Logic Developments

DRAFT Operational Environmental Management Plan

Eco Logic Developments Pty Ltd

Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

Date: 10/08/2020
Prepared by: Jackson Environment and Planning Pty Ltd
Version: Rev 1

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1. Introduction

This Operational Environmental Management Plan has been prepared by Jackson Environment and Planning Pty Ltd (JEP), on behalf of Eco Logic Developments Pty Ltd (Eco Logic), for the Singleton Recycling Facility (the Facility) located at 39 Enterprise Crescent, McDougalls Hill.

The proposed development will sort and recycle up to 95,000 tonnes per year of building, construction, household clean-up and commercial waste materials from households and businesses in the region. This Operational Environmental Management Plan sets out specific mitigation measures or controls to avoid or minimise negative environmental impacts associated with the operation of the development.

This OEMP summarises the characteristics of the Facility, the location, operating hours, how waste will be received, sorted and recycled, including traffic management, weighbridge operations, unloading of waste and loading of recycled product for off-site recycling or further processing.

This OEMP also outlines the internal movements of waste within the Facility environment, the dust suppression and stormwater collection system in place, storage of recycled products and off-site transport of final recycled materials from the operation.

The OEMP has been developed in alignment with AS/NZS ISO 14001:2016 *Environmental management systems* and has considered *Environmental Management Systems Guidelines - Risk-based licensing* (NSW EPA, 2015). The OEMP outlines the policies, systems and procedures that Eco Logic have committed to for protecting the environment during the operation of the Facility, and considers how key environmental and operational issues will be managed, including:

- Traffic Management
- Dust and Litter Minimisation
- Noise Pollution
- Non-Conforming Waste
- Stormwater Pollution Prevention
- Emergency Preparedness and Response
- Fire Prevention
- Weighbridge Management
- Pollution Incident Response
- Waste Management Plan
- Vermin and Pest Management

The OEMP has also been prepared to support the application for an EPA licence under Schedule 1 of the *Protection of the Environment Operations Act* 1997. The NSW EPA (2016) *Guide to Licensing* has also been considered in developing the OEMP for the Facility.

1.1. Policy drivers supporting the project

The *NSW Waste and Resource Recovery Strategy 2014–21* was released in December 2014. It sets clear directions for a range of priority areas over the next seven years and aligns with the NSW Government's waste reforms in NSW 2021: A plan to make NSW number one. The strategy seeks to support investment in much-needed infrastructure, encourage innovation and improve recycling behaviour. The strategy also seeks to facilitate the development of new markets for recycled materials and reduce litter and illegal dumping.

The strategy sets the following targets to be achieved by 2021–22:

- Avoiding and reducing the amount of waste generated per person in NSW
- Increasing recycling rates to:
    - 70% for municipal solid waste
    - 70% for commercial and industrial waste
    - 80% for construction and demolition waste
- Increasing waste diverted from landfill to 75%
- Managing problem wastes better, establishing 86 drop-off facilities and services across NSW
- Reducing litter, with 40% fewer items (compared to 2012) by 2017
- Combatting illegal dumping, with 30% fewer incidents (compared to 2011) by 2017.

The new strategy provides a clear framework for waste management to 2021–22 and provides an opportunity for NSW to continue to increase recycling across all waste streams.

The proposed development will increase and expand recycling infrastructure in Singleton and the Upper Hunter region and will make an important contribution to increasing the recycling rate of:

- Household waste from 42% (in 2017-18) to 70% by 2021;
- Commercial and industrial waste from 53% (in 2017-18) to 70% by 2021; and
- Construction and demolition waste from 79% (in 2017-18) to 80% by 2021.

1.2. OEMP objectives

The objectives of the OEMP are to:

- Support operations of the Development in accordance with the Conditions of Consent;
- Ensure compliance with all relevant regulatory requirements;
- Minimise the environmental impacts of the Development during operations;
- Engage with the community to minimise complaints;
- Maintain a high level of environmental performance through on-going training and inductions;
- Ensure the commitments made in the approval's documentation are fully implemented and/or complied with during operations; and
- Ensure the environmental risks associated with the operations of the Development are effectively managed.

1.3. Facility Objectives

The key objectives of the proposed development are to:

- Enable residents and commercial and industrial operators in the Hunter Valley region to send non-putrescible mixed waste to recycling centre.
- Enable processing of non-putrescible waste from the Hunter Valley region through a best practice facility to increase landfill diversion and recovery of valuable materials.
- Create choice and competition in the region for management of non-putrescible waste.

1.4. Targets

The development will increase and expand recycling infrastructure in Singleton and the Upper Hunter region and will make an important contribution recycling rates as per the NSW Waste and Resource Recovery Strategy 2014–21. Thus, the facility has adopted following recycling targets:

- 70% of Household waste;
- 70% of Commercial and industrial waste; and
- 80% of Construction and demolition waste.

2. Development description

2.1. Site description

The development application seeks approval for the operation of the Facility with a maximum sorting and recycling capacity of 95,000 tpa. Key operational features of the development within the footprint of the Site include:

- A Community Recycling Centre for household problem wastes;
- A tipping and sorting area for a range of household, business and building waste;
- An advanced sorting and processing facility to sort and recover mixed building materials;
- A product manufacturing area for landscaping and civil supplies.

The layout of the Facility is shown in Figure 2.1 and Figure 2.2.

This Facility is located at 39 Enterprise Crescent, McDougalls Hill, identified as Lot 17, DP 1062083 in the Singleton Local Government Area (LGA). The Facility is located in the Maison Dieu Industrial Estate, an industrial area zoned B5 Business Development and is surrounded by a mix of commercial premises and rural dwellings.

The site is approximately 2km to the west of Singleton township and is located entirely within the Singleton Council Local Government Area (refer to Figure 2.3). An aerial view of the entire lot is shown in Figure 2.4.

2.2. Nearest sensitive receptors

The site is situated at an interface between industrial zoned land / buildings and rural residential dwellings. The nearest industrial buildings are approximately 10 m to the north. The B5 Business Development zone to the east is large and extends for over 500m. The nearest arterial road is the New England Highway (A15) which is located approximately 1,100m to the north east of the site. Maison Dieu Road (sub-arterial road) is located directly south at approximately 100m.

Rural residential zones with residential dwellings are located along the north-western, western, south-western, south and south-eastern boundaries of the site. The closest residential dwellings are located within 150m (western), 470m (south) and 660m (south-east) respectively from the site boundary.

The nearest commercial property (Lady Bird Embroidery) is located >600m west of the site boundary.

2.2.1. Adjoining premises

The site has several nearby land use zones, including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape. The site is also surrounded by a mix of commercial premises and rural dwellings. The activities of the adjoining businesses are summarised in Table 2.1. Figure 2.5 shows the Facility's adjoining premises.

Table 2.1. Adjoining business details.

Map Ref.	Business	Address	Contact	Main Activity
1	Aussie Self Storage	37 Enterprise Cres, McDougalls Hill	(02) 6572 4055	Self-Storage
2	Humex	7 Rosella St, McDougalls Hill	(02) 4017 1746	Muffler shop
3	Rapid Spray	35 Enterprise Cres, Singleton	1800 011 000	Manufacturer
4	Drill Doctors Australia	60 Enterprise Cres, Singleton	(02) 6571 3690	Drilling equipment supplier
5	Hunter Valley Hydraulink	164 Maison Dieu Rd, Gowrie	(02) 6571 1625	Hydraulic equipment supplier
6	Minetek	3 Rosella St, McDougalls Hill	(02) 6578 8600	Mining company
7	Actisafe	5 Rosella St, Singleton	1300 852 397	Manufacturer
8	Currently not occupied	1 Cockatoo St, McDougalls Hill	-	-

2.2.2. Schools

The nearest schools, Singleton Heights Public School and Singleton Heights Pre-School are located approximately 2.4km to the east of the Site.

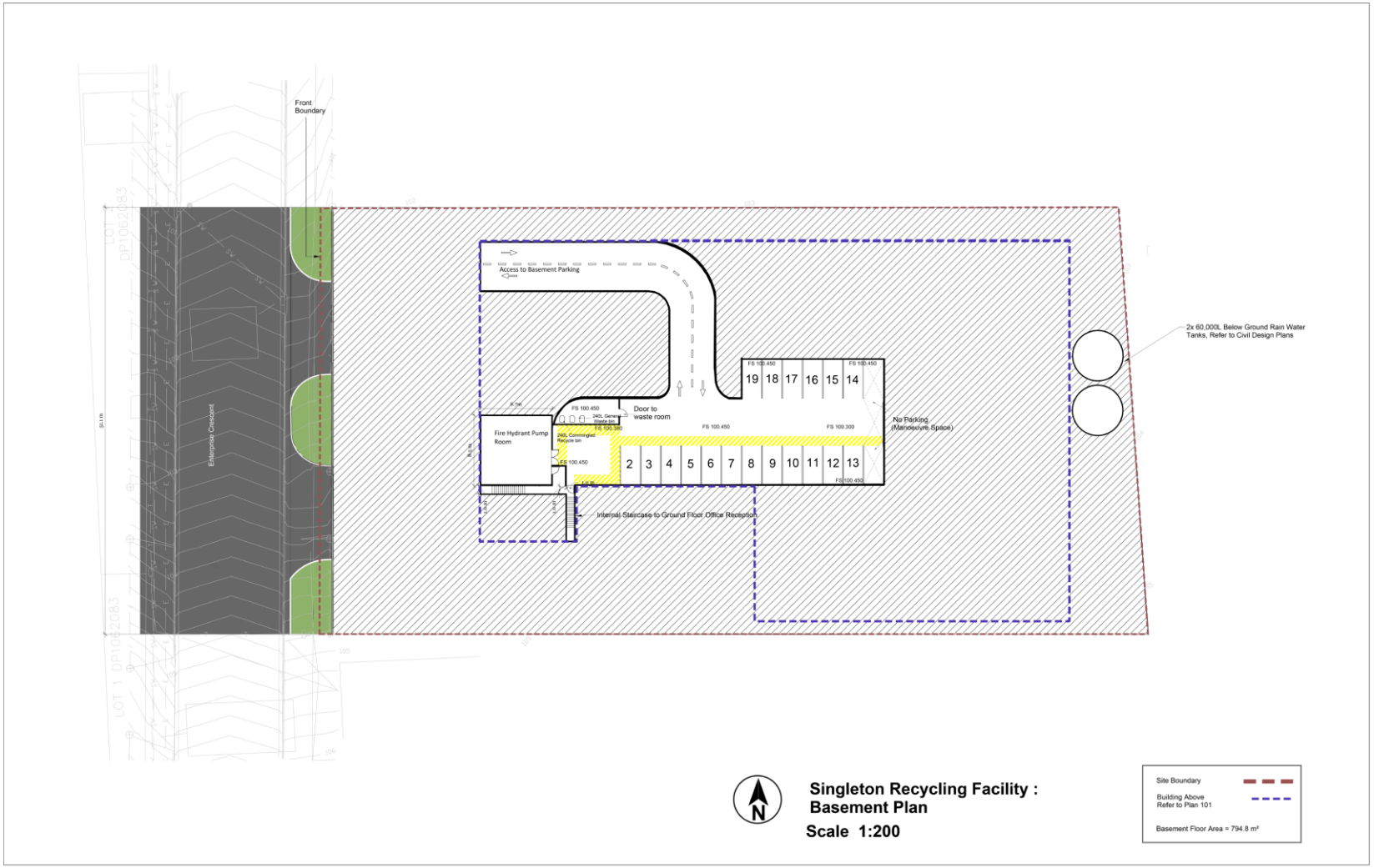
2.2.3. Waterway

Rixs Creek is located to the north and flows into the Hunter River to the south. Rixs Creek is impacted by the mining industry upstream.

2.2.4. Habitat

The area has undergone extensive clearing, resulting in grassland and low-quality scattered vegetation with low diversity and integrity. Tree cover is scattered with little to no interconnection. Located to the north and east are large parcels of remnant native bushland. This bushland provides habitat, foraging and breeding opportunities for local fauna species and forms part of a larger vegetation corridor to the north. The nearest land identified as Terrestrial Biodiversity on the *Singleton Local Environmental Plan* 2013 is located 20km to the northwest of the Site.

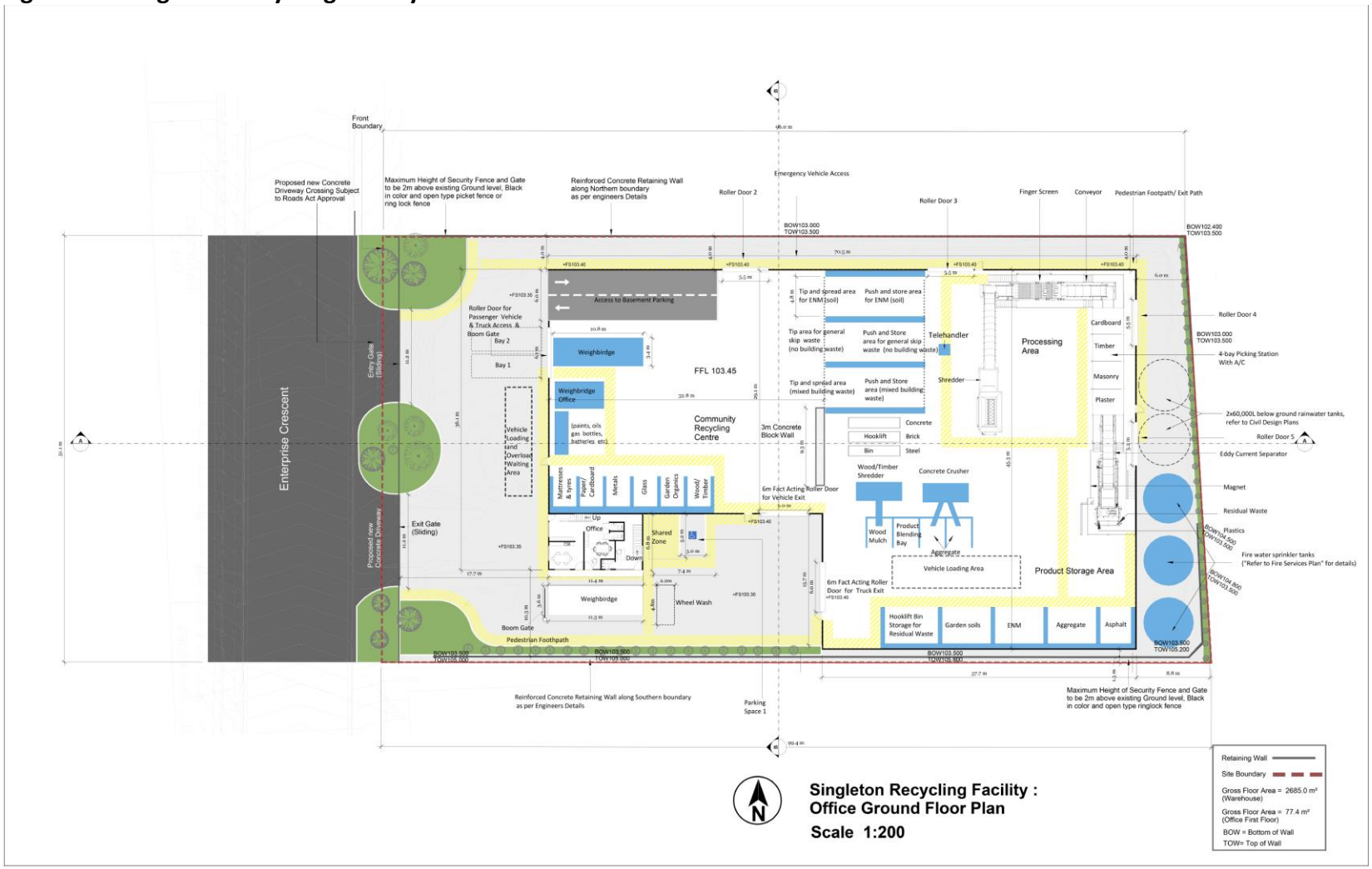
Figure 2.1. Singleton Recycling Facility: Basement Plan.



Date	Plan Number	Basement Plan			
08-08-2020	103	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Jackson Environment and Planning Pty Ltd Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd
				Project	Singleton Recycling Facilty
				Title	Basement Plan
				Scale	1:200
				Source	Jackson Environment and Planning Pty Ltd

01 A

Figure 2.2. Singleton Recycling Facility: Ground Floor Plan.



Date	Plan Number	Site & Office Ground Floor Plan	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd	01
08-08-2020	101	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au JACKSON ENVIRONMENT AND PLANNING	Project	Singleton Recycling Facilty	A
				Title	Site and Office ground floor plan	
				Scale	1:200	
				Source	Jackson Environment and Planning Pty Ltd	

Figure 2.3. Aerial view of the nearby region. Site boundaries are shown in red.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	**Strategy | Infrastructure | Compliance | Procurement** **A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060** **E:** admin@jacksonenvironment.com.au **T: 02 8056 1849** **W:** http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - OEMP
						Title	Aerial photo of site – region
						Scale	As shown
						Source	NSW Department of Planning and Environment

Figure 2.4. Aerial view of the lot, 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083). Site boundaries are shown in red.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	**Strategy | Infrastructure | Compliance | Procurement** **A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060** **E:** admin@jacksonenvironment.com.au **T: 02 8056 1849** **W:** http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - OEMP
						Title	Aerial photo of site - lot
						Scale	As shown
						Source	NSW Department of Planning and Environment

Figure Error! No text of specified style in document..**5. Adjoining Businesses. Site is shown as a red box.**

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
17/04/19	Revision A	R. Loemker	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - OEMP
						Title	Adjoining Business
						Scale	Not to scale
						Source	Google Maps

2.3. Key contact details

Table 2.2 lists the key contacts for the Development.

Table 2.2. Eco Logic Developments Contact Details

Location / Personnel	Contact Details
Singleton Recycling Facility	To be arranged
Customer Inquiries	To be arranged
Emergency Spills Response	To be arranged
Complaints and Feedbacks	To be arranged

Table 2.3 lists the contact details for the regulatory authorities that have an interest in the operations of the Development.

Table 2.3. Regulatory Authority Contact List

Regulatory Authority	Contact Details
Department of Planning, Industry and Environment (DPIE)	
Newcastle Regional Office	(02) 4904 2700 hunter@planning.nsw.gov.au
Singleton Office - Compliance	(02) 6575 3400
Environment Protection Authority (EPA)	
Environment Line	131 555 or 02 9995 5555 info@epa.nsw.gov.au
Newcastle Office	(02) 6575 3415 hunter.region@epa.nsw.gov.au
Singleton Council	
Singleton Office	(02) 6578 7290 council@singleton.nsw.gov.au
SafeWork NSW	
Incident notification	13 10 50
Emergency Services	
Fire and Rescue NSW Singleton Fire Station	02 6572 1495
NSW Police and / or NSW Ambulance Service	000

2.4. Site Processes

Key operational features of the development within the footprint of the Site include:

- A Community Recycling Centre for household problem wastes;
- A tipping and sorting area for a range of household, business and building waste;
- An advanced sorting and processing facility to sort and recover mixed building materials;
- A product manufacturing area for landscaping and civil supplies.

A description of these are provided in the following sections.

2.4.1. Community recycling centre and skip tip area

The purpose of the Community Recycling Centre is to provide a convenient way for householders to drop off chemicals, recyclables and general waste (not containing food) for recycling and disposal. A tipping area for skip bin waste from commercial collection vehicles will also be provided.

An overview of the operational features for the proposed Community Recycling Centre area is given below (also see Figure 2.5):

- A fully integrated, drive through Community Recycling Centre at the front of the Singleton Recycling Facility will be established. Small vehicles will enter the site through the main entrance, over the 9m weighbridge and then through to the Community Recycling Centre. Drop off and sorting bays will be established along the western wall of the warehouse for sorting of household chemical waste (includes paint, gas bottles, fire extinguishers, motor oils, other oils, car batteries, household batteries, smoke detectors and fluoro globes and tubes). Staff will supervise householders to safely unload items from vehicles and trailers for placement in designated bays.
- Concrete bays for sorting and placement of recyclable materials will be provided along the southern side of the warehouse, including bays for: clean untreated wood/timber; garden organics; glass; metals; paper / cardboard; and mattresses / tyres.

General waste in vehicles and trailers will be inspected on the weighbridge and if loads do not contain non-compliant materials (e.g. asbestos or fibro), vehicles will be directed to an appropriate concrete sided tipping bay in the centre of the sorting and tipping warehouse.

It is noted that no retail sales will be available at any time in the facility to small vehicles and trailer combinations (such as the pick up of mulch, soil or aggregate).

Figure 2.5. Process flow chart for the operation of the Community Recycling Centre – Small vehicles with clean-up waste, household chemical waste and recyclables.

2.4.2. Tipping area

The tipping area consists of the following:

- Three separate bays are provided, with the front of the bay for tipping, spreading and identification of any hazardous materials (e.g. gas bottles, batteries, paints, chemicals and asbestos) from trailers and skip bin collection vehicles in accordance with *Standards for Managing Construction Waste in NSW* (NSW EPA 2018).
- A separate bay is provided for: building waste; general waste (no building materials); and Excavated Natural Material (soil) (with a test certificate demonstrating compliance with the Excavated Natural Material Resource Recovery Order 2016).
- Any hazardous materials (e.g. gas bottles, batteries, paints, chemicals) are moved and stored in the appropriate chemical storage area along the western side of the warehouse.
- Vehicles then exit the Community Recycling Centre at the southern side of the warehouse.
- Vehicles will then exit the site, through the wheel wash and via the second outbound weighbridge near the site office on the southern driveway and will exit the site from the separate exit. The net weight of materials dropped off for recycling or disposal will be recorded in the weighbridge software.
- Waste collected in skip bin trucks will be deposited into the appropriate tip and spread bunker at the centre of the Community Recycling Centre.
- This drop off area is separated from the householder Community Recycling Centre to avoid vehicle conflicts.
- All sorted materials in bunkers will be moved periodically to the Processing Area for further sorting, processing and storage of materials / products for off-site transfer. Tyres, mattresses, metals and glass will not be processed further on the site and will be picked up in trucks for transport to other lawful recycling facilities for processing / recycling.

Figure 2.6 provides a process flow chart for the operation of the Tipping Area.

Figure 2.6. Process flow chart for the operation of the Tipping Area.

2.4.3. Processing area

The Processing Area of the Singleton Recycling Facility will involve sorting, screening, and size reduction to produce a series of aggregate, mulch and soil products from recovered materials or for off-site transfer to other recycling facilities. An operational overview of the Processing Area is provided below. Figure 2.7 provides a process flow chart for the operation of the Processing Area.

- Building waste which has been inspected is pushed via front end loader to the rear of the concrete bay, where primary sorting is performed using a mechanical telehandler / grab to remove large heavy recyclable items, such as concrete, bricks, timber and steel. These materials are stored into separate hook lift bins, with residual light waste moved to the building waste sorting plant via front end loader.
- To assist in the recovery of materials from the light fraction of building waste, waste is loaded and sorted through a 30 tonne per hour secondary sorting process. Waste is transferred via front end loader into a receiving hopper, where waste is shredded via a slow speed shredder.
- Waste is then passed onto a conveyor and is screened via a finger screen to remove soil and sand from the waste materials. This is stored in a bunker for further processing.
- Waste is then transferred via conveyor into an elevated picking station with air-conditioned cabin for up to 6 personnel, who physically sort recyclable materials, which are dropped via chute into hook lift bins beneath the platform.
- Materials including paper/cardboard, clean timber, masonry (bricks / concrete) and plasterboard are separated from the waste material.
- Waste is then passed over a magnet to remove ferrous metals, an eddy current separator for removing aluminium and then an air classifier to remove light plastic films. These recovered materials will be stored in separate bins beneath the platform.
- Remaining materials on the conveyor will then be transferred into a hook lift bin for disposal.
- The same sorting, screening and decontamination process will be used for General waste.
- Excavated Natural Material is transferred to the Product Storage Area in a designated bay.
- For loads of concrete/brick removed from the primary and secondary sorting process, this will be crushed and screened into aggregate products for off-site transfer.
- Clean timber will be shredded via a shredding unit.

2.4.4. Product storage area

The Product Storage Area will be the main area where recovered materials or products are stored for bulk dispatch in trucks (no small vehicles and trailer combinations). An operational overview of the Product Storage Area is provided below.

- Separate concrete storage bays for aggregates, wood mulch, Excavated Natural Material, garden soils will be provided. A blending bay for mixing of soils and landscaping materials is provided.
- A separate storage bay for waste with hook lift bins for off-site disposal will also be provided.
- Trucks and vehicles picking up product will enter via the western side of the warehouse, will pass over the weighbridge, and will manoeuvre through the warehouse through the designated vehicle roadway to the Product Storage Area.
- Trucks will be loaded via front end loader, then will exit the warehouse in the front direction and pass over the wheel wash then the weighbridge for assessing net weight of materials or products transferred off site.

Figure 2.7. Process flow chart for the operation of the Processing Area.

2.4.5. Operating hours

Table 2.4 provides the proposed operational hours.

Table 2.4. Operational Hours.

Operational Activity	Hours
Normal operating hours (staffed) including: Waste deliveries, waste processing and product sales	Mon-Fri: 7am to 6pm Saturday: 8am to 4pm Sunday: 10am to 3pm
Evening access for return of vehicles only (no loading/unloading)	Monday to Sunday: 6pm to 10pm
Night-time (10pm to 7am)	No operational activities or truck movements

Please note that Section 5.2.1 provides a more detailed breakdown of proposed access days and times for commercial skip bin collection vehicles that will be operated by the Singleton Recycling Facility, and passenger vehicles. Management controls for access to the Singleton Recycling Facility will help to:

- Avoid the potential for traffic congestion on Enterprise Crescent or other public road.
- Minimise conflicts between commercial and passenger vehicles within the Singleton Recycling Facility site; and
- Allow the operation of plant and equipment for sorting and recycling operations with doors closed outside of drop off times for commercial skip bin collections and householder drop off times.

2.5. Quantities of waste materials to be received

The waste materials to be accepted and recycled at the site are given are given below. The waste classification of each material under the NSW EPA's *Waste Classification Guidelines* (2014) is also given (Table 2.5). Waste handling including sorting, processing and storage for off-site transfer is also provided in Table 2.3 below.

Table 2.5. Types, quantities, and classification of waste materials approved to be accepted at the Singleton Recycling Facility.

NSW EPA Waste Classification	Material description	Maximum tonnage to be received / yr.	Processing / Handling	Storage	Use / Sold as	Residual Waste
General solid waste (non-putrescible)	Building and demolition waste	47,500	Sorted into various materials that can be recycled	Sorted material stockpiled on site	Sold as second-hand building material or to redistributed to relevant recycling area	Material that cannot be recycled sent to landfill
	Soil that meet the CT1 thresholds for general solid waste in Table 1 of the Waste Classification Guidelines. No ENM processing to occur	14,250	CT1 soils that meet the CT1 thresholds for general solid waste will be recovered via screening	Sorted material stockpiled on site	Manufactured soils sold for landscaping and construction or sent to recycler for reprocessing	~20% waste to landfill
	Virgin excavated natural material	4,750	None	Sorted material stockpiled on site	Sold as landscaping material or sent to recycler	Nil
	Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste	9,500	Sorted into various materials that can be recycled	Sorted material stockpiled on site.	Sold to paper/cardboard recycler for reprocessing	Nil
	Non-chemical waste generated from manufacturing and services (including metal, timber, paper, ceramics, plastics, thermosets and composites)	1,900	Sorted into various materials that can be recycled	Sorted material stockpiled on site.	Sold to recycler for reprocessing	Material that cannot be recycled sent to landfill
	Household waste from municipal clean up that does not contain food	1,900	Sorted into various materials that can be recycled: metal, timber, plastic, etc	Sorted material stockpiled on site	Sold as second-hand building material or to redistributed to relevant recycling area.	Material that cannot be recycled sent to landfill
	Wood waste	4,750	Large timber cut to size and shredded	Sorted material stored on site as mulch	Sold as recycled building material or as mulch or sent to recycler for reprocessing	Unsuitable wood waste will be disposed of to landfill
	Asphalt	4,750	Material crushed and screened into various products	Material made to various sizes and stockpiled on site.	Sold for road aggregate and drainage backfill or	Nil

NSW EPA Waste Classification	Material description	Maximum tonnage to be received / yr.	Processing / Handling	Storage	Use / Sold as	Residual Waste
					sent to recycler for reprocessing	
General solid waste (non-putrescible) or hazardous waste	Household paint, gas bottles, fire extinguishers, motor oils, other oils, car batteries, household batteries, smoke detectors and fluorescent globes and tubes.	475	No processing required	Products containing liquids such as used oil and lead acid batteries will be stored in purpose-built storage receptacles that provide bunding to an acceptable Australian standard.	All taken off-site for recycling as per the NSW EPAs Household Problem Waste program	Nil
General solid waste (non-putrescible)	Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal	950	Materials sorted into various types. Some materials crushed and screened into various products	Material graded to various sizes and stockpiled on site	Sold as secondhand building material or sold for aggregates, drainage backfill, soil amendments, or sent to recycler for reprocessing	Nil
	Paper or cardboard	950	Material sorted into various types	Sorter material stockpiled on site	Sold to paper/cardboard recycler for reprocessing	Nil
General or Specific Exempted Waste	Waste that meets all conditions of a resource recovery order under Clause 91 of the *Protection of the Environment Operations (Waste) Regulation* 2014	950	Materials sorted into various types. Some materials crushed and screened into various products	Material graded to various sizes and stockpiled on site	Sold as secondhand building material or sold for aggregates, drainage backfill, soil amendments, or sent to recycler for reprocessing	Nil
General solid waste (non-putrescible)	Bulky goods waste containing building de-fit fittings, fixtures and furniture that is not contaminated or mixed with any other type of waste	950	Materials sorted into various types. Some materials crushed and screened into various products	Material graded to various sizes and stockpiled on site	Sold as secondhand building material or sold for aggregates, drainage backfill, soil amendments,	Nil

NSW EPA Waste Classification	Material description	Maximum tonnage to be received / yr.	Processing / Handling	Storage	Use / Sold as	Residual Waste
					or sent to recycler for reprocessing	
	Waste collected by, or on behalf of local councils from street sweepings	475	No processing required	Stockpiled on site.	Nil	Material sent to landfill
General solid waste (putrescible)	Grit, sediment, litter, gross pollutants collected in and removed from stormwater treatment devices and or stormwater management systems that have been dewatered so that they do not contain free liquids	475	No processing required	Stockpiled on site	Nil	Material sent to landfill
General solid waste (non-putrescible) or hazardous waste	Materials such as asbestos, tyres, batteries, gas bottles, fire extinguishers and food	475	No processing required	Products containing liquids such as used oil and lead acid batteries will be stored in purpose-built storage receptacles that provide bunding to an acceptable Australian standard.	All taken off-site for recycling as per the NSW EPAs Household Problem Waste program	Asbestos taken off site for lawful disposal. Unexpected finds to be separated for lawful off-site management
Total (tonnes per annum)		95,000				

2.6. Infrastructure

The key infrastructure at the Facility are summarised in Table 2.6.

Table 2.6. Key Infrastructure at the Facility.

Infrastructure	Description
Office and amenities	An office, meeting room and bathroom amenities are located on the ground floor in the southeast corner of the Facility. An office area, bathroom, meeting room, lunchroom facilities, education room and staff training room are provided upstairs.
Access	All vehicles enter and exit the site in a forward direction from separate entry and exit driveways on Enterprise Crescent. The entry driveway on Enterprise Crescent is located towards the north of the site frontage with traffic then exiting via the driveway towards the south of the site onto Enterprise Crescent. The location of these driveways allows for direct access to the inbound and outbound weighbridges within the site.
Weighbridge and wheel wash	Inground (pit style) weighbridges are provided at both the entry and exit from the Community Recycling Centre to allow for weighing of all inbound and outbound product. A wheel wash is provided just prior to the outbound weighbridge to clean the tyres of vehicles prior to exiting the site.
Car parking	A basement car park provides parking for up to 18 vehicles.
Rainwater harvesting system	A 120,000L rainwater harvesting system is used for dust suppression (misting) and amenities (toilet flushing) and irrigation.
Stormwater system	The Stormwater system consists of: • an inground drainage system designed to the 10-year ARI storm event • Surface inlet pits fitted with Enviropod pit inserts (fitted with Oilsorb to capture oils and grease) for treating stormwater in runoff from hardstand areas. • An on-site detention pond with a capacity of 70m³ with a combination of orifice and weir discharge controls to allow for staged discharged into existing Council pit in the street. The OSD is fitted with a shut off/knife valve at the discharge outlet of the development's drainage system in order to prevent any contaminated fire water leaving the site and entering the council drainage system • A proposed fire containment storage of 1,235m³ within the basement. Any firewater entering the external hardstand areas will be contained within the OSD and the underground drainage lines within the development. A shut off/knife valve is provided in order to prevent firewater entering council's drainage system
Energy	A 100kW commercial solar collection array will be installed on 700m² of the north facing side of the warehouse roof for solar electricity generation

3. Environmental Management Framework

3.1. Development Consent

The facility will be operated in accordance with this Operational Environmental Management Plan, conditions of development consent and EPA licence.

3.2. Legal Requirements

This section applies to activities which Eco Logic can be held responsible and includes:

- Requirements stipulated in legislation, including regulatory requirements, codes of practice and industry standards at a National, State and Local government level;
- Requirements stipulated in corporate standards; and
- Other environmental requirements as required generally.

Management shall also access and review appropriate sources of information (at least annually) and identify significant changes in legal requirements related to environmental aspects. These sources of information may include:

- Lawlex Legislation Service;
- Publications relevant to the waste industry;
- Environment Manager Magazine;
- NSW EPA news bulletins;
- Department of Planning, Industry and Environment publications; and
- Direct notification by Commonwealth and State Government Departments.

Management shall maintain summaries of legal requirements related to the Operations and environmental aspects. Such summaries shall be updated at least every 12 months by a competent person.

Table 3.1 Legal Requirements.

Legislation	Associated regulations	General intent	Relevance to the Facility
Protection of the Environment Operations Act 1997	*Protection of the Environment Operations (General) Regulation* 2009 *Protection of the Environment Operations (Clean Air) Regulation* 2010 *Protection of the Environment Operations (Noise Control) Regulation* 2008 *Protection of the Environment Operations (Waste) Regulation* 2014	To enhance the quality of the environment in NSW.	Outlines requirements for a range of activities related to waste facilities including licensing, monitoring and reporting and Resource Recovery Orders and Exemptions

Legislation	Associated regulations	General intent	Relevance to the Facility
Waste Avoidance and Resource Recovery Act 2001		Minimise the consumption of natural resources and the final disposal of waste and achieve integrated waste and resource management planning.	The operation of the Facility must uphold principles of ecologically sustainable development and focus on waste minimisation and resource recovery over disposal.
Environmental Planning and Assessment Act 1979	*Environmental Planning and Assessment Regulation* 2000	Encourage the proper management, development and conservation of natural and artificial resources and protection of the environment.	Determines the development approval process.
State Environmental Planning Policy (Infrastructure) 2007	-	Identifies the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development).	Determines the development approval process.
Singleton Local Environmental Plan 2013		Provides the local planning and legislative framework for the development. Outlines the approval process and identify the applicable local planning controls that relate to the proposed development.	Determines the development approval process.
Work Health and Safety Act 2011	*Work Health and Safety Regulation* 2011	To secure and promote the health, safety and welfare of people at work.	The operations must provide a safe work environment.
Environmentally Hazardous Chemicals Act 1985	*Environmentally Hazardous Chemicals Regulation* 2008	Control of activities related to chemical waste.	Influences waste permissibility.
Public Health Act 1991	-	To increase the standard of health in NSW.	Outlines requirements for safe drinking water.
Water Management Act 2000	-	To protect, enhance and restore water, associated ecosystems and water quality.	Effects of the facility and waste operations must be managed.

3.3. Inductions and Training

Eco Logic management will ensure that all employees and contractors involved with the operations of the Facility are suitably inducted and trained prior to commencing any work on site. Training in relation to environmental responsibilities and implementation of this OEMP will take place initially through a site

induction and then on an on-going basis through “toolbox talks” (or similar). Further details are provided in Section 7.2.

The topics to be covered during the induction and toolbox talks include:

- General site maintenance and management expectations and requirements;
- Traffic management;
- Familiarisation with site environmental management and mitigation measures in this OEMP;
- The environmental management commitments and responsibilities in this OEMP;
- Waste avoidance and management strategies;
- Appropriate response and management of complaints received from the public, government agencies or other stakeholders in accordance with the protocol detailed in Section 8.3; and
- Appropriate response and management of environmental incidents in accordance with the strategy detailed in Section 6.

Records of all inductions and training undertaken will be recorded in a Training Register.

3.4. Eco Logic Development's Environmental Policy

ENVIRONMENTAL POLICY	
Eco Logic Developments Pty Ltd pursues 'best practice' in all its activities, to that end, we strive to operate and manage our business such that the following environmental principals/goals are met and exceeded:	
Environment	• Committed to protecting and enhancing the environment through rigour in environmental management
Compliance	• Recognise the importance and relevance of compliance with all relevant policy and regulation
Monitoring	• Appropriate monitoring of systems/procedures and progress with an inbuilt review process
Continuous Improvement	• A commitment to continuous improvement to ensure that best practice is pursued and achieved
Extended Producer Responsibility	• Heightened awareness and commitment to Extended Producer Responsibility to ensure that the supply chain is sustainable
Education	• A comprehensive education and training schedule are maintained so that employees and management are in tune with latest trends and practice, creating awareness and pride in the workplace.
Hazards	• Monitoring and management of hazards to ensure minimal environmental impact and disturbance
Landfill	• Minimising waste to landfill is our priority.

4. Environmental Aspects and Impacts

The key environmental aspects and associated impacts of the Facility, as identified in the EIS, and which are covered by this OEMP include:

- Traffic and access;
- Air quality;
- Noise and vibration;
- Vermin and pest;
- Stormwater;
- Pollution incident; and
- Fire.

The key environmental aspects and associated impacts of the Facility are summarised below.

4.1. Traffic and access

The development will have minimal impact upon the operation of the intersections in the locality due to the minimal amount of additional traffic movement associated with the development.

The additional traffic movements generated by the development will have a minimal impact upon the local road network and the site access can operate with minimal delay or congestion. Parking for the development has been provided on site in accordance with the specific requirements of the site operations and staffing levels as per the guidance provided with the Singleton Council DCP. The site access allows for safe entry and exit movements with good visibility available for road users. All vehicles will be able to enter and exit the site in a forward manner.

The development will have a minimal impact upon road safety. The site access is located on a straight section of road allowing for good visibility for drivers entering and exiting the site. The access also allows drivers on Enterprise Crescent to observe the traffic movements in and out of the site and adjust their vehicle speeds accordingly. Traffic speeds in this location appear to be within the posted speed limit. There are a low number of accidents in this location.

To avoid the potential for traffic congestion from commercial and passenger vehicles arriving at the site at the same time, access controls are proposed in Section 5.2.

4.2. Air quality

The processes which may result in the emission of pollutants to air include:

- Movement of vehicles around the proposed development site on paved road surfaces;
- Unloading of waste materials;
- Movement of material around the site using material handler and front-end loaders;
- Material processing (sorting/crushing/screening/shredding/blending);
- Storage of materials;
- Loading trucks with product material; and
- Emissions from vehicle and equipment exhaust.

The predictions presented in this EIS indicate that there would be no exceedances of the adopted air quality criteria, save for one minor exceedance of the 24-hour average PM2.5 criterion, which is dominated by background concentrations (accounting for 99.6% of the criterion).

4.2.1. Odour

It is anticipated that less than 950 tonnes/annum of potentially odorous materials would be brought to the proposed development site in any year, which is less than 1 % of the total 95 000 tonnes/annum of accepted waste.

Although timber would be received, mulched and stored at the site, it is not likely that the material would be retained at the site for a sufficient period to decay and become odorous. Furthermore, the product is of no commercial value as a mulch product if it does begin to degrade and therefore the material will be managed and stored to reduce the potential for decay. Importantly, no composting is proposed as part of the site operations.

The odour from raw timber products and shredded / chipped material would be minor. A review of odour emissions data and hedonic tone descriptors associated with raw timber and shredded/chipped wood materials indicates that odour from these sources would generally be described as exhibiting neutral hedonics and by a standard odour descriptor as ‘earthy’. The final product is often used as media in biofilters (used to reduce odour from odorous processes) and intrinsically has a weak and neutral residual woodchip odour.

A minor odour may therefore be experienced in close proximity to the bay of mulched timber. However, as the material is stored in an enclosed building, the potential for odour impacts is considered to be insignificant.

4.3. Noise and vibration

The Predicted Operational Noise Impact assessment performed as part of the EIS demonstrated that:

- Noise emissions from the site to the surrounding environment is low.
- The proposed development satisfies the Project Trigger Noise Levels at all nearby residential receivers.
- The potential for noise impacts during the night-time, which have the potential for sleep disturbance events are effectively nil.
- The sleep disturbance Project Trigger Noise Levels are satisfied.
- The Project Trigger Noise Levels at all nearby commercial and industrial receivers are also satisfied.
- Impacts due to vehicle movements through the Maison Dieu Industrial Estate are negligible.

Impacts due to vehicle movements through the Maison Dieu Industrial Estate are considered negligible. Traffic noise along Maison Dieu Road is likely to exceed the NSW Road Noise Policy criteria as vehicles exit the industrial estate and connect with other transport routes along the New England Highway. Therefore, the allowable increase in traffic noise due to the proposed development must not exceed 2 dB as per the NSW Road Noise Policy requirements.

As the existing traffic noise levels on Maison Dieu Road and the New England Highway already likely exceed the NSW Road Noise Policy criteria, all new traffic noise increases must satisfy the 2 dB increase criteria. Based on the findings of the EIS, the Facility generates negligible additional traffic noise and the NSW Road Noise Policy criteria is satisfied.

The offset distances (in all directions) between the vibrationally intensive equipment and any sensitive receivers is large (> 150 m). The potential for vibration impacts due to the construction or operation of the development are effectively nil. All vibration criteria with respect to cosmetic damage (buildings) and human comfort impacts will be satisfied as a result.

A proposed condition of consent is that the operation of the roller doors will be electronically linked to the waste plant/machinery, to avoid any noise impacts on neighbours or sensitive receptors. To avoid the stop/start load on the plant, and to ensure the plant operates efficiently, access controls for commercial and passenger vehicles will be introduced to enable to waste plant/machinery to sort and recycle materials delivered during the day. Please see Section 5.2.

4.4. Vermin and Pests

With consideration to the following site factors, the risk of vermin and pest infestation is considered low:

- The site layout;
- Nature of waste materials to be delivered;
- The minimal time uncontainerised waste material will remain on site;
- Proximity to the waterways and surrounding vegetation; and,
- The nature of surrounding industrial activities.

However, there is a potential for a variety of pests and vermin to be encountered at the Facility, including:

- Mice;
- Rats;
- Cockroaches;
- Spiders;
- Ants;
- Silverfish;
- Feral cats; and

There is also the potential for native species, particularly birds, inhabiting the surrounds to become a nuisance.

4.5. Stormwater

All operations associated with the proposed development will be performed inside the Facility. Rainwater will not come into contact with waste materials, and therefore cannot contaminate stormwater leaving the site.

The main potential pollutants in stormwater associated with the proposed development is fine sediment and associated nutrients/metals/fuels from vehicle tyres. Whilst tipping of waste material is done within the designated tipping area within the waste receival building, there is a small risk of waste being tracked on tyres, though this is mitigated through the use of an on-site wheel wash before vehicles exit the site. Suspended sediment and nutrients (principally nitrogen and phosphorus) from the site could impact on stormwater.

4.5.1. Leachate

No leachate will be generated during waste sorting, processing and storage.

4.6. Pollution incident

Emergencies or incidents which are considered not likely, but have the potential, to cause or threaten material harm to the environment include:

- Workplace health and safety;
- On-site spills or leaks;
- Off-site discharges;
- Hazardous materials/dangerous goods;
- Fire; and
- Road incidents.

4.7. Fire

Waste fires can arise across all stages of the waste management chain, including waste collection, transport, transfer stations, recycling and disposal at landfill (whether hazardous, mixed or inert). The source of combustible material also varies greatly and includes tyres, used oils, green waste, wood waste, solvents, batteries, municipal solid waste. Fires therefore have the potential to cause significant harm to people and the environment through the release of hazardous chemicals to the atmosphere and ground water supplies.

The majority of materials stored on site are inert such as soils, rock, concrete, brick, tile, asphalt, glass and metals and present a low fire hazard. Household wastes such as paint, gas bottles, motor oils, other oils, car and household batteries may present a fire hazard. The risk of fire from these materials is considered low given the appropriate storage and separation of chemicals by class, and small amounts held on site. Other materials such as wood waste, paper carboard, plastics present the highest risk of fire.

The potentially hazardous chemicals to be stored on site are minor quantities of flammable liquids.

4.8. Waste Management

During the operational phase, up to 95,000 tpa of waste materials will be received on site for recycling. The Facility will be operated in accordance with the NSW EPA (2018) *Standards for Managing Construction Waste in NSW*. No waste or waste-derived products will be unloaded or stored outside the warehouse.

Overall, the Facility will sort and recycle 74.8% of all wastes received. The office administration operations will generate very minimal waste, and it is estimated that 85% of this waste will be fully recycled, through a separate comingled recycling system and an on-site worm farm for food waste in the basement.

5. Environmental Management Measures

A suite of development design, best management practices and mitigation measures have been committed to minimise the potential for adverse impact on the local environment and surrounding community. The environmental mitigation and management measures relevant to the Facility are provided in the following sections.

5.1. General

Table 5.1 outlines the general environmental management and mitigation measures that will be implemented at the Facility to minimise the potential for adverse impacts on the local environment and surrounding receptors.

Table 5.1. General Management and Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
Eco Logic will implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the operation of the Facility	Site Management	On-going
Pests and vermin will be controlled on site through active monitoring and placement of baits and traps as required	Site Management	On-going
Fires will be extinguished promptly	Operations Management	On-going
Adequate fire fire-fighting capacity will be maintained on site	Site Management	On-going
A perimeter fence and security gates have been installed and they will be maintained and locked at all times when the site is unattended	Site Management	On-going
Employees and contractors will be suitably inducted and trained prior to commencing any work on site	Site Management	Inductions prior to commencing employment / contract. As needed toolbox talks.
Contact details will be displayed on signage at the entrance to the site	Site Management	On-going
Any new signage will be installed in consultation with Singleton Council and shall comply with the State Environmental Planning Policy 64 – advertising and Signage	Site Management	As required (prior to installation of new signage)
All plant and equipment used for the Facility will be maintained in a proper and efficient condition and operated in a proper and efficient manner	Site Management	On-going
Eco Logic will repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Development	Site Management	On-going

5.2. Traffic and access

The traffic movements generated by the development are predicted to have a minimal impact upon the local road network and the site access can operate with minimal delay or congestion.

However, in order to ensure that traffic is carefully managed and queuing does not occur on Enterprise Crescent in the unlikely scenario of multiple vehicles arriving at the facility at once, Eco Logic proposes the following access controls. These access controls will ensure the site has sufficient on-site capacity to accept vehicles without queueing on a public road. The access controls will also help to ensure that the facility can be made available for both commercial skip bin vehicles and passenger vehicles in a safe and controlled manner:

Monday to Friday operations:

- Only commercial skip bin collection vehicles will use the facility. Queueing will be avoided through the traffic management procedure and driver training requiring drivers to radio call ahead to ensure their arrival does not result in queueing.
- Skip bin collections will occur Mon-Fri 7am to 3pm. Between 3 and 6pm, the facility will sort, separate and process wastes received during the day.
- No passenger vehicles with or without trailers.

Saturday and Sunday operations:

- Householder vehicles with or without trailers will be provided access to the facility 8am to 2pm Saturdays and 10am to 1pm Sundays, in line with when peak demand is expected.
- No commercial skip bin collections on the weekends (to avoid conflicts with any passenger vehicles).
- 2pm to 4pm Saturdays and 1pm to 3pm Sundays the facility will sort, separate and process wastes received during the day (without the need to open and close roller doors to accommodate traffic movements).

A queueing assessment has been performed to understand the sites capacity to accommodate vehicles on site, particularly should a delay occur during unloading. Staff movements are exempt from the queueing analysis with staff having arrived to site prior to the start of operations and their vehicles to be stored within the basement parking on site, accessed via a separate entry than the waste operation.

The entry area within the site shall be marked to provide for two parallel entry bays. The width of the entry roller door shall be designed to provide easy vehicle entry from either of the bays onto the weighbridge, which shall be managed to enable a vehicle to hold while another vehicle is unloading. The weighbridge can be flush mounted with the pavement to enable suitable manoeuvring onto it. This would enable four vehicles to be waiting or unloading simultaneously, all contained within the site. When the unloaded vehicle exits onto the outbound weighbridge the inbound vehicle shall then progress off the inbound weighbridge and the next waiting vehicle can then enter.

Whilst there is no certainty around the time required to unload a truck or trailer, as a worst-case scenario most loads can be processed within 10 minutes. On a weekend, staff on site will help direct public users to avoid confusion and delay. This approach is in place at many Council Community Recycling Centres across NSW which helps reduce the time required for the deposit of materials. This minimises delays and ensures vehicle turnover on site. The predicted time for a truck arriving with a skip bin to unload, be inspected and

depart the site is more likely to be 6-8 minutes. Similarly, light vehicles with trailers can be processed in a similar time frame with assistance by staff within the facility. On this basis the site can manage the unloading of 6-10 large loads each hour, with the site layout to allow for 3 vehicles to hold whilst a vehicle is unloading on site.

The operational analysis for the site indicates 6-8 trucks arriving per hour with trucks relating to outbound product able to be accommodated within the facility at the same time as a disposal vehicle. Therefore, the capacity of the site during the week is adequate to accommodate the peak demands at the disposal access (6-10 vehicles per hour) without the need for queued vehicles to impact the local roads.

Of a weekend the demand for 10 vehicles per hour, some of which may include trailers, can also be managed without impacting the local roads. Four customers with trailers will operate on site in a manner consistent with the commercial operator vehicles with queuing provided for two car/trailer combinations whilst a further one is unloading, and one is on the weighbridge. Single vehicles will require less queuing space and have the potential for two cars/utes to hold in the area otherwise taken by a single car/trailer combination. Similarly, the space required within the site for a single vehicle to manoeuvre upon entry or exit will enable more than one vehicle to be within the site at any point in time.

In the event of a significant delay on site or should multiple vehicles (more than four) all arrive simultaneously, further consideration has been given to the impact of this on the safe operation of the adjoining road network. Should four vehicles with trailers already be on site, an overflow waiting bay has been provided across the site building frontage but within the site. In this way a vehicle can be directed to enter the site and hold there until a vehicle exits the site. The vehicle can then manoeuvre into one of the entry bays and enter as required. This overflow bay is designed to cater for occasional deliveries to the office on site and so shall be empty on a weekend. No loading or unloading of recycled product shall occur in this space.

Whilst queuing by car and trailer combinations on a weekend is not expected, monitoring of traffic should be done at all times. Should queuing occur with car and trailer combinations consistently at peak times on the weekend, consideration may be given to introducing an on-line booking system for scheduling the arrival and drop off of waste materials by all householders. This will help to further mitigate and avoid any queuing occurring at the site. As part of this management approach, educating customers on the process for scheduling a visit to the facility will help ensure that traffic in and around the development is managed well at all times.

It is noted that no retail sales will be available at any time in the facility for small vehicles and trailer combinations (such as the pick up of mulch, soil or aggregate)

5.2.1. Controlled access for operation of waste plant and machinery

The proposed operating hours for the Singleton Recycling Facility are:

- Mon to Fri: 7am to 6pm (11 operating hours);
- Sat: 8am to 4pm (8 operating hours); and
- Sun: 10am - 3pm (5 operating hours).

Skip bin collections will occur Mon-Fri between 7am and 3pm and only commercial skip bin collection vehicles will use the Facility during this time. This will help to ensure that the facility can operate between 3pm-6pm to sort, separate and process wastes received during the day without the plant having to shut down every time the doors are opened (processing plant is electronically linked to processing warehouse

doors, such that the plant shuts down to avoid noise impacts external to the building). When the facility is at maximum capacity, it is expected that operation of waste plant and machinery will be required for between 2 and 3 hours per day during the week, and 1-2 hours per day on the weekend.

Private vehicles will be provided access to the Facility on Saturdays between 8am and 2pm and Sundays between 10am and 1pm. No commercial skip bin collections on the weekends. This will help avoid traffic conflicts. The facility will sort and process waste between Saturdays between 2pm and 4pm and Sundays between 1pm and 3pm to avoid the plant having to shut down every time the doors are opened.

Table 5.2 lists the management and mitigation measures that will be implemented at the Facility to minimise the impacts of traffic.

Table 5.2. Traffic Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
Monitoring of traffic to be done by the Operations Manager at all times (supported by the use of video in the office)	Operations Management	Continuous during opening hours
Commercial skip bin collection vehicles will only access the Facility on Mon-Fri between 7am and 3pm. Private vehicles will not be accepted.	Operations Management	On-going
Commercial skip bin vehicle drivers to radio call ahead to ensure their arrival does not result in queueing.	Truck drivers	On-going
Private vehicles will only access to the Facility on Saturdays between 8am and 2pm and Sundays between 10am and 1pm. Commercial vehicles will not be accepted.	Operations Management	On-going
A member of staff to assist in directing, unloading and guiding passenger vehicles through the facility to minimise delays	Operations Management	Saturdays between 8am and 2pm and Sundays between 10am and 1pm
A total of 18 car parking spaces will be marked and provided in the basement car park (and one mobile space outside the office)	Site Management	Prior to commencement
All vehicles will enter and leave the site in a forward direction	Operations Management	On-going
Site access, driveways and parking areas will be maintained in accordance with the latest versions of Australian Standards AS 2890.1, AS 2890.2, AS 2890.6 and AS 1428.1	Site Management	Prior to commencement
Signage will be maintained to ensure safe and efficient traffic flow. Waiting bays to be clearly marked.	Site Management	Prior to commencement
All vehicles will turn off their engines when stationary (no idling), where practicable.	Operations Management	On-going
The Facility will not result in any vehicles parking or queuing on the public road network.	Operations Management	On-going
All vehicles will be wholly contained on site before being required to stop, where practical	Operations Management	On-going

Mitigation Measures	Responsibility	Timing / Frequency
All loading and unloading of heavy vehicles will occur inside the enclosed building	Operations Management	On-going
The turning areas in the car park will be kept clear of any obstacles, including parked cars, at all times.	Operations Management	On-going
Trucks entering and leaving the premises that are carrying loads will be covered at all times, except during loading and unloading.	Operations Management	On-going
Implement the use of an online booking system for passenger vehicles if demand exceeds predictions in the EIS	Operations Management	To be assessed following commencement of operations

5.3. Air quality, odour and dust

Based on the findings of the operational phase air quality impact assessment, it is considered that the control measures proposed to be implemented (Table 5.3) will be sufficient to ensure that exceedances of all particulate criteria would not be experienced as a result of the operation of the Facility.

It is noted that the full enclosure of operations within a purpose-built building represents best practice. The use of fast acting rollers doors, which would be kept closed during activities within the warehouse, will ensure that air quality emissions from the building are minimised when vehicles do not require access.

Table 5.3. Air Quality Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
All vehicles to comply with strict speed limit of 5km/hr internal and external to the building	Operations Management	Continuous
All internal and external surfaces are to be paved	Site Management	Prior to commencement
All trucks entering and leaving the premises carrying loads must be covered at all times, except during loading and unloading.	Truck drivers	During the transport of waste
Limit load sizes to ensure material is not above the level of truck sidewalls	Truck drivers	During the transport of waste
Good dust management procedures will be implemented within the building including regular sweeping and moistening of paved areas, as required.	Operations Management	Daily
Good dust management procedures outside of the building, and the general Site including regular sweeping to remove dust and other debris.	Operations Management	Daily
Training of all staff and personnel accessing the Site in the need to minimise dust generation.	Site Management	Inductions prior to commencing employment / contract. Regular / as needed toolbox talks

Mitigation Measures	Responsibility	Timing / Frequency
Direct ducting of diesel combustion emissions from the in-feed shredder, finger screen, concrete crushing plant and wood shredder through two emission points located on the roof to maintain good indoor air quality.	Site Management	Prior to commencement
Operation of the waste plant and machinery to be performed between 3pm and 6pm Mon to Fri, and 2pm to 4pm Saturdays and 1pm to 3pm Sundays (when doors are closed and vehicle access is not permitted)	Operations Management	Daily based on allowed operational times for waste plant and machinery
Use of water misting over areas of waste sorting and processing where required.	Operations Management	As needed
All waste to be contained in appropriate 3-sided storage bays	Site Management	Prior to commencement of operations
Regularly transport off-site to landfill or other recycling facility where any waste has the potential to create odour	Site Management	As needed
Review of any complaints received relating to dust and reports from monitoring conducted as a result.	Site Management	As needed
Toolbox meetings to discuss any safety and compliance issues, including dust and odour, that have arisen since the previous meeting.	Operations Management	Monthly

5.4. Noise and vibration

Environmental controls listed in Table 5.4 will be implemented to minimise the potential for adverse noise impacts at the nearest receptor locations during the operation of the Facility. If excessive noise levels are experienced at the Facility and/or a noise complaint is received, appropriate remedial actions/additional mitigation measures will be implemented.

Table 5.4. Noise Management and Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
All vehicles to comply with strict speed limit of 5km/hr internal and external to the building	Operations Management	Continuous
Commercial skip bin collection vehicles will only access the Facility on Mon-Fri between 7am and 3pm. Private vehicles will not be accepted.	Operations Management	On-going
Private vehicles will only access to the Facility on Saturdays between 8am and 2pm and Sundays between 10am and 1pm. Commercial vehicles will not be accepted.	Operations Management	On-going
Best management practice will be implemented including all reasonable and feasible noise management and mitigation measures to prevent and minimise operational, low frequency and traffic noise generated by the Facility.	Operations Management	On-going
Noise impacts of the Development will be minimised during adverse meteorological conditions.	Operations Management	On-going

Mitigation Measures	Responsibility	Timing / Frequency
Noise suppression equipment on plant will be maintained effectively at all times.	Operations Management	On-going
All doors and openings are to be completely closed during noisy activities	Operations Management	During noisy activities
Operation of the waste plant and machinery to be performed between 3pm and 6pm Mon to Fri, and 2pm to 4pm Saturdays and 1pm to 3pm Sundays (when doors are closed and vehicle access is not permitted).	Operations Management	Daily based on allowed operational times for waste plant and machinery
Throttle down or switch off idle plant and equipment.	Operations Management	On-going
Defective plant will not be used operationally until fully repaired.	Operations Management	On-going
Commercial skip bin collection vehicles operating on the site will be fitted with the High and Low Buzzer system, designed to minimise noise associated with reversing alarms in accordance with the Australian Vehicle Standard (Australian Design Rule 42/04) and Heavy Vehicle (Adoption of National Law) Act 2013.	Site Management	During equipment purchase and as needed
Regularly assess noise emissions and relocate, modify, and/or stop operations to ensure compliance with the relevant conditions of consent.	Operations Management	On-going
Mobile plant operation will only occur inside the processing building and mobile plant will be fitted with low frequency white noise reversing alarms.	Operations Management	On-going
Noise emissions from the Facility will be in compliance with the requirements of the NSW EPA's *Noise Policy for Industry*	Operations Management	On-going

5.5. Stormwater management

Implementation of the designed Stormwater Management System will mitigate the impacts of stormwater run-off from and within the Facility. The stormwater controls for the Facility include:

- A 120,000L rainwater harvesting system to be used for dust suppression (misting) and amenities (toilet flushing) and irrigation;
- An inground drainage system designed to the 10-year ARI storm event;
- Surface inlet pits fitted with Enviropod pit inserts (fitted with Oilsorb to capture oils and grease) for treating stormwater in runoff from hardstand areas;
- An on-site detention tank with a capacity of 70m³ with a combination of orifice and weir discharge controls to allow for staged discharged into existing Council pit in the street. The OSD is fitted with a shut off/knife valve at the discharge outlet of the development's drainage system to prevent any contaminated fire water leaving the site and entering the council drainage system
- A proposed fire containment storage of 1,235m³ within the basement. Any firewater entering the external hardstand areas will be contained within the OSD and the underground drainage lines within the development. A shut off/knife valve is provided to prevent firewater entering council's drainage system.

Detailed management and monitoring measures of the stormwater drainage system are to be implemented for the operation of the development as outlined in Table 5.5.

Table 5.5. Stormwater drainage system monitoring and maintenance schedule.

Mitigation Measures	Responsibility	Timing / Frequency
General		
Inspect and remove any build-up of sediment, debris, litter, and vegetation within drainage system.	Operations Management / Maintenance Contractor	Monthly or after rain event
Remove grate and inspect internal walls and base, repair where required. Remove any collected sediment, debris, litter, and vegetation. (e.g. Vacuum truck) Inspect and ensure grate is clear of sediment, debris, litter, and vegetation. Ensure flush placement of grate on refitment.	Operations Management / Maintenance Contractor	Quarterly/ after major storm
Inspect all drainage structures noting any dilapidation, carry out required repairs.	Operations Management / Maintenance Contractor	Bi-annually
Rainwater Tank		
Inspect first flush device to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace.	Operations Management / Maintenance Contractor	6 monthly
Check for evidence of access by animals, birds or insects including the presence of mosquito larvae. If present, identify access point and close. If evidence of algal growth, find and close points of light entry.	Operations Management / Maintenance Contractor	6 monthly

Mitigation Measures	Responsibility	Timing / Frequency
Check structural integrity of tank including roof and access covers. Any dilapidation including holes or gaps are to be noted and repaired.	Operations Management / Maintenance Contractor	6 monthly
Gross Pollutant Trap		
Refer to manufacturer's operation and maintenance manual.	Operations Management / Maintenance Contractor	As per manufacturer's manual
On-Site Detention (OSD) Tank		
Trash Screen located in south west corner of tank. Grate opening tool may be required to open grate to gain access into OSD tank. Inspect trash screen to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace.	Operations Management / Maintenance Contractor	Six monthly/ after major storm
Orifice plate located on wall behind trash screen. Inspect orifice plate to ensure correct operation. Check orifice diameter size is correct, and no damage is present to orifice edge. Check orifice plate is securely fastened to wall with no gaps present between plate and face of wall. If gaps are present fill with sealant or mortar to provide watertight seal. Inspect Outlet pipe beyond orifice plate for any blockages and remove if present.	Operations Management / Maintenance Contractor	Six monthly/ after major storm
Inspect weep holes in base of sump. Ensure weep holes are able to drain effectively and remove accumulated sediment and debris if present.	Operations Management / Maintenance Contractor	Six monthly/ after major storm
Check structural integrity of tank including roof and access covers. Any dilapidation including holes or gaps are to be noted and repaired.	Operations Management / Maintenance Contractor	6 monthly

5.6. Vermin and Pests

Environmental controls listed in Table 5.6 will be implemented to minimise the potential for vermin and pests at the Facility.

Table 5.6. Vermin and Pest Management and Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
Minimise the amount of unsorted waste in the tip and spread area.	Operations Management	On-going
Ensure all mixed waste delivered is sorted and separated prior by the close of operations each day.	Operations Management	Daily
Remove and dispose off-site of any waste that has the potential to generate odour and attract pests or vermin.	Operations Management	Daily
Regularly clean waste floors, walls, and all loading areas, including mechanical sweeping of the building floor following periods of high traffic volumes.	Operations Management	Daily
All overhead structures and internal roofs are visually inspected weekly to ensure they are kept clean.	Operations Management	Weekly
Ensure roller doors are kept closed at all times, except during entry and exit of vehicles (to avoid entrapment of birds or other pests in the building).	Operations Management	On-going
The grounds are kept in good condition to limit harbourage for pests by ensuring grounds and gardens are kept free from excessive weeds and undergrowth.	Operations Management	On-going
The drainage sumps and catch drains are inspected daily and cleaned regularly to prevent providing a potential habitat for pests.	Operations Management	Daily
Daily litter patrols are conducted to remove any windblown litter. Incorporated in the litter patrol is an inspection for the emergence of potential vector habitats.	Operations Management	Daily
Inspection of the site by a registered pest controller.	Operations Management	Every three months for the first year, and at least annually thereafter
If required, implement a spray and bait program as directed by the registered pest controller.	Operations Management	As needed

5.7. Pollution and incident response management

A Pollution Incident Response Management Plan (PRIMP) has been prepared for the facility to meet the requirements of the POEO Act and POEO (General) Regulations (refer to Attachment 9) and has been incorporated into this OEMP. The PIRMP outlines the protocol to immediately notify the following agencies in the event of an emergency or incident which is determined to have caused or threatened material harm to the environment:

- NSW EPA
- Fire & Rescue NSW
- NSW Health Department - Public Health Unit
- WorkCover NSW
- Singleton Council.

The PRIMP provides the general management strategy that to minimise the risk to the public and all personnel in the event of an emergency including;

- Providing adequate resources including staffing and firefighting equipment.
- Ensuring that all relevant employees would be familiar with the PIRMP.
- Training staff so that a high level of preparedness would be maintained by all people who could be involved in an emergency.
- Periodic review and update of emergency procedures for the Site.

Table 5.7 lists the management and mitigation measures that will be implemented during operation of the Facility to minimise the potential for pollution incidents.

Table 5.7. Pollution Management and Mitigation Measures.

Mitigation Measures	Responsibility	Timing / Frequency
All chemicals, fuels and oils used on site will be stored in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or EPA's Storing and Handling Liquids: Environmental Protection – Participant's Manual 2007	Operations Management	On-going
Accidental spillage or poor management of fuels, oils, lubricants, hydraulic fluids, solvents and other chemicals during the operation of the Development will be controlled through spill management actions to prevent water quality and ecological impacts.	Operations Management	On-going
Spills, leaks or other discharge of any waste(s) or other material(s) will be cleaned up as soon as practicable after it becomes known.	Operations Management	On-going
Dangerous goods will be stored on site according to their respective ADG classes and compatibility.	Operations Management	On-going
In the event of an incident, notification and actions in the Pollution Incident Response Management Plan are to be activated	Operations Management	On-going
Pollution Incident Response Management Plan training is to be provided in weekly toolbox meetings and the plan is to be tested at least once a year.	Operations Management	Training – weekly Testing – at least once per year

5.8. Fire management

A fire safety system has been designed for the Facility. The following sections summarise the key aspects of the fire safety system. Environmental controls listed in Table 5.8 will be implemented to minimise the risk of fire within the facility.

5.8.1. Fire sprinkler system

Thirty-two (32) fire sprinklers are located throughout the building as follows:

- Warehouse – 10 sprinklers;
- Office – 4 sprinklers (2 in office area and 2 in ceiling void);
- Community recycling centre – 6 sprinklers;
- Basement – 10 sprinklers; and
- Pump room – 2 sprinklers.

Fire water will be distributed by two diesel-powered fire sprinkler pumpsets, located in the fire pump room, at a minimum rate of 165 litres per second at 1,000 kPa. Water for the fire sprinkler system will be supplied by three 343,000 litre tanks located at the rear of the facility, providing a total effective capacity of 968,000 litres.

The sprinklers design density of 24mm/min over 280m^2 with a full capacity tank (968,000 litre) provides for 2-hours of fire-fighting capacity. The two diesel-powered fire sprinkler pumpsets are also connected to the town water supply to supplement the rainwater tanks if they are emptied before the fire is contained.

The sprinkler system also consists of a 150mm diameter fire brigade suction point with two 65mm suction fittings and a 4-point sprinkler booster inlet. The Suctions will enable the attending fire brigade to draught from the onsite water source. The fire sprinkler booster assembly provided adjacent the building allows a fire appliance to enter and exit the site in a forward motion and hardstand provided with a 6-metre clearance for emergency access.

5.8.2. Fire hydrant system

The fire hydrant system consists of six external dual check valve fire hydrants and one 150mm 2-point fire hydrant booster assembly will be provided at the boundary of the site within 8 metres of the street hardstand. The 2-point booster is provided at the site boundary with allowance to upgrade to a 4-point booster (additional 2-suction and 2-inlet) to allow for additional capacity to flow above the 20L/s performance of the system with water from a fire pumper appliance.

Fire water will be distributed by one diesel-powered fire hydrant pumpset, located in the fire pump room, at a minimum duty of 20 litres per second at 700 kPa. Water is distributed around the facility via a 150mm diameter fire hydrant ring (FH) ring main.

5.8.3. Fire hose reels

Ten (10) fire hose reels will be wall mounted throughout the facility (refer to Fire Engineering Plans in Appendix 1) as follows:

- Warehouse – 6 fire hose reels;
- Office – 1 fire hose reel;
- Community recycling centre – 1 fire hose reel; and

- Basement – 2 fire hose reels.

All fire hose reels, unless noted otherwise, will be located within 4m of a fire egress/exit. Each fire hose will be 36 metres in length and be made of 20mm internal diameter fabric reinforced non-kinking rubber hose with adjustable nozzle.

The hose reels will operate with a minimum flow rate of 0.33 litres per second and a running pressure of 250 kpa at the outlet of the nozzle when the hose is fully extended.

Water, externally supplied, is distributed around the facility via a 40mm diameter fire hose reel (FHR) ring main.

5.8.4. Containment of contaminated fire water

Contaminated firewater will be contained in the basement of the facility. The basement has a total firewater containment storage volume of 1,235m^3.

Surface inlet pits within the building extents, open-ended droppers and grated trench drains at vehicle access points will discharge fire water to the basement and contain firewater within the building extents.

Any firewater entering the external hardstand areas will be contained within the OSD and the underground drainage lines within the development. A shut off/knife valve will be fitted in order to prevent firewater entering council's drainage system.

Within the basement, a pump out pit will be connected to a pump outlet which discharges into the stormwater drainage system. The shut off/knife valve will be activated in order to prevent firewater entering council's drainage system until all firewater has been safely removed and disposed of appropriately.

Table 5.8. Fire Management and Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
Stockpiles of waste materials in the designated waste storage area will be limited to 3m in height.	Operations Management	On-going
Waste contained in hook lift bins will not exceed the rim of the bin	Operations Management	On-going
Stockpiles of organic material such as timber and mulch will be limited to a maximum of 3m in height in the processing and blending areas.	Operations Management	On-going
Stockpiles of all processed products, aggregates and landscaping supplies will be limited to 3m.	Operations Management	On-going

5.9. Waste management

A Waste Management Plan has been prepared to guide how waste will be dealt with in the most environmentally sustainable way. The Waste Management Plan is contained in Attachment 10. Waste management and mitigation measures, additional to those proposed in the WMP, which will be implemented at the Facility are outlined in Table 5.9.

Table 5.9. Waste Management and Mitigation Measures

Mitigation Measures	Responsibility	Timing / Frequency
No materials or waste (as defined by the POEO Act) generated outside the Site will be received at the Site for storage, treatment, processing or reprocessing except as expressly permitted by the EPL.	Operations Management	On-going
The site will not receive or process on the site more than 95,000 tonnes of waste per calendar year.	Operations Management	On-going
The site will record the amount of waste (in tonnes) received at the Site on a daily basis via weighbridges in place.	Operations Management	Daily
Subcontractors will be informed of site waste management procedures.	Operations Management	On-going
Liquid and non-liquid waste(s) will not be unlawfully deposited on the premises.	Operations Management	On-going
Waste received at the Facility is assessed and classified in accordance with the EPA's *Waste Classification Guidelines* as in force, from time to time	Operations Management	On-going

6. Environmental Incidents Management Strategy

An environmental incidents management strategy has been developed to ensure that any environmental incident caused by or relating to the operation of the Development is effectively responded to, and any resulting adverse environmental and/or community impact is promptly prevented or effectively managed.

The following procedure is for general environmental incidents that have the potential to cause material harm to the environment. Smaller, minor incidents will be managed in accordance with the Facility's Environmental Emergency Response Plans attached to this document.

6.1. Responsibility

Eco Logic's Management is responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of an environmental incident.

All employees and contractors are to:

- Take immediate action to notify Site Management of any environmental incident; and
- Take immediate action (where it is safe to do so) to prevent, stop, contain and/or minimise the environmental impact of the incident.

6.2. Handling Procedure

Upon becoming aware of an environmental incident, Eco Logic's Management is to undertake the following:

Preventative Action

Where possible and it is safe to do so, immediate action should be taken to prevent, stop, contain and/or minimise the environmental impact of the incident. This may include:

- Making all efforts to contain all fire water at the Facility;
- Making all efforts to control air pollution from the Facility;
- Making all efforts to contain any discharge, spill or run-off from the Facility;
- Making all efforts to prevent flood water entering the Facility; and
- Making the Facility secure.

In the unlikely event that a pollution incident requires the evacuation of the Site, actions will be completed in accordance with the Pollution Incident Response Management Plan (Attachment 9). All employees and contractors are informed of the location of emergency assembly areas through site inductions, signage and toolbox talks.

Notify

Under the provisions of the POEO Act, there is a duty to notify any incident that has caused or threatens to cause material harm to the environment and all relevant information about the incident. This duty extends to the following:

- A person engaged as an employee or contractor must, immediately after becoming aware of the incident, notify the employer of the incident and all relevant information. If the employer cannot be contacted, the person is required to notify each relevant authority and provide all relevant information; and

- An employer who is notified of an incident or who otherwise becomes aware of an incident must, immediately after becoming aware of the incident, notify each relevant authority and provide all relevant information.

Under the POEO Act, the "relevant authority" means any of the following:

- The appropriate regulatory authority (refer to Table 2.3 above);
- If the NSW EPA is the appropriate regulatory authority - the NSW EPA;
- If the EPA is not the appropriate regulatory authority - the local authority for the area in which the pollution incident occurs (i.e. Council);
- NSW Health;
- SafeWork NSW; and
- Fire and Rescue NSW.

Relevant contact details are listed in Table 5 lists the contact details for the regulatory authorities that have an interest in the Development.

Eco Logic will provide written details of the notification to the Secretary (DPE), EPA and any other relevant agencies within 7 days of the date on which the incident occurred.

In the event of a serious incident or emergency, it is more than likely that the Fire and Rescue NSW and/or the EPA will take control and manage the required investigation and remedial activities. Any instructions issued must be strictly adhered to.

Assistance

Where assistance is required handling the situation, the Operations Manager should be contacted.

Where the incident is reported via a government agency (i.e. Council or the EPA), The Operations Manager must be notified immediately (even if outside of normal business hours).

If adequate resources are not available and the incident threatens public health, property or the environment, it is essential that Fire and Rescue Service NSW and/or the EPA be contacted. Relevant contact details are listed in Table 2.3 lists the contact details for the regulatory authorities that have an interest in the Development.

Investigate

Undertake immediate investigative work to determine the cause of the incident.

Remedial Action

Undertake appropriate remedial action to address the cause of the incident and mitigate any further environmental impact. In some instances, outside resources such as specialist contractors/consultants may be required.

Remedial action may include:

- Remediate and rehabilitating any exposed areas of soil and/or waste; and
- Monitoring surface water leaving the premises.

Record

An assessment of the incident will be conducted and documented to minimise the potential for similar events in the future. Every environmental incident will be recorded in Eco Logic's electronic record system. If the system is unavailable, then the incident will be recorded on Eco Logic's Non-Conformance Report. A copy of all completed forms should be maintained for at least four years.

Review

In the instance an incident report is submitted, the Environmental Incident Management Strategy will be reviewed in accordance with Table 10.1 below.

6.3. Preventative Action

Once the incident has been suitably handled, appropriate preventative measures should be identified and implemented to negate the possibility of re-occurrence.

6.4. Environmental Response Plans

The following documents include identification of situations that have the potential to impact the environment and measures to prevent, respond to and mitigate such impacts:

- Procedure for Traffic Management;
- Procedure for Dust and Litter Minimisation;
- Procedure for Minimising Noise Pollution;
- Procedure for Non-Conforming Waste;
- Procedure for Stormwater Pollution Prevention;
- Procedure for Emergency Preparedness and Response;
- Procedure for Fire Prevention
- Procedure for Weighbridge Management
- Pollution Incident Response Management Plan; and
- Waste Management Plan

Collectively, these documents are known as the Facility's Environmental Response Plans and are attachments to this OEMP.

Table 6.1 provides an overview of each Environmental Emergency Response Plans.

Table 6.1. Environmental Emergency Response Plans.

Environmental Response Plans	Purpose of the Plan
Procedure for Traffic Management	• To ensure the safe movement of vehicular and pedestrian traffic, the protection of workers from passing traffic and to minimise conflict between vehicles accessing properties located within the limits of the Facility
Procedure for Odour, Dust and Litter minimisation	• To ensure the facility does not accept odorous waste • To ensure that no dust leaves the facility • To ensure that no litter escapes the facility
Procedure for Minimising Noise Pollution	• To ensure that noise pollution is minimised on the site and the facility fully complies with the EPA's Noise Policy for Industry
Procedure for non-conforming waste	• To ensure that non-conforming waste (waste that does not meet the NSW EPA classification of *General waste – non-putrescible*) is not received at the site • If non-conforming waste is found on the site, to ensure it is managed in a way that minimises harm to human health and the environment
Procedure for Stormwater Pollution Prevention	• To ensure that the stormwater system functions effectively • To ensure that the quality of receiving watercourses and rivers is not impacted by stormwater from the site

Environmental Response Plans	Purpose of the Plan
Procedure for Emergency Preparedness and Response	• To ensure that fire safety requirements are met and to identify fire hazards to human health and the environment
Procedure for Fire Prevention	• To ensure that fire safety requirements are met and to identify fire hazards to human health and the environment • To ensure that all fire risks are minimised on the site
Procedure for Weighbridge Management	• Sets out procedural aspects to ensure all waste received and products / waste transported out of the facility is accurately recorded and reported on a monthly basis to the EPA • Ensure compliance with Clause 36 of the *Protection of the Environment Operations (Waste) Regulation* 2014
Pollution Incident Response Management Plan	• Ensure comprehensive and timely communication about a pollution incident to staff, EPA, authorities and other stakeholders • Minimise and control the risk of a pollution incident by identifying risks and planning actions to minimise and manage them • Ensure that the plan is properly implemented by nominated trained staff, and regularly tested
Waste Management Plan	• Minimise the adverse environmental impacts associated with waste storage and collection; • Ensure that waste storage areas are conveniently located for both the user and waste collector; • Minimise the likelihood of illegal dumping; • Ensure optimum hygiene in the management of waste; • Minimise adverse amenity impacts associated with waste storage; and • Discourage illegal dumping by providing on site storage, and removal services.

7. Implementing the OEMP

The primary objective of the implementation and operation stage is to ensure that the support processes are in place to manage environmental risk.

7.1. Roles and responsibilities

Personnel have allocated responsibilities under this OEMP. These responsibilities relate predominantly to overall accountability, setting and maintaining strategic direction, allocation of resources, provision of business support services and management review. These are summarised below:

7.1.1. General Manager

Under this OEMP, the General Manager is accountable for:

- Corporate environmental commitment for the facility;
- Endorsing the Environmental Policy; and
- Ensuring the availability of resources to implement the OEMP.

7.1.2. Operations Manager

Under this OEMP, the Operations Manager is accountable for:

- Implementation of the Environmental Policy;
- Establishment, maintenance and implementation of the OEMP and its procedures;
- Establishment, maintenance, and implementation of the PIRMP;
- Reporting environmental performance against the OEMP to the General Manager; and
- Management of allocated resources to implement and maintain the OEMP.

7.1.3. Employees

Under this OEMP, the Employees are accountable for:

- Implementation of the Environmental Policy (as applicable);
- Implementation of the OEMP and its procedures (as applicable); and
- Implementation of the PIRMP (as applicable).

7.2. Training and Awareness

The management of training and awareness generally incorporates the following elements.

7.2.1. General Induction Training

The general induction is general training that incorporates the WHS requirements for the relevant position. Contractor personnel are required to undertake this WHS training. The induction training is to be delivered by the Operations Manager. This training will be specific to the individual role of the staff member and will require a detailed review and acceptance of these documented procedures.

The specific induction is to include but not be limited to:

- Safety and operating procedures and the correct identification of environmental hazards;
- Operation of plant and equipment;
- Identification of wastes;

- Accurate data recording;
- Emergency Response Plan as outlined in this OEMP; and
- Pollution incident response management plan.

7.2.2. General environmental awareness

All employees and contractor personnel shall receive Environmental Awareness training. The General Environmental Awareness Training program shall include the following:

- The Environmental Policy;
- Sensitive environments and neighbours around their work area;
- Significant Environmental Activities;
- Site Legal and other requirements; and
- OEMP non-conformance reporting requirements.

7.2.3. Induction

All employees shall undergo induction training which comprises:

- Overview of the OEMP;
- objectives and targets;
- Environmental Management Plans and their responsibilities under their OEMP; and
- Reporting the status of their actions under the OEMP.

7.2.4. Ongoing training

The ongoing competency and training requirements will be reviewed on an annual or as-needs basis depending on staffing at the site and triggers for ongoing training such as:

- Changes in procedures;
- Changes in regulations;
- Equipment upgrades or changes in equipment;
- Errors or deficiencies in job performance; and
- Errors in data reporting.

8. Communicating the OEMP

8.1. Internal Communications

The minimum internal communications required to administer, maintain and update the OEMP is outlined in Table 8.1.

Table 8.1 Minimum internal communications.

Position	Internal communications with:

General Manager	• Operations Manager
	  • Promote Environmental Policy
	  • Performance against the OEMP Objectives and Targets
	  • OEMP and compliance audit results

Operations Manager	• General Manager:
	  • Consult and obtain approval for Objectives and Targets
	  • Immediate notification of pollution incidents of material harm to the environment
	  • Annual reporting on:
	  • Performance against the OEMP Objectives and Targets
	  • OEMP and compliance audit results
	  • Quarterly reporting on:
	  • Performance against the OEMP Objectives and Targets
	  • Pollution incidents and status of incident closure
	  • Progress implementing the OEMP
	  • Status of corrective actions closure
	• Operational Staff
	  • Leading the OEMP Management Review
	  • Liaison and annual update of OEMP and EMPs

Operator/contractors	• Operations Manager
	  • Immediate notification of pollution incidents of material harm to the environment
	  • Notification of non-material of pollution incidents within 24 hours of occurrence
	  • Monthly reporting on:
	  • Pollution incidents and status of incident closure
	  • Progress implementing the OEMP
	  • Corrective actions arising from site inspections and other surveillance

8.2. External Communications

All external communications must be undertaken in accordance with corporate protocols on communications with stakeholders and the media.

The minimum external communications required to administer, maintain and update the OEMP and personnel responsible for the communication is outlined in Table 8.2.

Table 8.2. Minimum external communications.

Message type/frequency	Responsibility allocated to:	Method of communication:
Media response, media releases and/or material pollution incidents (As required)	General Manager	Telephone, email, letter. Media release website
Licence Monitoring Data (as required)	Operations Manager	Website
Notification to regulators and emergency response of material pollution incident (as required)	General Manager / Operations Manager	As per PIRMP
Notification to stakeholders of non-material pollution incident (as required)	General Manager / Operations Manager	Telephone, email, letter, website
Response to community complaints and/or non- material pollution incidents	General Manager / Operations Manager	Telephone, email, letter.

8.3. Community complaints

A community complaints handling process has been developed to ensure all environmental complaints regarding the operation of the Facility are promptly and effectively received, handled, and addressed.

Eco Logic is responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of a complaint. All employees and contractors who receive a complaint, either verbal or written, are to immediately notify Site Management.

Community complaints relating to the Facility can be received via:

- Eco Logic company or site office;
- Eco Logic Complaints and Feedback number – TBC.
- Eco Logic Internet enquiry - TBC and/or
- Through a government agency (i.e. Council or EPA).

8.3.1. Handling Procedure

Upon becoming aware of a complaint, Eco Logic Site Management is to undertake the following:

Receive

In the normal course of events, the first contact for complaints will usually be made in person or by telephone.

While this should instigate investigative action, a formal written complaint should be requested. Where the initial contact reaches an employee or contractor who is not a representative of Site Management, the call should be directed to Site Management. If unavailable, the complainant's details should be taken with a view to returning the contact once Site Management is in a position to discuss the matter.

The complainant's name, address and contact details, along with the nature of the complaint, must be requested. If the complainant refuses to supply the requested information, a note should be made on the form and complainant advised of same. The date and time of the complaint will also be recorded along with the method the complaint was made.

Assistance

Where assistance is required handling the situation, Eco Logic Management should be contacted. Where the complaint is reported via a government agency (i.e. Council or the EPA), Eco Logics General Manager must be notified immediately (even if outside of normal business hours).

Investigate

A field investigation should be initiated in an attempt to establish the legitimacy of the complaint and the cause of the problem. Eco Logic's Management should be consulted to identify any abnormality or incident that may have resulted in the complaint. Details may include heavy vehicle activity, equipment and machinery activities, etc.

If the complaint is due to an environmental incident, the management strategy outlined in Section 6 should be followed, and if the incident has caused or threatens to cause material harm to the environment each of the relevant regulatory agencies must be immediately notified.

Action

Once the legitimacy and cause of the complaint has been established, every possible effort must be made to undertake appropriate remedial action(s) to fix the cause of the complaint and mitigate any further impact.

Inform

The investigative work and remedial action should be reported back to the complainant and, if necessary, the relevant regulatory agencies.

Record

Every complaint received is to be recorded within the complaints register located in Eco Logic's electronic record system. If the system is unavailable, then the complaint is to be recorded on Eco Logic's Incident Non-Conformance Report Form. The complaints register will be updated on a monthly basis and made publicly available on the Eco Logic's website.

The complaints register will record the action taken by Eco Logic in relation to the complaint or if no action taken the reason why no action was taken. Complaint records will be kept for at least 4 years after the complaint was made.

Preventative Action

Once the complaint has been suitably handled, appropriate preventative measures will be identified and implemented to negate the possibility of re-occurrence.

Dispute Resolution

In the event that a dispute arises between Eco Logic and Council or a public authority, in relation to an applicable requirements of the Development Consent or relevant matter relating to the site, either party may refer the matter to the DPE (Secretary of) for resolution. The Secretary's determination of any such dispute must be final and binding on the parties.

In the case of a dispute between Eco Logic and a community member/complainant, either party may refer the matter to the relevant regulatory authority for consideration, advice and/or negotiation. If the matter escalates, a third-party mediator may be required.

9. Document Control

The following documents are controlled documents controlled by Operations Manager:

- The OEMP;
- Environmental Management Plans;
- Forms, templates and proformas;
- Registers;
- Progress reports;
- Monitoring data;
- Annual progress report to management; and
- Statutory monitoring and reporting.

9.1. Document Control Procedure

The current versions of all OEMP Documents are available as 'read-only' documents. An up to date copy (with version control) of each document will held on a secure server with relevant linkages to systems and management.

Only the current, electronic versions of OEMP Documents accessed through the above link are controlled. If using hard copies of OEMP Documents, it is the users' responsibility to ensure that they are using the latest version. All hard copies are uncontrolled.

The Operations Manager is responsible for the storage, review and update of all controlled OEMP documents.

The Operations Manager will maintain a Register of Current Version of OEMP documents. The Register will record Document Title, Current Version Number and Date current version was made effective.

The Operations Manager will ensure that each controlled document is appropriated tagged with Document Title, Current Version Number and Date current version was made effective. In addition, a summary of each revision will be documented in the revision history table on each controlled document.

10. Checking the OEMP

The primary objective of the checking and corrective action stage is to monitor the implementation and effectiveness of the environmental actions identified by the OEMP planning and implementation documentation and identifies corrective actions where necessary.

10.1. Evaluation of Compliance

Non-conformances relating to the Facility activities and the OEMP include the following:

- An incident or near miss with actual or the potential for environmental impact;
- An incident or near miss with actual or the potential for environmental compliance impact with legal requirements;
- A non-conformance with the OEMP requirements described in the EMPs or other environmental directives;
- Non-conformances generated from monitoring and auditing the OEMP and EMPs
- Significant failure to implement mitigation measures; and
- Complaints not resolved within 24 hours.

The Operations Manager, personnel and associated contractors shall be trained into what constitutes a non-conformance and how non-conformance are to be managed.

Non-conformances are to be reported to the Operations Manager who is responsible for the following:

The Operations Manager must:

- Notify the General Manager of the non-conformance in accordance with the timeframe stipulated on the form;
- Implement the corrective actions determined as part of the process; and
- Report to the General Manager on progress and when the corrective actions have been closed out.

Where corrective actions are beyond the control of the Operations Manager, these corrective actions are to be drawn to the attention of the General Manager for support.

The General Manager must:

- Enter the non-conformance on the non-conformance register for tracking;
- Provide support to the supervisor when corrective actions are beyond the control of the supervisor;
- Monitor progress and close out corrective actions on the register; and
- Undertake targeted inspections to verify close out corrective actions.

10.2. Review of Environmental Impacts and Management Plans

The Operations Manager / General Manager shall determine whether the activity generating the non-compliance warrants a re-evaluation of the risk it presents to the environment and associated management plans.

10.3. Auditing the OEMP and Associated Plans

Table 10.1 provides a schedule for auditing the OEMP and associated documents.

Table 10.1. Audit Schedule.

Audit Document	January	February	March	April	May	June	July	August	September	October	November	December
Internal Audit						✓						
External Audit						✓						
Performance of EMS and Plans (Internal)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Compliance with EPL (External)			✓									
Achieving objectives and targets									✓			
Pollution Incident Response Management Plan[1]			✓									

[1] A review of the PIRMP is required to be completed within 30 days of a pollution incident.

11. Adjusting the OEMP

The process is established to facilitate improvement of the OEMP through periodic formal review and discussion of OEMP performance to determine whether the OEMP remains suitable, adequate and effective for the Facility. Consequently, this OEMP is a working document that is designed to ensure any changes that could affect an environmental incident are captured.

11.1. Management Review and Updating the OEMP

Three levels of monitoring are required to implement the obligations under this OEMP. The objectives of these levels of environmental monitoring are to assess whether operations are:

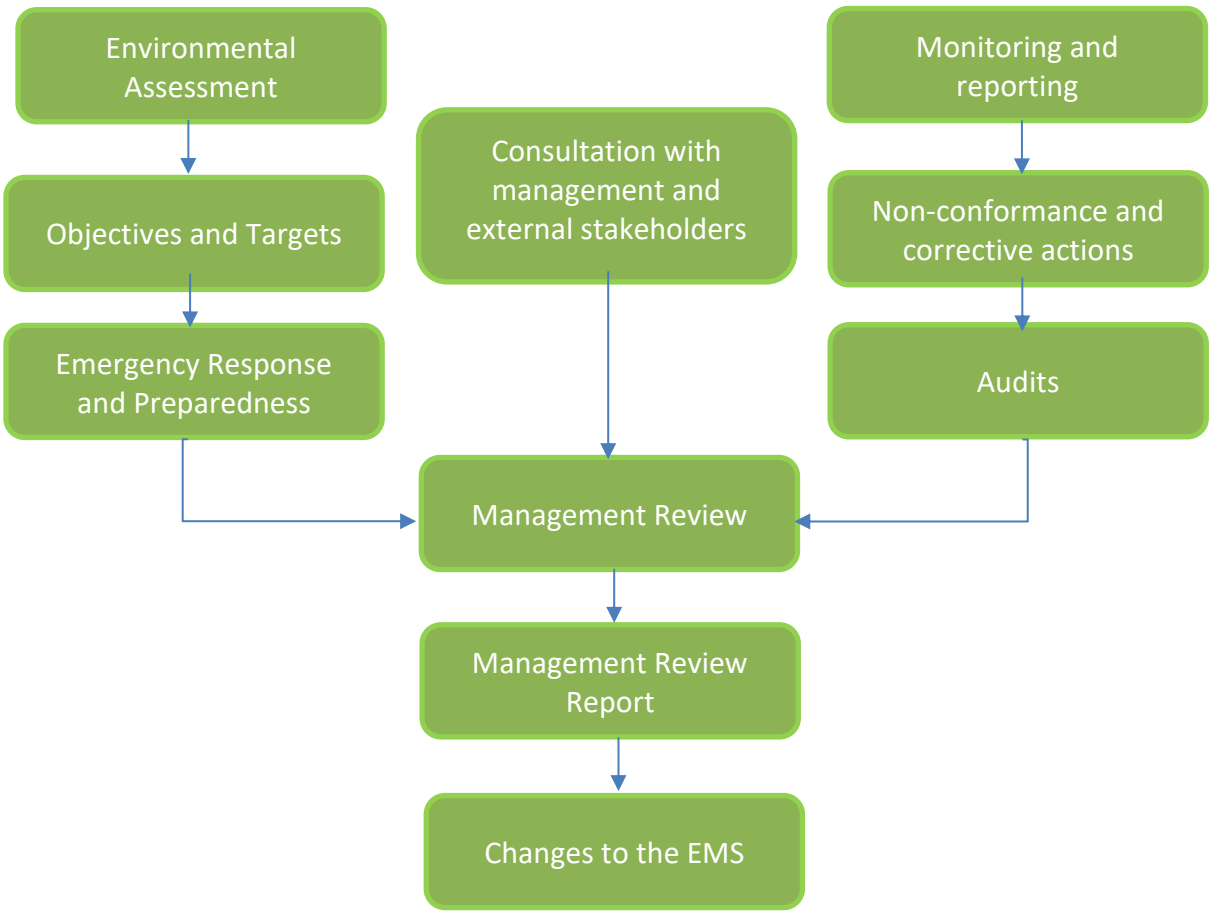
- Meeting environmental regulatory and other obligations;
- Managing significant environmental risks; and
- Meeting Corporate Objectives and Targets.

Monitoring is undertaken via:

- Monitoring required by licences and other statutory instruments;
- Internal and external compliance and system audits; and
- Senior management review.

Management Review process is established to facilitate improvement of the OEMP through periodic formal review and discussion of OEMP performance to determine whether the OEMP is suitable, adequate and effective for the Facility. The Management Review is facilitated by the General Manager, ensuring the recommendations of the Management Review are implemented. This OEMP is to be reviewed annually as a minimum.

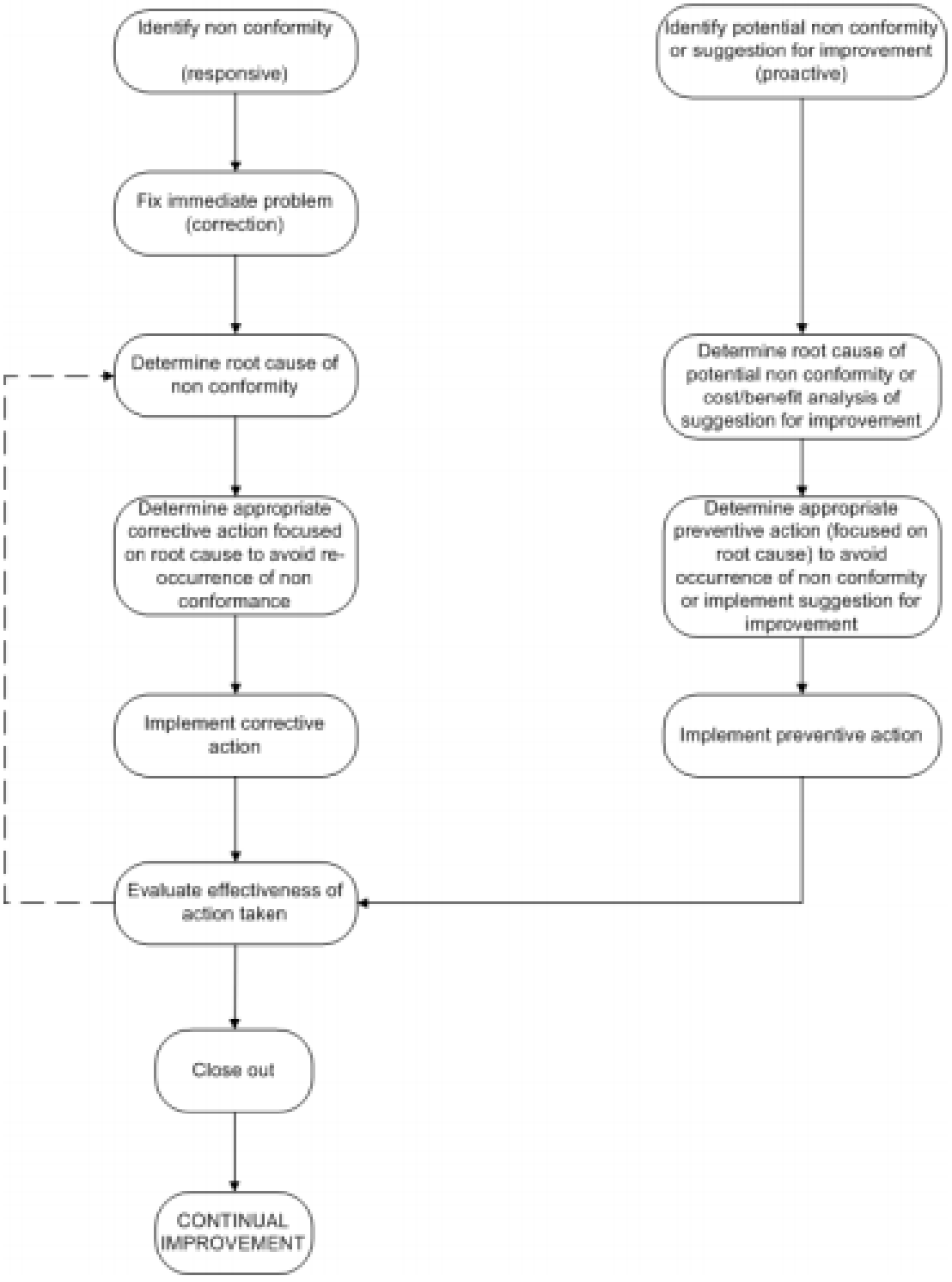
Figure 11.1. Environmental Monitoring, Audit and Review Procedure.



12. Continuous Improvement

The system audits will be conducted in accordance with a schedule nominated in this OEMP. This will include a schedule of independent audits by accredited external auditors. Environmental audits will also assess the Facility against any Conditions of Approval imposed by statutory authorities. The register that is completed during compliance audits become a record of the evaluation of compliance. All detected non-compliances will be followed up with corrective actions as per the flow chart below.

Figure 12.1. Continuous Improvement Process.



Attachment 1: Procedure for Traffic Management

TRAFFIC MANAGEMENT PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To ensure the safe movement of vehicular and pedestrian traffic, the protection of workers from passing traffic and to minimise conflict between vehicles accessing parts of the Facility

2. Responsible Person

Operations Manager

3. Associated Internal Documents

Operational Environmental Management Plan

Pollution Incident Response Management Plan

4. External Reference Documents

NSW *Protection of the Environment Operations Act* 1997

NSW Noise Policy for Industrial (NSW EPA, 2017)

Work Health and Safety Act 2011

Roads Regulation 2008

5. Main Traffic Risks at the Site

Increase in truck movements has the potential for more frequent noise and vibrations at nearby premises and residential houses along the truck haul route.

↓

Interaction between vehicles and pedestrians/employees

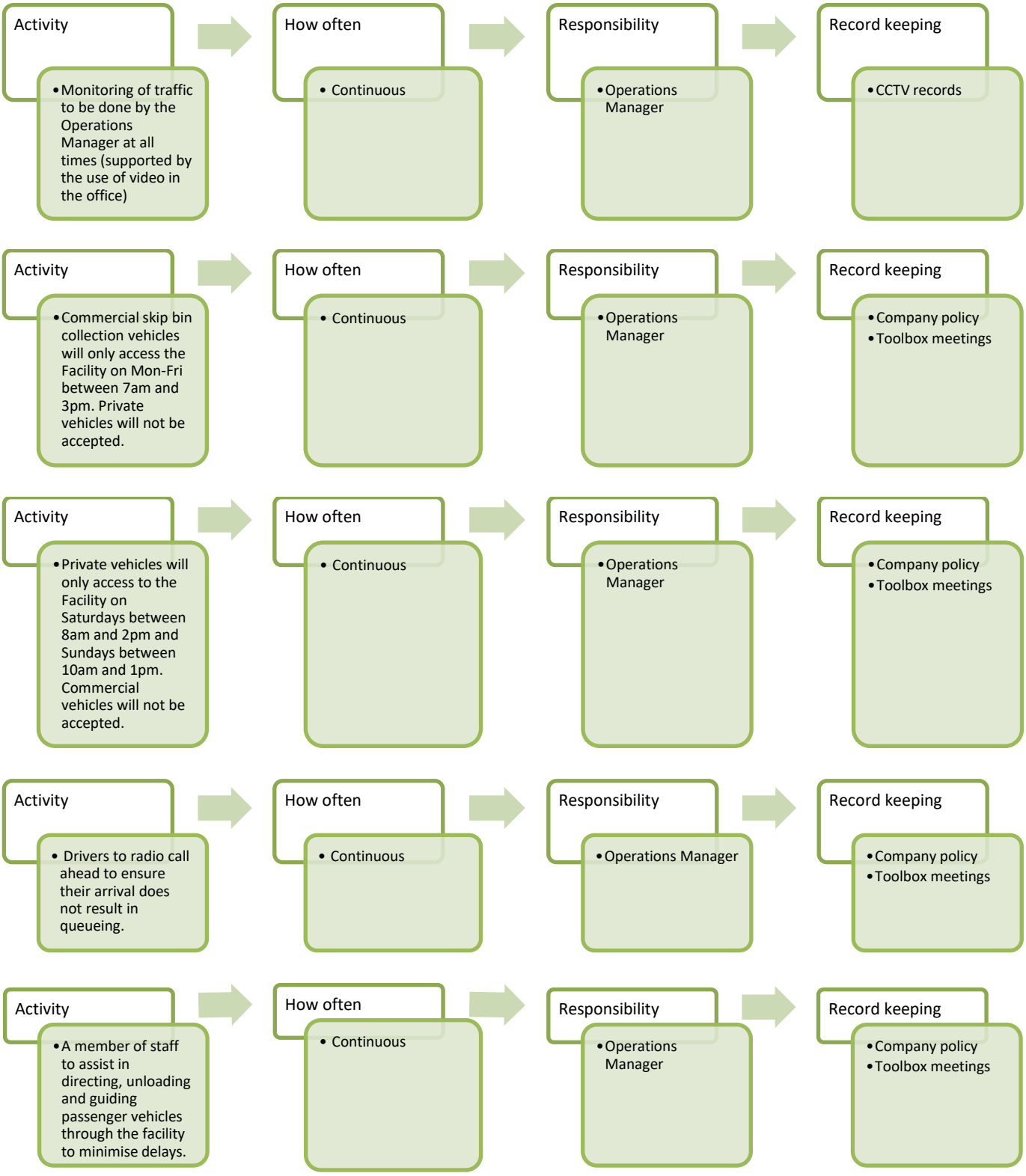
↓

Transportation to and from site outside of approved operating hours

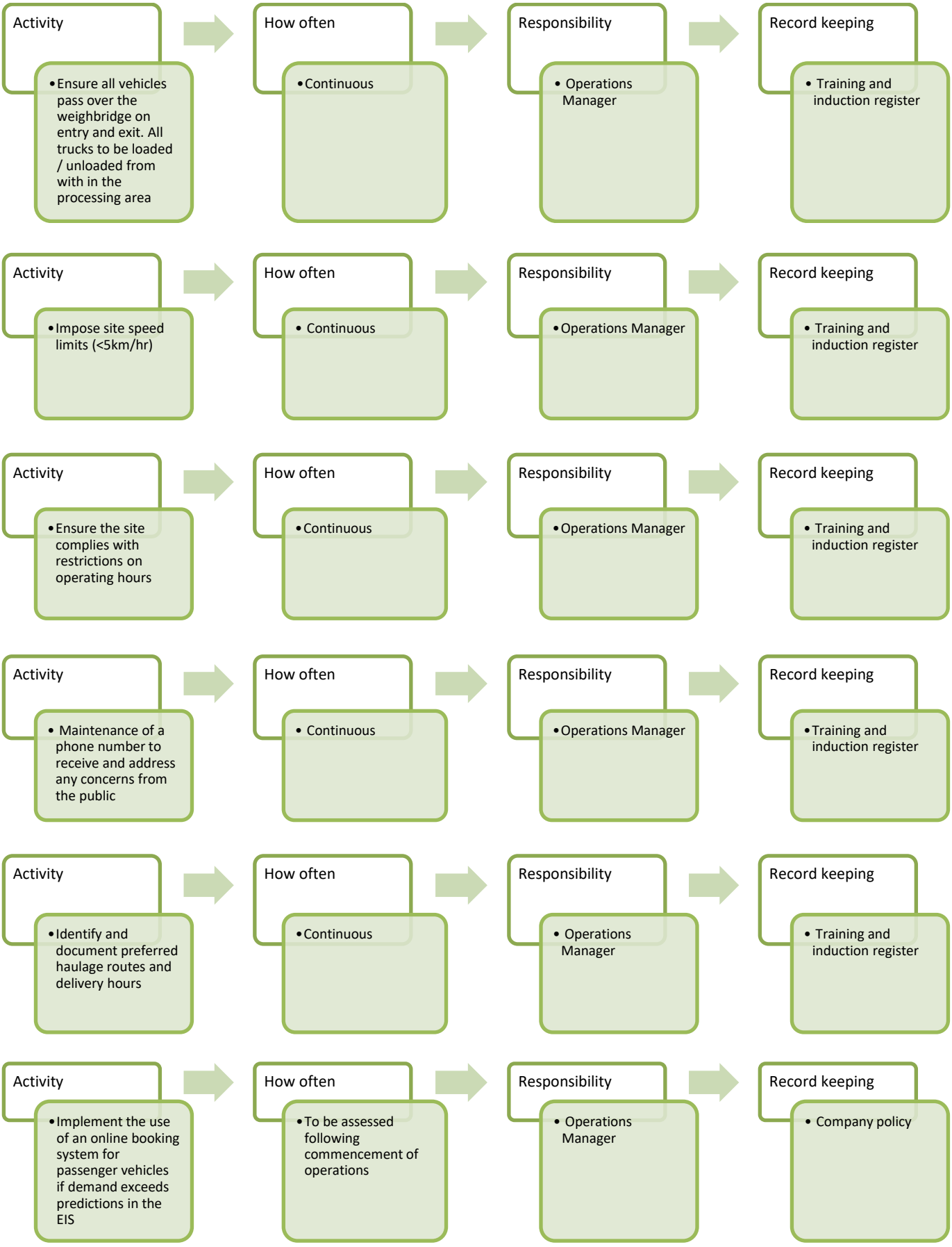
↓

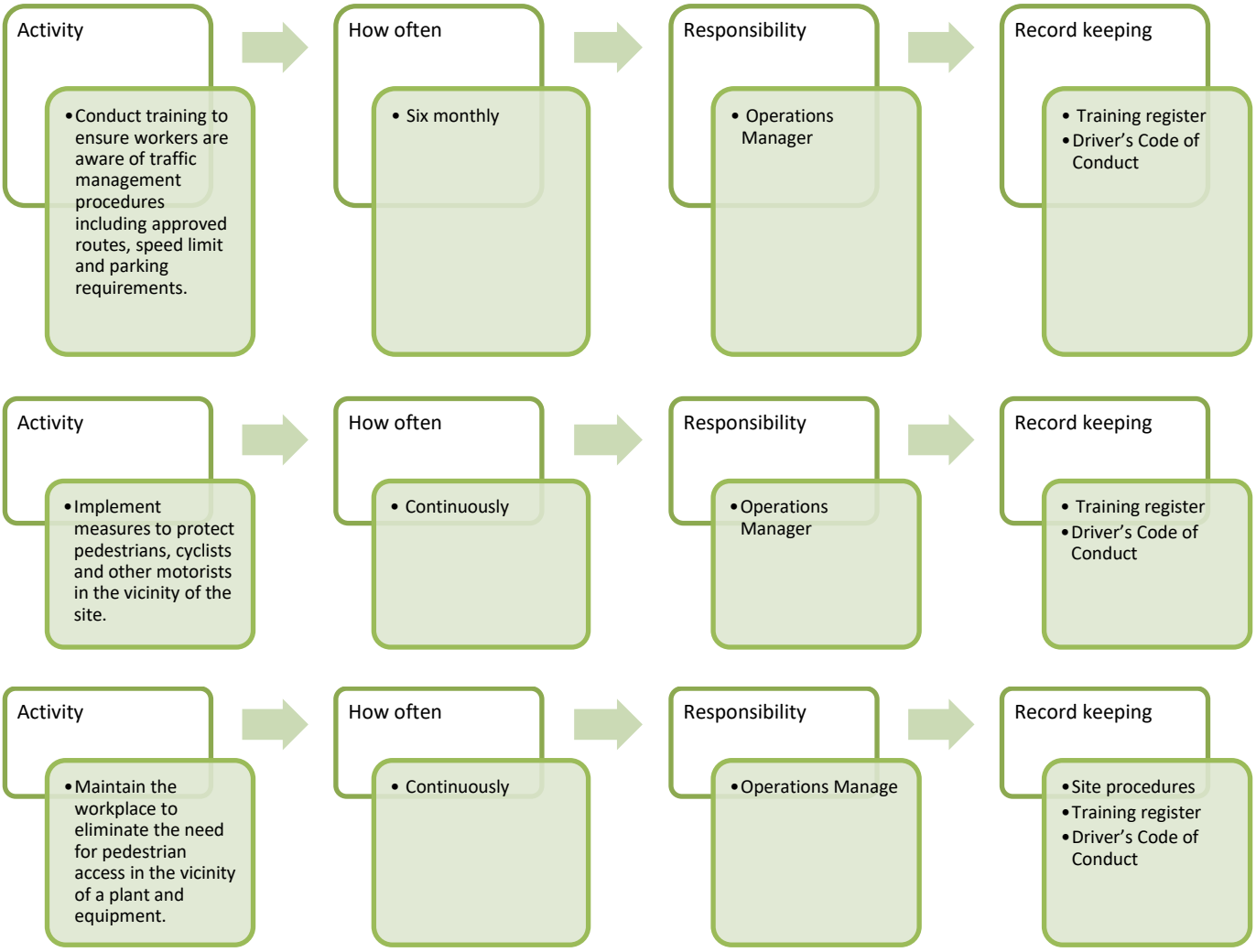
Potential for truck and passenger vehicle queueing to impact the local roads

6. Preventative Measures to Be Undertaken

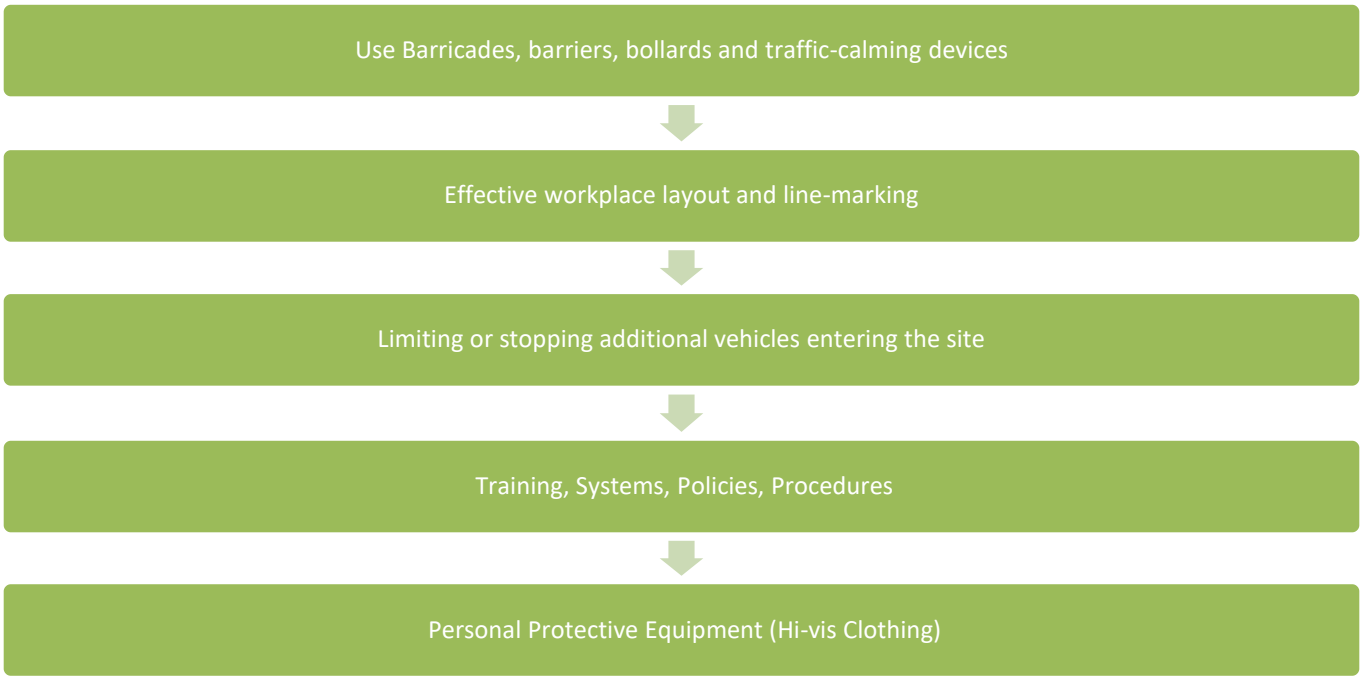


Activity	How often	Responsibility	Record keeping
• All vehicles will enter and leave the site in a forward direction and vehicle flows in accordance with Attachment 1 and 2.	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• Vehicles parking or queuing is note to occur on the public road network. Vehicles to park in waiting areas on the premises (Attachment 1)	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• All vehicles will be wholly contained on site before being required to stop, where practical	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• Throttle down or switch off idle plant and equipment	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• Switch off truck engines while waiting to access the site and while being loaded or unloaded	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• Trucks entering and leaving the premises that are carrying loads will be covered at all times, except during loading and unloading.	• Continuous	• Operations Manager	• Company policy • Toolbox meetings

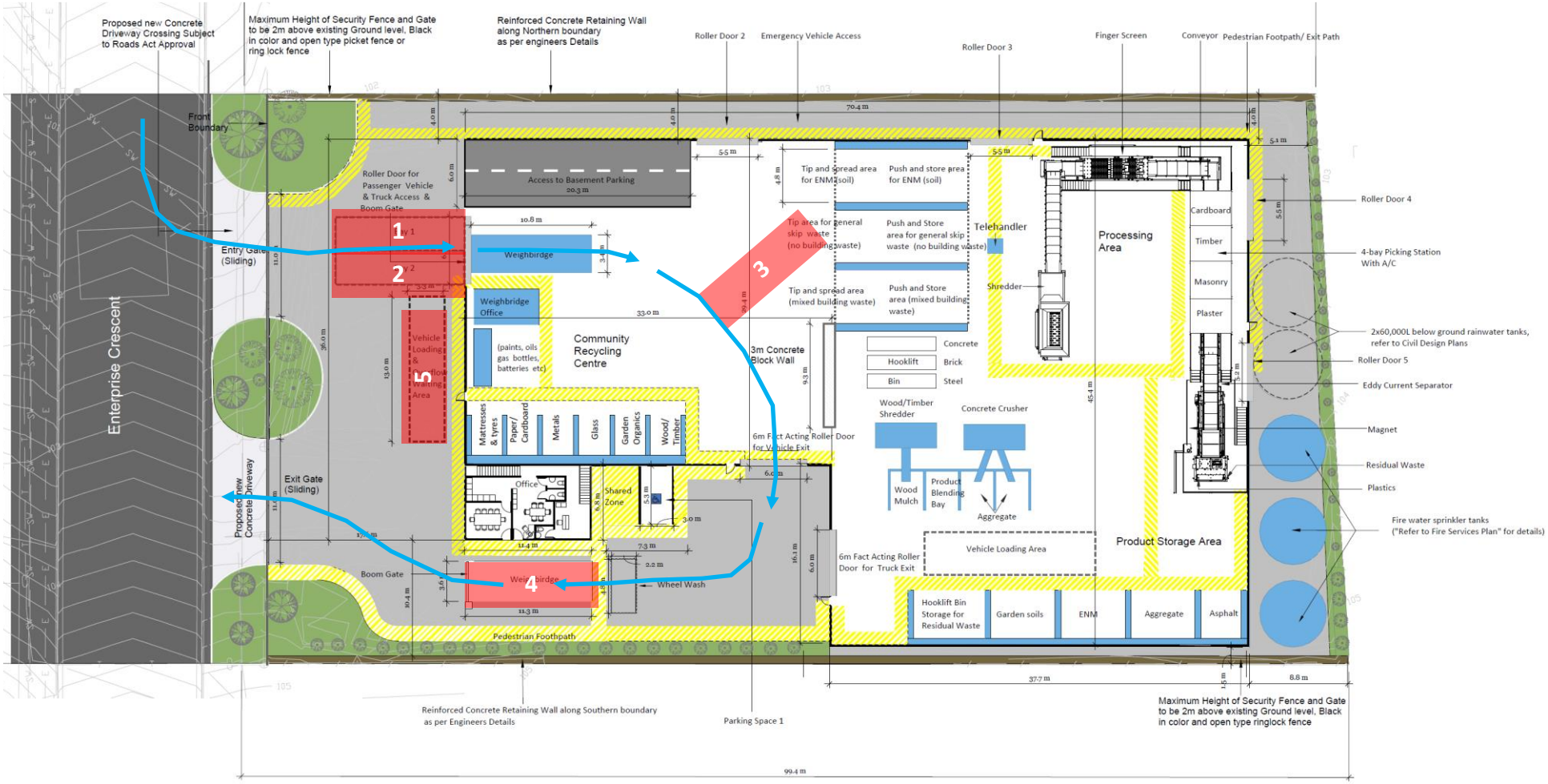

Activity
Ensure all vehicles pass over the weighbridge on entry and exit. All trucks to be loaded / unloaded from with in the processing area
How often
Continuous
Responsibility
Operations Manager
Record keeping
Training and induction register
Activity
Impose site speed limits (<5km/hr)
How often
Continuous
Responsibility
Operations Manager
Record keeping
Training and induction register
Activity
Ensure the site complies with restrictions on operating hours
How often
Continuous
Responsibility
Operations Manager
Record keeping
Training and induction register
Activity
Maintenance of a phone number to receive and address any concerns from the public
How often
Continuous
Responsibility
Operations Manager
Record keeping
Training and induction register
Activity
Identify and document preferred haulage routes and delivery hours
How often
Continuous
Responsibility
Operations Manager
Record keeping
Training and induction register
Activity
Implement the use of an online booking system for passenger vehicles if demand exceeds predictions in the EIS
How often
To be assessed following commencement of operations
Responsibility
Operations Manager
Record keeping
Company policy


Activity
•Conduct training to ensure workers are aware of traffic management procedures including approved routes, speed limit and parking requirements.
How often
• Six monthly
Responsibility
• Operations Manager
Record keeping
• Training register
•Driver's Code of Conduct
Activity
•Implement measures to protect pedestrians, cyclists and other motorists in the vicinity of the site.
How often
• Continuously
Responsibility
•Operations Manager
Record keeping
• Training register
•Driver's Code of Conduct
Activity
•Maintain the workplace to eliminate the need for pedestrian access in the vicinity of a plant and equipment.
How often
• Continuously
Responsibility
•Operations Manage
Record keeping
•Site procedures
•Training register
•Driver's Code of Conduct

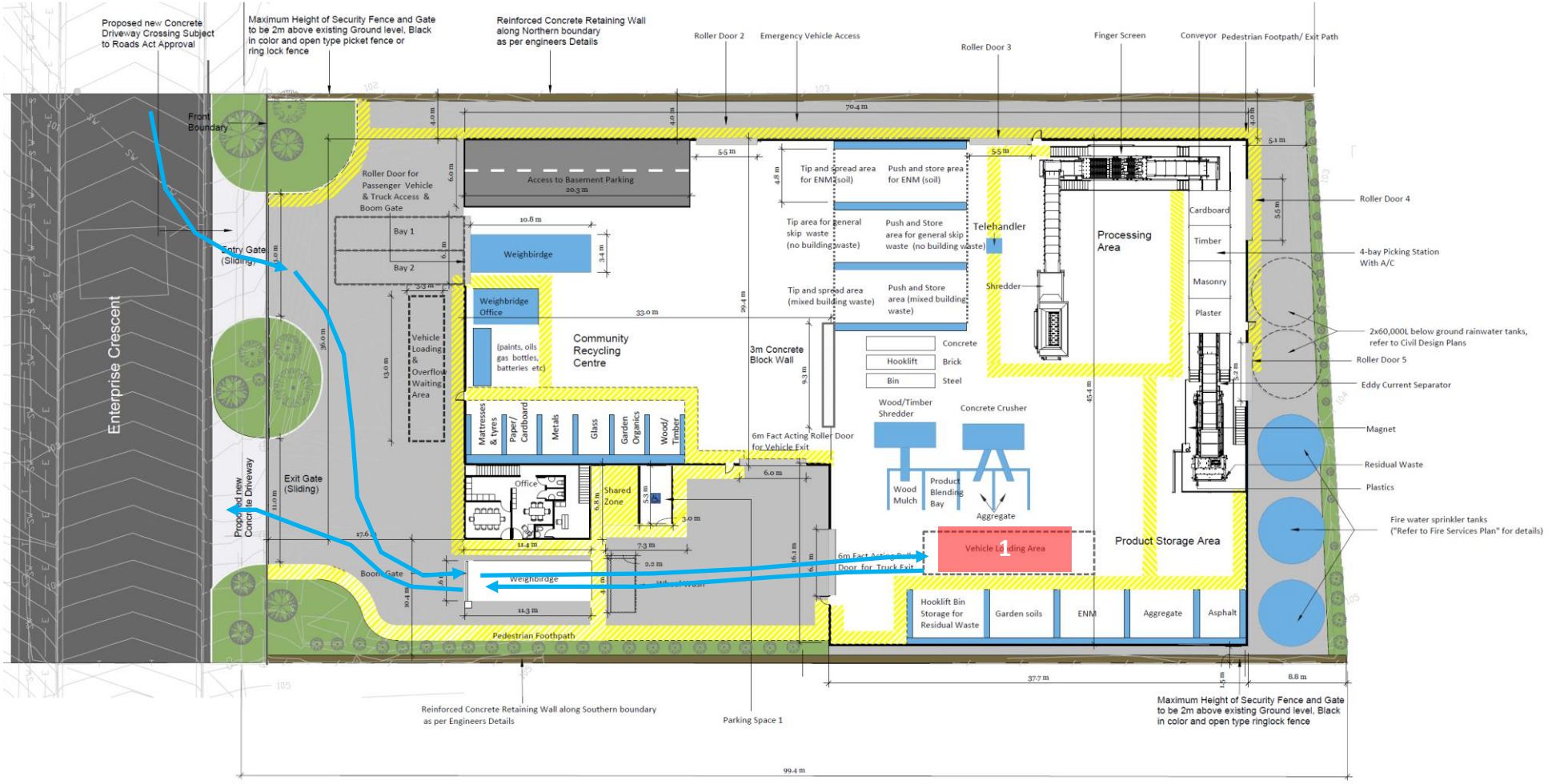
7. Other Traffic Management Control Measures



Attachment 1: Traffic flow (blue arrows) and waiting bay areas (shaded red) for skip bin trucks (weekdays) and passenger vehicles (weekends) to avoid queueing on Enterprise Crescent - waste drop off.



Attachment 2: Traffic flow (blue arrows) for trucks (red shading) picking up waste materials and recycling for off-site transport.



Attachment 2: Procedure for Dust, Odour and Litter Minimisation

DUST, ODOUR AND LITTER MINIMISATION PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To ensure that no dust leaves the site

To ensure that no litter escapes the facility

To ensure that odorous waste materials are not recceived by the facility

2. Responsible Person

Operations Manager

3. Associated Internal Documents

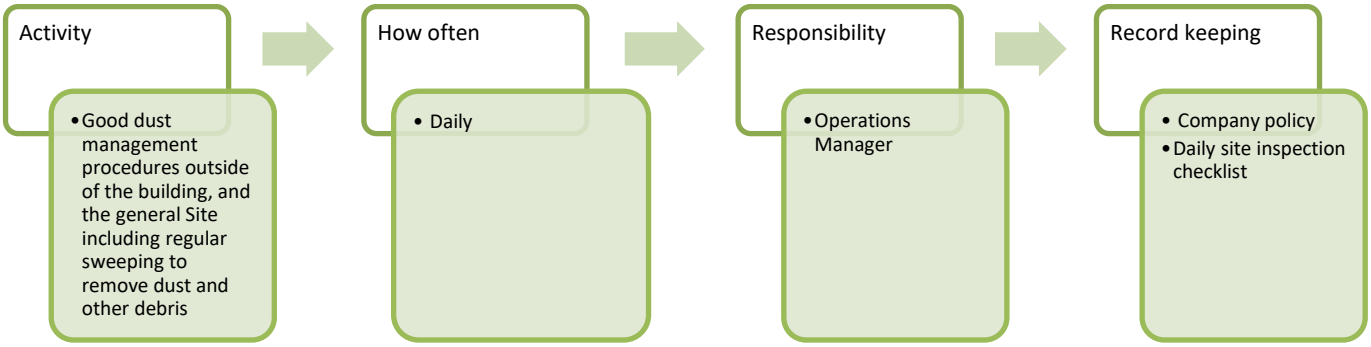
Operational Environmental Management Plan
Pollution Incident Response Management Plan

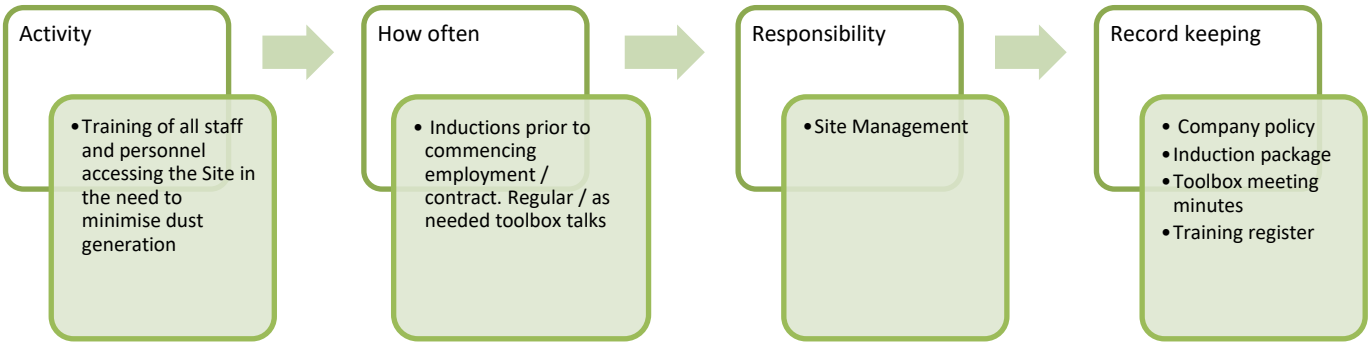
4. External Reference Documents

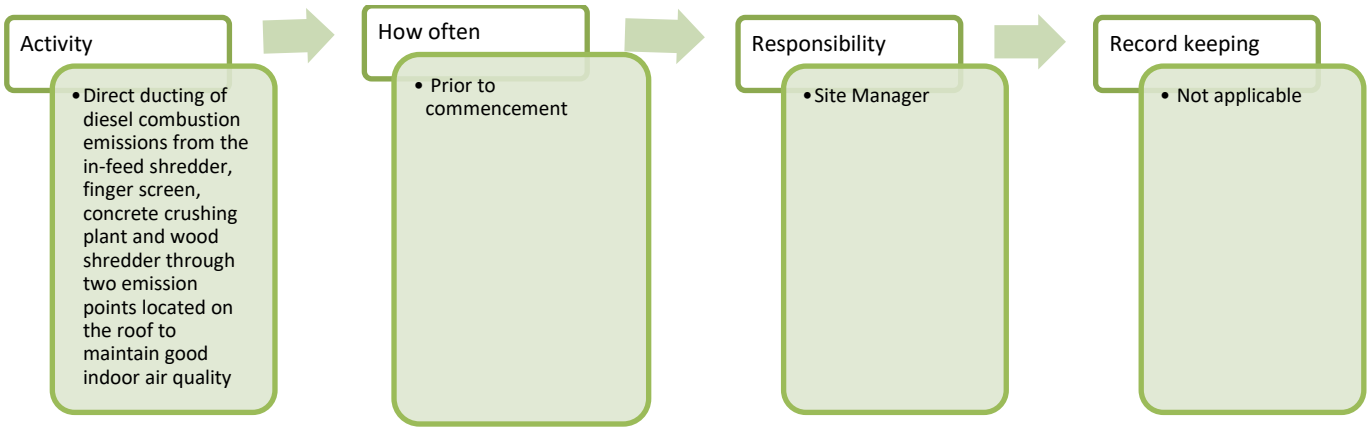
NSW *Protection of the Environment Operations Act* 1997

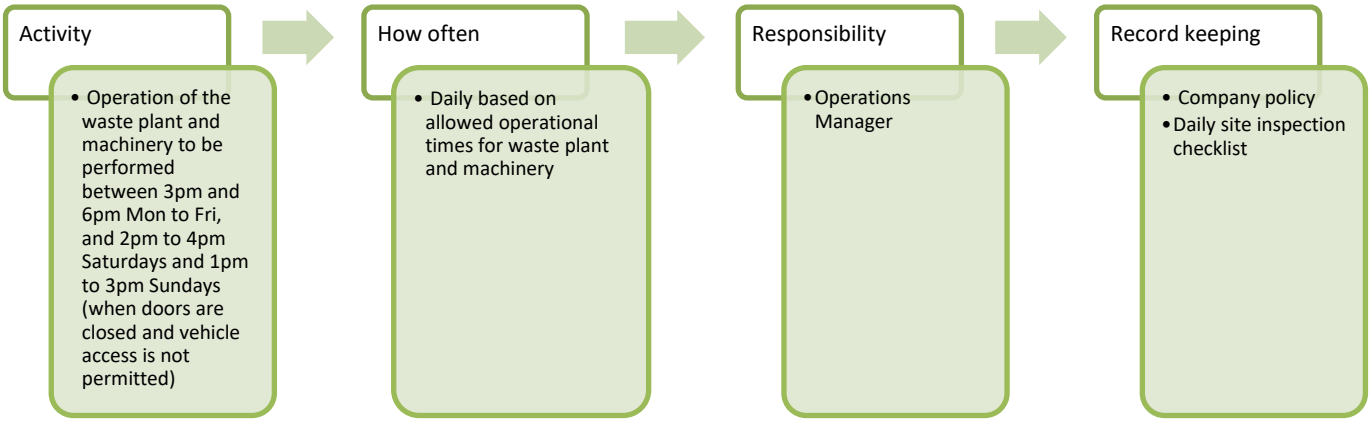
5. Preventative Measures to Be Undertaken

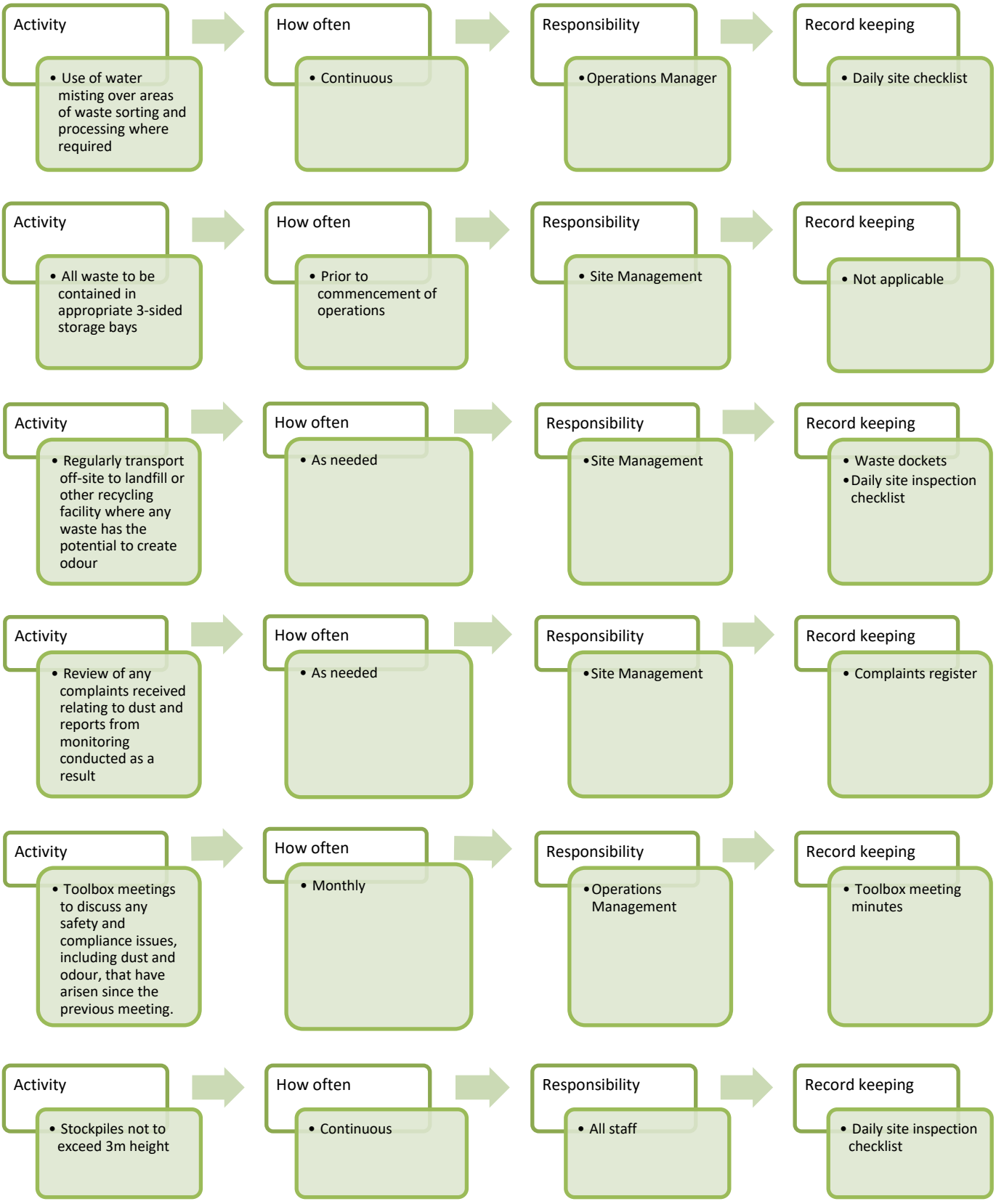
Activity	How often	Responsibility	Record keeping
• All vehicles to comply with strict speed limit of 5km/hr internal and external to the building	• Continuous	• Operations Manager	• Company policy
• All internal and external surfaces are to be paved	• Prior to commencement	• Site Manager	• Not applicable
• All trucks entering and leaving the premises carrying loads must be covered at all times, except during loading and unloading	• During the transport of waste	• Truck Drivers	• Company policy
• Limit load sizes to ensure material is not above the level of truck sidewalls	• During the transport of waste	• Truck Drivers	• Company policy
• Good dust management procedures will be implemented within the building including regular sweeping and moistening of paved areas, as required	• Daily	• Operations Manager	• Company policy • Daily site inspection checklist

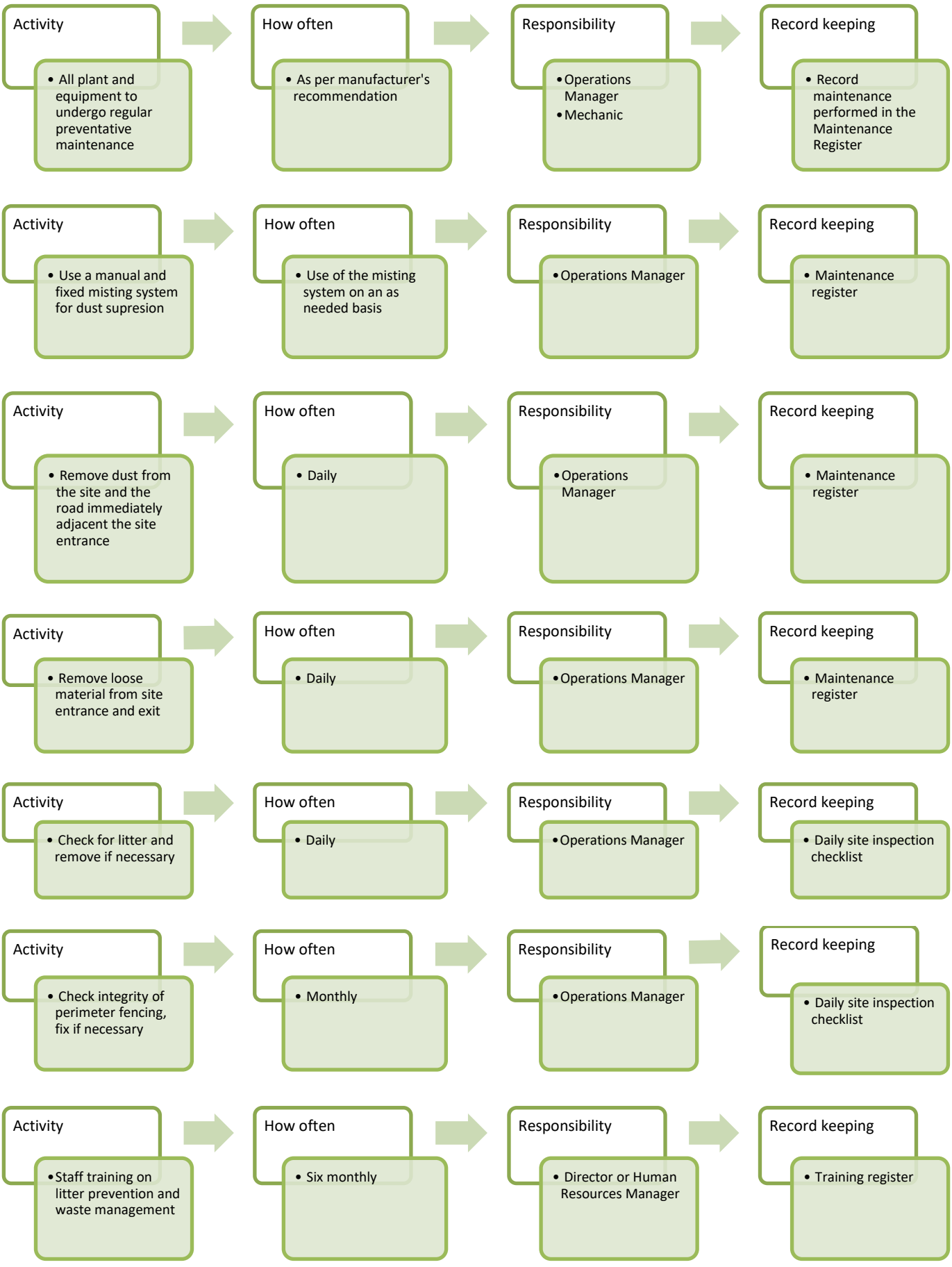

Activity
•Good dust management procedures outside of the building, and the general Site including regular sweeping to remove dust and other debris
How often
• Daily
Responsibility
•Operations Manager
Record keeping
• Company policy
•Daily site inspection checklist

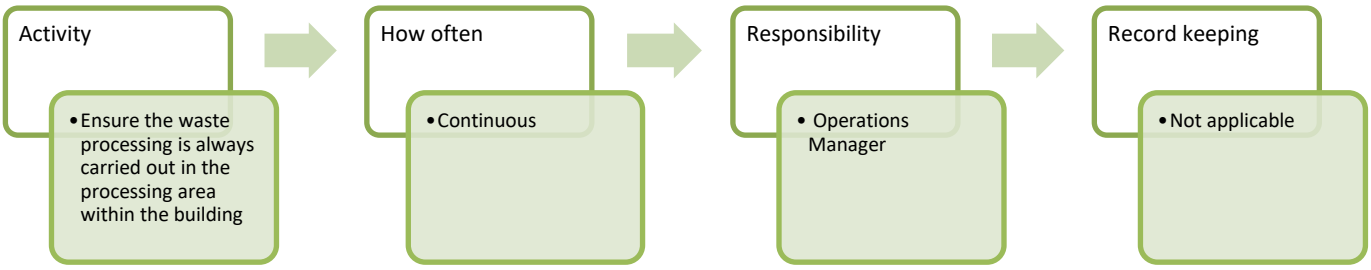

Activity
•Training of all staff and personnel accessing the Site in the need to minimise dust generation
How often
• Inductions prior to commencing employment / contract. Regular / as needed toolbox talks
Responsibility
•Site Management
Record keeping
• Company policy
•Induction package
•Toolbox meeting minutes
•Training register


Activity
•Direct ducting of diesel combustion emissions from the in-feed shredder, finger screen, concrete crushing plant and wood shredder through two emission points located on the roof to maintain good indoor air quality
How often
• Prior to commencement
Responsibility
•Site Manager
Record keeping
• Not applicable


Activity
• Operation of the waste plant and machinery to be performed between 3pm and 6pm Mon to Fri, and 2pm to 4pm Saturdays and 1pm to 3pm Sundays (when doors are closed and vehicle access is not permitted)
How often
• Daily based on allowed operational times for waste plant and machinery
Responsibility
•Operations Manager
Record keeping
• Company policy
•Daily site inspection checklist


Activity
• Use of water misting over areas of waste sorting and processing where required
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Daily site checklist
Activity
• All waste to be contained in appropriate 3-sided storage bays
How often
• Prior to commencement of operations
Responsibility
• Site Management
Record keeping
• Not applicable
Activity
• Regularly transport off-site to landfill or other recycling facility where any waste has the potential to create odour
How often
• As needed
Responsibility
• Site Management
Record keeping
• Waste dockets
• Daily site inspection checklist
Activity
• Review of any complaints received relating to dust and reports from monitoring conducted as a result
How often
• As needed
Responsibility
• Site Management
Record keeping
• Complaints register
Activity
• Toolbox meetings to discuss any safety and compliance issues, including dust and odour, that have arisen since the previous meeting.
How often
• Monthly
Responsibility
• Operations Management
Record keeping
• Toolbox meeting minutes
Activity
• Stockpiles not to exceed 3m height
How often
• Continuous
Responsibility
• All staff
Record keeping
• Daily site inspection checklist


Activity
• All plant and equipment to undergo regular preventative maintenance
How often
• As per manufacturer's recommendation
Responsibility
• Operations Manager
• Mechanic
Record keeping
• Record maintenance performed in the Maintenance Register
Activity
• Use a manual and fixed misting system for dust supresion
How often
• Use of the misting system on an as needed basis
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Remove dust from the site and the road immediately adjacent the site entrance
How often
• Daily
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Remove loose material from site entrance and exit
How often
• Daily
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Check for litter and remove if necessary
How often
• Daily
Responsibility
• Operations Manager
Record keeping
• Daily site inspection checklist
Activity
• Check integrity of perimeter fencing, fix if necessary
How often
• Monthly
Responsibility
• Operations Manager
Record keeping
• Daily site inspection checklist
Activity
• Staff training on litter prevention and waste management
How often
• Six monthly
Responsibility
• Director or Human Resources Manager
Record keeping
• Training register



6. Steps to Take If Dust Is Generated or In Windy Weather Conditions

Don PPE (dust mask and safety glasses)

Apply dust suppression measures - misting system in processing area and ensure surface of any dusy waste piles are most (avoid generation of runoff)

Minimise the time required for opening and closing roller doors

If there is potential for harm to human health or the environment, refer to the Pollution Incident Response Management Plan for further actions and notification requirements.

7. Steps to Take If Litter Is Generated

Identify and rectify source of litter

Patrol the site and re-capture litter and dispose in lidded bin on a daily basis

Conduct regular machine and manual sweeping of hardstand surfaces to capture litter items and dispose of in lidded bins on a daily basis

If there is potential for harm to human health or the environment, refer to the Pollution Incident Response Management Plan for further actions and notification requirements.

Attachment 3: Procedure for Minimising Noise Pollution

NOISE POLLUTION PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To ensure that noise pollution is minimised on the site and the facility fully complies with the EPA's *Noise Policy for Industry*

2. Responsible Person

Operations Manager

3. Associated Internal Documents

Pollution Incident Response Management Plan

4. External Reference Documents

NSW *Protection of the Environment Operations Act* 1997
NSW Noise Policy for Industry (NSW EPA, 2017)

5. Main Noise Risks at the Site

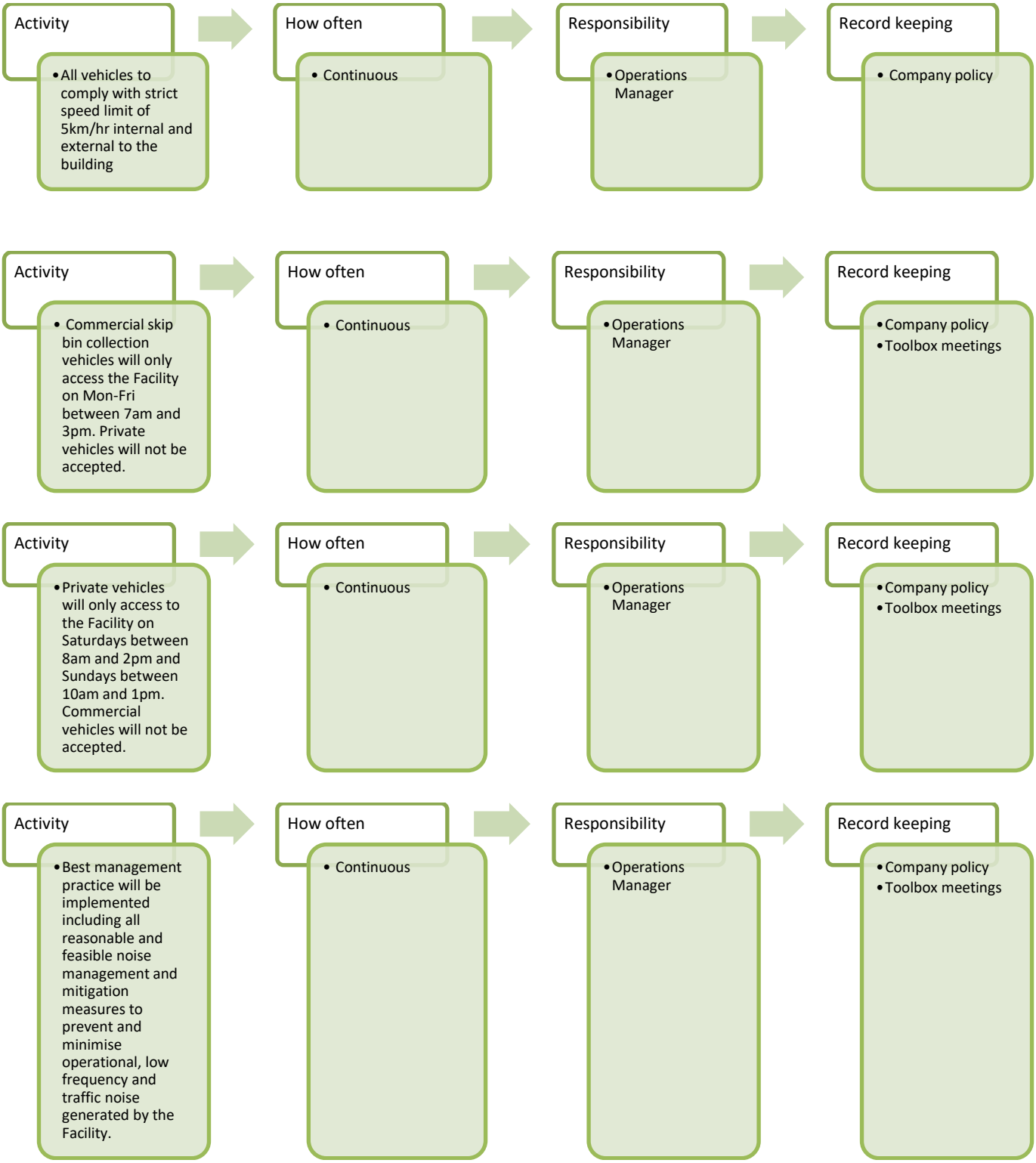
Vehicle movements entering and exiting the site

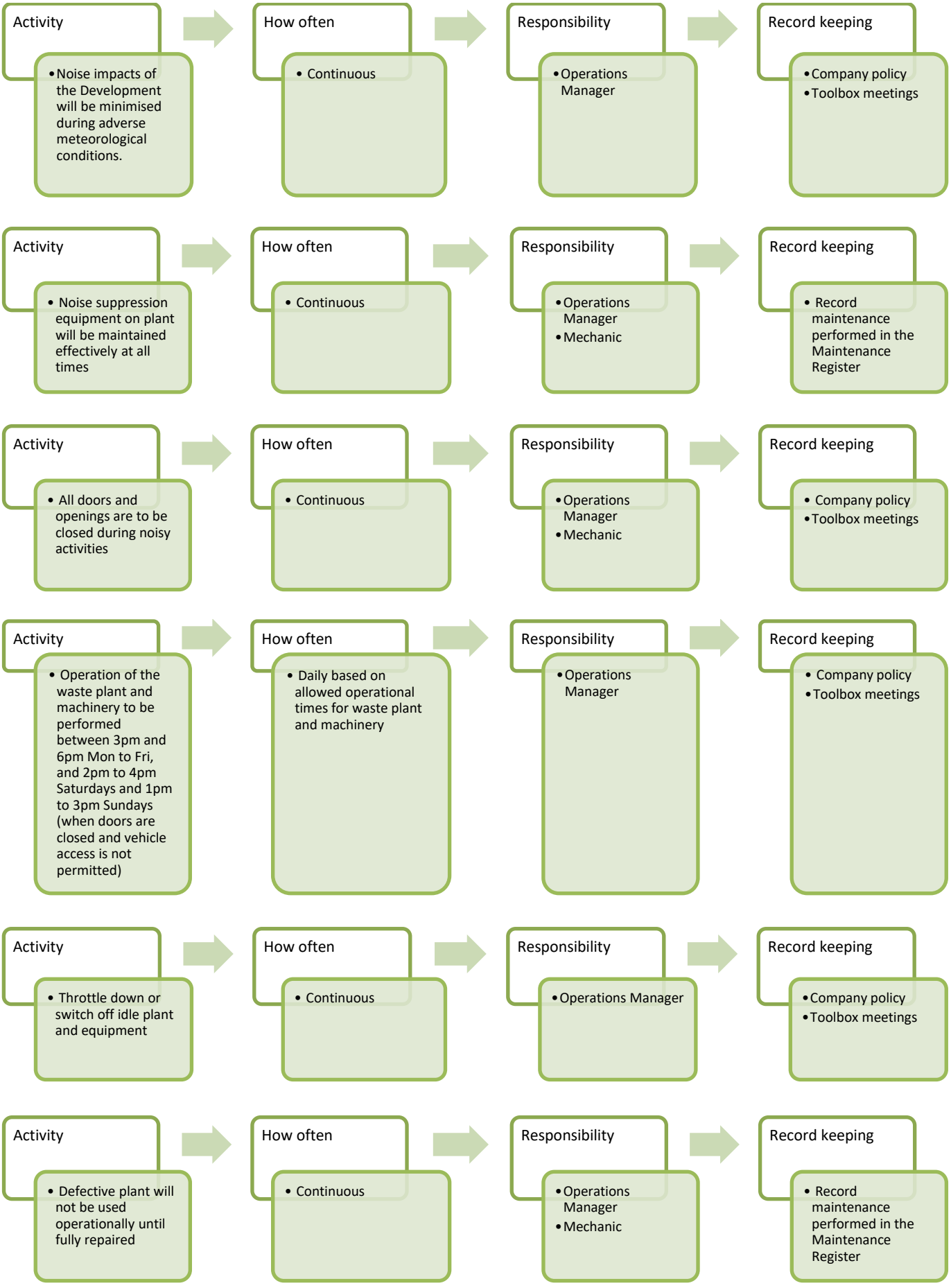
Operational noise generated during operation of the waste sorting and processing plant

Loading and unloading vehicles

Operating outside of approved hours

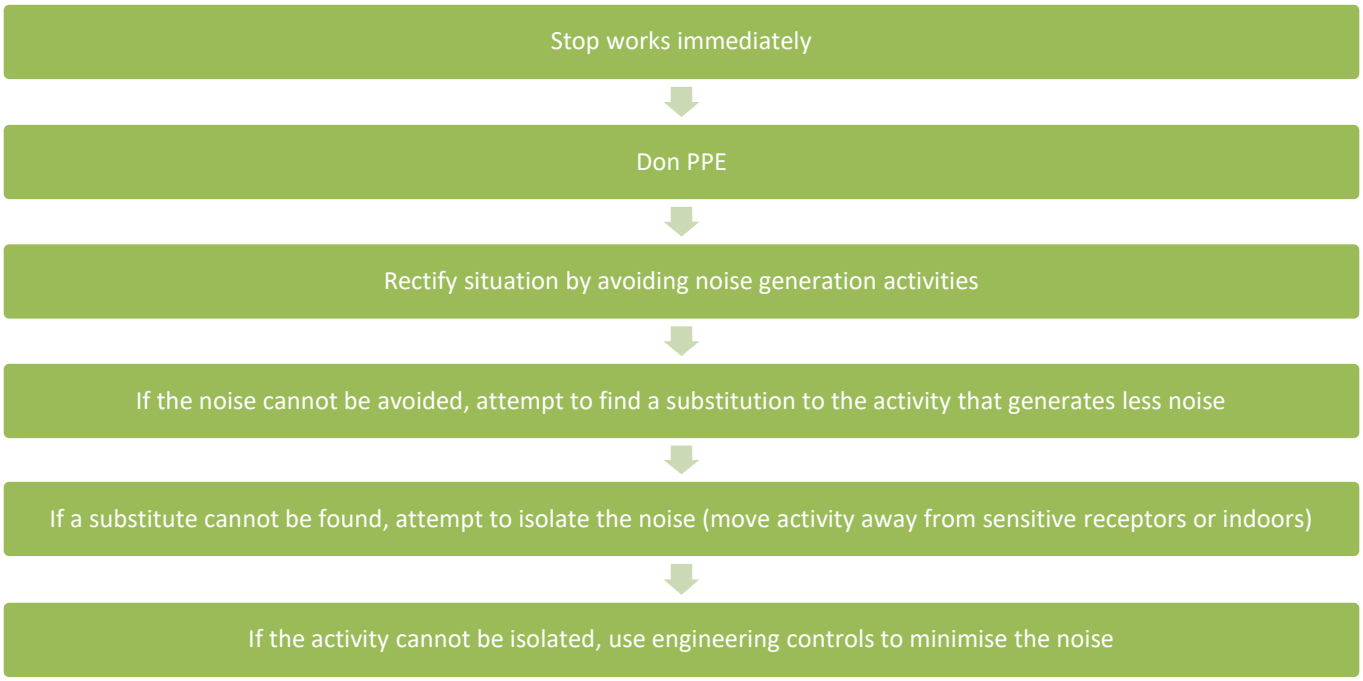
6. Preventative Measures to Be Undertaken




Activity
• Noise impacts of the Development will be minimised during adverse meteorological conditions.
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Company policy
• Toolbox meetings
Activity
• Noise suppression equipment on plant will be maintained effectively at all times
How often
• Continuous
Responsibility
• Operations Manager
• Mechanic
Record keeping
• Record maintenance performed in the Maintenance Register
Activity
• All doors and openings are to be closed during noisy activities
How often
• Continuous
Responsibility
• Operations Manager
• Mechanic
Record keeping
• Company policy
• Toolbox meetings
Activity
• Operation of the waste plant and machinery to be performed between 3pm and 6pm Mon to Fri, and 2pm to 4pm Saturdays and 1pm to 3pm Sundays (when doors are closed and vehicle access is not permitted)
How often
• Daily based on allowed operational times for waste plant and machinery
Responsibility
• Operations Manager
Record keeping
• Company policy
• Toolbox meetings
Activity
• Throttle down or switch off idle plant and equipment
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Company policy
• Toolbox meetings
Activity
• Defective plant will not be used operationally until fully repaired
How often
• Continuous
Responsibility
• Operations Manager
• Mechanic
Record keeping
• Record maintenance performed in the Maintenance Register

Activity	How often	Responsibility	Record keeping
• Commercial skip bin collection vehicles operating on the site will be fitted with the High and Low Buzzer system, designed to minimise noise associated with reversing alarms in accordance with the Australian Vehicle Standard (Australian Design Rule 42/04) and Heavy Vehicle (Adoption of National Law) Act 2013	• During equipment purchase and as needed	• Operations Manager • Mechanic	• Purchasing policy • Record maintenance performed in the Maintenance Register
• Regularly assess noise emissions and relocate, modify, and/or stop operations to ensure compliance with the relevant conditions of consent.	• Continuous	• Operations Manager	• Company policy • Toolbox meetings
• Mobile plant operation will only occur inside the processing building and mobile plant will be fitted with low frequency white noise reversing alarms	• Continuous	• Operations Manager • Mechanic	• Company policy
• Noise emissions from the Facility will be in compliance with the requirements of the NSW EPA's *Noise Policy for Industry*	• Continuous	• Operations Manager	• Company policy
• Conduct training to ensure workers are aware of noise issues and act to minimise noise where possible	• Six monthly	• Director or Human Resources Manager	• Training register

7. Steps to take if Excessive Noise is Generated



Attachment 4: Procedure for Non-Conforming Waste

NON-CONFORMING WASTE PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To ensure that non-conforming waste (waste that does not meet the NSW EPA classification of *General waste – non putrescible*) is not received at the site

If non-conforming waste is found on the site, to ensure it is managed in a way that minimises harm to human health and the environment.

2. Responsible Person

Operations Manager

3. Associated Internal Documents

Rejected Load Register and Rejected Load Certificate

Asbestos Inspection Register

Pollution Incident Response Management Plan

4. External Reference Documents

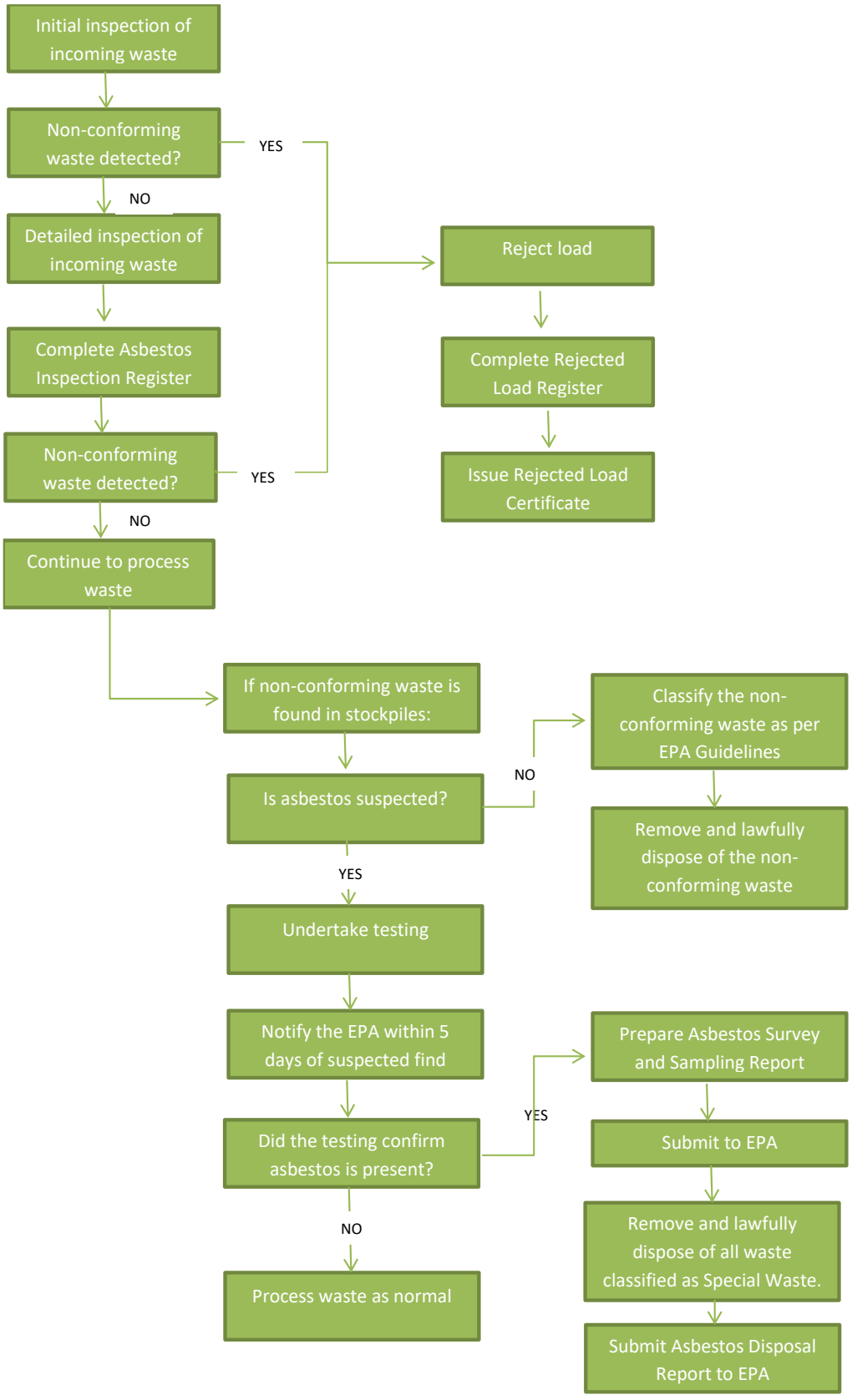
NSW EPA *Waste Classification Guidelines* 2014

NSW EPA *Draft Protocol for managing asbestos during resource recovery of construction and demolition waste* 2014

NSW EPA (2017) Reforms to the construction waste recycling sector

NSW *Protection of the Environment Operations Act* 1997

5. Steps to be undertaken for all incoming waste loads



6. Detail of Each Step in the Procedure

6.1 Initial inspection of incoming waste

When a load arrives at the gate, check the top of the load to see if non-conforming waste is visible. Also check for smell of putrescible waste.

If non-conforming waste is visible or you can smell putrescible waste, reject the load (see *Rejection of non-conforming loads*)

If non-conforming waste is not suspected, allow provisional acceptance of the waste

6.2 Detailed inspection of incoming waste, and Asbestos Inspection Register

Once the waste is tipped, spread and visually inspect the waste again for non-conforming materials.

If non-conforming waste is visible, reject the load load (see *Rejection of non-conforming loads* below)

If asbestos is suspected, wet down the load immediately.

For each load that underwent a detailed inspection, fill out the Asbestos Inspection Register.

If non-conforming waste is not suspected, process the waste as normal.

6.3 Rejection of non-conforming loads

Inform driver that load is being rejected due to presence of non-conforming waste.

Record details of the rejected load in the Rejected Load Register.

Issue the driver with a Rejected Load Certificate and keep a copy on file.

6.4 Non-conforming waste suspected in stockpiles

If non-conforming material other than asbestos is found, don appropriate PPE and remove it from the stockpile, to a bunded area if necessary. Arrange lawful disposal based on classification in accordance with EPA Guidelines.

If asbestos is suspected in a stockpile, DO NOT attempt to pick it out either manually or with equipment.

If asbestos is suspected, implement the next steps below.

6.5 Asbestos testing and notification

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.

If asbestos is suspected in a stockpile, visually check the rest of the pile and take digital photographs.

Do not add or remove any waste to or from the stockpile.

Immediately restrict access to the pile by erecting barriers and signage.

Wet down the pile if dust generation is possible.

Notify the EPA on 131 555 that asbestos is suspected in the pile.

If approved by EPA, don PPE (P1 or P2 respirator, gloves, disposable overalls and boot covers) and remove each piece of asbestos contaminated material and one cubic metre of the stockpile surrounding it.

Segregate from the stockpile the 20 cubic metres immediately adjacent to and surrounding each cubic metre removed in the above step.

Move this 20 cubic meters to an area that is not contaminated with asbestos. Divide it into four x 5 cubic metre piles and spread them to a height of no more than 10cm.

Inspect for visible asbestos.

If you can see asbestos, move straight to the next step (Further asbestos testing).

If you cannot see any asbestos, regroup into a $20m^3$ pile and collect one 10 litre sample. Send it to a NATA accredited laboratory for analysis.

If the lab tests do not detect asbestos, process the stockpile as normal. If the tests detect asbestos, move to the next step (Further asbestos testing).

6.6 Further asbestos testing

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.

If asbestos is found in the above step by visual inspection or by lab analysis, the 40m^3 surrounding each 20m^3 sampled above must be tested using the same procedures as the above step.

If asbestos is found in the 40m^3 tested above, the step must be repeated on more adjacent 40m^3 samples until it can be demonstrated that the waste material is free of asbestos.

6.7 Asbestos survey and sampling report

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.

Once sampling and testing are finished, prepare an Asbestos Survey and Sampling Report.

Include a volumetric survey of the pile, indicating observed locations of asbestos.

Include all digital photographs taken.

Include details of all waste sources, and the name and contact details of known or possible generators and transporters of the waste in the pile.

Include details of any blending, processing or movement of the waste in the pile.

Include contact details of anyone who may have received waste from the pile

Include details of how the waste has been sampled.

Include waste classification reports and amount in m^3 and tonnes of each waste type identified in the pile.

Include the current locations of the separated contaminated waste and other waste.

Include a proposed timeline for removal of the contaminated waste.

Include a list of steps will be taken to minimise future risk of asbestos contamination in stockpiles.

Submit the report to the EPA.

6.8 Removal of asbestos-contaminated waste

Once permission is granted by the EPA, arrange for lawful transport and dipsosal of all waste now classified as Special Waste (and any other waste identified to be removed) by trained personnel in accordance with the timelines in the Asbestos survey and sampling report.

6.9 Asbestos Disposal Report

Prepare an Asbestos Disposal Report

↓

Include a a signed, dated statement from Site Representatvive saying that you complied with the requirements of the NSW Draft Protocol for Managing Asbestos During Resource Recovery of Construction and Demolition Waste.

↓

Include all the weighbridge dockets showing that the Special Waste (and any other waste required to be removed) was disposed to a facility that can lawfully receive it.

↓

Include a signed and dated statement from the landfill that received the waste, confirming dates of receipt of waste, amounts received each day, and total amount received.

↓

Provide the report to the EPA within 7 days of final disposal of Special Waste, or if removal takes more than a month, within 7 days after every month that waste is being disposed.

Attachment 5: Procedure for Stormwater Pollution Prevention

STORMWATER POLLUTION PREVENTION PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. PURPOSE OF THIS PROCEDURE

To ensure that the stormwater system functions effectively

To ensure that the quality of receiving watercourses and rivers is not impacted by stormwater from the site.

2. WHAT IS STORMWATER?

Stormwater is rainwater that flows across surfaces into stormwater drains and then directly into waterways.

3. RESPONSIBLE PERSON

Operations Manager

4. ASSOCIATED INTERNAL DOCUMENTS

Pollution Incident Response Management Plan

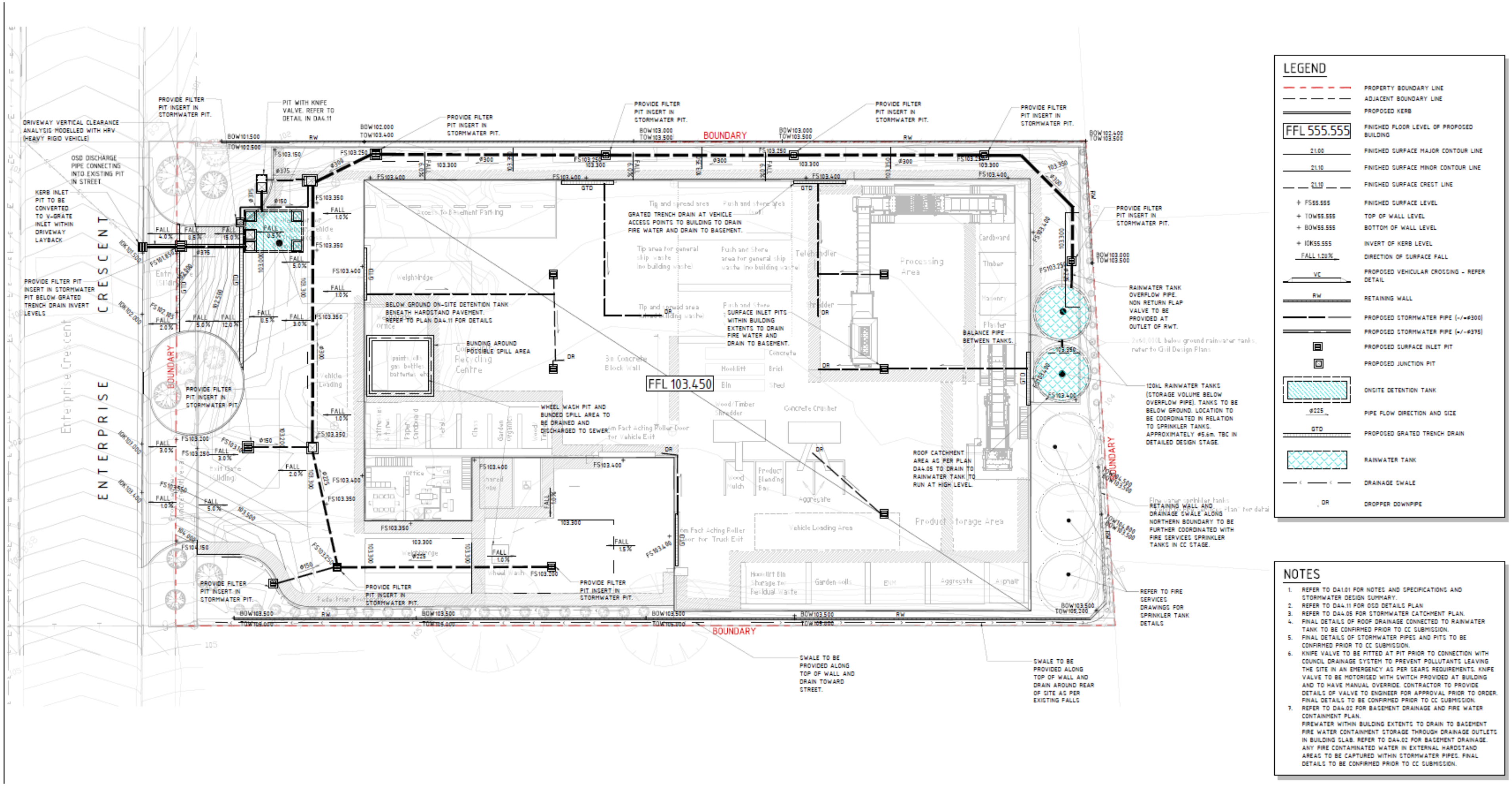
Dust, odour and litter minimisation procedure

5. EXTERNAL REFERENCE DOCUMENTS

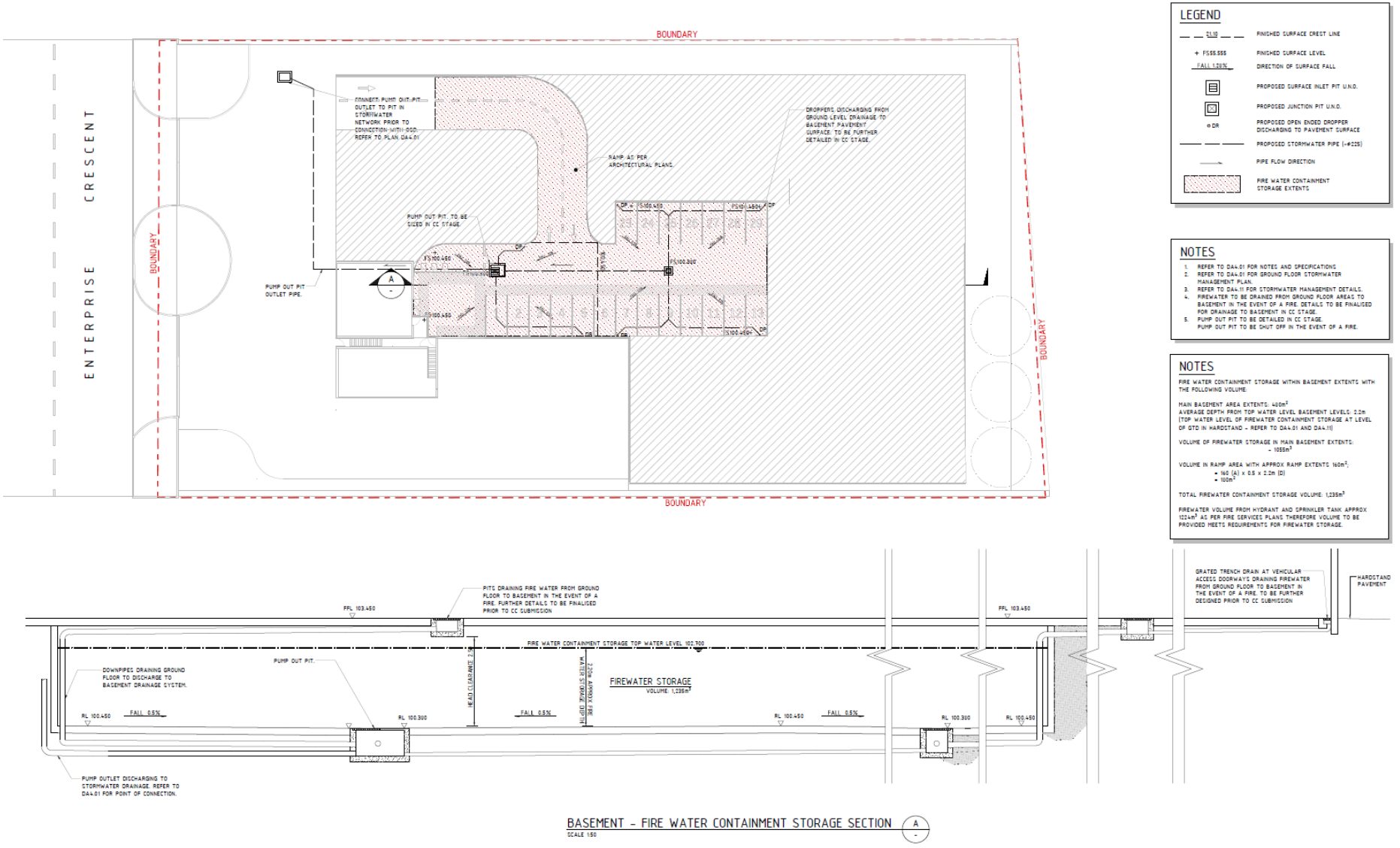
NSW *Protection of the Environment Operations Act* 1997

NSW DECC *Managing urban stormwater: soils and construction* (2008)

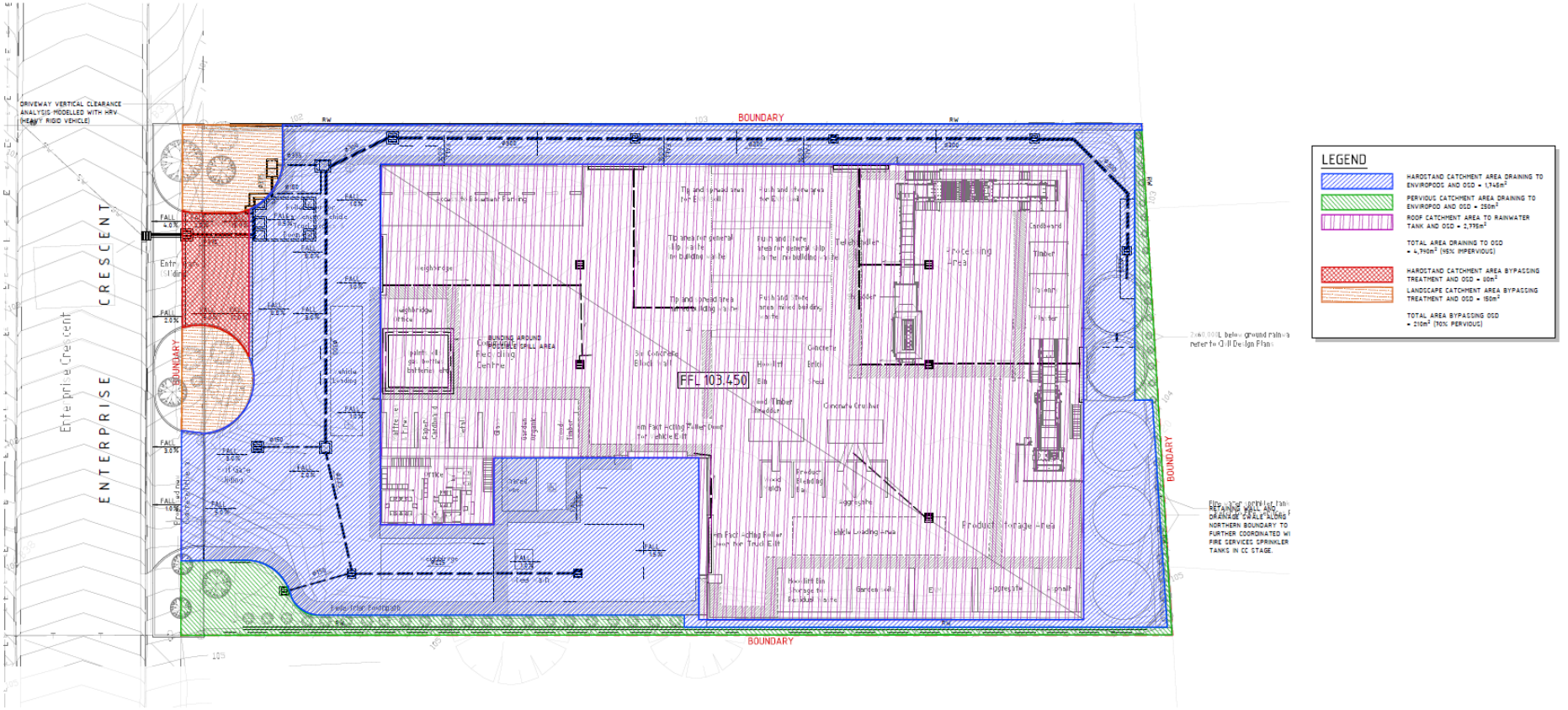
6. CONCEPT STORMWATER MANAGEMENT PLAN



7. CONCEPT FIRE WATER CONTAINMENT PLAN



8. CONCEPT STORMWATER CATCHMENT PLAN



9. CONCEPT STORMWATER MANAGEMENT DETAILS

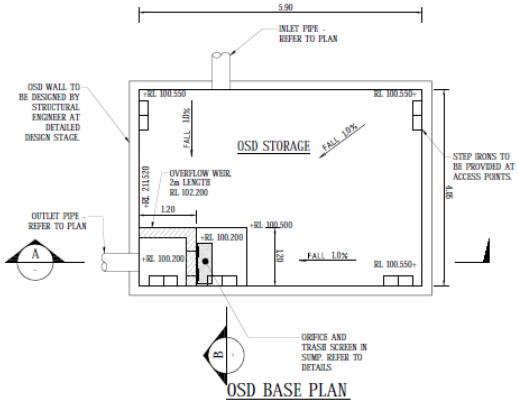
NOTES

1. REFER TO DA1.01 FOR OSD DESIGN AND WSUD SUMMARIES.
2. REFER TO DA4.01 FOR OVERALL SITE STORMWATER MANAGEMENT PLAN.
3. REFER TO DA4.01 FOR OSD ROOF PLAN.
4. REFER TO DA4.05 FOR SITE CATCHMENT PLAN.
3. FINAL DESIGN TO BE COORDINATED WITH STRUCTURAL ENGINEER. CONTRACTOR TO PROVIDE COST EFFECTIVE DESIGN OF THE TANK STRUCTURE, IN COORDINATION WITH THE ADJACENT STRUCTURES.
4. ALL PIT LIDS/GRATES TO BE CLASS D AND TO BE PLACED AT MAXIMUM 6m CENTERS.

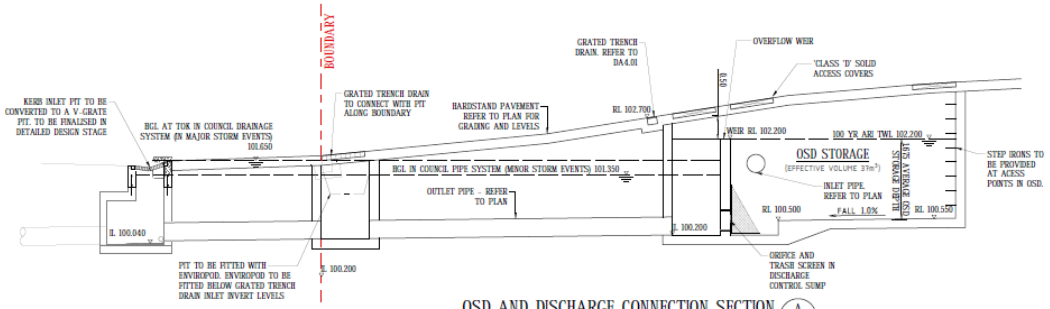
OSD STORAGE VOLUME CALCULATIONS
OSD TANK BASE AREA = 22m²

1 IN 100 yr ARI OSD TOP WATER LEVEL = 102.200
OSD STORAGE AVERAGE DEPTH = 1.67m
OSD STORAGE VOLUME = 22 x 1.675 = 37m³

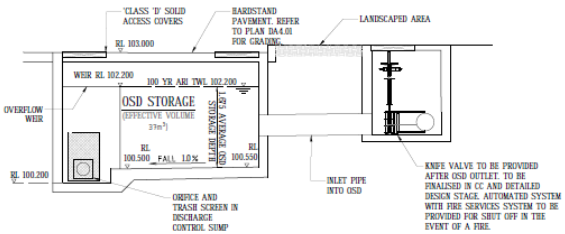
OSD VOLUME PROVIDED -/> OSD VOLUME TO BE ADOPTED AS PER OSD DESIGN SUMMARY ON DA1.01.



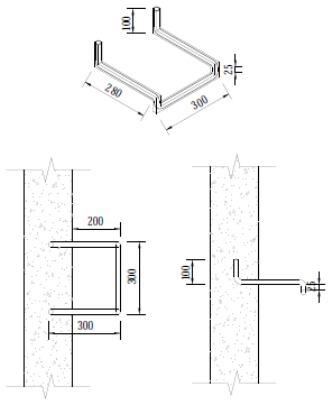
OSD BASE PLAN
SCALE 1:50



OSD AND DISCHARGE CONNECTION SECTION A
SCALE 1:50

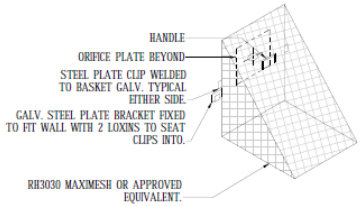


OSD AND DISCHARGE CONNECTION SECTION B
SCALE 1:50

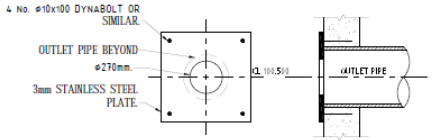


STEP IRON DETAIL
NOT TO SCALE

STEP IRON OF 20mm GALVANIZED STEEL MADE TO SHAPE AND DIMENSIONS SHOWN AND PLACED AT 300 CENTRES AND STAGGERED HORIZONTALLY FOR PITS DEEPER THAN 1.0m.



TRASH SCREEN DETAIL



ORIFICE PLATE DETAIL
NOT TO SCALE

10. MAIN RISKS FOR STORMWATER POLLUTION

Leak or spill of chemicals or hydrocarbons

↓

Escape of waste into stormwater system

↓

Excessive sediments enter stormwater system

11. PREVENTATIVE MEASURES TO BE UNDERTAKEN

11.1. General

Activity	How often	Responsibility	Record keeping
• Inspect and remove any build-up of sediment, debris, litter, and vegetation within drainage system.	• Monthly or after rain event	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register
• Remove grate and inspect internal walls and base, repair where required. Remove any collected sediment, debris, litter, and vegetation. (e.g. Vacuum truck) Inspect and ensure grate is clear of sediment, debris, litter, and vegetation. Ensure flush placement of grate on refitment	• Quarterly/ after major storm	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register
• Inspect all drainage structures noting any dilapidation, carry out required repairs.	• Bi-annually	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs

11.2. Rainwater Tank

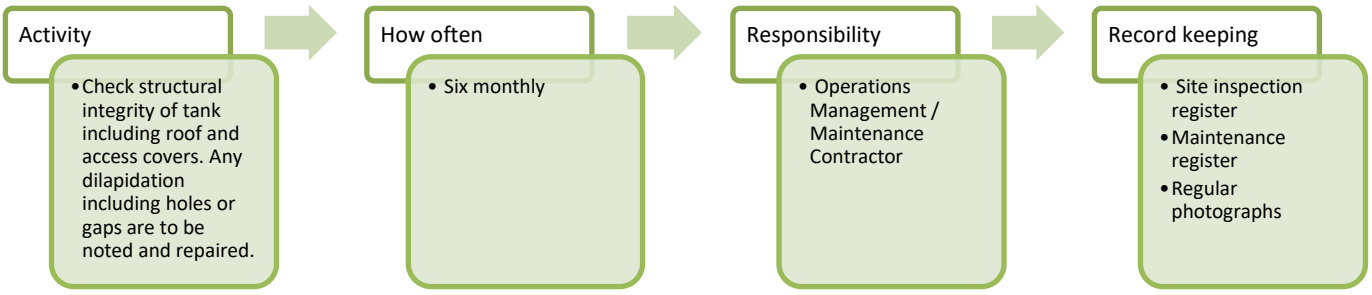
Activity	How often	Responsibility	Record keeping
• Inspect first flush device to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace	• 6 monthly	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs
• Check for evidence of access by animals, birds or insects including the presence of mosquito larvae. If present, identify access point and close. If evidence of algal growth, find and close points of light entry	• 6 monthly	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs
• Check structural integrity of tank including roof and access covers. Any dilapidation including holes or gaps are to be noted and repaired.	• 6 monthly	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs

11.3. Gross Pollutant Trap

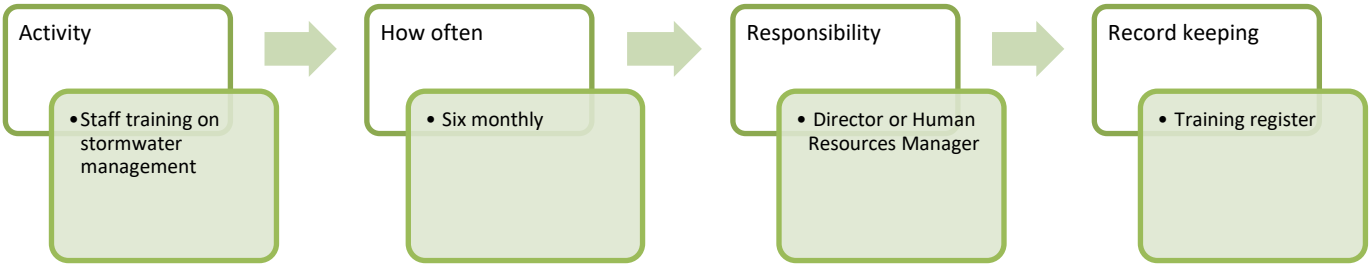
Activity	How often	Responsibility	Record keeping
• Refer to manufacturer's operation and maintenance manual	• As per manufacturer's manual	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs

11.4. On-Site Detention (OSD) Tank

Activity	How often	Responsibility	Record keeping
• Trash Screen located in south west corner of tank. Grate opening tool may be required to open grate to gain access into OSD tank. Inspect trash screen to ensure correct operation. Remove accumulated litter & debris. If device is not functioning properly repair or replace	• Six monthly/ after major storm	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs
• Orifice plate located on wall behind trash screen. Inspect orifice plate to ensure correct operation. Check orifice diameter size is correct, and no damage is present to orifice edge. Check orifice plate is securely fastened to wall with no gaps present between plate and face of wall. If gaps are present fill with sealant or mortar to provide watertight seal. Inspect Outlet pipe beyond orifice plate for any blockages and remove if present	• Six monthly/ after major storm	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs
• Inspect weep holes in base of sump. Ensure weep holes are able to drain effectively and remove accumulated sediment and debris if present	• Six monthly/ after major storm	• Operations Management / Maintenance Contractor	• Site inspection register • Maintenance register • Regular photographs



11.5. Training



12. STEPS TO TAKE IF POLLUTANTS ENTER THE STORMWATER

Activate the Pollution Incident Response Management Plan

Attachment 6: Procedure for Emergency Preparedness and Response

Emergency Preparedness and Response

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To reduce or eliminate the risk of an emergency and be prepared to respond to an emergency situation

2. Responsible Person

Operations Manager

3. Associated Internal Documents

Pollution Incident Response Management Plan

4. External Reference Documents

NSW *Protection of the Environment Operations Act* 1997

Work Health and Safety Act 2011 (NSW)

5. Main Risks at the Site

Personal injury

Ignition of gas or other flammable materials

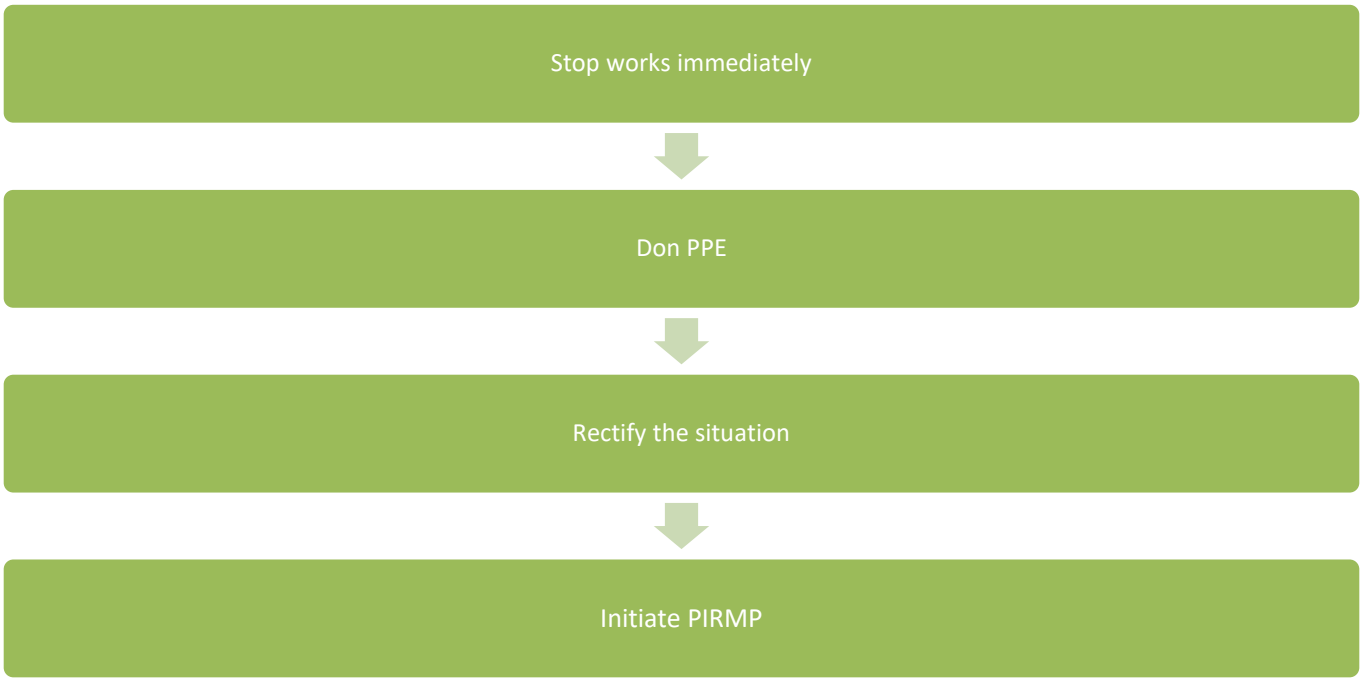
Leak or spill of hydrocarbons

Natural disaster (flood, storm, cyclone, earthquake)

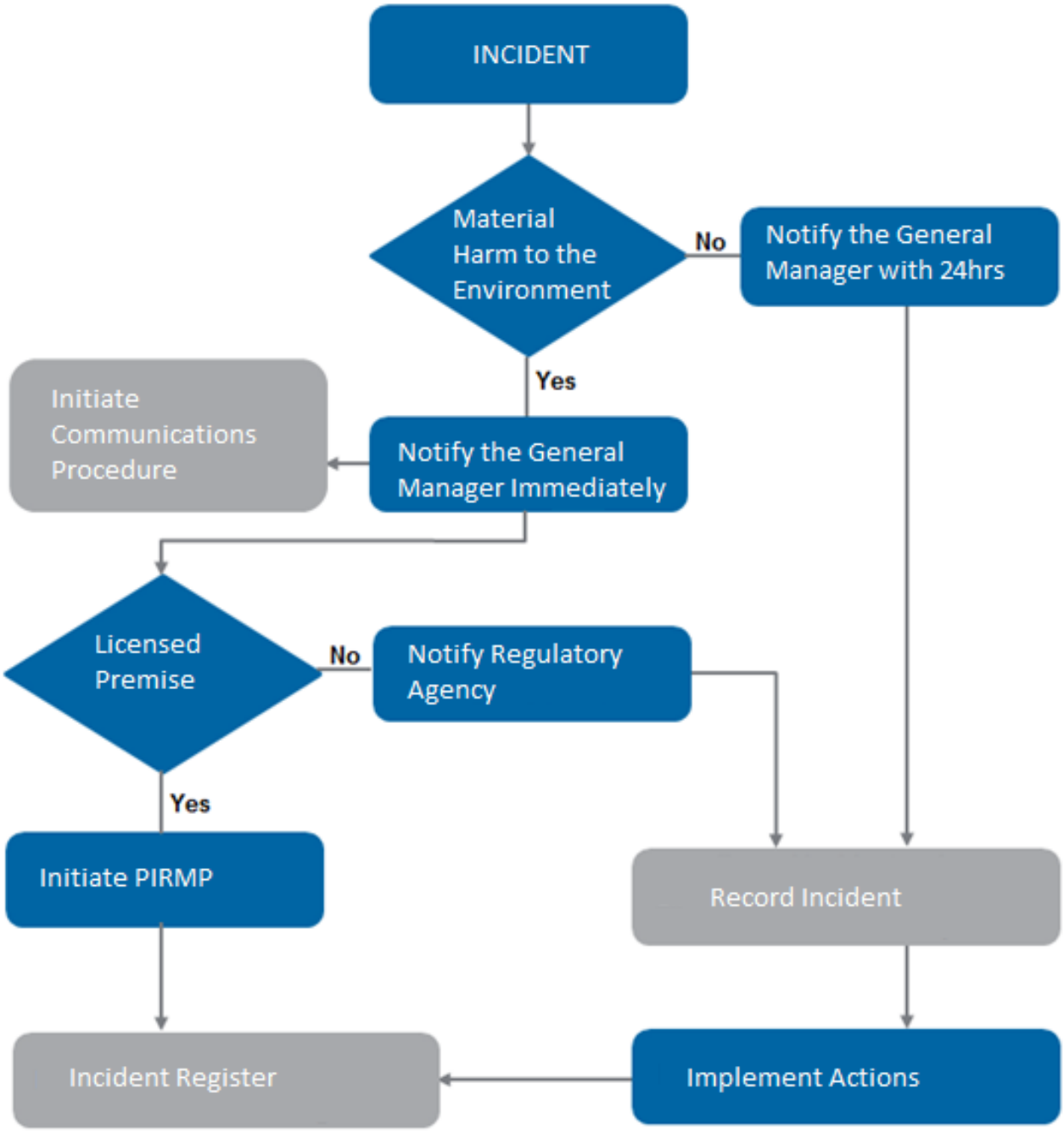
6. Mitigation Measures

Personal Injury	•Refer to Site Safety Procedures
Spill or leak of chemicals	•All chemicals will be appropriately stored , labelled and bunded •Spill kits will be ready accessible and maintained •Material Safety Data Sheets for all chemiclas will be available on site
Spill or leak of hydrocarbons	•No storage of fuel will occur onsite. Refueling will be conducted by mobile refueling truck •An appropriate spill kit will be maintained on site to absorb any spills •Any diesel spillages during refueling will be immediately contained and absorbed, and disposed of appropriately
Explosion or fire	•Stockpiles will remain under the prescribed limit • Fire hoses, general purpose fire extinguishers, and fire extinguishers suitable for control of oil/fuel fires, will be available on site •Staff will be trained in the use of fire extinguishers •Gas cylinders will be stored and labelled correctly
Natural disaster	•Appropriate insurance policies will be purchased •Staff will be trained in the emergency procedures

7. Steps to be taken in the event of a potential emergency



8. Steps to be undertaken in an emergency situation



9. Safety and Clean-Up Equipment

Equipment	Location
Spill kits	Throughout processing warehouse and storage area
Safety Data Sheets (SDS)	Office
First Aid Kit	Office
Fire hydrants	Front of building
Fire hose reels	Throughout processing warehouse and storage area
Fire sprinkler tanks	Located at rear of facility
Fire booster pumps	Basement
Personal Protective Equipment	Worn by staff, spares in office
Traffic bollards and traffic cones	Office

Attachment 7: Procedure for Fire Prevention

FIRE PREVENTION PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To ensure that fire safety requirements are met and to identify fire hazards to human health and the environment

To ensure that all fire risks are minimised on the site.

2. Responsible Person

Operations Manager

3. Associated Internal Documents

Pollution Incident Response Management Plan

4. External Reference Documents

NSW *Protection of the Environment Operations Act* 1997

5. Main Fire Risks at the Site

Leak or spill of hydrocarbons

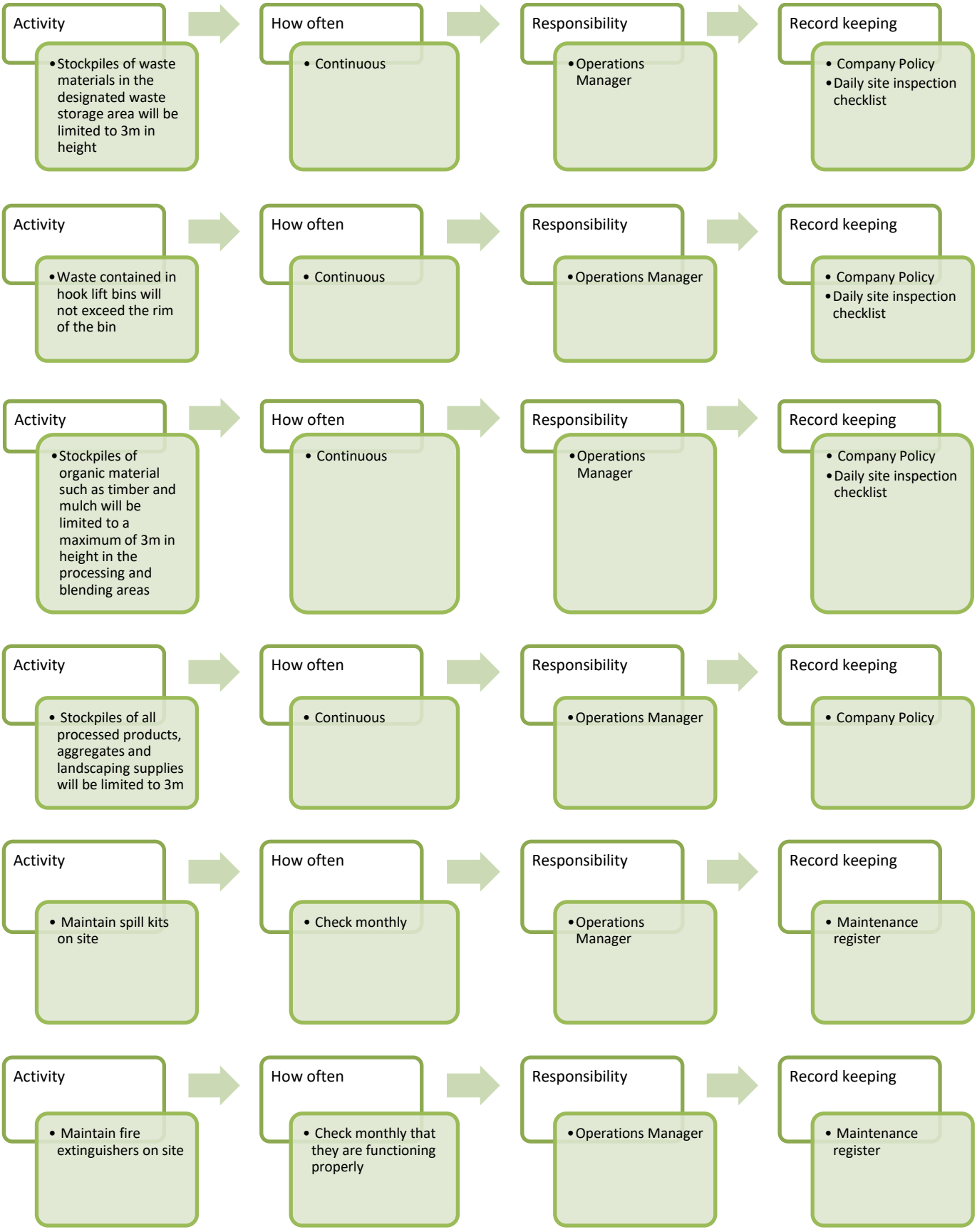
↓

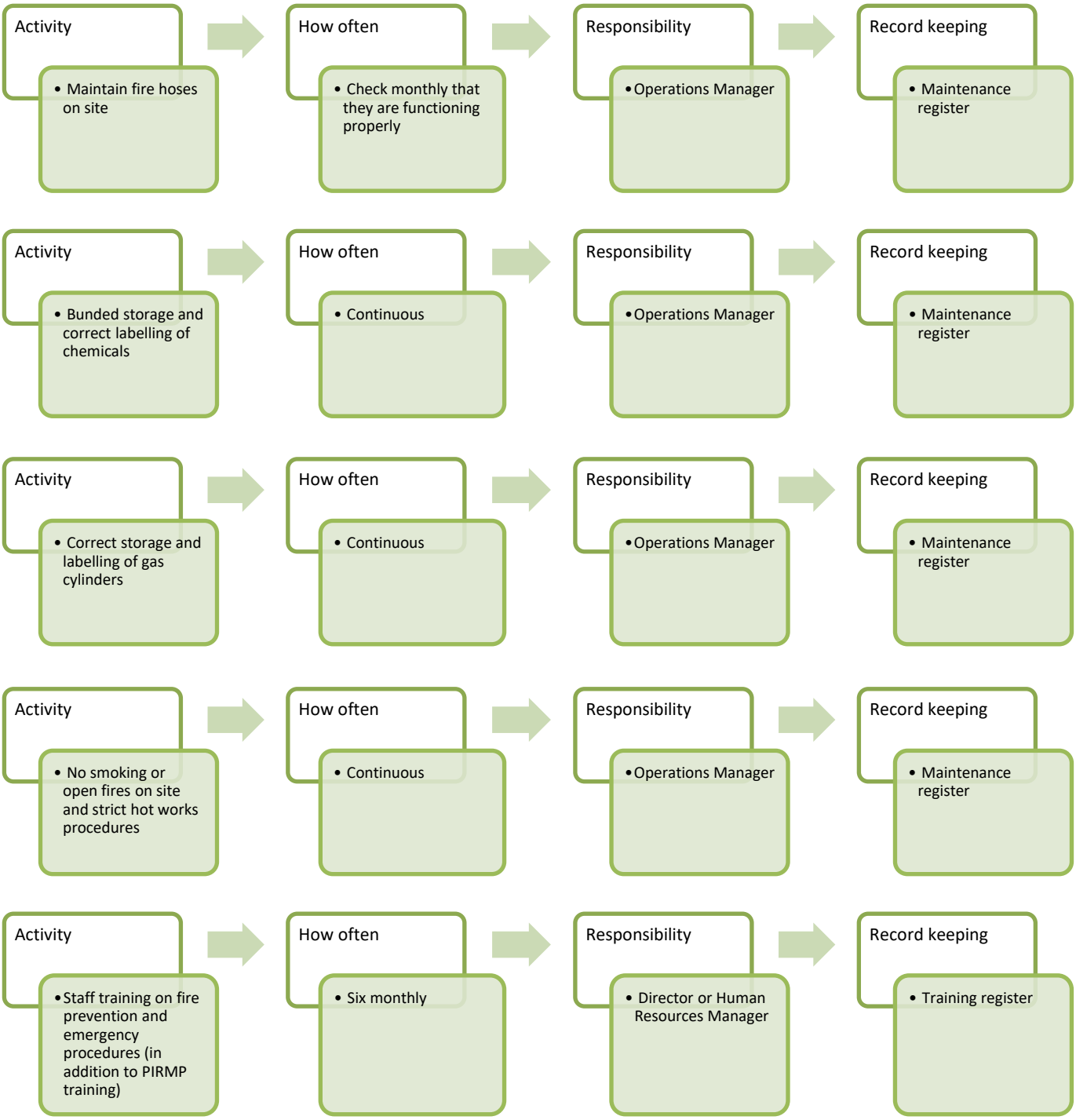
Ignition of gas or other flammable materials

↓

Spread of a fire at the site to neighbouring sites, which stores hazardous and flammable materials

6. Preventative Measures to Be Undertaken




Activity
• Maintain fire hoses on site
How often
• Check monthly that they are functioning properly
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Bunded storage and correct labelling of chemicals
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Correct storage and labelling of gas cylinders
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• No smoking or open fires on site and strict hot works procedures
How often
• Continuous
Responsibility
• Operations Manager
Record keeping
• Maintenance register
Activity
• Staff training on fire prevention and emergency procedures (in addition to PIRMP training)
How often
• Six monthly
Responsibility
• Director or Human Resources Manager
Record keeping
• Training register

7. Location of Fire Fighting Equipment

Equipment	Location
Spill kits	Throughout processing warehouse and storage area
Safety Data Sheets (SDS)	Office
First Aid Kit	Office
Fire hydrants	Front of building
Fire hose reels	Throughout processing warehouse and storage area
Fire sprinkler tanks	Located at rear of facility
Fire booster pumps	Basement
Personal Protective Equipment	Worn by staff, spares in office
Traffic bollards and traffic cones	Office

8. Steps to Take if a Fire Occurs

Activate the Pollution Incident Response Management Plan

Attachment 8: Procedure for Weighbridge Management

WEIGHBRIDGE MANAGEMENT PROCEDURE

Eco Logic Developments Pty Ltd
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

1. Purpose of This Procedure

To comply with Clause 36 of the *Protection of the Environment Operations (Waste) Regulation* 2014, which requires the Facility to operate and maintain a certified weighbridge to the *National Measurement Act* 1960 and report to the EPA on a monthly basis the total amount of waste received, processed, and exported from the site.

This weighbridge data is to be reported to the EPA through the online Waste and Resource Reporting Portal (WARRP) within 30 days of the end of the reporting month.

2. Responsible Person

Operations Manager

3. Associated Environmental Documents

Pollution Incident Response Management Plan

Environmental Impact Statement

4. External Reference Documents

Protection of the Environment Operations (Waste) Regulation 2014
National Measurement Act 1960
Waste Levy Guidelines NSW EPA (2018)

5. Key Regulatory Requirements

The occupier of a scheduled waste facility who is required to pay contributions under section 88 of the Act must ensure that there is a weighbridge installed at the waste facility

Submit to the EPA, within 30 days after installing the weighbridge, a plan of the waste facility indicating the proposed vehicle flow controls, including the entry and exit points where waste is transported into and out of the waste facility (a "vehicle flow control plan")

If any change occurs in relation to those vehicle flow controls, submit a revised vehicle flow control plan to the EPA no later than 30 days after the relevant change occurs, keep a copy of the latest vehicle flow control plan on the premises and make the plan available for inspection and copying by an authorised officer on request

Ensure that each vehicle that enters or leaves the waste facility for a purpose relating to the operation of the facility (whether or not the vehicle is being, is intended to be or has been used to transport or deliver waste) is weighed by the weighbridge on entering and on leaving the facility

During any period that the weighbridge is out of operation, an alternative method that is specified in the Waste Levy Guidelines is used to measure and record the quantity of waste and other material transported into or out of the waste facility

Take all reasonable steps to ensure that the weighbridge is maintained in proper working order

Ensure that the weighbridge is verified (within the meaning of the N*ational Measurement Act* 1960 of the Commonwealth) at least once a year

Ensure that the weighbridge has related software that records quantities of waste in any form and manner specified in the Waste Levy Guidelines

Notify the EPA of any incident that results in the weighbridge being out of operation for any period of more than 24 hours (and do so immediately on becoming aware that the incident will result in the weighbridge being out of operation for any such period)

Comply with any other requirement relating to the installation or operation of the weighbridge that the EPA may specify by written notice to the occupier

6. Weighing Protocol – Vehicle Entry and Exit

All vehicles enter the site via the main entrance and proceed to the weighbridge

Entrance points clearly signposted and visible from both the street and the site

The Weighbridge Operator or Operations Manager will monitor vehicle movements, instructing vehicles to wait for outgoing vehicles if necessary

Site speed limits will be strictly enforced

Vehicles will be weighed over the weighbridge based on the requirements given in Section 9 of this procedure

Vehicles then unload in the designated tipping area

Vehicles will then exit via the weighbridge and have their nett weight recorded

Record keeping requirements are given in Section 10

Where the tared weight of vehicles are kept by the Licensee, recording of nett weight upon exit of the facility is not required

8. Weighing Protocol – Exempt Vehicles

All vehicles upon entry to the site will need to pass over the weighbridge except for small visitor vehicles not carrying waste or other materials

In this case, record the vehicle registration number, date and time the vehicle enters or exits the facility. This may be recorded in the facility's site register or visitors book. Facilities with video surveillance can contact the EPA if they have other methods for recording these types of visits

No records need to be kept for small staff vehicles not carrying waste or other materials.

9. Weighing Protocol - Weighbridge Data Recording

Upon entry to the facility, vehicles need to be weighed on the weighbridge and details recorded, including gross weight

When vehicles exit the facility, they need to pass over the weighbridge for nett weight recording unless the stored tare of the vehicle is kept up to date

All details given in Table 9.1 need to be recorded upon vehicle entry and exit of the facility

Data is to be recorded by the Weighbridge Operator into the Licensees Excel database

Table 9.1. Mandatory data recording requirements

Delivery to the facility	Transport from the facility
Date and time vehicle enters facility	Date and time vehicle exits facility
Purpose of entry	Purpose of visit
Vehicle registration number	Vehicle registration number
Weight of vehicle	Weight of vehicle
Amount of waste/other material (2 decimal places)	Amount of waste/other material (2 decimal places)
Waste type (as set out in Waste Levy Guidelines)	Waste type (as set out in Waste Levy Guidelines)
Waste stream (as set out in Waste Levy Guidelines)	Waste stream (as set out in Waste Levy Guidelines)
Any EPA approval for community service/activity, biological outbreak or natural disaster	Any EPA approval for community service/activity, biological outbreak or natural disaster
Description of any non-waste material	Description of any non-waste material
Name, address and environment protection licence (EPL) number of sending waste facility	Name, address, EPL number of facility receiving the waste
Location of waste or other material stored at the facility (e.g. stockpile identification)	Identification of stockpile from which waste was removed (if relevant).

10.Record Keeping Requirements

Hard copies - all original records (such as paper documents) must be kept for 6 years and be accessible by the EPA

The Licensee must identify any adjustments or amendments to these records

Electronic records – as a verified weighbridge is connected to software at the Licensee's premises, you must use that software to record the mandatory records. If the weighbridge or software is out of operation or malfunctioning, the information can be manually recorded, but must be entered into the software when operational again. Electronic records for each vehicle visit must:

1.be backed up weekly

2.stored in a secure location

3.able to be downloaded by the EPA in an .xls, .xlsx, .csv or .dbf format

4.kept for 6 years

5.be accessible by the EPA in spreadsheet form, with each field (e.g. date, weight, vehicle registration) displayed as a heading in the first row & the content set out below that heading.

11.Weighbridge Certification

Every 12 months, the Licensee is required to ensure the weighbridge is calibrated and certified to meet the requirements of the *National Measurement Act* 1960

Calibration records should be kept on file for inspection by EPA Officers when requested.

Attachment 9: Pollution Incident Response Management Plan

Logic Developments

Pollution Incident Response Management Plan

Eco Logic Developments Pty Ltd

Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

Updated: 10 August 2020

Tested:

EXECUTIVE SUMMARY

This Pollution Incident Response Management Plan (PIRMP) has been developed for Singleton Recycling Facility located at 39 Enterprise Crescent, McDougalls Hill.

This document has been set out to fulfil the requirements of Part 5.7A of the *Protection of the Environment Operations Act* 1997 and contains the details required for pollution incident response management plans as set out within Part 3A of the *Protection of the Environment Operations (General) Regulation* 2009.

The content of this plan includes:

- The procedures to be followed by the licence holder in notifying a pollution incident;
- A detailed description of the action to be taken immediately after a pollution incident to reduce or control pollution; and
- The procedures to be followed for co-ordinating, with the authorities or persons that have been notified, any action taken in combating the pollution caused by the incident and the persons through whom all communications are to be made.

It is important to note that this PIRMP is a working document. If operating conditions or resource recovery practices on the site change, the PIRMP needs to be updated to reflect the changes in practices. Eco Logic Developments Pty Ltd are committed to working with the NSW Environment Protection Authority (EPA), and appropriate changes to the conditions of the Environment Protection Licence will be made before any site changes are implemented.

Below is a summary of the immediate steps to be taken in the event of a pollution incident (Table 1.1).

Table 1.1. Summary of Pollution Incident Responses.

In the event of a pollution incident		Responsibility and Action Required	Section of Report
Step 1	Contact Director / Operations Manager		Section 7
Step 2	Is there an immediate threat to human health and the environment?	Call Emergency Services (000) or 112 for mobile phones	Section 8.1
Step 3	Does the site need to be evacuated?	Initiate evacuation procedure Safely follow pollution incident procedures	Section 10
Step 4	Inform other relevant authorities of the incident	Follow the pollution incident plan contacting the relevant authorities	Section 8.1
Additional staff responsibilities			
Step 5	**Onsite Staff**	**Operations Manager**	**Director**
	Assist with Clean Up	Coordinate onsite plan	Call relevant regulatory authorities as specified in Section 8.1
	Follow instructions of Operations Manager	Barricade off area and notify staff onsite	Engage appropriate consultants
		Complete incident reporting form	Submit incident report form to EPA
			Review this plan within 30 days of report

It is recommended that all sections of this document are read, and the appropriate training undertaken, prior to responding to an incident.

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1. Purpose of This Plan

Under the *Protection of the Environment Operations Act* 1997, holders of an Environment Protection Licence (EPL) must prepare and implement a PIRMP.

The objectives of the PIRMP are to:

- Ensure comprehensive and timely **communication** about a pollution incident to staff, EPA, authorities and other stakeholders
- **Minimise and control the risk** of a pollution incident by identifying risks and planning actions to minimise and manage them
- Ensure that the plan is properly **implemented** by nominated trained staff, and regularly **tested**

A "pollution incident" is defined as:

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 noise.

The PIRMP must be:

In written form → Available at the premises → Able to be provided to an EPA officer on request → Tested at least once every 12 months → Immediately implemented if a pollution incident occurs

2. About the Site

Address	• 39 Enterprise Crescent, McDougalls Hill
Lot number	• Lot 17 DP 1062083
Site size	• Approximately 0.5 hectares in total
LGA	• Singleton Council
Zoning	• B5 - Business Development
Regulatory Controls	• Under the *Singleton Local Environmental Plan* 2013, 'waste or resource tranfer stations' are a permissable form of development with consent in the B5 Business Development zoning. •The development is also an Integrated Development, requiring a licence from the NSW EPA under Schedule 1 of the *Protection of the Environment Operations Act* 1997
Waste types accepted	•Eco Logic Developments Pty Ltd (Eco Logic) is seeking approval to construct and operate a waste or resource transfer station, with a capacity of 95,000 tonnes per year. The facility will operate within a purpose built and fully enclosed warehouse building. Key operational features of the development within the footprint of the Site include: •a Community Recycling Centre for household problem wastes; •a tipping and sorting area for a range of household, business and building waste; •an advanced sorting and processing facility for soils and virgin excavated natural materials; and •an advanced sorting facility to sort, recover and process mixed building materials for off-site transfer.

2.1 Location and Site Description

This site is located at 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083) in the Maison Dieu Industrial Estate, a light industrial area zoned B5 Business Development.

The site is approximately 2km to the west of Singleton township and is located entirely within the Singleton Council Local Government Area (refer to Figure 2.1). An aerial view of the entire lot is shown in Figure 2.2.

The lot has an area of 5,000 m^2 which is mainly unsealed and cleared of vegetation. The site has several nearby land use zones, including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape (refer to Figure 2.3). The site is also surrounded by a mix of commercial premises and rural dwellings.

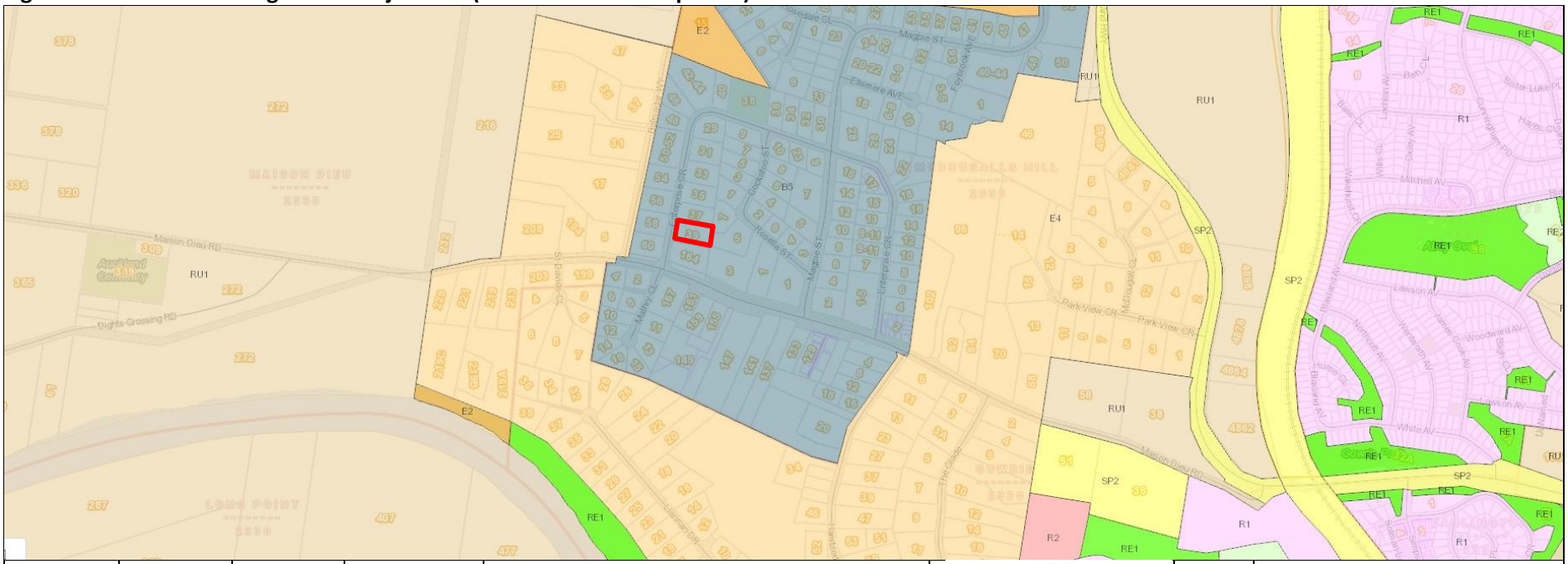
Figure 2.1. Aerial view of the nearby region. Site boundaries are shown in red.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - PIRMP
						Title	Aerial photo of site – region
						Scale	As shown
						Source	NSW Department of Planning and Environment

Figure 2.2. Aerial view of the lot, 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083). Site boundaries are shown in red.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - PIRMP
						Title	Aerial photo of site - lot
						Scale	As shown
						Source	NSW Department of Planning and Environment

Figure 2.3. Land use zoning of the subject site (B5 Business Development). Site boundaries are shown in red.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - PIRMP
						Title	Site zoning
						Scale	As shown
						Source	Singleton Council

2.2 Topography and drainage

The elevation of the site is approximately 110 m Australian Height Datum (AHD). No significant topographical features are present between the Proposal site and the nearest sensitive receptor locations.

The site is located in the area as Sedgefield Soloths Landscape, which is characterised as a landscape with undulating low hills, with elevations ranging from 60m to 170m. Slopes are approximately 6% with slope lengths of 500m-800m providing a low local relief, ranging from 40m to 60m. Most of the landscape drainage is to the south-east, with some to the south-west.

The soils consist of Yellow Soloths on the upper to mid-slopes with Yellow Solodic Soils on lower slopes and in drainage lines. The landscape and soils are characterised by extreme erosion hazards, local flooding and highly dispersible subsoils.

The site is located within the Permian Age Singleton Coal Measures which consists of sandstone, shale, mudstone, conglomerate and coal seams and a permeability ranging between 0.004 to 12 m/day.
The site lies in an area with no known occurrence of salinity or acid sulfate soil materials.

The site is located within the Hunter River catchment, which is the largest coastal catchment in New South Wales, covering approximately 22,000 km^2. Drainage on the site is to the north with the gradient of the land and towards Rixs Creek.

2.3 Nearest Sensitive Receptors

The site is situated at an interface between industrial zoned land / buildings and rural residential dwellings. The nearest industrial buildings are approximately 10 m to the north. The industrial zone to the east is large and extends for over 500 m. The nearest arterial road is the New England Highway (A15) which is located approximately 1100 m to the north east of the site. Maison Dieu Road (sub-arterial road) is located directly south at approximately 100 m.

Rural residential zones with residential dwellings are located along the north-western, western, south-western, south and south-eastern boundaries of the site. The closest residential dwellings are located within 150 m (west), 470 m (south) and 660 m (south-east) respectively from the site boundary.

The nearest commercial property (Lady Bird Embroidery) is located >600 m west of the site boundary.

2.3.1 School

The nearest schools, Singleton Heights Public School and Singleton Heights Pre-School are located approximately 2.4km to the east of the Site.

2.3.2 Waterway

Rixs Creek is located to the north and flows into the Hunter River to the south. Rixs Creek is impacted by the mining industry upstream. Rixs Creek is also a disappearing stream as it loses water as it flows downstream. The water infiltrates into the ground recharging the local groundwater, because the water table is below the bottom of the stream channel.

2.3.3 Habitat

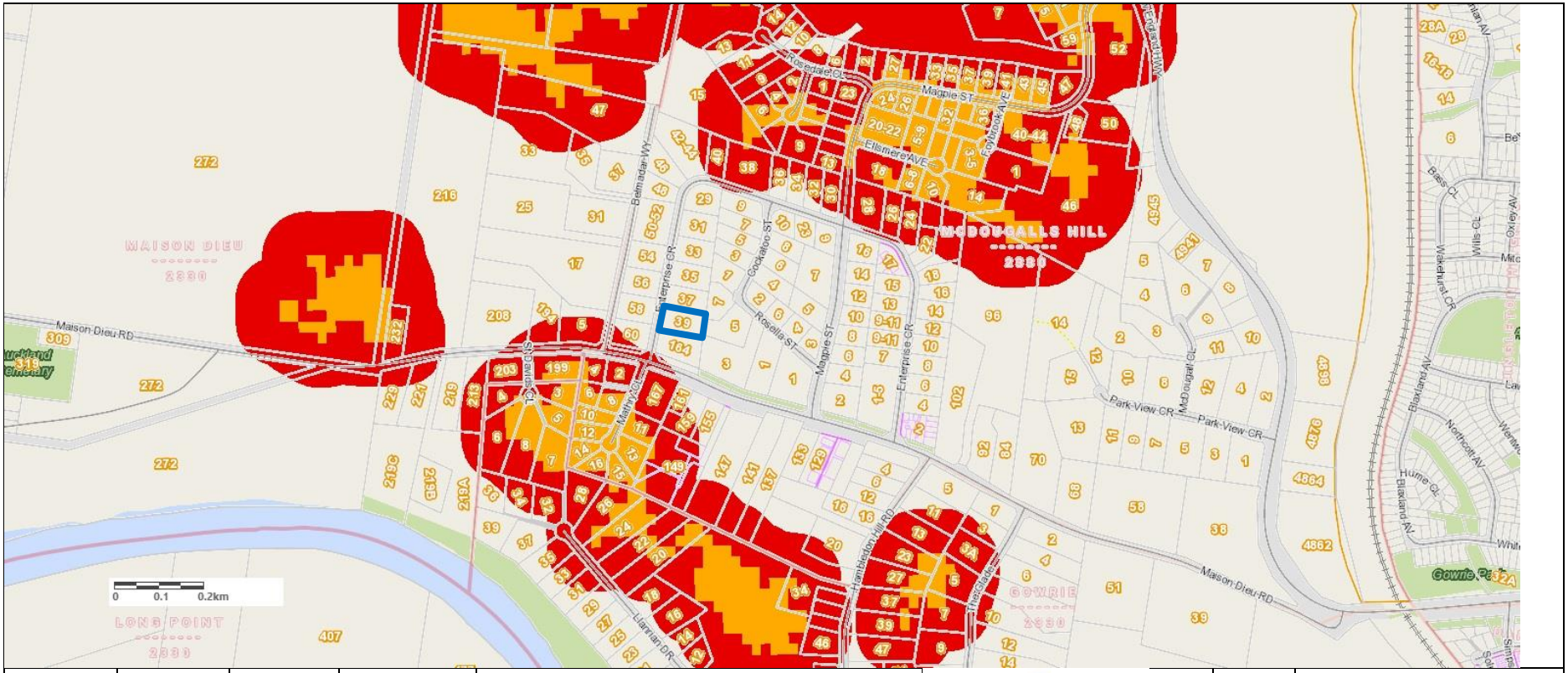
The area has undergone extensive clearing, resulting in grassland and low-quality scattered vegetation with low diversity and integrity. Tree cover is scattered with little to no interconnection. Located to the north and east are large parcels of remnant native bushland. This bushland provides habitat, foraging and breeding opportunities for local fauna species and forms part of a larger vegetation corridor to the north.

The nearest land identified as "Terrestrial Biodiversity" on the *Singleton Local Environmental Plan* 2013 is located 20km to the northwest of the Site.

2.3.4 Bushfire Prone Land

None of the land is identified as being bushfire prone land as defined by the *Environmental Planning and Assessment Act* 1979 (refer to Figure 2.4)

Figure 2.4. Bushfire Prone Land near the proposed development. Orange shading represents major sources of vegetation potentially subject to bushfires. Site boundaries are shown in blue.



Date	Revision	Drawn By	Site description
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill

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Client	Eco Logic Developments Pty Ltd
Project	Singleton Recycling Facility - PIRMP
Title	Bushfire Prone Land
Scale	As shown
Source	Singleton Council

2.4 Adjoining Premises

This site is located at 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083) in the Maison Dieu Industrial Estate, a light industrial area zoned B5 Business Development. The site has several nearby land use zones, including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape (refer to Figure 2.3). The site is also surrounded by a mix of commercial premises and rural dwellings. The activities of the adjoining businesses are summarised in Table 2.1.

Table 2.1 Adjoining Business Details.

Map Ref.	Business	Address	Contact	Main Activity
1	Aussie Self Storage	37 Enterprise Cres, Mcdougalls Hill	(02) 6572 4055	Self-Storage
2	Humex	7 Rosella St, McDougalls Hill	(02) 4017 1746	Muffler shop
3	Rapid Spray	35 Enterprise Cres, Singleton	1800 011 000	Manufacturer
4	Drill Doctors Australia	60 Enterprise Cres, Singleton	(02) 6571 3690	Drilling equipment supplier
5	Hunter Valley Hydraulink	164 Maison Dieu Rd, Gowrie	(02) 6571 1625	Hydraulic equipment supplier
6	Minetek	3 Rosella St, McDougalls Hill	(02) 6578 8600	Mining company
7	Actisafe	5 Rosella St, Singleton	1300 852 397	Manufacturer
8	Currently not occupied	1 Cockatoo St, McDougalls Hill	-	-

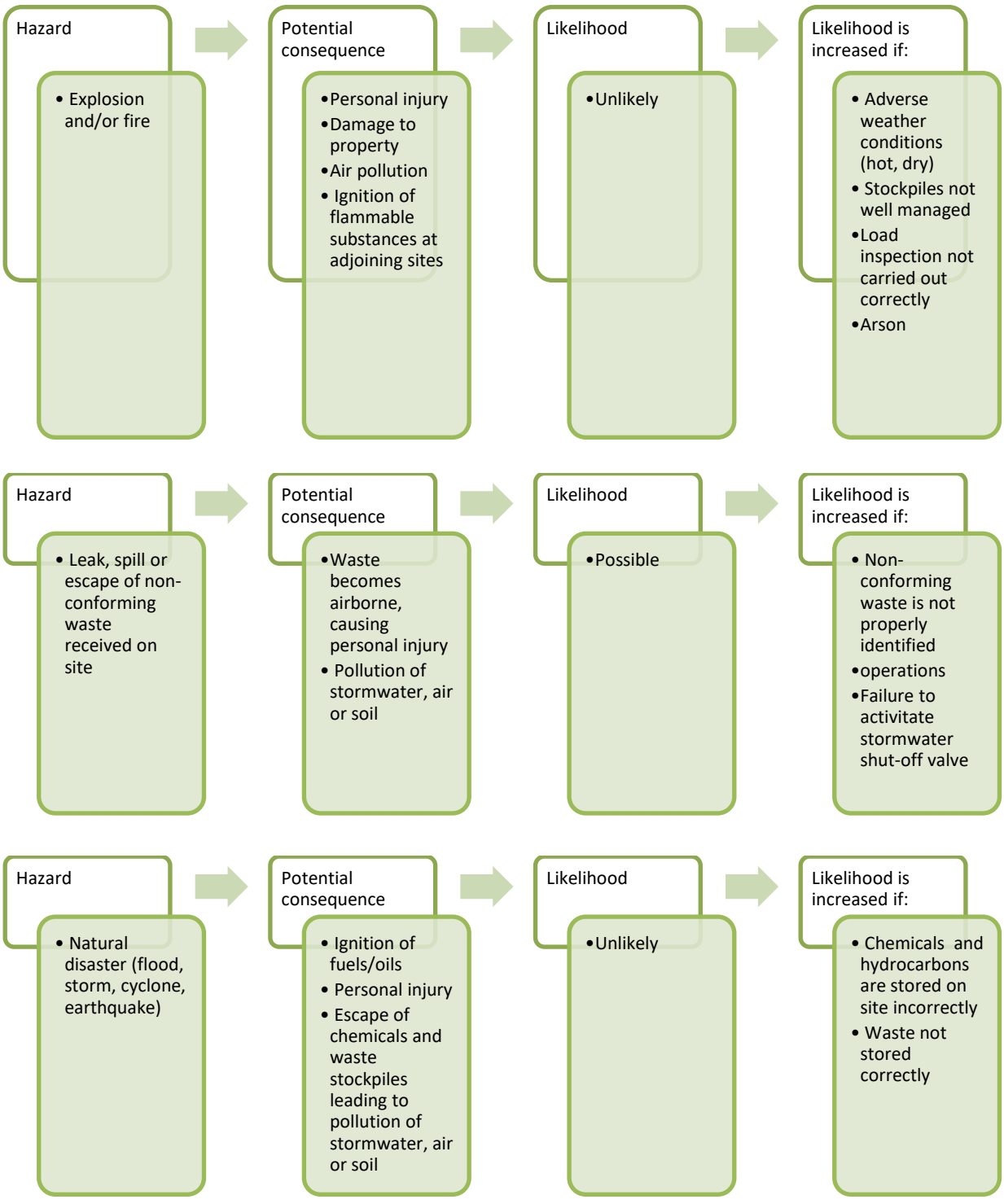
Figure 2.4 shows the Facility's immediate neighbours.

Figure 2.4. Adjoining Businesses. Site is shown as a red box.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
17/04/19	Revision A	R. Loemker	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	JACKSON ENVIRONMENT AND PLANNING STRATEGY | INFRASTRUCTURE | COMPLIANCE | PROCUREMENT	Project	Singleton Recycling Facility - PIRMP
						Title	Adjoining Business
						Scale	Not to scale
						Source	Google Maps

3. Description and Likelihood of the Main Hazards

Hazard	Potential consequence	Likelihood	Likelihood is increased if:
•Noise from tipping and loading	• Loss of amenity for neighbours • WHS issues for employees	• Moderate	• Breakdown of noise management controls • Inadequate training
• Spill or leak of liquid waste, hydrocarbons, diesel, oils	•Contamination of stormwater • Fire risk	•Moderate	• Hydrocarbons are stored on site •Inproper maintennce or damage to bunding at disposal and loading areas •An appropriate spill kit is not maintained on site to absorb any spills during mobile refueling operations •Failure to activitate stormwater shut-off valve
•Excessive dust emissions	•Air polluiton •Contamination of stormwater • Loss of amenity for neighbours •WHS issues for employees	•Moderate	• Stockpiles not well managed •Breakdown of dust management controls such as misting system


Hazard
• Explosion and/or fire
Potential consequence
•Personal injury
•Damage to property
•Air pollution
• Ignition of flammable substances at adjoining sites
Likelihood
•Unlikely
Likelihood is increased if:
• Adverse weather conditions (hot, dry)
• Stockpiles not well managed
•Load inspection not carried out correctly
•Arson
Hazard
• Leak, spill or escape of non-conforming waste received on site
Potential consequence
•Waste becomes airborne, causing personal injury
• Pollution of stormwater, air or soil
Likelihood
•Possible
Likelihood is increased if:
• Non-conforming waste is not properly identified
•operations
•Failure to activitate stormwater shut-off valve
Hazard
• Natural disaster (flood, storm, cyclone, earthquake)
Potential consequence
• Ignition of fuels/oils
• Personal injury
• Escape of chemicals and waste stockpiles leading to pollution of stormwater, air or soil
Likelihood
•Unlikely
Likelihood is increased if:
• Chemicals and hydrocarbons are stored on site incorrectly
• Waste not stored correctly

4. Pre-Emptive Actions to be taken

The main hazards, and the mitigation measures in place for each one, are shown below.

Spill or leak of chemicals

- All chemicals will be appropriately stored on self-bunded pallets and labelled
- Spill kits will be ready accessible and maintained
- Material Safety Data Sheets for all chemicals will be available on site
- Drains will be serviced
- Shut-off valve regularily checked and serviced

Spill or leak of hydrocarbons

- No storage of fuel will occur onsite. Refueling will be conducted via mobile tanker
- Spill kits will be maintained on site to absorb any spills
- Shut-off valve regularily checked and serviced

Excessive dust emissions

- Dust will be suppressed via misting system
- Miscellaneous materials will be removed as they are identified and place in waste bins
- A procedure will be in place to ensure maintenance of the equipment and that it meets requirements before coming to site

Explosion or fire

- Stockpiles will remain under the prescribed limits/heights and in approriate concrete storage bays
- Fire hoses reels, hydrants and sprinkler system will be available on site
- Staff will be trained in the use of fire hose reels

Escape of non conforming waste

- All incoming waste will be screened for non-conforming waste
- Any non-conforming waste identified will be dealt with in accordance with a Procedure for Non-conforming waste
- Any asbestos identified will be handled as per the NSW EPA's Draft Protocol for Managing Asbestos During Resource Recovery of Construction and Demolition Waste
- Stockpiles will remain under the prescribed limits/heights and in approriate concrete storage bays

Natural disaster

- Appropriate insurance policies will be purchased
- Staff will be trained in the emergency procedures

5. Inventory of Pollutants

Table 5.1. Inventory of Pollutants.

Material / potential pollutant	Storage location	Maximum quantity on site	Notes
Liquid Petroleum Gas bottles	Community Recycling Centre	1,000 L	
Fire extinguishers (CO_2, dry chemical powder, foam		1,000 L	Non-flammable, non-toxic gases and are not considered to be potentially hazardous with respect to off-site risk.
Engine coolant		500 L	Not classified as a dangerous good
Oils (engine and cooking)		1,000 L	Not classified as a dangerous good
Oils – heating		200 L	
Batteries (lead acid)		0.5 tonne	
Batteries (lithium, nickel-metal hydride)		0.5 tonnes	
Smoke detectors		0.05 tonnes	
Fluorescent globes and tubes		0.2 tonnes	
Water based paint and paint related products		500 L	Not classified as a dangerous good
Oil based paint and paint related products		500 L	

The storage and handling of the above pollutants are in accordance with:

- *AS 1596:2014 The storage and handling of LP Gas*
- *AS 1940:2004 The storage and handling of flammable and combustible liquid*
- *AS 2030.1:2009 Gas cylinders – General requirements*
- *Storage and Handling of Dangerous Goods Code of Practice* 2005

6. Safety and Clean-Up Equipment

Table 6.1. Type and Location of Safety and Clean-up Equipment.

Equipment	Location
Spill kits	Throughout processing warehouse and storage area
Safety Data Sheets (SDS)	Office
First Aid Kit	Office
Fire hydrants	Front of building
Fire hose reels	Throughout processing warehouse and storage area
Fire sprinkler tanks	Located at rear of facility
Fire booster pumps	Basement
Personal Protective Equipment	Worn by staff, spares in office
Traffic bollards and traffic cones	Office

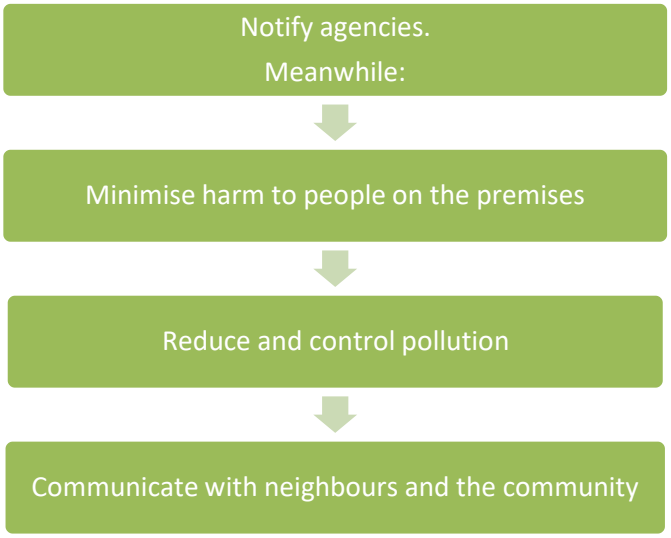
7. Contact Details and Responsible Persons

The person responsible for implementing this plan is (to be confirmed).

In the case of a pollution incident, the following people should be notified immediately:

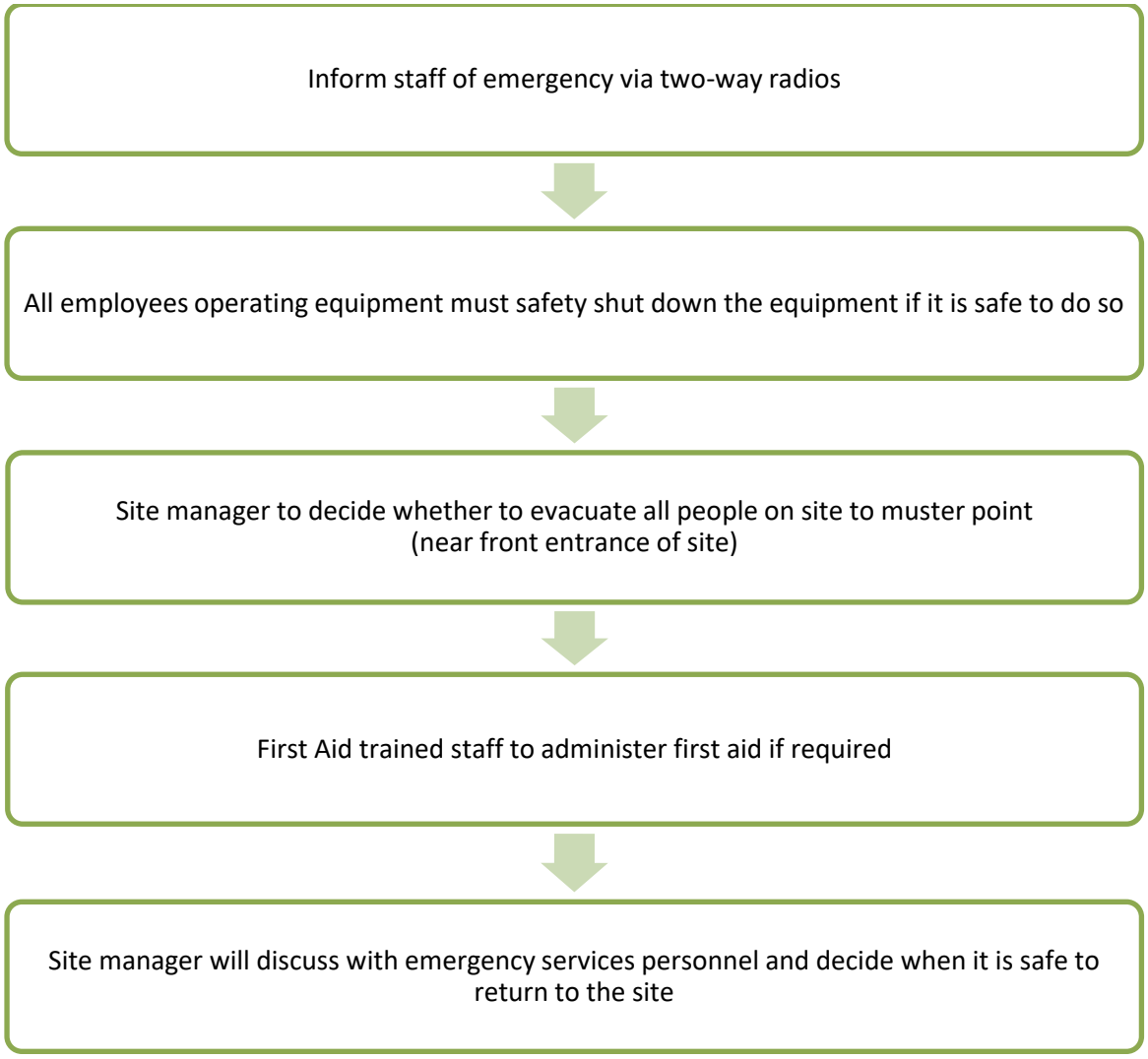
Primary site contact	• General Manager or Director
Secondary site contact	• Operations Manager

8. Actions to Be Taken During or Immediately After a Pollution Incident

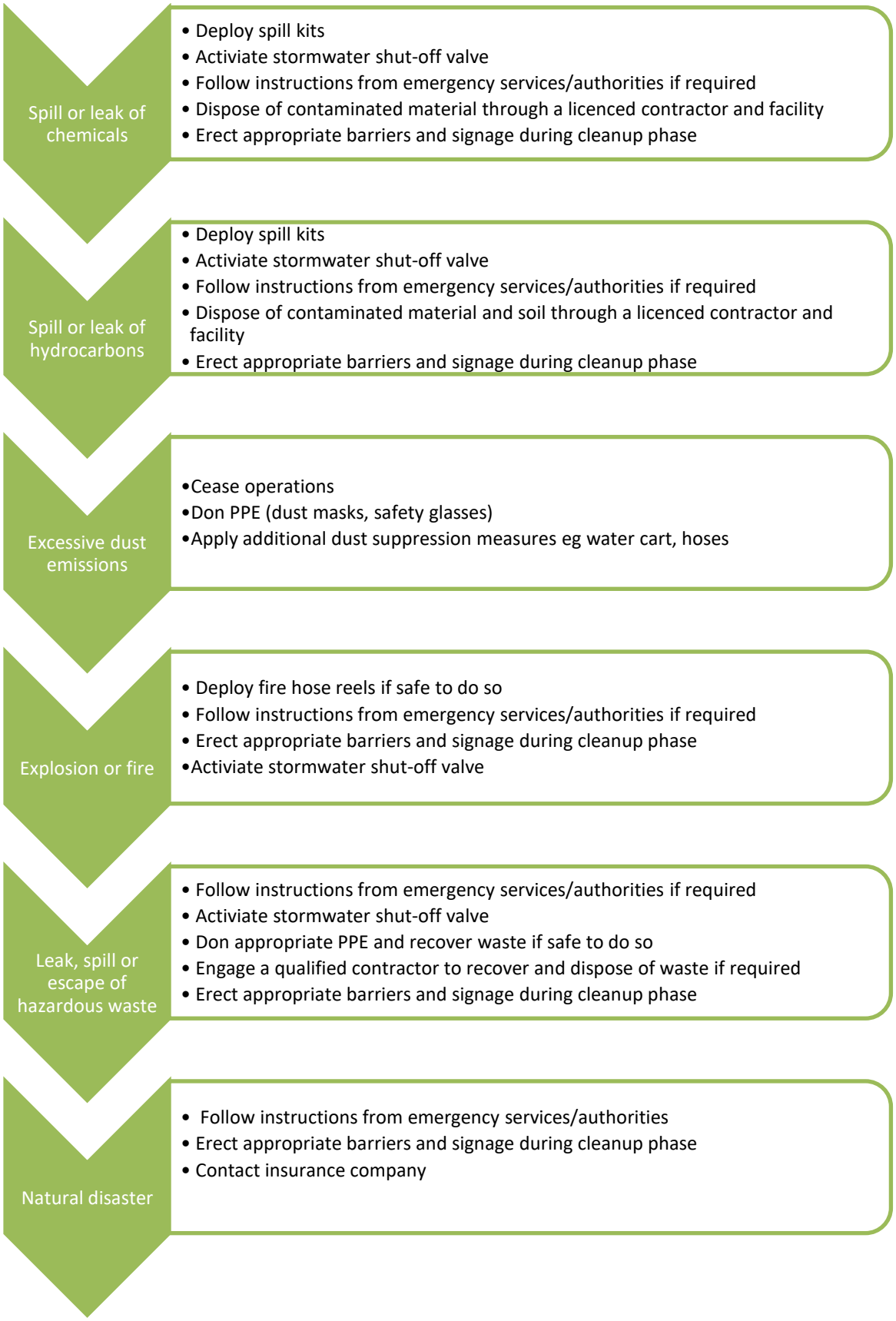


8.1 Notify Agencies

8.2 Minimise Harm to People on the Premises



8.3 Reduce and Control Pollution



8.4 Communicate with Neighbours and the Community

Is there potential for off-site impacts to the community or environment? If yes, then contact the following business via telephone or where appropriate via door knocking.

Table 8.1. Contact Details for Adjacent Businesses.

Business	Address	Contact	Main Activity
Aussie Self Storage	37 Enterprise Cres, Mcdougalls Hill	(02) 6572 4055	Self-Storage
Humex	7 Rosella St, McDougalls Hill	(02) 4017 1746	Muffler shop
Rapid Spray	35 Enterprise Cres, Singleton	1800 011 000	Manufacturer
Drill Doctors Australia	60 Enterprise Cres, Singleton	(02) 6571 3690	Drilling equipment supplier
Hunter Valley Hydraulink	164 Maison Dieu Rd, Gowrie	(02) 6571 1625	Hydraulic equipment supplier
Minetek	3 Rosella St, McDougalls Hill	(02) 6578 8600	Mining company
Actisafe	5 Rosella St, Singleton	1300 852 397	Manufacturer
Currently not occupied	1 Cockatoo St, McDougalls Hill	-	-

9. Staff Training and Testing This Plan

9.1 Staff Training

All new employees will be made aware of the requirements of the plan as part of their induction process.

All employees will be trained in the use of spill kits and fire extinguishers.

All employees are required to complete refresher training on a regular basis.

In addition to the above induction and training, details of this plan will be provided to key contacts on site and off site on request.

9.2 Testing this Plan

This plan will be reviewed once a year to ensure that the information contained within the plan is accurate and current. If necessary, the plan will be updated as a new version.

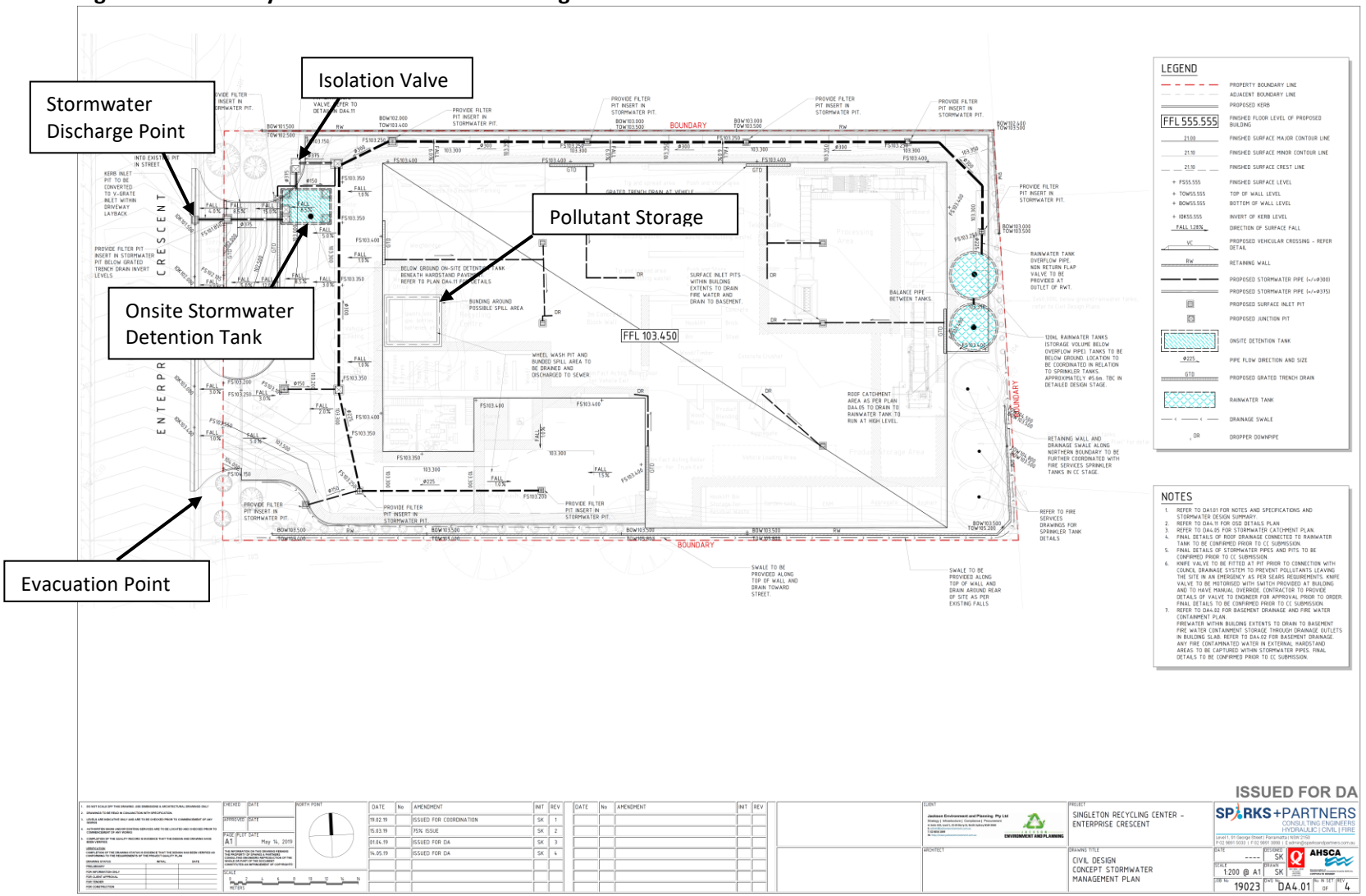
Evaculation drills will be carried out at least once a year.

Improvements identified in the review and drills will implemented.

Records will be kept of the reviews and drills, their outcomes and any improvements identified and implemented.

10. Location of Pollutant Storage, Evacuation Point and Drains

Figure 10.1. Site Layout and Stormwater Discharge Points.



Attachment 10: Waste Management Plan

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Waste Minimisation and Management Plan
Singleton Recycling Facility
39 Enterprise Crescent, McDougalls Hill

Jackson Environment and Planning Pty Ltd
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This Waste Management Plan has been prepared by the following staff of Jackson Environment and Planning Pty Ltd, Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060.

Author 1: Rylan Loemker, Senior Consultant, BEnvSc (Hons.), Graduate Diploma Business and Technology, Cert IV Carbon Management.

Author 2: Dr Mark Jackson, Director and Principal Consultant, B.Sc (Hons), PhD, Grad. Cert. Mgmt., Exec. Masters Public Admin.

We declare that:
This Waste Minimisation and Management Plan contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and the information contained in this plan is neither false nor misleading.

Report version	Authors	Date	Reviewer	Approved for issue	Date
v1.0	R, Loemker, Dr M.Jackson	29/01/19	Dr M.Jackson	Dr M.Jackson	30/01/19
FINAL	R, Loemker, Dr M.Jackson	01/02/19	Dr M.Jackson	Dr M.Jackson	01/02/19
UPDATED	R, Loemker, Dr M.Jackson	07/08/20	Dr M.Jackson	Dr M.Jackson	10/08/20

Executive Summary

Eco Logic Developments Pty Ltd is proposing to develop a recycling facility at 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 106208, Singleton). This Waste Management Plan addresses how waste will be minimised, separated, processed and recycled during the construction and operational phase of the development. The plan does not address demolition issues as the site is an undeveloped green field site with no built structures requiring removal.

The site is located within the Maison Dieu industrial estate, around 2km to the west of Singleton township. This single lot has an area of 5,000 m^2 and is unsealed with the majority of vegetation cleared. There are several nearby land use zones including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape.

The proposed development will involve the construction and operation of a best practice recycling facility for building, construction, household clean-up and commercial waste materials from households and businesses in the Singleton and Hunter region. The facility will operate within a purpose built and fully enclosed warehouse building. In total the Singleton Recycling Facility will provide capacity for recycling up to 95,000 tonnes of material per year.

The facility will include a fully enclosed and integrated recycling centre, including a Community Recycling Centre for household problem waste; a tipping and sorting area for a range of household, business and building waste, as well as soils and virgin excavated natural materials and an advanced sorting and processing facility to sort, recover and process mixed building materials to maximise recycling rates.

The proposed facility is considered to be a form of 'waste or resource transfer station' and is designated development under Schedule 3 of the *Environmental Planning and Assessment Regulation* 2000. This Waste Minimisation and Management Plan has been prepared to support the EIS and address the Department of Planning and Environment's SEARs requirements (SEARs 1282) and also the requirements of *Singleton Development Control Plan* 2014 (Schedule 5 – *Specialist Plans and Reports* and Section 2.29 *Waste Storage and Collection Areas*).

The development will involve: removal of two remaining eucalypt trees on the southern side of the lot; bulk earthworks and excavation to provide for the basement car parking; construction of retaining walls; construction of basement and ground floor reinforced concrete slabs; external handstand around the building; construction of a concrete tilt panel and steel roofed warehouse and office, including weighbridge, wheel wash, on-site detention storage and rainwater harvesting system; fire sprinkler tanks; landscaping; and installation of waste storage bays and specialized sorting and processing equipment within the warehouse.

During the construction phase, it has been estimated that approximately 10,300 tonnes of waste will be generated, comprising 18 tonnes of garden organics, 10,320 tonnes of excavated natural material (soil) and minor amounts of building waste. During construction, recycling and waste bins will be stored on the south west corner of the site in separate 30m^3 hook lift bins. Bins will be transferred to licensed recycling or disposal facilities. It is estimated that >95% of all waste generated during construction will be recycled.

Recycling operations will be conducted fully indoors within a warehouse with a gross floor area of 2,984m^2. Key operational features of the development within this footprint include:

- a Community Recycling Centre and Skip Tip area;
- a Processing Area;
- a Product Storage Area;
- office, training and education facilities; and
- a Basement car park to assist in traffic flow on the site.

During the operational phase, up to 95,000 tpa of waste materials will be received on site for recycling. Operational procedures for inspection, classification, storage, sorting, processing and manufactured products on the premises is summarised in this plan. The receival, storage, processing and manufacturing of products will be in accordance with EPA guidelines to achieve a recycling rate of 74%. The functional areas of the facility are summarized as follows:

Community Recycling Centre and Skip Tip Area

A fully integrated, drive through Community Recycling Centre at the front of the Singleton Recycling Facility will be established. Small vehicles will enter the site through the main entrance, over the 9m weighbridge and then through to the Community Recycling Centre. Access to the centre will be provided by a boom gate at the building entrance. Drop off and sorting bays will be established along the western wall of the warehouse for sorting of household chemical waste (including paints, oils, gas bottles, batteries). Staff will supervise householders to safely unload items from vehicles and trailers for placement in designated bays. Bays for mattresses and tyres, paper and cardboard, metals, glass, garden organics and wood/timber will be provided. These materials will be placed into hook lift bins as required and sent off-site for processing / recycling (except wood/timber which is mulched and recycled on site).

The Skip Tip area will involve:

- Three separate bays are provided, with the front of the bay for tipping, spreading and identification of any hazardous materials (e.g. gas bottles, batteries, paints, chemicals and asbestos) from trailers and skip bin collection vehicles in accordance with NSW EPA (2018) *Standards for Managing Construction Waste in NSW*.
- A separate bay is provided for: building waste; general waste (no building materials); and CT1 soils or Excavated Natural Material (soil) (with a test certificate demonstrating compliance with the *Excavated Natural Material Resource Recovery Order* 2014).
- Any hazardous materials (e.g. gas bottles, batteries, paints, chemicals) are moved and stored in the appropriate chemical storage area along the western side of the warehouse.
- Vehicles then exit the Community Recycling Centre at the southern side of the warehouse.
- Vehicles will then exit the site via a wheel wash then the second outbound weighbridge near the site office on the southern driveway and will exit the site from the separate exit. The net weight of materials dropped off for recycling or disposal will be recorded in the weighbridge software.
- Waste collected in skip bin trucks will be deposited into the appropriate tip and spread bunker at the centre of the Community Recycling Centre.
- Only one vehicle will be permitted in the drop off area in the Community Recycling Centre to avoid vehicle conflicts.
- All sorted materials in bunkers will be moved periodically to the Processing Area for further sorting, processing and off-site transfer. Tyres, mattresses, metals and glass will not be processed further on the site and will be picked up in trucks for transport to other lawful recycling facilities for processing / recycling.

It is noted that no retail sales will be available at any time in the facility for small vehicles and trailer combinations (such as the pick up of mulch, soil or aggregate).

Processing Area

The Operational Area of the Singleton Recycling Facility will involve sorting, screening, and size reduction to produce a series of aggregate, mulch and soil products from recovered materials. An operational overview of the Processing Area is provided below (also see Figure 2.3).

- Building waste which has been inspected is pushed via front end loader to the rear of the concrete bay, where primary sorting is performed using a mobile mechanical telehandler / grab to remove large heavy recyclable items, such as concrete, bricks, timber and steel. These materials are stored into separate hook lift bins, with residual light waste moved to the building waste sorting plant via front end loader.

- To assist in the recovery of materials from the light fraction of building waste, waste is loaded and sorted through a 30 tonne per hour secondary sorting process. Waste is transferred via front end loader into a receiving hopper, where waste is shredded via a slow speed shredder.
- Waste is then passed onto a conveyor and is screened via a finger screen to remove soil and sand from the waste materials. This is stored in a bunker for further processing.
- Waste is then transferred via conveyor into an elevated picking station with air-conditioned cabin for up to 6 personnel, who physically sort recyclable materials, which are dropped via chute into hook lift bins beneath the platform.
- Materials including paper/cardboard, clean timber, masonry (bricks / concrete) and plasterboard are separated from the waste material.
- Waste is then passed over a magnet to remove ferrous metals, an eddy current separator for removing aluminium and then an air classifier to remove light plastic films. These recovered materials will be stored in separate bins beneath the platform.
- Remaining materials on the conveyor will then be transferred into a hook lift bin for disposal.
- The same sorting, screening and decontamination process will be used for general waste.
- For loads of concrete/brick removed from the primary and secondary sorting process, this will be crushed and screened into aggregate products.
- Clean timber will be shredded via a shredding unit.

Product storage area

The Product Storage Area will be the main area where recovered materials or products are stored for bulk dispatch in trucks (no passenger vehicles and trailer combinations). An operational overview of the Product Storage Area is provided below.

- Separate concrete storage bays for aggregates, wood mulch, Excavated Natural Material, garden soils will be provided. A blending bay for mixing of soils and landscaping materials is provided.
- A separate storage bay for waste with hook lift bins for off-site disposal will also be provided.
- All products will be tested for compliance with an appropriate Resource Recovery Order prior to sale. Trucks and vehicles picking up product will enter via the western side of the warehouse, will pass over the weighbridge, and will manoeuvre through the warehouse through the designated vehicle roadway to the Product Storage Area.
- Trucks will be loaded via front end loader, then will exit the warehouse in the front direction and pass over the wheel wash / weighbridge for assessing net weight of product transferred off site.

A detailed assessment of the maximum waste storage capacity of the operation has been performed, and we have considered the draft NSW Fire and Rescue (2018) *Fire Safety Guidelines – Fire Safety in Waste Facilities.* The analysis suggests that the facility can safety store up to a maximum of 700 tonnes of waste and processed products at any one point in time, in designated concrete bays or bins allocated within the facility.

Overall, the waste processing and recycling operation will sort and recycle 74.8% of all wastes received. The office administration operations will generate very minimal waste, and it is estimated that 85% of this waste will be fully recycled, through a separate comingled recycling system and an on-site worm farm for food waste.

This facility will make an important contribution towards meeting the NSW Government's Waste Avoidance and Resource Recovery Strategy target of 70% recycling of municipal and commercial/industrial waste and 80% recycling of construction and demolition waste by 2021.

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1. Introduction

1.1. Background

Eco Logic Developments Pty Ltd is proposing to develop a recycling facility at 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 106208, Singleton). This Waste Management Plan addresses how waste will be minimised, separated, processed and recycled during the construction and operational phase of the development. The plan does not address demolition issues as the site is an undeveloped green field site with no built structures requiring removal.

The site is located within the Maison Dieu industrial estate, around 2km to the west of Singleton township. This single lot has an area of 5,000 m^2 and is unsealed with the majority of vegetation cleared. There are several nearby land use zones including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape.

The proposed development will involve the construction and operation of a best practice recycling facility for building, construction, household clean-up and commercial waste materials from households and businesses in the Singleton and Hunter region. The facility will operate within a purpose built and fully enclosed warehouse building. In total the Singleton Recycling Facility will provide capacity for recycling up to 95,000 tonnes of material per year.

The facility will include a fully enclosed and integrated recycling centre, including a Community Recycling Centre for household problem waste; a tipping and sorting area for a range of household, business and building waste, as well as soils and virgin excavated natural materials and an advanced sorting and processing facility to sort, recover and process mixed building materials to maximise recycling rates.

The proposed facility is considered to be a 'waste or resource transfer station' and is designated development under Schedule 3 of the *Environmental Planning and Assessment Regulation* 2000. This Waste Management Plan has been prepared to support the EIS and address the Department of Planning and Environment's SEARs requirements (SEARs 1282) and also the requirements of *Singleton Development Control Plan* 2014 (Schedule 5 – *Specialist Plans and Reports* and Section 2.29 *Waste Storage and Collection Areas*).

1.2. Scope and Objectives

This plan assesses how the waste will be dealt with in the most environmentally sustainable way. This WMP contains the following information:

- Relevant legislation and guidelines for waste management for the Facility;
- The systems, procedures and initiatives proposed to address the management of waste materials generated during the demolition, construction and operation phases of the Facility;
- Safeguards, mitigation measures and monitoring to manage waste impacts during demolition, construction and operation;
- Roles and responsibilities of those involved in the design and implementation of waste management controls; and
- An effective monitoring, auditing and reporting framework to assess the effectiveness of the controls implemented.

This WMP is a sub plan to the overall Environmental Management System (EMS) for the Facility. Eco Logic Developments Pty Ltd is committed to environmental sustainability through waste avoidance and reduction as well as increased recycling.

This WMP has been prepared to demonstrate Eco Logic Development's commitment in helping meet the 80% recycling target for construction and demolition waste under the NSW Government's *Waste Avoidance and Resource Recovery Strategy 2014-2021*.

The objectives of the Waste Minimisation and Management Plan are as follows, consistent with clause 2.29(1) of *Singleton Development Control Plan* 2014 (the DCP) which are to:

- Minimise the adverse environmental impacts associated with waste storage and collection;
- Ensure that waste storage areas are conveniently located for both the user and waste collector;
- Minimise the likelihood of illegal dumping;
- Ensure optimum hygiene in the management of waste;
- Minimise adverse amenity impacts associated with waste storage; and
- Discourage illegal dumping by providing on site storage, and removal services.

1.3. SEARs requirements

The Department of Planning and Environment on 17th December 2018 issued the Secretary's Environmental Assessment Requirements (SEARs) for the development. An outline of these requirements is provided in Table 1.1. This table also outlines the section of the Waste Management Plan where the specific SEARs requirement has been addressed.

Table 1.1. Secretary's Environmental Assessment Requirements that relate to waste management for the proposed Singleton Recycling Facility.

SEARs requirement	Section where this has been addressed?	Compliant (Yes / No)
Details of the type, quantity and classification of waste to be received at the site	Section 3.2.7	Yes
Details of the resource outputs and any additional processes for residual waste	Section 3.2.8	Yes
Details of waste handling including, transport, identification, receipt, stockpiling and quality control	Sections 3.2.6, 3.2.9, 3.2.10, 3.2.11, 3.2.12	Yes
The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the *NSW Waste Avoidance and Resource Recovery Strategy* 2014-21	Sections 3.2.1, 3.2.2, 3.2.3 and 3.2.9	Yes

1.4. *Singleton Development Control Plan* 2014

Section 2.29 of the *Singleton Development Control Plan* 2014 outlines the requirements for waste storage and collections associated with development in the Singleton local government area. An outline of these requirements is provided in Table 1.2.

Table 1.2. *Singleton Development Control Plan* 2014 requirements for the Waste Management Plan.

Singleton Development Control Plan 2014 requirements	Section where this has been addressed?	Compliant (Yes / No)
(1) The objectives of this clause are as follows: (a) to minimise the adverse environmental impacts associated with waste storage and collection, (b) to ensure that waste storage areas are conveniently located for both the user and waste collector, (c) to minimise the likelihood of illegal dumping,	Section 3.2 (all)	Yes

Singleton Development Control Plan 2014 requirements	Section where this has been addressed?	Compliant (Yes / No)
(d) to ensure optimum hygiene in the management of waste, (e) to minimise adverse amenity impacts associated with waste storage.		
(2) This clause applies to development that would generate waste or the need to store waste on any land to which this Plan applies.	Section 3.2	Yes
(3) Development consent should not be granted to development that would generate waste or the need to store waste onsite, unless the consent authority is satisfied that suitable waste storage areas are provided.	Section 3.2.10 and 3.2.11	Yes
(4) In considering whether waste storage areas are suitable, the consent authority must have regard to the following matters: (a) waste storage areas must have sufficient capacity to provide for the type and volume of waste generated, and (b) stored waste must not create offence through the emission of dust, leachate, odour or unsightliness, and (c) storage areas and receptacles must be conveniently located for the user and waste collector, and (d) storage facilities for putrescible wastes must have suitable shelter, be well ventilated, appropriately waterproofed and adequately vermin proofed, and (e) waste must not be permitted to pollute the air, water or soil, and (f) waste storage areas are to be provided with suitable provisions for cleaning of the areas, including an accessible hose cock (unless inappropriate for the type of waste being stored), and (g) the design of waste storage areas should be such that they complement the development and are not readily visible from the street and other public areas, and (h) where vehicles need to access the waste storage area(s) for collection, the waste storage area(s) must be able to be accessed by the collection vehicle without requiring the vehicle to reverse into or out of the site.	Section 3.2.11 and 3.2.12	Yes

1.5. The Site

The proposed site is a greenfield site located at 39 Enterprise Crescent, McDougalls Hill, within the Singleton Council local government area. The site is a single lot at Lot 17, DP 1062083, Singleton. The site is located in the Maison Dieu industrial estate, around 2km to the west of Singleton township. An aerial photo is provided in Figure 1.1. It is noted the current site is vacant with no equipment stored on site (Figure 1.2).

The lot has an area of 5,000 m^2. The current site is unsealed, with the majority of vegetation cleared. The site has several nearby land use zones, including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape. The site is zoned B5 Business Development in the *Singleton Local Environmental Plan* 2013.

Figure 1.1. Aerial view of the lot, 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083). Site boundaries are shown in red.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
22/09/18	Revision A	M.McGee	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au		Project	Singleton Recycling Facility
						Title	Aerial photo of site - lot
						Scale	As shown
						Source	NSW Department of Planning and Environment

Figure 1.2. Photo of 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 1062083) (photo taken 02/10/18).

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
17/01/19	Revision A	M.Jackson	39 Enterprise Crescent, McDougalls Hill	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au		Project	Singleton Recycling Facility
						Title	Site photo – view towards east
						Scale	As shown
						Source	Jackson Environment and Planning Pty Ltd

1.6. Legislative requirements and related documentation

The explicit details of managing particular types of wastes are clearly defined in the *EPA Waste Classification Guidelines* of the *Protection of Environment Operations Act 1997 (POEO Act*) to manage different waste types generated on-site. These include:

- Taking waste to the right waste management facility; and
- Specialised storage, handling, treatment and disposal requirements.

Other relevant legislation and publications are:

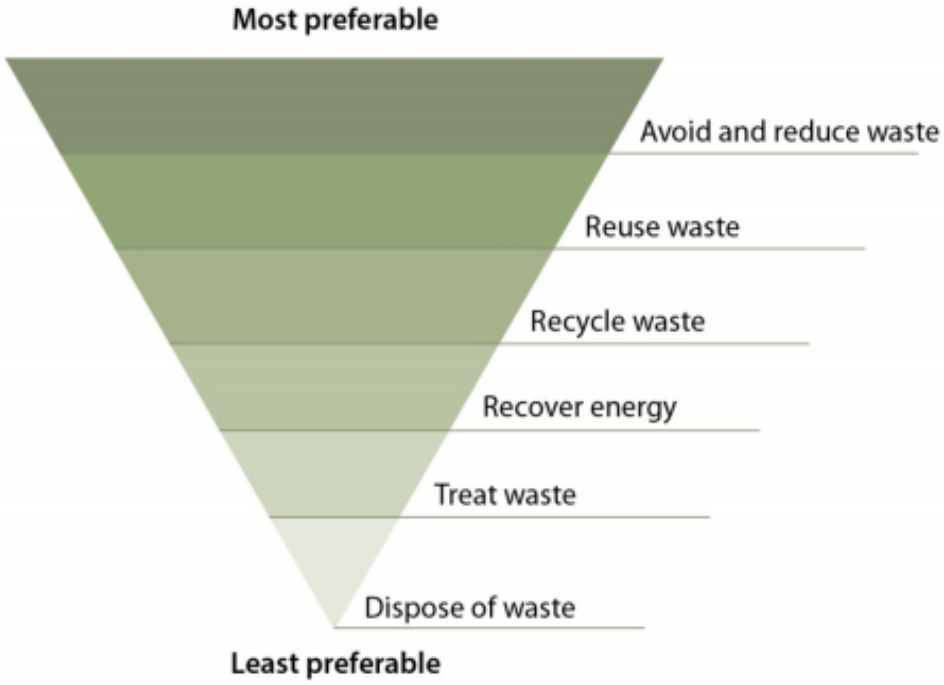
- *Environmental Planning and Assessment Act* 1979;
- *Waste Avoidance and Resource Recovery Act* 2001;
- *Protection of the Environment Operations (Waste) Regulation* 2014;
- *Work Health and Safety Act* 2011 and the *Work Health and Safety Regulations* 2011;
- *Environmental Protection (Controlled Waste) Regulation* 2001;
- *State Environmental Planning Policy (Exempt and Complying Development Codes)* 2008: Part 5A, Division 4, Clause 5A.26 Garbage and waste storage;
- *Singleton Development Control Plan* 2014– Section 2.29 Waste Storage and Collection Areas;
- *Recovered Aggregate Order* 2014 and *Recovered Aggregate Exemption* 2014;
- *"Batch Process" Recovered Fines Order* 2014 and *"Batch Process" Recovered Fines Exemption* 2014;
- NSW EPA (2013). *Draft Protocol for managing asbestos during resource recovery of construction and demolition waste*; and
- NSW EPA (2018). *Standards for managing construction waste in NSW.*
- Fire and Rescue NSW (2018). *Draft Fire Safety Guidelines – Fire Safety in Waste Facilities.*

The *Waste Avoidance and Resource Recovery Strategy* 2014-21 has the following objectives:

- Waste Avoidance;
- Increase recycling rate of Construction and Demolition waste to 80%;
- Divert 75% waste from landfill;
- Manage problem wastes better;
- Reduce Litter; and
- Reduce Illegal Dumping.

The manner in which waste is to be managed is driven by the Ecologically Sustainable Development principles. Guidance in managing waste has been provided by the hierarchical chart below.

Figure 1.3. The waste hierarchy as published in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21.*



2. Project Description

The proposed development will involve the construction and operation of a best practice recycling facility for building, construction, household clean-up and waste materials from households and businesses in the Singleton and Hunter region. The facility will operate within a purpose built and fully enclosed warehouse building. In total the Singleton Recycling Facility will provide capacity for recycling up to 95,000 tonnes of material per year.

The project consists of two stages; the construction phase and the operational phase. No demolition is required as the site is a greenfield site. The construction phase will involve:

- Removal of two remaining eucalypt trees on the southern boundary of the lot;
- Bulk earthworks and excavation to provide for the basement car parking;
- Construction of retaining walls;
- Construction of basement and ground floor reinforced concrete slabs;
- External handstand around the building;
- Construction of a concrete tilt panel and steel roofed warehouse and office, including weighbridge, wheel wash, on-site detention storage and rainwater harvesting system;
- Installation of fire sprinkler tanks;
- Landscaping; and
- Installation of waste storage bays and specialized sorting and processing equipment within the warehouse.

3. Waste Management

Waste management practices outlined in this waste minimisation and management plan will meet the key objectives of *Singleton Development Control Plan* 2014 (Schedule 5 – *Specialist Plans and Reports* and Section 2.29 *Waste Storage and Collection Areas*).

These measures address the economic, environmental and safety imperatives during the construction phase and into the operational phase. These enhanced management practices also produce triple bottom line benefits including financial efficiencies, sustainable construction methods and a safe work site for the duration of the construction process.

These positive outcomes will be achieved through thorough planning and procurement of exacting measurements reducing upfront costs of construction and preventing the generation of waste.

The benefits of the management practices outlined in the plans will be realised from the outset by both the business and the broader community in the form of reduced costs of disposal, reduced costs of legal liability and common good through:

- Minimising waste by manufacturing building components off site to design specifications;
- Maximising recovery of valuable resources;
- Exercising due diligence for safe disposal of waste; and
- Providing a safe worksite.

3.1. Construction phase

The development phase of the project does not involve the demolition any built structures. Trees removed during initial works will be mulched and surface applied to exposed soil surface outside of the immediate construction area

for soil erosion control in accordance with Appendix D of Landcom (2004) *Managing Urban Stormwater – Soils and Construction*[1]. All vegetation will be fully recycled and re-used on-site as erosion control mulch.

Excavated Natural Material (ENM) (soil) is the main waste material that will generated during the construction phase, which will be fully recycled. However, prior to excavation works occurring, in-situ soil sampling will be done to confirm compliance of the soil with the NSW EPA's *Excavated Natural Material Resource Recovery Order* 2014[2]. This will involve the sampling of soil in accordance with Table 2 of the Order. Prior classification of the soil will enable an assessment of the suitability of the soil for direct re-use and recycling in construction projects nearby. If any samples do not meet the requirements of the Order and are considered 'hotspots' with elevated concentrations of contaminants, this area will be segregated and separated from soil that is suitable for re-use. This soil will be placed in labelled hook lift bins and sent off-site for lawful disposal. Otherwise soil that is suitable for re-use in construction will be segregated, stored in hook lift bins and transported to sites that require ENM for construction.

The basement area requiring excavation is shown in Figure 3.1, and the footprint of the warehouse being which will require excavation for construction of hardstand areas and the ground floor of the warehouse is shown in Figure 3.2. A total of five 30m^3 hook lift bins positioned on the south west corner of the site will be used for storage and transport of ENM for recycling off-site (see Figure 3.3).

Minor amounts of concrete, timber, metal and plastics will be generated during the construction of the warehouse building. These wastes will be segregated to maximise recycling and stored separately in hook lift bins (see Figure 3.3) and will be transported off-site for recycling at a lawful facility. Note that tilt panels used for walls for the warehouse will be pre-manufactured off-site and will be simply placed and secured, minimising generation of waste.

Waste generation and a recycling estimate during the construction phase of the development is reviewed in Section 3.1.1.

3.1.1. Waste generation

The waste streams generated on site during the construction phase is summarised in Table 3.1 below.

Table 3.1. Estimated waste generation during the construction phase.

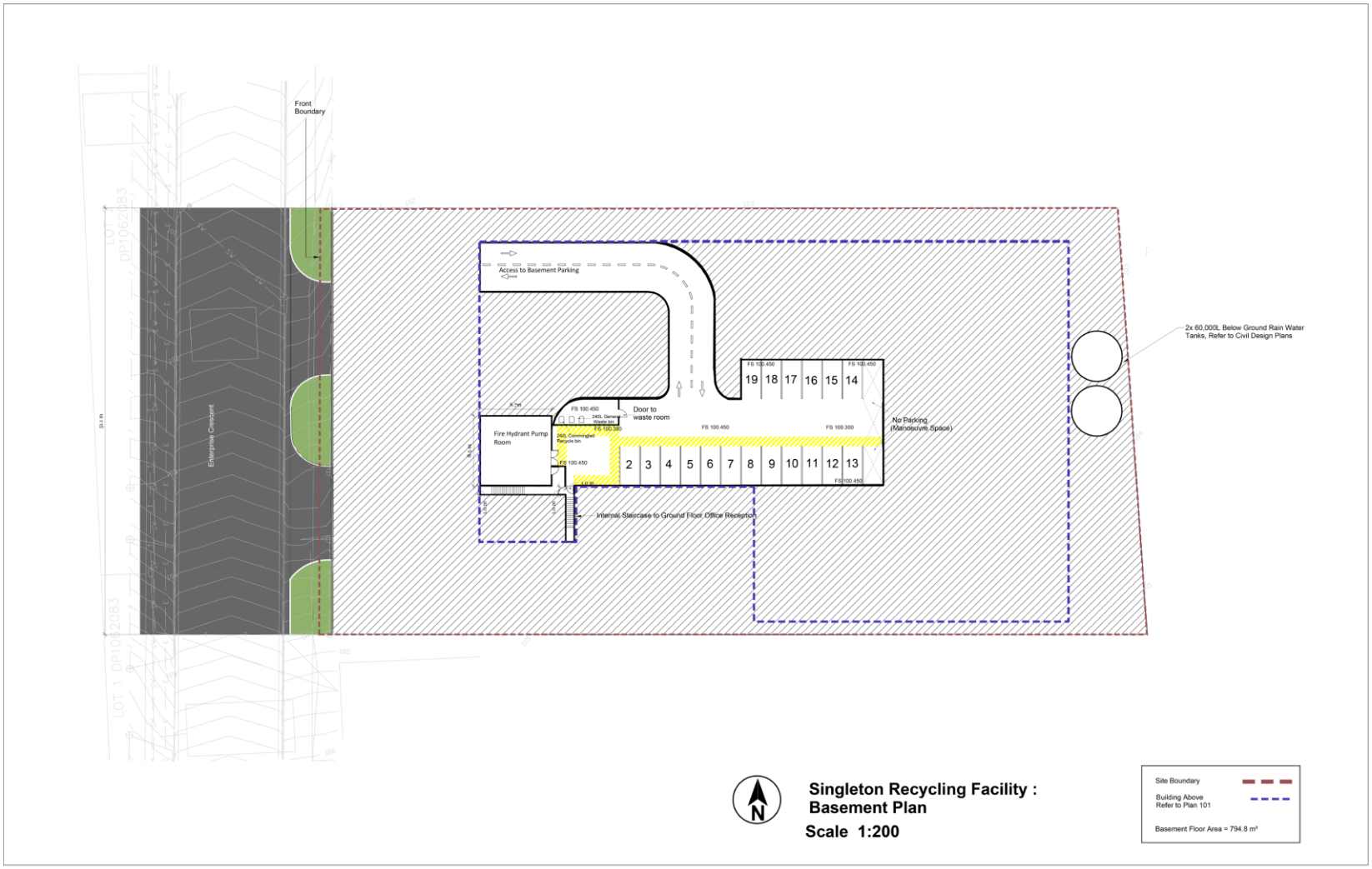
Source	Material	Description	Estimated volume (m^3)	Tonnes
Land clearing	Woody garden organics	Tree stumps and branches, as well as some grasses. These will be mulched and used on-site around the perimeter of the site for soil erosion control	80 m^3	18.2
Site excavation for basement and footings for handstand areas	Excavated Natural Material (soil)	Excavation and removal of surplus soil from the site is required for construction of the basement and footings for handstand areas and the ground floor for the warehouse. Soil will be sampled in-situ to confirm compliance with the NSW EPAs Excavated Natural Material Resource Recovery Order and will be lawfully re-use and recycled off site. Any 'hot spots' of contamination will be segregated and disposal at lawfully off-site.	6,820 m^3	10,230.0

[1] Landcom (2004). Managing Urban Stormwater – Soils and Construction. 4th Edition, March 2004. Internet publication: https://www.environment.nsw.gov.au/resources/water/BlueBookVol1.pdf

[2] NSW EPA (2014). Excavated Natural Material Resource Recovery Order 2014. Internet publication https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/resource-recovery-framework/current-orders-and-exemption

Source	Material	Description	Estimated volume (m^3)	Tonnes
Employee waste	Municipal Solid Waste	Small amounts of co-mingled recycling and general waste will be generated during construction works over a six month period (by construction contractors). Assume 1 x 240 L comingled recycling and 1 x 240 L general waste bin will be placed next to the hook lift bins and will be emptied weekly.	12.5 m^3	10.0
Building waste	Concrete	Surplus concrete from basement and floor construction	30 m^3	36.0
	Timber	Timber used in formwork not suitable for re-use, and timber off-cuts in construction of the office facilities	10 m^3	8.0
	Metal	Surplus metal for basement and concrete reinforcing, and off-cuts generated during the construction process	10 m^3	8.0
	Plastics	Plastic film used in wrapping of building materials and supply of plant and equipment	10 m^3	0.8
	Mixed building waste (non-recyclable)	Mixed building waste not suitable for recycling	60 m^3	66.0
TOTAL			**7,032.5 m^3**	**10,376 tonnes**

Figure 3.1. Basement plan showing the area to be excavated during construction works (white areas only).



Date	Plan Number	Basement Plan
08-08-2020	103	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)

Jackson Environment and Planning Pty Ltd
Strategy | Infrastructure | Compliance | Procurement
A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060
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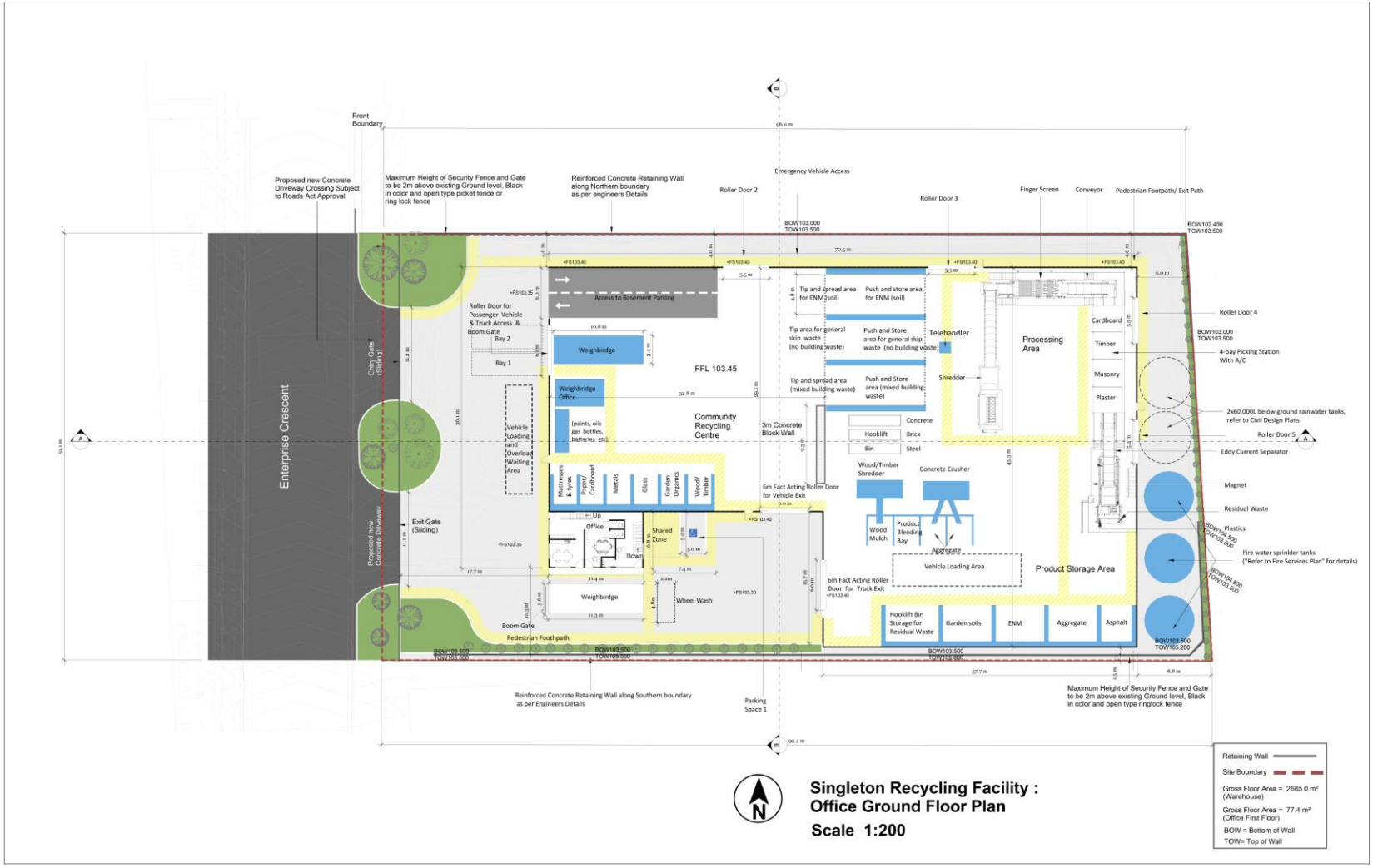
Client	Eco Logic Developments Pty Ltd
Project	Singleton Recycling Facilty
Title	Basement Plan
Scale	1:200
Source	Jackson Environment and Planning Pty Ltd

01 A

Figure 3.2. Ground floor plan showing the development footprint of the warehouse, including outdoor hardstand areas.



Date	Plan Number	Site & Office Ground Floor Plan
08-08-2020	101	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)

Jackson Environment and Planning Pty Ltd
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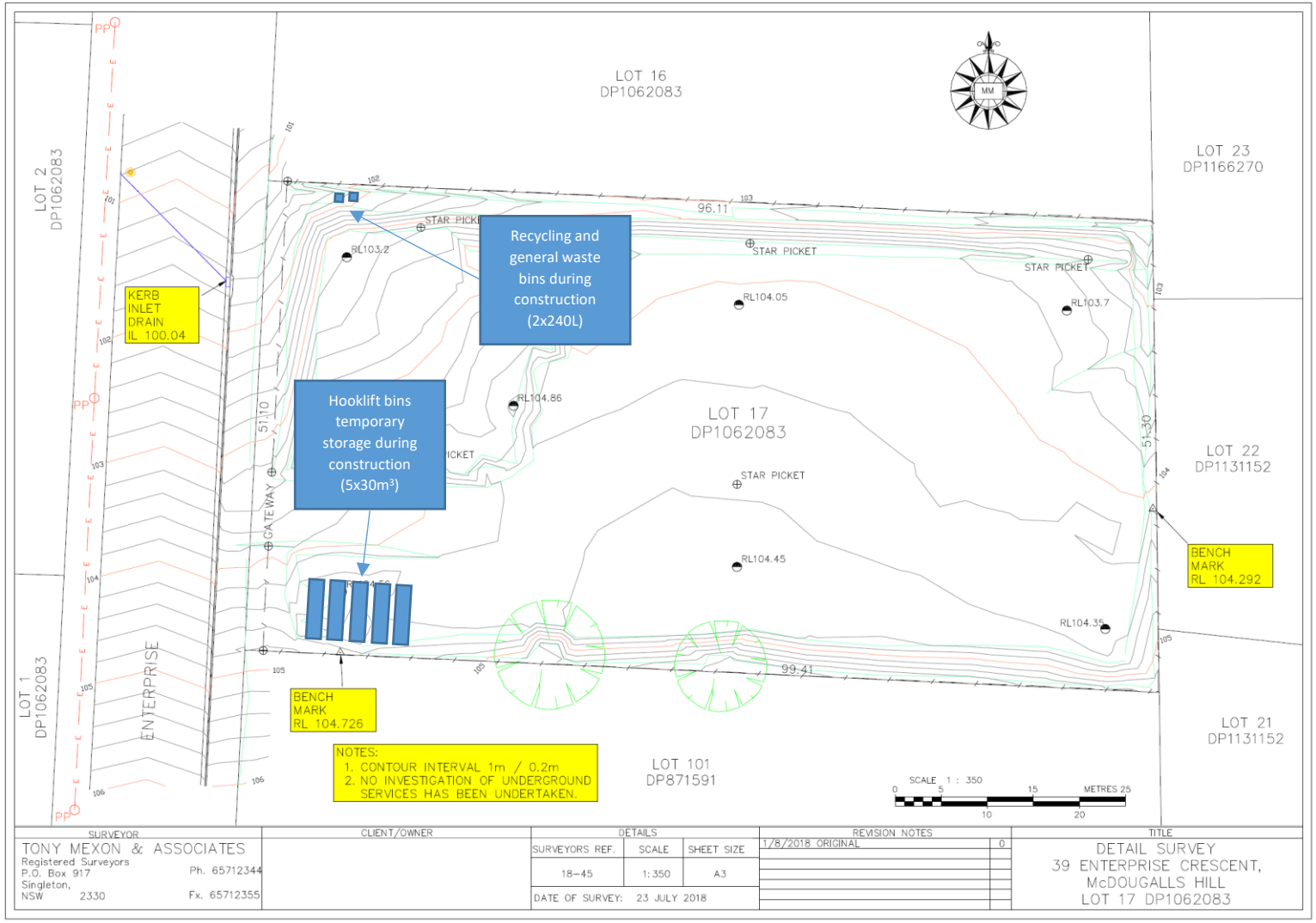
Client	Eco Logic Developments Pty Ltd
Project	Singleton Recycling Facilty
Title	Site and Office ground floor plan
Scale	1:200
Source	Jackson Environment and Planning Pty Ltd

01
A

Figure 3.3. Survey plan and lot boundaries, showing where the hook lift recycling and waste bins will be stored during construction works. One 240L MGB for general waste and one 240L MGB for comingled recycling for construction contractors will also be provided during construction works.



3.1.2. Waste management measures

The management and destination of waste materials from the construction phase of the project is summarised in Table 3.2 below.

Table 3.2. Waste management measures during the construction phase.

Material	Treatment / destination	Estimated recovery rate (%)
Woody garden organics	Woody garden organics will be shredded and applied as a mulch to ~50mm depth for soil erosion control around the perimeter of the site in accordance with Landcom (2004) *Managing Urban Stormwater – Soils and Construction.*	100
Excavated Natural Material (soil)	ENM compliant with the NSW EPA (2014) *Excavated Natural Material Resource Recovery Order* will be sent off-site for re-use in approved construction projects or sent to licenced facilities for further recycling. Soil will be excavated and stored in 30m^3 hook lift bins (or similar) and sent off-site for re-use.	100
Municipal Solid Waste	Comingled recycling will be sent off-site for recycling at a licence facility. Mixed general waste will be disposed to landfill.	50
Concrete	Surplus concrete segregated and stored in 30m^3 hook lift bins (or similar) and sent off-site for recycling.	100
Timber	Clean timber and pallets generated during construction will be segregated and stored in 30m^3 hook lift bins (or similar) and sent off-site for recycling.	100
Metal	Metal reinforcing and metal sheeting off-cuts generated during construction will be segregated and stored in 30m^3 hook lift bins (or similar) and sent off-site for recycling.	100
Plastics	Plastic films generated during construction will be segregated and stored in 30m^3 hook lift bins (or similar) and sent off-site for recycling.	100
Mixed building waste (non-recyclable)	Mixed building waste not suitable for recycling will be sent off-site for disposal.	0

The overall waste recovery rate during the construction phase will be >95%.

Residual waste will be collected in a separate hook lift bin and regularly removed from the site for disposal in a licensed landfill (Singleton Waste Depot, Singleton, EPL: 5927). Other recovered materials will be sent to EPA licenced recycling facilities in the region.

3.2. Operational phase

The operational phase consists of the operation of a 95,000 tpa best practice recycling facility. The recycling facility will be operated in accordance with the NSW EPA (2018) *Standards for Managing Construction Waste in NSW* and the NSW EPA's *Draft Protocol for Managing Asbestos During Resource Recovery of Construction and Demolition Waste.* The design and operation of the facility has also considered draft guidelines released by NSW Fire and Rescue (2018) *Fire Safety Guideline – Fire Safety in Waste Facilities.*

The proposed development will involve the construction and operation of a recycling facility for building, construction, household clean-up and commercial waste materials from households and businesses in the Singleton and Hunter region. The facility will operate within a purpose built and fully enclosed warehouse building.

It is noted that no waste or waste-derived products will be stored outside the warehouse.

Site plans providing an overview of the proposed development and operations, including vehicle turning paths, are given in Attachment 2. The proposed warehouse has a gross floor area of 2,984m^2, and the office area has a gross floor area of 83.9m^2. Key operational features of the development within this footprint include:

- a Community Recycling Centre and Skip Tip area;

- a Processing Area;
- a Product Storage Area;
- Office, training and education facilities; and
- a Basement car park to assist in traffic flow on the site.

An operational overview of the functional areas of the site is provided below. Concept plans for the development are shown in Figures 3.1 and 3.2.

3.2.1. Community Recycling Centre and Skip Tip Area

The purpose of the Community Recycling Centre is to provide a convenient way for householders to drop off chemicals, recyclables and general waste (not containing food) for recycling and disposal. A tipping area for skip bin waste from commercial collection vehicles will also be provided.

An overview of the operational features for the proposed Community Recycling Centre area is given below (also see Figure 3.1):

- A fully integrated, drive through Community Recycling Centre at the front of the Singleton Recycling Facility will be established. Small vehicles will enter the site through the main entrance, over the 9m weighbridge and then through to the Community Recycling Centre. Drop off and sorting bays will be established along the western wall of the warehouse for sorting of household chemical waste[3]. Staff will supervise householders to safely unload items from vehicles and trailers for placement in designated bays.
- Concrete bays for sorting and placement of recyclable materials will be provided along the southern side of the warehouse, including bays for: clean untreated wood/timber; garden organics; glass; metals; paper / cardboard; and mattresses / tyres.
- General waste in vehicles and trailers will be inspected on the weighbridge and if loads do not contain non-compliant materials (e.g. asbestos or fibro), vehicles will be directed to an appropriate concrete sided tipping bay in the centre of the sorting and tipping warehouse.
- To avoid the potential for vehicle conflicts, only one vehicle will be permitted to tip in the tipping area at one time.

It is noted that no retail sales will be available at any time in the facility to passenger vehicles and trailer combinations (such as the pick up of mulch, soil or aggregate).

[3] Household chemical waste includes paint, gas bottles, fire extinguishers, motor oils, other oils, car batteries, household batteries, smoke detectors and fluoro globes and tubes.

Figure 3.1. Process flow chart for the operation of the Community Recycling Centre – Small vehicles with clean-up waste, household chemical waste and recyclables.

The tipping area is comprised of (see Figure 3.2):

- Three separate bays are provided, with the front of the bay for tipping, spreading and identification of any hazardous materials (e.g. gas bottles, batteries, paints, chemicals and asbestos) from trailers and skip bin collection vehicles in accordance with NSW EPA (2018) *Standards for Managing Construction Waste in NSW*;
- A separate bay is provided for: building waste; general waste (no building materials); and Excavated Natural Material (soil) (with a test certificate demonstrating compliance with the *Excavated Natural Material Resource Recovery Order* 2016);
- Any hazardous materials (e.g. gas bottles, batteries, paints, chemicals) are moved and stored in the appropriate chemical storage area along the western side of the warehouse;
- Vehicles then exit the Community Recycling Centre at the southern side of the warehouse, and pass through an automatic wheel wash to remove any sediment;
- Vehicles will then exit the site via the wheel wash / second outbound weighbridge near the site office on the southern driveway and will exit the site from the separate exit. The net weight of materials dropped off for recycling or disposal will be recorded in the weighbridge software;
- Waste collected in skip bin trucks will be deposited into the appropriate tip and spread bunker at the centre of the Community Recycling Centre. Trucks can only enter if the Community Recycling Area is free of any vehicles. This is a safety measure to avoid any potential collisions;
- All sorted materials in bunkers will be moved periodically to the Processing Area for further sorting, processing and off-site transfer. Tyres, mattresses, metals and glass will not be processed further on the site and will be picked up in trucks for transport to other lawful recycling facilities for processing / recycling.

Figure 3.2. Process flow chart for the operation of the Tipping Area.

3.2.2. Processing Area

The Operational Area of the Singleton Recycling Facility will involve sorting, screening, and size reduction to produce a series of aggregate, mulch and soil products from recovered materials. An operational overview of the Processing Area is provided below (also see Figure 3.3).

- Building waste which has been inspected is pushed via front end loader to the rear of the concrete bay, where primary sorting is performed using a mechanical telehandler / grab to remove large heavy recyclable items, such as concrete, bricks, timber and steel. These materials are stored into separate hook lift bins, with residual light waste moved to the building waste sorting plant via front end loader.
- To assist in the recovery of materials from the light fraction of building waste, waste is loaded and sorted through a 30 tonne per hour secondary sorting process. Waste is transferred via front end loader into a receiving hopper, where waste is shredded via a slow speed shredder.
- Waste is then passed onto a conveyor and is screened via a finger screen to remove soil and sand from the waste materials. This is stored in a bunker for further processing.
- Waste is then transferred via conveyor into an elevated picking station with air-conditioned cabin for up to 4 personnel, who physically sort recyclable materials, which are dropped via chute into hook lift bins beneath the platform.
- Materials including paper/cardboard, clean timber, masonry (bricks / concrete) and plasterboard are separated from the waste material.
- Waste is then passed over a magnet to remove ferrous metals, an eddy current separator for removing aluminium and then an air classifier to remove light plastic films. These recovered materials will be stored in separate bins beneath the platform.
- Remaining materials on the conveyor will then be transferred into a hook lift bin for disposal.
- The same sorting, screening and decontamination process will be used for General waste.
- Excavated Natural Material will not be processed and will be stored in the product storage bay area.
- For loads of concrete/brick removed from the primary and secondary sorting process, this will be crushed and screened into aggregate products.
- Clean timber will be shredded via a shredding unit.

3.2.3. Product storage area

The Product Storage Area will be the main area where processed and recovered products are stored for sale and off-site transfer. An operational overview of the Product Storage Area is provided below.

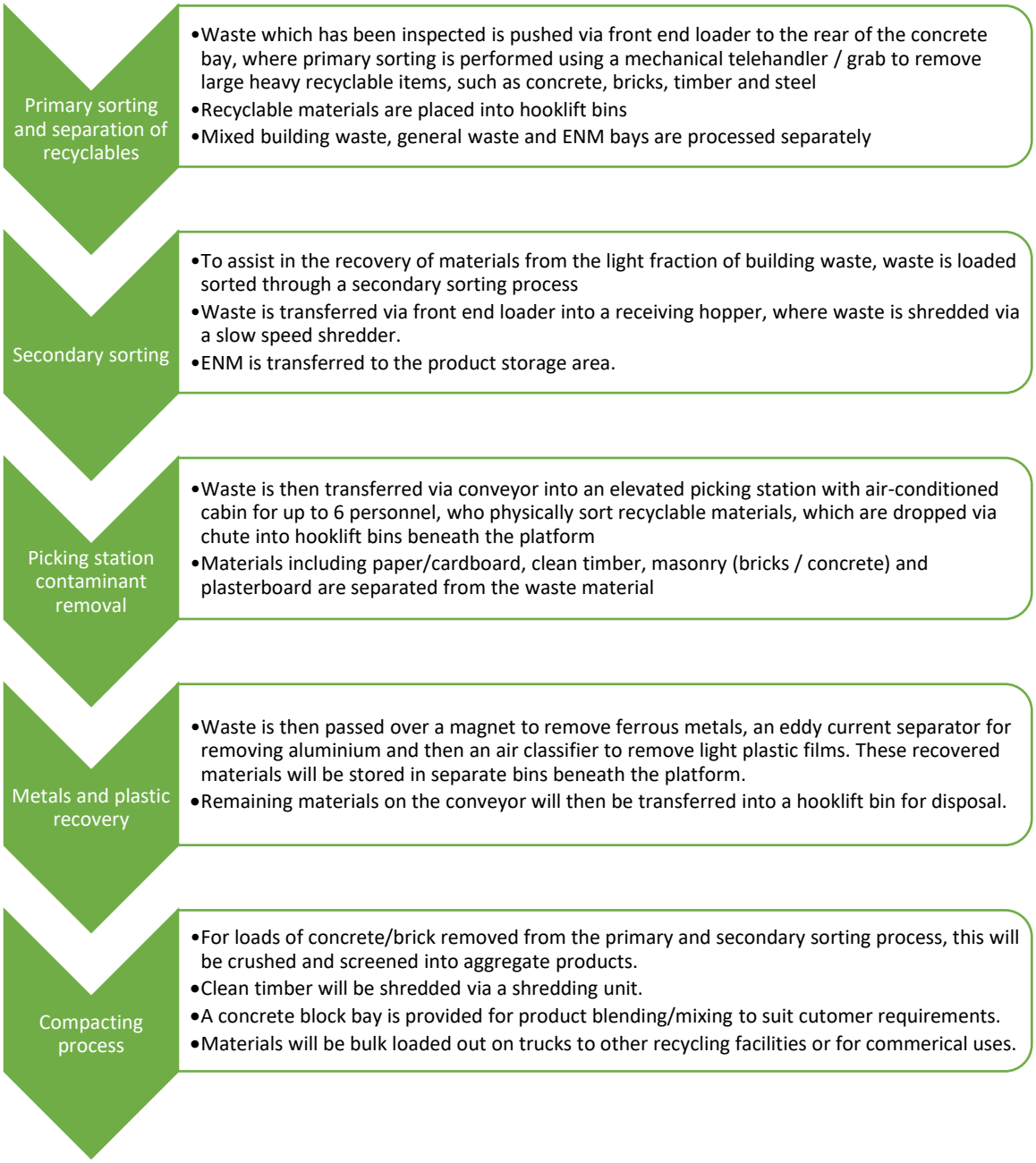
- Separate concrete storage bays for aggregates, wood mulch, Excavated Natural Material, garden soils will be provided. A blending bay for mixing of soils and landscaping materials is provided.
- A separate storage bay for waste with hook lift bins for off-site disposal will also be provided.
- All products will be tested for compliance with an appropriate Resource Recovery Order prior to sale. Trucks and vehicles picking up product will enter via the western side of the warehouse, will pass over the weighbridge, and will manoeuvre through the warehouse through the designated vehicle roadway to the Product Storage Area.
- Trucks will be loaded via front end loader, then will exit the warehouse in the front direction and pass through the automatic wheel wash then over the weighbridge for assessing net weight of product transferred off site.

3.2.4. Other site features and services

The Singleton Recycling Facility will be supported through other site features, as follows:

- Weighbridge office, meeting room and bathroom amenities (ground floor);
- Office area, bathroom, meeting room and lunch room facilities;
- An upstairs education room and staff training room;
- A full fire sprinkler system through the warehouse; and
- A basement car park for up to 18 vehicles to separate incoming truck movements from staff and visitor passenger vehicles.

Figure 3.3. Process flow chart for the operation of the Processing Area.



3.2.5. Classification of Waste Streams

Classifying waste into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal.

The following classes of waste are defined in clause 49 of Schedule 1 of the *Protection of the Environment Operations Act* 1997 (POEO Act) and the NSW EPA's *Waste Classification Guidelines* (2014)*:*

- Special waste;
- Liquid waste;
- Hazardous waste;
- Restricted solid waste;
- General solid waste (putrescible); and
- General solid waste (non-putrescible)

Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste is based on the *Waste Classification Guidelines* (NSW EPA, 2014). The guideline outlines how to assess waste, waste classification and sets out management options for the disposal of classified waste.

Waste classification will involve one or more of the following steps:

1. Establish if the waste should be classified as special waste;
2. If not special waste, establish whether the waste should be classified as liquid waste;
3. If not special waste or liquid waste, establish whether the waste is of a type that has already been pre-classified;
4. If the waste is not special waste, liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste;
5. If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine what class of waste it is. If the waste is not chemically assessed, you must manage the waste as if it were hazardous waste; and
6. If the waste is chemically assessed as general solid waste, a further test is available to determine whether the waste is putrescible or non-putrescible. This test determines whether the waste is capable of significant biological transformation. If you do not wish to undertake this test, you must manage the waste as if it were general solid waste (putrescible).

The EPA's Waste Classification Guidelines provide a clear framework for accepting, testing and determinising the management options for waste received to ensure human health and the environment are protected.

3.2.6. Waste inspection, acceptance and non-conforming waste

The incoming waste inspection and management of non-conforming loads will conform to the standards in the NSW EPA's *Standards for managing construction waste in NSW*[4].

Standard 1 Inspection requirements

At the verified weighbridge on entry into the facility, trained personnel must:

[4] NSW EPA (2018), Standards for managing construction waste in NSW, internet: https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/18p1270-standards-for-managing-construction-waste-in-nsw.pdf ; accessed 4/12/2018.

1. Inspect the entire top of each load from an elevated inspection point or by using a video camera connected to a monitor and determine whether or not the load contains any asbestos waste and any other unpermitted waste;

2. Where the load is identified as containing, or is reasonably suspected to contain, any asbestos waste, reject the entire load of waste by directing the driver to immediately leave the facility and record the information required by Standard 1.4 into the C&D waste facility's rejected loads register; and

3. Where the load is not rejected, record the details as required by clause 27 of the Waste Regulation and direct the driver and the load of waste to proceed directly to inspection point 2.

At inspection point 2 – tip and spread inspection area, trained personnel must:

1. Direct the driver of the vehicle to tip the entire load on the tip and spread inspection area;

2. Spread the entire load and inspect the visible surface area for any asbestos waste and any other unpermitted waste;

3. Manually turn, or direct a plant operator to turn, the entire load and inspect the entire load for any asbestos waste and any other unpermitted waste on or beneath the visible surface;

4. Where any asbestos waste is identified, reject the entire load of waste.

5. Where any other unpermitted waste is identified under this Standard 1.2, remove that waste from the load or reject the entire load of waste.

6. Where a load is rejected under this Standard 1.2, ensure that the entire load is immediately reloaded onto the vehicle in which it arrived or onto another vehicle and ensure that the vehicle with the rejected load leaves the C&D waste facility on the same business day and then immediately record the information required by Standard 1.4 into the C&D facility's rejected loads register; and

7. Ensure that all waste that may lawfully be received at the C&D waste facility proceeds to be sorted and stored in accordance with Standards 2, 3 and 4.

A load of construction waste received at the C&D waste facility that, upon receipt, only contains waste that meets the requirements of a resource recovery order, as evidenced by a statement of compliance for that waste which has been provided and kept in accordance with the applicable resource recovery order and is current at the time of receipt. The statement of compliance must be made available for inspection to an authorised officer of the EPA if requested. This load of waste must be immediately transferred to the appropriate waste storage area referred to in Standard 4.

3.2.7. Quantities of waste materials to be received

The site operations will generate very little waste itself. The vast bulk of "waste" materials will be brought onto site for processing or for aggregation and off-site transport to other facilities for recycling. While some material will be non-recyclable "residual" waste, most material will be recovered, processed and sold as products.

Wastes received on site will not exceed a maximum of 95,000 tonnes per year. The proposed waste materials to be accepted and recycled at the site are given in Table 3.3. The waste classification of each material under the NSW EPA's *Waste Classification Guidelines* (2014) is also given.

Building and demolition waste will make up the majority of wastes received at the facility for recycling (50% by weight), followed by soils that meet the CT1 (contaminant) thresholds for general solid waste in Table 1 of the NSW EPA (2014) *Waste Classification Guidelines* (15%), virgin excavated natural material (5%) and office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste (10%). These four

categories of waste materials will make up 80% of total wastes received at the recycling facilities. Other waste materials to be received are shown in Table 3.3.

Table 3.3. Types, quantities and classification of waste materials to be accepted at the Singleton Recycling Facility (quantities are approximate).

NSW EPA Waste Classification	Material description	% of waste received (estimated)	Maximum tonnage to be received / yr.
General solid waste (non- putrescible)	Building and demolition waste	50	47,500
	Soil that meet the CT1 thresholds for general solid waste in Table 1 of the Waste Classification Guidelines or Excavated Natural Material	15	14,250
	Virgin excavated natural material	5	4,750
	Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste	10	9,500
	Non-chemical waste generated from manufacturing and services (including metal, timber, paper, ceramics, plastics, thermosets and composites)	2	1,900
	Household waste from municipal clean up that does not contain food	2	1,900
	Wood waste	5	4,750
	Asphalt	5	4,750
General solid waste (non- putrescible) or hazardous waste	Household paint, gas bottles, fire extinguishers, motor oils, other oils, car batteries, household batteries, smoke detectors and fluorescent globes and tubes.	0.5	475
General solid waste (non- putrescible)	Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal	1	950
	Paper or cardboard	1	950
General or Specific Exempted Waste	Waste that meets all conditions of a resource recovery order under Clause 91 of the *Protection of the Environment Operations (Waste) Regulation* 2014	1	950
General solid waste (non- putrescible)	Bulky goods waste containing building de-fit fittings, fixtures and furniture that is not contaminated or mixed with any other type of waste	1	950
	Waste collected by, or on behalf of local councils from street sweepings	0.5	475

NSW EPA Waste Classification	Material description	% of waste received (estimated)	Maximum tonnage to be received / yr.
General solid waste (putrescible)	Grit, sediment, litter, gross pollutants collected in and removed from stormwater treatment devices and or stormwater management systems that have been dewatered so that they do not contain free liquids	0.5	475
General solid waste (non- putrescible) or hazardous waste	Materials such as asbestos, tyres, batteries, gas bottles, fire extinguishers and food (unexpected finds to be separated for lawful off-site management)	0.5	475
Total (tonnes per annum)		100	95,000

An estimate of maximum weekly and daily amounts of waste received at the facility is provided in Table 3.4.

Table 3.4. Maximum weekly and daily amounts of waste received at the facility (forecast).

NSW EPA Waste Classification	Material description	Maximum amount of waste received (expressed as tonnes/wk)	Maximum amount of waste received (expressed as tonnes/day)
General solid waste (non- putrescible)	Building and demolition waste	913	130
	Soil that meet the CT1 thresholds for general solid waste in Table 1 of the Waste Classification Guidelines or Excavated Natural Material	274	39
	Virgin excavated natural material	91	13
	Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste	183	26
	Non-chemical waste generated from manufacturing and services (including metal, timber, paper, ceramics, plastics, thermosets and composites)	37	5
	Household waste from municipal clean up that does not contain food	37	5
	Wood waste	91	13
	Asphalt	91	13
General solid waste (non- putrescible) or hazardous waste	Household paint, gas bottles, fire extinguishers, motor oils, other oils, car batteries, household batteries, smoke detectors and fluorescent globes and tubes.	9	1
General solid waste (non- putrescible)	Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal	18	3
	Paper or cardboard	18	3

NSW EPA Waste Classification	Material description	Maximum amount of waste received (expressed as tonnes/wk)	Maximum amount of waste received (expressed as tonnes/day)
General or Specific Exempted Waste	Waste that meets all conditions of a resource recovery order under Clause 91 of the *Protection of the Environment Operations (Waste) Regulation* 2014	18	3
General solid waste (non- putrescible)	Bulky goods waste containing building de-fit fittings, fixtures and furniture that is not contaminated or mixed with any other type of waste	18	3
	Waste collected by, or on behalf of local councils from street sweepings	9	1
General solid waste (putrescible)	Grit, sediment, litter, gross pollutants collected in and removed from stormwater treatment devices and or stormwater management systems that have been dewatered so that they do not contain free liquids	9	1
General solid waste (non- putrescible) or hazardous waste	Materials such as asbestos, tyres, batteries, gas bottles, fire extinguishers and food (unexpected finds to be separated for lawful off-site management)	9	1
Total (tonnes)		**1,827**	**261**

3.2.8 Products manufactured

A focus of the facility is to manufacture a range of sustainable and quality landscaping and building materials that can support the residential and commercial development projects in the Hunter region of NSW. An overview of the assumptions and mass flows through the facility is given in Table 3.5.

The Singleton Recycling Facility will recycle an expected 74.8% of all incoming waste (or 71,107 tonnes per annum). The remainder of the waste received will be disposed at a lawful landfill (~23,893 tonnes per annum). The major products expected to be manufactured by the facility include timber mulch (~13,490 tonnes per year), followed by manufactured soils (for landscaping and construction applications) (11,400 tonnes per year), concrete aggregate / road base products (9,975 tonnes per annum), steel (6,175 tonnes per annum) and paper / cardboard (5,320 tonnes per annum). These five products make up ~65% of all products manufactured. Other products manufactured or waste materials sent off-site for further recycling is summarised in Table 3.5.

Table 3.5. Mass flows, processing assumptions and products exported from the site on an annual basis. The overall recycling rate is also given.

Product or waste exported from site	Production assumptions	Tonnes per annum (Maximum production)
Garden soils	Assume 20% of VENM is processed into garden soils	950
VENM	Assume 80% of VENM is unprocessed	3,800
Manufactured soils (for landscaping and construction)	Assume 80% of CT1 soils and ENM is recovered, remainder is waste	11,400
Timber mulch	Recovered wood for sale - assume 60% of incoming source separated wood. And 20% of mixed building waste is clean timber. Remainder is engineered timber for disposal, 10% of Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste and 10% of Non-chemical waste generated from manufacturing and services (including metal, timber, paper, ceramics, plastics, thermosets and composites)	13,490
Steel	Assume 10% of building and demolition waste is steel and is recovered, including 15% of Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste	6,175
Aluminium	Assume 3% of building and demolition waste is aluminium and is recovered and 5% of Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste	1,900
Concrete aggregate / roadbase products	Assume 40% by weight of mixed building waste is recovered as bricks and concrete and 50% of Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal stream	9,975
Paper / cardboard	Assume 5% of building and demolition waste, and 20% of Office and packaging waste (including paper, plastics, glass, metal, timber) that is not contaminated or mixed with any other type of waste, paper and cardboard stream and 5% of Non-chemical waste generated from manufacturing and services (including metal, timber, paper, ceramics, plastics, thermosets and composites)	5,320
Mattresses	No processing - sent off-site for recycling. Assume 15% of Household clean up waste is mattresses	285
Tyres	No processing - sent off-site for recycling	4,750
Asphalt	Asphalt - some size reduction and direct resale. Assume 95% recovery	4,513
Recovered fines	Assume 15% of mixed building waste is recovered as fines	7,125
Household chemical waste	All taken off-site at no cost for recycling	950
Asbestos	Asbestos taken off site for lawful disposal	475
Residual waste (landfill)	Waste to Singleton landfill or other lawful disposal facility	23,893
Total exports from the site (tpa)		**95,000**
Recycling rate (%)		**74.85%**

3.2.9 Quality specifications and standards for manufactured products

Manufacturing products to meet the EPA's Resource Recovery Orders under the *Protection of the Environment Operations (Waste) Regulation* 2014 is critical to ensure all products can be used in a manner lawfully that protects human health and the environment. Other quality specifications, such as Australian Standards and industry specifications are given in Table 3.7. Further details on the range of specialist civil construction products to be manufactured are given in Table 3.7.

Table 3.6. Selected products to be manufactured and sold from the Singleton Recycling Facility, including relevant regulatory requirements and industry specifications / standards.

Product output	EPA Resource Recovery Order
Excavated Natural Material	*Excavated Natural Material Order* 2014
Aggregate and road base[1] Products to include: sand (0-6mm); Aggregate (0-10mm; 10-14mm; 10-20mm; 20-30mm; 30-40mm; 40-60mm); Road base (0-20mm; 20-40mm); and Recycled terra cotta aggregate (0-6mm; 6-10mm; 10-20mm)	*Recovered Aggregate Order* 2014
Virgin Excavated Natural Material (VENM) (soil)	EPA VENM validation certificate required
Asphalt	*Reclaimed Asphalt Pavement Order* 2014
Timber mulch	*Mulch Order* 2016
Steel	N/a
Aluminium	N/a
Paper / cardboard	N/a
Recovered fines	*Recovered Fines Order* 2014

[1] Aggregate and road base products include the following product categories as per IPWEA (2010): Road base (Class R1 and R2); Select Fill (Class S); Bedding Material (Class B); and Drainage Medium. These products are further defined in Table 3.7.

It is noted that the NSW Government has announced that it will revoke the general Resource Recovery Order and Resource Recovery Exemption for recovered fines in May 2019. After this period, the Singleton Recycling Facility intends to apply for a site-specific resource recovery order to enable it to sell its recovered fines as replacement soil product for construction works.

Table 3.7. Overview of the specialist civil construction products to be manufactured in under the 'Aggregate and road base' product category.

Product category	Class	Description as per IPWEA (2010)[1]
Road base	R1 R2	Suitable for use on roads with a traffic loading of greater than $1x10^6$ ESA Suitable for use on roads with a traffic loading of less than $1x10^6$ ESA
Select fill	S	Material placed directly on the subgrade to improve subgrade performance. Can also be used as engineered fill to raise site levels
Bedding material	B	Material used as support for paving blocks in pedestrian areas, carparks, shopping malls, footpaths, cycleways or on lightly trafficked accessways
Drainage medium	D10, D20 or D75	Backfilling material for storm water pipes, sewer pipes or sub-surface drainage lines

3.2.10 Waste storage, identification and stockpile heights

All waste materials and processed products will be stored in separate concrete bays with three sides or in dedicated hook lift bins. Storage of incoming waste in dedicated areas, and sorted materials and products in dedicate bays helps in inventory control, good housekeeping, reduces potential for cross contamination and is critical for quality control.

All bays and waste storage bins will be marked and identified as per the site layout plan in Attachment 2.

Stockpiles sizes are limited by the size of dedicate bays. Similarly, stockpile heights are limited by the height of concrete bays and hook lift bins. Maximum stockpile heights for the Singleton Recycling Facility are based on best practice

guidelines outlined in the NSW Fire and Rescue (2018)[5] and South Australian Environmental Protection Agency (EPA SA, 2010)[6] in order manage fire, dust and odour:

- Stockpiles of waste materials in the designated waste storage area will be limited to 3m. Height guidance will be provided by the 3m height of the concrete block bays;
- Where stockpiles of sorted waste materials or residual waste are contained in hook lift bins, the height of waste in these bins will not exceed the rim of the bin.
- Stockpiles of organic material such as timber and mulch will be limited to a maximum of 3m in height in the processing and blending areas. Height guidance will be provided by the 3m height of the concrete block bays;
- Stockpiles of all processed products, aggregates and landscaping supplies will be limited to 3m. Height guidance will be provided by the 3m height of the concrete block bays.

3.2.11 Maximum amount of waste and product stored on site (authorised amount)

Under Clause 10B of the *Protection of the Environment Operations (Waste) Regulation* 2014, operators of licensed waste transfer stations are required to not exceed the storage of a certain amount of waste and processed products (from waste) on site at any one point in time. This is referred to the 'Authorised Amount'. Exceedance of the Authorised Amount triggers the requirement for payment of the Waste and Environment Levy for tonnages of waste and product held on site (above the Authorised Amount). This regulatory measure encourages operators of these facilities to manage the inventory of waste and products held on site to avoid potential risks and hazards to the environment, public safety and human health.

An assessment of the storage capacity of the site based on designated areas for waste receival, sorting, storage and manufactured products is given in Table 3.8.

The analysis found that that facility can safety storage in separate designated areas up to 706 tonnes (or 876 m^3) of waste and processed products at any one point in time (Table 3.8). However, the maximum amount of waste material recommended for storage in indoor waste facilities as recommended by NSW Fire and Rescue (2018) is 450 m^3. Based on the bulk density of waste materials and products manufactured by the Singleton Recycling Facility, this volume is equivalent to 362.5 tonnes. This is equivalent to 51% of the waste and product storage capacity of the facility.

We note that many of the sorted waste materials and products from the facility are non-combustible and do not pose a fire risk. This includes:

- Metals;
- Glass;
- Concrete / brick / masonry;
- Concrete aggregate / road base; and
- Soils.

The analysis in Table 3.8 suggests that non-combustible materials and products make up 453 tonnes or 390 m^3 of waste held on-site at any one point in time. This makes up 44.5% by volume of all waste materials and products held

[5] NSW Fire and Rescue (2018) Fire Safety Guidelines – Fire Safety in Waste Facilities (draft). Published by Fire and Rescue, November 2018. Internet publication: https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_fire_safety_in_waste_facilities.pdf

[6] EPA South Australia (2017). Guideline for stockpile management: Waste and waste derived products for recycling and reuse. Internet publication: http://www.epa.sa.gov.au/environmental_info/waste_management/solid_waste/storage_and_stockpiling

on site. Given these materials are not combustible, it is argued these materials should not form part of the draft Fire and Rescue (2018) guideline maximum storage quantity, as they do not pose a fire risk. Given the calculated storage capacity of the facility (876m^3), if non-combustible materials are subtracted from this total (453m^3), this leaves 423m^3 of potentially combustible materials being stored on the premises. This amount is less than the proposed 450m^3 limit in the draft Fire and Rescue (2018) guidelines, meaning the facility can safety store up to 876m^3 or 703 tonnes of waste at any one point in time. This is outlined further in Table 3.8.

Table 3.8. Analysis of the storage capacity of the site for waste materials and processed products, based on the site operational layout in Attachment 2.

Waste or product storage area	Waste material or product storage	Bay or pile dimensions (m)	Volume stored (maximum) (m^3)	Bulk density (t/m^3)**	Maximum storage capacity (tonnes)
Community Recycling Centre	Paints, oil and gas bottle storage area	1.6m (deep) x 5.12 m (wide) x 1.5 m (high)	12	0.7	8.6
	Mattress and tyre bay	3.84m (deep) x 2.7m (wide) and 3 m (high)	31	0.1	3.1
	Paper and cardboard bay*	3.84m (deep) x 2.7m (wide) and 3 m (high)	25	0.055	1.4
	Metals bay*^	3.84m (deep) x 2.7m (wide) and 3 m (high)	25	0.12	3.0
	Glass*^	3.84m (deep) x 2.7m (wide) and 3 m (high)	25	0.411	10.2
	Garden organics*	3.84m (deep) x 2.7m (wide) and 3 m (high)	25	0.227	5.6
	Wood / timber*	3.84m (deep) x 2.7m (wide) and 3 m (high)	25	0.16	4.0
Skip Tip Area (tip/spread and push/store area)	Tip and spread / push and store area (ENM or CT1 soils)*^	12m (long) x 4.8m (wide) x 3m (high)	138	1.5	207.4
	Tip and spread / push and store area (general waste)*	12m (long) x 4.8m (wide) x 3m (high)	138	0.8	110.6
	Tip and spread / push and store area (mixed building waste)*	12m (long) x 4.8m (wide) x 3m (high)	138	0.7	96.8
Processing Area	Concrete bin	30m^3 hook lift bin	30	1.2	36
	Steel bin	30m^3 hook lift bin	30	0.5	15
	Timber bin	30m^3 hook lift bin	30	0.16	5

Waste or product storage area	Waste material or product storage	Bay or pile dimensions (m)	Volume stored (maximum) (m^3)	Bulk density (t/m^3)**	Maximum storage capacity (tonnes)
Product Storage Area	Aggregate storage bay*	5.92m (wide) x 4.32m (deep) x 3m (high)	61	1.5	92
	Wood mulch storage bay*	5.92m (wide) x 4.32m (deep) x 3m (high)	61	0.3	18
	Product blending area*	7.04m (wide) x 4.8m (deep) x 3m (high)	81	1.1	89
Total estimated site storage capacity			**876**		**706**
Maximum waste storage under NSW Fire and Rescue (2018) Fire Safety Guidelines			**450**		**362.5**
Quantity of materials considered non-combustible			**453**		**390**
Quantity of potentially combustible materials capable of being stored			**423**		**316**

* Storage capacity of bay limited to 80% of maximum volume of bay to properly contain waste within bay; ** Bulk density data from NSW EPA (2015) *Disposal-based audit Commercial and industrial waste stream in the regulated areas of New South Wales* or NSW EPA (2015) *Waste Levy Guidelines*; *** Maximum internal stockpile capacity as per draft NSW Fire and Rescue (2018) *Fire Safety Guideline - Fire Safety in Waste Facilities (draft) is 450m^3.*

It is therefore proposed that the facility will seek to store up to 700 tonnes of waste (and products) at any one point of time, and this should be considered by the NSW EPA in issuing a licence for the operation (following planning consent) under Schedule 1 of the *Protection of the Environment Operations Act* 1997.

3.2.12 Waste and recycling measures - office operations

The office operations associated with the Singleton Recycling Facility will generate waste from office administration and staff lunch activities. Whilst waste generation from these activities are considered minor, they need to be appropriately managed to ensure that waste is minimum and recycled in accordance with the waste hierarchy in the NSW Government's *Waste Avoidance and Resource Recovery Strategy 2014-2021* and the *Waste Avoidance and Resource Recovery Act* 2011.

The operation will generate minimal waste as part of the office operations. However, a full co-mingled recycling system will be introduced into the office, as well as a food waste collection bin. Food will be recycled in a worm farm in the waste storage area in the basement. Co-mingled recycling and general waste will be stored in separate bins in the waste storage area in the basement and collected fortnightly for recycling / disposal by contractors.

An overview of waste generation and recycling estimates as part of the office operations is provided in Table 3.9. Waste generation and recycling estimates are from NSW EPA (2012) *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities.* Waste bin storage requirements are also provided in Table 3.9. The waste bin storage areas in the basement are shown in Figure 3.1. Overall, it is estimated that the office operations will recycle more than 85% of all waste generated, which exceeds the NSW Government's target for recycling of commercial and industrial waste by 70% by 2021 as given in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.*

Table 3.3. Waste and recycling measures for waste generated by office operations.

Key Waste Stream	Waste Generation per day per 100m^2 floor area (for offices)* (L)	Weekly waste generation (based on a 6 day working week and office floor area of 168m^2) (L)	Estimated tonnages per annum	Segregation Areas / Containers	Reuse / Recycling / Disposal Method	Waste Type (NSW EPA Pre-classified Waste)	Suggest Receiving Facility	Recycling rate (%)
Co-mingled recycling: plastic / glass containers / metal cans / paper and cardboard	8	57.1	0.89	1 x 80L bin in kitchen / 1x 240L bin in basement and emptied fortnightly	Off-site recycling	General waste (non-putrescible)	Bin to be collected and sorted by Solo Waste (Gateshead) (EPL20647)	100%
Food waste	4	28.6	0.74	10L kitchen caddy with biodegradable bin liner in kitchen area emptied as required	On-site recycling (basement worm farm)	General waste (putrescible)	On-site worm farm	100%
General waste (non recyclable residual waste)	2	14.3	0.30	1 x 80L bin in kitchen / 1x240L bin in basement and collected fortnightly	Off-site disposal	General waste	Singleton Landfill (EPL5927)	0%
TOTAL Amount of waste generated (tonnes)			1.93 tonnes					
TOTAL Amount of waste recycled (tonnes)			1.63 tonnes					
Overall recycling rate								**85%**

3.2.13 Management of hazardous, toxic and liquid waste

As far as possible, no hazards, toxic or liquid waste will be accepted at the site. Where such material is delivered, but not detected at arrival, it will be removed and stored in a designated area awaiting removal by a licensed waste contractor. The procedure for detecting and managing unacceptable waste is provided at Attachment 1. This procedure is consistent with the NSW EPA guidelines. Chemical, flammable and radioactive wastes will be managed using the same procedures.

3.2.14 Incident Management – Spills

Spills on-site during the demolition and construction and operational phases likely to occur are oils, fuel, paints and primers. To better manage a spill incident Spill Response Kits will be kept on-site, at various clearly identified locations in easily accessible areas. The MSDS will be placed within sight and near spill kits. The MSDS has clear instructions on spill response management – clean up and disposal.

4 Environmental Risk Assessment

A risk assessment has been undertaken to identify the level of risk that construction and operations activities may present to waste management.

The following points summarise the key activities identified in the risk assessment relevant to waste management for demolition, construction works and operation of the Facility.

- Litter (e.g. food waste, packaging) from site amenities reaching local waterways;
- Leakage of effluent from site amenities;
- Leakage of vehicles duration site civil works;
- Excess packaging material deliveries increasing waste generated;
- Inappropriate reuse or disposal of waste items which may be hazardous;
- Fuel and oil spills during operational plant and equipment maintenance; and
- The location and storage of waste on site prior to reuse or disposal.

3.1. Environmental Control Measures

Table 4.1 provides the environmental control measures and safeguards that will be implemented in order to minimise waste generated during the construction and operation phases of the Facility.

Table 3.4. Environmental control measures.

Control Measures and Safeguards	Timing	Responsibility
Waste management and minimisation will form part of the induction program (which includes environmental due diligence training). All Project and site personnel will be trained in the requirements of this document including minimising wastes, recognising which types of materials are recyclable and their obligations to use recycling facilities provided on site.	Prior to starting on site / Ongoing	Operations Manager
Clearly assign and communicate responsibilities to ensure that those involved in the construction are aware of their responsibilities in relation to the waste management plan	Prior to starting on site / Ongoing	Operations Manager
Engage and educate personnel on how the various elements of the waste management plan will be implemented	Prior to starting on site / Ongoing	Operations Manager
Specific locations for waste management (e.g. sorting area locations, recycling bin locations, material stockpile locations) will be established on site and signposted appropriately.	Ongoing	Operations Manager
Waste management areas will be adequately managed to prevent sediment runoff and dust generation.	Ongoing	Operations Manager
Construction Method Statements (CMS) will include practices to minimise waste generation and to maximise recycling and reuse of materials including oils, greases, lubricants, timber, glass, and metal.	Prior to start of construction and ongoing	Operations Manager
Packaging minimisation and reuse initiatives will be implemented as part of the procurement.	Ongoing	Operations Manager
Development of an unexpected finds environmental procedure should any contamination be found during construction works.	Prior to starting on site	Operations Manager
Spill kit to be present on site in the case of any fuel leaks of plant and equipment during the construction phase of the development	Prior to start of demolition	Operations Manager

Control Measures and Safeguards	Timing	Responsibility
Segregated waste disposal containers for the collection and recycling/disposal of all waste streams generated during the construction and operation phases will be provided onsite. Waste disposal containers will have clear signage and instructions for use to avoid cross-contamination. No rubbish shall be disposed of on site.	Ongoing	Operations Manager
Waste will be disposed to an appropriate licensed facility. A Waste Management Register of all waste collected for disposal and / recycling, including amounts, data and time and details and location of disposal will be maintained at all times.	Ongoing	Operations Manager
All waste being transported off site must be covered. The transportation must be appropriately licensed to carry that material.	Ongoing	Operations Manager
Storage of all hazardous substances and dangerous goods will be in accordance with SDS requirements in a bunded area. Solid and hazardous wastes will be contained and separated from inert waste.	Ongoing	Operations Manager
Any hazardous waste (e.g. asbestos) will be managed and handled by an appropriately licensed contractor and transported for disposal to a licensed facility approved site	Ongoing	Operations Manager
Any material contaminated by spills i.e. fuel, oil, lubricants etc., including empty fuel, oil and chemical containers, will be stored in a sealed secure container within a bunded area and will be transported to a waste disposal site approved by the NSW EPA to accept such material.	Ongoing	Operations Manager
Incompatible wastes will not be mixed.	Ongoing	Operations Manager
Storage areas would be located away from waterways and the stormwater system.	Ongoing	Operations Manager
Biodegradable products will be used wherever practicable.	Ongoing	Operations Manager
Regular collection of wastes will ensure air emissions are at a satisfactory level. Inappropriate waste and wastewater management systems will be regularly inspected and audited.	Ongoing	Operations Manager

Control Measures and Safeguards	Timing	Responsibility
Conduct regular litter patrols to ensure litter is effectively controlled on site.	Ongoing	Operations Manager

4. Training

All employees, contractors and utility staff working on site will undergo site induction training (which includes environmental due diligence training) and environmental training in relation to waste management issues. The induction will address:

- This management plan;
- Relevant legislation;
- Waste minimisation strategies;
- Waste recognition and recycling;
- Available recycling facilities; and
- Energy and water minimisation measures.

Records would be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or specific training tailored by the Operation Manager.

5. Monitoring and Review

5.1. Inspections and Monitoring

Regular monitoring will be undertaken to track waste management on site. This will be through a series of formal and informal inspections at regular intervals.

Activity	Resources	Responsibility	Frequency
Daily Site inspections (work area)	Site Diary	Operations Manager	Daily Issues recorded in Site Diary (by exception)
Weekly Environmental Inspection	Environmental Site Inspection Checklist	Operations Manager	Weekly
Waste removal activities off site	Monthly Register for Waste Materials	Operations Manager	Monthly

5.2. Auditing

Audits will be undertaken to assess the effectiveness of environmental controls and compliance with this plan and other relevant guidelines.

A schedule for internal audits providing frequencies and responsibilities is to be determine by the Operations Manager as appropriate.

5.3. Environmental Management Review

The effectiveness and proper implementation of the WMP will be reviewed every twelve months or sooner as necessary. Review will be undertaken by the management team. The review will comprise:

- Reviewing the results of audits;
- Evaluation of the system, which improvements and corrective actions will be sought; and
- Evaluation of the operation of the WMP.

5.4. Continual Improvement

Continual improvement of this WMP will be achieved by the continual evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continual improvement process will:

- At least monthly (or as incidents / non-conformances occur):
    - Determine the root cause or causes of non-conformances and deficiencies.
    - Develop and implement a plan of corrective and preventative action to address non-conformances and deficiencies.
    - Verify the effectiveness of the corrective and preventative actions.

Outcomes of these reviews shall be documented and retained for the duration of the project.

5 Conclusion

Eco Logic Developments Pty Ltd is proposing to develop a recycling facility at 39 Enterprise Crescent, McDougalls Hill (Lot 17, DP 106208, Singleton). This Waste Management Plan addresses how waste will be minimised, separated, processed and recycled during the construction and operational phase of the development. The plan does not address demolition issues as the site is an undeveloped green field site with no built structures requiring removal.

The site is located within the Maison Dieu industrial estate, around 2km to the west of Singleton township. This single lot has an area of 5,000 m^2 and is unsealed with the majority of vegetation cleared. There are several nearby land use zones including E2 Environmental Conservation, E4 Environmental Living, RE1 Public Recreation, RU1 Primary Production and RU2 Rural Landscape.

The proposed development will involve the construction and operation of a best practice recycling facility for building, construction, household clean-up and commercial waste materials from households and businesses in the Singleton and Hunter region. The facility will operate within a purpose built and fully enclosed warehouse building. In total the Singleton Recycling Facility will provide capacity for recycling up to 95,000 tonnes of material per year.

The facility will include a fully enclosed and integrated recycling centre, including a Community Recycling Centre for household problem waste; a tipping and sorting area for a range of household, business and building waste, as well as soils and virgin excavated natural materials and an advanced sorting and processing facility to sort, recover and process mixed building materials to maximise recycling rates.

The proposed facility is considered to be a 'waste or resource transfer station' and is a designated development under Schedule 3 of the *Environmental Planning and Assessment Regulation* 2000. This Waste Management Plan has been prepared to support the EIS and address the Department of Planning and Environment's SEARs requirements (SEARs 1282) and also the requirements of *Singleton Development Control Plan* 2014 (Schedule 5 – *Specialist Plans and Reports* and Section 2.29 *Waste Storage and Collection Areas*).

The development will involve: removal of two remaining eucalypt trees in moderate condition; bulk earthworks and excavation to provide for the basement car parking; construction of retaining walls; construction of basement and ground floor reinforced concrete slabs; external handstand around the building; construction of a concrete tilt panel and steel roofed warehouse and office, including weighbridge, wheel wash, on-site detention storage and rainwater harvesting system; fire sprinkler tanks; landscaping; and installation of waste storage bays and specialized sorting and processing equipment within the warehouse.

During the construction phase, it has been estimated that approximately 10,300 tonnes of waste will be generated, comprising 18 tonnes of garden organics, 10,320 tonnes of excavated natural material (soil) and minor amounts of building waste. During construction, recycling and waste bins will be stored on the south west corner of the site in separate 30m^3 hook lift bins. Bins will be transferred to licensed recycling or disposal facilities. It is estimated that >95% of all waste generated during construction will be recycled.

Sorting and recycling operations will be conducted fully indoors within a warehouse with a gross floor area of 2,984m^2. Key operational features of the development within this footprint include:

- a Community Recycling Centre and Skip Tip area;
- a Processing Area;
- a Product Storage Area;
- office, training and education facilities; and
- a Basement car park to assist in traffic flow on the site.

During the operational phase, up to 95,000 tpa of waste materials will be received on site for recycling. Operation procedures for inspection, classification, storage, sorting, processing and off-site transfer of materials on the premises is summarised in this plan. The receival, storage, sorting and processing of waste materials will be in accordance with EPA guidelines to achieve a recycling rate of 74%. The functional areas of the facility are summarized as follows:

Community Recycling Centre and Skip Tip Area

A fully integrated, drive through Community Recycling Centre at the front of the Singleton Recycling Facility will be established. Small vehicles will enter the site through the main entrance, over the 9m weighbridge and then through to the Community Recycling Centre. Drop off and sorting bays will be established along the western wall of the warehouse for sorting of household chemical waste (including paints, oils, gas bottles, batteries). Staff will supervise householders to safely unload items from vehicles and trailers for placement in designated bays. Bays for mattresses and tyres, paper and cardboard, metals, glass, garden organics and wood/timber will be provided. These materials will be placed into hook lift bins as required and sent off-site for processing / recycling (except wood/timber which is mulched and recycled on site.

The Skip Tip area will involve:

- Three separate bays are provided, with the front of the bay for tipping, spreading and identification of any hazardous materials (e.g. gas bottles, batteries, paints, chemicals and asbestos) from trailers and skip bin collection vehicles in accordance with NSW EPA (2017) *Standards for Managing Construction Waste in NSW* (draft).
- A separate bay is provided for: building waste; general waste (no building materials); and Excavated Natural Material (soil) (with a test certificate demonstrating compliance with the *Excavated Natural Material Resource Recovery Order* 2016).
- Any hazardous materials (e.g. gas bottles, batteries, paints, chemicals) are moved and stored in the appropriate chemical storage area along the western side of the warehouse.
- Vehicles then exit the Community Recycling Centre at the southern side of the warehouse.
- Vehicles will then exit the site via the wheel wash / second outbound weighbridge near the site office on the southern driveway and will exit the site from the separate exit. The net weight of materials dropped off for recycling or disposal will be recorded in the weighbridge software.
- Waste collected in skip bin trucks will be deposited into the appropriate tip and spread bunker at the centre of the Community Recycling Centre.
- This drop off area is separated from the householder Community Recycling Centre to avoid vehicle conflicts.
- All sorted materials in bunkers will be moved periodically to the Processing Area for further sorting, processing and manufacturing of products. Tyres, mattresses, metals and glass will not be processed further on the site and will be picked up in trucks for transport to other lawful recycling facilities for processing / recycling.

Processing Area

The Operational Area of the Singleton Recycling Facility will involve sorting, screening, and size reduction to produce a series of aggregate, mulch and soil products from recovered materials. An operational overview of the Processing Area is provided below (also see Figure 2.3).

- Building waste which has been inspected is pushed via front end loader to the rear of the concrete bay, where primary sorting is performed using a mechanical telehandler / grab to remove large heavy recyclable items, such as concrete, bricks, timber and steel. These materials are stored into separate hook lift bins, with residual light waste moved to the building waste sorting plant via front end loader.

- To assist in the recovery of materials from the light fraction of building waste, waste is loaded and sorted through a 30 tonne per hour secondary sorting process. Waste is transferred via front end loader into a receiving hopper, where waste is shredded via a slow speed shredder.
- Waste is then passed onto a conveyor and is screened via a finger screen to remove soil and sand from the waste materials. This is stored in a bunker for further processing.
- Waste is then transferred via conveyor into an elevated picking station with air-conditioned cabin for up to 4 personnel, who physically sort recyclable materials, which are dropped via chute into hook lift bins beneath the platform.
- Materials including paper/cardboard, clean timber, masonry (bricks / concrete) and plasterboard are separated from the waste material.
- Waste is then passed over a magnet to remove ferrous metals, an eddy current separator for removing aluminium and then an air classifier to remove light plastic films. These recovered materials will be stored in separate bins beneath the platform.
- Remaining materials on the conveyor will then be transferred into a hook lift bin for disposal.
- The same sorting, screening and decontamination process will be used for general waste.
- For loads of concrete/brick removed from the primary and secondary sorting process, this will be crushed and screened into aggregate products.
- Clean timber will be shredded via a shredding unit.

Product storage area

The Product Storage Area will be the main area where processed and recovered products are stored for sale and dispatch. An operational overview of the Product Storage Area is provided below.

- Separate concrete storage bays for aggregates, wood mulch, Excavated Natural Material, garden soils will be provided. A blending bay for mixing of soils and landscaping materials is provided.
- A separate storage bay for waste with hook lift bins for off-site disposal will also be provided.
- All products will be tested for compliance with an appropriate Resource Recovery Order prior to sale. Trucks and vehicles picking up product will enter via the western side of the warehouse, will pass over the weighbridge, and will manoeuvre through the warehouse through the designated vehicle roadway to the Product Storage Area.
- Trucks will be loaded via front end loader, then will exit the warehouse in the front direction and pass over the wheel wash / weighbridge for assessing net weight of product transferred off site.

A detailed assessment of the maximum waste storage capacity of the operation has been performed, and we have considered the draft NSW Fire and Rescue (2018) *Fire Safety Guidelines – Fire Safety in Waste Facilities.* The analysis suggests that the facility can safety store up to a maximum of 700 tonnes of waste and processed products at any one point in time, in designated concrete bays or bins allocated within the facility.

Overall, the waste processing and recycle operation will sort and recycle 74.8% of all wastes received. The office administration operations will generate very minimal waste, and it is estimated that 85% of this waste will be fully recycled, through a separate comingled recycling system and an on-site worm farm for food waste.

This facility will make an important contribution towards meeting the NSW Government's Waste Avoidance and Resource Recovery Strategy target of 70% recycling of municipal and commercial/industrial waste and 80% recycling of construction and demolition waste by 2021.

Attachment 1 – Non-conforming Waste Procedure

NON-CONFORMING WASTE PROCEDURE

Singleton Recycling Facility

39 Enterprise Crescent, McDougalls Hill, NSW

1. Purpose of This Procedure

To ensure that non-conforming waste (waste that does not meet the NSW EPA classification of *General waste – non putrescible*) is not received at the site

If non-conforming waste is found on the site, to ensure it is managed in a way that minimises harm to human health and the environment.

2. Responsible Person

Operations Manager

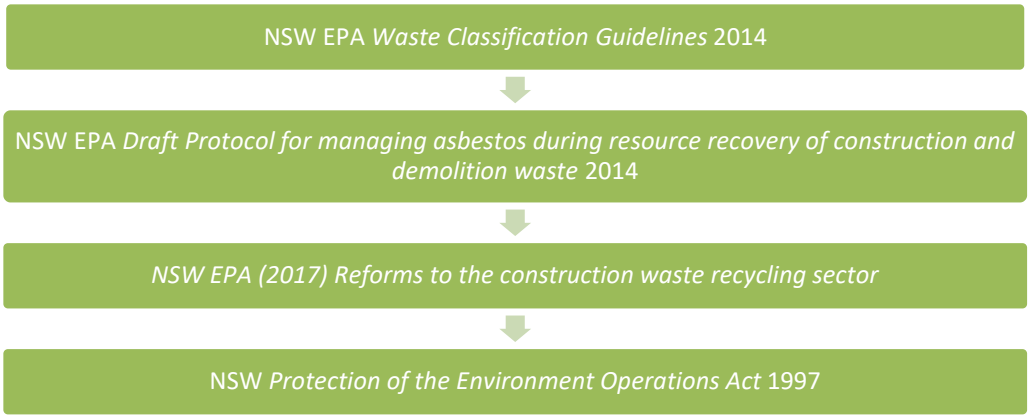
3. Associated Internal Documents

Rejected Load Register and Rejected Load Certificate

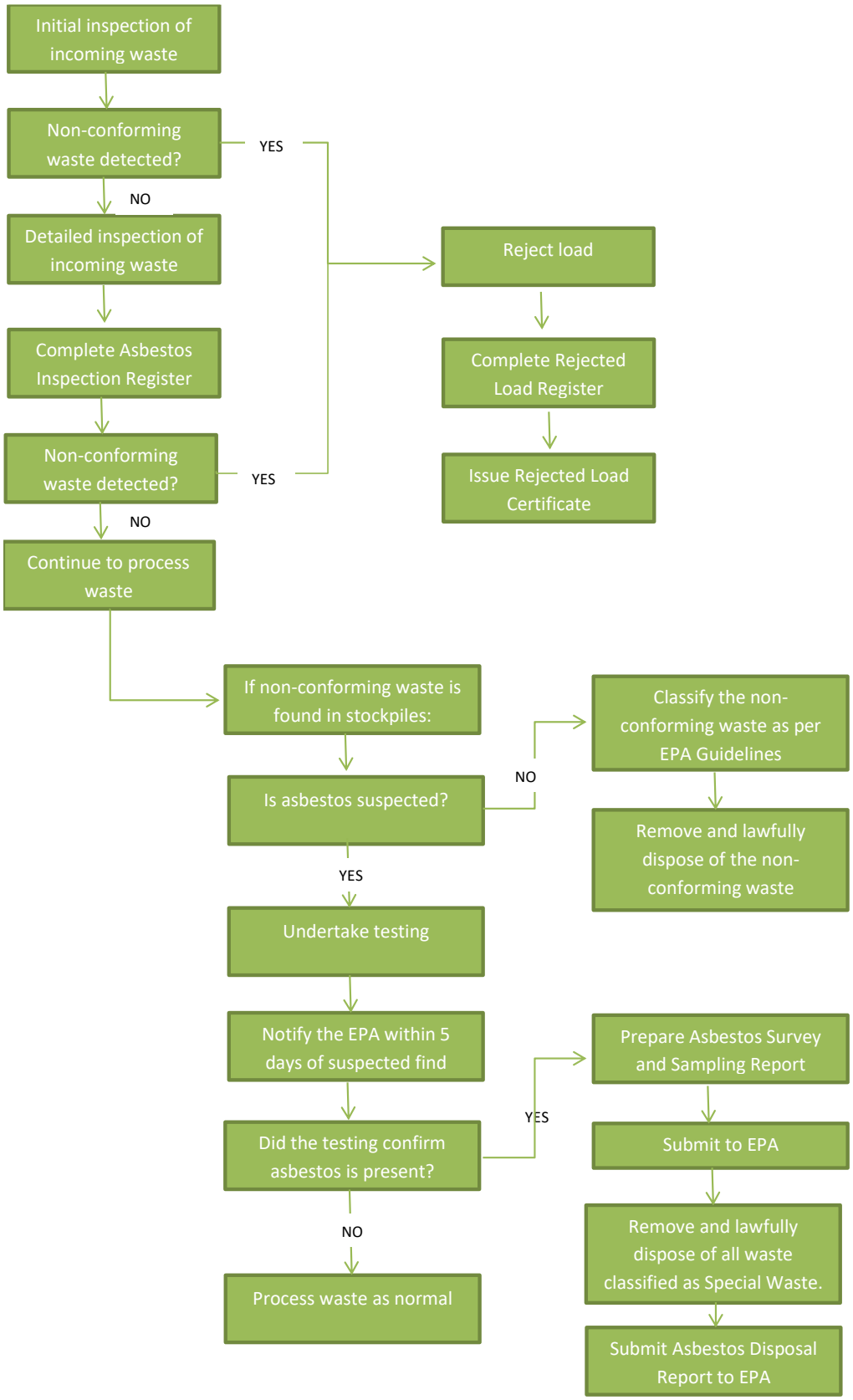
Asbestos Inspection Register

Pollution Incident Response Management Plan

4. External Reference Documents



5. Steps to be undertaken for all incoming waste loads



6. Detail of Each Step in the Procedure

6.1 Initial inspection of incoming waste

When a load arrives at the gate, check the top of the load to see if non-conforming waste is visible. Also check for smell of putrescible waste.

If non-conforming waste is visible or you can smell putrescible waste, reject the load (see *Rejection of non-conforming loads*)

If non-conforming waste is not suspected, allow provisional acceptance of the waste

6.2 Detailed inspection of incoming waste, and Asbestos Inspection Register

Once the waste is tipped, spread and visually inspect the waste again for non-conforming materials.

If non-conforming waste is visible, reject the load load (see *Rejection of non-conforming loads* below)

If asbestos is suspected, wet down the load immediately.

For each load that underwent a detailed inspection, fill out the Asbestos Inspection Register.

If non-conforming waste is not suspected, process the waste as normal.

6.3 Rejection of non-conforming loads

Inform driver that load is being rejected due to presence of non-conforming waste.

Record details of the rejected load in the Rejected Load Register.

Issue the driver with a Rejected Load Certificate and keep a copy on file.

6.4 Non-conforming waste suspected in stockpiles

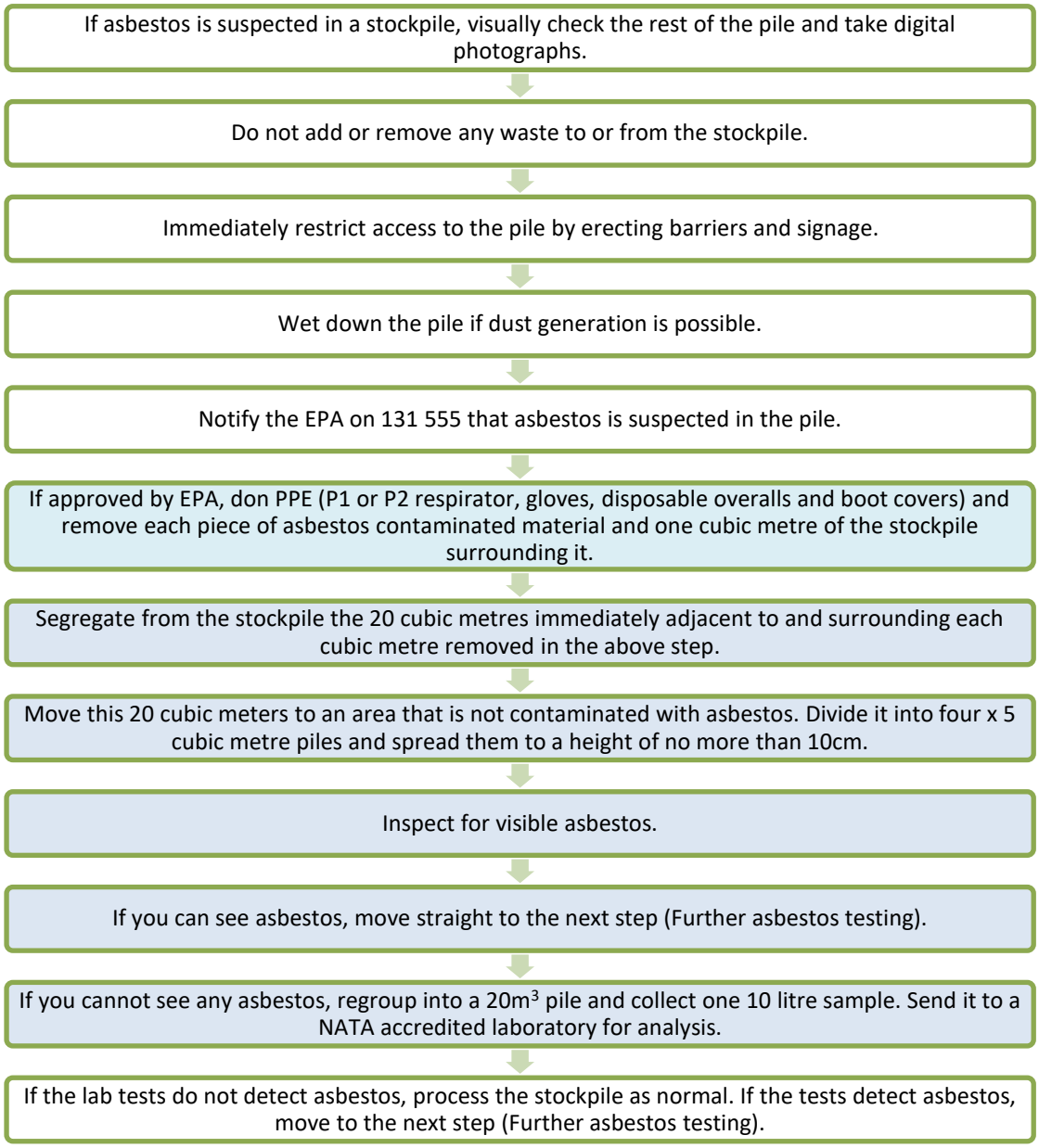
If non-conforming material other than asbestos is found, don appropriate PPE and remove it from the stockpile, to a bunded area if necessary. Arrange lawful disposal based on classification in accordance with EPA Guidelines.

If asbestos is suspected in a stockpile, DO NOT attempt to pick it out either manually or with equipment.

If asbestos is suspected, implement the next steps below.

6.5 Asbestos testing and notification

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.



6.6 Further asbestos testing

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.

If asbestos is found in the above step by visual inspection or by lab analysis, the 40m^3 surrounding each 20m^3 sampled above must be tested using the same procedures as the above step.

If asbestos is found in the 40m^3 tested above, the step must be repeated on more adjacent 40m^3 samples until it can be demonstrated that the waste material is free of asbestos.

6.7 Asbestos survey and sampling report

NOTE: all blue steps must be undertaken by a suitably qualified expert who has previous experience in classifying waste in accordance with the NSW Guidelines.

Once sampling and testing are finished, prepare an Asbestos Survey and Sampling Report.

Include a volumetric survey of the pile, indicating observed locations of asbestos.

Include all digital photographs taken.

Include details of all waste sources, and the name and contact details of known or possible generators and transporters of the waste in the pile.

Include details of any blending, processing or movement of the waste in the pile.

Include contact details of anyone who may have received waste from the pile

Include details of how the waste has been sampled.

Include waste classification reports and amount in m^3 and tonnes of each waste type identified in the pile.

Include the current locations of the separated contaminated waste and other waste.

Include a proposed timeline for removal of the contaminated waste.

Include a list of steps will be taken to minimise future risk of asbestos contamination in stockpiles.

Submit the report to the EPA.

6.8 Removal of asbestos-contaminated waste

Once permission is granted by the EPA, arrange for lawful transport and dipsosal of all waste now classified as Special Waste (and any other waste identified to be removed) by trained personnel in accordance with the timelines in the Asbestos survey and sampling report.

6.9 Asbestos Disposal Report

Prepare an Asbestos Disposal Report

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Include a a signed, dated statement from Site Representatvive saying that you complied with the requirements of the NSW Draft Protocol for Managing Asbestos During Resource Recovery of Construction and Demolition Waste.

↓

Include all the weighbridge dockets showing that the Special Waste (and any other waste required to be removed) was disposed to a facility that can lawfully receive it.

↓

Include a signed and dated statement from the landfill that received the waste, confirming dates of receipt of waste, amounts received each day, and total amount received.

↓

Provide the report to the EPA within 7 days of final disposal of Special Waste, or if removal takes more than a month, within 7 days after every month that waste is being disposed.