

Peel Resource Recovery

Report for Crushing & Screening of
Construction & Demolition Waste

August 2015

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1. Introduction

Peel Resource Recovery Pty Ltd proposes to initiate the process of crushing & screening of construction & demolition waste. This division will be situated at the present transfer station at Lot 239 Munday Avenue, Pinjarra which is located in the Landcorp Subdivision at the Pinjarra Industrial Estate. Surrounding land uses include rural dwellings and activities. The Industrial Estate is close to the Forrest Highway and is easily accessible for customers and contractors bringing in C & D waste. The present facility receives on an average about 60,000m³ of C & D annually. These wastes can be screened using reclaimer and then crushed. We intend to get this process going continuously. This premise will operate as Prescribed Premises under Category 61A. The Expected Plant capability is approx. 50,000 tonnes per year.

Peel Resource Recovery Pty Ltd currently operates a Solid Waste Depot in Pinjarra under licence number L8585/2011/1. There are no current community or non-compliance issues with the existing licence for this site.

This report provides an Environmental Management Plan (EMP) for the processing of C & D waste.

Premises Details

The Crushing and screening of C & D Waste will be located at Lot 239, Munday Avenue, Pinjarra, which is located in a landcorp industrial subdivision at the Pinjarra Industrial Estate. Surrounding land use includes rural dwellings and activities.

Conservation wetlands and threatened plant communities are located approximately 500 metres to the north of the site. The land between the facility and the wetlands is largely cleared industrial land or cleared rural property. No impacts to these wetlands are expected from the operation providing stormwater and dust control measures are implemented. The nearest rural residence is approximately 260 metres from the facility and urban area approximately 700 metres from the facility. The facility will only operate between the hours of 0700 and 1900 hours Monday to Saturday. Lot 239 is located within the Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992 area, which aims to protect the Estuary from further degradation by nutrient enrichment. This premise will not generate nutrient wastes and will not pose a risk to the Peel Harvey Estuary and catchment.

Proposal/Process Description

We will process up to 60,000 tonnes/year. C & D Waste can be recycled and 95% can be reclaimed without any loss of quality. The reclaimed sand will be resold back to the community, Light Materials like wood, plastics & paper (very unlikely received) will be stored and resent to Stanley Road for further recycling. The heavy materials like bricks, tiles & concrete will be crushed. Machineries used will be Screener, Crusher and loader.

The facility is designed to contain any dust which results from loading/unloading/screening and crushing operations to be contained within the building. The facility is fitted with an interior water misting system and extra sprinklers are fitted on the walls which are used if the dust levels inside the facility reach unacceptable levels. The property is designed with swales where stormwater, and any water from the internal misting system/sprinklers, will flow after passing through silt traps.

No Liquid waste will be stored on site. In the event onsite machinery requires refuelling, we will use mobile refuelling vehicles from our Australind operation.

The building is a new and purpose built facility within a newly developed and cleared Landcorp industrial estate. It consists of the shed of 40.6 metres by 25 metres with a concrete base and an attached office, located 25 metres back from the Munday Avenue boundary. The site is fully sealed with hot mix and graded to ensure that storm water and misting spray run off flow into the swales on the property boundaries. The rest of the site is landscaped.

The nearest residential buildings are approximately 260 and 500 metres to the east of the facility along Thomas Road. The urban zone begins approximately 700 metres to the east. The environmental Protection Authority's Guidance Statement No. 3 (EPA 2005) recommends a minimum separation distance of 200m between the premises and nearby sensitive residences. The premises is located outside the recommended buffer distance.

REGULATORY CONTEXT

Part IV Environmental Protection Act 1986. Environmental Impact Assessment

This project has not been assessed under Part IV of Environmental Protection Act 1986.

Part V Environmental Protection Act 1986, Environmental Management

Part V Legislation relevant to the process includes:

- Environmental Protection Regulations 1987
- Environmental Protection (Controlled Waste) Regulations 2004
- Environmental Protection (Unauthorised Discharge) Regulations 2004
 - Discharge of certain types of materials into the environment (Schedule 1)
 - Burning of certain types of materials to produce visible smoke (Schedule 2)
- Environmental Protection (Noise) Regulations 1997

Other legislation relevant to process includes:

- Litter Act 1979

Other Environmental Management documents relevant to the process include:

- Landfill Waste Classification and Waste Definitions 1996

Other Decision Making Authorities' Legislation

Department of commerce:

- Occupational Safety and Health Regulations 1996; and
- Occupational Safety and Health Act 1984

Shire of Murray:

- Local Government (Miscellaneous Provisions) Act 1960; and

Rights in Water Irrigation Act 1914

The site is fully reticulated from the mains water supply.

Local Government Authority

The local government authority is the Shire of Murray. Planning approval was granted under the shire of Murray Town Planning Scheme No. 4, subject to compliance with development conditions. The premise discharges stormwater into a swale on a separate block. Management of swales is the responsibility of Shire of Murray.

Stakeholder and Community Consultation

A 21 day waiver period will apply.

AIR EMISSIONS

Not Applicable

DUST EMISSIONS

The premises comprises of a concrete pad for the facility and a bitumen hardstand area and therefore there is little dust emissions from vehicle movement on the premises.

The speed limit on site is 8 Km/Hr. making the vehicle movements very slow to suppress the dusts.

Loading and unloading of waste materials is within the enclosed building.

Misting system and extra sprinklers inside the building is used to moisten loads being tipped and sorted

Loads will be moist & wet before being placed in reclaimer for screening and crushing.

The crusher is equipped with a Dust Suppression system consisting of water pump and dust covers.

Routine maintenance and housekeeping practices to ensure no accumulation of waste materials or dust is in or around

Distance to closest rural residence – 260m from the facility.

Distance to closest urban area is 700 metres from the facility.

ODOUR EMISSIONS

There is no generation of odour however, often being an unavoidable part of the waste streams that is included without the knowledge of operators. Prompt removal in terms of screening and crushing of these materials will ensure that the risk for odour generation on site is reduced.

Distance to closest rural residence – 260m from the facility.

Distance to closest urban area is 700 metres from the facility.

We will ensure that if any odour emitted from the premises, it does not interfere with the health, welfare, convenience or amenity of any person who is not on the premises.

NOISE EMISSIONS

There is potential for noise emissions from day time onsite vehicle traffic, loading/unloading and sorting operations.

These will be overcome by following:

Making sure loading/unloading and sorting occurs within the building of the facility.

All machinery on site will be new with the owners closely monitoring the use of these machines during hours of operation

To minimise the effects of noise on the occupants of adjacent properties following will be complied:

1. Create a 3m high sand bund wall fully mulched and landscaped with native vegetation
2. Use Silenced plant, operating plant as far away as practicable from occupied properties.
3. Limiting work hours on these activities which generate significant noise.
4. Crushing & Screening work between 8.00 am and 4.00 pm (excluding Saturday, Sunday and Public holidays).

Assigned noise levels for the site, for all hours, are:

- ☐ 60dB – not to be exceeded more than 10% of the time.
- ☐ 75dB – not to be exceeded more than 1% of the time.
- ☐ 80dB – not to be exceeded at any time.

Restrict screener, crusher machine use to 15 hours per week

Machine noise specification does not exceed 60dB

LIGHT EMISSIONS

Not applicable

No Night time works or changes to current times

DISCHARGES TO WATER

There are no direct discharges to water from the operation of Crusher & Screener.

DISCHARGES TO LAND

There are not anticipated to be any discharges to land.

SOLID LIQUID WASTE

We will not accept knowingly any hazardous or putrescible wastes, however if these wastes are inadvertently accepted in the load it will be disposed of appropriately. The facility has a hazardous waste material handling plan and the load/unload area is located inside the facility on a hard stand. Therefore the risk of wastes entering the environment is not considered to be significant.

NATIVE VEGETATION

NOT APPLICABLE

CONTAMINATED SITE IDENTIFICATION

NOT APPLICABLE

2. Environmental Management

The Environmental Management Plan (EMP) prepared for the project is shown in Table 1. The EMP details the environmental management measures to be implemented during operation of the C & D Crushing and Screening to ensure the site is operated in an environmentally and socially acceptable manner.

The EMP outlines responsibility for each commitment at the operational phase. The commitments outlined in the EMP aim to provide a basis for which performance and compliance can be measured during the operation of the Crushing & screening of C & D waste.

Table 1 Environmental Management Plan (EMP)

	Management Measure	Expected Outcome	Responsibility
1.0 - Environmental Management			
1.1	Peel Resource Recovery is responsible for the crushing & screening of construction & demolition waste located on Lot 239 Munday Avenue Pinjarra, in line with the environmental management measures detailed in this EMP.	Processing of C & D waste operation in accordance with this EMP.	Peel Resource Recovery
1.2	Compliance with this EMP should be monitored throughout the screening and crushing operation on the site.	Monitor compliance with the EMP and provide for feedback for continuous improvement.	Peel Resource Recovery
1.3	Peel Resource Recovery will incorporate relevant EMP measures and requirements into the C & D screening and crushing projects tender documentation and site induction material for all personnel and service providers involved.	Environmental management measures included in relevant project documentation and site inductions.	Peel Resource Recovery
2.0 - Workforce Inductions and Education			
2.1	Site inductions for site staff and contractors should include details of environmental management requirements for the project.	Ensure that all site personnel and contractors are aware of site environmental management requirements	Peel Resource Recovery
3.0 - Drainage			
3.1	Swales have been provided on the property boundaries.	Minimise erosion and stagnant water at the site.	Peel Resource Recovery
3.2	All crossovers have been constructed to meet Australian Standards and all stormwater disposal requirements will be met.	Minimise the adverse effects of stormwater disposed from the site on the environment.	Peel Resource Recovery
3.3	Where misting is used to dampen dust, the Transfer Facility has been designed with a 100 mm grade change over 25 m to enable damp material to flow toward a grate built into the floor of the facility and through a silt trap to the storm water drain.	Minimise the adverse effects of stormwater disposed from the site on the environment.	Peel Resource Recovery
3.4	Silt traps are regularly maintained to enable regular water flow to the stormwater drains.	Minimise accumulated water on site and stormwater overflow without treatment.	Peel Resource Recovery

4.0 - Visual amenity			
4.1	All recycled material will be fully screened from the main road (Munday Avenue) by the main building, office, fencing and landscaping (on the boundary).	Minimise negative visual impact on the surrounding environment.	Peel Resource Recovery
4.2	Ensure the premises provides visual harmony to the estate.	Minimise negative visual impact on the surrounding environment and subdivision.	Peel Resource Recovery
5.0 - Noise and Vibration Management			
5.1	All machinery on site will be new with the owners closely monitoring the use of these machines during hours of operation.	Minimise and manage noise at the site.	Peel Resource Recovery
5.2	The site will be fully landscaped to suppress any undue noise and monitoring of this will be undertaken frequently.	Minimise and manage noise at the site.	Peel Resource Recovery
5.3	All crushing and screening will take place within the premises.	Minimise noise at the site.	Peel Resource Recovery
5.4	The operations manager will take all necessary precautions during its operations to limit ground particle velocities from vibratory compaction or percussion equipment so that they do not become a public nuisance or result in property damage.	Minimise and manage vibration impacts at the site.	Peel Resource Recovery
5.5	For crushing & screening work between 8:00 am and 4:00 pm (excluding Saturday, Sunday and public holidays), the operator will minimise the effects of noise on the occupants of adjacent properties. This may include creating 3m sand bund wall fully mulched & landscaped near the adjoining properties close to the fence, using silenced plant, operating plant as far away as practicable from occupied properties, or by limiting working hours (15 hrs/wk) on these activities which generate significant noise.	Minimise noise at the site.	Peel Resource Recovery
5.6	Assigned noise levels for the site, for all hours, are: <ul style="list-style-type: none"> 60dB – not to be exceeded more than 10% of the time. 75dB – not to be exceeded more than 1% of the time. 80dB – not to be exceeded at any time. 	Minimise and manage noise at the site.	Peel Resource Recovery

5.7	Restrict machine use to 15 hours per week	Minimise Noise	Peel Resource Recovery
5.8	Machine noise specification does not exceed 60dB	Minimise Noise	Peel Resource Recovery
6.0 - Dust Management			
6.1	Loading and unloading of material (bricks, concrete and sand) will occur within an enclosed premises.	Minimise dust lift and impacts of dust.	Peel Resource Recovery
6.2	The Transfer Facility has been designed with a 20 mm copper water misting system that will be applied when dust levels are considered high and impact the amenity of the workplace. The use of this misting facility is a contingency only and is not anticipated as being a standard activity. When dust levels begin to impact the amenity of the workplace, misting will be applied to dampen the dust.	Minimise dust lift and impacts of dust.	Peel Resource Recovery
6.3	The Transfer Facility will be regularly cleaned to reduce the accumulation of dust.	Minimise dust lift and impacts of dust.	Peel Resource Recovery
6.4	The site is fully sealed with hot mix.	Minimise dust lift and impacts of dust.	Peel Resource Recovery
6.5	The site will be fully landscaped to suppress any undue dust and monitoring of this will be undertaken frequently.	Minimise dust lift and impacts of dust.	Peel Resource Recovery
6.6	Industry Standard dust masks will be provided for use by staff working in the Transfer Facility.	Ensure safety for employees.	Peel Resource Recovery
6.7	Measures will be undertaken to prevent material transfer from vehicle tyres exiting the sorting shed, such as grates with a collection point underneath.	Minimise dust lift and impacts of dust at the site.	Peel Resource Recovery
6.8	Material to be thoroughly wet before being placed in Reclaimer	Minimise Dust	Peel Resource Recovery
6.9	Crusher has a fitted Dust Suppression system with water pump and dust covers	Minimise Dust	Peel Resource Recovery
7.0 - Lighting			
7.1	No works at night time. Lighting used at the site will be directed away from any public roads.	Reduce risk to drivers.	Peel Resource Recovery
8.0 - Fire Management			
8.1	No burning will be permitted on the project	Reduce fire risk	Peel Resource

	site.	throughout site activities.	Recovery
8.2	Machines and vehicles should be restricted and parked within designated areas.	Reduce the fire risk during operation.	Peel Resource Recovery
8.3	The Licensee should confirm and adhere to any specific requirements for fire prevention requested by the Shire of Murray, Department of Environment and Conservation and the Fire and Emergency Services Authority of WA.	Comply with stakeholder agency requirements.	Peel Resource Recovery
9.0 - Fuel and Chemical Storage			
9.1	No liquid wastes, fuels or chemicals will be stored on site.	Avoid hazardous chemical storage on the site.	Peel Resource Recovery
10.0 – Asbestos			
10.1	Asbestos is a controlled waste and must be handled, packaged, transported and disposed in accordance with <i>Western Australia (Occupational Health and Safety) Regulations 1992 Part 4 – Disposal of material containing asbestos</i> (updated 2000) and in accordance with Department of Environment and Conservation, <i>Environmental Protection (Controlled Waste) Regulations</i> .	Minimise release of asbestos into the environment and ensure public safety.	Peel Resource Recovery
10.2	<p>In accordance with NOHSC (National Occupational Health and Safety Commission): 2002 (2005):</p> <ul style="list-style-type: none"> ▀ Asbestos waste should be placed and wrapped in a double layer of plastic sheeting or placed in heavy-duty 200 µm (minimum thickness) polythene bags that are no more than 1200 mm long and 900 mm wide. ▀ Polythene bags must be sealed with wire ties or strong durable tape. Each bag should not weigh more than 25 kilograms. ▀ Plastic sheeting must be sealed with strong durable tape. ▀ The bags or plastic sheeting should be labelled with an appropriate warning, clearly stating that they contain asbestos and that dust creation and inhalation 	Minimise release of asbestos into the environment and ensure public safety.	Peel Resource Recovery

should be avoided. Prior to loading onto trucks for transportation as asbestos waste and removed off site and disposing to Landfill the plastic sheeting or polythene bags should be labelled in letters at least 40mm high:

“CAUTION ASBESTOS”

Avoid Dust Creation or Inhalation of Dust

- ▶ The bags or plastic sheeting must then be disposed of as asbestos waste.
- ▶ All disposable clothing, equipment and waste will also be placed in double plastic bags and sealed with wire ties. Each bag should not weigh more than 25 kilograms. The bags must be labelled as containing asbestos.

10.3	Ensure that staff are appropriately trained in the handling of asbestos and ensure appropriate personal protective equipment (PPE) is worn when handling asbestos.	Ensure staff safety.	Peel Resource Recovery
11.0. Waste Disposal			
11.1 -	The waste from the site will be removed and disposed of into current and appropriately classified landfill sites	Waste managed & disposed appropriately to leave site clean	Peel Resource Recovery

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