

*Part Nine***WATER QUALITY IMPACT ASSESSMENT****9.1 Introduction**

The Secretary's Environmental Assessment Requirements require:

- *identification of water and soil resources, drainage lines, watercourses and riparian lands;*
- *the proposed erosion and sediment controls during construction;*
- *a detailed site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise the water use at the site;*
- *potential impacts on watercourses and groundwater;*
- *the proposed stormwater/wastewater/leachate management systems including the capacity of onsite detention systems, and measures to treat, reuse or dispose of water; and*
- *consideration of any potential salinity, soil contamination, flooding and acid sulfate soil impacts of the project.*

In order to ascertain the potential impact of the proposed development on the stormwater drainage system, Advisian has prepared a report titled *Waste and Resource Management Facility. Surface Water Management. (the Advisian Report)* a copy of which is at **Appendix 19**. An additional report has been prepared by Mott MacDonald titled *Stormwater Management Report*, a copy of which is also at **Appendix 19**.

9.2 Methodology

This part of the Environmental Impact Statement describes the proposed systems for surface water management on the Site including:

- Rainwater collection for re-use and reduction of demand from the mains potable supply.
- Stormwater pollution control using various proprietary treatment devices.

The stormwater drainage for the proposed development has been designed to comply

with the following guidelines:

- Australian Rainfall and Runoff 2001.
- Fairfield City Council's Urban Area On-site Detention Handbook 1997.
- Fairfield City Council's Stormwater Drainage Policy - September 2002.
- Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, March 2004.

9.3 Erosion and Sediment Control

Temporary erosion and sediment controls would be implemented prior to the construction of the facilities which comprise the water management system. A combination of localised controls including silt fencing and temporary sediment basins, etc would be used.

Prior to any earthworks commencing on the Site, erosion and sediment control measures will be put in place generally in accordance with *Managing Urban Stormwater: Soils and Construction 4th Edition, March 2004*. These measures include:

- Installation of a 1.8m high chain wire fence covered with geo-textile filter fabric, to the perimeter of the work site area, where required.
- The use of sediment diverting methods to minimise sediment in Council's stormwater drainage using sandbags around kerb inlet pits and geo-textile filter fabric around drop inlet pits.
- The provision of a sediment basin towards the lower perimeter of the Site to which stormwater runoff will be channelled and treated during construction. It is possible that an existing pond in the northwest corner may be utilised and converted for this purpose depending on its current capacity.
- Construct temporary site entrance with shaker grid.

The proposed capacity of the sediment control basin is based on a 5 day 85th percentile rainfall event of 32.2 mm (Table 6.3a of *Managing Urban Stormwater: Soils and Construction*). In accordance with the management requirements, the basin will be emptied within 5 days of the end of a storm as long as sufficient settlement has occurred. If necessary, a flocculant may be used to accelerate the settlement process.

Erosion and sediment controls measures to be employed are detailed further in the Engineering plans of the proposed development at **Appendix 17**.

Following project approval, a detailed Erosion and Sediment Control Plan would be

prepared in accordance with the requirements of *Managing Urban Stormwater: Soils & Construction*.

9.4 Water Re-use and Stormwater Management

The proposed stormwater management system applies the relevant principles of water sensitive urban design applicable to an industrial site, including maximising the capture and re-use of rainwater. This section describes the methodology used to assess the effectiveness of the proposed stormwater management systems:

- Rainwater re-use for dust suppression in the production process.
- Rainwater re-use for toilet flushing and landscape watering.
- Stormwater treatment prior to discharge from the Site.

9.4.1 Climate

For purposes of assessing the performance of the rainwater re-use systems, the following climate data has been used from the closest Bureau of Meteorology site:

- Daily rainfall for Prospect Reservoir (1889 – 2015)
- Daily pan evaporation for Prospect Reservoir (1965 - 2000).

Table 4.1 of the Advisian Report, a copy of which is reproduced below, summarises the long term average monthly climate statistics for rainfall and pan evaporation (**Epan**) together with the corresponding evapotranspiration (**ET**) calculated on the basis of pan factors given by McMahon et al (2013).

Month	Rainfall (mm)	Epan (mm)	Pan Factor	ET (mm)
Jan	93.7	169.5	0.839	142.2
Feb	96.4	139.0	0.837	116.3
Mar	97.3	124.6	0.846	105.4
Apr	77.0	90.4	0.842	76.1
May	71.1	63.2	0.899	56.8
Jun	75.7	51.5	0.880	45.3
Jul	56.5	56.6	0.869	49.2
Aug	49.9	80.7	0.850	68.6
Sep	46.6	109.6	0.849	93.0
Oct	59.2	139.1	0.848	117.9
Nov	73.2	151.3	0.854	129.2
Dec	74.0	182.2	0.825	150.4
Year	869.9	1,357.7		1,150.6

9.4.2 Potential Rainwater Re-use

The water demands which could utilise rainwater in lieu of potable supply have been derived as follows:

Process Water Quarterly water use data for an existing waste and resource management facility was provided by ResourceCo and, based on discussion with ResourceCo, was disaggregated on a monthly basis using the overall monthly distribution of pan evaporation as a guide.

Toilet Flushing Estimated water requirements for toilet flushing were based on 40 employees allowing for 2 x full flush (6 L) and 3 x half flush (3 L) per day.

Landscape Watering Water requirements for landscape watering have been estimated based on 300m² of landscaping (from landscape plans) and difference between evapotranspiration and rainfall. Where monthly rainfall exceeds evapotranspiration, it is assumed that no landscape watering is required.

Table 4.2, of the Advisian Report, a copy of which is reproduced below, summarises the estimated daily water demands for each month of the year.

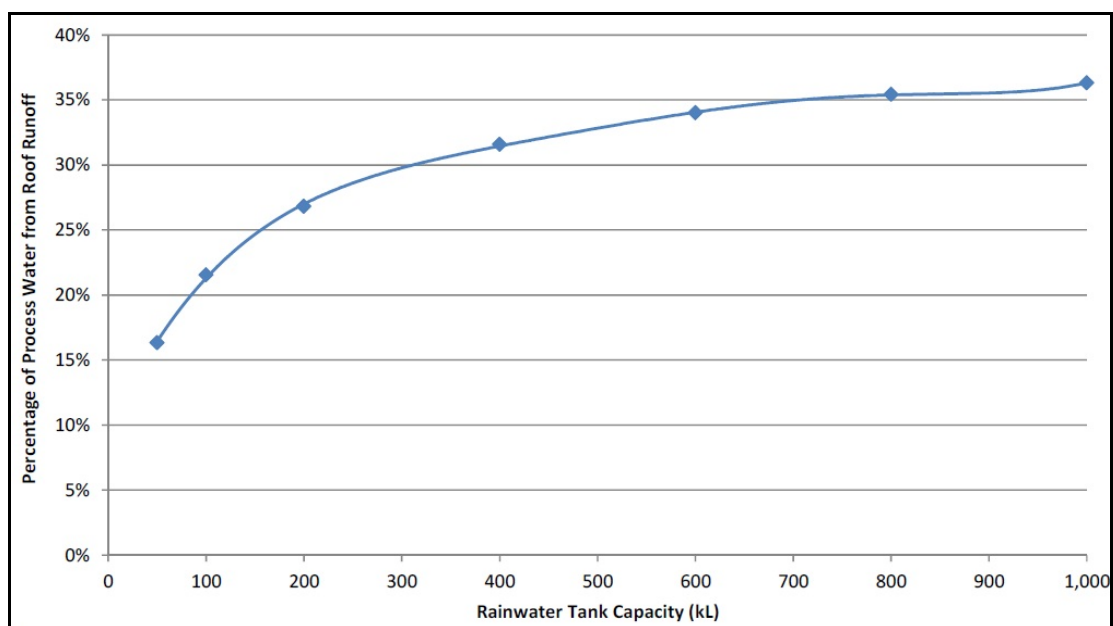
Month	Processing Use (kL/day)	Toilet Flushing (kL/day)	Landscape Watering (kL/day)
Jan	55.9	0.84	0.47
Feb	54.6	0.84	0.19
Mar	50.5	0.84	0.08
Apr	43.4	0.84	0.00
May	33.1	0.84	0.00
Jun	19.9	0.84	0.00
Jul	16.5	0.84	0.00
Aug	29.0	0.84	0.18
Sep	39.3	0.84	0.45
Oct	47.6	0.84	0.57
Nov	51.7	0.84	0.54
Dec	55.9	0.84	0.74

9.4.3 Assessment of Rainwater Re-use

For purposes of assessing the potential for rainwater re-use, the daily water demands listed in Table 4.2 of the Advisian Report were incorporated into a daily rainfall runoff model with the following features:

- 127 years of daily rainfall from Prospect Reservoir.
- Roof runoff from the processing warehouse (7,900m²) directed to an in ground tank from which supply is drawn to meet processing water demands.
- Roof runoff from the office and workshop (1,000m²) directed to two rainwater tanks with a combined capacity of 27 kL from which supply is drawn for both toilet flushing and landscape watering.
- In the event of there being insufficient water in the rainwater tanks to meet the water demand, the model assumes that water from the mains potable supply is used.
- Parameters derived from measurements of roof runoff in Sydney by Chapman and Salmon (1996) have been used to characterise roof runoff.

In the case of water supply for processing, the analysis included an assessment of the proportion of supply which could be met from roof runoff with different size tanks. The results of that assessment are summarised in Figure 4.1 of the Advisian Report, a copy of which is reproduced below.



The figure above shows significant diminishing benefit for tank sizes greater than 300 kL and indicates that the supply from rainwater is primarily constrained by the available

roof area. A tank size of 300 kL is proposed for the process water supply.

Apart from a minor volume of water for amenities, the facility is expected to require about 15.5 ML of water per year of which an average of 4.82 ML per year (31%) would be provided by rainwater as follows:

- Process water supply of 30% from rainwater (a saving of potable water of 4.49 ML/year).
- Toilet flushing and landscape water supply of 82% from rainwater (a saving of potable water of 0.33 ML/year).

9.5 Stormwater Drainage and Pollution Control

Details of the site stormwater drainage and pollution control systems are included in the Stormwater Management Report (**Appendix 19**). The features and performance of these systems are summarised below.

Stormwater Drainage

The proposed stormwater drainage system provides a below ground pit and pipe network designed to control nuisance flooding and enable effective stormwater management for the Site. The piped system has been designed to convey runoff from 20 year average recurrence interval (**ARI**) storm.

For storms larger than 20 year ARI up to 100 year ARI, the drainage system incorporates overland flow routes over proposed hardstand, car parking and landscaped areas designed to ensure that personal safety is not compromised.

An indicative pit and pipe network was developed which reflected the existing split of drainage between Frank Street (20%) and the north-west corner (80%). The DRAINS software has been used to assess the required capacity of the drainage system to convey runoff from a 20 year ARI storm, with safe overland flows for a 100 year ARI storm.

Stormwater Pollution Control

In addition to capture and re-use of rainwater, the following typical stormwater pollution control systems are proposed:

Draining to Frank Street: HumeGuard GPT and HumeCeptor.

Draining to Frank Street: HumeGuard GPT and Humes JellyFish.

The performance of the stormwater pollution control systems, including the capture and reuse of rainwater, have been assessed using the MUSIC software.

As Fairfield City Council does not specify stormwater pollution control targets, the relevant targets and pollutant generation characteristics specified by Blacktown City Council have been adopted for the analysis.

Details of the MUSIC modelling are set out in the Stormwater Management Report (**Appendix 19**) and the results summarised in Table 4.3 of the Advisian Report below.

Table 4.3: Results of Stormwater Pollution Assessment using MUSIC

Pollutant	Post Development (no Treatment) (kg/year)	Post Development (with Treatment) (kg/year)	Removal Rate (%)	Target Removal Rate (%)
Gross pollutants	377	8	99%	90%
Total suspended solids	2820	422	85%	85%
Phosphorus	5.4	1.6	70%	65%
Nitrogen	33.4	10.5	69%	45%

The table shows that the proposed stormwater pollution control system would achieve or exceed the relevant target reductions in pollutant loads.

9.6 Surface Water Impact Assessment

The Site is located within the Wetherill Park industrial area and is largely vacant with a mixture of concrete and bare soil surfaces.

Adjoining land use is limited to industrial buildings and associated vehicle parking.

There are no riparian lands adjacent to the Site.

A concept erosion and sediment control plan has been prepared in accordance with the relevant requirements of *Managing Urban Stormwater: Soils & Construction* (Landcom 2004). Following development approval, the erosion and sediment control plan will be finalised. Implementation of the plan will ensure that potential impacts will be managed in accordance with the relevant guidelines.

Sections 4.2 and 4.3 of the Advisian Report provide details of the methodology adopted for the assessment of the water demands for the proposed development (estimated 15.5 ML/year) and a detailed daily water balance analysis using 127 years of daily data.

Rainwater collected from the roofs of the buildings is estimated to provide:

- 30% of the water required for the waste processing (a saving of potable water of 4.49 ML/year).
- 82% of the water required for toilet flushing and landscape watering (a saving of

potable water of 0.33 ML/year).

The ability to provide rainwater for the waste process is primarily constrained by the area of available roof, not the capacity of the rainwater collection tank.

The proposed water management system is based on the relevant principles of "water sensitive urban design" and the analysis demonstrates that stormwater pollutant loads discharged from the Site would comply with, or exceed the relevant guidelines.

In accordance with the requirements of Fairfield City Council, no on-site detention of stormwater is proposed. It is expected that the development would have no impact on water quality in Prospect Creek.

The proposed diesel fuel tank will be fully enclosed and self-bunded. There will, therefore, be no risk of hydrocarbons draining to the stormwater system.

The Site will be fully sealed and would, therefore, have no impact on any groundwater underlying the Site.

All imported fill will be verified to ensure it does not contain any contaminants, saline soils or acid sulfate soils.

In conclusion, the assessment provided demonstrates that:

- Surface water risks can be adequately managed by application of relevant guidelines.
- The development poses no significant risk to the downstream environment.

*Part Ten***TRAFFIC IMPACT ASSESSMENT****10.1 Introduction**

In order to ascertain the potential impact of the proposed development on the local traffic network, Lyle Marshall & Associates Pty Ltd has prepared a report titled *Traffic Impact Assessment for EIS for Proposed Resource Recovery Facility at Nos.35-37 Frank Street, Wetherill Park (the Marshall Report)* a copy of which is at **Appendix 13**.

10.2 Scope

NSW Planning and Environment has listed the Secretary's Environmental Assessment Requirements and advised that the Environmental Impact Statement must address the following specific matters:

Traffic and Transport - including:

- *details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes;*
- *an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model;*
- *detailed plans of the proposed layout of the internal road network and parking on site in accordance with the relevant Australian standards; and*
- *detailed plans of any proposed road upgrades, infrastructure works or new roads required for the development.*

10.3 The Existing Environment

Historical traffic volumes at RMS Counting Stations in Horsley Drive (MR609), Gipps Road (MR646), Ferrers Road (RR7153) and Cowpasture Road (MR648) were published by the RMS until 2005. Later counts have been provided by request.

The location of the above Counting Stations is shown in **Figures 10-1, 10-2 and 10-3**.



Figure 10-1: Counting Stations 70074 and 66237.



Figure 10-2: Counting Stations 65095, 65140 and 65152.

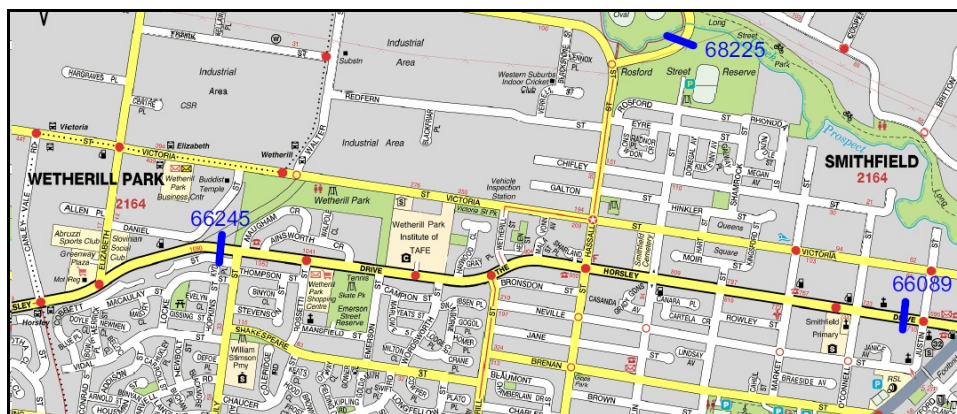


Figure 10-3: Counting Stations 66245, 68225 and 66089.

Available volumes are provided in Table 2.1a of the Marshall Report, a copy of which is provided below.

Table 2.1a – AADT Volumes

ROAD	STATION LOCATION	1993	1996	1999	2002	2005	2008	2009	2012	2015	ANNUAL GROWTH COMPOUND
Horsley Drive	66240 Fairfield Railway	37927	40889	40373	41273	40354	40934	40722	40021	41881	93 to 2015 +0.45%
	66089 West of Cumb. Hwy	16005	19487	22336	18240	19645					
	66245 West of Maugham Cr.	14600	21267	20815	21564	19972		21295			93 to 2009 +2.4%
	65140 West of Ferrers Rd	17627	18833	19376	19278	17547		28713			
	65095 East of Wallgrove Rd	17656		19244	18913	17084		28774			
Gipps Road	68225 South of Long St		17574	22784	22395	21067		18820	19488	17926	96 to 2012 +0.7%
Cowpasture Road	65152 South of Horsley Dr.		18119								
Ferrers Road	66237 Supply Canal	8571	11333	16184	17250	17449		11278			
	70074 South of Gt West Hwy	9134	12554	18113	18399	18703					
Cowpasture	65151 South of Prairievale Rd	17354	22794	25771	28879	32609		28365			

Peak Hour Traffic Volumes

Traffic Volume and Pedestrian Counts were undertaken from 7:00 am - 9:00 am and 4:00 pm - 6:00 pm on Tuesday 24 November 2015 and Wednesday 25 November 2015 at 6 intersections on the road network surrounding the Site as shown in **Figure 10-4**.

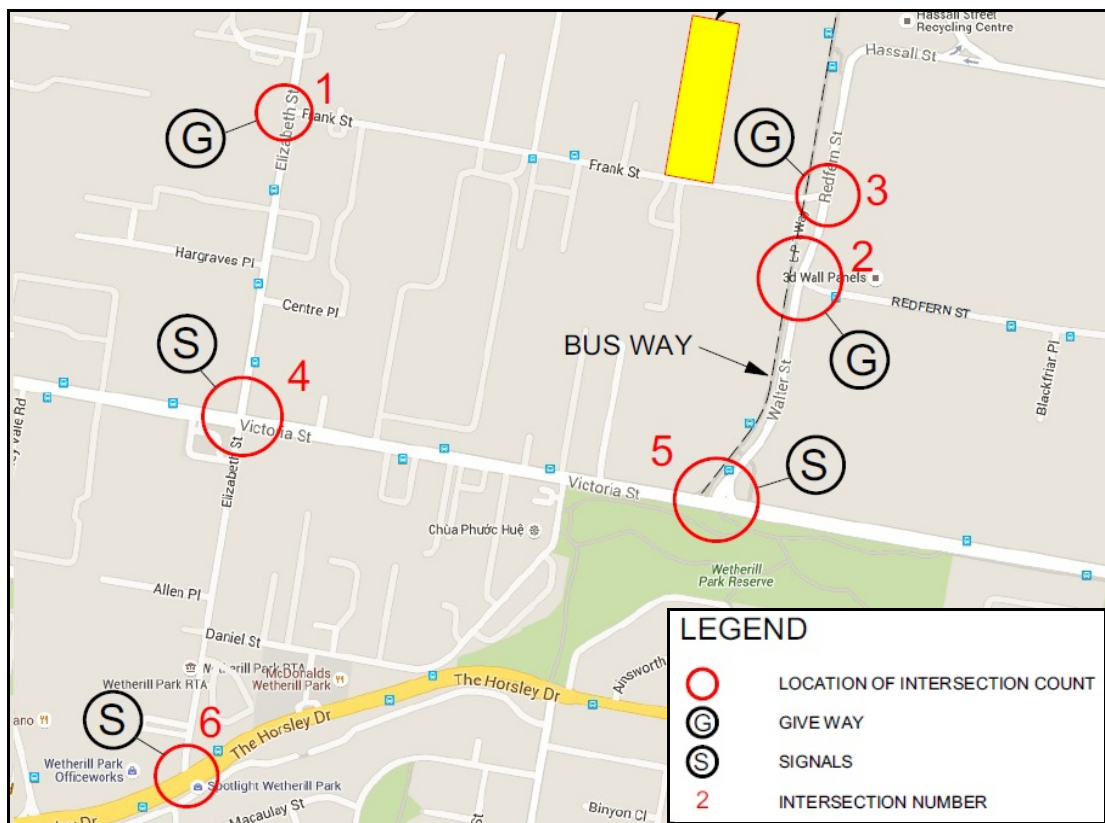


Figure 10-4: Location of traffic volume and pedestrian counts.

The peak hours were generally 7:30 am - 8:30 am and 4:00 pm - 5:00 pm. The counts are shown in Figure 3C of the Marshall Report for the am and pm peak hours (refer **Figure 10-5**). The peak hour Pedestrian Movements at the signalised pedestrian crossings ranged from 0 to 4.

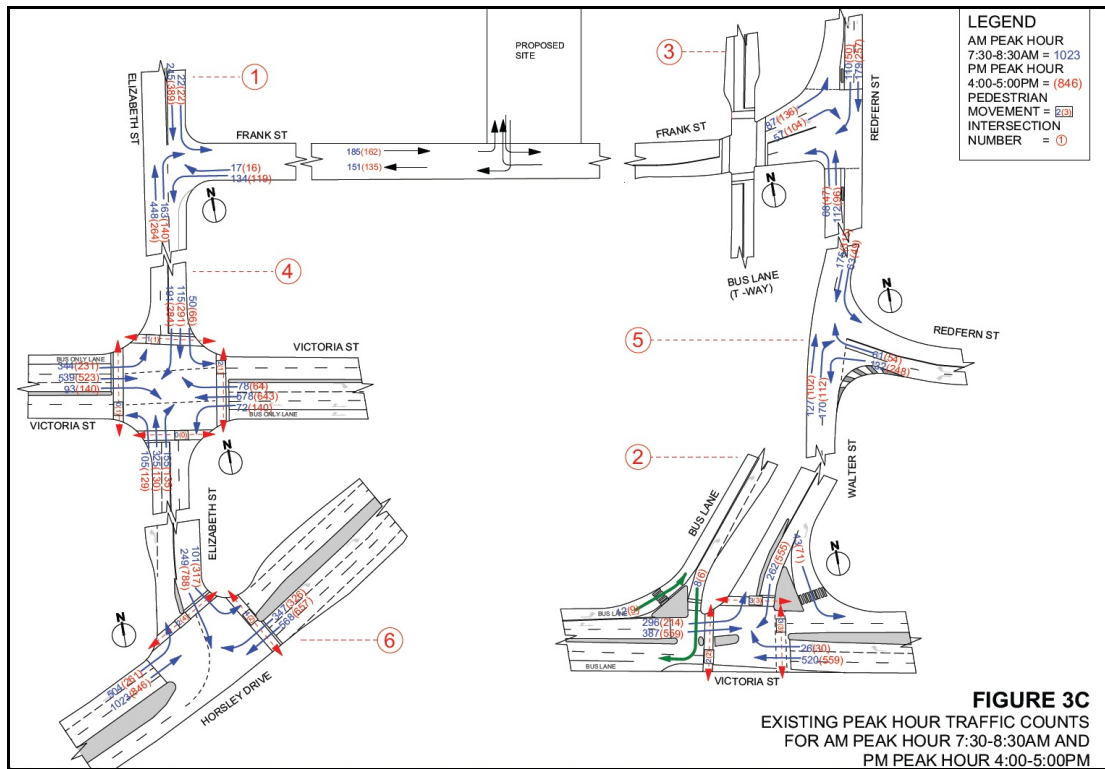


Figure 10-5: Figure 3C of the Marshall Report.

10.4 Road Inventory and Traffic Controls

The following road inventory exists in the locality of the Site:

1. Frank Street is a 2 lane industrial road. The movements at the Elizabeth Street intersection are controlled by Give Way signs. The movements at Redfern Street are controlled by Stop signs.
2. Elizabeth Street is a 4 lane industrial road with traffic signal control at the Victoria Street and The Horsley Drive intersections.
3. Victoria Street is a 4 lane industrial road with additional right turning lanes at the Elizabeth Street and Walter Street signalised intersections.
4. The Horsley Drive is a 4 lane industrial road with additional right turn bays at the signalised intersections.
5. Redfern Street is a 2 lane industrial road and movements at the Walter Street tee-intersection are controlled by Give Way signs.

6. The signposted speed limits are:
- 50kph in Frank Street,
 - 60kph in Redfern Street, Elizabeth Street and Gipps Road, and
 - 70kph in The Horsley Drive.

10.5 Intersection Capacity Analysis

The Classification Counts in Frank Street show that the percentages of heavy vehicles (Austroad Classes 3 to 12) were 34.7% in the 7:30 am - 8:30 am peak hour and 25.9% in the 4:00 pm - 5:00 pm peak hour. These percentages were used in the SIDRA analysis of intersections 1 to 3, as shown in **Figure 10-4**.

In The Horsley Drive Upgrade - M7 Motorway to Cowpasture Road corridor study for the RMS, the percentage of heavy vehicles is stated to range from 18 to 22% in *Section 2.1.1 of the Preferred Option Corridor Report by Hills Environmental, August 2015*. The report does not state whether the daily volumes are weekday or 7 day.

In the analysis of intersections 2, 4, 5 and 6, as shown in **Figure 10-4**, the percentage of heavy vehicles has been assumed to be 20%. A Classification Count will be made in The Horsley Drive west of Walter Street to confirm the percentage of heavy vehicles.

All 6 intersections located in **Figure 10-4** have been analysed using SIDRA Version 6.1.

The network performance is determined by the Level of Service (**LoS**), Average Delay (**AVD**), Degree of Saturation (**DoS**) and maximum delay on the critical movement at the intersections during peak hours. The Level of Service criteria for intersections are explained in Table 4.2 taken from the RTA *Guide to Traffic Engineering Developments*.

As shown in Table 2.3 of the Marshall Report at **Appendix 13**, all intersections are providing a satisfactory Level of Service.

10.6 Impacts of the Proposed Development

Access, Internal Traffic Circulation and Parking

The western vehicular crossing is to be widened to 13.5 metres and constructed in compliance with Fairfield City Council's standard for heavy duty vehicular crossings.

The swept paths of B Doubles for entry and exit have been checked using Autoturn. The ingress and egress crossings are separated by a raised 1 metre wide concrete median and comply with *Figure 3.1 in AS 2890.2 Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities*.

The swept paths of B Doubles for access to and from stockpiles of baled PEF, swept paths of a 19m long articulated vehicle or truck and dog trailer for deliveries of raw waste material, and for NSW Fire Brigade aerial appliances to circulate around the perimeter road have been prepared using Autoturn.

The car parking provision on-site meets the maximum parking demand by staff at the mid afternoon shift change. The parking can be increased by 4 spaces by line marking on the western side of the staff access driveway and a further 5 spaces by constructing additional pavement in front of the office building. A further 8 spaces are available along the Site frontage to Frank Street. Adequate parking can be provided to meet the anticipated future maximum demand.

Effects of Increased Traffic on Intersection Performance

The increase in heavy and light vehicle traffic movements in peak hours due to the operation of the proposed development are relatively minor at all intersections. The Victoria Street / Walter Street intersection is already at capacity, and the Elizabeth Street / Horsley Drive intersection requires improvements in the pm peak hour. All other intersections analysed using SIDRA 6.1 will continue to provide satisfactory performance. The SIDRA analysis is shown in Table 4.2 of the Marshall Report at **Appendix 13**.

Effects of Increased Traffic on Road Network

To cater for expected traffic increases to 2036, the RMS is planning an upgrade of The Horsley Drive between Cowpasture Road and the M7 motorway to a 4 lane divided carriageway, realignment of the Ferrers Road intersection, and provision of traffic lights at the Cowpasture Road south intersection.

The estimated increase in light and heavy vehicle movements on the major approach roads in the day-time 7:00 am to 10:00 pm and at night from 10:00 pm to 7:00 am are shown in Table 4.3A of the Marshall report at **Appendix 13**. The existing traffic volumes during these periods have been estimated and are shown in Table 4.3B of the Marshall Report.

These small increases will have minimal effect on the performance of the road network.

10.7 Traffic Movements During Construction Stages

Indicative Construction Programme

The construction staging and duration of each stage have been reviewed by Mike Haywood, Project Consultant for Resource Co and are shown in Table 3.9.1 of the Marshall Report, a copy of which is provided below.

TABLE 3.9.1 – Construction Program:

STAGE	DESCRIPTION OF WORKS	DURATION OF CONSTRUCTION PERIOD	ESTIMATED COMMENCEMENT DATE
Stage 1 PRELIMINARY WORKS			
	Demolition	1 week	
	Bulk Excavation	2 weeks	
Stage 2 EXCAVATION			
	Excavation for Floor Slab and drainage pits etc	2 months	
	Construction of Retaining walls	1 month	
Stage 3 MAIN FRAME CONSTRUCTION			
	Main Frame Construction	6 months	
Stage 4 CONSTRUCTION OF CAR PARKING AREAS			
	Car Parking Areas	2 months	
Stage 5 CONSTRUCTION OF VEHICULAR LAYBACK AND LANDSCAPING			
	Construction of Vehicle Layback	3 days	

Estimated Daily Vehicle Movements

The estimated daily vehicle movements have been reviewed by Mike Haywood, Project Consultant for Resource Co and are shown in Table 3.9.2 of the Marshall Report, a copy of which is provided below.

Table 3.9.2

Stage Phase of Construction	TOTAL NO. OF VEHICLE MOVEMENTS / DAILY										Parking Notes. (e.g whether construction workers park on site)
	Cars		Trucks up to 6.4 metres long		MRV Vehicles 8.8m Long		MRV Vehicles 12.5m Long		Articulated AV		
	IN	OUT	IN	IN	IN	OUT	IN	OUT	IN	OUT	
Stage 1	2	2			3-6	3-6			5	5	On site
Stage 2	2	2			3-6	3-6			17	17	On site
Stage 3					6-10	6-10	1	1	10 #	10 #	On site
Stage 4	1	1	1	1	3-5	3-5	5	5			On site
Stage 5			1	1	1	1	3	3			

note 1

Max loads per day estimated at 10 however only 50-60 loads over the life of the project.

Part Eleven**SOCIO-ECONOMIC IMPACT****11.1 Introduction**

The Secretary's Environmental Assessment Requirements includes a requirement for:

... an assessment of the economic and social impacts of the development, particularly of any benefits to the community.

This part of the Environmental Impact Statement describes the potential socio-economic impacts associated with the proposed development.

Consideration is given to the impacts identified in other assessment sections such as air quality and odour, visual amenity, noise and vibration, and traffic and transport, as these are connected to the potential socio-economic impact.

A summary of key socio-economic indicators is provided, based on information included in the Fairfield City Council community profiles.

Measures for the mitigation and management of socio-economic impacts associated with the facility have been identified for both the construction and operational phases.

11.2 Fairfield Local Government Area

Fairfield City is located in Sydney's south western suburbs, about 32 kilometres from the Sydney GPO.

The city is bounded by Blacktown, Holroyd and Parramatta Cities in the north, Bankstown City in the east, Liverpool City in the south and Penrith City in the west.

Fairfield City is continuing to develop, prosper and rise to its full potential. Fairfield is a vibrant and culturally diverse city with many advantages for business.

Fairfield City is approximately 104 square km in size, incorporates 27 suburbs, and is home to more than 181,000 people. The population of Fairfield has come from 133 countries and speaks more than 70 languages.

Whilst mainly residential, Fairfield contains the large-scale regional industrial estate of Smithfield Wetherill Park, as well as a number of smaller industrial centres.

With two major business and retail centres at Fairfield and Cabramatta, growing centres in Prairiewood and Bonnyrigg and many neighbourhood retail centres, Fairfield offers excellent shopping and eating opportunities. In addition, Fairfield City has beautiful

parklands and large expanses of rural land in the suburbs of Horsley Park and Cecil Park, providing people with a close at hand retreat from city life, when they wish.

It is estimated that 46,167 people work in Fairfield. Fairfield represents 7.50% of the 615,223 people working in Greater Western Sydney, 1.54% of the 2,996,038 people working in New South Wales, and 0.47% of the 9,824,444 people working in Australia.

The wages and salaries paid by businesses and organisations in Fairfield is estimated at \$3.546 billion. Fairfield represents 7.21% of the \$49.147 billion in wages and salaries paid by businesses and organisations in Greater Western Sydney, 1.48% of the \$239.696 billion in wages and salaries paid by businesses and organisations in New South Wales and, 0.46% of the \$766.085 billion in wages and salaries paid by businesses and organisations in Australia.

The output generated by the Fairfield economy is estimated at \$17.156 billion. Fairfield represents 7.90% of the \$217.258 billion in output generated in Greater Western Sydney, 1.71% of the \$1.003 trillion in output generated in New South Wales and 0.52% of the \$3.294 trillion in output generated in Australia.

Fairfield's Gross Regional Product is estimated at \$7.602 billion. Fairfield represents 7.40% of Greater Western Sydney's GRP of \$102.713 billion, 1.54% of New South Wales' Gross State Product (GSP) of \$492.478 billion and 0.48% of Australia's GRP of \$1.584 trillion.

11.3 Potential Impacts

Potential social and economic impacts resulting from the facility are generally positive.

Adverse social impacts are associated with the potential air, noise, traffic impacts, and visual amenity. The facility would employ best management practices and mitigation measures to minimise the potential for adverse impacts upon the local environment such that any adverse social impacts would be negligible.

Construction Impacts

Construction of the facility would create new temporary employment, contributing positively to the local economy.

The Capital Investment Value (CIV) of the facility is estimated at approximately \$30.795 million (refer **Appendix 18**).

Construction of the facility would create increased levels of traffic, noise and air pollution for the duration of the construction phase, which has the potential to impact on local residents if not appropriately managed, however, the distance to the nearest residential receptors is 800 metres from the Site and impacts at these locations are expected to be minimal.

Assessments of noise, air quality, visual amenity and traffic impacts associated with construction of the facility are presented in **Parts 5, 6, 8 and 10** of this Environmental Impact Statement respectively.

Operational Impacts

Potential social and economic impacts resulting from the operation of the facility are generally positive.

The operation of the Waste Resource Management Facility would provide employment for approximately 40 staff at this location, with the potential for increased employment in the future. All staff employed at the facility will be new positions, and would not involve transferring current employees to the Site.

Consumable products and services required to operate and maintain the facility, include:

- Annual telecommunications, electricity, water and gas supply costs.
- Opportunities for suppliers to provide various goods and services to the Site, including materials, operational fuels, machinery, and equipment.
- Opportunities for local businesses to fulfil maintenance and servicing requirements.
- Convenient, locally supported, cost-effective disposal of commercial and industrial waste.

The money which would be spent on consumables, along with the significant flow-on benefits, would result in a substantial stimulus to the local and regional economies.

The facility would contribute to the ongoing sustainability of the NSW economy through the provision of efficient waste management infrastructure as the population and commercial expansion of Sydney generates additional waste.

As stated in **Part 13** of this Environmental Impact Statement, the benefits of implementing better practice for waste management and recycling include:

- Enhanced social and environmental reputation of an organisation.
- Reduced costs associated with waste disposal.
- Benefits to all stakeholders and the wider community.
- Improved environmental outcomes.

The facility aligns with the Waste Avoidance and Resource Recovery Act 2007 hierarchy principles of avoidance, resource recovery and disposal, and can potentially reduce the amount of waste going to landfill in the future.

11.4 Mitigation and Management

Construction

A Construction Environmental Management Plan (**CEMP**) would be prepared for the facility. The CEMP would include:

- Measures to minimise noise impacts during construction.
- Measures for controlling dust generated during construction.

Additionally, the facility has been designed to minimise visual impact though locating all production activity within a purpose built building which would be consistent in size, colour and location with other industrial development in the Wetherill Park Industrial Estate.

Operation

Prior to commencing operation, a site-specific Operational Environmental Management Plan (**OEMP**) would be developed for approval.

The OEMP would ensure that the commitments made within the Environmental Impact Statement, along with the conditions contained in the Development Consent and Environment Protection Licence, are fully implemented and complied with.

The OEMP would establish the framework for managing and mitigating the potential environmental impacts of the facility over the life of the operation.

Social impacts associated with the facility would be managed and mitigated by:

- Adoption of measures to minimise air quality at receptors.
- Implementation of measures to minimise noise impacts at receptors.
- Maintenance of vegetation screens to minimise visual impact.
- Implementation of a Complaints Handling Procedure and maintenance of a Complaints Register.

Mitigation of noise, air quality, visual amenity and traffic impacts associated with construction of the facility are presented in **Parts 5, 6, 8 and 10** respectively of this Environmental Impact Statement.

*Part Twelve***HAZARD AND RISK ASSESSMENT****12.1 Introduction**

The Secretary's Environmental Assessment Requirements includes a requirement for:

- *a preliminary risk screening undertaken in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) and Applying SEPP 33 (DoP, 2011), and if necessary, a Preliminary Hazard Analysis (PHA); and*
- *an assessment of the likely toxicity levels of loads transported to and from the site.*

The proposed Waste and Resource Management Facility has a number of potentially hazardous operations including:

- Re-fuelling of plant and equipment.
- Potentially contaminated run-off.
- Equipment, raw material and product fires.
- Acoustic and air quality impacts.

These operations have the potential to impact offsite or cause impact at the adjacent properties.

12.2 Methodology

Reference has been had to the methodology described in *Hazardous Industry Planning Advisory Paper No.6, Hazard Analysis Guidelines* prepared by the then Department of Urban Affairs and Planning.

The proposed development was considered in the context of its location, the quantity and type of dangerous goods likely to be stored and used, and safety management.

State Environmental Planning Policy No.33 - Hazardous and Offensive Development (**SEPP 33**) was also considered which aims, among other things:

- (d) *to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account; and*

- (e) *to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.*

12.3 Assessment

As detailed in **Part 3.3.2** of this Environmental Impact Statement, the proposed development is not a *Hazardous Industry, Potentially Hazardous Industry* or *Hazardous Storage Establishment* as defined in SEPP 33 as it would not pose a significant risk in relation to the locality to human health, life or property, or to the biophysical environment.

The proposed development is, however, *Potentially Offensive Industry*.

Notwithstanding, the following assessment is provided.

12.3.1 Hazard Analysis

The following potential hazards would exist on the Site as part of the proposed development:

- the storage and handling of dangerous goods.
- contaminated runoff.
- refuelling of plant and equipment.
- contaminated material deliveries.

12.3.1.1 Dangerous Goods Storage and Handling

Materials stored and handled at the proposed development include:

- Mobile plant would be used at the proposed development including front end loaders and excavators. Diesel is to be stored in a 30,000 L purpose designed storage tank which is self bunding.

The site processes waste materials which could contain contaminants. Rainwater impacting the Site could become contaminated by the materials stored in the open areas of the Site. Rainwater runoff could, therefore, cause damage to the biophysical

environment adjacent to the proposed development. Release of potentially contaminated water could result in impact to these sensitive areas. To mitigate this potential, all waste materials are delivered to the Site and processed with a purpose built building such that rainwater would not come in contact with the waste either before or during processing. All processed waste is also stored internally such that contact with rainwater would not occur. Baled product is stored in a covered area, however, the product is wrapped in rain proof material.

In addition, contaminants such as bottles, cans, drums, cylinders of dangerous goods could enter the Site mixed with waste materials. These materials could be released during processing (i.e. shredding and screening), resulting in contaminated materials release, flammable liquid ignition and fire and flammable gas ignition and explosion.

12.3.1.2 Storage of Diesel

Diesel fuel would be stored in a purpose built, self bunded 30,000 L tank which would comply with the requirements of the relevant Australian Standard. **Figure 12-1** provides an example of the type of self bunding diesel tank to be installed on the Site.



Figure 12-1: Example of a self bunded fuel tank similar to that which would be used on the Site.

The self bunded nature of the storage tank would contain any spills and prevent any release offsite, hence, there would be no impact offsite from such an incident. Notwithstanding, a spill kit would be provided adjacent to the diesel storage area.

In the event of a release of diesel, there is a potential for the liquid to ignite, resulting in a fire. Local fire fighting may be required to contain the fire in the vicinity of the tank or to extinguish the fire itself. A dry powder type fire extinguisher would be installed adjacent to the diesel tank storage area.

In summary, there would be no impact offsite as a result of the storage of diesel fuel at the facility.

12.3.1.3 Contaminated Runoff

There is potential for leachate being produced from the operation of the facility.

Management measures

Pollutants which could potentially originate from the facility include suspended solids in site runoff, and oil, fuel or chemicals used on the Site.

All runoff from the operational area of the Site which is not diverted to storage tanks for re-use on the Site, is captured in sumps. The sump design would prevent the escape of oils and fuels from the Site. The sumps also give the Site operator the opportunity to respond to any spills by preventing such spills flowing immediately off site. Full detail of the stormwater management system is provided in **Appendix 19**.

12.3.1.4 Refuelling of Plant and Equipment

The proposed development would operate with a number of internal combustion engine powered components (e.g. front end loaders, excavators etc). This equipment would require periodical refuelling.

During the refuelling operation, there is a potential for fuel leaks and spills to occur from split or failed hoses, overfill of the truck/equipment or tanker/vehicle tank failure. Whilst the likelihood of these incidents would be low, heat radiation impact offsite could occur if the incident eventuated, therefore, there is potential for the adjacent properties to be impacted. A dedicated refuelling procedure would be established for mobile plant, and when such plant is refuelled.

12.3.1.5 Contaminated Materials Delivery

The waste to be received at the Site would be limited to that which the EPA Licence for the Site permits.

Visual inspections of waste as it arrives at the Site would be undertaken and any

contaminated waste would be returned to the delivery truck and removed from the Site.

The proposed development has been designed such that the vast majority of materials delivered to the Site are recycled. Approximately 10% of the material delivered to the Site is material which cannot be recycled and that waste would be transported to landfill.

12.4 Risk Assessment

Each of the issues identified above, and other minor issues, have been addressed and, where appropriate, management and mitigation options have been developed.

Each of the potential environmental issues was ranked as being low, moderate, high or critical risk, the risk rating allocated being dependant upon the probability of the impact occurring and the potential consequences should the impact materialise.

Table 12-1 summaries the findings of the risk assessment which indicate that, in the absence of controls and mitigation measures, aspects of the proposed development pose a moderate to high risk to the environment. No critical risks were identified.

Aspects of the proposed modification which have been identified as having a moderate to high environmental impact risk ranking have been the primary focus of the Environmental Impact Statement with appropriate mitigation measures identified. Aspects which were identified as having a low risk were also assessed, however, mitigation measures were considered either of lesser importance or unwarranted.

Ratings in **Table 12-1** were determined based on the following criteria:

Critical Recurring event during the life time of the operation.

High An event which may occur frequently during the life time of the operation.

Moderate An event which may occur during the life time of the operation.

Low An event which is unlikely to occur during the life time of the operation.

Table 12-1: Environmental Risk Rating Without Mitigation

Critical	High	Moderate	Low
None	Fire	Air Quality	Traffic
		Hazardous Materials	Contaminated Land
		Noise	Groundwater
		Surface Water	Local Ecology

Table 12-2 provides a summary of each potential risk and mitigation measures proposed.

Table 12-2: Environmental Risk Rating Without Mitigation

Source of Risk	Nature of Risk and Potential Impact	Risk Rating	Mitigation Measures
Local Ecology	Destruction of any remaining ecological value to local terrestrial or riparian environment.	Low No significant terrestrial or riparian ecology remaining.	Protection of existing trees on the adjoining site. Stormwater treatment to minimise potential impact on any remaining riparian ecological value.
Noise	Noise from processing machinery. Noise from mobile machinery around the site.	Moderate	All processing machinery operates within an enclosed, purpose built shed. Mobile plant would use approved exhaust mufflers.
Air Quality	Dust from sorting and packing process.	Moderate	Mist sprays and dust shields are used in the production shed to control dust.
Hazardous Materials	Storage and use of hazardous materials.	Moderate	External fuel storage in fully enclosed self-bunded tank. Approved spill kits and fire extinguishers would be provided. The workshop entrance would be graded to ensure runoff cannot enter and any inside spillage cannot escape.
Fire	Fire within the processing shed or in the outside storage of baled product.	High	The Fire Engineering Statement at Appendix 8 demonstrates that the proposed development can comply with the relevant requirements of the BCA
Groundwater	Groundwater pollution from site activities.	Low	The Site will be fully sealed (no pathway for drainage to groundwater). Baled product stored on the Site is largely inert.
Surface Water	Stormwater pollution.	Moderate	Recognised pollution control systems in conjunction with rainwater harvesting.
Contaminated Land	Land contaminated from previous activities or from imported fill.	Low	The Site has been decontaminated and verified. Imported fill to be screened for contamination/salinity/acid-sulfates.
Traffic	Additional traffic of local and regional road network	Low	The Environmental Management Plan for the Site will contain procedures for all truck drivers servicing the facility to ensure minimal impact to the local road network.

Part Thirteen**WASTE MANAGEMENT PLAN****13.1 Introduction**

The Secretary's Environmental Assessment Requirements stipulate that the Environmental Impact Statement must contain a Waste Management Plan (WMP) including:

- *a detailed description of the likely waste streams that would be handled, stored and processed at the facility including maximum volumes of each type of waste to be stored onsite at any one time and the maximum throughput of each waste type;*
- *details of how this waste would be stored and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with;*
- *details of the proposed location and size of stockpiles of unprocessed and processed recycled waste on the site;*
- *the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021;*
- *a description of the technology and timeframes for processing waste and the quality control measures that would be implemented;*
- *details of the potential impacts associated with treating, storing, using and disposing of this waste and waste product; and*
- *details of the type of commercial operations the waste will come from and the end use of each waste type.*

This WMP applies to both the construction and operation of the proposed development.

13.2 Objectives of the Waste Management Plan

The principal objective of this WMP is to identify all potential wastes likely to be received and generated at the Site during development and operational phases of the development, including a description of how waste would be handled, processed and disposed of (or re-used/recycled). The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste production and maximisation of resource

recovery.

- To identify procedures for waste management.

13.3 Better Practice for Waste Management and Recycling

13.3.1 Waste Management Hierarchy

The WMP aims to meet the principles of the waste management hierarchy, by promoting waste as a resource through the following in order of preference:

- Waste avoidance through prevention or reduction of waste generation. Waste avoidance is best achieved through better design and purchasing choices.
- Waste reuse, without substantially changing the form of waste.
- Waste recycling through the treatment of waste that is no longer usable in its current form to produce new products.
- Energy recovery through thermal treatment of residual waste materials and from green waste processing.
- Waste disposal, in a manner which causes the least harm to the natural environment.

Figure 13-1 demonstrates a classification of waste management options, as detailed in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.

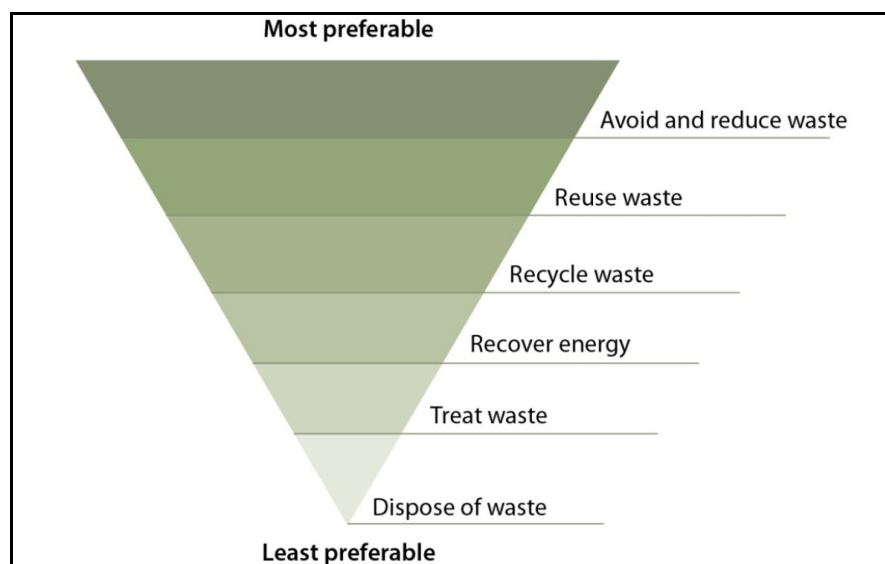


Figure 13-1: The waste hierarchy.

At the top of the hierarchy, avoiding and reducing the generation of waste is the most preferred approach. This is because it preserves resources, avoids the use of additional resources to manage waste which would have been generated, and aims to eliminate disposal costs. The goal is to maximise efficiency and avoid unnecessary consumption through such positive behaviours as:

- selecting items with the least packaging or which require the least resources to produce.
- avoiding disposable goods or single-use materials.
- buying products which are recycled, recyclable, repairable, refillable, reusable or biodegradable.
- using leftover food rather than throwing it away.

Where avoiding and reducing waste is not possible, the next most preferred option is to reuse the materials without further processing, avoiding the costs of energy and other resources required for recycling. For example, many household and industrial items can be repaired, reused, sold or donated to charities.

The next step in the hierarchy is recycling, which involves processing waste materials to make the same or different products. This includes composting, which recycles nutrients back into the soil. Recycling keeps materials in the productive economy and benefits the environment by decreasing the need for new materials and waste absorption.

Recycling a product generally requires fewer resources than drawing virgin materials from the environment to create a new one.

Where further recycling is not feasible, it may be possible to recover the energy from the material and feed that back into the economy where this is acceptable to the community.

Some materials may be inappropriate to reuse, recycle or recover for energy and instead require treatment to stabilise them and minimise their environmental or health impacts.

Finally, the waste hierarchy recognises that some types of waste, such as hazardous chemicals or asbestos, cannot be safely recycled and direct treatment or disposal is the most appropriate management option.

13.3.2 Benefits of Implementing Better Practice for Waste Management and Recycling

- Enhanced social and environmental reputation of an organisation.
- Reduced costs associated with waste disposal.

- Benefits to all stakeholders and the wider community.
- Improved environmental outcomes.

13.4 Construction Waste Management Plan

Demolition and construction stages of development projects have the greatest potential for waste minimisation.

Construction of the proposed development would initially require the demolition and removal of the existing buildings and redundant infrastructure on the Site.

13.4.1 Waste Streams and Classifications

The proposed development is likely to generate the following broad waste streams:

- green waste
- demolition wastes
- excavation material
- construction wastes
- plant maintenance waste
- packaging waste
- office waste
- waste water

Waste Generation Rates

The Construction Site Manager will need to record the types and quantities (including the volume in cubic metres and weight in tonnes) of wastes produced during the Site preparatory and construction stages.

13.4.2 Estimation of Waste Volumes

Site Preparatory Works

Significant earthworks would be required to achieve a level site. The site works would include cut and fill of the Site and the importation of fill materials to reach the desired finished level. Approximately 9,000m³ of fill would need to be imported.

Existing hardstand areas on the Site would be crushed on site and use for fill.

There are also a number of trees which would need to be removed to make way for the new facility, primarily along the site's southern boundary. These trees will be chipped, mulched and reused on the Site for landscaping where practicable.

The excavated, crushed and chipped materials would be transported to a stockpile within the Site for later use.

Other structures to be removed may include service cables, ducting, sewage pipework. Metal clad structures on Site would also be demolished.

It is estimated that approximately 70% of the predicted construction waste can be re-used (on-site or at another development) or recycled off-site (i.e. concrete, green waste, soil, metal, and a proportion of timber and hard materials).

13.4.3 Targets for Resource Recovery

Estimated tonnages for both demolition and construction phases demonstrate that a significant proportion of waste (approximately 70%) can be diverted from landfill. The recycling and resource recovery performance contributes to overall NSW State recycling targets.

13.4.4 Waste Avoidance Measures

The Construction Site Manager will identify opportunities for waste avoidance by:

- Selecting construction materials taking into consideration their long lifespan and potential for reuse.
- Ordering materials to size and ordering pre-cut and prefabricated materials.
- Reuse of formwork (where possible).
- Reducing packaging waste on site by:

- purchasing in bulk
- requesting cardboard or metal drums rather than plastics
- requesting metal straps rather than shrink wrap and using returnable packaging such as pallets and reels
- Careful on-site storage and source separation.
- Subcontractors informed of Site waste management procedures.
- Coordination and sequencing of various trades.

13.4.5 Reuse, Recycling and Disposal

Effective management of construction materials and demolition/construction waste, including options for reuse and recycling where applicable and practicable, will be conducted.

Only wastes which cannot be cost effectively reused or recycled are to be sent to landfill or appropriate disposal facilities.

The following procedures are to be implemented:

- Excavated materials will be re-used on site.
- Green waste will be mulched and re-used in landscaping on site.
- Concrete, tiles (where applicable) and bricks will be crushed on site for reuse in the proposed construction or recycled off site.
- Steel will be recycled off site, all other metals will be recycled where economically viable.
- Colorbond roof material off cuts to be stockpiled on site for reuse or recycling.
- Framing timber will be reused on site or recycled off site.
- Windows, doors and joinery will be recycled off site (where possible).
- Waste oil will be recycled or disposed of in an appropriate manner.
- All used crates will be stored for reuse unless damaged.
- All glass which can be economically recycled will be.

- All solid waste timber, brick, concrete, rock which cannot be reused or recycled will be taken to an appropriate landfill site and disposed of in an approved manner.
- All asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with EPA requirements.
- Provision will be made on site for the collection of batteries, fluorescent tubes, smoke detectors and other recyclable resources.
- Container and paper/cardboard recycling will be provided on site for employee use or these items will be sorted recycling at an appropriately licensed facility.
- All garbage will be disposed of via a Council approved system.
- All other solid waste including bitumen paving, tile, rock and soil will be taken to an appropriate materials recycling facility/landfill site and processed in an approved manner.

13.4.6 Waste Storage and Servicing

The facility will be managed to ensure effective source separation and appropriate collection of waste during demolition and construction works.

For construction stages, minimum dedicated skips would be used for:

- timber
- plasterboard/gyprock
- concrete
- bricks
- steel/scrap metal
- general waste
- other waste.

Separate receptacles for the safe disposal of hazardous waste types (i.e. light bulbs, batteries, etc) will also be provided where applicable.

All waste placed in stockpile areas/skips for disposal or recycling shall be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the Site.

Where possible, recycling bins will be provided in common areas for plastic and glass bottles, soft drink cans, aluminium and tin cans to ensure these items do not end up at landfill. Specialised bins for cigarette butts should also be provided outside lunchrooms and nearby common areas at work compounds/work sites.

13.4.7 Servicing and Transport

The frequency of the waste removal will be dictated by the volume of material being deposited into each of the dedicated skips. Skips are to be checked on a daily basis by the Site Manager to ensure that skips do not overflow. If skips and/or bins are reaching capacity, removal and replacement should be organised for the next 24 hours.

All skips/bins leaving the Site will be covered with a suitable tarpaulin to prevent the spillage of wastes from the skips whilst in transit.

13.4.8 Contaminated / Hazardous Waste

During the construction phase, qualified and certified contractors would be engaged to remove all contaminated/hazardous materials (eg asbestos) and dispose of all contaminated/hazardous waste at an appropriately licenced facility in accordance with EPA regulations.

In the event that any contaminated or hazardous materials are unexpectedly uncovered during demolition or excavation works, the Construction Site Manager is to stop work immediately and contact the relevant hazardous waste contractor prior to further works being undertaken in the area.

Any trucks carrying contaminated materials should be securely and completely covered immediately after loading the materials, to prevent windblown emissions and spillage.

13.4.9 Spills Management

Spills on the work site are most likely to involve fuel, hydraulic oil or engine oil spilled from plant items, and paints and solvents.

If a spillage occurs, site staff will immediately identify the spilled materials and notify the Construction Site Manager, then contain the spill as soon as possible so it does not spread.

Material Safety Data Sheets will also be located nearby spill kit areas for advice on spillage clean up and disposal.

13.5 Operational Waste Management Plan

Ineffective waste management can lead to environmental pollution, offensive odours, litter, attraction of vermin and occupational safety and hygiene issues.

Effective waste management reduces costs through the reuse of resources and minimisation of fees associated with removal, transportation and disposal of waste, and improves environmental outcomes locally, regionally and globally.

13.5.1 Waste Streams and Classifications

The general operation of the Site will generate the following waste streams:

- Office wastes.
- Packaging wastes (i.e. cardboard, paper, plastic / shrink wrap, pallets).
- Amenity wastes.
- Maintenance wastes.

13.5.2 Waste Avoidance, Re-use and Recycling Measures

Waste Avoidance

Waste avoidance measures may include:

- Avoiding printing where ever possible.
- Printing double sided to avoid paper and printer toner / ink cartridge wastes.
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items in kitchen and staff common areas.
- Purchasing consumables in bulk to avoid unnecessary packaging.

Re-use

Establish systems to transport products in re-useable packaging where possible.

Recycling

Recycling opportunities include:

- Paper recycling trays provided in office areas for scrap paper collection and recycling.
- Printer toners/ink cartridges collected in allocated bins for appropriate contractor recycling.
- Development of purchasing policy to include purchase of recycled products.
- Providing recycling collections within each of the offices (e.g. plastics, cans and glass and also paper and cardboard if not collected separately).
- The office and amenities will have its own waste and recycling storage area where the recycling and garbage bins will be stored prior to collection.

13.5.3 Special Wastes

Contaminated / Hazardous Wastes

- All contaminated and hazardous wastes (i.e. fluorescent tubing, batteries, e-wastes) will be recycled at an appropriately licensed facility.
- E-waste (electronic waste such as computers, mobile phones, printer toners and ink cartridges) and batteries containing heavy metal contaminants will be recycled at an appropriately licensed recycling facility.

Liquid Waste

- Liquid, semi-liquids or moist substances will not be placed in waste containers, unless securely wrapped or contained to prevent the substance from leaking.
- Any liquid wastes or dangerous goods wastes should be disposed of by a suitably qualified contractor to an appropriately licensed disposal facility.
- No liquid wastes or wash down waters should be disposed of via the stormwater drainage system.

13.5.4 Spills Management

Containment measures for spillages should be provided at appropriate locations and in close proximity to staff car park areas, dangerous goods storage areas and main warehouse operation areas (e.g. a spill kit containing non-combustible absorbent material).

Material Safety Data Sheets should also be located nearby spill kit areas for advice on

spillage clean up and disposal.

Part Fourteen**DEVELOPMENT JUSTIFICATION AND ALTERNATIVES****14.1 Development Need and Justification**

The Secretary's Environmental Assessment Requirements includes a requirement for:

A detailed description of the development, including:

- *need for the proposed development;*
- *justification for the proposed development.*

As detailed in **Part 2** of this Environmental Impact Statement, the NSW government and the NSW Environment Protection Authority has released the *NSW Waste Avoidance and Resource Recovery Strategy 2004-21* which states, among other things:

Effective waste management is a fundamental responsibility for the NSW community as well as the global community. Without it, we risk compromising our environment, our health and our economy.

The NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014–21 is a key component of the Government's vision for the environmental, social and economic future of the state that will be supported financially by the Waste Less, Recycle More initiative.

The primary goal of this strategy is to enable all of the NSW community to improve environment and community well-being by reducing the environmental impact of waste and using resources more efficiently.

Using resources efficiently and keeping materials circulating in the productive economy can also help to create jobs and grow the NSW economy.

WARR Strategy 2014–21 objectives and targets

Avoid and reduce waste generation

- *By 2021-22, reduce the rate of waste generation per capita.*

Increase recycling

- *By 2021-22, increase recycling rates for:*
 - *municipal solid waste from 52% (in 2010-11) to 70%*
 - *commercial and industrial waste from 57% (in 2010-11) to 70%*

- *construction and demolition waste from 75% (in 2010-11) to 80%.*

Divert more waste from landfill

- *By 2021-22, increase the waste diverted from landfill from 63% (in 2010-11) to 75%.*

Manage problem wastes better

- *By 2021-22, establish or upgrade 86 drop-off facilities or services for managing household problem wastes statewide.*

Reduce litter

- *By 2016-17, reduce the number of litter items by 40% compared with 2011-12 levels and then continue to reduce litter items to 2021-22.*

Reduce illegal dumping

- *From 2013-14, implement the NSW Illegal Dumping Strategy 2014-16 to reduce the incidence of illegal dumping statewide.*

It is proposed to establish a Waste and Resource Management Facility on the Site which would process waste material to produce *Processed Engineering Fuel (PEF)* and other reusable commodities including aggregates, metal, timber and soil.

The objectives of the proposal are:

- (a) To establish a commercially viable Waste and Resource Management Facility which is capable of recovering waste from the waste stream for reuse.
- (b) To assist the NSW State government in achieving its objectives for the recovery and recycling of waste as detailed in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.
- (c) To establish an environmentally responsible and sustainable industry which would create employment.

The proposed development would assist in achieving the above targets of the State government through the removal of Commercial and Industrial waste from the waste stream which might otherwise have been diverted to landfill.

14.2 The Principles of Ecologically Sustainable Development

Schedule 2 of the Environmental Planning and Assessment Regulation 2000 provides the parameters for an Environmental Impact Statement with regard to the principles of ecologically sustainable development, being:

(1) *The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:*

(a) *the **precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

In the application of the precautionary principle, public and private decisions should be guided by:

(i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*

(ii) *an assessment of the risk-weighted consequences of various options,*

(b) ***inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*

(c) ***conservation of biological diversity and ecological integrity**, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*

(d) ***improved valuation, pricing and incentive mechanisms**, namely, that environmental factors should be included in the valuation of assets and services, such as:*

(i) *polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*

(ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*

(iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best*

placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

14.2.1 The Precautionary Principle

This Environmental Impact Statement has assessed the possible alternatives to the proposed development in terms of environmental risk. Investigations have been undertaken to identify risk associated with the proposed development in terms of hazardous impacts, air quality, traffic, acoustic amenity and visual amenity.

None of the potential risks identified during the assessment of the proposed development would pose a threat of serious irreversible environmental damage. Where potential impacts have been identified, mitigation measures have been put into place which would mitigate those potential impacts.

14.2.2 Inter-generational Equity

The principle of inter-generational equity requires that the present generation ensures that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

The proposed development is for the establishment of a Waste and Resource Recovery Facility on the Site for the collection and recovery of commercial and industrial waste which will be reused and recycled. The proposed development would remove some of the pressure on natural material resources which might otherwise have been required to produce fuel for the cement industry which would be generated by the proposed facility.

The proposed development would divert commercial and industrial waste from the waste stream which might otherwise have been directed to landfill, thus minimising the environmental impacts to existing landfill operations, assisting in extending the lifespan of such landfill operations, and, hence, assisting in stalling the need for the creation of new landfill sites.

14.2.3 Conservation of Biological Diversity and Ecological Integrity

There would be no impact to biological diversity or ecological integrity as a result of the proposed development.

14.2.4 Improved Valuation, Pricing and Incentive Mechanisms

The proposed development is one where waste from commercial and industrial development in the Sydney metropolitan area would be received as an incentive to recycle waste rather than dispose of that waste to landfill. The money saved by industry and the State government in waste disposal costs is such that there is an economic incentive to recycle waste.

The proposed development would provide:

- (i) Increased life to existing landfill operations by the removal of commercial and industrial waste from the waste stream.
- (ii) A means by which the waste reduction targets of the State government can be achieved.
- (iii) An avenue whereby what would otherwise be waste becomes a valuable resource and, hence, improves its value.
- (iv) A resource based industry which would provide benefits to future generations through the reduction in the use of raw materials for the production of fuel for the cement industry, and extending the life of existing landfill operations.

14.3 Development Alternatives

14.3.1 Location

ResourceCo has incurred considerable expense in the investigation of suitable sites in the Sydney metropolitan area for the proposed facility such that the environmental impact of such a facility would be minimal.

There is a shortage of land in the Sydney metropolitan area which is large enough to accommodate a facility such as that which is proposed while at the same time being sufficient distance from potentially affected land uses to ensure that such a facility operates in harmony with other land uses.

Notwithstanding a continued review of the available industrial land, ResourceCo has concluded that the most cost effective and environmentally acceptable location is the subject site.

14.3.2 Production Method

The proposed means by which waste from commercial and industrial development would be received, processed and recycled to the market is state of the art practice which has been developed by ResourceCo.

There are no practical cost effective alternatives to those proposed as part of the proposed development.

14.3.3 Non Development

The proposed development is to facilitate the recycling of commercial and industrial waste.

The proposed operation of the ResourceCo facility from the Site is a business decision made by that company to promote the most cost effective means by which its business can establish in the Sydney metropolitan area. The non development option would not promote the efficient operation of its business in the Sydney metropolitan area and would not assist the State government in its goal to reduce the waste stream to landfill.

No significant environmental benefit would be gained by non development.

*Part Fifteen***DRAFT STATEMENT OF COMMITMENTS****15.1 Introduction**

The Secretary's Environmental Assessment Requirements stipulate that the Environmental Impact Statement must contain:

... a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.

This part of the Environmental Impact Statement provides a draft Statement of Commitments which describes the management measures which ResourceCo is prepared to implement with regard to the environmental management of the Site, and the mitigation and monitoring of potential environmental impacts associated with the operation of the proposed Waste and Resource Management Facility.

ResourceCo is committed to the following objectives:

- To provide a long term, fully licensed Waste and Resource Management Facility capable of recycling mixed Construction and Demolition (C&D) waste and dry Commercial and Industrial (C&I) waste.
- To protect the health and safety of site workers and the general public, and ensure business viability by compliance with relevant legislation, standards and regulating authorities.
- To ensure site operations do not significantly impact on potential environmental receptors and comply with the following environmental legislation:
 - the *Environmental Planning and Assessment Act 1979*, and
 - the *Protection of the Environment Operations Act 1997*.
- To ensure that new technologies are implemented in relation to resource recovery and environmental management of the Waste and Resource Management Facility throughout its life.
- To encourage and facilitate community participation in the recycling of building and construction waste.
- To protect the surrounding environment through the implementation and management of environmental controls and contingency measures.
- To operate the Waste and Resource Management Facility in a manner which is sympathetic to the amenity of the area in which it is located.

15.2 General Commitments

1. The development will be undertaken in accordance with the Environmental Impact Statement prepared by Nexus Environmental Planning Pty Ltd (**the EIS**), including accompanying appendices.
2. The development will be undertaken in accordance with the following drawings:
 - Drawings prepared by Bell Architects as contained in **Appendix 7** of the EIS.
 - Drawings prepared by Mott MacDonald as contained in **Appendix 17** of the EIS.
 - Drawings prepared by Tract Landscape Architects as contained in **Appendix 12** of the EIS.
3. The Project will be conducted and operated in accordance with this Statement of Commitments.
4. ResourceCo will develop a program of informing the NSW Department of Planning and Environment and Fairfield City Council of construction staging and operation of the Waste and Resource Management Facility throughout the development process.
5. ResourceCo will obtain the necessary approvals and permits to undertake both construction and operation of the Waste and Resource Management Facility.
6. A copy of the approved and certified plans, specifications and documents, including conditions of approval will be kept on the Site at all times.
7. All building works will be carried out in accordance with the Building Code of Australia.

15.3 Environmental Management Plan

An Environmental Management Plan (**EMP**) will be developed for both the construction and operation stages of the Waste and Resource Management Facility.

The key principles of the EMP will be to provide:

- An environmental management tool for the construction and operation of the proposed Waste and Resource Management Facility.
- A means of identifying baselines for monitoring the impact of the Waste and

Resource Management Facility.

- An outline of reporting requirements associated with the Waste and Resource Management Facility.
- The processes for interaction between ResourceCo and the relevant government authorities.
- The means by which compliance with the Secretary's requirements and the requirements of the Environmental Protection Licence will be achieved.

The EMP will contain sub-sections which will provide details of the management of the Waste and Resource Management Facility to minimise potential impacts discussed in the EIS. Sub-sections of the EMP will include:

- Induction and Training.
- An Erosion and Sediment Control Plan which will cover both establishment and operation of the facility.
- A Construction and Operational Noise Management Plan which will detail measures to minimise acoustic impact during establishment and operation of the facility.
- An Air Quality Management Plan which will detail measures to be employed to minimise air quality impacts during both establishment and operation of the facility.
- A Waste Management Plan.
- A Stormwater Management Plan.
- A Traffic Management Plan.
- A Complaints Register.
- A Hazard Reduction Plan.

Following are drafts of the relevant sections of the EMP, refinement of which will be undertaken following receipt of consent for the proposed development.

TITLE	EMP 1 - INDUCTION AND TRAINING
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To ensure all persons working on the site are aware of their environmental obligations, site environmental issues and control measures, as well as roles and responsibilities.
Procedures	<ol style="list-style-type: none"> 1. Environmental induction for all employees and contractors before starting work. Induction to cover the following issues: <ol style="list-style-type: none"> (i) requirements of the EMP; (ii) specific environmental issues on the Site and control measures; (iii) roles and responsibilities for environmental management, and (iv) environmental incident procedures. 2. Retraining sessions within one month of changes to relevant sections of the EMP. 3. Retraining sessions within one month to persons identified by <i>Complaints Register</i> as not conforming to procedures. 4. All truck drivers entering the site for the first time to be provided with the <i>Site Induction for Drivers</i> form.
Monitoring	Status of inductions to be checked monthly.
Reporting	Record of all inductions and retraining, including name and date provided, to be retained on site.
Responsible Person	Environmental Officer responsible for ensuring all persons working on the Site are properly inducted and retraining provided as required.
Information/References	Insert relevant EMPs and Policies.

TITLE	EMP 2 - EROSION AND SEDIMENT CONTROL
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To minimise and manage erosion and sedimentation on the site and ensure that sediment laden runoff is not discharged from the site.
Procedures	<ol style="list-style-type: none"> 1. Construct all erosion and sedimentation controls as per Appendix 19 of the Environmental Impact Statement and relevant EPA requirements. 2. Divert runoff to sediment basins, sediment traps and catch ponds as a primary means of sediment trapping before water is discharged to main tank storage. 3. Inspect drainage and sediment controls monthly and conduct maintenance as required to ensure effectiveness. Where erosion is observed to be occurring, implement rehabilitation/stabilisation measures. 4. Implement and maintain silt fence. Fence to be maintained along boundary.
Monitoring	Monthly inspection of all drainage and sediment controls on site, including water storage, pumps and pipes.
Reporting	As required by Conditions/Licence.
Responsible Person	Environmental Officer or person(s) authorised by Environmental Officer.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 3 - NOISE MANAGEMENT PLAN
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To ensure that construction and operation noise complies with EPA regulations. To minimise impact of noise to surrounding properties. To ensure employees are not subject to noise levels above those specified in the OH&S legislation.
Procedures	<ol style="list-style-type: none"> 1. Standard construction work hours will be as follows: <ul style="list-style-type: none"> • Monday to Friday 7.00 am to 6.00 pm. • Saturday 8.00 am to 1.00 pm. • No work on Sundays or public holiday. 2. Ensure mobile plant used is fitted with residential grade silencers. 3. At all times, but particularly prior to 7:00 am, trucks should be loaded in a quiet manner. 4. Plant based at the site must incorporate "quacker" style reversing alarms. 5. Implement any acoustic impact mitigation measures outlined in the Acoustic Impact Assessment at Appendix 15 of the EIS.
Monitoring	As required by Conditions/Licence.
Reporting	As required by Conditions/Licence.
Responsible Person	Environmental Officer to organise monitoring and reporting as required. Truck drivers responsible for required actions to reduce noise.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 4 - AIR QUALITY MANAGEMENT PLAN
Consent/Licence Ref.	<p>Insert relevant Conditions of Consent</p> <p>Insert relevant POEO Licence Conditions</p>
Objectives	<p>To minimise dust generation and air pollution to prevent impact on surrounding development as detailed in the Air Quality Impact Assessment at Appendix 14 of the EIS.</p> <p>To ensure employees are not subject to dust levels above those specified in the OH&S legislation.</p>
Procedures	<ol style="list-style-type: none"> 1. Minimise the area of disturbance. 2. Maintain dust suppression and extraction devices to all processing equipment and areas. 3. Maintain the sprinkler system including fine sprays on the conveyors of the processing plant and stockpile sprinklers. 4. Use water cart to suppress dust on roads, truck loading areas and non permanent stockpiles during dry conditions on days of operation. 5. 20 km/hr speed limit on internal to minimise dust generation. 6. All loaded vehicles entering and leaving the Site to be covered. 7. Regular maintenance of mobile and fixed equipment to minimise exhaust emissions.
Monitoring	As required by Conditions/Licence.
Reporting	As required by Conditions/Licence.
Responsible Person	<ol style="list-style-type: none"> 1. Drivers responsible for adherence to speed limits, covering loads, regular vehicle maintenance. 2. Site supervisor responsible for ensuring processing plant operator(s) maintain dust suppression equipment on the plant. 3. Environmental Officer or person(s) authorised by Environmental Officer responsible for dust and air quality monitoring and reporting, implementation of dust suppression controls.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 5 - WASTE MANAGEMENT PLAN
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To minimise waste generated, maximise reuse and recycling, and ensure wastes are managed effectively to minimise impact on the environment.
Procedures	<ol style="list-style-type: none"> 1. Maintain separate receptacles for recyclables to be taken off site for recycling. 2. Non-recyclable waste to be disposed of at registered landfill. 3. No putrescible material to be disposed of on site. 4. Encouragement of employees to adopt waste-reducing practices.
Monitoring	Monthly inspection of on-site sorting and storage of recyclables.
Reporting	As required by Conditions/Licence.
Responsible Person	All staff are responsible for correct management and disposal of waste. Environmental Officer to educate new staff of waste minimisation procedures.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 6 - STORMWATER MANAGEMENT PLAN
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To ensure discharge of stormwater from the Site is clear of sediment, downstream ecosystems are protected, on-site re-use of water is maximised.
Procedures	<ol style="list-style-type: none"> 1. Install and maintain water management structures as per EIS Appendix 19 to contain and treat all rainfall and runoff. 2. Erosion and sediment control works to be implemented in accordance with EMP 2. 3. Minimise the area of disturbance. 4. Install tank farm to store stormwater collected on the site for re-use in dust mitigation.
Monitoring	As required by Conditions/Licence.
Reporting	As required by Conditions/Licence.
Responsible Person	Environmental Officer or person(s) authorised by Environmental Officer.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 7 - TRAFFIC MANAGEMENT PLAN
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To minimise the impact of trucks on the local road network and local residents, and to comply with approved access and vehicle movements.
Procedures	<ol style="list-style-type: none"> 1. All new truck drivers to be provided with <i>Site Induction for Drivers</i> form at the site entrance. 2. Drivers provided with Site Traffic Management Policy. 3. All loads must be fully covered prior to leaving the Site. 4. 20 kph speed limit on internal road. 5. All vehicles are to enter and leave the Site in a forward direction.
Monitoring	<ol style="list-style-type: none"> 1. All loads to be inspected at site entrance to make sure they are covered. 2. Complaints register to be used to record traffic management complaints.
Reporting	As required by Conditions/Licence.
Responsible Person	<ol style="list-style-type: none"> 1. Environmental Officer responsible for weekly inspections of site entrance for waste accumulation, monthly inspections of road pavements for damage condition. 2. Truck drivers responsible to comply with permitted hours of operation.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 8 - COMPLAINTS MANAGEMENT
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To ensure any site problems brought to the attention of ResourceCo by the local community and/or relevant authorities are documented and acted upon to avoid re-occurrence.
Procedures	<ol style="list-style-type: none"> 1. Complaints telephone number signposted at front gate. Telephone number, along with postal and email address for complaints advertised on website. 2. All complaints/concerns raised by local community/relevant authorities to be recorded on <i>Complaints Register</i> by Environmental Officer. <i>Complaints register</i> to be retained on site. 3. All complaints to be brought to the attention of the Environmental Officer immediately. 4. Environmental Officer to identify and initiate appropriate action in response to complaint and follow-up contact with complainant. 5. Any complaints received to be reviewed to ascertain if site management requires amendment.
Monitoring	<ol style="list-style-type: none"> 1. All complaints to be recorded on <i>Complaints Register</i>. 2. <i>Complaints Register</i> to be checked monthly.
Reporting	Summary of complaints to the EPA as part of Annual Return for Licence.
Responsible Person	<ol style="list-style-type: none"> 1. All persons who receive telephone complaints are responsible for completing the <i>Complaints Register</i> and notifying the Environmental Officer within 24 hours. 2. Environmental Officer responsible for initiating follow-up action and contact with complainant.
Information/References	Insert relevant EMPs and Policies

TITLE	EMP 9 - HAZARD REDUCTION
Consent/Licence Ref.	Insert relevant Conditions of Consent Insert relevant POEO Licence Conditions
Objectives	To ensure any potential hazards are mitigated.
Procedures	<ol style="list-style-type: none"> 1. Spill kits in the workshop, storage shed and adjacent to the diesel fuel tank will be installed. 2. Staff will be trained in spill cleanup procedures and use of the spill kits at the Site. 3. A dry powder fire extinguisher will be installed in the workshop and adjacent to the diesel fuel tank. 4. Staff will be trained in the use of first attack fire fighting. 5. A procedure for the refuelling of mobile plant will be developed and implemented.
Monitoring	<ol style="list-style-type: none"> 1. All incidents will be recorded detailing measures taken to mitigate impact. 2. Spill kits and firefighting equipment to be checked monthly.
Reporting	Summary of incidents to the EPA as part of Annual Return for Licence.
Responsible Person	<ol style="list-style-type: none"> 1. Environmental Officer responsible for initiating follow-up action and monitoring of equipment.
Information/References	Insert relevant EMPs and Policies

15.4 Monitoring and Reporting

During both the construction and operational stages of the development, environmental reporting is essential to ensure that the facility operates within the parameters set down in the consent for the development and the relevant legislation and licences which guide the operation of the facility.

Reporting will include details of:

- The parties who are responsible for the on-site Management Plan at the Site.
- The methods of communication with regard to matters contained in the EMP.
- Contact details of those responsible for the operation of the EMP.
- Compliance reports.
- Remedial action taken as a result of the reporting on an incident.

- Details of auditing carried out in compliance of consent and licence conditions.
- Details of any monitoring such as air quality, acoustic monitoring and water quality monitoring.

*Part Sixteen***CONCLUSIONS****16.1 Introduction**

Consultation with the Secretary of the Department of Planning and Environment has resulted in a number of Key Issues being identified for assessment as part of the preparation of this Environmental Impact Statement.

In accordance with the requirements of the Secretary, consideration has been given to the likely impacts to the environment which might potentially result from the use of the Site as a Waste and Resource Management Facility.

Key issues which have been identified are:

- the potential for the proposed development to impact on the acoustic environment of the Site and its surroundings;
- the potential for activity associated with the proposed development to affect air quality in the environs of the Site;
- the potential for traffic generated by the proposed development to impact on the local road network, and
- to potential for visual impact to the locality associated with the buildings and other structures.

16.2 Acoustic Impact

There is potential for the activities associated with the proposed development to impact on the existing acoustic environment of both the Site and its environs.

A comprehensive acoustic impact assessment has been undertaken by Wilkinson Murray which concludes that the proposed development of a Waste and Resource Recycling Facility at Frank Street, Wetherill Park has been assessed against NSW government policies in relation to industrial noise, construction noise and traffic noise on the road network.

Industrial noise has been assessed in accordance with the NSW EPA Industrial Noise Policy. The predicted noise levels indicate compliance with intrusive criteria under neutral and adverse meteorological conditions at both residential receivers and the industrial boundary. At residential receivers, activities are predicted to be inaudible at all times.

Potential noise impacts from traffic on the surrounding road network, arising from additional truck and car movements associated with the operation of the facility are predicted to not be noticeable as increases in noise are less than 0.2dB at daytime and 0.1dB at night time.

Noise levels associated with the construction of the facility, including the earthworks, are predicted to be within the relevant Noise Management Levels for residences.

Construction noise from the shorter term retaining walls and earthworks close to the industrial boundary are predicted to exceed Noise Management Levels at times. Since construction is limited to standard daytime hours, these works are short-term, beyond notification of the neighbours at the commencement of construction, no further mitigation measures are considered feasible and reasonable.

16.3 Air Quality

There is potential for the proposed development to impact the existing air quality in the environs of the Site.

Wilkinson Murray has assessed that potential impact. The assessment has been conducted in general accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005).

Quantitative assessments of potential odour and dust impacts from the operation of the facility have been conducted, based on TAPM meteorological simulations and the CALPUFF dispersion modelling system.

The results of the dispersion modelling indicate that odour concentrations at sensitive receptors due to the operation of the facility comply with the established criterion, and are likely to be undetectable.

Total ground level concentrations of criteria dust and particulate matter pollutants are predicted to comply with the impact assessment criteria at all sensitive receptors.

The existing ambient concentrations of PM_{2.5} are slightly above the NEPM advisory goals, and the facility is predicted to have a negligible effect on these levels.

It is concluded that there would be no adverse air quality impacts arising from the operation of the proposed facility.

16.4 Traffic Impact

The proposed access to the Site is discussed in the report of Lyle Marshall & Associates Pty Ltd.

With regard to the performance of intersections in proximity of the Site, the Level of Service and Degree of Saturation shows that tested intersections will provide satisfactory performance.

With regard to the impact truck traffic from the proposed facility would have on the existing road network, the estimated hourly truck volumes generated by the facility are low and will have no impact on either the local or the arterial road network.

16.5 Visual Impact

A development such as that which is proposed has potential to impact on the visual environment in that it would comprise of buildings to house processing machinery and there would be stockpiles of processed material on the Site in the form of baled and wrapped product.

The visual assessment has considered the range of potential visual impacts which could ensue as a result of the establishment of the proposal as well as the range of potential public and private domain locations from which it may potentially be visible.

It is concluded that the overall visibility of the structures and activities on the Site would be minimal. The minimal impacts lead to few residual impacts which require mitigation measures.

Subject to:

- Controls on the colours and materials to be employed in buildings on the Site;
- A requirement for screen planting where required, and
- Assuming a best practice dust management plan,

the visual impacts of the development would be negligible and the application can be supported on visual grounds.

16.6 Conclusion

The proposed development is for a Waste and Resource Management Facility to be located at Frank Street, Wetherill Park.

The assessment undertaken of the impact the proposed development would have on the environment of the Site and its locality has been canvassed in the main body of the Environmental Impact Statement.

With implementation of the recommended attenuation measures discussed in this

Environmental Impact Statement, there would be no impact to the environment of the Site which would be considered significant.

It is concluded that the proposed development is an acceptable land use for the Site.