NSW GOVERNMENT | Planning & Environment

STATE SIGNIFICANT DEVELOPMENT ASSESSMENT:
Bingo Recycling Pty Ltd
Mortdale Resource Recovery Facility
SSD 7421

Environmental Assessment Report
Section 89H of the
Environmental Planning and Assessment Act 1979

November 2017

Cover photo: Aerial photograph of site location

Published November 2017
NSW Department of Planning and Environment
www.planning.nsw.gov.au

ABBREVIATIONS AND DEFINITIONS

ACM	Asbestos-containing material
AHD	Australian Height Datum
Applicant	Bingo Recycling Pty Ltd
AS	Australian Standard
BCA	Building Code of Australia
C&D	Construction and Demolition
C&I	Commercial and Industrial
CEMP	Construction Environmental Management Plan
CIV	Capital Investment Value
Commission	Planning Assessment Commission
Construction	The demolition of buildings or works, carrying out of works, including earthworks, erection of buildings and other infrastructure covered by this consent
Council	Georges River Council
CWMP	Construction Waste Management Plan
DA	Development Application
Demolition	The removal of buildings, sheds and other structures on the site
Department	Department of Planning and Environment
Development	The development as described in the EIS and RTS for the construction and operation of the Mortdale Resource Recovery Facility
DPI	Department of Primary Industries
EIS	Environmental Impact Statement titled *Environmental Impact Statement – Mortdale Resource Recovery Facility* prepared by AAP Corporation dated 29 June 2016
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
ha	Hectares
HLEP	Hurstville Local Environment Plan
LGA	Local Government Area
LPG	Liquified petroleum gas
Minister	Minister for Planning (or delegate)
MNES	Matter of National Environmental Significance
MRV	Medium Rigid Vehicles
NCW	Non-conforming waste
OEH	Office of Environment and Heritage
OEMP	Operations Environmental Management Plan
RFS	Rural Fire Service
RMS	Roads and Maritime Services
RRF	Resource Recovery Facility
RTS	Response to Submissions titled *Response to Submissions Report* prepared by APP dated 5 December 2016 and 6 April 2017
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning and Environment, or nominee
SEPP	*State Environmental Planning Policy*
Sensitive receiver	A location where people are likely to work or reside, this may include a dwelling, school, hospital, office or public recreational area
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
SSD	State significant development
TCP	Traffic Control Plan
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
Tpa	Tonnes per annum
WARR	Waste Avoidance and Resource Recovery Strategy
Waste	As defined in the *Protection of Environment Operations Act 1997*
WMP	Waste Management Plan

TABLE OF CONTENTS

ABBREVIATIONS AND DEFINITIONS i
TABLE OF CONTENTS ii
EXECUTIVE SUMMARY iv
1. BACKGROUND 1
1.1. The Department's Assessment 1
1.2. Development Background 1
1.3. Site Description 1
1.4. Surrounding Land Uses 2
1.5. Other Development Approvals 3
2. PROPOSED DEVELOPMENT 3
2.1. Description of the Development 3
2.2. Process Description 4
2.3. Applicant's Need and Justification for the Development 9
3. STRATEGIC AND STATUTORY CONTEXT 9
3.1. Strategic Context 9
3.2. State Significant Development 10
3.3. Permissibility 10
3.4. Consent Authority 11
3.5. Other Approvals 11
3.6. Considerations under Section 79C of the EP&A Act 11
3.7. Environmental Planning Instruments 11
3.8. Public Exhibition and Notification 12
3.9. Objects of the EP&A Act 12
3.10. Ecologically Sustainable Development 13
3.11. *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* 13
4. CONSULTATION AND SUBMISSIONS 13
4.1. Consultation 13
4.1.1. Consultation by the Applicant 13
4.1.2. Consultation by the Department 14
4.2. Submissions 14
4.2.1. Public Authorities 14
4.2.2. General Public 15
4.3. Response to Submissions and Supplementary Information 15
5. ASSESSMENT 16
5.1. Traffic 16
5.2. Site and Operational Management 24
5.3. Noise and Vibration 28
5.4. Other Issues 32
5.5. Consideration of Key Issues Raised in Public Submissions 36
6. CONCLUSION 37
APPENDIX A: DEVELOPMENT CONSENT 41
APPENDIX B: CONSIDERATIONS UNDER SECTION 79C 42
APPENDIX C: CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS 43
APPENDIX D: ENVIRONMENTAL IMPACT STATEMENT 45
APPENDIX E: SUBMISSIONS 46
APPENDIX F: RESPONSE TO SUBMISSIONS 47

FIGURES

Figure 1: Site Location 2
Figure 2: Existing Site Layout 3
Figure 3: Surrounding Land Uses 5
Figure 4: 3-Dimensional Representation of the Development 6
Figure 5: Proposed Development 7
Figure 6: Process Flow Diagram 8
Figure 7: Hurstville LEP Land Use Zones 11
Figure 8: Haul Routes and Key Intersections 17
Figure 9: Swept Path Analysis - 19.6 m Truck-and-Dog Combination Entering and Medium Rigid Vehicle Exiting 22
Figure 10: Swept Path Analysis - Semi-Trailer Manoeuvring through the Site 22
Figure 11: Truck Stacking Plan and Semi-Trailer Swept Path Analysis 23
Figure 12: Saturation of Truck Stacking During A-Typical Operations (avg. truck duration of 50 mins on site) 23
Figure 13: Location of Bingo Recycling Facilities in the Sydney Basin 26
Figure 14: Noise Monitoring Locations 31

EXECUTIVE SUMMARY

Bingo Recycling Pty Ltd (the Applicant) has lodged a Development Application (DA) and accompanying Environmental Impact Statement (EIS) seeking consent to demolish an existing waste transfer station and construct and operate a new resource recovery facility (RRF) at 20 Hearne Street, Mortdale (the site) in the Georges River local government area (LGA).

The site is located 22 kilometres (km) south-west of the Sydney city centre and 4.6 km west of the Hurstville town centre. The site covers approximately 0.76 hectares (ha) of IN2 Light Industrial zoned land. The site is currently used as a waste transfer station, which comprises a metal and concrete clad waste processing shed, an office and amenity building, weighbridge, bin storage area, wash bay and 6 car parking spaces. The nearest residential receivers are located to the south-east on Barry Avenue, as well as east of Boundary Road, being 200 metres and 250 metres away respectively. The M5 motorway is located approximately 5 km to the north of the site.

The Applicant proposes to increase the site's currently approved maximum waste processing capacity of 30,000 tonnes per annum (tpa) to 220,000 tpa. Waste streams to be processed at the new RRF would be dry non-putrescible construction and demolition (C&D), commercial and industrial (C&I) and domestic (council clean-up) waste. The waste processed would include metals, timber, paper, cardboard, green waste, glass, plastics, ceramics, asphalt, soils, bricks, concrete and rubber. The Applicant seeks to operate the RRF during the hours of 6 am–10 pm, Monday to Saturday.

The proposed development (the development) also includes the demolition of existing buildings and structures, site establishment works, construction of a new 2,534 m^2 waste processing shed, new office and staff amenities, ten output material bays, installation of plant and equipment, two weighbridges, drainage works and landscaping. All waste processing activities, including tipping of incoming waste, would occur indoors within the processing building.

The development is consistent with the NSW Government's direction in achieving the targets in the Waste and Avoidance and Resource Recovery Strategy 2014-2021. In particular, the development would assist in the recovery of C&D and C&I wastes.

The development has a capital investment value of $3,745,020 and is expected to generate 15 full-time equivalent construction jobs and 25 additional operational jobs.

The development is classified as State significant development (SSD) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as it meets the criteria in Clause 23(3) of Schedule 1 in State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP), being the construction and operation of a resource recovery or recycling facility that handles more than 100,000 tpa of waste. Consequently, the Minister for Planning is the consent authority for the development.

The Planning Assessment Commission will determine the SSD application in accordance with the Minister for Planning's delegation, as there were more than 25 public submissions objecting to the development.

The Department of Planning and Environment (the Department) exhibited the EIS for the development from Friday 22 July 2016 until Monday 22 August 2016. A total of 45 submissions were received, including 7 from government agencies and 38 from the general public. Of the 45 submissions received, 36 objected to the development.

The key concerns raised in the public submissions on the EIS related to the suitability of the site for the proposed volume of waste to be processed, traffic impacts, potential queuing in the street outside the site entrance, sleep disturbance from night time truck deliveries, and dust and odour impacts. Government agencies requested further assessment of noise from plant and truck movements during the evening and night time periods, further assessment of emissions based on projected daily throughput, and details of leachate and green waste management.

The Applicant submitted a Response to Submissions (RTS) on 5 December 2016 to address and clarify matters raised in the submissions. The Department reviewed the RTS in consultation with the agencies and deemed that further information and clarification was required regarding waste management, fire suppression, and traffic and noise issues. In particular, the Department and Council were concerned the site was too small to handle the volume of traffic and waste proposed. Subsequently, a revised RTS was requested to address these outstanding matters.

Amendments to the Development Application
Originally, the Applicant had proposed a waste processing capacity of up to 300,000 tpa over 24 hours a day, six days a week. In response to the public and government agency concerns, the Applicant amended the application, in accordance with Clause 55 of the Environmental Planning and Assessment Regulation 2000 and with the agreement of the Secretary. The amendments included:

- a reduction in processing capacity from 300,000 tpa to 220,000 tpa
- hours of operation (including delivery and removal of waste) reduced from 24 hours a day, six days a week to 6 am–10 pm only, six days a week
- prohibiting all vehicles accessing the site via Barry Avenue
- removal of bin storage on site to increase space available for vehicle maneuvering
- an increase in operational staff numbers from 12 to 13 per shift due to the addition of a traffic controller at the site entrance
- update of Capital Investment Value from $2,466,000 to $3,745,020.

These amendments were submitted in the form of a revised RTS on 6 April 2017. The government agencies considered these changes and were generally satisfied they presented reduced and acceptable impacts, in particular for traffic and noise.

The Department's assessment of the application has fully considered all relevant matters under Section 79C of the EP&A Act, the objects of the EP&A Act and the principles of ecologically sustainable development. The Department has identified the following key issues for assessment:

- traffic
- site and operational management
- noise and vibration.

The Department's assessment concluded the impacts of the development can be mitigated and/or managed to ensure an acceptable level of environmental performance, subject to the recommended conditions of consent. In summary, the development would:

- be capable of handling 220,000 tpa of waste from receipt through to dispatch
- satisfy the EPA's draft Standards for C&D recycling facilities
- positively contribute to the State's Waste Avoidance and Resource Recovery Strategy performance for both C&I and C&D waste
- meet the relevant air quality and noise criteria at sensitive receivers
- generate traffic, which could be accommodated on the local and regional road network without any significant impacts on safety, capacity or efficiency
- provide a range of environmental and economic benefits for the region, through resource recovery and the provision of 25 new long term operational jobs.

The Department considers the development is approvable, subject to any conditions of consent. This assessment report is therefore presented to the Planning Assessment Commission for determination.

1. BACKGROUND

1.1. The Department's Assessment

This report details the Department of Planning and Environment's (the Department) assessment of the State significant development (SSD 7421) for the Mortdale Resource Recovery Facility. The proposed development (the development) involves redevelopment and increase in processing capacity of an existing waste transfer station to establish a new resource recovery facility (RRF).

The Department's assessment considers all documentation submitted by Bingo Recycling Pty Ltd (the Applicant), including the Environmental Impact Statement (EIS) and two Response to Submissions (RTS) reports, as well as submissions received from government agencies and the public. The Department's assessment also considers the legislation and planning instruments relevant to the site and the development.

This report describes the development, surrounding environment, relevant strategic and statutory planning provisions and the issues raised in submissions. The report evaluates the key issues associated with the development and provides recommendations for managing any impacts during construction and operation. The Department's assessment of the development has concluded the development is approvable, subject to any conditions of consent.

1.2. Development Background

The Applicant is seeking development consent to construct and operate a RRF capable of processing up to 220,000 tpa of commercial and industrial (C&I), construction and demolition (C&D) and domestic (council clean-up) waste at a site in Mortdale in the Georges River Local Government Area (LGA) (see **Figure 1**). At the RRF, the incoming mixed waste streams would be separated into recyclable materials that would be transported offsite to other facilities for reuse or recycling. Any remaining, non-recyclable waste would be removed for disposal at an appropriately licensed landfill.

The development includes demolition of existing buildings, site establishment works, construction of a processing shed, office and staff amenities, ten output material bays, installation of plant and equipment, two weighbridges, drainage works and landscaping. Operational plant and equipment would include grab machinery, various waste screens, magnets, conveyors, drum separators, a de-stoner, air separation units, and excavators/front end loaders. The proposed hours of operation are 6 am-10 pm Monday to Saturday.

Originally, the Applicant had proposed a waste processing capacity of up to 300,000 tpa, with waste delivery and removal occurring 24 hours a day, six days a week. However, due to concerns with the site's capacity and with traffic and noise impacts raised by the Department, agencies and the general public, the Applicant amended the development application to comprise a reduced processing capacity of 220,000 tpa and reduced hours of operation (including delivery and removal of waste) from 6 am–10 pm only, six days a week. The amendment was made in accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000*, and with the agreement of the Secretary.

The Applicant is a large waste management company that predominantly specialises in C&D and C&I waste processing. The Applicant has been operating RRFs throughout New South Wales for over 10 years, and currently operates eleven facilities in Sydney, the Hunter and Illawarra regions. The Applicant wishes to increase the site's processing capacity to cater for Sydney's recent growth in the construction industry and the resulting rise in need for C&D waste recycling.

1.3. Site Description

The site comprises 0.76 hectares (ha) of IN2 Light Industrial zoned land at 20 Hearne Street, Mortdale in southern Sydney (see **Figure 1**). The site is legally described as Lot 102 in DP 585775 and is owned by Bingo Property Pty Ltd.

The site is irregular in shape, with a 6.5 metre (m) driveway entrance/exit fronting a bend in Hearne Street. The land has been subject to cut and fill for drainage purposes and slopes approximately 3 m downward from the site entrance to the north-west boundary at the back of the site. While no remnant vegetation exists on the site, a number of established native and non-native trees grow along the site's boundaries, with one non-native tree adjacent to the administration building.

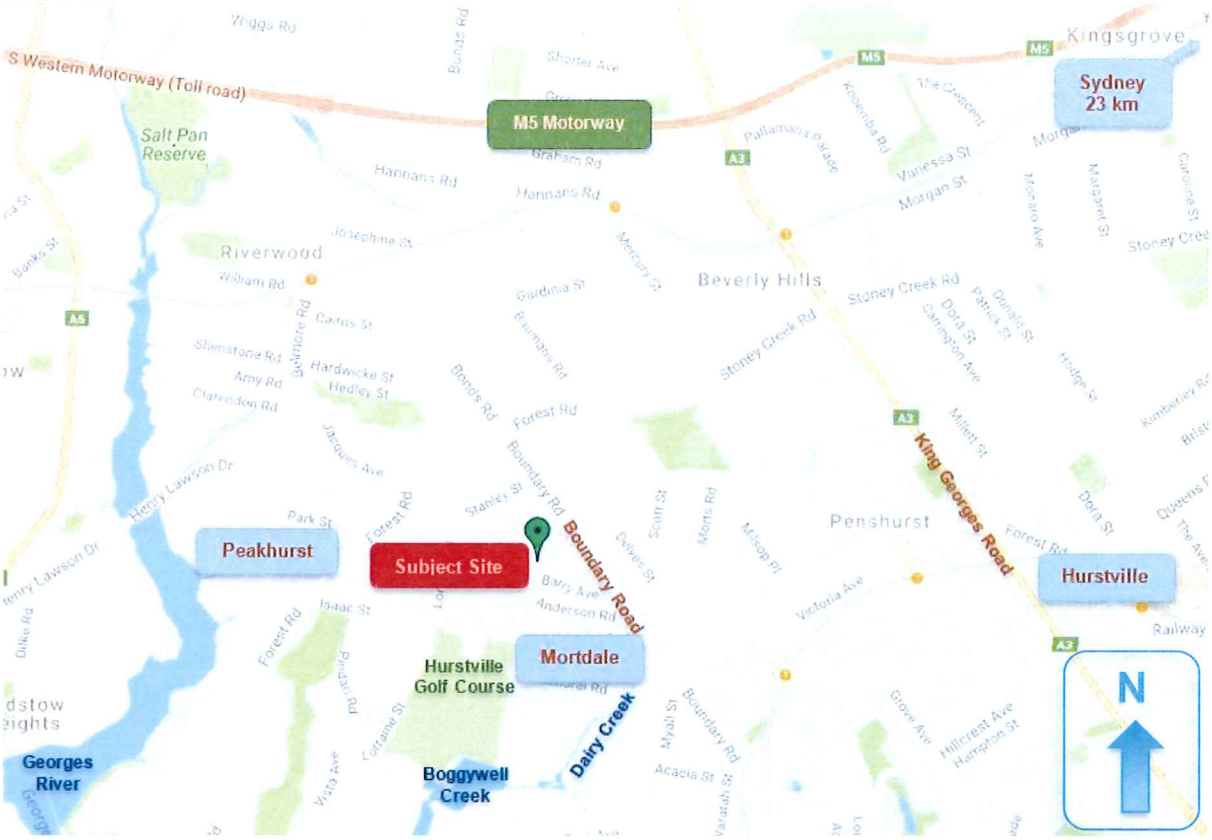

Figure 1: *Site Location*

From 1947-2010, the site was used to manufacture industrial machinery and glass. Since 2010, the site has been used as a waste transfer station under various owners. The site has an existing development consent granted by Hurstville City Council on 8 June 2011 to receive and process up to 30,000 tpa of general solid waste (non-putrescible), which is then removed for either further processing at a Bingo resource recovery facility or disposal at a licensed landfill. The existing facility comprises a 1,343 m^2 metal and concrete clad shed with a ridge height of 14.5 m, an office and amenity building, one weighbridge, bin storage area, wash bay and 6 car parking spaces (see **Figure 2**). Currently, 5 operational staff are employed at the facility.

1.4. Surrounding Land Uses

The site is located in the south-eastern portion of the Peakhurst industrial area. Approximately 800 metres south-east of the site is Dairy Creek, and 800 m south of the site is Boggywell Creek, which drains into Jewfish Bay and the Georges River. Hurstville Golf Course is situated directly south of the Peakhurst industrial area (see **Figure 1**).

Immediately surrounding land uses are industrial in nature, including a mix of warehouses, manufacturing and repair industries, automotive services industries, printing facilities, hardware and general supplies. A new industrial building for the manufacture of metal roofing products is currently being constructed directly opposite the development at the corner of Hearne Street and Barry Avenue, however the entrance and exit to this site will be on Barry Avenue.

Low density residential areas in the suburbs of Peakhurst and Mortdale surround the Peakhurst industrial area. The nearest residential receivers are located 200 m south-east of the site on Barry Avenue, and 250 m east of the site on Boundary Road. A dance school and children's play centre are located approximately 150 m to the south-east of the site on Barry Avenue (see **Figure 3**).

The road network surrounding the site includes Hearne Street (a 2 lane local road), Boundary Road (a 2 lane regional road), Barry Avenue (a 2 lane local road) and Forest Road (a 6 lane state road). Forest Road intersects with Boundary Road to the north of the site and provides connection to Sydney's arterial road network, including the M5, which is 2.5 km to the north.

Figure 2: *Existing Site Layout*

1.5. Other Development Approvals

The site currently operates under an existing development consent granted by Hurstville City Council (10/DA55), which was originally granted on 8 June 2011. The existing development consent permits a waste transfer station on the site receiving up to 30,000 tpa of general solid waste (non-putrescible). Minor modifications to the consent were granted by Council on 4 November 2015. The existing operations are also regulated under an Environment Protection Licence (EPL) issued by the Environment Protection Authority (EPA) (EPL 20622), which permits resource recovery, waste processing and waste storage of listed non-putrescible wastes.

2. PROPOSED DEVELOPMENT

2.1. Description of the Development

The Applicant proposes to demolish an existing waste transfer station and construct and operate an RRF at 20 Hearne Street, Mortdale. The major components of the development are summarised in **Table 1**, shown in **Figure 4** and **Figure 5**, and described in full in the Environmental Impact Statement (EIS) and the RTS documents, included in **Appendix D**.

Table 1: *Main Development Components*

Aspect	Description
Development Summary	**Demolition of buildings and construction and operation of a RRF with a processing capacity of up to 220,000 tpa of mixed non-putrescible waste. Operation of the RRF during the hours of 6 am–10 pm, Monday to Saturday.**
Site area and development footprint	• the site is approximately 0.76 hectares in area
Demolition	• demolish existing buildings and structures, including weighbridge, truck bay and wheel wash bay • remove demolition waste, including concrete pavement in poor condition

Aspect	Description
	• remove existing landscaping and vegetation
Earthworks, civil works and services extension	• removal of existing ramp and replacement of parts of existing slab to create a new ramp • site entrance to be widened by removal of existing garden bed and trees to allow for an extended concrete hardstand area along the entire length of the driveway
Construction of site buildings	• a processing building with a fixed awning over storage bays of separated waste materials (total area 2,534 m^2) • an office and staff amenities building (area 150 m^2) with awning over workshop area
Plant and equipment	• install processing equipment in the processing building including grab machinery, various waste screens, magnets, conveyors, drum separators, a de-stoner, and air separation units
Ancillary infrastructure	• 10 material storage bays • 2 x 20 metre weighbridges • covered refueling point and diesel fuel storage tank (28,000 litres (L)) • concrete ramps and retaining walls • 45,000 L rainwater tank • cool-fog dust suppression system • external dust suppression sprinklers • water pollution control equipment • bunding • leachate collection sumps • 12 onsite carparking spaces
Waste storage	• unprocessed waste to be stored in Incoming Waste Receival (Stockpile) Area inside the processing shed • separated waste to be stored in Processed Material Bays under the awning or in a skip bin inside the processing shed (plasterboard only) (see **Figure 5**)
Traffic	At full capacity, the site would generate up to 336 traffic movements (168 in, 168 out) per day
Road and intersection works	No road or intersection works proposed.
Landscaping	• removal of all existing trees on the site • installation of 280 m^2 of soft landscaping and planting along eastern and northern boundaries
Construction timeframe	• demolition and construction – 34 weeks
Hours of operation	6 am–10 pm, Monday to Saturday No operations (waste processing or waste deliveries/removal) on Sundays or Public Holidays.
Capital investment value	$3,745,020
Employment	15 full-time equivalent construction jobs and 30 operational jobs (25 new operational jobs) - 13 employees per shift.

2.2. Process Description

The primary purpose of the RRF would be to receive incoming, non-putrescible waste material and separate it into:

- reusable outputs for further recycling offsite – soil, brick and concrete, timber, scrap metal, plastic, paper and cardboard, plasterboard, and green waste
- residual waste requiring disposal.

A specialised plant and equipment line (see Section 2.1) would be utilised to separate the waste.

The majority of waste would arrive at the site as mixed loads of building, demolition, commercial/industrial or domestic materials, however single-material loads (e.g. loads of brick only or concrete only or soil only) would also be received. The sorted, recyclable output materials would be transported offsite to other facilities for reuse or recycling. Any remaining, non-recyclable waste would be removed for disposal at an appropriately licensed landfill. The target resource recovery rate for the site is 85%. A description of the waste separation process is provided below, while **Figure 6** presents a flow diagram of the process steps.

Arrival and Waste Acceptance

Waste materials would be delivered to the site using various Medium Rigid Vehicle (MRV) skip/hook trucks and larger trucks including truck-and-dog combinations, each carrying a maximum of 32.5 tonnes of waste. Incoming waste delivery vehicles would comprise customer, contractor and Bingo's own trucks. On arrival at the facility, paperwork would be examined and the load visually inspected and weighed at the weighbridge area to determine the weight, suitability and category of waste. Trucks containing acceptable waste only would then proceed and drive up the ramp to the rear portion of the processing building for unloading at the incoming waste receival (stockpile) area. Single-material loads would be tipped in a separate part of the receival area to the mixed waste to prevent cross contamination and assist with separation.

The incoming waste receival area is proposed to be approximately 574 m^2 in size, capable of storing up to 6,196 tonnes of incoming unprocessed waste at any one time. A breakdown of predicted incoming waste streams is provided in **Table 2**.

Table 2: *Incoming Waste Streams*

Waste material	Tonnes per annum	% of incoming stream
Wood waste	2,200	1%
Non-chemical manufacturing waste	2,200	1%
Asphalt waste	1,100	0.5%
Soils	44,000	20%
Paper and cardboard	1,100	0.5%
House-hold waste (municipal clean-up of 'hard' waste)	1,100	0.5%
Office and packaging waste	2,200	1%
Construction and demolition waste	165,000	75%
VENM	1,100	0.5%
TOTAL	**220,000**	**100%**

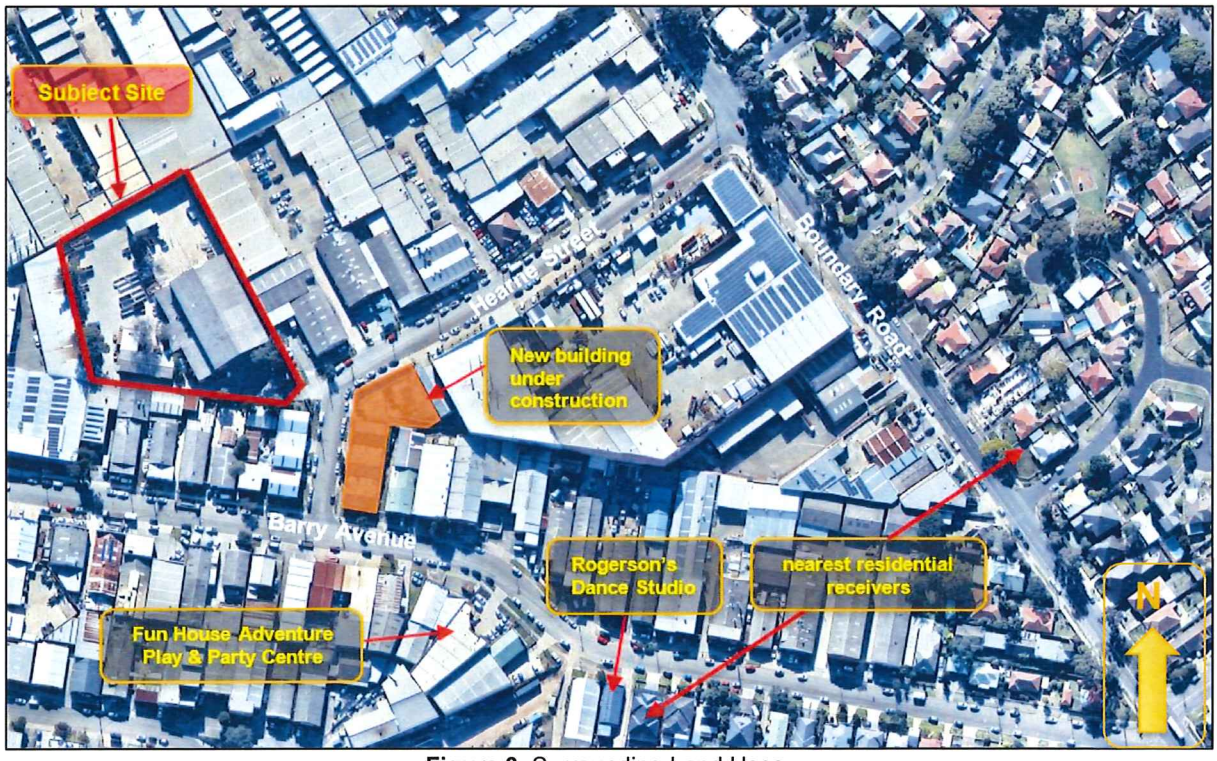

Figure 3: Surrounding Land Uses

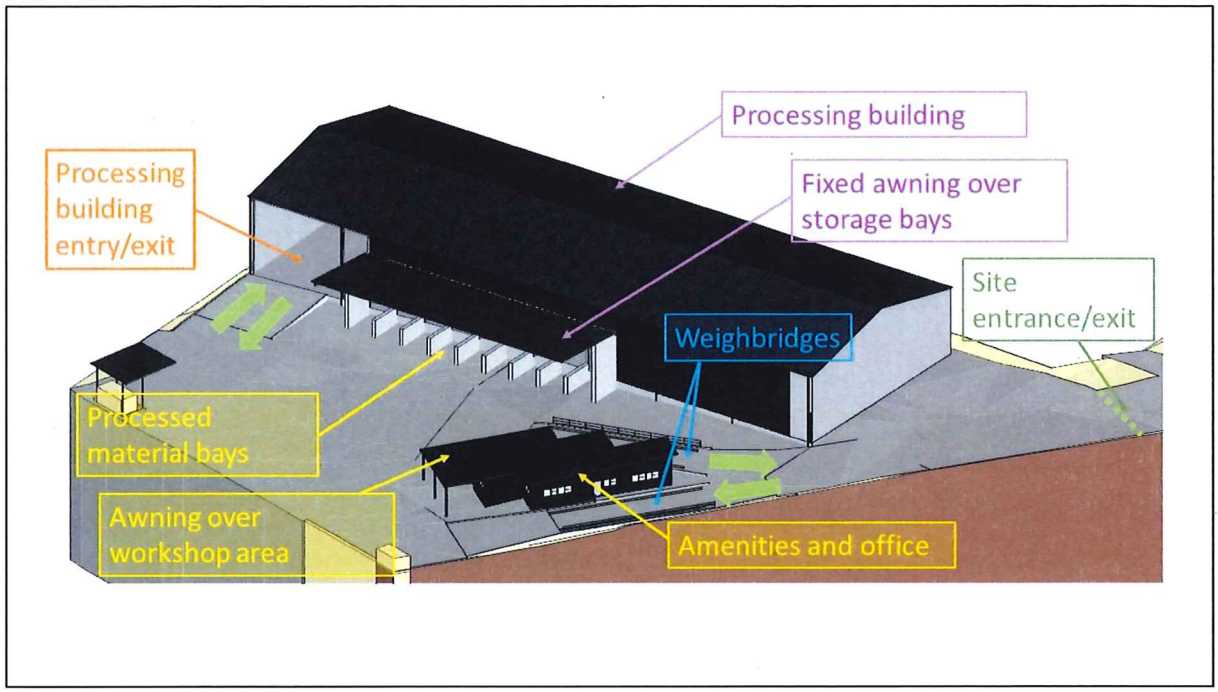

Figure 4: *3-Dimensional Representation of the Development*

Waste Rejections
Staff would inspect the waste before, during and after unloading to determine waste acceptability. If any non-conforming waste (NCW), such as asbestos or gas bottles, is detected during unloading, the load would be rejected and immediately reloaded and removed from the site. Any NCW detected after unloading that cannot be returned to the consignor would be segregated from the receival area and dealt with according to the Applicant's relevant procedure. Asbestos would be handled according to the Bingo procedure *SOP-YA020 Unexpected Asbestos Finds* and stored in accordance with Bingo's *OPL-YA030 Storage of Hazardous Waste – Special Waste* until removed from the site within 24 hours.

Resource Recovery/Processing
The incoming waste material would be fed into the processing machinery line by grab machinery within 24-48 hours of arrival onsite. The proposed processing machinery has been specifically designed by SKALA Australasia Pty Ltd to process up to 70 tonnes of waste per hour and separate it into 8 recyclable waste streams (scrap metal, paper and cardboard, brick and concrete, plasterboard, green waste, timber, plastic, and soil) plus 3 separate points for removal of residual (non-recyclable) waste streams (see **Figure 6**).

A sequence of machinery (screens, magnets, conveyors and drums) as well as manual 'picking' would separate and size the waste before it is discharged via conveyor directly into the appropriate storage bay, according to its type. Separated plasterboard would be transferred from the processing line by front end loader into a skip bin within the processing shed.

Storage
Ten processed material storage bays would be located under a fixed awning at the south-western exterior side of the processing building. There would be separate processed material storage bays for each separated type of waste (7 recyclable waste, 3 residual waste), as shown in **Figure 5** and **Figure 6**. Each storage bay would be 3.5 m x 7 m in size, and stockpiles in the bays would have a maximum height of 6 m. The maximum tonnage that would be contained in each bay would vary depending on the type of material stored, but is estimated to range from 74 tonnes to 158 tonnes per bay. In addition, one 1.7 m x 3.5 m covered skip bin for storage of plasterboard would be located inside the processing building near the receival area. Used lead-acid batteries, fire extinguishers and gas bottles recovered from the waste stream would be stored in covered, self-bunded cages beside the storage bays until removed from the site. Asbestos would be stored in a covered skip bin adjacent to the storage cages (see **Figure 5**). All NCW would be removed from the site daily.

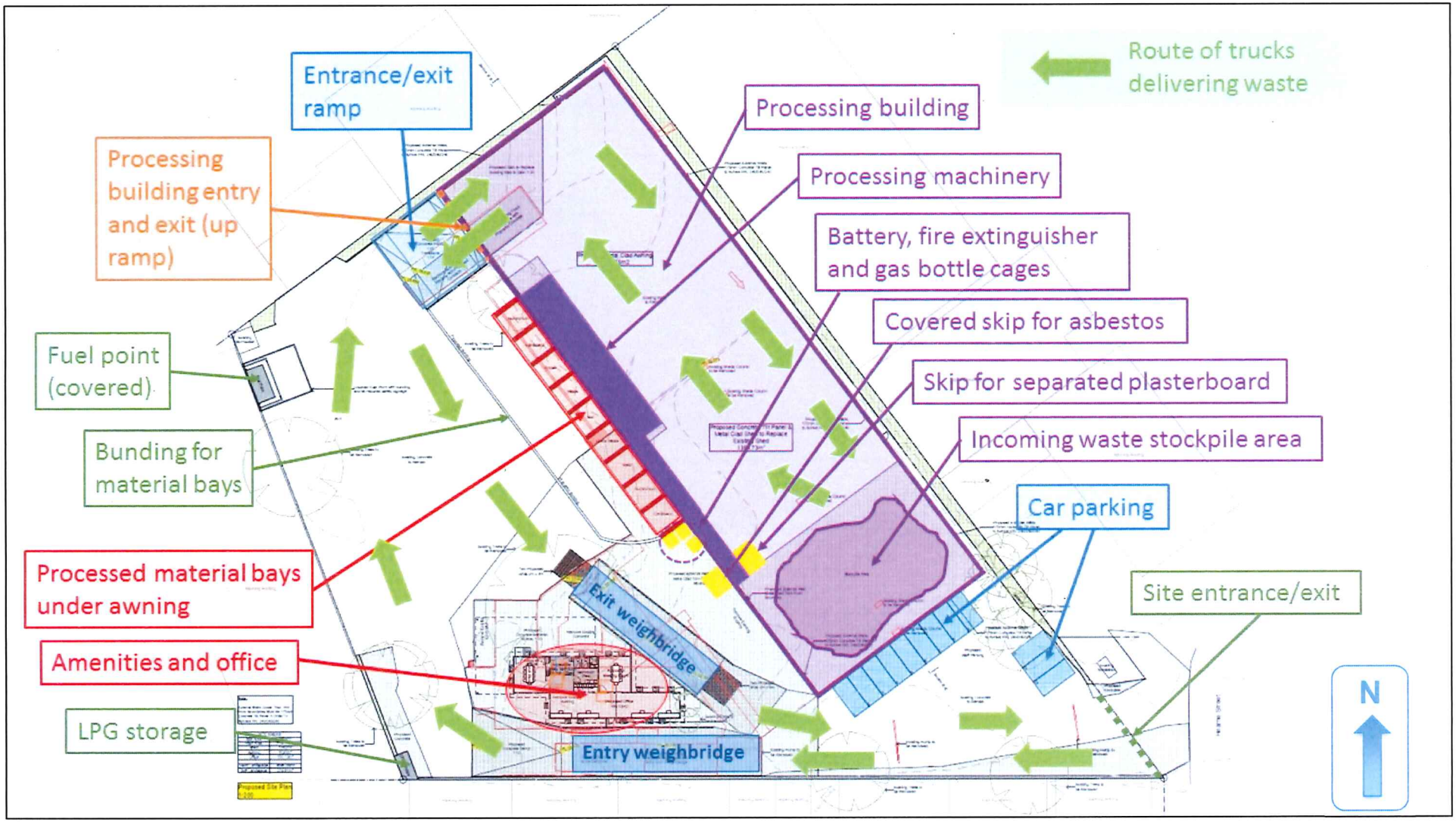

Figure 5: *Proposed Development*

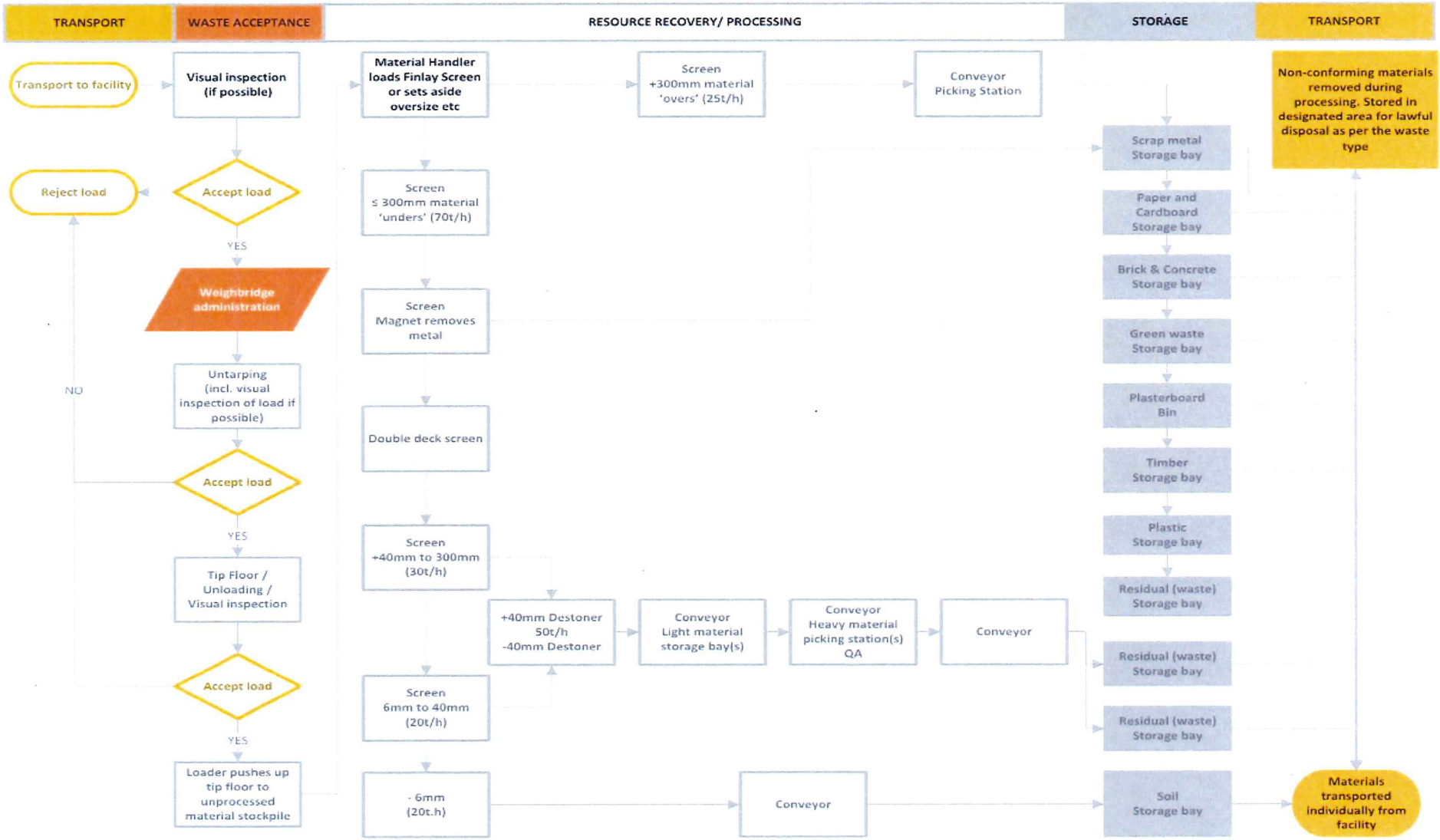

Figure 6: *Process Flow Diagram*

Based on calculations of the maximum potential storage capacity of the storage bays and the incoming waste area, the Applicant has advised it intends to apply for storage of up to 10,000 tonnes of waste at any one time to be permitted on its EPL (the Authorised Amount).

The awning would serve to prevent rainwater from coming into contact with stored, processed waste in the material storage bays. However, should any leachate be generated, it would drain to a leachate sump that would be pumped out to a truck for disposal at a licensed liquid waste facility. The materials storage bay area would be bunded to prevent leachate interaction with clean stormwater from outdoor areas.

Removal from the Site
Processed recyclable and residual waste material would be removed from the storage bays in separate loads according to its type. 19 m semi-trailer trucks and 19.6 m truck-and-dog combinations would be loaded by front-end loader with processed or residual waste and exit the site via the weighbridge. In order to reduce total site vehicle movements, some trucks that have delivered unprocessed waste may also be loaded with processed waste for removal. Removal of separated waste from each storage bay would be scheduled on average every 24-48 hours, or more frequently if required. The skip containing plasterboard would be removed from the site by skip truck when full. In order to minimise site congestion, the site operator would schedule removal of processed waste outside of the peak hours of delivery of incoming waste to the site (i.e. 6 pm–10 pm).

Destinations for processed waste outputs would vary depending on type. However, in all cases destinations would be licensed recycling facilities or landfills (for residual waste).

2.3. Applicant's Need and Justification for the Development

The Applicant has justified the need for the development by highlighting that it would assist in achieving the targets of the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (WARR Strategy) through reduction of waste going to landfill. With a target recovery rate of 85%, the development would exceed the 2021-22 targets of the WARR strategy for both C&I (70%) and C&D (80%) waste. It is expected that the facility would reduce the percentage of waste diverted to landfill and cause a significant increase in the overall tonnes of waste diverted from landfill.

The Applicant indicates the site is well positioned to service approved demolition and construction projects in the region as well as those predicted to originate from the Sydenham to Bankstown Urban Renewal Project and Arncliffe and Banksia Priority Precincts. The development would be capable of receiving and processing waste products to enable resource recovery and subsequent reuse elsewhere.

The Applicant suggests the current processing capacity of 30,000 tpa under-utilises the site and fails to cater for Sydney's recent growth in construction and the resulting need for C&D waste recycling. In addition, the Applicant refers to the present lack of similar facilities in the Mortdale area to cater for local needs, as well as the shortage of C&D recycling facilities in the Sydney metropolitan area in general.

Provided environmental control measures are properly implemented and monitored, the Applicant maintains that the potential for environmental impacts from the development would be minimal.

3. STRATEGIC AND STATUTORY CONTEXT

3.1. Strategic Context

The NSW Government has announced the Premier's Priorities which cover 12 key areas including economic growth, provision of infrastructure, protection of vulnerable communities, improving education and environmental protection. One of the Premier's key priorities is 'Creating Jobs'. The NSW Government aims to provide 150,000 new jobs over the next four years.

The development would contribute toward 'Creating Jobs' by creating 15 new construction jobs and 25 new operational jobs in the Georges River LGA. The development also represents a $3.7 million capital investment in industrial development.

The development is also consistent with the goals, directions and actions outlined in *A Plan for Growing Sydney* as it will:

- assist in the sustained growth and investment of the identified Hurstville and Kogarah strategic centres, which have good levels of accessibility to the state and regional road network (Action 1.7.1)
- provide for additional jobs closer to where people live (Direction 1.7)
- meet the industry demands in dealing with waste generated by key infrastructure projects in the locality, including the expansion of Sydney Rapid Transport to Hurstville (Action 1.11.1).

NSW 2021 and the Waste Avoidance and Resource Recovery Strategy

Reducing waste and keeping materials circulating within the economy are priorities for the NSW government, as set out in NSW 2021. To meet this important challenge, the government developed the state-wide WARR Strategy that sets waste recovery targets for C&D, C&I and municipal solid waste (MSW) material. By 2021–22, the WARR Strategy requires an increase in recycling rates as follows:

- C&I from 57% (in 2010–11) to 70%
- C&D from 75% (in 2010-11) to 80%
- MSW from 52% (in 2010–11) to 70%
- increase in the waste diverted from landfill from 63% (in 2010-11) to 75%.

The target recycling rate for the RRF is 85%, which exceeds the WARR Strategy targets for both C&D and C&I waste. The Department has reviewed the information and specifications for the SKALA machinery to be used to separate waste and is satisfied that the 85% target rate is achievable and realistic for the development. The development would therefore contribute to the State's recovery performance in both the C&I and C&D sectors.

Revised Draft South District Plan, 2017

To implement the broad aims of the Plan for Growing Sydney, the Minister has directed the preparation of Districts Plans for five geographical districts across Sydney. District Plans are currently being prepared, with the revised draft South District Plan released in October 2017 for public consultation. The revised draft South District Plan provides a link between the broad aims of a Plan for Growing Sydney and local environmental plans. It sets key priorities and actions for delivering productive, liveable and sustainable communities. The draft South District plan includes job and housing targets, strategies for improved housing choice and affordability and protection and enhancement of natural resources.

The Department considers the development is consistent with the priorities of improving productivity within the District by delivering jobs closer to home. The development would provide an additional 15 new construction jobs and 25 new operational jobs within the District. The proposed development would also assist in meeting Action 71 of the revised draft South District plan as it provides an expanded location for waste recycling and management.

3.2. State Significant Development

The development is State significant development pursuant to Section 89C of *Environmental Planning and Assessment Act 1979* (EP&A Act) because it involves development for the purpose of resource recovery or recycling facilities that handles more than 100,000 tpa of waste, which meets the criteria in Clause 23(3) of Schedule 1 in State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Consequently, the Minister for Planning is the consent authority for the proposed development.

3.3. Permissibility

One land use zone applies to the site under the Hurstville Local Environment Plan 2012 (HLEP) (see **Figure 7**):

- IN2 Light Industrial.

Resource recovery facilities are permissible with consent in the IN2 zone. Therefore, the Minister or a delegate may determine the carrying out of the development.

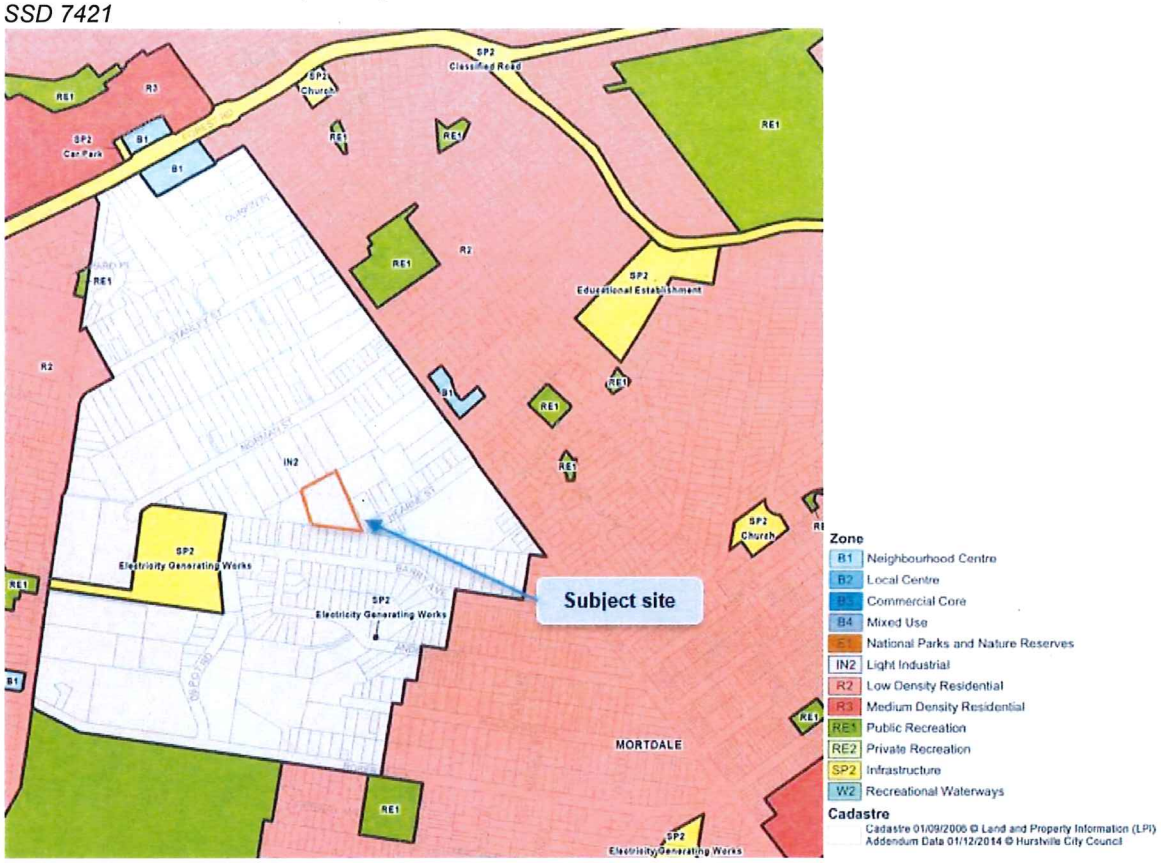

Figure 7: *Hurstville LEP Land Use Zones*

3.4. Consent Authority

On 14 September 2011, the Minister delegated the functions to determine SSD applications to the Planning Assessment Commission (the Commission) where more than 25 public submissions in the nature of objections were received.

Under the Ministerial Delegation, the Commission must determine the SSD application as 36 objections were received from the general public during the exhibition period of the development application and the accompanying EIS.

3.5. Other Approvals

Section 89K of the EP&A Act requires further approvals to be obtained, considered or determined in a manner that is consistent with any Part 4 approval for SSD projects under the EP&A Act. In the case of the development, an EPL will need to be applied for and issued by the EPA under the *Protection of the Environment Operations Act 1997*.

3.6. Considerations under Section 79C of the EP&A Act

Section 79C of the EP&A Act sets out matters to be considered by a consent authority when determining a development application. The Department's consideration of these matters is set out in Section 5 and **Appendix B**. In summary, the Department is satisfied the development is consistent with the requirements of Section 79C of the EP&A Act.

3.7. Environmental Planning Instruments

Under Section 79C of the EP&A Act, the consent authority, when determining a development application, must take into consideration the provisions of any environmental planning instrument (EPI) and draft EPI (that has been subject to public consultation and notified under the EP&A Act) that apply to the development.

The Department has considered the development against the relevant provisions of several key environmental planning instruments including:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (REP 2)
- Hurstville Local Environmental Plan 2012 (HLEP)
- Hurstville Development Control Plan No.1.

The development seeks to exceed the 'height of buildings standard' under Clause 4.3 of the HELP that restricts building height to 10 m in this area. The Applicant has submitted a written request (Appendix M of the EIS) for an exception to the development standard under Clause 4.6 of the HLEP. Clause 4.6(4)(b) states the concurrence of the Secretary is required in considering a request to vary a development standard. However, Clause 79B(2A) of the EP&A Act states the Secretary's concurrence is not required for SSD, unless an EPI specifies that it applies to SSD. The HLEP does not specify that the Secretary's concurrence is required for SSD. The Department's assessment of the Applicant's Clause 4.6 request is provided in Section 5 of this report.

Development Control Plans (DCPs) do not apply to SSD under Clause 11 of the SRD SEPP. However, the Department has considered the relevant provisions of the Hurstville DCP 1 in its assessment of the development in Section 5 of this report.

Detailed consideration of the provisions of all EPIs that apply to the development is provided in **Appendix C**. The Department is satisfied the development generally complies with the relevant provisions of these EPIs.

3.8. Public Exhibition and Notification

Under Section 89F(1) of the EP&A Act, the Secretary is required to make the development application and any accompanying information of an SSD application publicly available for at least 30 days. The application was on public exhibition from 22 July 2016 until 22 August 2016. Details of the exhibition process and notifications are provided in Section 4.1.

3.9. Objects of the EP&A Act

In determining the application, the consent authority should consider whether the development is consistent with the relevant objects of the EP&A Act. These objects are detailed in Section 5 of the Act. The objects of relevance to the merit assessment of this application include:

(a) to encourage:
- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- *(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- *(vii) ecologically sustainable development, and*

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The Department has fully considered the objects of the EP&A Act, including the encouragement of Ecologically Sustainable Development (ESD), in its assessment of the application (see **Table 3**).

Table 3: *Considerations against the EP&A Act*

Object	Consideration
5(a)(i)	The development would enable the re-development of land to expand the capacity of the existing facility, permitting the facility to recycle and recover a greater volume of waste in a more efficient and cost-effective manner. This would assist in meeting the growing demands of local industries for waste recycling within the southern metropolitan area of Sydney. In addition, it would promote the economic welfare of the local community through the provision of 15 full time construction jobs and 30 ongoing operational jobs (25 new operational jobs).
5(a)(ii)	The development would ensure the orderly and economic use of the land, which is zoned for industrial use, IN2 Light Industrial and which permits the proposed development with consent. The

Object	Consideration
	site is also strategically located with access to the major regional road network, including the M5 motorway.
5(a)(vi)	The Department's assessment in Section 5 of this report demonstrates that, with the implementation of recommended conditions of consent, the impacts of the development can be mitigated and/or managed to ensure an acceptable level of environmental performance.
5(a)(vii)	The development is consistent with the principles of ESD as it would provide a RRF on appropriately zoned industrial land.
5(b)	The Department has assessed the development in consultation with, and giving due consideration to, the technical expertise and comments provided by Georges River Council (Council) and other Government authorities. This is consistent with the object of sharing the responsibility for environmental planning between the different levels of government in the State.
5(c)	The Department provided the public with opportunity to comment on the development and considered all issues raised in public submissions during its assessment of the application (Section 4).

3.10. Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

(a) the precautionary principle
(b) inter-generational equity
(c) conservation of biological diversity and ecological integrity
(d) improved valuation, pricing and incentive mechanisms.

The potential environmental impacts of the development have been assessed and, where potential impacts have been identified, mitigation measures and environmental safeguards have been recommended.

As demonstrated by the Department's assessment in Section 5 of this report, the development is not anticipated to have any adverse impacts on native flora or fauna, including threatened species, populations and ecological communities, and their habitats. As such, the Department considers that the development would not adversely impact on the environment and is consistent with the objectives of the EP&A Act and the principles of ESD.

3.11. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Under the EPBC Act, assessment and approval is required from the Commonwealth Government if a development is likely to impact on a matter of national environmental significance (MNES), as it is considered to be a 'controlled action'. The Applicant undertook a preliminary assessment of the MNES in relation to the development and concluded the development would not impact on any of these matters, and is therefore not a 'controlled action'. As such, the Applicant determined a referral to the Commonwealth Government was not required.

4. CONSULTATION AND SUBMISSIONS

In the EIS, the Applicant applied for a processing capacity of up to 300,000 tpa of waste, with operations occurring 24 hours a day, six day a week. Therefore, initial consultation and comments on the EIS and first RTS were based on this proposal. However, due to concerns raised by the Department, agencies and the public, the Applicant later amended the development application as described in Section 4.3.

4.1. Consultation

The Applicant, as required by the Secretary's Environmental Assessment Requirements (SEARs), undertook consultation with relevant local and State authorities as well as the community and affected landowners. The Department undertook further consultation with these stakeholders during the exhibition of the EIS and throughout the assessment of the application. These consultation activities are described in detail in the following sections.

4.1.1. Consultation by the Applicant

The Applicant undertook a range of consultation activities throughout the preparation of the EIS including:

- a letter to adjoining owners and occupiers, as well as meetings and telephone discussions with owners who expressed an interest in the development
- a meeting on 11 February 2016 with Georges River Council (then Hurstville Council), including Council engineers and planners, to discuss potential impacts in relation to traffic, noise and vibration, dust, waste water impacts, hours of operation and permissibility
- a meeting with the EPA to discuss matters to be included in the EIS when assessing potential impacts regarding noise and vibration, dust, odour and wastewater impacts and controls for leachate management.

The Applicant also met with the Department onsite on 6 July 2017 to discuss outstanding issues regarding the assessment of the application.

4.1.2. Consultation by the Department

After accepting the DA and EIS for the application, the Department:

- made it publicly available from **Friday 22 July 2016** until **Monday 22 August 2016**:
  - on the Department's website
  - at the Department's Information Centre (Bridge Street, Sydney)
  - at Georges River Council (at two offices: Dora & MacMahon Streets, Hurstville and 2 Belgrave Street, Kogarah)
- notified landowners in the vicinity of the site about the exhibition period by letter
- notified relevant State government authorities and Council by letter
- advertised the exhibition in the St George and Sutherland Shire Leader.

4.2. Submissions

The Department received 45 submissions during the exhibition period, including 7 submissions from public authorities and 38 submissions from the general public. A summary of the submissions received is provided in **Table 4**.

Table 4: *Breakdown of Submissions by Classification and Respondent*

Respondent	Support	Object	Comment	Total
Public authorities	0	0	7	7
Community Groups	0	0	0	0
Individuals	1	36	1	38
Total	**1**	**36**	**8**	**45**

A summary of the issues raised in submissions is provided within Section 4.2.1 and Section 4.2.2. Each submission is provided in full at Appendix E.

4.2.1. Public Authorities

The Department received 7 submissions from public authorities during the exhibition period, of which none were objections. The submissions received and the issues raised are discussed further below.

The **EPA** identified that insufficient information was provided in the EIS to allow for an adequate assessment of the development's impacts. In particular, the EPA requested further assessment and details regarding:

- impacts from plant and road noise in the evening and night time periods
- leachate, air quality and stormwater management
- emission estimates and proposed emission controls.

Council neither supported nor objected to the development, and requested further detail and assessment on the following matters:

- traffic impact, in particular the management of vehicle queuing to prevent impacts to traffic flow on Hearne Street and swept path diagrams for all required vehicle movements
- traffic and operational noise management
- dust management mitigation
- stormwater management
- compliance with the building height requirements under the HLEP.

Council concluded that generally the scale of the development is incompatible with the objectives of the IN2 Light Industrial zone under the HLEP.

NSW Fire and Rescue (FRNSW) requested further clarification regarding the provision of adequate water pressure to the site, the installation of fire hydrants and adequate stormwater controls to contain contaminated fire water run-off in the event of fire. Clarification and additional information was also requested with regard to the proposed storage of Dangerous Goods on the site. FRNSW provided recommendations regarding requirements for a Fire Safety Study.

NSW Roads and Maritime Services (RMS) advised it had no objections to the development and as such did not recommend any conditions of consent.

The **Office of Environment and Heritage (OEH)** advised it had no objections, as there were no heritage, biodiversity or natural hazard issues connected to the development, and did not recommend any conditions of consent.

Department of Primary Industries (DPI) Water and Agriculture Divisions advised it had no objections to the development and did not recommend any conditions of consent.

NSW Rural Fire Service (RFS) advised it had no comments on the development.

4.2.2. General Public

38 submissions were received from the general public, of which 36 objected to the development, one supported and one raised concerns. Issues raised in the submissions included:

- the suitability of the site's size and location to cater for an increase in processing capacity
- amenity impacts, particularly in relation to road congestion, safety and noise due to the additional traffic generated and impacts on the local road network
- pollution and safety impacts with regard to children, parents and workers at nearby children's play and learning facilities
- the 24-hour operation of the site, with the potential for residents to be impacted by noise during the night time period
- the reduction of air quality and associated health impacts of dust from processing activities in a not fully enclosed shed and uncovered stockpile areas.

Consideration of key issues raised in public submissions is provided in Section 5.5 of this report.

4.3. Response to Submissions and Supplementary Information

On 5 December 2016, the Applicant provided a response to the issues raised in submissions that was accompanied by revised specialist reports, including traffic, noise and vibration, air quality, as well as a Fire Safety Study (see **Appendix F**).

The RTS provided some minor modifications to operational and traffic details, such as a change to the location of the liquefied petroleum gas (LPG) storage area, amendments to site layout to accommodate onsite traffic movements and stacked vehicles, plant area changes, and restriction on the use of Barry Avenue for heavy vehicles. The changes were reflected on updated architectural plans. A draft Construction Waste Management Plan (CWMP) was also provided.

The RTS was provided to key agencies to consider whether it adequately addressed the issues raised. A summary of the agencies' responses is provided below:

- **EPA** – provided recommended conditions of approval for the development. In addition, it provided advice regarding the restriction of trucks accessing the facility via Barry Avenue
- **Council** – expressed concerns about the queuing of trucks on the surrounding street network due to the vehicle stacking capacity of the site and its restricted size. In addition, Council opposed the potential for vehicle and operational noise during night-time hours and the health and amenity impacts on surrounding residents
- **FRNSW** – had additional comments on the proposed fire suppression infrastructure and the lack of information provided regarding hydraulic design. FRNSW concluded there was not sufficient information provided to undertake a full review of the site's firefighting and water containment capabilities.

The Department also raised a number of unresolved issues regarding traffic controls, 24-hour waste delivery, leachate management, stockpile capacity and the waste separation process.

Amendments to the Development Application
Due to the concerns and issues raised by the general public and government agencies, the Applicant reconsidered and revised the scope of the application. On 6 April 2017, a second RTS report, including supporting noise and traffic studies and updated architectural plans, was provided to the Department that detailed a number of amendments to the development, including:

- a reduction in processing capacity from 300,000 tpa to 220,000 tpa
- hours of operation (including delivery and removal of waste) reduced from 24 hours a day, six days a week to 6 am–10 pm only, six days a week
- prohibiting all vehicles accessing the site via Barry Avenue
- removal of bin storage on site to increase space available for vehicle maneuvering
- an increase in operational staff numbers from 12 to 13 per shift due to the addition of a traffic controller at the site entrance
- update of Capital Investment Value from $2,466,000 to $3,745,020.

In accordance with Clause 55 of the Regulation, on 31 October 2017 the Applicant officially amended the development application to reflect the above changes.

The agencies reviewed the updated information and amendments to the development supplied with the 6 April 2017 RTS and provided the following comments:

- **Council** – indicated support for the reduction in processing volume and hours of operation and provided some recommendations for conditions of consent pertaining to traffic and noise issues
- **NSWFR** – provided recommended conditions of consent for the development.

The Department requested additional information regarding stockpile size, vehicle stacking, waste storage details and procedures, job creation, and MNES.

On 13 July 2017, additional information, including updated architectural plans and additional traffic information was submitted to the Department. This information was forwarded to the EPA for comment, which advised it was generally satisfied and provided amended recommended consent conditions.

The Department has considered the issues raised in submissions, the two RTS documents and the supplementary concerns raised, in its assessment of the development.

5. ASSESSMENT

The Department has considered the EIS, the issues raised in the submissions, the Applicant's three RTS documents and supplementary information in its assessment of the development. The Department considers the key assessment issues are:

- traffic
- site and operational management
- noise and vibration.

A number of other issues have also been considered. These issues are considered to be minor and are addressed in **Table 14** under Section 5.4.

5.1. Traffic

The expansion and increase in processing capacity of the RRF would generate additional truck movements to and from the site. These additional truck movements have the potential to impact on the safety, capacity and efficiency of the local road network.

The site is located on Hearne Street, which is a local road with a two-way, two lane configuration within a 12 m wide carriageway that connects to Boundary Road to the north-east and Barry Avenue to the south (see **Figure 8**). Boundary Road is a classified Regional Road with a two-way, two lane configuration which connects to Forest Road to the south of the Hearne Street intersection. Forest Road is a classified State Road with a two-way, six lane configuration that provides connection to the M5 Motorway via King Georges Road to the east. The M5 motorway is located approximately 4 km north of the site by road.

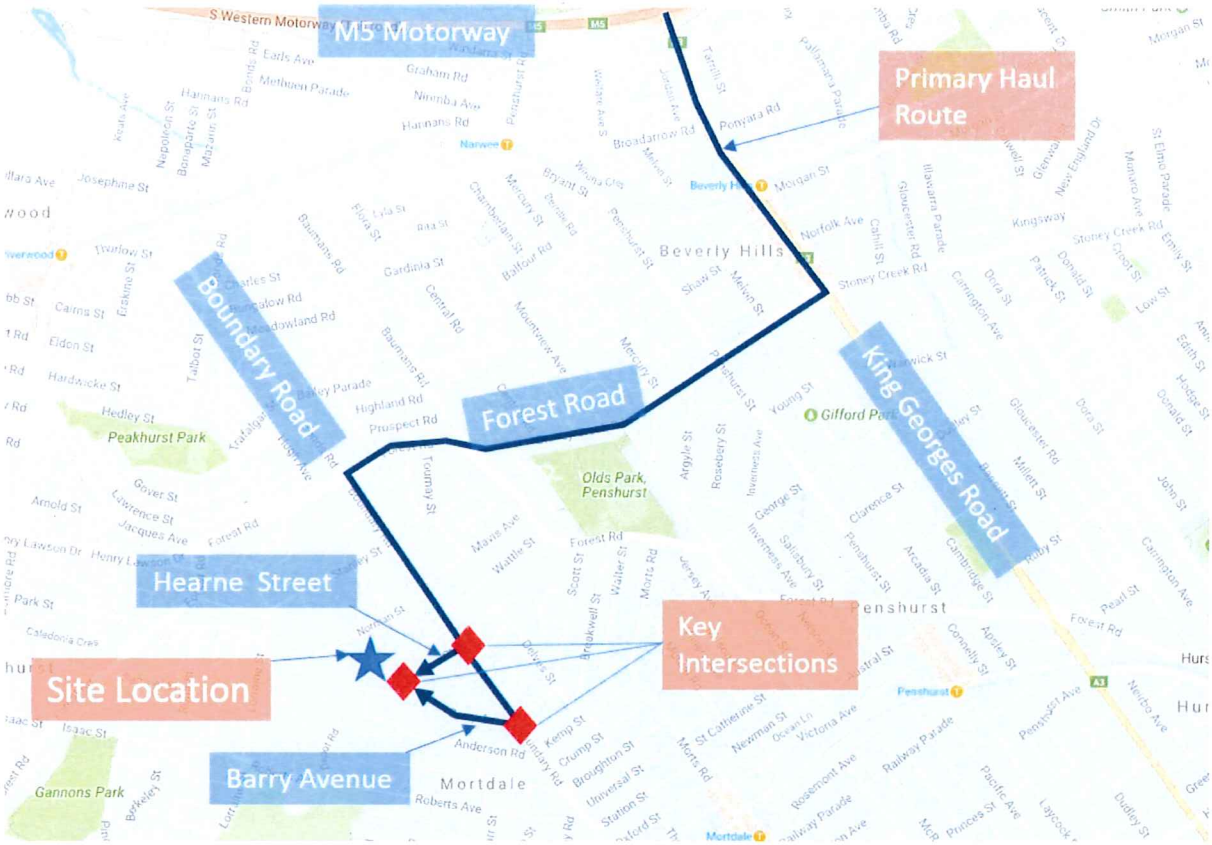

Figure 8: *Haul Routes and Key Intersections*

Access to the site is currently gained via a two-way driveway off Hearne Street at the point where Hearne Street bends to the south towards Barry Avenue. The Applicant has proposed to modify the design of the site's access to better accommodate the turning of trucks entering and exiting the site. This entails the removal and concreting of a small landscaped area to the south of the existing driveway thus increasing its width to 13.5 m.

Concern about traffic impacts was one of the major issues raised by residents objecting to the development. As discussed in Section 1.2, the original application requested a processing capacity of 300,000 tpa, with hours of operation (including delivery and removal of waste) 24 hours a day, six days a week. Therefore, the Traffic Impact Assessment (TIA) prepared by GTA Consultants provided in the EIS assessed operational traffic at that level. Additional revised information on operational traffic movements at the reduced level of 220,000 tpa of waste, with operations occurring 6 am–10 pm, six days a week was provided by the Applicant and its new traffic consultants, The Transport Planning Partnership (TTPP), in April and July 2017.

The TIA provided a quantitative analysis of the potential traffic impacts of increasing the existing production capacity of the facility. This included a SIDRA analysis of the performance of certain key intersections, swept path movement plans for some of the trucks proposed to access the site, including the maneuvering of trucks into and through the site. The TIA concluded the additional traffic generated by the proposed development would not be expected to compromise the safety and function of the road network in terms of intersection performance or queuing of trucks in Hearne Street.

The Department's assessment of the traffic impacts of the development has been separated into three main issues, namely, construction traffic and parking, operational traffic generation, and truck maneuvering and queuing.

Construction Traffic and Parking

Construction traffic was considered in the TIA and the Construction Waste Management Plan (CWMP) prepared by Dewcape, dated 11 November 2016. During the construction and demolition phase, the existing waste transfer facility would cease operations, with construction related vehicles being the only traffic accessing the site.

It is estimated there would be up to 40-60 construction staff onsite at any one time. The Applicant proposes to provide 20 off-street parking spaces for staff in the north-western corner of the site. Due to the limited availability of off-street parking, staff would be encouraged to carpool and use public transport to reach the site.

During the 34-week construction period, vehicle movements would be variable depending on the work being undertaken and would range between 14 and 46 vehicle movements per day. Of this, it is expected that a maximum of six vehicle movements per day would be trucks.

Vehicle or truck movements in the TIA have been assessed based on a two-way movement. A two-way movement consists of a vehicle entering the site (counted as one movement) and the same vehicle leaving the site (counted as one movement). As such, a vehicle attending and leaving the site is counted twice in a two-way movement analysis. The Department considers using a two-way movement is beneficial as it accounts for the actual traffic impact of the development on the surrounding road network.

Construction would occur during normal construction hours, with the peak periods for construction traffic caused by staff arriving and leaving the site at the beginning and end of each work day. The staff arrival and departure times would not fall within the road network peak periods for the Mortdale area.

None of the submissions received posed concerns with construction traffic and parking.

The Department accepts the Applicant's assertion that construction traffic volumes are low and represent a substantial reduction in the existing 204 traffic movements per day at the site (102 in, 102 out). Considering the facility will not be in operation, the Department does not believe the construction phase of the development would have a significant impact on the surrounding road network in terms of traffic volumes.

However, the Department is concerned that the provision of only 20 construction staff parking spaces on site for between 40 and 60 construction staff would saturate the off-street parking provision in the local road network, which could impact on other businesses in the area. To avoid this, it is imperative that all construction related vehicles are parked within the site. For this reason, the Department has recommended a condition of consent requiring the preparation of a Construction Traffic Management Plan (CTMP) which would designate an adequate parking area within the site for the projected number of staff required for each phase of construction. The CTMP would also be required to identify that construction haul routes would follow operational haul routes and identify traffic controls to avoid conflict with road users and the public. Furthermore, the Department has recommended a condition of consent which prohibits construction staff from parking within the local road network.

The Department's assessment of construction traffic and parking concludes that with adequate controls in place, the construction phase of the development would not impact the safety, capacity or efficiency of the local road network.

Operational Traffic Generation

Operational traffic impacts were addressed in the TIA prepared by GTA Consultants, with updated information supplied by TTPP. TTPP predicted the truck movements based on the throughput of 220,000 tonnes, with hours of operations limited to 6 am–10 pm, Monday to Saturday (see **Table 5**). The prediction used the proposed spread of truck types and their average load weight originally indicated by GTA (see **Table 6**).

Table 5: *Predicated Truck Movements*

Direction	Existing (30,000 tpa)	220,000 tpa
	Truck Movements	Truck Movements
Inbound waste	185	284[1]
Outbound waste	19	52
TOTAL (per day)	**204**	**336**

The existing facility currently generates approximately 204 truck movements per day at a processing capacity of 30,000 tpa. The expanded operations at 220,000 tpa is predicted to generate 336 truck movements per day, an overall increase of 132 truck movements per day. The average truck

[1]Note: some inbound trucks delivering waste would also collect outgoing waste.

movements per hour was predicted to be 24. The TIA predicts the operational peak hour for the proposed development to be between 11 am and 12 pm, resulting in 42 truck movements in the hour.

The TIA indicates the vast majority of trucks would access the site via the M5 motorway exiting onto King Georges Road, travelling south to Forest Road / Stoney Creek Road then west to Boundary Road and south to Hearne Street (see **Figure 8**). However, due to the nature of the facility accepting C&D waste from sites in various locations throughout the Georges River LGA and adjoining LGAs, a single haul route for waste deliveries cannot be identified. As such, the TIA focused on the key intersections in the immediate area which all truck movements would utilise, including Hearne Street and Boundary Avenue, Barry Avenue and Boundary Avenue and Hearne Street and the site entrance (see **Figure 8**).

To analyse the performance of the key intersections, SIDRA modelling was undertaken during the AM peak period of 9 am–10 am and the site peak period of 11 am–12 pm. The results found that all the key intersections are currently performing to a good standard (Level of Service (LoS) A, B and C) (see **Table 7**). The TIA suggested that based on the current high performance of the intersections, the additional traffic generated by the development would not cause these intersections to reach capacity. The TIA concluded the predicted number of trucks generated by the increase in processing capacity could not be expected to compromise the safety or function of the surrounding road network.

Council raised concerns regarding the potential impact the increase in truck movements generated by the development could have on the road network in the industrial area. In particular, Council was concerned with the increased traffic generated by the development on Boundary Road and the proposed use of Barry Avenue. The EPA were concerned with the use of Barry Avenue to access the site and the capacity of Boundary Road due to potential road noise impacts. Several public submissions also raised concerns regarding the potential impact of the increased truck movements on the safety, capacity and efficiency of the local road network. The RMS did not raise any concerns regarding operational traffic.

The Department questioned the Applicant's truck movement predications, as the development equates to around a 700% increase in the waste processing of the current facility, whereas the number of predicted truck movements only equates to an additional 132 movements or a 65% increase. The Department also raised concerns the TIA only undertook SIDRA modelling of the existing situation and did not include SIDRA modelling of the key intersections under the worst-case scenario traffic generation of the proposed development in full operation.

In a RTS, the Applicant provided confirmation that no trucks accessing or leaving the site would utilise Barry Avenue. This would be ensured through briefings provided to drivers during mandatory inductions, the installation of a 'left turn only' sign at the exit to the site and the use of a traffic controller to direct outbound trucks to use Hearne Street only. The Applicant also advised that in the unlikely scenario a truck utilises Barry Avenue, the traffic controller would inform them of the required route and record the vehicle registration. The Department has recommended a condition of consent prohibiting the use of Barry Avenue.

The RTS also contained a justification for the predicted truck movements provided in the TIA. The Applicant suggests the existing facility in its operations as a waste transfer station predominantly caters for small and medium rigid trucks with low tare weights (average of 5 tonnes) carrying lighter comingled wastes. The Applicant argues the predominant purpose of the increase in processing capacity is to carry out resource recovery of C&D waste from large construction and infrastructure projects. These projects would require the use of larger sized trucks, including semi-trailers and truck and dog combinations with average tare weights of 27.3 tonnes to carry heavier waste streams including soils, bricks and concrete. As such, the Applicant suggests the introduction of these trucks to transport heavier waste streams has the effect of limiting the overall truck movements required for the additional processing capacity. The Applicant also indicates several larger sized trucks delivering waste to the site would also be utilised to dispatch waste from the site in the same trip, which would further limit the number of trucks needed for the intended processing volume.

Table 6: *Breakdown of Truck Types and Load Weight*

Vehicle Weight Classification	Vehicle Type	Avg. Net Load	Proposed Split %	Average Daily No. of Vehicles
5 t – 12.5 t Tare	Heavy	5 t	45%	152
12.5 t – 15 t Tare		14.26 t	40%	134
>15 t Tare		27.3 t	15%	50
TOTAL				**336**

The RTS contained SIDRA modelling of the key intersections including the worst-case scenario traffic generation of the proposed development in full operation (220,000 tpa processing capacity). The SIDRA analysis illustrates the key intersections of Boundary Road and Hearne Street and the site access at Hearne Street would continue to operate at a good standard when the facility is in full operation (LoS A, B and C) (see **Table 8**).

Table 7: *Existing Conditions SIDRA Modelling Results*

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay	Level of Service (LoS)
Boundary Road / Hearne Street	am Road Network Peak Hour	0.43	35	C
	pm Road Network Peak Hour	0.45	28	B
Hearne Street / Site Access	Site Peak Hour	0.05	8	A

Table 8: *Future Conditions SIDRA Modelling Results*

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay	Level of Service (LoS)
Boundary Road / Hearne Street	am Road Network Peak Hour	0.45	36	C
	pm Road Network Peak Hour	0.46	29	C
Hearne Street / Site Access	Site Peak Hour	0.06	8	A

Lastly, the RTS contained tube counts for Boundary Road which showed that both the northbound and southbound traffic flows during peak periods are below the operational capacity for the road type in RMS's Guide to Traffic Generating Development, which is 900 vehicles per hour (see **Table 9**).

Table 9: *Tube Counts for Boundary Road in Both Directions*

Peak Period	Existing Traffic Flows on Boundary Road	
	Northbound (vehicles/hour)	Southbound (vehicles/hour)
AM peak period (9 am–10 am)	703	658
PM peak period (4 pm–5 pm)	742	794

Council and the EPA were satisfied with the Applicant's response and did not pose any additional concerns regarding operational traffic generation.

The Department is satisfied with the rationale used by the Applicant to predict truck movements for the intended processing capacity, as it is based on trends evident at other facilities and the waste industry in general. However, the proposed development still represents a modest increase in heavy vehicle traffic to the site and on the surrounding local road network. Several public submissions raised concerns regarding the impact the proposed development would have on the traffic on Boundary Road during peak hours (9 am–10 am and 4 pm–5 pm). The Department notes that the site's operational peak (11 am–12 pm) occurs outside of the road network peak hours. The Department also notes that during the AM peak hour, the development would only add an additional 32 truck movements on Boundary Road which is presently operating at a level of 100-200 vehicles per hour below RMS's operating capacity for a two-way road. For these reasons, the Department is satisfied the performance of Boundary Road and the key intersections would not be adversely affected by the predicted increase in truck movements and no road infrastructure or other upgrades are needed in this case.

However, to ensure any impacts are effectively managed, some controls are recommended to manage the additional truck movements. The Department has recommended conditions of consent requiring the Applicant to prepare a Driver Code of Conduct to minimise traffic impacts on the local road, including requiring the use of the specified routes and prohibiting the use of Barry Avenue. Further, the Applicant will be required to prepare a Traffic Control Plan (TCP) which will detail the onsite measures to be implemented to control the movement of trucks out of the site including providing a 'left turn only' sign and traffic controller at the exit. Lastly, a Traffic Management Plan (TMP) would also to be prepared as a subcomponent of a wider Operational Environmental Management Plan (OEMP) for the site. The TMP must include measures that are to be implemented to ensure road safety and efficiency, including prioritising the removal of recycled products and residual waste outside of the road network peak hours (6 pm–10 pm).

Truck Maneuvering and Queuing

It is important that waste facilities are of a size and layout which allows for the unhindered and efficient maneuvering of all sizes of trucks through the site in a manner which avoids potential queuing within the road reserve. Also, access arrangements of waste facilities must be designed and road configurations capable of allowing all sizes of vehicles to enter and exit the site in a forward direction without affecting the safety and efficiency of the road.

The TIA, prepared by GTA Consultants, provided a swept path analysis for a 19 m semi-trailer maneuvering through the site. The TIA only contained broad statements regarding the appropriateness of the size and layout of the site to cater for the amount and type of heavy vehicles which would be contained on the site during peak periods.

Council raised concerns that in the absence of a robust assessment including a truck stacking plan and a detailed swept path analysis, it was unclear if the size and layout of the facility would cater for the number of trucks accessing the site during peak periods based on the proposed processing volumes. Council also raised concerns that internal vehicle stacking would conflict with the required maneuvering of trucks picking up processed waste.

The Department also raised concerns that the TIA did not provide enough information to justify the site as designed was suitable for the proposed truck volumes to avoid queuing within the road or delays in processing. In particular, the Department required the Applicant to provide:

- a revised swept path analysis of all types of proposed trucks maneuvering unhindered throughout the site
- a swept path analysis of all combinations of trucks entering and exiting the site from and into the appropriate lane within Hearne Street in a forward direction
- a time-step analysis showing the maximum number of trucks that will be onsite during peak periods
- a vehicle 'stacking plan' indicating the proposed areas for trucks to wait (stack) onsite and the number of trucks that could be stacked onsite at one time without impacting the maneuvering of vehicles
- proposed traffic controls to avoid conflicts at the access and through the site.

As previously discussed, the Applicant provided a RTS including a revised traffic analysis prepared by TTPP which responded to the above concerns raised in the submissions and by the Department. The traffic analysis prepared by TTPP included a more comprehensive swept path analysis, a time-step analysis, vehicle stacking plans showing the location of truck waiting areas outside maneuvering areas and a draft TCP.

The Applicant's revised swept path analysis showed a combination of trucks entering and exiting the site from and into Hearne Street in a forward direction. The swept path plans also included a proposed island separator to ensure vehicle movements could be carried out in accordance with the analysis (see **Figure 9**). The Applicant also provided a revised swept path analysis of vehicles maneuvering within the site (see **Figure 10**).

To accommodate the movements and stacking of trucks, the Applicant removed the 'bin storage' area previously proposed adjacent to the western fence and relocated the fuel point further to the north. The Applicant's stacking plans indicated the site could cater for the stacking of a maximum of 31 trucks on site at any given period without hindering the maneuvering of semi-trailers or truck-dog-combinations through the site (see **Figure 11**).

The results of the Applicant's time-step analysis were informed by the stacking plan. The analysis indicated that during typical operations a truck would spend on average 25 minutes on site between entry and exit. Based on this analysis, each stacking space would accommodate 2.4 vehicles in one hour. As such, the Applicant argues the proposed stacking plan could accommodate a maximum of 74 trucks in any hour (31 x 2.4). During typical operations, nine of the 31 stacking spaces would be occupied, leaving 22 spaces available. As the maximum number of vehicles expected during the peak operation of the facility is 21, the Applicant's suggests the stacking arrangements are more than sufficient under normal circumstances.

The Applicant also carried out an analysis of the saturation of stacking spaces during an a-typical or worst-case scenario in which a truck would spend an average of 50 minutes on site between entry and exit (see **Figure 12**). The analysis of the worst-case scenario indicated that 18 stacking spaces would be occupied, leaving 13 spaces available. Under this scenario, each stacking space would

accommodate 1.2 trucks in one hour, thereby accommodating a maximum of 37 trucks in any hour, which would also be sufficient for the 21 trucks expected during the peak operations hour.

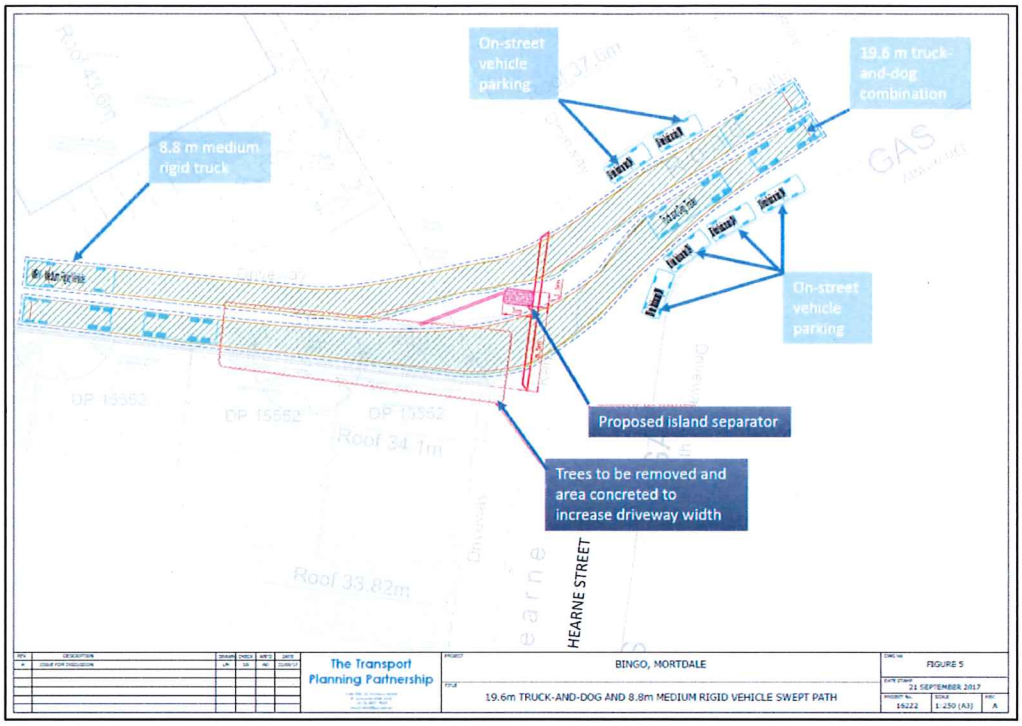

Figure 9: *Swept Path Analysis - 19.6 m Truck-and-Dog Combination Entering and Medium Rigid Vehicle Exiting*

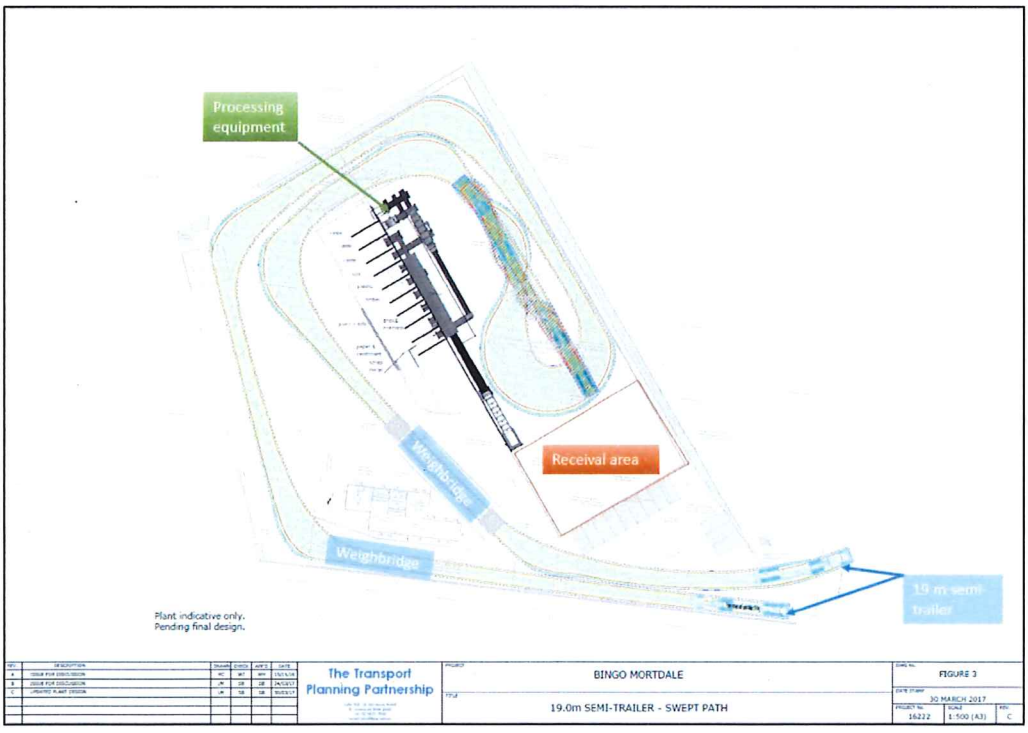

Figure 10*: Swept Path Analysis - Semi-Trailer Manoeuvring Through the Site*

The Applicant indicates the conservative assessment of truck stacking in the RTS demonstrates the site has sufficient capacity onsite to accept trucks at the facility in typical and a-typical operating conditions without causing an impact on Hearne Street, including the queuing of trucks.

However, to ensure the site operates in the manner which has been detailed in the RTS, the Applicant has proposed the following mitigation measures:

- incorporate the vehicle stacking plan and associated management protocols to allow for up to 31 vehicles to be held on site at any one time
- maintaining internal vehicle swept paths through line-marking to prevent encroachment
- implementation of a TCP.

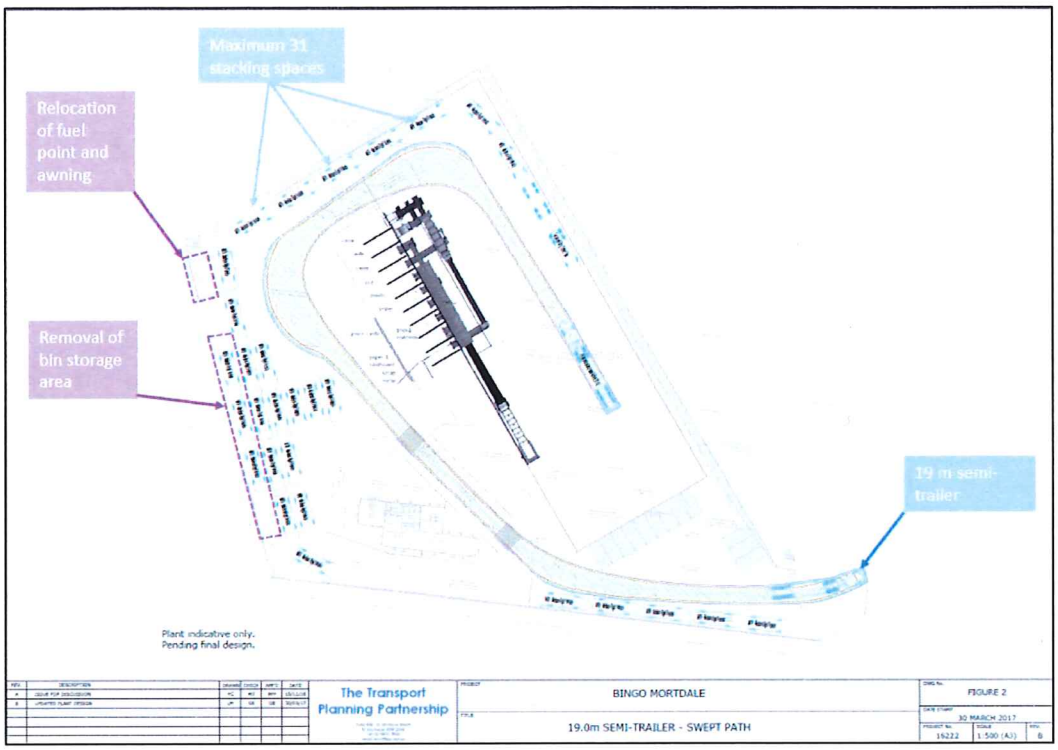

Figure 11: *Truck Stacking Plan and Semi-Trailer Swept Path Analysis*

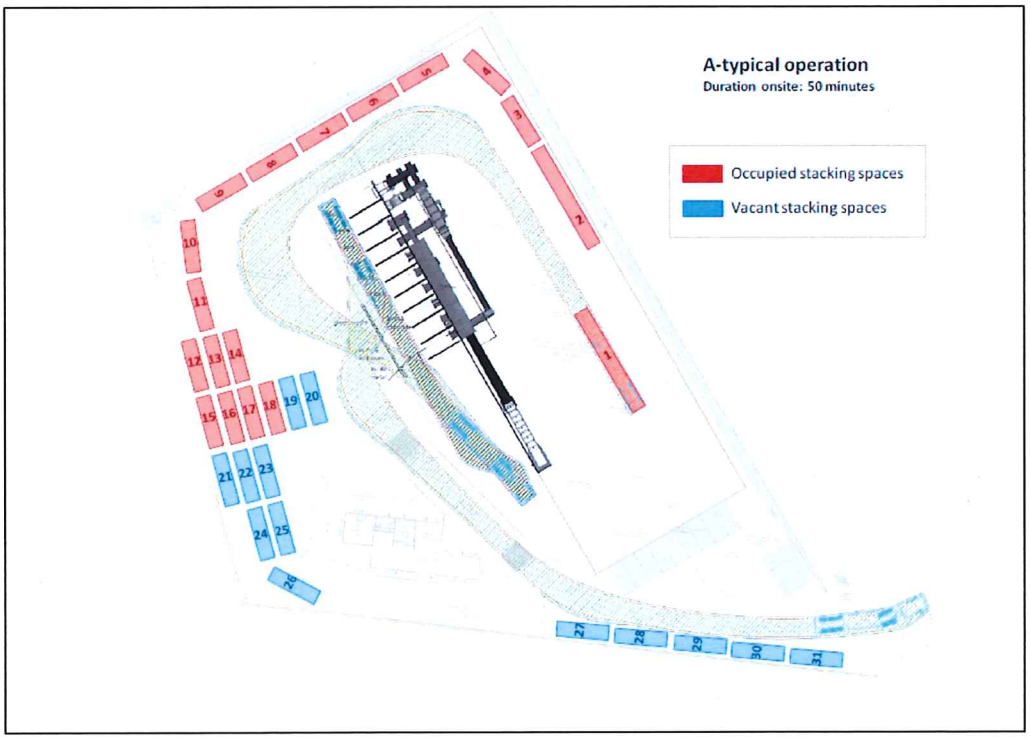

Figure 12*: Saturation of Truck Stacking During A-Typical Operations (avg. truck duration of 50 mins on site)*

Council was satisfied with the RTS, but raised concern regarding the ability of the site to handle the removal of materials via semi-trailers while maintaining sufficient stacking spaces. The Applicant responded by reiterating the transport of materials from the site would be scheduled outside peak operational hours, primarily between 6 pm and 10 pm, to avoid times when stacking spaces are needed.

Council noted that based on the information provided it appeared unlikely that queuing would occur and recommended a condition of consent which prohibits any vehicle accessing the site from queuing within Hearne Street. Council also recommended another condition requiring the preparation of a TMP, which would contain controls to ensure queuing in Hearne Street is avoided.

Although the Department raised concerns with the TIA submitted with the EIS and required several additional assessments and analysis to be carried out, the Department considers the Applicant has provided the necessary information to carry out a robust assessment of truck maneuvering and stacking.

The Applicant's swept path analysis appears to provide adequate justification that the largest size of trucks proposed to access the site can maneuver unhindered in the event that 31 other trucks are stacked within the site. However, a swept path analysis of two 19 m + trucks entering and exiting the site at the same time was not provided and the Applicant has conceded that this movement would not be possible given the narrowness of Hearne Street and the location of on-street parking. Although only 7% of the trucks accessing the site would be 19 m + and the majority of these trucks would be transporting waste outside of peak hours, there would remain a possibility of this conflict occurring. To avoid potential safety issues or queuing in Hearne Street should two 19 m + vehicles reach the access / exit at the same time, the Department has recommended a condition of consent requiring the TCP to include provisions for requiring the traffic controller to stop the exiting truck to allow the entering truck to maneuver into the site unhindered.

The time-step analysis and stacking plans appear to show that, even during a worst-case scenario in which trucks remain on the site for 50 minutes, there would be no queuing within Hearne Street. The Department agrees with Council that adequate measures and contingencies need to be in place to avoid queuing within Hearne Street during a number of situations. For instance, should a truck break down within the site or at the entrance, protocols must be in place to re-direct trucks to other facilities to avoid queuing. Such protocols would include contacting truck drivers remotely and traffic controllers directing trucks away from the facility. The Department has recommended a condition of consent requiring the preparation of a TMP and TCP detailing these and other measures to avoid any queuing within Hearne Street. A further condition has been recommended prohibiting any vehicles accessing the site from queuing or parking within Hearne Street. Should the facility operate within the confines of the mitigation measures provided by the Applicant and the recommended conditions of consent of the Department and Council, it is unlikely the development would compromise the safety and efficiency of Hearne Street.

Conclusion
Due to the Department's, Council's and the public's concerns regarding traffic generated by the development, particularly at night, the original application was amended, resulting in fewer traffic movements than originally proposed and no traffic between the hours of 10 pm and 6 am.

The Department's assessment concludes that, subject to the conditions recommended below and the Applicant's mitigation measures, site access and parking arrangements are satisfactory and traffic generated by the development can be accommodated on the local and regional road network without any significant impacts on safety or LoS. Maneuvering of vehicles onsite is satisfactory, subject to implementation of the stacking plan and direction from the site controller. Provisions for construction traffic management and parking are also considered to be adequate.

The Department notes RMS raised no objection to the development.

The Department has recommended conditions of consent to manage construction and operational traffic impacts, including the preparation of a detailed Construction Traffic Management Plan and Traffic Control Plan to ensure construction and operational traffic and parking is managed appropriately.

5.2. Site and Operational Management

A key concern raised by the Department and the EPA related to the ability of the site to handle a processing capacity of 300,000 tpa and its associated vehicle traffic, particularly given its size and proposed design. To alleviate a number of these concerns, the Applicant agreed to decrease the annual waste throughput to 220,000 tpa and reduce the hours of operation to exclude night-time hours. However, due to the relatively small size of the site, the narrowness of Hearne Street and the location of the accessway on a bend and the size and type of recycling equipment proposed, the suitability of

the site remains a key issue of the Department and the EPA, even at a reduced processing capacity. As such, the Department has rigorously assessed the development's capabilities and processes to handle 220,000 tpa of waste from receipt through to dispatch. This assessment is presented in **Table 10** below.

The EIS and RTS provided information regarding the receiving, handling, separating and dispatching of incoming waste streams. This included details of waste composition, as well as where and how waste materials would be stored before and after processing. A summary of the waste processing operation and its outputs is provided in Section 2.2.

***Table 10**: The Department's Assessment of Capability to Handle and Process Waste*

Aspect	Assessment
Ability to process proposed amount of waste	• Bingo's machinery manufacturer, SKALA, has advised the processing machinery would be configured to process up to 70 tonnes of waste per hour. The actual maximum processing capacity of the machinery is 100-150 tonnes per hour and the machinery would be brand new and purpose-built for its application. • maintenance of the SKALA machinery would occur for one hour per day (30 minutes at the start of each shift). • working 15 hours per day, six days a week, equates to 327,600 tpa maximum throughput, which represents a 49% time surplus above the time required to process 220,000 tpa. • the Department considers this would be sufficient to absorb unexpected processing machinery breakdown time without compromising the ability to process all incoming waste. • the Department is satisfied the processing capability of the RRF would be sufficient to ensure efficient and timely processing of all incoming waste.
Unexpected processing machinery shutdown	• breakdown or blockage of processing machinery has the potential to cause a build-up of unprocessed waste in the incoming waste receival area. • based on a throughput of 220,000 tpa, an average of 4,230 tonnes per week, or 705 tonnes of unprocessed waste per day would be received. • the incoming waste receival area is 574 m^2 and has a holding capacity of between 2,891 tonnes and 6,196 tonnes, depending on whether the type of waste received is 'light' or 'heavy'. Based on the composition of incoming waste from **Table 2**, the Department has conservatively assumed 70% of waste would be 'heavy', thereby the average holding capacity in the receival area would be 5,203 tonnes. This represents more than one week's worth of incoming waste. • as the waste to be received is non-putrescible and would be stored under cover within the processing building, there is a low likelihood that odour issues would arise due to any waste build-up in the receival area (see Section 5.4). • the Applicant controls its fleet of trucks via a real-time tracking system, which can instantly contact drivers and advise them to delay approach or divert their load to another facility. Due to its broad network of recycling facilities throughout Sydney (see **Figure 13**), Bingo can redirect waste material to other recycling facilities if one facility is unavailable for a period of time. This option to temporarily shut down the site to incoming waste would prevent waste build-up in the receival area as it approaches its maximum storage capacity • there is also capacity to 'stack' up to 31 trucks on site (see Section 5.1). Conservatively assuming 10 tonnes is loaded on each truck, there would be capacity to store up to 310 tonnes of incoming waste in the trucks, however this is considered a very short-term measure and would represent a worst-case scenario. • outgoing waste would be removed during processing machinery shutdown to ensure storage bays are empty and immediately available for use when the machinery resumes activity. • the Department is satisfied Bingo could adequately manage the flow of incoming waste to ensure there would be no exceedance of the site's unprocessed waste storage capacity due to machinery breakdown. Due to the broader Bingo network of recycling facilities, the effective shutdown of the site to incoming waste could be maintained until the machinery is reinstated.
Unexpected failure of removal of waste	• if trucks are unable to remove processed waste, there is the potential for waste to build up in the finished waste bunkers. • due to the mixed nature of the incoming waste, when one bunker becomes full to capacity, it would be necessary to stop processing waste until that bunker can be emptied to prevent overflow. • it is expected that any subsequent build-up of waste in the receival area due to processing stop would be dealt with as described above. • the Department is therefore satisfied this situation could be adequately managed.
Unexpected finds of non-	• from time to time it can be expected that non-conforming items such as asbestos, batteries, fire extinguishers, tyres and gas bottles may be encountered in incoming waste.

Aspect	Assessment
conforming waste	• the Applicant has developed procedures to deal with unexpected finds of NCW and such items would be handled in accordance with these: o SOP-YA018 Rejecting Loads of Non-Complying Waste / Prohibited Materials o SOP-YA017 Visual Inspection of Inbound Waste o SOP-YA020 Unexpected Asbestos Finds o SOP-YA003 Asbestos at Recycling Centres o OPL-YA029 Storage of Hazardous Chemicals – Waste o OPL-YA030 Storage of Hazardous Chemicals – Special Waste • storage of NCW would be in a covered skip or cage as described in Section 2.2, with removal every day. • the Department is satisfied sufficient procedures and processes are in place to adequately manage unexpected finds of NCW.

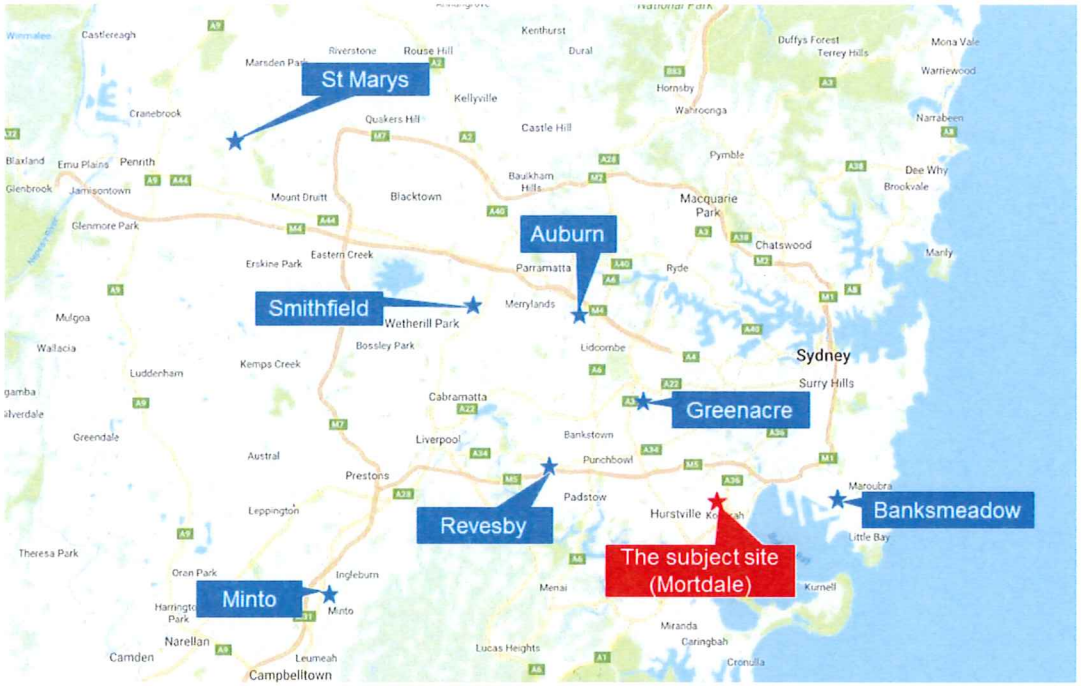

Figure 13: *Location of Bingo Recycling Facilities in the Sydney Basin*

Inappropriate management of C&I and C&D waste material entering and leaving the RRF has the potential to cause adverse impacts on the surrounding area and the environment. Approximately 75% of waste accepted at the RRF would comprise C&D waste. The EPA's consultation paper Standards for Managing Construction and Demolition Waste in NSW (the draft Standards) outlines proposed waste industry reforms, including standards for licensed C&D waste facilities. Whilst the proposed Standards are currently in draft form, it is considered appropriate for facilities processing large quantities of C&D waste to address the proposed requirements, as they represent 'best practice' for the industry. The Department's assessment of compliance with the draft Standards considers the development would adequately address the EPA's C&D draft Standards and is presented in **Table 11.**

Table 11: *Assessment of the Development Against Proposed EPA Draft C&D Waste Management Minimum Standards*

Requirement	Assessment
Standard 1: Inspection requirements	• the draft Standards requires three inspection points – at the weighbridge, at the receival area ('tip and spread'), and at the waste storage area. Staff must also be appropriately trained to undertake inspections. • the Applicant's procedures SOP-YA018 Rejecting Loads of Non-Complying Waste / Prohibited Materials and SOP-YA017 Visual Inspection of Inbound Waste describe incoming waste inspection protocols at the site. These two procedures document steps undertaken by appropriately trained staff that conform with the inspection requirements of the minimum standards.
Standard 2: Sorting requirements	• as described in Section 2.2, conforming waste arriving at the facility would undergo sorting in SKALA machinery that has been designed to separate waste material and

Requirement	Assessment
	discharge it into dedicated material storage bays before transport to a waste facility that can lawfully receive the waste.
Standard 3: No mixing of waste	• the RRF has been designed so that unprocessed and processed (inspected and sorted) waste would not come in contact with one another.
Standard 4: Storage requirements	• the development provides separate, dedicated storage areas for the following waste materials: o incoming waste – in designated incoming waste receival/stockpile area o contaminants (non-conforming waste) – covered skip bin (asbestos) and covered and bunded cage (used batteries, gas bottles and fire extinguishers) o separated soil, brick and concrete, timber, scrap metal, plastic, paper and cardboard, and green waste – storage bays on the south-western side of the processing building o plasterboard – covered skip bin inside the processing building o residual, separated waste – storage bays on the south-western side of the processing building • storage bays and bins would be clearly labelled with their waste type. • NCW would be removed every day to a facility lawfully permitted to accept that waste type. • all waste stockpiled or stored on site would be stored under cover.
Standard 5: Transport requirements	• pursuant to implementation of all the requirements above, C&D waste would not be transported from the RRF unless it has been inspected, sorted and stored in accordance with the standards • as described in Section 2.2, any load of waste transported from the RRF would be of a single waste type.

The Applicant has committed to a number of management measures to ensure efficient and effective handling of waste:

- scheduling and tracking of waste movements (in and out) to ensure smooth waste handling
- adopting appropriate procedures relating to the acceptance, handling and removal of operational waste
- implementing a proactive, planned machinery maintenance regime, regular inspections and good housekeeping practices to minimise unplanned facility downtime.

These commitments are noted and have been included as part of the Applicant's proposed management and mitigation measures.

The EPA had no comments on the general waste management aspects of the development, however provided recommended conditions of consent relating to waste types to be received and the permitted locations of waste storage and processing areas. One of the EPA's recommended conditions requires garden waste to be stored in a 35 m^3 covered skip bin and this has been included as a condition of consent.

The Department's assessment in **Table 10** and **Table 11** was undertaken using a conservative approach to the RRF's capabilities to process waste in a timely and efficient manner. The Applicant's main contingency to ensure a back-up of waste does not occur is the redirection of incoming waste to other sites. The Department notes the Applicant is a large waste management company that predominantly specialises in C&D and C&I waste processing and has been operating RRFs throughout New South Wales for over 10 years. Currently, Bingo operates eleven facilities in Sydney, the Hunter and Illawarra regions, eight of which are in the Sydney basin (see **Figure 13**). Bingo is therefore in the unique position of having a network of RRFs throughout Sydney to which it can send waste that temporarily cannot be accommodated at the Mortdale RRF. The Department considers the Applicant has sufficient appropriate experience and capacity to manage the diversion of waste to other facilities from time to time if required, however will require the Applicant to develop a procedure for diversion of waste to other facilities during unexpected disruption, including receival area capacity triggers and timeframes.

Other important operational waste aspects of the development relate to the appropriate storage and transport of waste. The Department is satisfied the purpose-built storage bays, skips and cages proposed would be of an appropriate size and design and in appropriate locations to facilitate storage and removal of waste in an efficient manner. Combined with the onsite logistics described in Section 5.1, such as use of site controllers and limiting removal of outputs and residual waste to outside of the

RRF's peak times, the Department considers the proposed operational waste management regime to be appropriate.

Therefore, the development, subject to implementation of the proposed management and mitigation measures and adherence to the recommended conditions of consent, would manage waste appropriately on site. Recommended conditions of consent have been included requiring preparation of an ongoing Waste Management Plan (WMP) to the satisfaction of the Secretary.

The Department's assessment concludes the development:
- has robust and appropriate maintenance, waste handling and contingency procedures in place that are suitable to ensure the satisfactory functioning of the RRF
- complies with the draft Standards for managing construction and demolition waste in NSW
- satisfies the requirements of the WARR Strategy by contributing to and exceeding the target recycling rates of 70% and 80% for C&I and C&D waste respectively.

The Department has recommended a condition of consent which requires the preparation of an ongoing WMP. The WMP would include details of stockpile limits in the incoming waste receival area, adoption of procedures for diversion of waste during unexpected machinery breakdown, and requirements for NCW handling and removal.

5.3. Noise and Vibration
The development has the potential to emit noise and vibration impacts during both its construction and operational phases, which could impact on the amenity of the locality.

Construction Noise and Vibration
Construction noise and vibration were addressed in a Construction Noise and Vibration Management Plan (CNVMP) that was prepared by SLR in accordance with the Interim Construction Noise Guidelines (ICNG), Assessing Vibration: technical guideline, British Standard 7385: Part 2- 1993, and German Standard DIN 4150: Part 3 – 1999. No agencies or public submissions were concerned with potential construction noise impacts.

The CNVMP included a quantitative assessment of construction noise, noting construction noise would be generated by construction plant such as hand tools, trucks, saws and excavator/loader machinery. The recommended site-specific noise management level (NML) for the nearest residential receiver (R6) during construction hours ($LA_{eq(15mins)}$) is 51 dBA.

Using a SoundPLAN model, the NVIA predicted that, under a worst-case scenario of all construction machinery working simultaneously, noise levels at nearby residences (R1-R16) (see **Figure 14**) would comply with the construction NMLs.

Operational noise
The development has the potential to generate noise during its operational hours which could impact the amenity of the locality. The primary noise sources would be:
- heavy vehicle movements to, from and within the site
- staff vehicle trips
- unloading of received materials
- use of operational vehicles (front-end loaders, excavators, skid steers) for loading waste
- use of waste processing machinery (SKALA)
- loading of processed recyclable and residual waste material into trucks for removal.

Waste receival and processing would be undertaken inside the site's large industrial building, however loading of trucks with material for dispatch would occur outside in the yard.

A noise and vibration impact assessment (NVIA) for the development's operation was prepared by SLR in accordance with relevant NSW guidelines, including:
- noise – Industrial Noise Policy (INP) and Road Noise Policy (RNP)
- vibration – EPA Assessing Vibration: A Technical Guideline (AVTG).

Road traffic noise and operational noise were significant concerns of the public during the exhibition of the EIS. Council was also concerned about potential road traffic noise impacts on residents, particularly caused by heavy vehicles during night-time hours at the Hearne Street/Boundary Road intersection, on

Boundary Road approaching Forest Road, and on Barry Avenue. The EPA requested clarification regarding methodologies used in the noise model.

A revised NVIA was provided in April 2017 that assessed the noise and vibration impacts of the amended application. The Department's, agencies' and public's original concerns related to night-time (24-hour) operations and the number of trucks accessing the site. Therefore, the overall reduction in the operational hours and truck movements mitigated a number of the noise impact issues that were originally raised. Council confirmed it was satisfied that limiting the hours of operation and not using Barry Avenue would ensure that surrounding residential receivers would not be unreasonably impacted by traffic or operational noise. The EPA had no further comments regarding operational noise.

The Department's assessment below of operational noise and vibration considers the noise impacts of the amended application.

As part of the NVIA, background unattended noise monitoring was undertaken to determine the ambient noise environment at the nearest sensitive receiver, R6 (27 Barry Avenue) (see **Figure 14**). To identify noise sources contributing to the ambient noise environment, operator attended noise measurements and observations were taken at receivers R4 (106 Boundary Road) and R6.

Using the processed results of the unattended noise monitoring, project-specific noise criteria were developed, as prescribed in the INP. These criteria related to intrusiveness, amenity, amenity classification, sleep disturbance, traffic noise, and vibration (human comfort). As the RRF would commence processing operations at 6 am, the NVIA considered it to be overly stringent to expect such operation to be assessed against the night-time criteria. In accordance with Section 3.3 of the INP, a morning shoulder period of 6 am-7 am was included. For each assessment period, the lower, more stringent, of the amenity or intrusiveness criteria was adopted and carried forward to the rest of the assessment.

To predict noise levels at sensitive receivers, a SoundPLAN model was developed that generated noise emission levels considering the source sound power levels, distance to nearest receivers, ground absorption, air absorption and shielding from the processing building, as well as meteorological conditions. The model was based on a worst-case scenario where all processing machinery and plant were operating simultaneously. Three different operational scenarios were modelled over differing time periods (morning shoulder, daytime and evening) that incorporated the anticipated worst-case level of noise-generating activity. The predicted operational noise levels and noise criteria for each receiver shown in **Figure 14** is presented in **Table 12**.

Table 12: *Predicted Operational Noise Levels (dBA) and Criteria*

Receiver	Morning Shoulder 6 am–7 am LA_{eq} (Criteria 44)	Day 7 am–6 pm LA_{eq} (Criteria 47)	Evening 6 pm–10 pm LA_{eq} (Criteria 43)	Sleep disturbance Morning Shoulder 6 am–7 am LA_{max} (Criteria 54)
R1	30	37	34	36
R2	32	41	38	38
R3	38	47	41	44
R4	39	46	42	45
R5	36	43	40	41
R6	41	47	43	47
R7	39	46	42	45
R8	37	44	40	43
R9	33	40	38	39
R10	27	34	31	33

Receiver	Morning Shoulder 6 am–7 am LA_{eq} (Criteria 44)	Day 7 am–6 pm LA_{eq} (Criteria 47)	Evening 6 pm–10 pm LA_{eq} (Criteria 43)	Sleep disturbance Morning Shoulder 6 am–7 am LA_{max} (Criteria 54)
R11	40	46	41	46
R12	34	41	38	40
R13	32	39	36	38
R14	30	37	34	36
R15	28	35	31	34
R16	24	31	28	30
R17 (Childcare Centre)	41 (Criteria 65)	47 (Criteria 65)	42 (Criteria 65)	N/A
R18 (Industrial Premises)	59 (Criteria 70-75)	65 (Criteria 70-75)	53 (Criteria 70-75)	N/A

These noise levels were compared to the most stringent noise criteria for each time period and receiver type. This concluded the development would comply with all project-specific noise criteria at all receivers and neighbouring industrial properties for all time periods. Three time-periods/locations (shaded above) show noise levels equal to the criteria, however the Department considers this to be acceptable due to the distance of the receivers from the facility and given the assessment was under a worst-case scenario.

The Department is satisfied the development would be capable of operating within the noise criteria above and recommended a condition of consent which requires this.

Operational vibration

The AVTG provides guideline values for continuous, transient and intermittent events that are based on a Vibration Dose Value (VDV) rather than a continuous vibration level. The VDV is dependent upon the level and duration of the short-term vibration event, as well as the number of events occurring during the daytime or night-time period. The recommended VDVs for vibration of an intermittent nature are preferred values of 0.8 $m/s^{1.75}$ for workshops (i.e. nearest industrial receivers) and 0.13 $m/s^{1.75}$ (during morning shoulder period) for residences.

SLR undertook a broad spectrum (1 Hz to 20 kHz) noise and vibration survey of a similar facility operating in Auburn, which is the same design proposed for the Mortdale facility. The survey found the processing screen to be operating in the dominant third octave band of 6.3 Hz with overall rms (root mean square) vibration levels of 0.09 mm/s (velocity) and 0.01 m/s^2 (acceleration) measured at 5 m. The corresponding vibration dose being 0.17 $m/s^{1.75}$, which is significantly lower than the preferred vibration dose value of 0.8 $m/s^{1.75}$ for the workshops associated with the neighbouring properties. Consequently, it is predicted there will be no vibration impact to the development's surrounding industrial receivers.

Notwithstanding, the NVIA recommended the external vibration emissions and location of vibration generating plant and activities be controlled so that the development does not adversely impact upon neighbouring receivers and site workers. It also recommended the loading and unloading of heavy materials be addressed within the OEMP with protocols to ensure that such products are handled through the use of appropriate plant to minimise vibration.

The Department is satisfied the development, with the recommended controls in place, would not impact on surrounding receivers and has recommended a condition of consent requiring vibration to be addressed in an Operational Nosie and Vibration Management Plan (ONVMP).

***Figure 14**: Noise Monitoring Locations*

Road Traffic Noise

The assessment criteria from the RNP for residences potentially affected by additional traffic generated by land use developments are summarised in **Table 13**.

***Table 13**: NSW RNP Road Traffic Noise Assessment Criteria for Residences*

Road Category	Type of Project	Assessment Criteria	
		Day 7 am – 10 pm	**Night 10 pm – 7 am LA_{eq}**
Freeway/arterial/ sub-arterial	Existing residences affected by additional traffic on existing freeway/arterial/sub-arterial roads generated by developments	$LA_{eq(15\ hour)}$ 60 dBA	$LA_{eq(9\ hour)}$ 55 dBA
Local roads	Existing residences affected by additional traffic on existing local roads generated by developments	$LA_{eq(1\ hour)}$ 55 dBA	$LA_{eq(1\ hour)}$ 50 dBA

Heavy vehicles accessing the site would travel via Boundary Road and Hearne Street, and would not be permitted to travel along Barry Avenue. The NVIA suggests the predicted maximum increases in

traffic flows caused by the development on Boundary Road would result in the traffic noise levels only increasing by 0.7 dBA and 0.4 dBA during the daytime and morning shoulder periods, respectively.

The RNP notes that an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person. Where existing residences and other sensitive land uses are potentially affected by additional traffic on existing roads due to land use developments, any increase in the total traffic noise level should be limited to 2 dB above the corresponding 'no build option'. As the proposed development would only increase traffic noise levels by up to 0.7 dBa, it is not considered that residential receivers adjacent to the surrounding road network, including Boundary Road and Barry Avenue would be impacted.

Conclusion
The Department's assessment concludes that, based on the conclusions of the NVIA, noise from the operation of the development would comply with relevant guidelines, including the INP and RNP. Nevertheless, a condition of consent has been included that restricts noise generated by the development to predicted levels. The Department also requires the Applicant to minimise noise from the development utilising best practice noise management measures and prepare an ONVMP prior to the commencement of operation.

Construction noise would also comply with the relevant NMLs of the ICNG. The EPA provided recommended noise limits for construction noise in line with the ICNG and these have been included as conditions of consent.

5.4. Other Issues
The Department's assessment of other issues is provided in **Table 14**.

Table 14: *Assessment of Other Issues*

Consideration	Recommended Conditions
Water Management	
• The development has the potential to result in surface water impacts caused by erosion and sedimentation during construction, leachate from waste, stormwater, and contaminated water from fire-fighting incidents (fire-water). • The site is located within the Peakhurst Industrial Area surface water catchment, which drains through the Hurstville Golf Course to the south before discharging into Lime Kiln Bay. The EIS included a Soil and Water Impact Assessment (SWIA) prepared in accordance with the relevant legislation, policies and guidelines. The SWIA assessed the performance of the proposed stormwater management system, as well as the potential flooding, soil and water impacts of the development. Construction • To prevent surface water impacts, sediment and erosion controls would be installed during construction of the RRF and would include straw bales across the site during pavement construction, siltation socks around existing inlet pits, and installation of a silt fence around the work area. • The Department concludes that construction sediment and erosion impacts can be adequately managed by the proposed control measures. The requirement to prepare and implement an Erosion and Sediment Control Plan prior to construction has been included in the conditions of consent to ensure appropriate management of this issue. Stormwater • As the site is already fully developed and sealed and no additional sealed areas are proposed, peak flow rates and stormwater runoff volumes would not increase as a result of the development. Misted water from the Coolfog system to control internal dust and yard sprinklers is not predicted to contribute to surface runoff, as is would evaporate or be absorbed by the waste material. • The mean annual stormwater runoff volume generated for the development represents a reduction from existing site run-off by 1.1 ML per year due to the proposed capture and reuse of stormwater. • The SWIA did not provide assessment of the capacity of the stormwater system to convey the 20 year ARI storm event. • However, as required by the Department, additional information (DRAINS modelling) was provided that showed the proposed drainage system has the	Require the Applicant to: • prepare and implement an Erosion and Sediment Control Plan prior to construction • preparation of a Water Management Plan prior to commencement of operations • final design of the onsite water management system to contain contaminated fire-water be developed in consultation with and to the satisfaction of FRNSW

Consideration	Recommended Conditions
capacity to accommodate the 20 year ARI storm event and in some areas is capable of conveying the runoff from a 100 year ARI storm event. • The proposed stormwater treatment system includes the installation of Ecosols Litter Baskets in all drainage pits and use of a Hume Jellyfish gross pollutant trap (GPT) unit. • The treatment methods were assessed using a MUSIC model which concluded the relevant target reductions for pollutant loads provided in the WSUD Guidelines would be achieved or exceeded for Total Suspended Solids, Total Phosphorus, Total Nitrogen and gross pollutants. <u>Flooding</u> • Based on a review of the 2004 Georges River Floodplain Risk Management Strategy and Plan, the site is not affected by mainstream flooding for the Probable Maximum Flood (PMF) event. • The Draft Hurstville Overland Flood Study (2015) indicates that some minor overland flooding would occur on the site during the 1 in 100-year flood event, however the site is not located in the main overland flood flow path. • Due to the very minor nature of the potential overland flood impacts, the Department considers the flood risk for the site to be extremely low, therefore, no conditions of consent are recommended with regard to flooding. <u>Wastewater and Leachate</u> • The Applicant advised no wastewater or leachate would be produced during waste processing operations, as all activities would occur in a fully enclosed building. Whilst water would be diffused through misters used for dust suppression, this water would either evaporate or be absorbed by the products. • Should any wet loads be delivered to the site, leachate would be captured in dry sumps at the lowest point of the graded slab of the processing building. Any rainwater infiltrating the material stockpile bays under the awning would drain to the sump located in the bunded area around the bays. • Sumps would be pumped out by vacuum pump trucks and the leachate removed from the site to an appropriate licensed disposal facility. • Even though little leachate is anticipated to be produced, a condition of consent has been included requiring inclusion of protocols for the management of leachate within a Water Management Plan <u>Firewater</u> • FRNSW indicated insufficient information and calculations were provided in the EIS, RTS and accompanying documents to allow adequate assessment of the site's proposed fire-water containment capabilities. • To ensure the overall containment strategy for firewater at the site is effective, FRNSW has recommended the final design of the onsite water management system to contain contaminated fire-water be developed as part of a pre-construction Fire Safety Study (FSS) in consultation with and to the satisfaction of FRNSW. • The Department has incorporated FRNSW's recommended condition and is satisfied that with this control in place, firewater would be adequately managed. <u>Conclusion</u> • The Department's assessment concludes the development provides sufficient water quality, drainage control and firewater containment measures to ensure unacceptable water impacts are avoided, subject to adherence to the recommended conditions.	
Air Quality and Odour	
• The development has the potential to generate air quality impacts during construction and operation, primarily from dust emissions. • The Department notes the primary dust control method is processing of waste inside the building, with storage under cover and that a Coolfog water suppression system would be installed inside to reduce dust emissions. • The EIS included an Air Quality Impact Assessment (AQIA) undertaken in accordance with the NSW Approved Methods. • The EPA sought clarification on emissions estimates and the parameters used and requested some remodelling relating to emission controls (processing inside building and limiting of onsite speed limit). This information was provided in an addendum to the AQIA in October 2016. • The updated AQIA demonstrated the impact assessment criteria would be met at all residential and industrial receptors for TSP, $PM_{2.5}$, PM_{10} and	Require the Applicant to: • undertake all reasonable steps to minimise dust during all works • prepare and implement an Air Quality Management Plan for the development to the satisfaction of the Department • ensure the development does not cause or

Consideration	Recommended Conditions
deposited dust. Due to the amendments to the development, the actual waste handling capacity would be lower than assessed in the AQIA. Therefore, it is considered the actual air impacts would also be lower. • The AQIA did not provide an assessment of construction air quality impacts, however, the Department considers the potential for dust impacts during construction to be limited and is satisfied mitigation measures proposed in the Dewcape CWMP would adequately reduce these impacts. • Details of all dust prevention, minimisation and control measures were provided in the draft OEMP submitted with the EIS. The Applicant has committed to incorporating comprehensive air quality management measures into the final versions of both the OEMP and the Construction Environmental Management Plan (CEMP). • The EPA did not raise any concerns regarding air quality but did note that odour had not been assessed due to the low likelihood of occurrence. The EPA advised it would require the Applicant to undertake an odour impact assessment through an amendment to the EPL should odour impacts occur. • The Department's assessment concluded that with appropriate measures in place, including a requirement to prepare and implement an Air Quality Management Plan, the proposal would have minimal air quality impacts on surrounding receivers and meet all NSW health and amenity criteria.	permit the emission of offensive odours. • install a wheel wash at the entrance to the site.
Operational Parking	
• Providing insufficient parking on site would lead to employees parking within the surrounding road network which would decrease available parking for other businesses in the industrial estate. • Nine parking spaces are required under the Hurstville DCP. As the proposed development includes 12 parking spaces, the TIA concluded that sufficient parking has been provided. • None of the public submissions raised parking as a concern. • The Department notes the DCP parking ratios used in the TIA were based on the site being used for general industry and office as opposed to a waste facility, so it is considered more appropriate to base the parking requirements on the number of employees working at the site during each shift. • Based on the maximum number of employees on site at any given time, a total of 13 parking spaces should be required, which is one more space than was proposed. • An additional parking space could be located adjacent to parking space 10 depicted on the Site Plan for the development. • As such, the Department has recommended a condition of consent requiring the preparation of a revised parking layout plan with one additional parking space.	Require the Applicant to: • Prepare and submit a revised parking layout plan for 13 parking spaces in accordance with AS 2890:2009.
Hazards and Risk	
• A Preliminary Risk Screening Assessment (PRSA) in the EIS assessed the proposed storage quantities and delivery frequencies of dangerous goods for use on site in accordance with SEPP 33. • The PRSA confirmed the facility would not store or transport dangerous goods above the thresholds specified in SEPP 33, therefore it would not be considered potentially hazardous or offensive development. • A Fire Safety Study (FSS) was undertaken in accordance with *HIPAP No. 2 – Fire Safety Study Guidelines 2011* to identify fire hazards at the site and consequences of possible fire incidents. • A 28,000 L diesel storage tank for refuelling by onsite vehicles would be located along the western site boundary within a bunded area with a capacity of 37,500 L (110% of tank capacity). • The FSS identified potential onsite fire hazards, the consequences of these fires and the detailed strategies and measures to prevent fires, including details of the onsite fire safety measures to be implemented on site. • FRNSW recommended a pre-construction FSS be developed in accordance with HIPAP No. 2 and be submitted for assessment and approval by FRNSW. • The Department considers the Applicant has adequately addressed the provisions of SEPP 33 and that the proposed development is not considered a potentially hazardous industry or offensive industry. • Conditions of consent are recommended by the Department and FRNSW to ensure the final design of the onsite fire safety system and the storage area	Require the Applicant to: • implement auditable procedures to handle and dispose of hazardous waste materials such as asbestos, sharps and chemical/ biological materials • storage of combustible materials in accordance with Australian standards • develop a pre-construction FSS in accordance with HIPAP No. 2 and submit for assessment and approval by FRNSW • consult with FRNSW during the preliminary design of the fire safety system to ensure it

Consideration	Recommended Conditions
for hazardous and combustible materials meet relevant Australian Standards.	meets FRNSW requirements.
Clause 4.6 – Exceptions to Development Standards	
• Clause 4.3 in the HLEP specifies buildings are not to exceed the height nominated in the Height of Buildings Map specified in the HLEP. • The height of buildings standard for the subject site is 10 m. The proposed maximum height for the development is 14.5 m to the pitch of the roof, as measured from existing ground level, which represents a 45% exceedance of the development standard. • The existing building to be demolished presently has a height of 14.5 m. • The EIS includes a written request to vary the height of buildings standard applicable to the site in accordance with Clause 4.6(3) of the HELP. • The Applicant's justification for the height variation addressed the provisions of Clause 4.6 of the HLEP as well as the principles of caselaw on this issue to argue the unreasonable and unnecessary nature of the standard. • Council indicated it was also satisfied with the justification provided. • Based on the requirements set out in Clause 4.6 (4)(a) of the HLEP, the Department is satisfied that development consent can be granted despite the contravention of the development standard as: o the Applicant's written request has addressed the matters required to be demonstrated in 4.6(3) of the HLEP o the proposed height is not out of keeping with the surrounding area o the higher building level would facilitate the functioning of the development as an efficient resource recovery facility where processing can occur indoors to mitigate environmental impacts o the proposed height matches that of the existing building o the proposed development is in the public interest as it is consistent with the objectives of the standard and the objectives of the IN2 zone. • The Department recommends the Commission grant development consent despite the contravention of the development standard.	• Not applicable
Construction Waste Management	
• Construction waste would primarily originate from demolition of the existing shed, office and amenities during the 34-week demolition and construction period. • The CWMP detailed the strategies to ensure building and demolition waste would be managed to maximise recycling and reuse and be disposed of lawfully. • An Asbestos Inspection and Register report prepared by Safe Environments on 12 August 2015 estimated the location of asbestos containing material at the site and the CWMP included asbestos control measures and a removal procedure. • The Department's assessment concludes waste from the construction and demolition of the facility would be managed in an acceptable manner provided the CWMP is followed.	Require the Applicant to: • revise and submit a Construction Waste Management Plan as a component of the overall CEMP for the development.
Site Contamination	
• Previous use of the site for industrial activities could have resulted in legacy contamination. • A Phase 1 Preliminary Contaminated Site Investigation (PCSI) was undertaken by SLR to identify any areas of environmental concern and associated contaminants of potential concern (COPC) on the site. • The PCSI identified the likelihood of soil contamination to be low for current land use activities, with the risk of COPCs from historic activities rated as low to medium. • Potential contaminant pathways and receptors were also examined, with on-site workers and visitors during the construction/demolition phase being the most likely receptors. • A review of the *Hurstville City Council Acid Sulfate Soils (ASS) Planning Map* revealed that ASS is unlikely to be present on the site. • The Department's assessment concludes the development site is suitable for its proposed use as the likelihood of discovering COPCs is relatively low and the amount of excavation required is minimal. • The Department recommends the preparation of a protocol for unexpected discoveries of contamination prior to the commencement of construction.	Require the Applicant to: • prepare a protocol for unexpected finds to ensure any material identified as contaminated is disposed of appropriately and does not pose a risk to workers.

Consideration	Recommended Conditions
Visual	
• The construction of a new waste processing building and offices has the potential to visually impact the surrounding area. • The EIS included an assessment of the visual impacts of the development. • The development would be located within an established industrial area with limited possibility for views of the site from residential or public space areas due to the presence of surrounding industrial buildings. • It would be possible to view the buildings from the site entrance at Hearne Street. However, from this position there would be no discernible change in scale or height from the existing building and would be consistent with the established built form of the area. • The proposed landscaping would soften the built form and, despite the removal of some existing trees, is considered an improved outcome. • The proposed schedule of colours consists of external walls in Colorbond cladding with colours Windspray (grey) and Stone Crop (brown), and roof and accessories in Surfmist (beige). These colours are from a neutral palette and are considered appropriate and in keeping with the industrial locality. No signage has been proposed as part of the development. • Light pollution from the development is not expected to impact on road users or neighbouring businesses, a condition is recommended requiring external lighting to comply with relevant Australian Standards. • The Department's assessment concludes the development is not visually intrusive, complements the surrounding industrial land uses, and would have minimal visual impact on surrounding receivers.	Require the Applicant to: • ensure the lighting associated with the development complies with the latest version of *AS 4282 (INT) - Control of Obtrusive Effects of Outdoor Lighting.*
Developer Contributions	
• The Department notes that the Hurstville Section 94 Development Contributions Plan 2012 (Update 2 - 2017) (Contributions Plan) is applicable in the former Hurstville LGA. • The Contributions Plan, however, does not apply to industrial development.	• Not applicable
Greenhouse Gas	
• The EIS included a Greenhouse Gas Assessment to assess the contribution of the development to the emission of greenhouse gases (GHG) - carbon dioxide, methane, nitrous oxide, synthetic gases and hydro fluorocarbons - to the atmosphere. • The GHG assessment considered Scope 1 – Direct Emissions and Scope 2 and Scope 3 – Indirect Emissions. • The total estimated annual operational GHG emissions for the development are 1,312 tCO2-e, which accounts for approximately 0.0006% of total current NSW emissions. • Scope 1 emissions represent 37% of the predicted emissions, which can be reduced by good maintenance and management practices of plant and equipment. The Applicant has committed to including such measures in the facility's OEMP. • The GHG assessment was based on the original waste input of 300,000 tpa, and the Department notes the actual impact would be less than predicted. • The Department's assessment concludes that the impact of the development on GHG emissions is negligible.	• Not applicable

5.5. Consideration of Key Issues Raised in Public Submissions

Table 15 presents the key issues raised in the public submissions and how the Department has considered each issue.

Table 15: *Department's Response to Issues Raised in Submissions from the General Public*

Concerns raised	Department Comments
Traffic • Increased number of vehicles in the area • Heavy vehicle use of residential streets	• Since the public exhibition period, the Applicant has reduced both the overall capacity of the site and the proposed hours of operation. An updated TIA was submitted. • The TIA demonstrated there is sufficient capacity within the local road network to accommodate additional traffic caused by the development. • In its RTS, the Applicant confirmed no trucks would access or leave the site via Barry Avenue and this would be ensured through staff induction, installation of a 'left turn only' at the site exit and a traffic controller. • The Department has recommended conditions of consent prohibiting on-street parking by site workers during construction, and requiring the

	preparation and implementation of a Driver Code of Conduct, TCP and TMP to mitigate and manage impacts to the local road network.
Noise • Night-time noise generated by heavy vehicles	• In its RTS, the Applicant reduced the proposed hours of operation, which effectively eliminates the potential for noise impacts from operations and trucks between 10 pm and 6 am. • An updated NVIA was submitted demonstrating compliance with the RNP.
Location • Zoning • Site suitability • Proximity to residential development	• The development is a permissible form of development with consent in the IN2 zone, pursuant to the HLEP 2012. • In Section 5.2, the Department assessed the site's suitability for the proposed use and concluded it is capable of processing 220,000 tpa of non-putrescible waste with negligible environmental impacts, including impacts on the amenity of residential areas. • The Department has assessed the proposal and is satisfied that, subject to the imposition of conditions of consent, the impacts of the development can be appropriately managed to avoid unacceptable impacts on residents.
Safety • Heavy vehicles on residential streets, particularly Barry Avenue • Heavy vehicle driver behaviour • There are several childcare centres, educational establishments and children's recreation facilities in the local area	• The Applicant has proposed mitigation measures to prevent trucks from using Barry Avenue and to facilitate road safety throughout the local road network. • The Department has recommended conditions of consent: o requiring the preparation and implementation of a Driver Code of Conduct for all truck drivers associated with the development o prohibiting the use of Barry Avenue by trucks associated with the development o prohibiting on-street parking during construction.
Hours of Operation	• The proposed hours of operation have been reduced. No operations are proposed between 10 pm and 6 am. • The technical reports submitted with the Applicant's RTS demonstrate the proposed reduced hours of operation would ensure the development complies with the relevant criteria and guidelines, such as the INP.
Air Quality • Dust	• The Applicant's AQIA concluded the development would not cause dust impacts in the locality based on a processing capacity of 300,000 tpa due to the processing of waste inside a building, installation of a Coolfog dust suppression system, and waste storage under cover. • Since the pubic exhibition period, the Applicant has reduced the overall capacity of the proposal by 27%, therefore it can be assumed the operational air impacts would be lower than predicted in the AQIA. • In its RTS, the Applicant submitted an updated Statement of Commitments which includes air quality mitigation and management measures. • The Department's assessment recommends the preparation and implementation of an Air Quality Management Plan and the implementation of measures to minimise dust during construction and operation.
Health • Long term impacts of noise on mental health • Sleep deprivation • Attraction of rodents to the area	• In its RTS, the Applicant reduced the proposed hours of operation, reducing the number of trucks on local roads and eliminating the potential for additional noise between 10 pm and 6 am. An updated NVIA was submitted demonstrating compliance with the INP and ICNG. • Construction and operational noise limits will be imposed by conditions of consent. • The development would not accept putrescible wastes that would attract vermin. Effective measures would be in place to manage pests and vermin that may arise.

6. CONCLUSION

The Department's assessment of the application has fully considered all relevant matters under Section 79C of the EP&A Act, the objects of the EP&A Act and the principles of ecologically sustainable development.

The development would focus on the conversion of waste into reusable products via recycling. It would also assist in diverting C&D and C&I material from landfill and as a result would help to extend the life of existing landfill facilities and minimise their environmental impacts. In economic terms, recycling also reduces waste disposal costs for both government and industry.

Through its assessment of the application and in response to issues raised by the public, the EPA, and Council, the Department has required the Applicant to make changes to the development. In response to community concern regarding potential traffic congestion and night-time noise issues, the Applicant reduced the site's waste throughput and operating hours, and also prohibited the use of Barry Avenue by trucks. To assure mitigation of any residual impacts, the Department has developed and recommended a stringent set of conditions which it is confident would ensure the level of noise and traffic congestion experienced by the surrounding community would not have an adverse impact on existing amenity.

The key issues associated with the development relate to site and operational management and the traffic impacts associated with delivery and removal of the waste. Overall, the Department's assessment concluded:

- the development would be capable of handling 220,000 tpa of waste from receipt through to dispatch and have the required procedures and control processes in place to satisfy the EPA's draft Standards for C&D recycling facilities
- the development would positively contribute to the State's performance in regard to the WARR Strategy in both the C&I and C&D sectors
- the development would meet the relevant air quality and noise criteria at sensitive receivers
- traffic generated by the development could be accommodated on the local and regional road network without any significant impacts on safety or LoS
- it is satisfied of the matters in Clause 4.6(4)(a) of the Hurstville LEP to vary the height of buildings standard
- the development would provide a range of environmental and economic benefits for the region, through resource recovery and the provision of 25 new long term operational jobs.

The Department has recommended a number of conditions to manage any potential impacts as a result of the development, including:

- restricting waste receipt and processing to 220,000 tpa
- prohibiting use of Barry Avenue by heavy vehicles and requiring left turn only out of the development onto Hearne Street
- development of an Operational Traffic Management Plan, Traffic Control Plan and Driver Code of Conduct to manage operational traffic impacts
- preparation and implementation of management plans for waste, noise and vibration, water and air quality.

The Department concludes the impacts of the development can be appropriately managed through implementation of the recommended conditions of consent. Consequently, the Department considers the development is in the public interest and should be approved, subject to conditions.

The Department recommends the Planning Assessment Commission agree to varying the height of building development standard as set out in Clause 4.3 of the HLEP, as the Department considers:

- the Applicant's written request adequately addresses matters required to be demonstrated by Clause 4.6(3) of the HLEP
- the development will be in the public interest, because it is consistent with the objectives of the development standard and the objectives for development within the IN2 zone, in which the development is proposed to be carried out.

The Department considers the development is approvable, subject to any conditions of consent. This assessment report is therefore presented to the Planning Assessment Commission for determination.

Prepared by: Sheelagh Laguna
Industry Assessments

Endorsed by:

Chris Ritchie 16/11/17.
Director
Industry Assessments

Endorsed by:

Anthea Sargeant 16/11/17
Executive Director
Key Sites and Industry Assessments