Mortdale State Significant Development Application

Response to Submissions Report

APP Corporation Pty Limited

APP Project Number 10336

April 2017

Contents

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Amendment, Distribution & Authorisation Record

Amendment Record

Revision	Description / Details	Date
1	Draft for Client Review	23/03/2017
2	Updated to incorporate client feedback	29/03/2017
3	Updated to incorporate client feedback	06/04/2017
4	Final Report	06/04/2017
5		

Distribution

This Report Is Prepared For Distribution to:

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1	Shivesh Singh	Planner	Skylife Properties
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3	Shivesh Singh	Planner	Skylife Properties
4	Kelly McNicol	Team Leader Industry Assessments	DP&E
5			
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Authorisation Record

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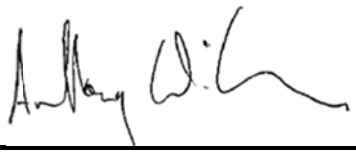

Signature

06/04/2017
Date

Approval by
Karie Bradfield
Project Director

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06/04/2017
Date

Executive Summary

APP Corporation Pty Ltd on behalf of Skylife Properties Pty Ltd (the applicant) is seeking development consent under Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to redevelop an existing resource recovery facility at 20 Hearne Street, Mortdale.

The Mortdale Environmental Impact Statement (EIS) was placed on public exhibition from 22 July 2016 to 22 August 2016.

On 5 December 2016, a Response to Submissions (RTS) was prepared by APP Corporation Pty Ltd addressing matters raised by the community and government agencies. The RTS was circulated to relevant agencies for comment.

On 15 February 2017, the Department of Planning and Environment advised the proponent that more detailed information or clarification was sought from some agencies, namely:

- Department of Planning and Environment (DP&E);
- NSW Environment Protection Agency (EPA);
- Georges River Council (GRC); and
- NSW Fire and Rescue (FRNSW).

Issues raised by these agencies related to:

Department of Planning and Environment

- Road safety in terms of accessing and exiting the site;
- Vehicle stacking and internal path conflicts;
- 24-hour operation;
- Alarms for leachate management;
- Details of stockpiles; and
- Details of waste processing.

NSW Environment Protection Agency

- Enforceable restrictions for trucks using Barry Avenue.
- Recommended conditions of approval:
  - Preparation of Operation Environmental Management Plan prior to commencement of works;
  - Limits on the annual tonnage limits;
  - Types of waste to be received;
  - Management of construction and demolition waste;
  - Preparation of an Air Quality Management Plan;
  - Construction noise management; and
  - Hours of operation.

Georges River Council

- Removal of waste outside of peak operations;
- Conflicts with vehicle stacking and swept paths;
- Vehicle queuing on Hearne Street;
- Noise generated from vehicles during after-hours operation;
- Insufficient assessment of noise impact and noise frequency at Hearne Street/ Boundary Road and Boundary Road/Forest Road;
- The cumulative impact of plant noise has not been identified; and
- Site is of an insufficient size to accommodate operation, queuing and movements at the capacity proposed.

NSW Fire and Rescue

- Acknowledges that under SEPP 33 the proposed development would not be classified as a potentially hazardous or offensive industry and therefore would likely not require a Fire Safety Study (FSS) to be assessed and/or approved by FRNSW;
- Concerns relating to fire safety and/or firefighting operations associated with the development proposal remain unresolved or not to the satisfaction of FRNSW; and
- Recommends that a condition of approval be imposed that the proponent meet with FRNSW and then submit a FSS for approval or provide hydraulic fire systems, associated firewater supply and provisions for the containment of contaminated water to the satisfaction of FRNSW.
- A full assessment of the (FSS) is required to be undertaken by FRNSW pending approval;
- Does not support the proposed location of hydrant booster assembly and attack fire hydrants nor does the fire hydrant system meet the requirements of FRNSW;
- Details on sprinkler booster assembly or any associated dedicated firewater storage tanks have not been provided;
- The hydraulic design should cope with any hazards and the consequence thereof;
- Critical information relating to fire water supply, identified worst case fire scenario firewater requirements, contaminated firewater containment quantities/site capabilities and detailed fire service drawings need to be provided with the study;
- FSS does not contain required calculations or information to allow FRNSW to undertake an accurate assessment of the sites containment capabilities;

Summary Response

This report and supporting technical documentation provide a detailed response to each of the matters raised by the aforementioned agencies. This report also describes and documents amendments to the proposal made to assist in addressing concerns raised by DP&E, relevant agencies and the wider community. These include:

- A reduction in the operating capacity from 300,000 tonnes per annum (tpa) to 220,000 tpa;
- A reduction in operating hours from the 24 hours sought to 6am – 10pm only;
- Amendments to the proposed queuing and bin storage arrangements; and
- Additional arrangements to restrict heavy vehicles movements to Hearne Street only.

The technical assessment made the following conclusions on the next few pages.

Site Operations

Reduced throughput

A reduced throughput will improve handling and processing efficiency, reduce movement of vehicles within the site and minimise environmental impacts. With regard to traffic and safety, an additional traffic controller will be positioned at the entrance of the facility to improve vehicle flow in Hearne Street and facilitate vehicles entering and exiting the facility in an efficient and safe manner to avoid congestion and improve road and pedestrian safety.

Stockpile capacity

Whilst the annual capacity will be reduced, the limit for waste to be held on the site at any one time will remain the same. The proponent believes that a maximum limit of 10,000 tonnes at any one time is appropriate for the site. The proposed machinery within the shed has capacity to process in excess of 100 tonnes per hour which is unlikely to eventuate as the business will never operate at capacity for 100% of the time.

Technical assessments prepared to support the proposed throughput for the Mortdale facility supports the annual throughput of 220,000 tonnes. These studies and this report have demonstrated that the stockpile capacity of the site is suitable from the volumetric breakdown of the stockpile area having regard for the different types of waste accepted at the site.

Two stockpile capacity scenarios have been provided in this report to demonstrate the variation in capacity related to waste types to be accepted. The area set aside to stockpile unprocessed material would accommodate approximately 6,196 tonnes of material where the stockpile consisted of mostly dense (heavy) material. The total site storage capacity would be approximately 7,990 tonnes. A 10,000 tonne any one-time limit is not unreasonable and is supported by the scenarios provided.

Traffic

Road safety

TTPP have recommended the following additional measures be implemented to improve on-site and road safety:

- Traffic controllers will be located at the entrance of the Mortdale facility and within the site to ensure safe vehicle movements to and from the site and within the site;
- Road markings will clearly distinguish lane separation; and
- Installation of 'left turn only' signage at the site exit point.

Vehicle Movements

The number of vehicles using the Mortdale facility will be substantially reduced as a result of the proposed modifications to reduce the annual processing limit to 220,000 tonnes per annum and site operations from 6am and 10pm only. TTPP have advised that the expected average daily two-way vehicle flows equates to 364 movements or 182 trucks. Overall, the reduction in waste throughput has resulted in a reduction of vehicle movements across the key peak periods.

Vehicle stacking

The proposed vehicle stacking arrangement would simultaneously accommodate 31 stacked vehicles and the largest waste delivery truck (i.e. 19m semi-trailer) exiting the site.

Conflicts in stacking and swept paths

The reduced vehicle flow would ensure trucks will be wholly accommodated and managed within the site. As a result of the proposed stacking, traffic control arrangements and reduced peak vehicle movement, heavy vehicles are not expected to queue back onto Hearne Street.

The swept path analysis provided by TTPP demonstrates that a 19 metre semi-trailer is able to sufficiently tip waste, proceed to collect waste then exit via the weighbridge without impeding on stacked trucks. The 31 stacking spaces are also shown on the architectural plan and include two semi-trailers of 19 metre in length to highlight that the swept path does not clash with the queuing trucks.

Use of Barry Avenue

The proponent does not propose to use Barry Avenue for any vehicle movements. All vehicle movements will be via Hearne Street and onto Boundary Road and customers and transporters will be encouraged to use this route.

Noise

Impacts on residential receivers

SLR Consulting has advised that no project related traffic noise impacts in respect of the proposal (taking into consideration the reduced hours of operation and throughput) are anticipated at residential receivers adjacent to the surrounding road network, including Boundary Road and Barry Avenue. Also as a result of the reduced annual capacity, machinery and plant use will be reduced. Consequently, less noise will be generated which will improve any impacts to the residential amenity. SLR has further advised that the facility would comply with project specific noise criteria.

Vehicle movements

SLR have confirmed that in undertaking the traffic noise assessment, the truck and light vehicle sound power levels under normal and high noise levels events (i.e. braking and accelerating, including body noise) have been used in the noise modelling to determine the traffic noise assessment against the LAeq (LAeq(15hour) and LAeq(9hour)) and LAmax (sleep disturbance) criteria.

From the predicted noise levels identified, the facility remains compliant with the relevant project specific noise criteria at all receivers under all operational scenarios. Noise generating activities associated with the proposed operations are therefore considered to have minimal impact on the existing noise environment.

Night-time noise impacts

Site operations during the night-time period will be limited to the morning shoulder period of 6:00am to 7:00am. This represents a substantial reduction in night time noise operations when compared to 24 hour operations previously proposed and remains consistent with the current development consent.

Fire Safety

SLR prepared a revised fire safety plan attached to this report which identifies alternative locations for the booster and the attack hydrants as well as a response to the matters raised by FRNSW. SLR recommend that the necessary detailed design and calculations should be prepared as part of the final design. A site meeting would then be held with FRNSW and the proponent's fire safety consultant to finalise the design. This meeting will seek to satisfy FRNSW requirements and resolve any outstanding issues. SLR concluded that the matters raised by FRNSW have been sufficiently addressed for the purpose of assessing the SSD application.

Cumulative benefits

When compared to the initial SSD application, it is anticipated there will be cumulative environmental benefits resulting from the reduced annual processing limit and hours of operation with respect to:

- residential amenity as the modified development will:
  - alleviate amenity impacts raised by the community in terms of traffic and vehicle movements causing noise and vibration at night;
  - improve road safety along Hearne Street as well as for vehicles accessing and exiting the site as a result of reduced vehicle movements; and
  - reduce environmental impacts concerning operational noise, dust and vibration.
- Site operations as the modified development will:
  - not generate noise from the facility or vehicles movements between 10:00pm and 6:00am;
  - reduce noise impact and vehicle movements at Hearne Street/ Boundary Road and Boundary Road/Forest Road; and
  - reduce cumulative plant noise, vibration and dust impacts as a result of reduced use.
- traffic as the proposed changes and commitments will:
  - reduce traffic and vehicle movements to and from the site;
  - reduce probability of queuing of vehicles at the entrance to the site; and
  - negate the need for vehicle queuing on Hearne Street.
- on-site vehicle movements as the modified development will:
  - reduce the duration and frequency of vehicles stacking within the site;
  - remove any conflicts with vehicle stacking and swept paths; and
  - confine the removal of waste during day-time operation hours.

1. Introduction

1.1. Background

APP Corporation Pty Ltd (APP), on behalf of Skylife Properties Pty Ltd (the applicant), is seeking development consent under Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to redevelop an existing resource recovery facility at 20 Hearne Street, Mortdale.

Processing activities at the facility include resource recovery, waste processing and waste storage. Based on the intended handling capacity sought, the proposed resource recovery facility is classified as State Significant Development (SSD) and approval is sought from the Minister for Planning and Environment or his delegate.

The Mortdale Environmental Impact Statement (EIS) was placed on public exhibition from 22 July 2016 to 22 August 2016. The DP&E received a total of 37 objections, including one petition with 150 signatures, 1 letter of support and 1 letter with comments from the public. As a consequence of the number of submissions, the application will be determined by the NSW Planning Assessment Commission in accordance with current Ministerial delegations.

A Response to Submissions report (RTS) was prepared to address comments received from the community and relevant government agencies during the public exhibition process for the Mortdale SSD application (SSD 7421). The RTS report was submitted to the Department of Planning and Environment (DP&E) on 5 December 2016 and subsequently circulated to relevant government agencies for input and feedback relating to:

- Traffic impact;
- Noise and vibration;
- Air quality;
- Fire safety;
- Construction waste management;
- Waste streams and vehicle types; and
- The Operational Environmental Management Plan.

On 15 February 2017, the DP&E advised the proponent that more detailed information or clarification was sought from relevant agencies.

Comments on the RTS were received from:

- Department of Planning and Environment (DP&E);
- NSW Environment Protection Agency (EPA);
- Georges River Council (GRC); and
- NSW Fire and Rescue (FRNSW).

This report provides a response to the issues raised by these agencies and discusses the changes proposed by the proponent in response to feedback received from agencies. In this regard, the proponent seeks to reduce the proposed annual throughput from 300,000 tonnes per annum to 220,000 tonnes per annum and reduce the proposed hours of operation from 24 hours to 6am-10pm only.

These amendments will result in a further reduction of the environmental impacts and represents a willingness by the proponent to acknowledge and respect community sentiments towards the proposal and general perceptions of the industry. These matters are discussed in further detail in Section 2 of this report.

Specialist studies and plans were updated to respond to the matters raised by agencies. These were namely:

• Architectural plans	Insight Architecture
• Transport Impact Assessment	The Transport Planning Partnership Pty Ltd
• Air Quality	SLR Consulting
• Noise and Vibration Impact Assessment	SLR Consulting
• Fire Safety Study	SLR Consulting
• CIV	Rider Levett Bucknall

1.2. Overview of the Modified Proposal

The modified proposal as includes the following major elements as tabulated and outlined below:

Table 1: Proposal Summary

Criteria	Existing Situation	EIS Proposal	Modified Proposal
Volume	30,000 tonnes per annum	300,000 tonnes per annum	220,000 tonnes per annum
Storage at any one time	5000 tonnes	10,000 tonnes	10,000 tonnes
Hours of Operation	6am-6pm (Mon-Sat) No access to Barry Avenue prior to 7am	24-hour operation (Mon-Sat)	6am-10pm (Mon-Sat)
Maximum 2-way truck movements	220	430	364
Maximum vehicles	110	215	182

Approval is sought to increase the processing capacity of the existing waste or resource management facility from 30,000 tonnes per annum to permit up to 220,000 tonnes per annum. It is expected that no more than 10,000 tonnes of waste will be held on site at any one time.

The proposed hours of operation are:

- Monday to Saturday: 6:00am to 10:00pm
- Sunday and Public Holidays: No processing operations

Approval is also sought for the following works on site:

- Demolition and removal of existing structures including:
  - A 1,343m^2 shed;
  - A truck wash bay;
  - An office and amenities building;
  - A concrete ramp;
  - Concrete pavement in poor condition;
  - Removal of speed humps;
  - Removal of an existing weighbridge; and
  - Removal of existing landscaping and vegetation across the site.
- Construction of new shed and awning with a combined area of 2,534m2 and a ridge height of 14.5 metres from the existing ground level. The shed and awning will house all processing operations including:
  - Indicative plant and processing areas;
  - Loading, unloading and manoeuvring areas capable of accommodating up to a 19.5 metre truck; and;
  - Ten (10) material storage bays
- Installation of two new 20 metre weighbridges;
- Installation of a refuelling point and diesel fuel storage (28,000 litres) along the south-western property boundary;
- Construction of an ancillary office building and staff amenities;
- Construction of concrete ramps and associated retaining walls;
- Construction of a 45,000 litre rainwater tank;
- Landscaping;
- Installation of pollution control equipment and measures to mitigate stormwater and dust impacts including:
  - The cool fog dust suppression system within the processing building;
  - External sprinklers to supress dust on external surfaces;
  - - 1200mm Gross Pollutant and Sediment Trap / Vortex Separator (Rocla First Defense Trap);
  - - 1200mm Water Level Controller for containment of site runoff in the event of incident or emergency;
  - - Impermeable bunds around fuel store and material holding areas; and
    - Leachate collection sumps.
  - A total of 12 on-site car parking spaces have been provided for approximately 13 full time staff.

The proposed plant area (as identified in Figure 1) is indicative only and a detailed design will be prepared at the post approval stage and to the satisfaction of the private certifier. Section 4 of this report provides a detailed explanation of the waste processing method, plant details and stockpile capacity.

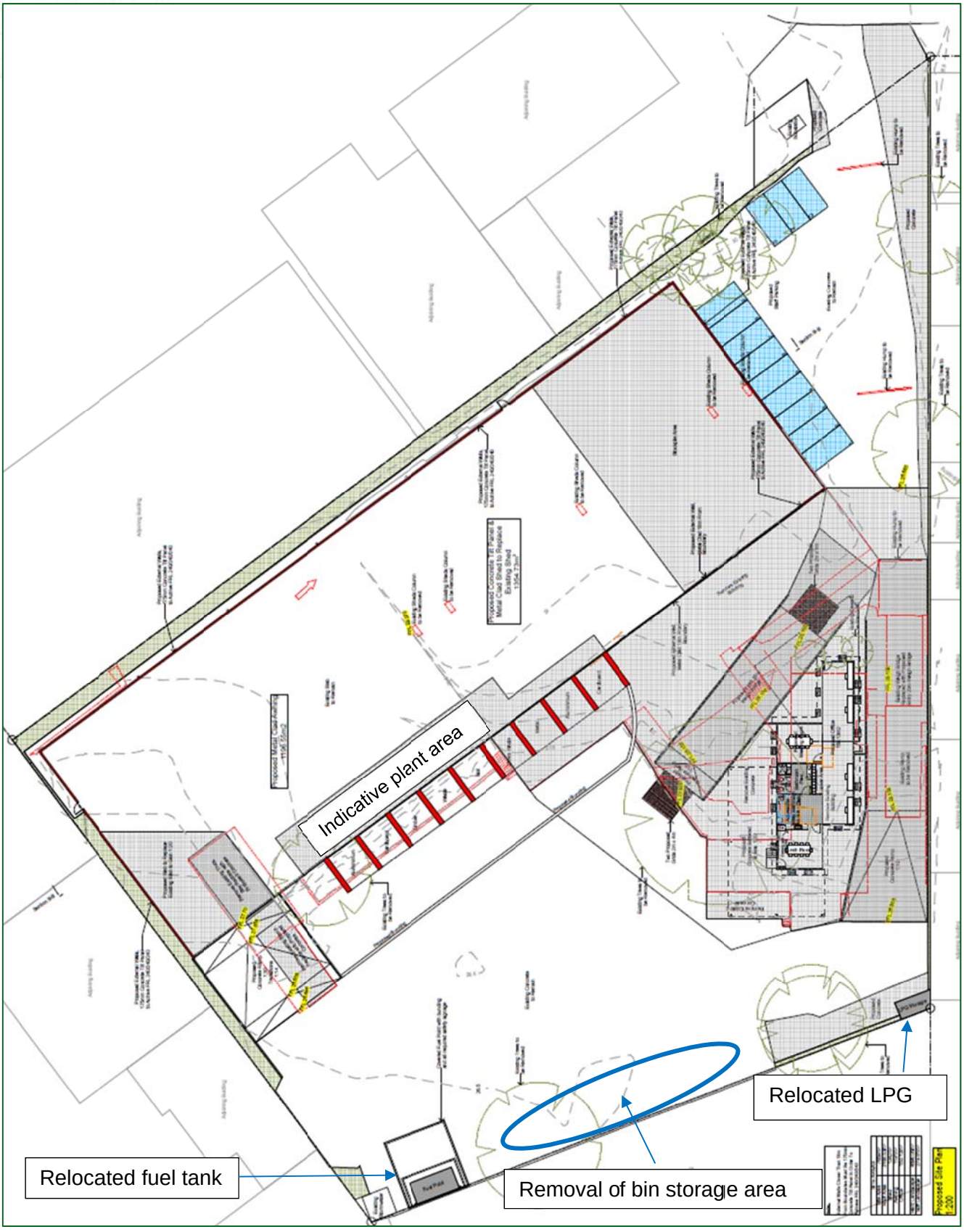


Figure 1: Amended Site Plan

Source: Insight Architecture

1.3. Summary of Key Issues

A copy of the agency responses is provided at **Appendix F**. The key issues raised by agencies are as follows:

Department of Planning and Environment

- Road safety with regard to vehicles accessing and exiting the site;
- Internal site operations with regard to stacking and internal path conflicts; and
- Details of stockpiles and how waste will be processed especially the 24-hour deliveries.

NSW Environment Protection Agency

- Enforceable restrictions for trucks using Barry Avenue; and
- Recommended general conditions of approval for capacity, operation and processing of waste.

Georges River Council

- Did not support the operation of the facility between 10pm and 6am on the basis of noise impacts on nearly residential receivers;
- The site is too small to accommodate the site operation; and
- Vehicle queueing will place additional vehicle burden on Hearne Street.

NSW Fire and Rescue

- Acknowledged that under SEPP 33 the proposed development would not be classified as a potentially hazardous or offensive industry and therefore would likely not require a Fire Safety Study to be assessed and/or approved by FRNSW;
- Concerned relating to fire safety and/or firefighting operations associated with the development proposal remain unresolved or not to the satisfaction of FRNSW; and
- Recommended that a condition of approval be imposed that the proponent meet with FRNSW and then submit a FSS for approval or provide hydraulic fire systems, associated firewater supply and provisions for the containment of contaminated water to the satisfaction of FRNSW.

1.4. Assessment and Determination Process

The proposal is within the category of waste and resource management facilities listed in Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*. Consequently, the development is classified as SSD and approval would be required under Part 4, Division 4.1 of the EP&A Act.

The Secretary for Planning and Environment, on behalf of the Minister, would review the EIS, all submissions received, and this Submissions Report. Once Planning and Environment has completed its assessment, a Secretary's Environmental Assessment Report (or equivalent) would be prepared for consideration of the Planning Assessment Commission (PAC). It is anticipated that the PAC would prepare a review report including recommendations and determine the application.

1.5. Structure of the Document

This report is structured as follows:

- Chapter 1 - provides the background to the report and assessment process;
- Chapter 2 - sets out the changes made to the Proposal;
- Chapter 3 - discusses the comments made by government agencies;
- Chapter 4 - provides a response to the key issues raised;
- Chapter 5 - provides a tabulated response to all submissions raised;
- Chapter 6 - sets out a revised and final statement of commitments; and
- Chapter 7 - concludes the report.

Technical responses are provided within the appendices and assist in informing the proponent's response.

2. Summary of Proposal Amendments

The Mortdale EIS and supplementary studies undertaken to support the RTS Report, including the request for additional information by government agencies has demonstrated that the proposal can proceed with minimal environmental impacts.

Having regard to further input from the DP&E and other relevant agencies, the proponent has made amendments to the EIS to ensure that any concerns on the viability of the proposal are resolved and confirm without doubt that any impacts to the environment or the community will be further reduced and remain below applicable impact thresholds. These changes will ensure that the proposal satisfies the relevant environmental assessment framework whilst also remaining aligned with community expectations and government agency objectives alike. In this way, the project is justified and should be supported by DP&E.

To this extent, the Proponent is seeking to:

- Reduce the proposed annual throughput from 300,000 tonnes per annum to 220,000 tonnes per annum;
- Amend the proposed hours of operation from 24 hours to 6:00am-10:00pm only;
- Provide modifications to the proposed heavy vehicle access, queuing, bin storage, unloading and loading arrangements; and
- Introduce additional arrangements to restrict heavy vehicles movements to Hearne Street only.

These changes are discussed in more detail below.

2.1. Annual processing limit

The proposed 300,000 tonnes sought under the initial SSD application reflects a market demand for waste and recycling facilities from the housing and infrastructure boom currently experienced in NSW. The EIS, incorporating appropriate management and mitigation measures supports the 300,000 tonne annual throughput sought.

Technical studies provided as part of the EIS have proven that the proposed use will operate within industry standards with minimal impact to the environment, the surrounding businesses and community. Further, the processing plant proposed for the facility adopts improved levels of automation providing fast and efficient processing times to ensure waste will be processed with maximum efficiency limiting stockpile sizes and the need for onsite bin storage.

Notwithstanding the above, in response to feedback received from Government agencies, the proponent seeks to reduce the maximum annual throughput sought from 300,000 tonnes to 220,000 tonnes per annum. A reduction in maximum annual throughput will provide greater certainty to regulatory authorities relating to the handling capacity of the site while also resulting in reductions in environmental impacts which will provide amenity benefits to the surrounding business community and nearby residential areas. The benefits to the overall site operations, community and environment are discussed in Section 4 of this report.

2.2. Night-time Hours of Operation

As documented in the EIS, the proponent originally sought to accept and transport waste from the site 24 hours per day Monday to Saturday with processing activities (separation of waste) limited to 6:00am to 10:00pm. The 24-hour operation was proposed to support the 300,000 tonnes per annum throughput originally sought, and predicted demand from waste generation associated with 24 hour construction programs for regionally significant infrastructure projects.

The proponent no longer seeks to pursue night-time operations and now wishes to operate from 6:00am to 10:00pm (Monday to Saturday). Consequently, there will be limited night-time noise generated from the site. Night-time impacts will be limited to the morning 'shoulder period' of 6:00am to 7:00am by restricting operating hours from 6:00am to 10:00pm. This will result in a substantial reduction in impacts during the night-time period to the surrounding residential area and resolve any concerns or uncertainty raised with regard to night-time noise and vibration impacts. It is believed that this substantial reduction in proposed hours of operation will assist in meeting community expectations relating to night-time noise and vibration.

The environmental impacts associated with the revised hours of operation are quantified in Section 4 of this report.

2.3. Use of Barry Avenue

The proponent is committed to confining operational vehicle movements to Hearne Street and restrict the use of Barry Avenue. The Traffic impact assessment report prepared by GTA Consultants (29/06/2016) to support the Mortdale EIS demonstrates that vehicles accessing the site predominantly use Hearne Street and rarely use Barry Avenue.

Notwithstanding this, further measures to discourage the use of Barry Avenue are proposed, including directional signage and dedicated traffic control personnel. Furthermore, the proponent supports the implementation of mass limits within the residential portion of Barry Avenue, as detailed in the Georges River Council submission.

These additional commitments address a substantial number of submissions which raised concerns with the use of Barry Avenue and amenity impacts associated with heavy vehicle movements on this road. This matter is discussed in more detail in Section 4.2.5 of this report.

2.4. Bin Storage

The proponent no longer wishes to, or has the need to store waste bins on site. The efficiency of the Mortdale facility will be improved as a result of there being no bin changes or swap-over on the site. Once a bin truck offloads waste in the shed, it retains its bin and transports the bin off-site. This measure improves the overall functionality of the site by allowing for more efficient manoeuvring through the site and improved vehicle queuing and stacking arrangements during peak periods. This initiative also reduces 'double handling' which has benefits relating to fuel consumption, greenhouse gas emissions and labour costs.

The architectural plans provided in **Appendix A** have been updated to reflect this operational change. Similarly, vehicle queuing plans have been updated to reflect an increase in the number of vehicles stacking on the site.

2.5. Increase in staff

In response to agency feedback, an additional traffic controller is proposed at the site entrance as required by the vehicle/traffic movement assessment undertaken by TTPP (31/03/2017). The number of employees has therefore increased from twelve to thirteen staff.

2.6. Capital Investment Value Update

The proponent has reviewed the current Capital Investment Value (CIV) to reflect the proposed plant within the processing shed. The proposed plant is estimated to be valued at $1,000,000 which has resulted in a CIV value increase from $2,712,600 to $4,119,522 incl. GST.
The updated CIV is attached at **Appendix G** to this report.

2.7. Conclusion

By reducing the proposed annual throughput and hours of operation, community concerns have been addressed to the extent that noise emissions and traffic impact considerations are definitively well below the relevant impact and amenity thresholds for the area. The modifications and commitments made by the proponent in the initial RTS and this report have now resolved the majority of submissions from the community and agencies.

The proponent is confident that these measures would translate to an improved outcome which would benefit the residential amenity, the environment and the road network for the above stated reasons.

3. Additional Government Agency Submissions

This section presents an overview of the additional government agency submissions received on 15th February 2017 in response to the Response to Submissions report (RTS) prepared in support of the public exhibition process for Mortdale SSD application (SSD 7421).

Issues raised by each agency are provided in full at **Appendix F** and are listed below to:

3.1. Department of Planning and Environment

- Road safety in terms of accessing and exiting the site;
- Vehicle stacking and internal path conflicts;
- 24-hour operation;
- Alarms for leachate management;
- Details of stockpiles; and
- Details of processing waste.

3.2. NSW Environment Protection Agency

- Enforceable restrictions for trucks using Barry Avenue.
- Recommended conditions of approval:
  - Preparation of Operation Environmental Management Plan prior to commencement of works;
  - Limits on the annual tonnage limits;
  - Types of waste to be received;
  - Management of construction and demolition waste;
  - Preparation of an Air Quality Management Plan;
  - Construction noise management; and
  - Hours of operation.

3.3. Georges River Council

- Removal of waste outside of peak operations;
- Conflicts with vehicle stacking and swept paths;
- Vehicle queuing on Hearne Street;
- Noise generated from vehicles during after-hours operation;
- Insufficient assessment of noise impact and noise frequency at Hearne Street/ Boundary Road and Boundary Road/Forest Road;
- The cumulative impact of plant noise has not been identified; and
- Site is of an insufficient size to accommodate operation, queuing and movements at the capacity proposed.

3.4. NSW Fire and Rescue

- A full assessment of the FSS is required to be undertaken by FRNSW pending approval;
- Does not support the proposed location of hydrant booster assembly and attack fire hydrants nor does the fire hydrant system meet the requirements of FRNSW;
- Details on sprinkler booster assembly or any associated dedicated firewater storage tanks have not been provided;
- The hydraulic design should cope with any hazards and the consequence thereof;
- Critical information relating to fire water supply, identified worst case fire scenario firewater requirements, contaminated firewater containment quantities/site capabilities and detailed fire service drawings need to be provided with the study;
- FSS does not contain required calculations or information to allow FRNSW to undertake an accurate assessment of the sites containment capabilities;
- Acknowledges that under SEPP 33 the proposed development would not be classified as a potentially hazardous or offensive industry and therefore would likely not require a FSS to be assessed and/or approved by FRNSW;
- Concerns relating to fire safety and/or firefighting operations associated with the development proposal remain unresolved or not to the satisfaction of FRNSW; and
- Recommends that a condition of approval be imposed that the proponent meet with FRNSW and then submit a FSS for approval or provide hydraulic fire systems, associated firewater supply and provisions for the containment of contaminated water to the satisfaction of FRNSW.

4. Response to Key Issues

This section provides a response to the key issues raised by government agencies in relation to the RTS Report.

4.1. Site Operations

The DP&E sought additional clarification on the site operations in terms of processing and stockpiling of waste. As stated in Chapter 3 of this report, the proponent has made substantial changes to the SSD application by reducing the annual throughput sought from 300,000 tonnes to 220,000 tonnes per annum and proposed changes to the operation time from 24 hours per day to 6:00am to 10:00pm (Monday to Saturday) only.

When compared to the initial SSD application, it is anticipated there will be cumulative environmental benefits resulting from the reduced annual processing limit and hours of operation with respect to:

- Residential amenity:
  - alleviate amenity impacts raised by the community in terms of traffic and vehicle movements causing noise and vibration at night;
  - improve road safety along Hearne Street as well as for vehicles accessing and exiting the site as a result of reduced vehicle movements; and
  - reduce environmental impacts concerning operational noise, dust and vibration.
- Site operations:
  - no noise generated from the facility or vehicle movements between 10:00pm and 6:00am;
  - reduce noise impact and vehicle movements at Hearne Street/ Boundary Road and Boundary Road/Forest Road; and
  - reduce cumulative plant noise, vibration and dust impacts as a result of reduced use.
- Traffic:
  - reduce traffic and vehicle movements to and from the site;
  - reduce probability of queuing of vehicles at the entrance to the site; and
  - negate the need for vehicle queuing on Hearne Street.
- On-site vehicle movements:
  - reduce the duration and frequency of vehicles stacking within the site;
  - remove any conflicts with vehicle stacking and swept paths; and
  - confine the removal of waste during day-time operation hours.

4.1.1. Excessive nature of the operation and insufficient size of facility

Georges River Council has raised concern that the size of the site is insufficient to support the processing of waste at the 300,000 tonnes annual throughput originally sought. Whilst the facility has sufficient capacity to process waste to this limit and remain compliant with relevant impact thresholds, the proponent is prepared to reduce the annual processing throughput to 220,000 tonnes. This reduction of almost a third in processing waste will further reduce cumulative environmental and amenity impacts and consequently addresses Council's concerns.

All environmental and technical studies have used conservative criteria to determine the maximum impacts associated with the proposed development. These assessments have determined that the site can operate efficiently without unreasonably impacting on the amenity of the surrounding locality.

A reduced throughput assisted by the advanced automated machinery proposed will not only improve handling and processing efficiency, but also reduce vehicle movements to the site and reduce stacking of vehicles within the site during peak periods. With regard to traffic and safety, an additional traffic controller will be positioned at the entrance of the facility to improve vehicle flow in Hearne Street and facilitate vehicles entering and exiting the facility in an efficient and safe manner to both avoid congestion and improve road and pedestrian safety.

4.1.2. Delivery of Waste

There are currently over 60 sites listed on the business operator's Tip Site Register, most of which remain active tip sites for the business on an ongoing basis. At the time of writing, processed waste is being transported to the facilities listed in **Table 2**. These arrangements are subject to change due to market and regulatory influences including but not limited to, changes to gate fees, variations conditioned in agreements, approved site capacity thresholds, processing and storage capacity, and facility operational issues such as product preferences related to what is being stored and processed at the time and weather conditions.

Table 2 – Tipping Facilities

Material	Facility Location	EPL No.
Steel	Kings Park	EPL11555
Brick and Concrete	Wetherill Park	EPL11815
Green Waste	Badgerys Creek	EPL4625
Timber	Badgerys Creek Chipping Norton Belrose Menangle	EPL4625 EPL2794 EPL4504 EPL3991
Paper and Cardboard	Botany St Marys	EPL1594 EPL20640
Heavy mixed materials	Auburn Banksmeadow Minto St Marys Smithfield	EPL10935 EPL12857 EPL10638 EPL20621 EPL20653
Unexpected Finds (e.g. batteries, gas bottles)	Various depending on item and waste classification	Various

4.1.3. Processing of waste

Figure 2 sets out the process to manage waste from delivery to removal off-site. Processing capacity at key stages of material processing are noted in this Figure 2. The main feed for the plant will be set to process a maximum of 70 tonnes of waste per hour. Noting the proposed operating hours and number of operating days per year the plant has capacity to process 350,000 tonnes of mixed heavy waste in addition to over 125,000 tonnes of oversized waste. This translates to a total capacity of over 450,000 tonnes. The previously proposed 300,000 tonnes annual throughput was conservative when compared with the potential waste processing capacity proposed for the plant, however in response to stakeholder feedback, the proponent has revised the proposed annual throughput to 220,000 tonnes per annum.

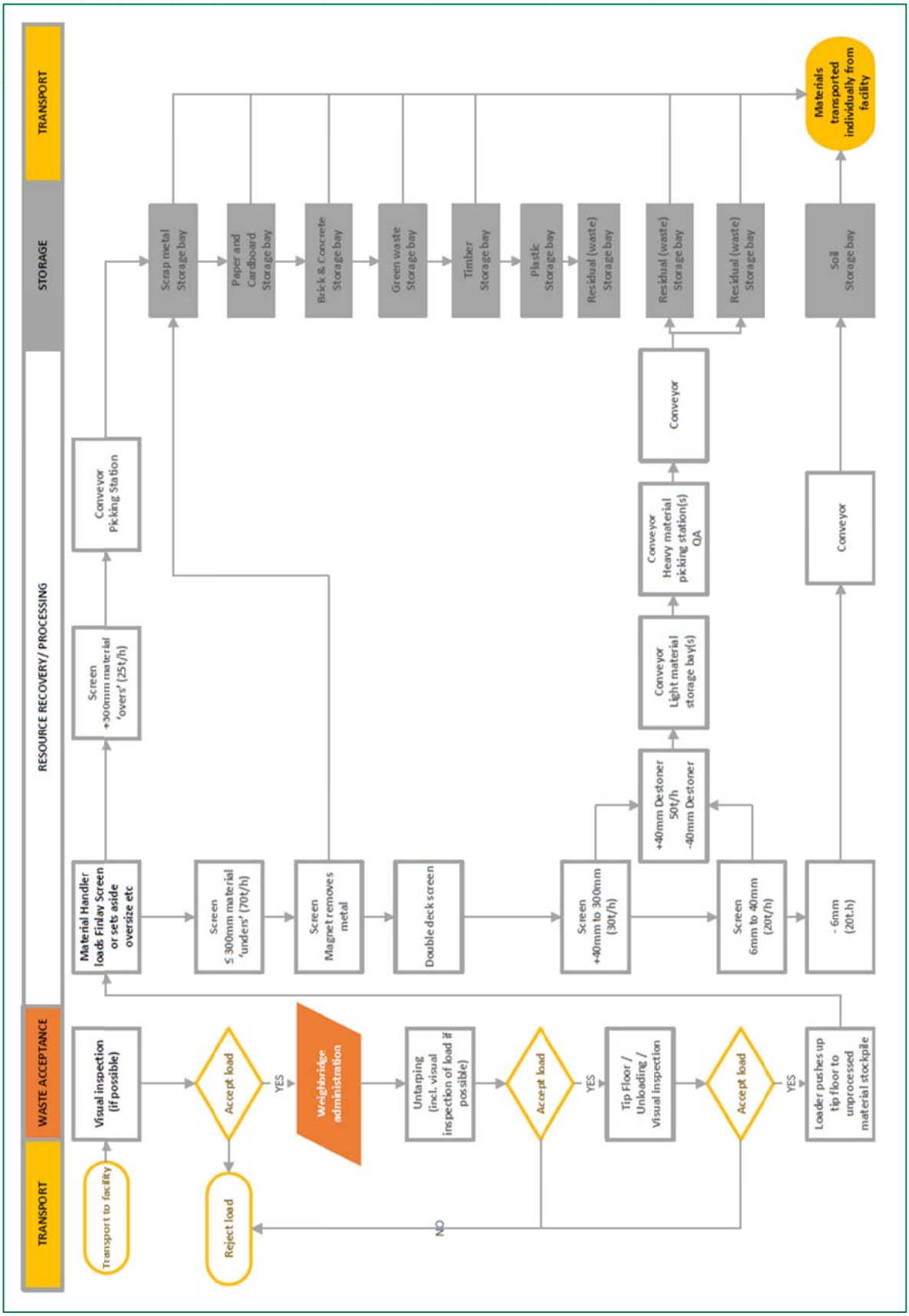


Figure 2: **Waste Processing Flowchart**
Source: Bingo Industries Pty Ltd

4.1.4. Stockpiles

The current Environment Protection Licence (EPL 20622) issued on 5 January 2016, allows for 5,000 tonnes of waste to be held on the site at any one time. Under the EIS, the proponent sought to increase the maximum allowable waste to be held at the site at any one time to 10,000 tonnes.

Whilst it is now proposed for the annual throughput to be reduced to 220,000tpa, the limit for waste to be held on the site at any one time will remain the same. The proponent believes that a maximum limit of 10,000 tonnes at any one time is appropriate for the site. Following project approval, an application will be made to the Environment Protection Authority (EPA) to vary the EPL to ensure it remains consistent with the approval.

Whilst the proposed plant and machinery has capacity to process in excess of 100 tonnes per hour, it is unlikely that this will occur as the site will never operate at capacity for 100% of the time. It should be noted that machine settings will be adjusted to process 70 tonnes per hour under normal operating conditions.

The waste storage capacity takes into account the capacity of the designated stockpile area for unprocessed material and storage areas for processed materials, deliveries and outbound materials. It should be noted that the NSW EPA's advice to facilities when 'authorised amounts' were introduced, was to determine a volume that the site will always remain below.

The applicant believes that 10,000 tonnes is a reasonable determination on the basis of the technical assessments supporting the proposal in the RTS report which includes detail relating to the capacity of the equipment. Furthermore, this limit is justified having regard to the volume conversions provided in **Table 3** and **Table 4**.

Technical assessments prepared to assess the revised throughput for the Mortdale facility supports the intended annual throughput of 220,000 tonnes. It can be demonstrated that the stockpile capacity of the site is suitable from the volumetric breakdown of the stockpile area having regard for the different types of wastes accepted at the site.

A breakdown of stockpile capacity has been provided in **Table 3** and **Table 4** and is based on two scenarios. The two scenarios indicate low density waste and high density waste stockpile capacity in tonnes using the conversion factors adopted by NSW EPA Waste Levy Guidelines.

The low-density waste scenario represents a scenario where 100% of inbound material is light waste. The stockpile area for unprocessed waste would thereby have a capacity of approximately 2,891 tonnes. When taking into account the additional storage capacity provided by processed material bays the site has a total storage capacity of 4,686 tonnes approximately.

A high-density waste scenario in terms of amount of waste on site is represented by a situation where 100% of the waste in the unprocessed waste stockpile is heavy material consisting of materials including but not limited to concrete, brick, rock, sand and or soil. The amount of waste by weight in the unprocessed waste stockpile would then be approximately 6,196 tonnes. When taking into account the additional storage capacity provided by processed material bays the site has a total storage capacity of 7,990 tonnes approximately. A 10,000 tonne any one-time limit is therefore considered reasonable and is supported by the scenarios provided.

A breakdown of stockpiles identified the following:

Table 3: Breakdown of Stockpile Capacity: High density waste scenario
Source: Bingo Industries Pty Ltd

Storage Area	Area (m2)	Volume (m3)	Conversion factor (t/m3)	Tonnes
1. Stockpile - Tip Floor / Unprocessed Material	574	4,131	1.5	6,196
2. bay - residual	24.5	147	0.7	103
3. bay - residual	24.5	147	0.7	103
4. bay - residual	24.5	147	0.7	103
5. bay - soil	24.5	147	1.5	221
6. bay - plastic	24.5	147	1.1	162
7. bay - timber	24.5	147	1.1	162
8. bay - green waste	24.5	147	1.1	162
9. bay - brick & concrete	24.5	147	1.2	176
10. bay - paper & cardboard	24.5	147	1.1	162
11. bay - metal	24.5	147	1.1	162
12. Trucks (assumes max stacking of 28 trucks on site at any one time and average 1:1 density all inbound / outbound waste)		280	1	280
TOTAL (tonnes at any one time)	874	5,601		7,990

Table 4: Breakdown of stockpile capacity: Low density waste scenario
Source: Bingo Industries Pty Ltd

Storage Area	Area (m2)	Volume (m3)	Conversion factor (t/m3)	Tonnes
1. Stockpile - Tip Floor / Unprocessed Material	574	4,131	0.7	2,891
2. bay - residual	24.5	147	0.7	103
3. bay - residual	24.5	147	0.7	103
4. bay - residual	24.5	147	0.7	103
5. bay - soil	24.5	147	1.5	221
6. bay - plastic	24.5	147	1.1	162
7. bay - timber	24.5	147	1.1	162
8. bay - green waste	24.5	147	1.1	162
9. bay - brick & concrete	24.5	147	1.2	176
10. bay - paper & cardboard	24.5	147	1.1	162
11. bay - metal	24.5	147	1.1	162
12. Trucks (assumes max stacking of 28 trucks on site at any one time and average 1:1 density all inbound / outbound waste)		280	1	280
TOTAL (tonnes at any one time)	**874**	**5,601**		**4,686**

As a result of the above calculation, it can be concluded that approximately 8,000 tonnes of waste can be held on the site at any one time and that the amount of waste held, when measured in tonnes, is highly influenced by the nature and density of inbound material. Based on advice from the EPA in relation to the calculation of authorised amounts, following introduction of the *Protection of the Environment Operations (Waste) Regulation 2014*, allowance should be made for contingency. Taking into account the aforementioned waste calculation and contingency, a 10,000 tonne 'at any one time' limit is considered to be appropriate and justified for the Mortdale facility.

4.1.5. Processing plant

SKALA Australasia Pty Ltd (Skala) was commissioned by the business operator to design, supply and install the plant and machinery for the Mortdale facility (**Figure 3**). Skala is a service and equipment supplier specialising in bulk material handling and vibratory process equipment. The following provides a description of plant functionality by Skala:

- Waste is placed on the tip floor within the building in bins or by trucks carting waste in bulk skip bins and trucks;
- Mixed waste is loaded to the processing plant via a specialised grab holding approximately 1 tonne per grab and loading 4 to 5 grabs per minute;
- Once loaded, the material is mechanically separated into two specific sizes for further processing. These are referred to as 'overs and unders'. At this stage of the process, approximately 30% of the material is categorised as overs and 70% as 'unders';
- Overs are hand processed in a controlled indoor environment and selected recycled materials are individually transferred to final storage bays;
- Each storage bay is 3.5m x 7m deep and 6m high providing in excess of 147m^3 storage per bay;
- Metal is removed from the 'unders' transfer line prior to secondary screening. This involves a mechanical process with secondary mechanical backup which transfers the metal via a conveyor system to a storage bay;
- The 'unders' continue to multiple size reduction machines;
- The various size materials from the separation/sizing process are conveyed directly to the specific storage bays;
- The size reduction equipment is capable of 100 tph to meet the loading needs but will typically operate at up to 70 tpa;
- Within this process, any fine remaining metal is removed mechanically and conveyed to the storage bay;
- Selected 'unders' materials are sent for further mechanical air and vibration separation;
- These highly effective and efficient machines sort and separate select products. These products are sent for further manual quality checks and are hand processed in a controlled indoor environment before being conveyed to their respective storage bays;
- Equipment selected for the Mortdale facility has the highest efficiency and lowest power consumption. The machinery is isolated from the building and from adjacent slabs and floors to minimise vibration; and
- Any airborne dust is suppressed by means of fine water mist, covers and hoods on machines.

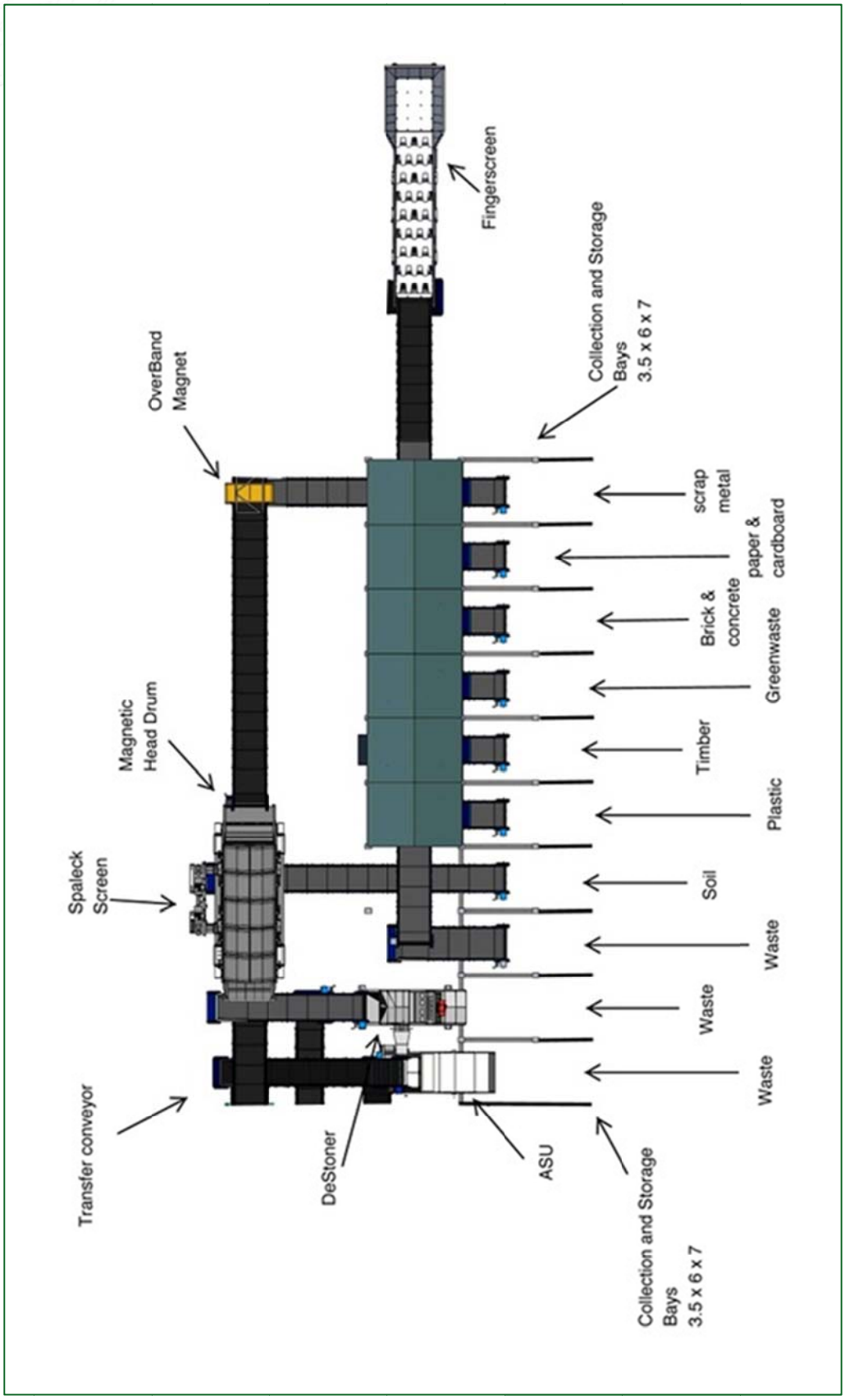


Figure 3: Proposed processing plant at the Mortdale facility
Source: SKALA

4.1.6. Leachate

In the unlikely event of leachate forming within the shed, the proponent is committed to ensuring that an alarm system will be installed to indicate that the leachate sump is reaching capacity. The leachate collection sump has a capacity to hold approximately 1000 litres and will be installed to a depth of 1.2 metres. An alarm will be installed at a height of 1 metre at which time arrangements will be made to remove leachate from the tank. Leachate will be removed by tanker from the site and transferred to an appropriately licensed facility for treatment and disposal. Management measure for the system installed will be identified in the OEMP.

4.2. Traffic

TTPP traffic consultants have prepared a response to the issues raised by the government agencies and recalculation of vehicle movements as a result of the reduced throughput. Further detail was also provided on the site operation and specifically, vehicle movement within the site, road safety and internal operations to further justify the proposed development.

4.2.1. Road Safety

TTPP have prepared a comprehensive response to the issue of road safety (**Appendix C**) and recommend the following additional measures as reflected in **Figure 4** and **5**:

- A traffic controller will be located at the entrance of the Mortdale facility and within the site to ensure safe vehicle movements to and from the site and within the site;
- Road markings will clearly distinguish lane separation; and
- Installation of 'left turn only' signage at the site exit point.

Figure 4: Traffic Controls at Site Access
Source: TTPP

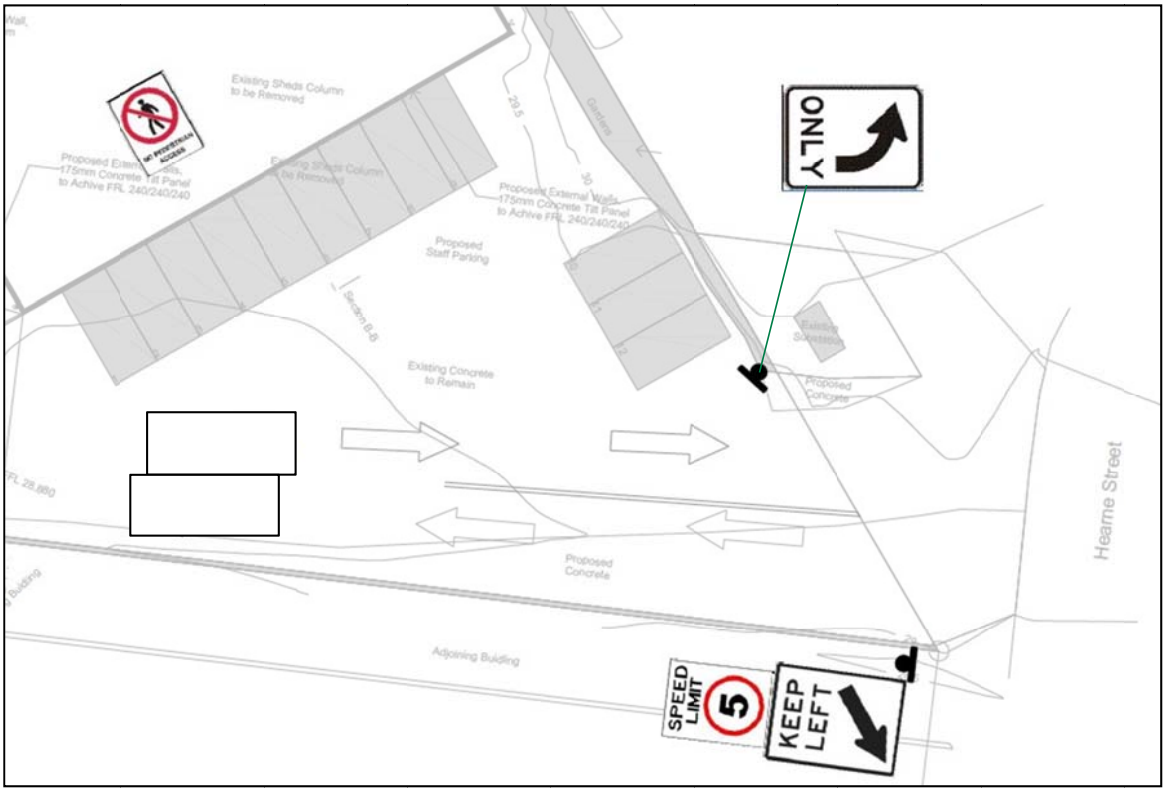
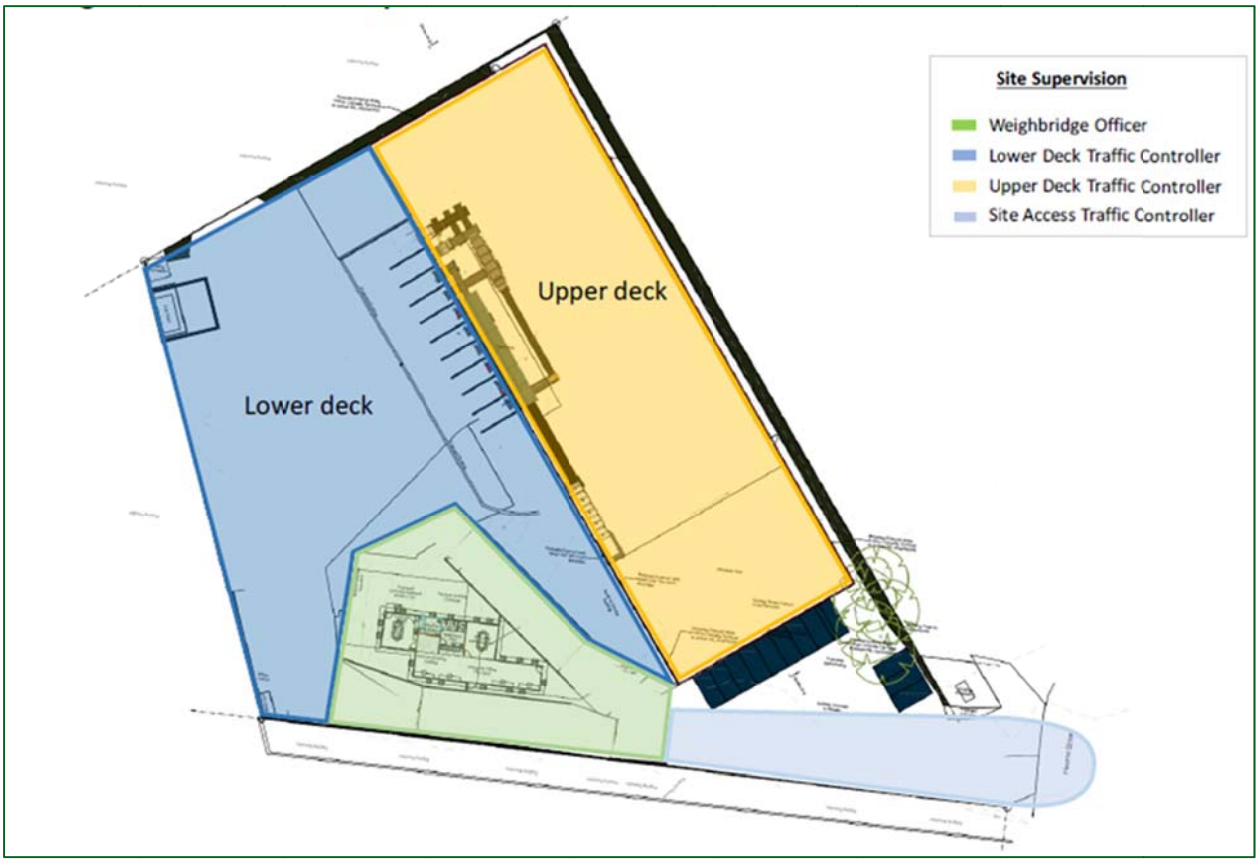


Figure 5: Areas of Site Supervision
Source: TTPP



4.2.2. Vehicle movements

The number of vehicles entering and exiting the Mortdale facility will be reduced as a result of the proposed modifications to reduce the annual processing limit by almost a third (**Table 5**) based on the revised traffic data calculated on 220,000 tonnes per annum and site operations from 6am and 10pm only. TTPP have advised that based on similar hourly flows to the existing conditions, the expected average daily two-way vehicle flow equates to 364 movements (i.e. 182 trucks).

At a throughput of 220,000 tonnes, during the site's peak operational hour, there are 64 two-way vehicle movements (i.e. 32 trucks). During the key peak periods, two-way vehicle trips have been adjusted as follows:

- Morning road network peak (9:00am – 10:00am) has resulted in a reduction of 11 two-way trips (roughly six trucks);
- Site peak operation (11:00am – 12:00pm) has resulted in a reduction of 14 two-way trips (seven trucks); and
- Afternoon road network peak (4:00pm – 5:00pm) has resulted in an increase of five two-way trips (roughly three trucks).

Overall, the reduced waste throughput has resulted in a reduction of vehicle movements across the key peak periods. The hourly vehicle movements during the existing operation and future operation have been summarised in **Table 5** below.

Table 5: Anticipated 24-hour Traffic Profile of Two-way Vehicle Movements
Source: TTPP

Starting Hour	Existing Operation		Future Operation (300,000 tpa)		Future Operation (220,000 tpa)	
	Volume	Percentage	Volume	Percentage	Volume	Percentage
00:00	0	0.0%	2	0.5%	0	0.0%
01:00	0	0.0%	2	0.5%	0	0.0%
02:00	0	0.0%	2	0.5%	0	0.0%
03:00	0	0.0%	4	1.0%	0	0.0%
04:00	0	0.0%	4	1.0%	0	0.0%
05:00	0	0.0%	6	1.5%	0	0.0%
06:00	11	5.4%	17	4.0%	10	2.8%
07:00	17	8.2%	30	7.0%	12	3.4%
08:00	18	9.0%	34	8.0%	22	6.0%
09:00 **a**	22	11.0%	43	10.0%	32	8.8%
10:00	27	13.0%	52	12.0%	40	11.0%
11:00 **b**	29	14.0%	56	13.0%	42	11.5%
12:00	21	10.2%	39	9.0%	38	10.4%
13:00	20	9.9%	39	9.0%	32	8.8%
14:00	13	6.6%	26	6.0%	28	7.7%
15:00	13	6.5%	22	5.0%	22	6.0%
16:00 **c**	7	3.4%	9	2.0%	14	3.8%
17:00	6	2.8%	9	2.0%	14	3.8%
18:00	0	0.0%	9	2.0%	16	4.4%
19:00	0	0.0%	9	2.0%	16	4.4%
20:00	0	0.0%	6	1.5%	14	3.8%
21:00	0	0.0%	4	1.0%	12	3.4%
22:00	0	0.0%	4	1.0%	0	0.0%
23:00	0	0.0%	2	0.5%	0	0.0%
Total	**204**	**100%**	**430**	**100%**	**364**	**100%**

Notes:

a Road network AM peak hour

b Operational peak hour at Mortdale Resource Recovery Facility

c Road network PM peak hour

4.2.3. Vehicle Stacking and Turn-over

A total of 31 stacking spaces would be provided across both decks that could accommodate a mixture of waste delivery vehicle sizes, ranging from vans/utes to 19m semi-trailers. A breakdown of the time spent on each activity whilst onsite is summarised in **Table 6**.

Table 6: Timing of Waste Disposal and Collection Activities
Source: TTPP

Activity	Waste Disposal		Waste Collection
	Car/ute/MRV/HRV	Semi-trailer	Semi-trailer and Truck-and-dog
Truck weigh-in	2 mins	2 mins	2 mins
Truck depositing waste on tip floor	10 mins	15 mins	*No waste deposited*
Truck collecting waste at stockpiles	*No waste collected*	*No waste collected*	10 mins
Truck weigh-out	2 mins	2 mins	2 mins
Truck wheel-wash	2 mins	2 mins	2 mins
Total Time Required	**20 mins**	**30 mins**	**20 mins**

TTPP have advised that on average, a truck would spend 25 minutes on-site between entry and exit meaning each stacking space could accommodate 2.4 vehicles in one hour. Therefore, during the site's peak hour of operation (42 two-way vehicle movements), the proposed stacking arrangement could accommodate the turn-over of 74 vehicles (2.4 vehicles x 31 spaces).

Since a single vehicle generates one inbound movement and one outbound movement, the 42 two-way vehicle movements equate to 21 vehicles which would be adequately accommodated during the site's peak hour. Hence, queuing of heavy vehicles would be entirely accommodated and managed within only nine stacking spaces and trucks will not queue onto Hearne Street.

The proposed vehicle stacking arrangement would simultaneously accommodate 31 stacked vehicles (not including the vehicle already on the tip floor) and the largest waste delivery truck (i.e. semi-trailer) exiting the site. The swept path of a 19.0m semi-trailer moving from the tip floor to the waste stockpiles then exiting the site is identified in **Figure 6** and **Attachment C**.

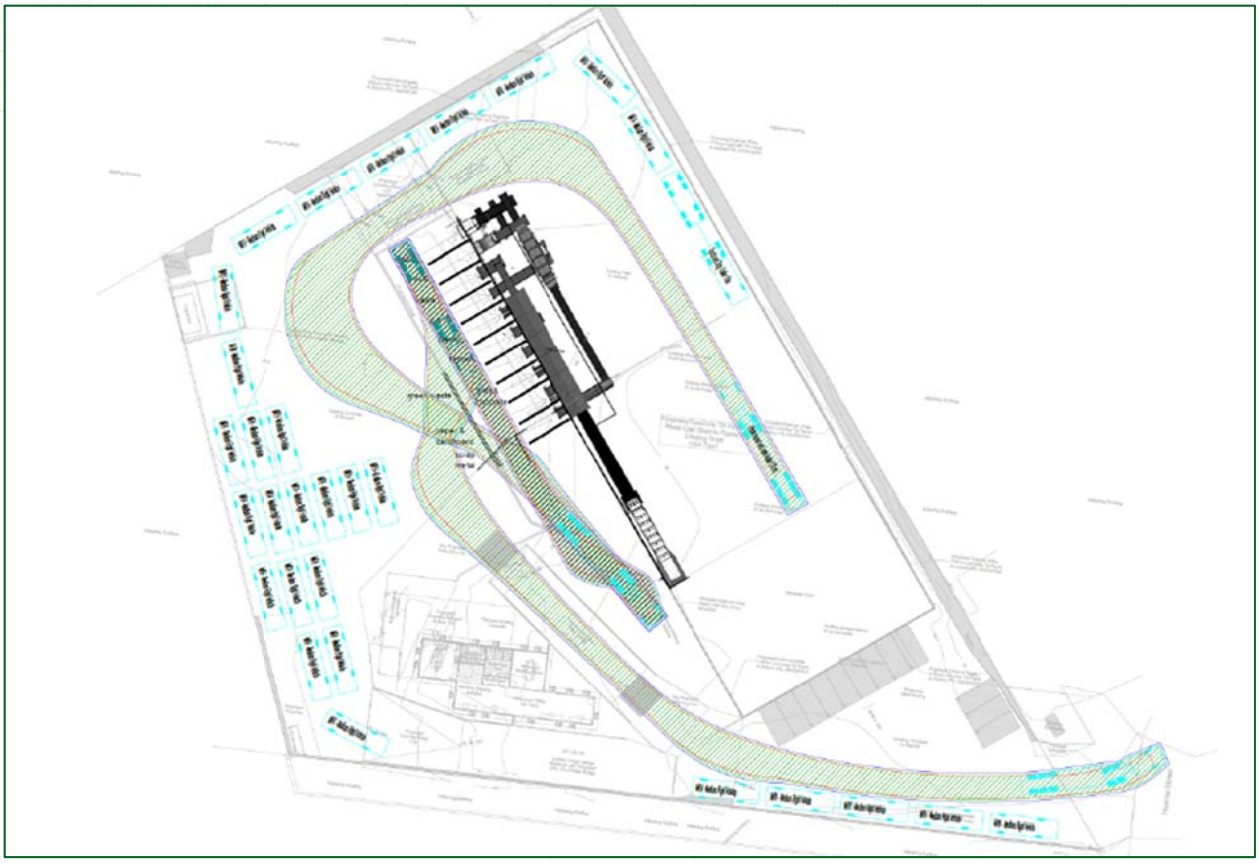


Figure 6: Semi-Trailer Swept Path and Stacking Plan
Source: TTPP

4.2.4. Conflicts with Stacking and Swept Path Movements

The DP&E sought clarity on a perceived conflict between the stacking and swept path movements. TTPP prepared an updated stacking and swept path plan which identified no conflicts between these procedures (**Appendix C**). TTPP have also advised that the reduced vehicle flow will ensure trucks will be wholly accommodated and managed within the site. As a result of the proposed stacking, traffic control arrangements and reduced peak vehicle movement, heavy vehicles are not expected to queue back onto Hearne Street.

The swept path of a 19 metre semi-trailer travelling from the tip floor to the storage bays and site exit indicates that vehicle movements can be achieved without conflict. The 31 stacking spaces are also shown on this plan and include two semi-trailers of 19 metre in length to highlight that the swept path does not clash with the queuing trucks. The on-site stacking plan for waste delivery vehicles is provided at **Appendix C**.

The swept path analysis provided by TTPP demonstrates that a 19 metre semi-trailer and a 19m truck and dog is able to sufficiently tip waste, proceed to collect waste then exit via the weighbridge without impeding on stacked trucks.

4.2.5. Use of Barry Avenue

The proponent does not propose to use Barry Avenue for any vehicle movements (**Figure 7**). All vehicle movements will be via Hearne Street and onto Boundary Road. All customers and transporters will be encouraged to use this route. Notwithstanding this, it is acknowledged that Barry Avenue is a public roadway and the possibility of heavy vehicles utilising Barry Avenue remains. It is, however, evident that it is not practical for vehicles to access the facility from Barry Avenue due to the turning path from this route.

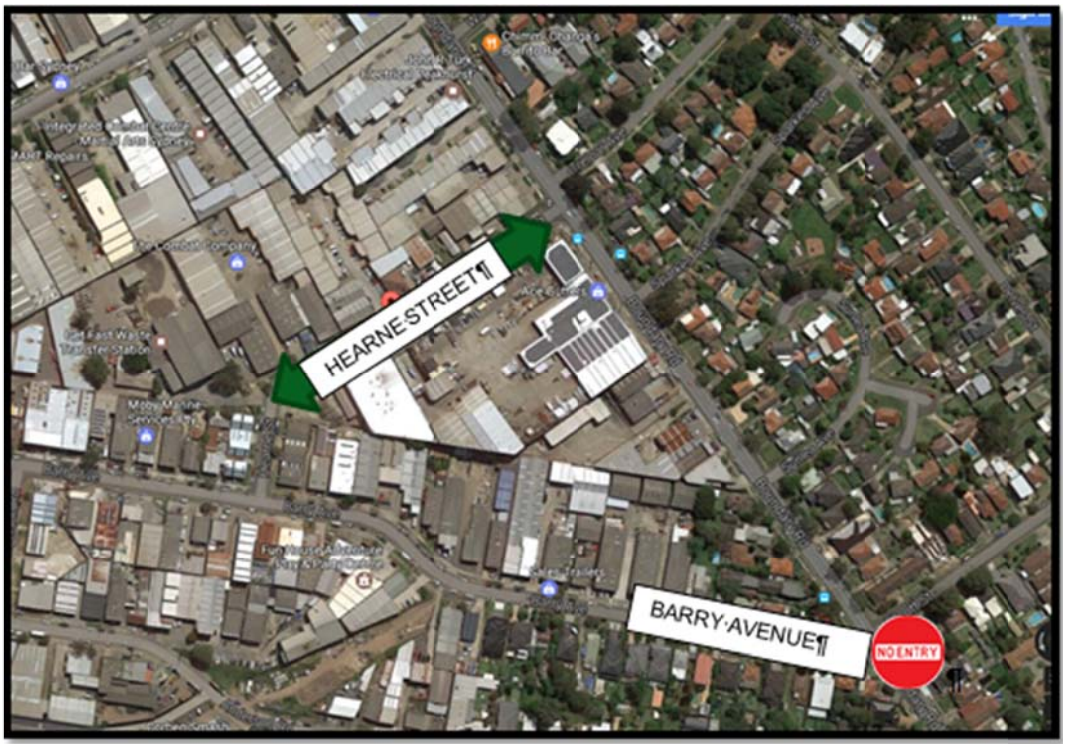


Figure 7: No use of Barry Avenue
Source: Google Maps

GTA Consultants Traffic Report (29/06/2016) surveyed traffic turning movements at the site access during the road network peak periods on 9 December 2015. This investigation revealed that only 2 vehicles entered the site via Barry Avenue and 2 left the site and turned right to use Barry Avenue whilst the majority of vehicles during this period utilised Hearne Street.

The turning movement surveys (**Figure 8** and **Figure 9**) confirm the low number of trucks accessing the site via Barry Avenue in the morning and afternoon periods. This data supports the position that Barry Avenue is not the preferred route for heavy vehicles to access the site and also that the operator discourages the current use of Barry Avenue, and will continue to do so during future operations.

It is worthwhile reconfirming that measures currently in place, including site induction training will be continued for future operations. All drivers are currently, and will continue to be strongly advised, via the formal induction process, to enter and exit the site via Hearne Street from Boundary Road. This is reflected in the site protocols provided in Attachment B of the TTPP Response to Submissions Letter (ref 1622 date 05/12/2016).

To ensure that these operational protocols are enforced, a traffic controller would be located at the site access to direct outbound trucks to the north of Hearne Street combined with the installation of a 'left turn only' sign at the site egress to ensure all motorists turn left from the site into Hearne Street.

In the unlikely scenario, where a truck driver travels to the site via Barry Avenue, the traffic controller will inform them of the acceptable route to the site (i.e. from the north of Hearne Street) and will record the vehicle registration. This record will be used as a measure to monitor the effectiveness of procedures in place to inform drivers of the acceptable routes to use when travelling to site.

Figure 8: Turning movement surveys at the site access from 7:00am -9:00am
Source: TTPP, RTS Letter Ref. 16222

Figure 9: Turning movement surveys at the site access from 16:00pm -18:00pm
Source: TTPP, RTS Letter Ref. 16222

Given the limited number of heavy vehicles associated with the premises utilising Barry Avenue, protocols in place to prevent recurrent use and commitment to introduce additional measures, it is considered that the road traffic noise and safety risks associated with the proposal with respect to Barry Avenue can be managed and mitigated effectively.

4.3. Noise

4.3.1. Impacts on residential receivers

The Noise and Vibration Assessment (SLR Consulting) at **Appendix E**, has been updated to account for the modifications to the proposed redevelopment and feedback from the respective government agencies.

SLR Consulting has advised that no project related traffic noise impacts in respect of the proposal (taking into consideration the reduced hours of operation and throughput) are anticipated at residential receivers adjacent to the surrounding road network, including Boundary Road and Barry Avenue. Also as a result of the reduced annual capacity, machinery and plant use would be reduced. Consequently, it is predicted that less noise will be generated which would improve any impacts to the residential amenity. SLR has further advised that the facility would comply with project specific noise criteria.

Operations during the night time period will be limited to the morning shoulder period of 6:00am to 7:00am. This represents a substantial reduction in night time noise operations when compared to 24 hour operations previously proposed. It is predicted that the change of proposed operating hours will however, see a slight increase in vehicles using the facility from 6:00pm to 10:00pm to accommodate movements previously forecast to take place during the night-time period.

4.3.2. Vehicle movements

The relevant assessment criteria for residences potentially affected by additional traffic generated by the Mortdale facility on Boundary Road are the LAeq (15 hour) and LAeq (9 hour) criteria as described in **Table 7**.

SLR Consulting has considered the existing traffic flows on Boundary Road, as presented in **Table 7**, along with the project generated traffic flows. The assessment assumes that heavy vehicles accessing the site would travel via Boundary Road and Hearne Street. Heavy vehicles would be discouraged from travelling along Barry Avenue.

The weekly average traffic flows for morning shoulder (6:00am to 7:00am) and daytime/evening (7:00 am to 10:00 pm) are shown, together with the relative percentage increase associated with the Project traffic. The existing traffic flows on Boundary Road are presented in **Table 7** below, along with the project generated traffic flows. The weekly average traffic flows for morning shoulder (6:00am to 7:00am) and daytime/evening (7:00am to 10:00pm) are shown, together with the relative percentage increase associated with the project related traffic.

The relevant assessment criteria for residences potentially affected by additional traffic generated by the Mortdale facility on Boundary Road are the LAeq (15 hour) and LAeq (9 hour) criteria as described in **Table 7**.

Table 7 NSW RNP Road Traffic Noise Assessment Criteria for Residences

Source: SLR

Road category	Type of project/land use	Assessment criteria[1]	
		Day/Evening (7:00 am to 10:00 pm)	Night (10:00 pm to 7:00 am)
Freeway/arterial/sub-arterial roads	Existing residences affected by **additional traffic** on existing freeways/arterial/sub-arterial roads generated by land use developments	LAeq(15hour) 60 dBA	LAeq(9hour) 55 dBA
Local Roads	Existing residences affected by **additional traffic** on existing local roads generated by land use developments	LAeq(1hour) 55 dBA	LAeq(1hour) 50 dBA

Note 1: The criteria are for assessment against façade-corrected noise levels when measured at 1 m in front of a building facade.

The maximum 38% and 2.4% increase in heavy vehicle and total traffic flows, respectively, due to the Project related vehicles on Boundary Road would result in less than a 2 dBA increase in the existing traffic noise levels. Specifically, the traffic noise levels would increase by 0.7 dBA and 0.4 dBA during the daytime/evening and morning shoulder periods, respectively.

A noise increase of up to 2 dBA represents a minor impact that, in accordance with the EPA's Road Noise Policy is considered barely perceptible to the average person. Further, the EPA's Road Noise Policy goes on to say, 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 dBA above the corresponding 'no build option'. Accordingly, no project related traffic noise impacts are anticipated at residential receivers adjacent to the surrounding road network, including Boundary Road and Barry Avenue.
SLR has confirmed that one or two noise events per night, with maximum internal noise levels of 65-70 dBA, are not likely to affect health and wellbeing significantly. The allowable corresponding external noise levels would be 10 dBA and 25 dBA higher with windows open and windows closed, respectively. This equates to external noise levels of 75-80 dBA (windows open) and 90-95 dBA (windows closed). Accordingly, SLR conclude that no potential sleep disturbance impacts are likely from the project related truck movements on the public road network.

It is also noted that, in undertaking the traffic noise assessment, the truck and light vehicle sound power levels for both the LAeq and LAmax noise emissions under normal and high noise levels events (i.e. braking and accelerating, including body noise) have been used in the noise modelling to determine the traffic noise assessment against the LAeq (LAeq(15hour) and LAeq(9hour)) and LAmax (sleep disturbance) criteria.

Table 8 Weekly Average Traffic Flow on Boundary Road[1,6]

Source: SLR

Road	Period	Existing[2,3]			Project-generated (Proposed)[1,7]			Cumulative			Increase due to Project		
		LV	HV	Total	LV	HV	Total	LV	HV	Total	LV	HV	Total
Boundary Road	Daytime[4]	14075	921	14996	12	353	366	14087	1275	15362	0%	38%	2.4%
	Morning Shoulder[5]	660	71	731	12	10	22	672	81	753	1.8%	14%	3%

Note 1: Traffic flows are for two way traffic movements. To determine the number of vehicles accessing the Project Site divide Project-generated (Proposed) flow by 2.

Note 2: Existing traffic flows based on information presented in The Transport Planning Partnership Pty Ltd letter Response to Submissions Letter - Traffic/Vehicle Movements dated 18 November 2016 (TTPP Letter).

Note 3: Existing traffic flow is based on the traffic count survey conducted on 19 September 2016 presented in TTPP Letter.

Note 4: Average 7 day traffic flow for daytime period (7:00 am to 10:00 pm) from the traffic count survey conducted on 19 September 2016 presented in TTPP Letter. Divide by 15 to get average hourly daytime period traffic flow.

Note 5: Average 7 day traffic flow for morning shoulder period (6am to 7am) from the traffic count survey conducted on 19 September 2016 presented in TTPP Letter.

Note 6: LV - number of light vehicles. HV - Number of heavy vehicles.

Note 7: Proposed project generated traffic from TTPP based on the revised traffic data calculated on 220,000 tonnes per annum and no night-time movements.

Table 9 provides the predicted operational noise levels at each of the identified receivers based on the proposed operational scenarios. From the predicted noise levels identified, the facility remains compliant with the relevant project specific noise criteria at all receivers under all operational scenarios. Noise generating activities associated with the proposed operations are therefore considered to have an insignificant impact on the existing noise environment.

Table 8: Predicted Operational Noise Levels (dBA) and Compliance

Source: SLR

Receiver	Morning Shoulder 6am – 7am	Day 7am – 6-pm	Evening 6pm – 10pm	Sleep Disturbance Morning Shoulder 6am – 7am
	LAeq	LAeq	LAeq	LAmax
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
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 (child care)	41	47	42	N/A
R18 (Industrial)	59	65	53	N/A

4.3.3. Cumulative Night-time Noise Impacts

As a result of the modifications to the original proposal, the hours of operation are now 6:00am to 10:00pm Monday to Saturday only. SLR has advised that despite being near an industrial area, the ambient noise environment measured at the logger location used for setting the noise assessment criteria was not dominated by industrial noise sources (but rather distant traffic noise and neighbourhood noise) and therefore the amenity criteria are the recommended amenity criteria for residences in an urban area (i.e. the "ANL" or Acceptable Noise Level).

For each assessment period, the lower (i.e. the more stringent) of the amenity or intrusive criteria are adopted. These are shown in **Table 10** of the revised Noise and Vibration Impact Assessment in **Appendix E**.

Table 10 Operational Noise Criteria for at Nearest Receivers
Source: SLR

Receiver	Time of Day	ANL [1] LAeq(period)	Measured RBL [2] LA90(15minute)	Measured LAeq(period) Noise Level)	Criteria for New Sources		
					Intrusive LAeq(15minute)	Amenity [3] LAeq(period)	Sleep Disturbance LAmax Screening Criteria
Residential	Morning Shoulder[5] Period (6am-7am)		39	55	**44**	45	INP 54 RNP 60-65[4] and 75-80[5]
	Day	60	42	57	**47**	57	-
	Evening	50	38	55	**43**	45	-
	Night	45	34	54	**39**	44	INP 49 RNP 60-65[4] and 75-80[5]
Childcare centre	When in use	Peak hour LAeq (1hour, internal) [7] 40	-	-		LAeq (1hour, external) [7] **65**	-
Industrial	When in use	Acceptable 70 Maximum 75	-	-	**-**	**70-75**	-

Note 1: ANL = "Acceptable Noise Level" for residences in Suburban areas, and acceptable and maximum noise level for industrial receivers in accordance with INP.

Note 2: RBL = "Rating Background Level".

Note 3: Assuming existing noise levels are unlikely to decrease in the future.

Note 4: Unlikely to awaken people.

Note 5: One or two noise events per night are not likely to affect health and wellbeing significantly.

Note 6: Shoulder period defined as per Section 3.3 of the INP i.e. 6.00 am to 7.00 am.

Note 7: The internal criterion for school classrooms has been adopted for the childcare centre. The internal ANL has been set to $L_{Aeq(1hour,internal)}$ 40 dBA as determined that the premises is currently affected by noise from existing industrial noise sources. Accordingly, it is appropriate to adopt an **external** L_{Aeq} noise criterion of 65 dBA based on the assumption that windows would be closed.

SLR further advise that in relation to potential cumulative noise impacts from activities being undertaken on the project site, the noise assessment has been undertaken on the basis of all proposed site activities being undertaken concurrently. Accordingly, the noise impacts presented in the Noise and Vibration Impact Assessment are based on all processing plant, mobile plant, trucks idling, manoeuvring and dumping waste onsite occurring at the same time.

The SLR Noise and Vibration Assessment recommends protocols to ensure that the loading and unloading of heavy materials are handled through the use of appropriate plant to minimise vibration (and noise) emissions. As documented in the EIS, and as considered by SLR, appropriate equipment would include an excavator (Leibher) with grab attachment, which is currently in use at the site. The use of Leibher and other handling techniques assist to minimise vibration impacts. Trained and competent operators ensure these techniques are implemented and equipment is maintained in accordance with manufactures recommendations and operations occur inside shed.

4.3.4. Use of Barry Avenue

SLR noted the comments from the EPA on the use of Barry Avenue. As there is no intention to use Barry Avenue, the assessment of road traffic noise does not consider trucks accessing Barry Avenue. Given that Barry Avenue will not be used by trucks associated with the premises, or at worst would be an isolated occurrence, a traffic noise assessment of trucks accessing Barry Avenue is not thought to be necessary and consequently is not included in the Noise and Vibration Impact Assessment.

4.3.5. Construction and Operational Noise Conditions

SLR confirms that the construction noise limits proposed by the EPA for the development are acceptable and that the site would operate within the limits proposed by the EPA.

4.4. Fire Safety

The Fire and Rescue NSW (FRNSW) submission acknowledges that under SEPP 33 – Hazardous and Offensive Development, the proposal would not be classified as a potentially hazardous or offensive industry and therefore would likely not require a Fire Safety Study (FSS) to be assessed and/or approved by FRNSW. This position is consistent with that presented in the EIS.

Notwithstanding this, the FRNSW submission raised concerns relating to fire safety and firefighting operations associated with the proposal which remain unresolved or not to the satisfaction of FRNSW.

FRNSW have, however, recommended that a condition of approval be imposed for the proponent to meet with FRNSW and then submit a FSS for approval or provide hydraulic fire systems, associated firewater supply and provisions for the containment of contaminated water to the satisfaction of FRNSW. The updated Statement of Commitments for the proposal has been updated to allow for this.

SLR prepared a revised plan (**Figure 10**) showing alternative locations for the booster and the attack hydrants as well as a response to the matters raised by FRNSW (**Appendix D**). SLR recommend that the necessary detailed design and calculations are best prepared as part of the final design. Following approval of the project and once this information has been prepared, a site meeting will be held with FRNSW to finalise the design to meet FRNSW requirements and resolve any outstanding issues.

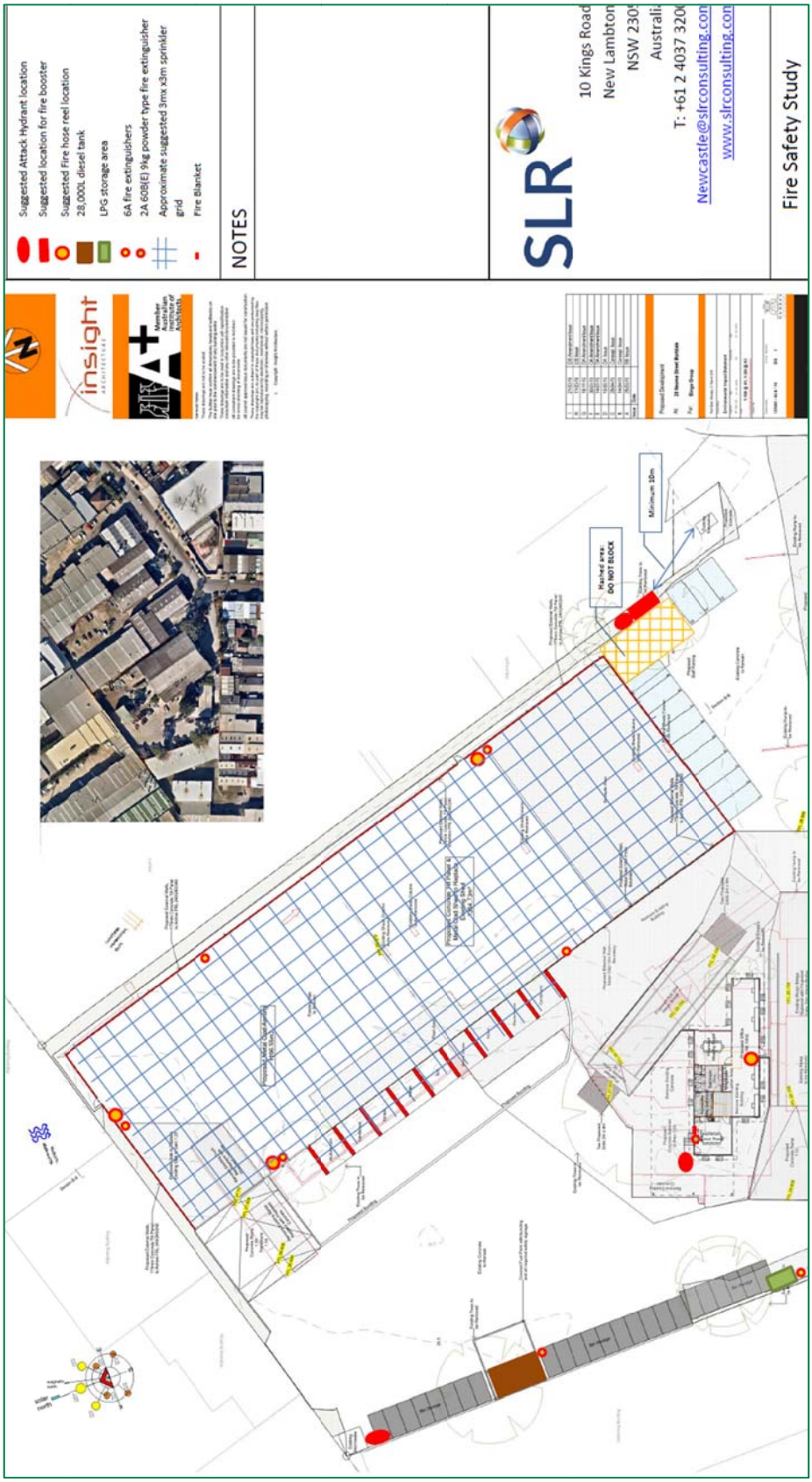


Figure 10: Updated Fire Safety Plan
Source: SLR

4.5. Proposed EPA Conditions

Should approval be granted, the EPA, have provided recommended conditions. The proponent notes that the Conditions 4, 5, 6 and 7 are contradictory to the proposed operations.

Condition 4 requires that

> *"All waste processing including loading and unloading must be undertaken inside the building."*

As noted on the architectural plans the product storage bays are not located within the main structure. The proponent therefore requests the following amendment to proposed Condition 4.

> *"All waste processing must be undertaken inside the building. All loading and unloading activities must be undertaken within the building and/or adjacent to the designated waste storage areas."*

Condition 5 requires that

> *"No waste material is to be stored outside of buildings, other than in bins fitted with waterproof covers."*

As noted on the plans processed material storage bays are under cover outside the building. The proponent requests the following amendment to proposed Condition 5.

> *"No waste material is to be stored outside of buildings, other than in the waste storage bays or in bins fitted with waterproof covers."*

Under proposed Conditions 6 and 7, the EPA have proposed the following with respect to waste types to be accepted on the Premises:

> *"No putrescible waste is to be received, stored or processed on the site."*
> *"Only the following waste types, as defined in the Protection of the Environment Operations Act 1997, are permitted to be received at the Premises:*
> - *Wood waste;*
> - *No-chemical waste generated from manufacturing and services;*
> - *Asphalt waste;*
> - *Soils that meet the CT1 thresholds for general solid waste in Table 1 of the Waste Classification Guidelines (as in force from time to time);*
> - *Paper and Cardboard;*
> - *Household waste;*
> - *Office and packaging waste;*
> - *Building and demolition waste; and*
> - *Virgin Excavated Natural Material".*

The EIS and supporting documents also note the following waste types are included in the application:

- Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal; and
- Green waste
- Other waste types categorised as General Solid Waste (non-putrescible)

Further to the above, the proponent notes the following requirements for waste storage and confirms that relevant procedures to manage and mitigate unexpected finds will be noted in the OEMP and would be implemented should the proposal be approved:

> *"Unexpected finds of materials not permitted to be received such as asbestos, tyres, batteries, gas bottles, fire extinguishers and food. Limited to waste identified during inspection and resource recovery operations being unexpected finds in tipped, unprocessed and processed material. Storage only for the purposes safe and lawful handling, storage and transport to a lawful facility."*

The proponent requests that DPE recognise the merit of the recommended amendments to the proposed EPA conditions and request that DPE include the conditions, as amended, as part of the project approval.

5. Detailed Tabulation of Agency Comments

Table 11 below, provides a detailed tabulation of each comment made by government agencies to the RTS Report. It also provides the relevant section where a response was made.

Table 11: Agency comments and correlated response

Department of Planning		
Traffic		
No.	**Agency Comment**	**Response Section**
1	Additional information provided in TIA Letter, however the information lacks any detail regarding management of trucks at the site entry. Figure 2 depicts traffic controls which are all internal - there are no proposed controls at the entrance to avoid conflict with vehicles entering and exiting. If an exiting truck takes a wide berth, an incoming truck would not be able to enter. Further details are required regarding management of vehicles entering and leaving the site to avoid queuing within the road reserve and traffic safety issues.	Section 4.2.1 and Section 4.2.4
2	A stacking plan has been provided which only shows the stacking of heavy rigid trucks on site. There is no plan showing the stacking of semi-trailers collecting sorted materials. There is no indication of how traffic will be controlled at the access way. In particular, how will trucks be directed to the stacking locations. Further, the stacking plan contradicts the internal turning path diagrams with vehicles stacked in areas required for manoeuvring. Further clarification is required.	Section 4.2.3
3	Exiting trucks have been placed in a location which contradicts the stacking plan diagrams (see below). This requires amendment.	Section 4.2.33
Waste		
4	No clear indication is provided as to the number of days per year that 24 hour waste delivery would be required. Would night time deliveries occur every day? Where are the 60 sites used for disposal? Is there a main buyer of the recycled product?	Section 4.1 Section 4.1 Section 4.1.2
Water		
5	Is there an alarm system to indicate when the leachate sump is full?	Section 4.1.6
Stockpiles		
12	It is unclear how the information provided addresses this issue. The Department requires information regarding the dimensions of the designated stockpile areas of the site where unprocessed and processed waste material would be stored. If 10,000 tonnes of material were to be stored on the site at any one time, would there be sufficient space for this? Details of the storage capacity of the site should be provided and demonstrated to be adequate.	Section 4.1.4
Process		
6	The explanation provided is inadequate. Whilst the processing capacity of the machinery may be sufficient to process (more than) 300,000 tpa of waste material, the Department's concerns also relate to the size of the site and its ability to support this amount of throughput. Provide full details of the method for processing waste materials including: • unloading procedures and timeframes, especially in relation to the situation where the site is fully "stacked" with incoming trucks. How long would it take to unload each truck and how would this affect build-up of trucks behind it given only one truck can unload at any one time? • storage timeframes; • processing timeframes; • quality control; • outputs; and • methods for loading and removal from the site. In particular, information should be provided regarding the site's capability to store and process the waste received during night time, whilst still receiving more waste during the day without excessive build up occurring i.e. there would be no processing between 10pm and 6am while, according to Appendix A – TIA letter, 26 truckloads of waste are predicted to be delivered in this period, with another 17 truckloads between 6am and 7am. Further details should also be provided regarding the machinery (screens etc.) proposed for waste separation, as well as the method of conveyance of separated products into the material bays prior to removal.	Section 4.1.5

Georges River Council		
No	**Agency Comment**	**Response Section**
1	MRV trucks laden with waste for processing enter the site and queue to await an available slot for unloading. Semi-trailers/truck and dog enter the site and queue awaiting an available slot for the loading of processed waste. The estimated time required for these movements is 25 minutes ("Response to Submissions Letter – Traffic Vehicle Movements" p 7). While pick up is to be limited to "outside of peak" (p7) it is unclear whether this is peak operation of the facility (during the middle of the day) or the am and pm peak traffic times. The vehicle stacking plan "Response to Submissions Letter – Traffic Vehicle Movements" Attachment C) conflicts with many of the provided swept path arrangements for 19m vehicles indicated in ("Response to Submissions Letter – Traffic Vehicle Movements," Attachment G). The introduction of semi-trailers/truck and dog vehicles into the site has the potential to impact on the timing of queueing arrangements within the site which may increase the assumed vehicle processing turnover time of 25 minutes (as indicated on page 7). Any potential conflict between queueing and turning vehicles that leads to vehicle queueing on Hearn (or surrounding) streets is not supported. 68 semi-trailer in/out movements are stated to be required per day to "transport waste from the Mortdale site to other waste processing facilities…" ("Response to Submissions Letter – Traffic Vehicle Movements" page 19). Should 25 minutes be required for these vehicle movements ("Response to Submissions Letter – Traffic Vehicle Movements" page 7) some conflict of queueing during peak operation will be unavoidable. This would lead to vehicle queueing on the surrounding street network and this outcome is not supported. The 68 required daily pick up movements is highly likely to result is some conflict between the large (semi-trailer/truck and dog vehicles) and the smaller drop-off MRV's as the allocated queueing spaces conflict with the required turning circles of the pick-up vehicles. This is likely to result in queuing of trucks on Hearne (and surrounding) streets. Council strongly objects to this outcome. As vehicle movements and queueing for the proposed operation are not likely to be able to be accommodated within the boundaries of the site, Council argues that the site is of an insufficient area for the use at the tonnage proposed.	Section 4.2.3
2.	During after-hours operation (10pm – 6am), processing on site is limited however the following noise generating activities are required: a. Vehicle movements to and from the site; Of greatest concern are the heavily laden semi-trailer/truck and dog combinations that will require braking at the Hearne Street/Boundary Road intersection (directly adjacent to residential receivers), idling while giving way and then accelerating from this stopped/idling position. Further noise issues are also likely when these heavily laden vehicles are required to accelerate up the hill along Boundary Road to the Forest Road intersection. "Noise and Vibration Impact Assessment" Table 3 identifies the corner of Boundary Road and Treloar avenue to have a maximum Truck pass-by dBA of 60 – 70 however no estimated maximum dBA is provided for the likely braking, stopping, idling and acceleration out of the Hearn Street/Boundary Road intersection, nor is the gradual up-grade acceleration of semi-trailers/truck and dog vehicles considered on Boundary Road on the approach to Forest Road. These vehicle movements are the most likely to result in negative impacts on adjacent residential receivers and must be addressed in the supporting information. However it is likely that these vehicle movements will generate noise that is greater than the assumed truck pass-by (i.e. movements that are presumably already under acceleration) reading of 60-70dBA. This is highly likely to affect health and wellbeing in accordance with Section 4.1.1 of "Noise and Vibration Impact Assessment" as "68 trucks are estimated to transport waste from the Mortdale site to other waste processing facilities per day" ("Response to Submissions Letter – Traffic Vehicle Movements" prepared by The Transport Planning Partnership; p19) with these movements scheduled to occur during "the later afternoon, night time and early morning." "Response to Submissions Letter – Traffic Vehicle Movements" prepared by The Transport Planning Partnership; p19). Even using a conservative linear estimate between the later afternoon (4pm) and the early morning (6am) this would result in up to 5 vehicle movements per hour at the Hearne St/Boundary Rd intersection. Chapter 4.4.4 of The "Noise and Vibration Impact Assessment" prepared by SLR Consulting Australia Pty Ltd (p11) states that "one or two noise events per night, with maximum noise levels of 65-70 dBA, are not likely to affect health and wellbeing significantly." From this it is then assumed that up to 5 such disturbances per hour during the night is likely to significantly impact on the health and wellbeing of residential receivers	Section 4.3

adjacent to the Hearne Street/Boundary Road intersection.

In summary insufficient assessment of the noise impact and noise frequency has been provided, especially at the Hearne Street and Boundary Road intersection and on the steeper up-grade on Boundary Road approaching Forest Road. On the information provided it is likely that the night-time movements of vehicles (especially heavily laden semi-trailers/truck and dog combinations) will impact significantly on residential receivers adjacent to this intersection and on Boundary Road. As such Council strongly objects to the night time (10pm – 6am) operation of the proposal.

b. MRV's will enter the site and undertake the tipping of waste. The "Noise and Vibration Impact Assessment" recommends that "the loading and unloading of heavy materials are addressed within the OEMP with protocols to ensure that such products are handled through the use of appropriate plant to minimise vibration" (page 16). It does not appear that the OEMP has identified what this "appropriate plant" may be, however it is assumed that an excavator would be used to decrease the distance from which concrete blocks/bricks would be dropped on to the tipping floor.

The abovementioned operation is identified as resulting in the following LAMax dBA per item:

- Round trip truck entry dump and exit – 111 dBA
- Volvo ECR145C Excavator – 110dBA

"Noise and Vibration Impact Assessment" prepared by SLR Consulting Australia Pty Ltd, Table 6.

The cumulative impact of this noise on-site has not been identified in the "Noise and Vibration Impact Assessment." Council strongly objects to any additional noise on-site between 10am and 6pm that would impact (or potentially impact) on the sleeping patterns of nearby residential receivers.

In summary, it would appear that the site is of insufficient size to accommodate both site operation/vehicle queueing and vehicle movements at the capacity proposed. The supporting information also provides insufficient assessment of the impacts of vehicle noise and cumulative night-time (10pm – 6am) processing required on site and from the information provided it would appear that the proposal will have a significant impact on the health and amenity of nearby residences especially on Boundary Road. On this basis, Council does not support the current proposal.

Fire and Rescue NSW

No.	Agency Comment	Response Section
1.	FRNSW acknowledges that the proponent has undertaken a review of the proposed storage arrangement of Dangerous Goods at the site as detailed above (see FRNSW item number 1). The initial review of the site plan is positive however a full assessment of the FSS is required to be undertaken by FRNSW, pending any specific approval requirements being imposed on the development proposal by the Department.	Section 4.4
2.	Given the information provided within Figure 7 of the RTS, the proponent has clearly indicated that the proposed shed and awning will be appropriately sprinkler protected, which is supported by FRNSW. However, FRNSW has also reviewed the basic details provided within Figure 7 which relate to the fire hydrant system and do not support the locations indicated on the drawing for both the hydrant booster assembly and attack fire hydrants. Details relating to the sprinkler booster assembly, or any associated dedicated firewater storage tanks have not been provided in Figure 7 of the RTS. Additionally, as detailed within Hazardous Industry Planning Advisory Paper Number 2 (HIPAP No.2), a crucial part of the FSS is ensuring that the hydraulic design is sufficiently satisfactory to cope with the hazards and consequences. However in an initial overview of the FSS (not a full assessment), critical information relating to fire water supply, identified worst case fire scenario firewater requirements, contaminated firewater containment quantities/site capabilities and detailed fire services drawings are yet to be provided within the study (See sections 10, 11 and 12). The FSS must be complete prior to FRNSW undertaking an assessment and subsequently providing its determination. FRNSW acknowledges the difficulties that exist for the site relating to access from Hearne Street and the existing location of the electrical substation kiosk, however the proposed hydrant system locations as currently detailed remains problematic for FRNSW in relation to operational firefighting and Workplace Health and Safety.	Section 4.4

	Based on the above information, FRNSW does not consider that the proposed fire hydrant system meets the requirements of FRNSW or Clause E1.10 of the National Construction Code. Of particular concern is the current lack of information relating to the firewater supply which would be required to maintain the concurrent operation of both the fire hydrant and sprinkler systems in the event of a worse case fire scenario at the proposed development site.	
3.	As detailed within HIPAP No.2, a crucial part of the FSS is ensuring that the hydraulic design is sufficiently satisfactory to cope with the hazards and consequences. However, in an initial overview of the FSS (not a full assessment), critical information relating to fire water supply, identified worst case fire scenario firewater requirements, contaminated firewater containment quantities/site capabilities and detailed fire services drawings are not yet provided within the submitted FSS. The FSS must be complete prior to FRNSW undertaking an assessment and subsequently providing its determination. Based on the above information, FRNSW does not consider that the information provided within the RTS, stormwater detailed drawings and/or the existing FSS contain the required calculations or information to permit FRNSW to undertake an accurate assessment of the site's containment capacities.	Section 4.4
4.	In the event of development consent being granted, it is FRNSW recommendation that a Fire Safety Study (FSS) is developed and that the FSS is undertaken in accordance with the recommendations detailed in Hazardous Industry Planning Advisory Paper No.2. It is also recommended that the FSS be approved by FRNSW to ensure its operational requirements are met. (d) The information provided within the RTS and various other documents contained within the submission, including the FSS and SEPP 33 - Preliminary Risk Screening & Hazard Assessment prepared by SLR Consulting, dated 12 April 2016 (Appendix L) have been taken into consideration, however FRNSW is not satisfied that our operational requirements have been met. As detailed within the SEPP 33 - Preliminary Risk Screening & Hazard Assessment, FRNSW acknowledges that the proposed development would not be classified as a potentially hazardous or offensive industry based on the requirements of SEPP 33 and therefore would likely not require a FSS to be assessed and/or approved by FRNSW. However, as a number of concerns relating to fire safety and/or firefighting operations associated with the development proposal remain unresolved or not to the satisfaction of FRNSW. Therefore, our preferred position remains in-line with the original recommendation as detailed above (see FRNSW item number 4).	Noted. Section 4.4
5	Recommendations: 1. In the event that development consent is granted on the proposed Facility (SSD 7421) and a specific consent condition requiring the proponent to submit a FSS to FRNSW for approval is imposed by the Department, it is recommended that the proponent request a consultation meeting with FRNSW, prior to undertaking a review of the existing FSS and lodging a revised FSS for assessment. Or alternatively, 2. In the event that a specific consent condition requiring the proponent to submit a FSS to FRNSW for approval is not imposed by the Department, it is recommended that consultation be undertaken, requiring the proponent to obtain FRNSW satisfaction in relation to the hydraulic fire systems, the associated firewater supply and provisions for the containment of contaminated firewater for the proposed Facility (SSD 7421). NOTE: Application forms for both an 'Informal Consultation ' and 'FRNSW Report (other)' can be located at the FRNSW website, which is www.fire.nsw.gov.au.	Noted. Section 4.4
Environment Protection Authority		
1	**BARRY AVENUE** In relation to Barry Avenue, the EPA notes that predicted noise levels from the additional traffic generated by the proposal are acceptable along the simulated route. However, this route assumes that trucks do not access the facility via Barry Avenue. One item which DPE may wish to consider is the inclusion of a condition on any approval that requires the Proponent to include, if possible and enforceable, clauses in any contracts with truck drivers requiring them not to use Barry Avenue. Alternatively, Council may be able to place weight restrictions on Barry Avenue. This would lessen noise from truck traffic for those residents on	Section 4.3.4

	Barry Avenue. The EPA notes that, while the Proponent has included a commitment to "encourage all vehicle access to the site via Boundary Road and Hearne Street" in their Statement of Commitments, Barry Avenue is a public road that any road registered vehicle is entitled to use. If there is no enforceable method to restrict trucks associated with the proposal from accessing the facility via Barry Avenue, the EPA then strongly recommends DPE consider requiring the Proponent via conditions of approval to provide an assessment of traffic noise impacts on this route.	
2	**GENERAL** • An Operational Environmental Management Plan ("OEMP") must be submitted to DPE and the EPA for review prior to the site re-commencing waste operations. Waste is not permitted to be received at the Premises without written approval from DPE and the EPA following receipt of the OEMP. Note: In its previous correspondence, the EPA set out requirements in relation to stormwater and leachate management that must be addressed in the OEMP. The EPA will not approve waste receipt at the premises until those requirements have been satisfactorily addressed.	Noted

	WASTE
	
	• The quantity of waste to be received and processed at the Premises must not exceed 300,000 tonnes per annum.
	• The quantity of waste to be received and processed at the Premises must not exceed 20,000 tonnes per day.
	• All waste processing including loading and unloading must be undertaken inside the building.
	• No waste material is to be stored outside of buildings, other than in bins fitted with waterproof covers.
	• No putrescible waste is to be received, stored or processed on the site
	• Only the following waste types, as defined in the Protection of the Environment Operations Act 1997, are permitted to be received at the Premises:
	
	o Wood waste
	o No-chemical waste generated from manufacturing and services
	o Asphalt waste
	o Soils that meet the CT1 thresholds for general solid waste in Table 1 of the Waste Classification Guidelines (as in force from time to time)
	o Paper and Cardboard
	o Household waste
	o Office and packaging waste
	o Building and demolition waste
	o Virgin Excavated Natural Material
	
	• The Proponent must manage any waste generated during demolition and construction works at the Premises in accordance with the "Construction Waste Management Plan" prepared by Dewcape and dated November 2016.
	• Disposal records (such as landfill disposal dockets) for all waste disposed of under the CWMP, including asbestos waste, must be retained by the Proponent for 4 years and provided to the EPA if requested.
	• Activities must be carried out in a manner that minimises the generation of dust.
	• The Premises must be maintained in a condition which prevents the emission of dust
	• The Proponent must ensure that no material, including sediment or oil, is tracked from the Premises.
	• Trucks entering and leaving the Premises that are carrying loads must cover the loads at all times, except during loading and unloading.
	• The building must be fitted with a dust suppression system. The system must be designed and maintained to prevent dust emissions.
	• All internal haul roads are to be sealed and appropriately maintained.
	• Prior to the commencement of operation, the Proponent must prepare and implement an Air Quality Management Plan that includes, but is not limited to, the following information:
	i. Proactive and reactive management strategies;
	ii. Key performance indicator(s);
	iii. Monitoring method(s);
	iv. Location, frequency and duration of monitoring;
	v. Record keeping;
	vi. Response mechanisms;
		Noted

vii. Complaints handling protocol; and
viii. Reporting.

3 **NOISE** Noted

Construction noise limits

Construction of the project is proposed to occur within standard hours, and not exceed the noise management levels at residences. This level of impact can be managed, on any project approval given, by requiring construction of the project to only occur within standard hours:

LG.8 Construction work associated with the project must be undertaken:

a) between 7:00 am and 6:00 pm, Mondays to Fridays;
b) between 8:00 am and 1:00 pm on Saturdays; and
c) at no time on Sundays or public holidays.

LG.9 Construction work associated with the project may be undertaken outside the hours specified in condition L6.8 if it is:

a) construction that causes LAeq(1smin) noise levels that are:
   i. no more than 5 dB above Rating Background Level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009); and
   ii. no more than the Noise Management Levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other noise sensitive land uses; or
b) for the delivery of materials required by the police or other authorities for safety reasons; or
c) required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
d) approved through the process outlined in condition L6.10.

LG.10 The hours of construction specified under condition L6.8 may be varied with the prior written approval of the Secretary. Any request to alter the hours of construction shall be:

a) considered on a case-by-case or activity-specific basis;
b) accompanied by details of the nature and justification for activities to be conducted during the varied construction hours;
c) accompanied by written evidence to the Secretary that appropriate consultation with potentially affected noise sensitive receivers and notification of relevant Council(s) and other relevant agencies has been and will be undertaken;
d) all reasonable and feasible noise mitigation measures have been put in place; and,
e) accompanied by a noise impact assessment consistent with the requirements of the Interim Construction Noise Guideline (DECCW, 2009).

Operating hours

- Waste processing activities may only occur between 6am and 10pm Monday to Saturday, with no waste processing permitted on Sundays or Public Holidays.
- Truck movements are permitted 24 hours per day Monday to Saturday, with no truck movements on Sundays or Public Holidays.
- No activities are permitted at the Premises on Sundays and Public Holidays.

6. Updated Statement of Commitments

The proposed commitments are made to ensure any impacts arising from the construction and operation of the resource recovery facility are minimised and summarised in **Table 12** below.

Table 12: Project Commitments and mitigation measures

Issue	Proposed Mitigation Measure
Annual Throughput and storage limits	The proponent is committed to limiting waste processed on site to 220,000 tonnes per annum. The proponent will maintain and monitor weighbridge records (inbound and outbound) to ensure limits are not exceeded. The proponent will make weighbridge records available at the request of DPE or the EPA to verify compliance. The proponent will ensure storage does not exceed the amount prescribed in the EPL
Hours of Operation	Operating hours will be limited to 6:00am to 10:00pm Monday to Saturday.
Noise	**Operations** A Noise Management Plan (NMP) is to be incorporated into the OEMP. The NMP would address matters such as: • Limiting site hours of operation to align with the NVA (SLR, March 2016). • Implementation of a general vehicle speed limit of 5 km/hr. • Vibration management – handling of heavy materials; • Inclusion of site access limitations and restrictions to encourage all access to the site via Boundary Road and Hearne Street; • Requirements for ongoing maintenance of fixed and mobile plant in accordance with manufactures specifications; • Development of protocols to ensure processing operations are undertaken wholly within the processing building; and • Procedures to handle complaints assessment of risk and impacts and corrective actions if required. **Detailed Design** Detailed design plans will: • Remove the proposed speed humps with alternate measures to limit speed within the site incorporated into the final design and site specific Traffic Management Plan. • Ensure the design of the slab and footings associated with the finger screen shall be prepared to take into account and accommodate vibration from dynamic loads associated with the operation of this plant. **Construction** A comprehensive Construction Environmental Management Plan (CEMP) would include:

Issue	Proposed Mitigation Measure
	• Mitigation measures to ensure Construction Noise and Vibration are minimised and the measures are implemented and managed for the duration of the construction programme.
Traffic and Access	**Operations:** An Operational Traffic Management Plan (OTMP) will be incorporated into the OEMP to prescribe traffic management procedures for the development including: • Identification of preferred routes to minimise noise impacts on the surrounding community; • Incorporate the vehicle stacking plan (TTPP, March 2017) and associated management protocols to allow for up to 31 vehicles to be held on site at any one time; • Physical and operational measures (including signage) to mitigate impacts of vehicles accessing and leaving the site; • Maintaining internal vehicle swept paths through appropriate line marking to identify and prevent encroachment on parking areas; • Driver education and information to promote driver habits to minimise noise and awareness of preferred heavy vehicle routes; and • Provision for a traffic controller to be stationed at the site entry to: o Direct traffic to make a left hand turn when exiting to Hearne Street; o Record details of any vehicles approaching from Barry Avenue; and o Advise management of any observed breaches to the OEMP. • Timetabling, scheduling and details of vehicle booking systems. **Detailed Design:** Ensure vehicle swept paths are not compromised in the detailed design phase. The minimum proposed site entry of 16.2m is to be maintained. Detailed design plans are to include appropriate 'left out only' signage to guide heavy vehicles when departing the site. **Construction:** The CEMP would include measures to mitigate impacts associated with construction traffic including but not limited to: • Hours of operations; • Temporary parking arrangements; • Access and manoeuvring arrangements; • Traffic control requirements; and • Oversize Vehicle Permits and arrangements (e.g. floating of plant and equipment).
Air Quality and Greenhouse Gas	**Air Quality** **Operations:**

Issue	Proposed Mitigation Measure

An Air Quality Management Plan (AQMP) would be prepared to form part of a comprehensive OEMP. The AQMP would be prepared with regard given to the AQIA and address matters such as:

- The installation and regular maintenance of an operator-activated overhead dust suppression system;
- Use of a street sweeper over external hardstand areas;
- Use of hand held hoses to supplement overhead dust suppression system;
- Use of hand held hoses within any areas not covered by the overhead dust suppression system;
- Procedures to cease operations if weather conditions have a major negative impact on the operation.
- Implementation of a general vehicle speed limit of 5 km/hr will be imposed across all areas of the site.
- Procedure to check all vehicles are checked for mud and soil on tyres prior to leaving the site and where mud or soil is detected on the entrance road (i.e. "track out"), staff will be deployed to sweep the road.
- Maintenance requirements for all on-site, fixed and mobile diesel powered plant (excluding road vehicles) (e.g. manufactures specifications).
- Maintenance requirements of rumble grid and stormwater pits to prevent build up of dust / sediment.
- Assignment of roles and responsibilities for the management of air quality issues such as dust suppression, and outlining the mitigation measures to be implemented to minimise the generation of air pollutants.
- Procedures to handle potentially odour generating wastes such as green waste or hidden putrescible wastes.
- Procedures to handle complaints.

Design

Detailed design plans are to document the location and coverage of dust suppression measures including:

- The fogging system;
- Overhead dust suppression sprinklers;
- Hand held hoses; and
- Location of rumble grid and all stormwater pits.

Construction

The CEMP would include measures to mitigate impacts associated with air quality (dust) associated with construction. This would include but not be limited to:

- Deployment of dust suppression measures (sprinklers / watercart / hand held hoses) during construction;
- Protocols for restricting construction activities during adverse weather conditions (wind generated dust);
- Use of street sweepers; and

Issue	Proposed Mitigation Measure
	• Regular checking and maintenance of soil erosion and sediment control measures. **Greenhouse Gases** The following mitigation and management measures will be implemented at the site to minimise greenhouse gas emissions during operations: • Fixed plant maintenance requirements and practices will be incorporated into the OEMP to ensure all plant is operating in an efficient manner. • Prior to the release of a Construction Certificate issued pursuant to Section 109C of the EP & A Act, a report addressing the energy efficiency requirements contained in Section J of the National Construction Code (BCA) will be prepared and submitted to the appointed Principal Certifying Authority. This report will document and assess the suitability of lighting and appliances proposed for the site office space. • Garden waste materials received on site (i.e. low volumes contained in skip bins from household clean up or demolition sites) are picked and stored separately, then transported off site to a local facility for recycling (e.g. mulched, chipped and/or composted). The final OEMP will include details relating to the identification, handling and diversion of greenwaste.
Contamination	A Construction Environmental Management Plan (CEMP) will be prepared prior to the commencement of demolition works or the approval of a Construction Certificate under section 109C of the Act. The CEMP will further report on the results of subsurface materials testing and will provide protocols to ensure the health and safety of construction workers when handling or working within disturbed areas and will include protocols for managing groundwater should it be encountered. Any testing of material will be undertaken in accordance with the relevant guidelines made under the Contaminated Land Management Act 1997. Should further approvals be required to undertake construction or remediation work, they will be sought and secured prior to the commencement of any works. The Pollution Incidence Response Management Plan (PIRMP) will be reviewed and updated to reflect the operations and activities on site. The updated PIRMP will be submitted to the NSW EPA as part of any application to modify the EPL for the site.
Water Cycle Management	**Operations** A Water Cycle Management Plan (WCMP) will be incorporated into the OEMP. The OEMP will address matters such as: • The installation and regular maintenance of a control measures including: o Rocla First Defense treatment device; o Rocla Water Level Controller; o Litter baskets; o Rainwater tank; o Gutters and downpipes; o Sweeping of internal and external hardstand areas;

Issue	Proposed Mitigation Measure
	o Cleaning and removal of leachate from blind sumps; o Fogging system; and o Leachate sump and alarm system. • Procedures to ensure all waste is stored in an enclosed or covered environment. • Implementation of a general vehicle speed limit of 5 km/hr will be imposed across all areas of the site. • Procedure to ensure all vehicles are checked for mud and soil on tyres prior to leaving site and where mud or soil is detected on the entrance road (i.e. "track out"), staff will be deployed to sweep the road. • Procedures for monitoring any water quality limits as specified in the EPL. • The Final OEMP will be developed in consultation with the EPA prior to commencement of operations and will include: o leachate management and disposal; and o maintenance triggers and actions for the stormwater management system. **Detailed Design** Detailed stormwater management plans document and confirm the suitability of proposed measures including: • Rocla First Defense treatment device; • Litter baskets; • Sweeping of internal and external hardstand areas; • Cleaning and removal of leachate from blind sumps; • Leachate sump and alarm system • Fogging system; • Rainwater tank; and • Bunding arrangements to fuel store and under awning material storage area. **Construction** The CEMP would include measures to mitigate impacts with water quality associated with construction. This would include but not be limited to: • Regular checking and maintenance of soil erosion and sediment control measures; • Procedures for monitoring water quality during the construction phase; and • Procedures for managing groundwater should it be encountered.
Hazardous and Dangerous Goods	**Operations** To ensure the risks associated with the storage of potentially dangerous goods are not increased, the following measures are proposed: • Storage of diesel fuel and LPG will be limited to the quantities contained in this EIS and the SEPP 33 Risk Screening Assessment; • Diesel fuel will be stored within a bunded area with sufficient capacity in isolation of any other flammable liquids. **Detailed Design** • Fire safety measures recommended in the SLR Fire Safety Study (25/10/2016) are to be incorporated into the detailed design documents.

Issue	Proposed Mitigation Measure
	• Prior to the release of a construction certificate issued under Section 109C of the Act the proponent shall submit the final detailed design documents to the NSW Fire and Rescue Service and incorporate any feedback made by the service. Evidence of such consultation shall be made to the PCA prior to the release of the construction certificate. • The diesel storage tank area and bund will be designed and constructed to satisfy the requirements of *AS1940-2004 - The storage and handling of flammable and combustible liquids;* • Storage locations are to be documented in accordance with *AS1940-2004* will be incorporated into the OEMP and submitted to the PCA prior to the release of a certificate issued under section 109C of the Act. • The design, construction and installation of the aboveground diesel storage tank in the context of any relevant Australian Standards will be submitted to the PCA prior to the release of a final occupation certificate issued under section 109C of the Act. • The design recommendations for the Fire Protection Systems, as contained in the SLR Fire Safety Study (March 2017) are to be incorporated in to the detailed design. This is to include the recommended fire safety measures and details relating to the containment of firefighting water.
Visual Impact	Prior to the issue of a final occupation certificate: • Landscaping works will be completed in accordance with a Landscape Plan at the completion of the building works; and • The proposed colour schedule will be documented in the construction documents and be in place at the completion of the construction works.
Operational Waste Management	**General** The following commitments are made to ensure the efficient handling of waste and movement of vehicles across the site: • Provision sorting and processing machinery to ensure processing efficiency; • Scheduling and tracking of waste deliveries (in and out) by the operators dedicated scheduling team; • Utilising dedicated site traffic controllers during peak periods and enforcement of driver protocols will enhance vehicle operations onsite. These commitments will be embodied in the Operations Environmental Management Plan (OEMP) and adopted to control the day to day handling of waste both on and off site. The OEMP will include protocols and procedures relating to: • Waste acceptance; • Waste source control; • On site storage requirements; • Resource recovery requirements; • Operational noise management; • Dust and air quality management; • Leachate Management; • Management and maintenance of stormwater infrastructure;

Issue	Proposed Mitigation Measure
	• Transport and Disposal (Waste Tracking); and • Stockpile Management; • Special Waste Management (Asbestos and Tyres); • Third party material sampling; • Weighbridge operation (including calibration); • Emergency management procedures as contained in the SLR Fire Safety Study (25/10/2016). A final OEMP will be reviewed by the EPA prior to the variation of the EPL. Commencement of operations or the release of an occupation certificate under Section 109C of the Act. The OEMP will be reviewed biennially or following any formal review of procedures.
Construction Environmental Management	A CEMP will be submitted to the PCA prior to the issue of relevant certificate under section 109R of the Act. The plan will address: • proposed demolition and construction hours; • the requirements of the DEWCAPE Construction Waste Management Plan (Rev 3 dated 11/11/2016) • pedestrian and traffic management during demolition and construction; • stormwater and waste management; • noise management; and • contamination;

7. Conclusion

This report seeks to address comments made by government agencies in reviewing the Response to Submissions Report prepared by APP Corporation Pty Ltd. Significant changes have been made by the proponent in response to the issues raised during the exhibition process and subsequent stakeholder engagement. This submission has described the changes proposed to the SSD application and documented how the project, as a whole, will address the concerns of the community and government agencies.

It has been demonstrated in this submission and supporting technical reports that the reduction of throughput to 220,000 tpa combined with a reduction in operating hours to 6:00am to 10:00pm will allow for a resource recovery facility which:

- Complies with all relevant statutory requirements and guidelines;
- Is capable of stockpiling, processing and distributing the nominated volume of wastes;
- Does not pose any risk to the environment which cannot be effectively managed;
- Does not place any excessive or unreasonable burden on existing infrastructure, including the local road network;
- Will assist the NSW Government in meeting targets relating to landfill reduction and resource recovery; and
- Has responded to the key issues raised by the community and has been modified to align with community expectations.

On this basis, it considered that approval of the proposal is in the public interest and consequently should be supported by the Department of Planning and Environment.

8. Appendices

Appendix A	Architectural Plans
Appendix B	Processing of Waste
Appendix C	Vehicle & Traffic Study
Appendix D	Fire Safety Study
Appendix E	Noise & Vibration Impact Assessment
Appendix F	Agency Feedback
Appendix G	Updated Capital Investment Value

Appendix A

Architectural Plans

Appendix B

Processing of Waste

Appendix C

Vehicle and Traffic Assessment

Appendix D

Fire Safety Study

Appendix E

Noise and Vibration Impact Assessment

Appendix F

Agency Feedback

Appendix G

Updated Capital Investment Value