Bulk Recovery Solutions

16 Kerr Road, Ingleburn

State Significant Development No 8593

Response to Submissions

Prepared by: BRS Management with input from specialist consultants

Prepared for: Department of Planning, Industry and Environment

Report Name: BRS RTS SSD8593 October 2020
Date: October 2020

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Prepared by: Timothy Baillie, Director Bulk Recovery Solutions Pty Ltd
BRS Management Team

Approved by: Timothy Baillie, Director Bulk Recovery Solutions Pty Ltd

Input provided by:

- Armstrong Design Creative Practical Solutions,
- HAZKEM Dangerous Goods Consulting,
- Dirt Doctors Geotechnical Testing Services,
- DRB Consulting Engineers Pty Ltd,
- Intersect Traffic Pty Ltd,
- Muller Acoustics Consulting Pty Ltd,
- Todoroski Air Sciences,
- GHD Pty Ltd

Application and Land Details

Applicant:	Bulk Recovery Solutions Pty Ltd
Applicant Address:	16 Kerr Road, Ingleburn NSW 2565
Land to be developed:	Lot 16, DP717203 – 16 Kerr Road, Ingleburn NSW 2565
Proposed Development:	Expansion to Existing Resource Recovery Facility

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Abbreviations

ASS	Acid Sulphate Soil
AHD	Australian Height Datum
Applicant	Bulk Recovery Solutions
AQIA	Air Quality Impact Assessment
BRS	Bulk Recovery Solutions
C&I waste	Commercial and industrial waste
C&D waste	Construction and demolition waste
CIV	Capital Investment Value
CLEP 2015	Campbelltown Local Environmental Plan 2015
CLM Act	Contaminated Lands Management Act 1997
Council	Campbelltown City Council
Dangerous Goods Code	Australian Code for Transportation of Dangerous Goods by Road and Rail
DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement (revised EIS dated 16/12/19)
ENM	Excavated Natural Material
EPA	NSW Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regs	Environmental Planning and Assessment Regulation 2000
EPL	Environment Protection Licence
ERA	Environmental Risk Assessment
GHG	Greenhouse Gas
GMREP	Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
ha	Hectares
km	Kilometres
LGA	Local Government Area
m	Metres
NIA	Noise Impact Assessment
NPI	Noise Policy for Industry 2017
OEH	Office of Environment and Heritage
PASS	Potential Acid Sulphate Soil
POEO Act	Protection of the Environment Operations Act 1997
POEO (General) Regulation	Protection of the Environment Operations (General) Regulation 2009
POEO (Waste) Regulation	Protection of the Environment Operations (Waste) Regulation 2014
PCA	Principle Certifying Authority
RMS	Roads and Maritime Services
RNP	Road Noise Policy
RRF	Resource Recovery Facility
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SEPP 33	State Environmental Planning Policy 33 – Hazardous and Offensive Development
SEPP 55	State Environmental Planning Policy 55 – Remediation of Land
SEPP State and Regional Development	State Environmental Planning Policy (State and Regional Development) 2011

SSD	State Significant Development
SSDA	State Significant Development Application
The Site	16 Kerr Road, Ingleburn
TIA	Traffic Impact Assessment
t	Tonnes
tpa	Tonnes per annum
VENM	Virgin Excavated Natural Material
vpd	Vehicles per day
vph	Vehicles per hour
WARRS	NSW Waste Avoidance and Resource Recovery Strategy 2014 – 21

1 INTRODUCTION

This Response to Submissions (RtS) report has been prepared in support of the proposed expansion of the Bulk Recovery Solutions Pty Ltd (BRS) Ingleburn Resource Recovery Facility noted as SSD-8593 and located at 16 Kerr Road, Ingleburn NSW 2565. This RtS report is submitted to the Department of Planning, Industry and Environment (DPIE) as requested in their letter dated 9 August 2019. This RtS report combines all responses previously submitted to the DPIE as well as all revised reports prepared by highly qualified and experienced consultants.

The document responds to the submissions received as a result of the public exhibition of the environmental impact statement (EIS) associated with the proposed expansion and requests for information as documented by the DPIE in their correspondences as listed below. It also responds to issues raised in community and Government agencies submissions. The following submissions from Government agencies including Campbelltown City Council (Council) have been specifically referred to in this RtS report:

1. DPIE – 19 July 2019
2. DPIE – 21 October 2019
3. NSW EPA – 10 July 2019
4. DPIE Water – 9 August 2019
5. NSW EPA Technical Advice – 16 August 2019
6. Roads and Maritime Services – 01 July 2019
7. Campbelltown City Council – 12 August 2019
8. Fire & Rescue NSW – 20 June 2019
9. Sydney Water – 18 July 2019
10. SafeWork NSW – 9 March 2020
11. Fire & Rescue NSW – 12 March 2020
12. NSW EPA – 6 March 2020
13. DPIE – 3 April 2020
14. DPIE – July 2020
15. NSW EPA – 15 July 2020
16. Campbelltown City Council – 31 August 2020

In its last written communication, DPIE requested that the RtS should include all submissions and all responses since the start of the process which is the exhibition of the EIS. Therefore, it was considered appropriate to divide the RtS into four (4) major Sections as listed below. In relation to the EIS referred to in the responses, it is the revised EIS prepared by KDC Pty Ltd, dated 16 December 2019 and submitted to the DPIE in January 2020 accompanying the first RtS.

Section A includes all Government submissions received as a result of the EIS exhibition, and the responses to these submissions as provided by KDC Pty Ltd on behalf of BRS in their RtS dated December 2019.

Section B includes all Government submissions received after reviewing the RtS included in **Section A**, and the responses to these submissions as provided by BRS in their submission dated June 2020.

Section C includes all Government Submissions received after reviewing the RtS included in **Section B**, and the responses to these submissions as provided in this RtS.

Section D includes all community submissions received as a result of the EIS exhibition, and the responses to these submissions as provided by KDC Pty Ltd on behalf of BRS in their RtS dated December 2019.

For clarity purposes, the submissions received so far are included in this document in *italics font*, previous responses are provided in *italics blue font* and BRS new responses are presented in **bold blue font**. Copies of all submissions are included in **Appendix A** for completeness.

We understand the concerns raised by the authorities and appreciate their input to the process. We believe that the main reasons for these concerns can be attributed to the fact that not all supporting documents were initially submitted to the Department (and subsequently all other relevant authorities) and not all revised documents had replaced the previously submitted documents to address the previous submissions. These documents have been reviewed again and updated, and they are included in this document to assist in clarifying the aspects included in the submissions.

Following the receipt and review of the submissions, the management team of BRS met to determine the best way to move the proposed development forward in-light of the outcomes of their meetings with relevant senior staff of the Department. BRS management has decided to remove from the development the following waste streams:

1. **Hazardous Soil**
2. **Acid Sulphate Soil**
3. **Potential Acid Sulphate Soil**

In addition to the above changes, the initially proposed processing capacity of 500,000 per year has been reduced to 225,000 tonnes per year. The processing capacity will include approximately 100,000 tonnes of solid wastes and 125,000 tonnes of liquid wastes.

Furthermore, and following a comprehensive review all storage facilities on site, it was determined to seek the storage of 8,000 tonnes of combined wastes at any one time to ensure that there is sufficient space and capacity for these wastes to be stored without compromising the safety of employees, truck drivers and contractors. Comprehensive details of all storage facilities including names, locations, dimensions, capacities and compatibilities are included in **Appendix H**.

To ensure that all approved and proposed additional activities as well as wastes are clearly known to all authorities, we have prepared **Table 1-1** presented below. **Table 1-1** includes all activities previously approved by NSW Government Authorities including Campbelltown Council (Council) and Environment Protection Authority (EPA), and the Land & Environment Court of NSW.

Therefore, the previously submitted RtS and RRtS must be reviewed in light of the above changes and those contained within Tables 1-1 and 1-2 as well as the revised supporting documents within the Appendices.

Table 1-1: Approved and Proposed Activities and Wastes

Existing Approved Activities (i.e. Development Consent, L&E Court Decisions, EPA licence)	**Proposed Additional Activities**
➢ Waste processing (non-thermal treatment) ➢ Resource recovery ➢ Waste storage ➢ Concrete batching ➢ Concrete works/Masonry plant	Nil
Existing Approved Wastes (i.e. Development Consent, L&E Court Decisions, EPA licence)	**Proposed Additional Wastes**
Liquid Waste: • Drilling mud, • Non-destructive digging waste, • Stormwater contaminated with gross pollutants Concrete: • Concrete washout from concrete batch plants, • Residual batch concrete from agitator trucks Building and demolition waste: • As defined in Schedule 1 of the POEO Act, as in force from time to time General solid waste (non-putrescible): • Municipal waste, being waste consisting of household domestic recycling waste that is set aside for kerb side collection or delivered by the householder directly to the waste facility (e.g. glass, plastic, cardboard, paper, aluminium, steel), or commercial waste of the same nature General or Specific exempted waste (not resource recovery): • Being treated drilling mud, • Processed foundry sand, • Basalt fines, • Reclaimed asphalt pavement, • Excavated public road materials, • Recovered aggregate, • Recovered fines (continuous and batch), • Recovered glass sand, • Recovered railway ballast, • Slag (blast -furnace, electric arc furnace, electric arc furnace ladle, electric arc welding, steel furnace) Soils (not resource recovery): • Soil that meets the General Solid Waste Classification (assessed against the CT1 thresholds, Table 1) of the Waste Classification Guidelines as in force from time to time with exception of the maximum threshold values for contaminants specified in the “Other Limits” column	Liquid waste (Waste processing (non-thermal treatment), Resource recovery and Waste storage): • Oily water (J120), • Industrial wastewater N205, • Sewage sludge and residues K130, • Asbestos containing water, • Groundwater, • Firewater N140 Solid waste (Waste processing (non-thermal treatment), Resource recovery and Waste storage: • Fly ash N150, • Grit from sewage treatment systems K130

Virgin excavated natural materials (not resource recovery): • As defined in Schedule of the POEO Act, as in force from time to time Soils (Waste storage only): Soil that meets the Restricted Solid Waste Classification (assessed against the CT2 thresholds, Table 1) of the Waste Classification Guidelines as in force from time to time	

All submissions received were forwarded to relevant specialist consultants, where relevant and considered necessary, for review and comments to inform this RTS. We have determined that for the benefit of all involved and for continuity purposes to engage the same consultants previously used by KDC Pty Ltd during the preparation of the EIS. These consultants are familiar with the site, existing approved and proposed activities and wastes. However, to ensure that we address all aspects raised by the authorities, we have engaged the services of additional professionals who specialise in those aspects. The consultants engaged to assist BRS in providing qualified responses to the Department are listed below.

1. Armstrong Design Creative Practical Solutions,
2. HAZKEM Dangerous Goods Consulting,
3. Dirt Doctors Geotechnical Testing Services,
4. DRB Consulting Engineers Pty Ltd,
5. Intersect Traffic Pty Ltd,
6. Muller Acoustics Consulting Pty Ltd,
7. Todoroski Air Sciences,
8. GHD Pty Ltd

It should be noted that in early March 2020 and following a meeting between BRS management team and senior staff of Campbelltown Council (Council), BRS lodged with Council an application for the installation of an awning for its assessment. Based on recent advice by Council officers, the application for the installation of the awning has been approved and the relevant Development Consent No DA801/2020/DA-O is being finalised. This is an excellent outcome since the awning has several benefits to the environment, community and BRS.

In support of the responses provided in this document, it was considered necessary to include relevant documents to ensure that this RtS can be reviewed on its own with references included in the **Appendices**.

Table 1-2 includes a list of all supporting documents presented in the **Appendices** to facilitate cross referencing when reviewing the RTS.

Table 1-2: BRS SSD8593 RtS Supporting Documentation

Appendix	Main Subject	Document Name
A	Submissions received by BRS	Department of Planning, industry & Environment Environment Protection Authority NSW Fire & Rescue Services SafeWork NSW Campbelltown City Council Community
B	Air Quality Response	Air Quality and Odour Response – Todoroski Air Sciences
C	Revised Site Layouts, Plans & Drawings	2D Masterplan 3D Masterplan Internal Site Layout General Site Layout Crushing and Screening Plant Site Plan- Tanks Farm Site Plan – Storage Bays Location of Noise Barrier Concrete blocks drawings Solid Waste Stockpile Shapes
D	Tipping Procedures & Flow Diagrams	Procedures for Incoming Deliveries of Sewer Waste Procedures for Incoming Deliveries of Resources Tipping Procedures - flow diagrams for: • J120/Firewater • A100/B100/C100/N140/Z180/M250 • Stormwater/Groundwater • Drill Mud/NDD/Cement Slurry • Soils/Sand/GSW/Solids • Cement Agitator Trucks • Sewer Waste • Asbestos Contaminated Mud/Waters • Leachate Material Pick up Procedures Asbestos Containing Liquid • Safe Entry into Asbestos Room • Asbestos Liquid Soil Delivery Instructions to Drivers & Passengers • Decontamination from Asbestos Room • Ausperl SDS • Kobelco Mini Excavators
E	Traffic Management within the Site	Traffic Stacking and Queuing Procedure Vehicle Turning Paths for different vehicle sizes and at different locations Vehicle Turning Paths inside the Building Vehicle Turning Paths outside the Building
F	Revised Traffic Impact Assessment	Revised Traffic Impact Assessment -
G	Previous Approvals	Concrete Batching and Masonry Plant (L&E Court) Resource Recovery Facility DA No: 948/2015/DA-1 Planning Assessment Report 948/2015/DA-1/B Modifications to DA 948/2015/DA-1/B
H	Locations, Capacities and Compatibilities of Storage Facilities	Plan with locations, names, capacities of storage facilities Table with names and capacities of storage facilities

		Table with materials compatibilities in Storage Facilities
I	Waste Loads TimeStep Analysis	Chart with Loads Timestep analysis over 2 hours
J	Revised Surface Water Management Plan	Revised Water Management Plan and Water Balance including revised OSD design Revised catchment plans Revised drawings Response to EPA's water comments
K	Revised Noise Impact Assessment	Revised Noise Impact Assessment - Muller Acoustics Consulting Pty Ltd
L	Photographic Evidence	Photos of • Fire Safety Features • Spill Kits • Landscaping & Vegetation • Traffic Management Signs • Pedestrians Safety Features • Others
M	Current Environment Protection Licence 20797	BRS current Environment Protection Licence 20797
N	Material Testing Procedures	Materials testing procedures Sample Process & Acceptance Procedures Sample Process Acceptance flow diagram Standard Operating Procedures (SOP) BRS Cement Tankers Testing Procedures for: • Drilling Mud/NDD • Stormwater/Groundwater • Cement Slurry • J120/Hydrocarbon Containing Waters • Sands, CT1 & CT2 Soil, Hazardous Soil, PASS/ASS Soils Excavated Natural Material (ENM Order) Processed Foundry Sand (PFS Order) Recovered Aggregate (RA Order) Recovered glass sand (RGS Order) Treated drilling mud (TDM Order)
O	Fire & Safety Management	Sydney Water available Pressure and Flow Locations of Spill Kits Fire Evacuation Procedures Fire hydrant concessions for existing buildings
P	Revised SEPP 33 Assessment Report	Revised SEPP 33 Assessment Report - Intersect Traffic Pty Ltd
Q	GHD Independent Audit Report	Independent Audit Report – GHD Pty Ltd

SECTION A

2 DPIE LETTER – DATE 19 JULY 2019

2.1 WASTE MANAGEMENT PROCESSING

2.1.1 HAZARDOUS SOILS

Page 26 of the EIS identifies hazardous soils will be processed at the site. Provide details on the hazardous soils proposed to be treated or processed.

The hazardous soils proposed to be processed will vary based on the particular contaminant. These soils may contain concentrations of metals or other chemicals in excess of the Contaminant Threshold (CT2) threshold under Table 1 of the NSW EPA Waste Classification Guideline. BRS proposes to treat hazardous soils which exceed CT2 threshold levels and aim to minimise concentrations of contaminants to below CT1 levels enabling safe disposal at an appropriately licenced facility.

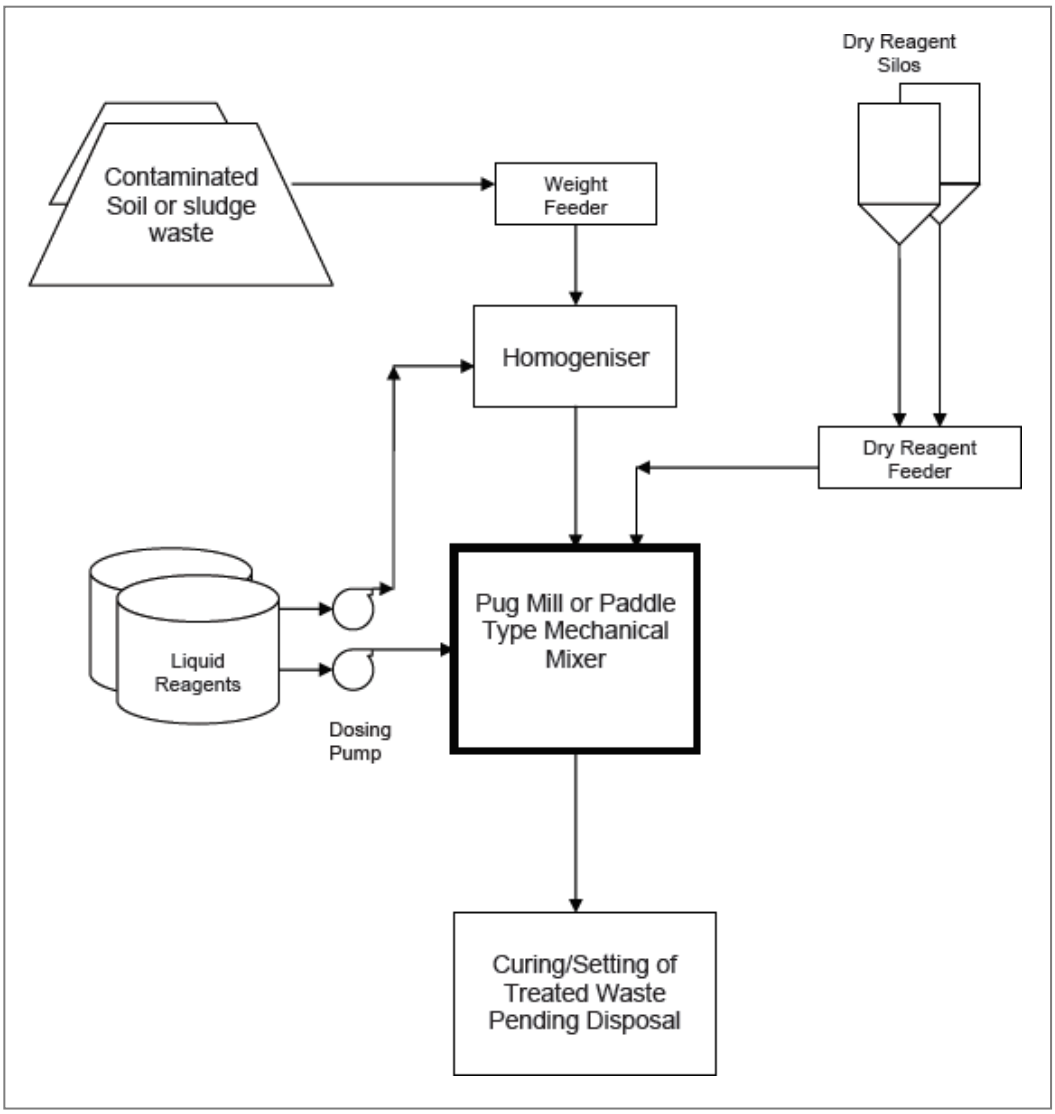
Further details on Hazardous Soils has been provided within Section 4.6 of the updated EIS.

Provide a detailed description of the treatment process to be used to treat the hazardous soils

Processing of the hazardous soils will involve the soil being fed into a homogeniser where liquid reagents are added manually. The material is then mixed by the proposed pug mill where further liquid and new dry reagents can be fed manually and mixed. Once appropriately mixed, the soil is left to settle/cure. The waste will be processed for a minimum 24 hours however, further treatment will continue until certified to be appropriate for disposal. The process is designed in accordance with the NSW EPA Immobilisation Technical Note 1 with an immobilisation approval for the component to be received from NSW EPA certifying the component is fit for purpose.

Further clarification of the hazardous waste process is provided at Section 4.6 of the updated EIS. Figure 1 provides a diagram of the proposed treatment process for hazardous soils.

Figure 1 – Hazardous Soils Process Flow Diagram



Provide details on whether the treatment of hazardous soils will be automated or manually operated.

The process will be handled manually by trained staff. Further clarification of the hazardous waste process is provided at Section 4.6 of the updated EIS.

The EIS did not provide any detail on the pollution control equipment that will be used to capture emissions or discharges from the treatment of hazardous soil. Provide details on the pollution control equipment proposed to capture or mitigate air emissions or discharges.

The area is to be appropriately bunded to prevent cross contamination or spillage of material outside the processing area. Misting sprays are to be installed to control dust generation during processing. Loading and unloading will occur in a designated loading area. The designated area will have misting sprays and bunding installed to prevent cross contamination.

Leachate from the area will be collected within the bund and directed to the liquid waste treatment process for treatment. Wastewater will be discharged to the sewer and filter cake will be handled as contaminated and disposed of at an appropriately licenced facility.

Due to the extended processing times involves and the small size of the operational component and storage capacity of the materials, any delivery of hazardous soils and ASS/PASS will be scheduled based on stock levels. This scheduling will provide adequate time to transition the operation between hazardous soils and ASS/PASS.

Provide details of the dimensions of the stockpile bays where the hazardous soils will be stored.

The hazardous waste treatment area is proposed to be 10m by 10m with a maximum height of 5m.

Provide details on the immobilisation approval(s) required to treat the hazardous soils.

A general approval to undertake immobilisation processing of hazardous waste must be sought from the NSW EPA in accordance with the Section 98 of the Protection of the Environment Operations (Waste) Regulation 2014. All treatment and handling of hazardous waste will be in accordance with the NSW EPA Waste Classification Guidelines – Part 2: Immobilisation of Waste.

Page 26 of the EIS states the treated hazardous soil will be tested. Provide details on what the treated soils will be tested for, details of soil testing be tested by a National Association of Testing Authorities (NATA) accredited laboratory and the testing regime.

The aim of the process is to reduce chemical contaminants and acidity to general solid waste standards appropriate for disposal. Testing of the resultant waste will be undertaken utilising the SCC and TCLP testing parameters in accordance with the NSW EPA Waste Classification Guidelines Part 1: Classifying Waste and will be undertaken by National Association of Testing Authorities (NATA) accredited laboratory.

Provide details on where the treated soil will be stored while awaiting the test results

Treated soil will remain within the treatment area while awaiting test results.

Provide details on how long the treatment process on the length of time of time it would take to treat the hazardous soils.

With the required thoroughness and testing requirements, it is expected that it will take a minimum of 24 hours to process a batch of hazardous soils.

Provide details on how the hazardous soils will be managed if there are delays in the treatment process or testing process.

No further hazardous soils will be accepted on the site if the hazardous soils are being processed. All hazardous soils received on the site will be scheduled in advance to ensure the hazardous soils are only received when the facility is capable of accepting the material.

2.1.2 ACID SULFATE SOILS (ASS)

Provide a detailed description of the treatment process to be used to treat the ASS.

Processing of ASS and PASS will be fed into the pug mill however, lime will be added manually and mixed through the soil to control pH levels only. Once appropriately mixed, the soil will be left to settle/cure. The waste will be processed for a minimum of 24 hours however, further treatment will continue if needed until certified to be appropriate for disposal. Further clarification of the ASS/PASS soils process is provided at Section 4.6 of the updated EIS.

Provide details on whether the treatment process will be automated or manually treated

The process will be handled manually by trained staff.

Provide details on the pollution control equipment needed to prevent emissions or discharges while treating the ASS

The area is to be bunded to prevent cross contamination or spillage of material outside the processing area. Misting sprays are to be installed to control dust generation during processing. Loading and unloading will occur in a designated loading area. The designated area will have misting sprays and bunding installed to prevent cross contamination.

Leachate will be collected within the bunded area and directed to the liquid waste treatment process for treatment and discharge of the wastewater to the sewer. Filter cake will be treated as contaminated and disposed of at an appropriately licenced facility.

Due to the extended processing times involved and the limited storage capacity of the materials, any delivery of hazardous soils and ASS/PASS will be scheduled based on stock levels. This scheduling will provide sufficient time to transition the operation between hazardous soils and ASS/PASS.

Figure 10 of the EIS provides a flow diagram of the treatment process, it appears the treatment process will use the same machinery. Provide details on how cross contamination of hazardous soils and ASS will be prevented.

Both hazardous soils and ASS/PASS are minor components of the overall operation and will be operated on an "as needed" basis dictated by market demand. Quantities are expected to be low and will only be accepted if suitable for treatment in the area set aside.

As the operation is operated on an "as needed" basis, on decommissioning the area and all equipment will be washed down. Wastewater will be collected and treated as leachate. The same washdown procedure will be implemented when transitioning directly between hazardous soils and ASS/PASS.

Provide details on how leachate from the ASS will be managed in the stockpile storage bays

Leachate from the area will be collected within the storage and processing areas and directed to the liquid waste treatment process. Wastewater will be discharged to sewer once treated and filter cake will be disposed of at an appropriately licenced facility.

Provide a timeframe of the ASS treatment process.

With the required thoroughness and testing requirements, it is expected that it will take a minimum of 24 hours to process a batch of PASS/ASS soils.

It does not appear the site has adequate space to treat ASS, provide a justification on whether the site has adequate space to treat ASS

The treatment area is 10m x 10m with a maximum height of 5m. The area is sufficient for the processing of this material.

2.1.3 LIQUID WASTE TREATMENT

Page 31 of the EIS states that liquid wastes will be sample for verification. Provide details on the liquid waste will be tested for.

Water testing will assess the full range of TCLP parameters as outlined within the NSW EPA Waste Classification Guidelines Part 1 and will be undertaken by a NATA accredited laboratory.

Filter cake will be classified under the NSW EPA Waste Classification Guidelines Part 1 and will be disposed of at an appropriately licenced facility.

Provide details on how the liquid waste will be managed to ensure incompatible liquid wastes are not stored in the same storage tanks

Each liquid waste stored at the site will be stored within a dedicated tank to prevent cross contamination. If a tank is to be transitioned between liquid wastes, the tank will to be cleaned via flushing with the flushing water treated as liquid waste and processed. Once the water being flushed through has been tested and cleared as clean, the tank will be ready for use for new liquid waste.

Provide details on the pollution control equipment that will be used to prevent and/or capture emissions from the storage tanks.

The liquid waste storage tanks will be 150% volume self-bunded and will be fitted with a radar control system to detect overflow. The tanks will be sealed to prevent fugitive odours. Charcoal filters will be applied throughout the liquid waste treatment system where potential exhausts are located.

Page 31 of the EIS identifies solids will be separated from the liquid waste and then piped to the dissolved air flotation system. Provide details on how solids will be pumped and provide details on how blockages from pumping solid waste will be prevented.

At this stage of the process, the solids will be suspended at the top of the liquid as a sludge mixture and pumped to the DAF where the addition of air to the mixture will enable further sludge to be floated to the top and separated. The sludge will be pumped in this form to the filter presses where water will be completely removed from the mixture.

Provide details on whether the treatment and processing of the liquid waste is automated or manually operated

The liquid waste treatment process will be automated.

Provide details on whether the storage tanks contain high level alarms to prevent overflows.

Radar control systems will be installed on the system providing alarms for overflow or spill events.

Provide details on the current and proposed bunding to capture any spills from the liquid waste tanks

All proposed tanks will be 150% self-bunded.

2.1.4 MUD PLANT AND FILTER PRESS

Provide detail on how sand, soil and sediment captured through the treatment of muddy liquid waste would be suitable for reuse.

Filter cake will be classified under the NSW EPA Waste Classification Guidelines Part 1 and the treated drilling mud order 2014. If the resulting filter cake meets the relevant criteria it will be sold as soil under the treated drilling mud exemption 2014.

Provide details on where the filter cakes be stored while awaiting information on the suitability of the filter cakes for reuse

All cakes are to be stored within the internal storage area on the eastern side of the main building. See Appendix A of this RTS Report and the EIS for proposed site plan.

Provide details on how it would be determined that the treated water would be reused for concrete batching or be discharged under the existing Trade Waste Agreement.

Treated water must meet a pH of 7-10, conductivity below 2000 micro Siemens, turbidity between 30-45 on clarity wedge, and a Total Dissolved Solids (TDS) of between 100-500ppm before it can be reused. Water not appropriate for reuse will be tested as waste and discharged to the sewer under the trade waste agreement.

2.1.5 LIQUID CONTAINING ASBESTOS

Provide details on how asbestos dust fibres from the filter cake be managed once pressed into a filter cake

The filter cake resulting from the asbestos containing water treatment process will be managed within a vacuum sealed bin pending disposal at an appropriately licenced facility.

Provide a waste classification of the filter cake

The resulting asbestos containing filter cake and waste HEPA Filters will be defined as Special Waste: asbestos waste Asbestos means the fibrous form of those mineral silicates that belong to the serpentine or amphibole groups of rock- forming minerals, including actinolite, amosite (brown asbestos), anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos) and tremolite.

It noted that the process equipment that would be used to treat the liquid containing asbestos would be used for other treatment processes. Provide details on how cross contamination will be managed

No cross use of asbestos treatment system with other waste treatment systems will be permitted. Dedicated equipment will only be used.

Provide details on the cleaning regime that would be applied to cleaning the tank containing the liquid containing asbestos

As the system is sealed and dedicated to asbestos liquid waste only, cleaning down of the system is not required. If maintenance requires disconnection of the sealed system, the system will be thoroughly flushed through and all liquid captured within the dedicated sealed storage tank allowing for works to commence.

Provide details on the treatment and processing of the liquid containing asbestos has been used in Australia or overseas

The use of filters in the removal of asbestos fibres is commonplace and used in many industries in a variety of applications. HEPA filters which are proposed to be used are capable of removing liquid bound or air bound asbestos fibres. Sufficiently fine HEPA filters will be used to ensure all asbestos fibres are removed from the liquid with the proposed final filter press plant providing an effective measure to ensure the liquid is asbestos free. Further details of the asbestos containing liquid treatment process can be found in Section 4.5 of the updated EIS.

Provide details on the capacity of the cake bin

The capacity of the cake bin is 10m^3.

2.1.6 CONSTRUCTION AND DEMOLITION (C&D) WASTE

Provide details on the tip and spread area and provide clarification on the receivals area

The tip and spread area has been relocated to in front of the feed stock roller door on the south western side of the building. This provides sufficient space for the tip and spread area and is not located within the main vehicle movement pathway. Once checked, the material can be easily pushed to the feed stock area within the building for processing.

Detail of the receivals procedure for solid wastes including C&D can be found in Section 4.2.1 of the updated EIS.

Provide a justification as to why the loading and unloading of wastes at the C&D facility will be carried out externally. Provide details on how noise and dust will be managed from this area

Receival and loading will occur external to the building as these actions are short in duration. Water sprays are to be installed over the tipping area which adjoins the feed stock area which is within the building. The tipping area is bunded by a drainage system which will manage any runoff from the area controlling the amount of material reaching other hardstand surfaces and improving washdown of the tipping area. Washdown of the receivals area will be undertaken routinely with the proposed drainage bunding improving the washdown procedure allowing for faster washdown of the tipping area when required. The bunding also serves to catch sediment runoff, with all captured sediment collected for reuse.

Detail of the receivals procedure for solid wastes including C&D can be found in Section 4.2.1 of the updated EIS.

Based on the site diagrams it does not appear the receivals area has enough space to store waste and

tip and spread in accordance with the "Standards for Managing Construction and Demolition Waste in NSW". Provide details on how C&D waste will be managed in accordance with these Guidelines

The tip and spread area has been relocated to in front of the feed stock roller door on the south western side of the building. This provides sufficient space for the tip and spread area and is not located within the main vehicle movement pathway. Once checked, the material can be easily pushed to the feed stock area within the building for processing.

The "Saleable Material" stockpiles appear to be undersized relative to the amount of incoming waste. Provide details on how waste will be managed and details on the tonnages, throughput and dispatching of waste

The previously approved saleable material stockpiles have been removed.

The EIS identified that the waste stockpiles would be below 6.5 m. What will the proposed stockpile height be and provide a justification for the proposed stockpile height

The external stockpile bays have been removed from the application. The proposed internal stockpiles will be limited to 6.5m high bays.

The "Saleable Material" stockpiles appear to be difficult to access, provide details on how machinery and heavy vehicles
will access these stockpiles

The previously approved saleable material stockpiles have been removed.

Provide details on how long it would take to unload a truck, spread it out and then move it to the designated stockpiles

The process has been timed and has been calculated to be 25 minutes per truck inclusive of the tip and spread procedures required under the Standards for managing construction waste in NSW (EPA, 2018). The tip and spread process has been timed to be 10 minutes per delivery (which is inclusive within the 25 minutes per truck previously stated).

Detail of the receivals procedure for solid wastes including C&D can be found in Section 4.2.1 of the updated EIS.

Provide details on what pollution control equipment will be used to managed dust from the crushing plant

The crushing area is to remain inside the southern portion of the building. The feed stock and product bays will be located internally with each provided with a roller door to allow for the movement of material into and out of the building. All roller doors will be closed and only opened to facilitate the movement of material. The roller doors will be supported by water sprays to control dust generated in the transition area.

To manage dust internally, the crushing plant will incorporate water sprays. This will be supported through management measures such as regular maintenance of crushing plant and water sprays, routine washdowns of the area, and works procedures.

Provide details on whether the roller door will be closed or open during operation

The roller doors are proposed to be closed during operation however, the doors will be opened to allow for the movement of unprocessed material into the feed stock area or processed materials out of the crushing area into vehicles.

2.1.7 PRODUCT DESTRUCTION

Describe the products and its waste classification

Product received on the site for destruction is to be restricted to beer and will be received on site packaged in glass bottles, boxes, and on pallets. The waste classification of the beer is as liquid waste under the NSW EPA Waste Classification Guidelines: Part 1 with the other components such as glass or other packaging being general solid waste (non-putrescible).

The liquid may be applied to land as Food waste (liquid) under the liquid food waste exemption 2014. Glass cullet will be directed to glass bottle manufactures for reuse whilst any glass fines will be sold under the recovered glass sand exemption 2014.

Describe what the packaging is?

Glass bottle, metal cap, and cardboard box.
The glass bottle will be fully recovered with glass cullet directed to glass bottle manufactures and glass fines sold under the recovered glass sand exemption 2014. Metal caps and cardboard boxes are directed to appropriately licenced recycling facilities for recycling.

Section 4.8 of the EIS states the product will be put through a shredder or crusher dependant on packaging material. Provide further details on this process.

The product destruction range of products has been constrained to glass bottles only and as such only a crusher is required.

The beer bottles will be fed into a small-scale crusher with the liquid filtered allowing for the separation of the liquid and solids.

The liquids will be captured and directed to a liquid storage tank for temporary holding. Once the processing has been completed, the batch will be directed to soil injection at appropriately licenced facilities.

Once liquids are drained a spray bar atop the small-scale crusher will further flush residues from the collected glass cullet with the water collected with the beer. The glass cullet will then be directed to licenced glass recyclers for recycling. Other packaging including the cardboard boxes and metal caps will be directed to licenced facilities handling those associated materials.

See Section 4.9 of the updated EIS for further details on the product destruction process.

Figure 21 of the EIS identifies where the location of where the products will be stored prior to separation. Provide details on how the product will be stored

The storage of liquid waste will be capped at 20kL at any one time with the annual amount processed expected to be small. Glass cullet and glass fines will be provided with a stockpile bay within the north western internal storage area.

Section 4.8 of the EIS identifies the liquid product will be put through a filter to capture any solids such as glass before being transported off site for soil injection. Provide details on the classification of the liquid and provide detail of where the liquid waste will be transported off site for soil injection. Section 4.8 of the EIS describes the remaining material will be processed to remove residues via a spray bar on a conveyor. Provide details of where the spray bar is and what the spray bar does

Once the processing has been completed, the batch will be directed to an appropriately licenced facility for soil injection. The liquid is classified as liquid waste and may be applied to land as Food waste (liquid) under the liquid food waste exemption 2014.

A spray bay, which is a bar that sprays water, is to be located atop the small crusher and will run water through the collected crushed glass to further remove residues. The water will be collected with the beer waste and handled in the same manner.

2.1.8 CONCRETE BATCHING PLANT

Figure 20 of the EIS provides a flow chart of the concrete batching process, however the EIS does not described the concrete batching plant process is. Provide a detailed description of the concrete batching process.

Cement and sand will be fed from the two internal storage silos via conveyor. Cement will be fed to a load cell while sand, water, and aggregates will be fed directly to the mixing unit; this system allows for adjustment to the mix ensuring quality concrete production is maintained during production. Once mixed, the slurry will be fed into either a concrete agitator truck or to a prefabricated mould for masonry which will be allowed to cure within the main building. Once cured, the masonry blocks will be dispatched from the site. Further details on the concrete batching process is provided at Section 4.8.1 of the updated EIS.

Provide detailed description of what the upgrade of the concrete batching plant.

The new concrete batching plant will completely replace the existing concrete batching system. The new concrete batcher will include:

+ *New enclosure;*
+ *2 x New storage silo's for cement and sand;*
+ *1 x Load cell;*
+ *1 x Aggregate feeder;*
+ *1 x Mixer/Hopper; and*
+ *1 x Swing in hopper.*

Supporting the concrete enclosure will be mist spraying bays throughout the system to minimise dust generation.

The new system utilises modern equipment chosen to minimise impacts from noise and dust whilst improving batching efficiency.

Provide detailed description of how the concrete blocks are manufactured.

Concrete moulds are used to form the blocks and are pre-made and reused where possible. Rebar reinforcement is made for each block and placed into the mould prior to pouring. Once the rebar is in

place, concrete slurry is poured into the mould and allowed to settle and dry. Once the block is formed and dried, the moulding is removed, and the block is ready for sale. See Section 4.8.2 of the updated EIS for further details on the concrete block manufacture process.

Provide details how recovered materials will be used to manufacture the concrete blocks.

Where possible, BRS aims to utilise recovered materials in the formation of concrete products and will target close to 100% recovered materials in the block manufacture.

Crushed wastes such as recovered asphalt or slag may be utilised as aggregates. Foundry sands and glass fines will be blended with recovered sands and utilised as sand within the process. Fly ash and collected dusts will be blended with cement powder for reuse within the process. Water used in the process is also recovered from drilling muds and water capture processes. Prior to inclusion in the process, all wastes will be classified for use. Any contamination must be within acceptable standards.

Recovered materials will be sourced on site or purchased from other suppliers and include:

- *Foundry sands;*
- *Reject glass fines;*
- *Timber waste;*
- *Reject concrete;*
- *Reclaimed asphalt;*
- *Slag;*
- *Various baghouse fines and 'dusts' from dust collection operations;*
- *Recovered aggregates;*
- *Drilling muds;*
- *Fly ash; and*
- *Reject cement.*

See Section 4.8.2 of the updated EIS for further details on the concrete block manufacture process.

2.2 WASTE

Table 5, page 18 of the EIS lists the typical quantities of waste types accepted at the site. The wastes listed under Material Group doesn't match the proposed waste types listed in Table 4. Provide a more detailed quantities table with proposed daily, weekly and annual outputs.

Table 4 has been revised in line with the waste groupings listed in Table 5. See Section 4.1.3 of the EIS for Tables 4 and 5.

The inspection protocol only deals with asbestos. Provide details about other non-conforming wastes.

The inspection protocol has been revised to include any visible contaminants and asbestos. See Section 4.2.1 of the EIS for description of the solid waste receival and inspection process.

2.3 HAZARDS

Following a review of Appendix I of the EIS, The Department does not consider the preliminary risk screening has been undertaken in accordance with the Department's Applying SEPP 33. Primarily:

+ the screening does not include the quantities of all dangerous goods associated with the proposed development.
+ The screening did not include the quantities of sulphuric acid and caustic soda (referred to in page 31 of the EIS). Both are known to be DG. the screening did not consider the DG transport screening thresholds. As such, the EIS does not satisfy the hazards SEARs

The SEPP33 Risk Screening has been updated based on the Department's comments and includes the required items as described. All dangerous goods associated with the proposed development and their quantities have been listed and a Dangerous Good (DG) transport screening assessment has been undertaken. The updated EIS now includes this detail, see Section 7.4 or Appendix I of the updated EIS or Appendix F of this RTS Report for further detail.

Page 20 of the EIS did not include sufficient information processes which may involve the use of DG such as the reaction tank and x3 neutralisation pits.

It is noted that a number of treatment chemicals are designated as dangerous goods; their use in the process is automated to ensure safe separation of staff and chemicals along with the safe and appropriate dosing of chemicals into the liquid waste. The chemicals are introduced within the reaction and neutralisation tanks and, as their dosing is automated, are mixed with the liquid waste in accordance with the measured parameters. For example, sulfuric acid and sodium hydroxide are used within the neutralisation tank and are automatically dosed to return the pH balance of the liquid to an acceptable level.

All chemicals including dangerous goods will be stored in a designated bunded storage location in the eastern corner of the building. All automated processes, storage locations, and treatment tanks will be fitted with warnings and alarms. Spill kits will be located to ensure effective management of any spills.

Drawing BRSLS-OO1R2 of EIS and Appendix M identifies a neutralisation process with 2x 25kL mixers which may be connected to scrubbers/ filters/ absorbers.

Charcoal filters are proposed to be installed throughout the liquid waste treatment system where necessary. If the design of the mixing units includes any ventilation, the opening will be equipped with a filter to manage any odour. Updated process flow diagrams which note location of Charcoal filters have been provided at Appendix M of the updated EIS and Appendix I of this RTS Report.

Provide a revised preliminary risk screening (DG transport inclusive), including and not being limited by the following information:

1. *clear indication of class, quantity and location (site diagram) of all dangerous goods and hazardous materials associated with the SSD, including any raw materials or reagents associated with all waste processing or water treatment operations*
2. *clear description all processes (neutralisation, reaction tank, etc.) associated with the SSD involving the storage and handling of dangerous goods;*
3. *clear indication on the capacity and location of all storage or processing tanks and storage areas for dangerous goods;*
4. *clear description of the safeguards (scrubbers, filters, alarms, etc.) to be implemented for processes involving the storage and handling of dangerous goods*
5. *clear verification that DG Class 3 flammable goods tanks and combustible liquid tanks associated with the SSD can comply with AS 1940:2017 The storage and handling of flammable and combustible liquids (AS 1940).*
6. *clear indication and confirmation that the diesel fuel station (13 kL of C1 combustible liquid) will be sufficiently segregated (i.e. outside of bund and considering AS 1940) from any areas associated with the storage and handling of DG Class 3 combustible liquids*

A DG transport risk screening has been undertaken in accordance with the comments above and have been included within Section 7.4 and in Appendix I of the updated EIS or Appendix F of this RTS

Report.

If the preliminary risk screening indicates that the proposed development is potentially hazardous, a preliminary hazard analysis (PHA) prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis' and Multi-level Risk Assessment must be submitted.

The updated SEPP33 Risk Screening found the proposed development is not potentially hazardous and therefore did not require a preliminary hazard analysis. Further discussion can be found in Section 7.4 and in Appendix I of the updated EIS or Appendix F of this RTS Report.

2.4 SITE ACCESS, MANOEUVRABILITY AND PARKING

"Proposed Site Plan" (180009 — Site 02, Rev. F) shows a vehicle queuing behind the outward weighbridge. A truck would be unable to safely exit if this queuing space is occupied. Provide details on how trucks can exit with a truck located in this "Que In" space.

All heavy vehicles arriving to the site will require scheduling or pre-notification of arrival allowing for management of vehicle loads. If the premises is at capacity, vehicles will be advised to delay their journey to the site. If vehicles arrive to site without scheduling and no capacity is available, they will be turned away.

A total of seven queuing spaces have been provided within the site beyond the weighbridge; these queuing spaces can hold a single truck and dog or other articulated vehicle or two liquid trucks affording a total of 14 queue spaces if exclusively occupied by liquid trucks. A total of 6 heavy vehicles of various sizes are expected to arrive to the site per hour with the maximum time on site projected to be below 30 minutes per vehicle. As there is sufficient queuing space internal to the site, a management policy of prioritising an incoming truck over outgoing is possible if the need arises.

There appears to be only enough space for one truck to queue behind the weighbridge. Additional space for queuing is required to ensure no impact on the road. Provide details of the weighbridge wait times for heavy vehicles and how heavy vehicles will be managed to prevent queuing on Kerr Road

The site access, load detail entry, weighing and weighbridge inspection process has been timed to take an average of 2 minutes.

The limited queuing prior to the weighbridges is not projected to be an issue due to the management procedure to be put in place and the total number of queuing spaces provided throughout the site.

It has been calculated based on the proposed processing capacity that 6 heavy vehicles per hour are expected to arrive to the site with all vehicles timed or projected to spend less than 30 minutes on the site. Given the number of queuing space internal to the site, a management policy of prioritising an incoming truck over outgoing is possible if the need arises.

To further prevent on road stacking of heavy vehicles, all heavy vehicles are to be scheduled. If the premises is at capacity, vehicles will be advised to delay their journey to the site. If vehicles arrive to site without scheduling and no capacity is available, they will be turned away.

Provide a heavy vehicle stacking plan that indicates the proposed areas for trucks to wait (tack) on site and the number of heavy vehicles that could be sacked onsite at one time without impacting the manoeuvring of vehicles

All on site queuing spaces are shown on the provided site plan. Given the manoeuvring of vehicles may be constrained in places notably, next to the muddy waste drop off location and along the north eastern boundary, queuing afforded in the south eastern portion of the site facilitates manoeuvring whilst truck and dog vehicles await the tip and spread procedure and loading of material.

The site management system will cater to the proposed capacity based on the average number of vehicles per hour expected to the site, the queuing provided on site and the time taken to undertake delivery and loading on the site.

In the case of peak hour demand or unexpected delays, sufficient queuing capacity is available to accommodate the vehicles on the site and the scheduling allows for drivers to be informed of delays prior to their commencing their journey to the site.

Provide a timestep analysis showing the maximum number of heavy vehicles that would be onsite during peak period.

A timestep analysis of heavy vehicle movements during peak hours has been provided at Appendix H of this RTS report.

Section 4.2.1 of the EIS suggests that at the weighbridge, a worker would inspect the top of each load from an elevated inspection point or by using a video camera. Provide details of where the elevated inspection point is located.

No elevated platform is provided. A video camera will be used to inspect the load.

Provide details of where the weighbridge operator/waste inspector would be located.

The inspector will be located within the new weighbridge office on the Kerr Road frontage, see Appendix A for proposed site plan.

There is no analysis of weighbridge and inspection operations and resulting queuing during peak periods for the facility. Provide procedures to ensure no queuing in the road occurs if four trucks arrive at once.

A total of 6 heavy vehicles are projected per hour with all trucks to be scheduled. Two weighbridges are proposed with one dedicated to liquid vehicles entering and leaving the site whilst the main weighbridge will process all sized heavy vehicles.

If unscheduled heavy vehicles arrive and no capacity is available, the load will be turned away. In the circumstance where a scheduled heavy vehicle arrives early or late overlapping with another heavy vehicle, sufficient capacity is afforded within the site to prioritise entering vehicles over leaving vehicles until scheduled flow returns.

The temporary storage area (solid materials, skip bins and solids for transfers) and staff parking area appears to be located in the heavy vehicle turning path for B double, articulated vehicle paths and mud waste and smaller trucks. Provide details on how heavy vehicle will be managed and updated plans that show that heavy vehicle safely manoeuvre within the site and the relocation of the receivals area.

The proposed temporary storage area has been removed. A new tip and spread area has been provided in front of the crushing area in the south eastern portion of the site. As shown within the swept paths, no conflicts arise from the on-site traffic system. See Appendix A for site plan and vehicle swept

paths.

The parking bays appear to be in very close proximity to the vehicle turning path for the concrete agitator. Provide details of how heavy vehicles can safely manoeuvre within the site and not conflict with staff parking

One queue space has been removed affording greater space between the parking area.

The TIA does no assess onsite manoeuvring provide turning path diagrams of all on-site truck manoeuvring is required including:

+ *accessing and loading and unloading all stockpiles on the site*
+ *Front end loaders manoeuvring in and out of the building through the roller doors*
+ *truck manoeuvring in and out of the "loading" area at the eastern corner of the site*
+ *trucks manoeuvring in the south-east side of the building*
+ *trucks manoeuvring in and out of the Concrete plant area and still allow trucks to enter the shed*

Vehicle turning paths have been provided for the heavy vehicles which will access the site, see Appendix A.

The TIA identifies the average load of vehicles is 20 tonnes which seems high compared to other similar facilities. Provide further details on average load for different waste types

The TIA has been revised to accommodate different vehicle sizes and more accurately calculate vehicle movements to and from the site. See Appendix D for revised TIA and Section 7.6 of the updated EIS for further discussion.

The EIS identified that it would take 10 minutes for a vehicle to unload waste. Provide details of how long it takes for vehicles with different waste types to unload an unload.

BRS have timed a number of vehicles based on the proposed receivals procedure. The following provides a guide to the likely time on site per waste group and includes unloading of material:

+ *Solid waste deliveries – 25 minutes on site*
+ *Muddy waste deliveries – 21 minutes on site*
+ *Liquid waste deliveries – 26 minutes on site*

The solid waste tip and spread portion of the delivery process is timed take 10 minutes. Liquid and muddy waste tip off and vehicle hose out has similarly been timed to take on average 10 minutes.

The Transport Management Plan indicated that Campbelltown DCP requires 41 car parking spaces at the site. Provide updated site plans with appropriate number of parking spaces

The transport management plan initially calculated the parking rate based on roof area alone. Building floor areas to be utilised have been provided and a revised parking calculation has been undertaken resulting in 30.05 car parking spaces being required under the Campbelltown DCP (which has to be rounded to 31 spaces).

30 car parks are proposed on site. The minor non-compliance with the Council DCP parking rate is considered appropriate as the number of cars likely to be parked on site during peak demand is projected to be 26.

Provide details on the onsite on road pavement

The onsite road pavement consists of 200mm thick concrete hardstand constructed in accordance with applicable guidelines and standards. This thickness is considered appropriate considering the size of vehicles, vehicle loads, and vehicle weight which will be accessing the site. BRS will maintain the hardstand integrity and, operating a concrete batching plant, is able to quickly and effectively fix any wear on the hardstand condition.

Provide details on expected numbers of vehicles accessing on-site vehicle parking

Based on existing staff numbers and projected staff numbers, BRS has projected that a total of 26 cars will utilise the site in peak times based on current loads and the projected additional staff generated by the proposed development.

2.5 TRAFFIC

The TIA averages out truck movements. Waste facilities have peak hours which represent the worst-case scenario. Update the TIA to include the worst-case scenario.

The TIA includes a calculated AM and PM peak hour worst-case scenario for traffic generation. Advice from the operator is that the peak hours for truck movements from the site are 7 am to 9 am and 4 pm to 6 pm.

AM Peak hour = 15 inbound trips + 15 outbound trips (waste delivery and removal) + 15 inbound (staff)+ 2 inbound and 2 outbound (concrete batching plant) = 49 vtph (32 inbound and 17 outbound).

PM Peak hour = 15 inbound trips + 15 outbound trips (waste delivery and removal) + 15 outbound trips (staff) + 2 inbound + 2 outbound (concrete batching plant) = 49 vtph (17 inbound and 32 outbound).

The TIA does not indicate if the sites AM/PM peak will coincide with the AM/PM peak period of Ingleburn traffic. Update the TIA to include the AM/PM peak period times.

As stated above the peak hours for truck movements from the site are 7 am to 9 am and 4 pm to 6 pm.

The TIA did not identify what are the haulage load numbers based on. Provide clarification on whether the haulage numbers were based on the existing weighbridge data.

Capacity of truck and dogs was determined to be 28t as per generally accepted practice. An average load of 12KL or 12t was chosen for liquid and muddy waste deliveries having regard to the average capacity of the trucks (16kL to 8kL) likely to be visiting the site.

2.6 AIR QUALITY

The AQIA does not consider adjacent industrial uses as receivers. Update the AQIA to include industrial receivers

It is acknowledged that some receptors, such as a boarding school or hospital may have sensitive individuals present for periods of time. However, not all places where people work are automatically sensitive receptors which trigger the EPA criteria.

All potentially sensitive receptors were considered in the AQIA. The existing industrial receptors were examined and were not considered to be sensitive receptors for any detailed assessment. The key factors considered were that only healthy adults would be present, and even then for much less than 24-hours over any day, whereas the EPA criteria are set at levels suitable to protect the most sensitive individuals in the community and such individuals would unlikely be present.

Workplace air quality standards are many times higher than the EPA criteria and are directly applicable to the places where people may work at the nearby industrial receptors. The workplace criteria are set at suitable levels to manage the health of adult workers present at the industrial receptors and compliance with such criteria would not tangibly be affected by the proposed development.

The AQIA does not consider potential emission sources including those that could be generated from the treatment of liquid waste and hazardous soils waste Update the AQIA to include potential emissions sources and update the modelling to identify potential impacts on industrial and residential receivers

As outlined above, the treatment of liquid waste and hazardous solid waste has a low likelihood of impacting the surrounding environment as these materials would only be processed in sealed systems, or have their emissions captured or be wetted to the point that no tangible emissions would arise. This processing is proposed within a building enclosure, further reducing the scope for any off-site emissions.

The liquid wastes would be transported to the site in vacuum sealed trucks and pumped from the trucks into sealed vacuum storage bins located within the building enclosure. The liquid waste process is a closed treatment system with minimal potential for odour emissions to arise.

The waste material including foundry sand, hazardous soils, slag and fly ash received would be stockpiled and handled within the building enclosure. The material would be sufficiently wetted to ensure no tangible dust emissions and hence minimal emissions of other contaminants is likely to arise during the handling and processing of this material. There would be no wind erosion from the stockpiling of material as they are not subject to wind effects within the building.

The modelling has not considered if roller doors for the warehouse will be open or shut C&D processing. Provide clarification on whether the modelling took into consideration the building design and whether doors will be open or closed during operation

This is incorrect. As outlined in Section 6.3.1 of the AQIA (Todoroski Air Sciences, 2018), all sources are assumed to be located in the open. That is, the dispersion modelling has not accounted for the potential reductions associated with the activity occurring within an enclosed building (door open or not) as proposed. The building enclosure would reduce dust emissions by approximately 70-90% by minimising wind effects, allowing for controlled moisture and preventing the travel of pollutants. The issue of a door in this context is not a tangible issue.

The EIS has not considered how dust will be managed from the crushing plant including whether a bag house would be required to manage dust from the crushing plant

This is incorrect. The modelling assessment applies controls to the crushing plant. The controls include wet suppression. Refer to Table 8-1 in Section 8 of the AQIA (Todoroski Air Sciences, 2018).

2.7 NOISE

The site plan used in the NIA is not site plan in the EIS. Update the NIA to ensure the site plan in the EIS is used.

The NIA has been updated based on the revised proposed development on the site. See Appendix F or Section 7.2 of the updated EIS or Appendix F of this RTS Report for further discussion of the proposed development.

Update the NIA to ensure the roller door have not indicated whether the roller doors will be open or shut in the modelling

The roller doors have been modelled as being open during operations.

Roller doors are proposed to be closed during operation with the roller doors opening to allow for the movement of materials into or out of the building as required.

The proposed extension of the noise wall impact the flow of water at the existing easement

The proposed extension of the noise wall remains a part of the proposed development however with significant change to facilitate the flow of water. The bottom portion of the wall is proposed to include flaps which will allow for water to flow through thus not inhibiting water flow through the drainage easement. The height of the hinged flaps is proposed to be in alignment with the building floor level.

The noise wall extension has also been slightly moved to be outside of the gas pipeline easement.

It does not appear the NIA considered a 3 am start time for the concrete batching plant. Update the modelling to assess potential impacts for the proposed 3 am start up times.

The NIA considered 24-hour operation for the concrete batching plant as 3am to 7am is considered to be a part of the nighttime period.

exceedances of the residential receivers' during construction period were identified in the NIA, provide details on whether the proposed the proposed management/mitigation management measures would reduce noise during construction.

All construction noise mitigation measures to be put in place during construction are in accordance with AS2346-2010 Guide to Noise Control on Construction, Maintenance and Demolition Sites".

2.8 WATER MANAGEMENT

There are several existing easements on the site which restrict the use of external areas. The proposal includes the stockpiling of waste within the easement for the overland flow of water, construction of push walls, the extension of a noise wall and the construction of an awning which will impede the flow of water. Can these structures be legally constructed on the easement?

The stockpiling of waste, the proposed awning, and the approved saleable material bays have been removed from the application. The existing noise wall is to remain as it has been previously approved by Council and the proposed extension of the noise wall also remains a part of the application.

In the case of a drainage easement, the purpose is to facilitate overland flow of water across private land and as such any development within the easement must preserve the overland water flow.

The previously proposed noise wall was of solid concrete construction and did not consider drainage flow through the easement due to the fact that the approved saleable product bays were already impeding any water flow through the area.

To facilitate the north easterly water flow through the easement the proposed noise wall extension has been redesigned. The bottom portion of the extended noise wall is proposed to include flaps which will allow for water to flow through. The height of the flaps will be in alignment of the main building floor level to ensure free water flow through the drainage easement.

As the proposed noise wall extension facilitates the overland flow path it is considered able to be approved within the drainage easement.

The Water Management Plan and Water Balance (Appendix B) does not model or discuss water quality including potential contaminants of concern. The proposal does not include separate leachate collection for external stockpiles and stormwater systems. Therefore, contaminants from the waste stockpiles are directed to the stormwater system. How leachate or dirty water be managed on site to prevent pollution of waters?

External stockpiling of material has been removed from the application and as a result, only material tipped within the tip and spread area in the south eastern portion of the site (see Appendix A) may contribute to contamination of stormwater.

To manage the potential for contamination, the tip and spread area has been designed to incorporate a drainage bund circling the tip and spread area. The purpose of this drainage bund is to capture any runoff from the tip and spread area ensuring the material does not end up within the stormwater system. Accompanying the proposed drainage bund will be

management procedures including regular washdown of the tip and spread area along with the designated dirty water catchment area of the site.

For all other external surfaces on the site, all runoff is to be collected in the site's stormwater drainage network and treated prior to leaving the site. To manage pollutant loads, all drainage pits are proposed to be fitted with pit inserts to capture sediments and gross pollutants as recommended within the water management report. All pit inserts are to be inspected daily and cleared as required. Site sweepers are to routinely clean the hardstand areas to further remove sediment.
In addition, a 10m^2 stormwater chamber equipped with 14 x Ocean Protect 690mm cartridges is proposed with all overflow directed through the cartridges prior to leaving the site.

With the tip and spread area effectively managed and separated from the other external surfaces the potential for contaminants entering the stormwater system is considered to be low.

Provide a characterisation of water run-off from the stockpiles is provided, taking into account the stockpiles are located in an overland flow path.

External stockpiling of material has been removed from the proposed development. The only material to be located on the external hardstand area is received material within the tip and spread area. This area is managed with a drainage bund which collects all runoff from this area effectively separating

it from the rest of the external hardstand area.

The Water Management Plan does not discuss the impacts of the proposal on the overland flow of water.

The stockpiling of waste, the proposed awning, and the approved saleable material bays have been removed from the application. The existing noise wall is to remain as it has been previously approved by Council and the proposed extension of the noise wall also remains a part of the application.

The flow path is considered to flow towards the north east into another overland flow path which flows towards to the north west. Due to this flow path, the proposed noise wall extension could block water flow. Therefore, a redesign has been undertaken. The bottom portion of the extended noise wall is now proposed to include flaps which will allow for water to flow through.

Where is the OSD tanks proposed?

An OSD tank is proposed in the northern corner of the site. See the revised stormwater management plan is provided at Appendix B.

2.9 FIRE MANAGEMENT

Provide details on whether the site is capable of capturing fire water if in the event of a fire

Provide detail on whether the drains can be manually or automatically shut to prevent firewater from leaving the site

The drains will be manually able to be closed to enable the capture of fire water. Sufficient space on the site and water capacity exists on the site to manage the captured water.

The Fire Management Plan does not appear to cover the proposed awning or the C&D facility or external plant.

As part of previous fire management works on the site it was deemed unnecessary to fit out the crushing area or the muddy water under awning area with sprinkler systems due to the size of the crushing area and the operations involving only inert non-combustible materials with minimal potential for fire. Similarly, the material within the mud plant area is contained within storage tanks with the waste largely consisting of water. In the event of a fire, evacuation plans for staff operating in the area would be implemented.

The EIS does not assess the proposal against FRNSW's draft "Fire Safety in Waste Facilities" Guideline

The draft *Fire Safety in Waste Facilities Guideline* prepared by FRNSW applies to waste facilities which meet the following criteria.

This guideline does not apply to any waste facility, or areas of, that are being used for:

a) *landfill (but, may apply to a waste facility on the landfill site)*
b) *composting, including in-vessel, green waste and anaerobic digestion*
c) *liquid waste treatment*

d) *hazardous chemicals or special waste treatment (e.g. waste tyres, or*
e) *less than 50m^3 of combustible waste material.*

No component of the facility is defined as a landfill and there is no proposal to undertake composting. However, the facility proposes liquid waste treatment and will store hazardous chemicals as part of the liquid waste treatment. Less than 50m^3 of combustible waste material is proposed to be stored on the site at any one time. As a result, the guideline does not apply to the proposed operation.

2.10 GENERAL

Provide a detailed description of current operations and any pollution control equipment used to managed noise, air and water impacts

The proposed operation has been described throughout Section 4 of the EIS which has been updated. Further clarifications and detail have been included as part of the updated EIS based on comments from the submissions.

Notations regarding mitigation measures have been included within Section 4 of the updated EIS along with the mitigation measure listed at Section 9 of the EIS.

BRS will implement all recommendations provided by specialist subconsultants in order to achieve compliance with the relevant environmental guidelines.

Provide details on current and future employees including proposed number of jobs to be created during construction and operation.

BRS currently employ 20 staff on site (3 admin staff, 3 management staff and 14 operators). It is projected that another 10 full time equivalent (FTE) staff will be required with the potential for an additional 2 part time opportunities.

Provide details on whether employees will be on shift work

Due to the proposed 24-hour operation of certain aspects of the proposed development along with the extended operation of the concrete batching plant, shift work will be required as part of the operation. BRS are proposing 3 shifts 6am-2:30pm, 2pm-10:30pm and 10pm-6:30am.

Provide an update on any development applications that are currently with Council for assessment and how they will impact this development if not approved.

DA 651/2019/DA-0 for the proposed awning over the south eastern portion of the site has been formally withdrawn. No awning over this area are proposed as part of the development application.

2.11 PLANS

Adequate plans for the awning have not been provided. No indication of the location of the footings and supports has been provided. The location of the footings and supports could impact manoeuvring on site

The awning is no longer a part of the proposed development and has been removed from the revised plans and EIS.

The proposed noise barrier appears to be within the easement for a gas pipeline. Can this legally occur?

The proposed noise barrier has been relocated outside the gas pipeline easement to enable access in accordance with easement requirements.

The "Proposed Site Plan" (180009 — Site 02, Rev. F) does not contain a legend for the Easements

All easements are described in detail within the provided survey plan at Appendix H of the EIS.

The South East Elevation includes the water towers, but the site plan has them shown as being removed.

The existing water towers are shown on the site plan at Appendix A.

2.12 INDEPENDENT AUDIT

An Independent Audit is required as per the SEAR's requirements

The independent audit has been provided at Appendix G of this RTS Report. (The Independent Audit prepared by GHD is now included in Appendix Q).

3 DPIE LETTER – DATE 21 OCTOBER 2019

The Department has concerns regarding the storage of processed construction and demolition waste in storage bays over a water easement on the eastern side of the resource recovery facility (RRF). This was further expressed in Campbelltown City Council's (Council) submission dated 12 August 2019.

Given these concerns the external storage bays have been removed. A new internal stockpile area has been provided to compensate for the removal. See Appendix A for further detail.

In its response to submissions (RtS) report, the Applicant should fully assess the potential onsite and off-site impacts of storing waste in an easement required for the drainage of surface flows in flood events.

As all external stockpiles have been removed from the application no impacts are expected.

Additionally, the Department requires the Applicant to consult with the appropriate section of Council to ensure the flooding issues raised by Council have been fully addressed.

The overland flow path is no longer obstructed given the removal of the saleable product bays. The proposed noise wall extension incorporates hinged flaps which will facilitate the required flow.

The Department also encourages the Applicant to obtain its own legal advice in relation to its obligations under the easement and the limitations imposed by the restriction.

Proposed work within easements must not cause "substantial" or "material" interference in the operation of the easement in which it is located.

The subject drainage easement runs from south west to north east along the south eastern external area of the site and is 30m wide. The existing noise wall was approved by Council and is considered appropriate as the wall runs in the same direction as the overland flow having minimal impact on drainage flows.

The proposed noise wall runs along the south west and could block flows within the drainage easement. As a result, an engineered solution was required to facilitate the overland flow. Hinged flaps are proposed up to the height of the building floor level which will maintain the overland flow path.

As the overland flow path is maintained by the engineered solution, the proposed development is not considered to substantially or materially interfere with the drainage easement and as a result is considered appropriate and able to be approved.

4 EPA WASTE COMPLIANCE LETTER – DATE 10 JULY 2019

A detailed assessment and related flow diagram for each waste stream which the proponent has nominated in the EIS (Table 4 – Proposed Waste Types) has not been provided as required in section B.b) of EPA SEARS.

The waste types proposed under Table 4 were grouped as per their treatment method (e.g., solid wastes which are crushed). The treatment method for each of the groups was then described in full providing an assessment and flow diagrams for all the waste streams.

The operation description has been revised to be easier to read in an effort to make the proposed waste processes clearer, see Section 4 of the EIS for details of the proposed operation.

We have identified a number of waste types proposed to be received by the proponent that have the potential to generate odour which are not addressed in the odour source inventory of the Air Quality Impact Assessment (Table 6-3). As per the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, the AQIA report should be revised to include:

+ *A detailed list of all process inputs and outputs that could give rise to odours*
+ *Plans, process flow diagrams and descriptions that clearly identify and explain all pollution control equipment and techniques for all processes on the premises*
+ *A description of all aspects of the air emission control system, with particular regard to any fugitive emission capture systems*
+ *The operational parameters of all emission sources, including all operational variability, i.e. location, release type (stack, volume or area) and release parameters (e.g. emission concentration and rate)"*
+ *An updated odour emissions inventory that includes a detailed discussion of the methodology used to calculate the expected odour emission rates for each source and detailed calculations of odour emission rates for each source. All potential odour sources should be included in these calculations.*

All liquid and solid wastes proposed to be received on the site have been considered for odour impacts on the surrounding environment.

The liquid wastes will be transported to the site in vacuum sealed trucks and pumped directly from the trucks into sealed vacuum storage tanks located within the building enclosure for processing. The vacuum storage tanks will be fitted with carbon filters to treat the air ventilated during the filling of the tanks, and any such release occurs indoors. Overall, as the liquid wastes are not directly exposed to the air, and any emissions are treated with a carbon filter, there is minimal potential for significant odour emissions to arise.

Of the proposed solid wastes, only foundry sand is considered to emit an odour requiring further assessment. Foundry sand does not generate exceptionally high odour levels that are difficult to manage, or a type of odour that is unusual in the context of an industrial area. The proposed mitigation measure is to blend the sand with other inert materials. This would cover most of the sand and thus supress odour emissions. This suppression has not been factored into the modelling, but the average odour emission rate was applied at a constant source to conservatively model the potential emissions.

The odour assessment incorporates conservative assumptions regarding the potential odour sources,

such as modelling of the odour sources out in the open rather than within a building enclosure, and also not including any potential mitigation measures for the modelled odour sources. The ventilation extraction system for the DAF would include a hooded ventilation system discharging through charcoal filters before being released. However, in the model the odour generated from the DAF is assumed to be untreated sludge odour. Hence the predicted impact of the process is significantly overestimated.

The modelling assumes the sources emit odour at a constant rate out in the open and not within a building enclosure as would actually occur. The potential odour emissions generated would vary depending on the demand and waste material received and there would be no odour generated for a significant portion of the time.

As noted in the AQIA, the odour emission rates for the foundry sand were obtained from a study conducted by Benbow Environmental (2016) for Bulk Recovery Solutions. Site specific odour sampling for foundry sand was conducted by Stephenson Environmental Management Australia at Austral Alloys Pty Ltd. Duplicate samples in two areas within the foundry sand storage bays at the site were conducted to obtain an odour concentration for foundry sand. A summary of the measured odour results is outlined in Table 1.

Table 1: Summary of odour measurements for foundry sand

Sample ID	Odour concentration (OU/m³)
1A	180
1B	270
2A	230
2B	200
Average	**220**

Source: **Benbow Environmental (2016)**

To represent the DAF system, it was assumed potential odour emissions would arise from the sludge capture of the DAF system. It was further conservatively assumed that the sewage sludge odour emissions represent the worst-case odour emission scenario for this source. Table 2 presents a summary of the odour measurements for sludge bays reviewed for the assessment. The maximum odour concentration was applied as a conservative estimate for this source.

Table 2: Summary of odour measurements for sludge bay

Sample ID	Odour concentration (OU/m³)
T - 1	114
T – 2	130
SM – 1	1,365
SM – 2	1,186
SM – 3	883
W - 1	2,054
W - 2	3,981
Maximum	**3,981**
Level used in Modelling	**3,981**

The odour sources have been modelled as volume sources as they are located within the building. The foundry sand has been represented as a volume of 2,621m³ (19m x 14m x 10m) and the DAF sludge bay as 759m³ (11m x 7m x 10m). The odour emissions for each source are estimated from the dimensions of the source with an assumed one air change per hour and the odour concentrations from Table 1 and Table 2. As noted, the modelled odour sources have been assumed to emit at a constant rate and have been modelled out in the open and not within a building enclosure.

A revised liquid waste flow diagram has been provided within Appendix M of the revised EIS or Appendix I of this RTS Report.

A number of the plans submitted by the proponent detailing vehicular movement within the site show vehicle paths directly through the nominated receivals area for solid waste. We require further information detailing how the proponent will meet the EPA's minimum standards for managing construction waste in NSW, given the limited space available.

Vehicle movement paths and receivals area have been revised. No vehicles track through the receivals area whilst manoeuvring through the site. The new tip and spread area has been afforded a large area to enable full compliance with the EPA's minimum standards for managing construction waste in NSW and has been located to enable the material to be quickly moved internal to the building to minimise impacts. See Appendix A for a revised site plan and Section 4.2.1 for the solid waste receivals procedure which has been developed in accordance with the minimum standards for managing construction waste in NSW guideline.

We have concerns that the proposed methodology for the treatment of asbestos containing liquids may not adequately remove all asbestos fibres prior to discharge to sewer. Further information about this process and any associated testing is required. The proponent should also ensure that discharge of this material to sewer is covered by the trade waste agreement with Sydney Water.

The use of filters including HEPA filters and sand filters are well known to filter the solid fibres of asbestos from water and generally represent the standard form of water treatment for asbestos fibres and other small sized solids. The proposed system utilises two HEPA filters with one serving as an initial pass prior to batch treatment where solids and liquids are separated. Free water is to be directed to another HEPA filter prior to discharge whilst the suspended solids is to be directed to a filter press with the pressed water discharged whilst the filter cake is proposed to be directed to a 10m^3 vacuum sealed asbestos bin.

The resultant water is to be routinely tested for asbestos concentrations by a NATA accredited laboratory prior to discharged as trade waste.

A new trade waste agreement with Sydney Water will be sought for the new operations on the site.

During a meeting with the proponent on 12 September 2017, the EPA expressed the need to ensure that outgoing waste types meet EPA Resource Recovery Orders (RRO). There is no indication from the proponent in the Proposal that indicates that outgoing waste types will meet the RRO's as required.

Any applicable standards and requirements provided within the EPA's Resource Recovery Orders will be applied to the waste products. Where new or updated orders are applicable, the operation will take measures to ensure their processes achieve the requirements of the order. The following orders are applicable to the proposed waste:

- *Effluent*
- *Excavated natural material*
- *Excavated public road material*
- *Food waste (liquid)*
- *Foundry sand*
- *Plasterboard*
- *Reclaimed asphalt pavement*
- *Recovered aggregate*
- *Recovered glass sand*
- *Slag (blast furnace)*
- *Slag (electric arc furnace)*
- *Slag (electric arc furnace ladle)*
- *Slag (electric arc welding)*
- *Slag (steel furnace)*
- *Stormwater*
- *Treated drilling mud*

+ *Recovered fines (Continuous)*
+ *Recovered fines (Batch)*
+ *Treated grease trap waste*

5 DPIE – LANDS WATER AND DPI – DATE 9 AUGUST 2019

I refer to your email of 7th June 2019 to the Department of Planning, Industry and Environment (DPIE) – Lands, Water and Department of Primary Industries (DPI) about the above matter.

The department has reviewed the proposal and has no comments.

BRS thanks DPIE Lands Water and DPI for their input.

6 EPA TECHNICAL ADVICE LETTER – DATE 16 AUGUST 2018

Operational Noise Assessment

The noise report has not provided sufficient detail on the operational assumptions used in the noise productions and some information appears to be inconsistent with other parts of the application. The proponent should provide more information as follows:

Clarification of the site layout as the site plan in the noise report is currently inconsistent with the rest of the application

The NIA has been revised to utilise the revised site plan.

Clarification of the operational activities assessed during the day, evening and night periods and confirmation that they are consistent with planned operations

Section 1.2 Proposed Operations of the NIA fully list all noise generating operations assessed including Table 1 which provides periods during which each of the noise generating operations occur.

Location, height and operating durations of noise sources for each day, evening and night scenario

Table 16 of the NIA provides a full list of noise generating activities proposed to occur on the site along with location, height, and operational period.

Clarification of the truck and concrete agitator numbers used in the noise report as they appear inconsistent with the rest of the application

Clarification of traffic assumptions for truck and dog along with concrete agitator trucks has been included within Table 16 of the NIA.

Details of the assumptions regarding mobile noise sources present on the site, including light vehicles, truck movements, truck tipping/dumping, queuing and on-site speed limits

On site vehicle assumptions have been included within Table 16 of the NIA.

Details of assumptions used to calculate the breakout noise from buildings including roller doors being open or closed and assumed sound reduction of building materials

Roller doors modelled as being open during operations. However, it must be noted that roller doors will be closed during operation and will only open to facilitate the movement of material into and out of the building.

Validating and providing appropriate references for plant sound power levels; in particular for the truck and dog tipping which appears to be the same as the truck and dog manoeuvring

The Lw of 102dBA is adopted for reassessment for a duration adjustment of 115dBA dumping taking

45 secs to complete then average over 15 minutes.

Noise contour maps to illustrate noise propagation from the premises at surrounding noise-sensitive receivers

Noise contours have been included within the revised NIA provided at Appendix F of the EIS or Appendix E of this RTS Report. Further discussion of noise impacts has been discussed at Section 7.2 of the revised EIS.

Justification or reference for the maximum sound power level of Lmax 102 dBA used in the sleep disturbance assessment, which is less than the Leq 15min level for several of the plant proposed to operate during the night

During the night only forklifting will occur in the rear yard with an associated impact noise of typically 102dBA or below. Additional assessment added with a metallic impact of 115dBA added at the batching plant.

Details and results of the model calibration exercise

The surrounding locality is typical of an urban environment, with birds, traffic noise and industrial noise audible. It is noted that the site was inaudible at both unattended monitoring locations (L1 and L2). Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ±0.5 dBA. All equipment carried appropriate and current NATA (or manufacturer) calibration certificates. Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI.

Details of how the existing conditions from the premises 'Environmental Protection Licence (No. 20797) have been considered in the noise report

The NIA has assessed the project in accordance with the contemporary NPI. An updated EPL will be required for the proposed development prior to commencement of works and will provide the NSW EPA an opportunity to update existing conditions.

Proposed and existing noise management measures for activities that occur during the day, evening and night period. This should include how noise emissions were considered in the building and premises layout design, consideration of tonal reversing alarms and how operations are managed adjacent to the noise wall to enable efficient operation

A list of recommended operational mitigation measures has been included within the revised NIA. All measures outlined within the NIA will be implemented by the proponent as outlined within Section 9 of the revised EIS.

The coordinates of some receivers in Table 2 of the noise report do not match the locations shown in Figure 1.

Figure 1 of the NIA has been revised with cross checked coordinates.

It is also noted that predictions in the noise report are dependent on a noise barrier on the southwest

and southeast boundaries and a restriction on the location of the slump stands. The performance of the noise barrier is a critical component to achieve the predicted noise levels. The noise barrier should therefore form part of any approval conditions if the application is approved.

The proponent fully agrees with the requirement to retain the existing noise wall and construct the proposed noise wall extension.

The proponent notes that the noise wall extension is located within a drainage easement however an engineered solution has been proposed which facilitates overland water flow whilst achieving compliance with the required outcomes for the site. The noise wall extension is able to be approved as the solution achieves the aims of the easement.

Road Noise Assessment

The vehicle trip information used in the noise report is not consistent with predicted traffic numbers in the rest of the application. The proponent should review the assumptions and update the noise report accordingly.

Revised traffic numbers have been utilised within the NIA as per the traffic impact assessment.

Light vehicles should be considered in the traffic noise assessment

Light vehicles have been included within the traffic assumptions for the site.

Road traffic noise criteria should be applied according to Section 3.4.1 of the Road Noise Policy (DECCW, 2013) and the Road Noise Policy Application Notes. The assessment criteria are applicable to the total traffic noise, not just the premises contribution.

The road traffic noise assessment has been undertaken in accordance with the Road Noise Policy and the Road Noise Policy Application Notes. See Appendix E for the revised NIA for further discussion.

Construction noise assessment

Further information is required on the construction noise assessment as follows:

Details of the assumptions made regarding the noise predictions, including the insertion loss of any barriers and location of sources

A 108dBA source was located at the south noise barrier wall and at the batch plant site. The existing noise barrier wall and buildings were incorporated into the construction assessment.

The predicted construction noise calculations appear to have underestimated the noise level at the nearest receivers. The noise report predicts a noise level of Leq 15min 40 dBA at R01 from a source of sound power level 106dBA at approximately 60m. Even considering a well performing barrier, this calculation appears to be an underestimate and should be reviewed.

Further assessment of the impact on the nearest receiver has been undertaken including

recalculation, crosschecking, and remodelling. The end result was the same noise levels being applied to the receptor. For further discussion see Appendix E of this RTS for updated NIA.

EPA TA-Air Comments

Potential for odour not adequately assessed

i. The only potential odour sources, identified in the AQIA for the proposal, are from the stockpiling of foundry sand from the dissolved air filtration (DAF) treatment of liquid waste and the DAF system. It is proposed to process waste types that may have odour generating potential such as sewage sludge, grease trap oil, industrial wastewater and waste oil and these waste types should be considered in the assessment. Adequate justification for omitting all odour sources except for DAF and foundry sand has not been provided.

ii. Mitigation measures proposed to minimise the generation of odour from the identified odour sources include blending of foundry sand with other materials to dilute the material and the use of charcoal filters within the DAF process. However, the AQIA is lacking:

- *Plans, process flow diagrams and descriptions that clearly identify and explain all pollution control equipment and techniques for all processes on the premises*
- *A description of all aspects of the air emission control system, with particular regard to any fugitive emission capture systems (e.g. Hooding, ducting), treatment systems (e.g. Scrubbers, bag filters) and discharge systems (e.g. Stacks)*
- *The operational parameters of all emission sources, including likely operational variability*
- *It has not been established how the proposed mitigation measures will be used to effectively minimise emissions from all potential odour sources at the premises*

iii. Adequate justification for the adopted odour emission rates has not been provided. The odour concentration and emission rates adopted in the AQIA have been sourced from existing reports and publicly data. It has not been adequately established how the odour emission date adopted in the AQIA is relevant to this project. Where emission data is sourced from publicly available literature (including previous assessments), the data must be adequately justified, including reference to the original test data and provision of the original test data report.

iv. It has not been established if the adopted odour emission rates represent a reasonable worst case, and account for expected emission rate variability. The odour emission rate should reflect reasonable worst case and account for foreseeable variability in process. Additionally, the AQIA should include:

- *A detailed discussion of the methodology used to calculate the odour emission rates*
- *Detailed calculations of pollutant emission rates for each source*
- *All release parameters of stack and fugitive sources*

Recommendations: TA-Air recommend the AQIA be revised to address the identified inadequacies I to iv listed above

Emissions from solid waste processing

The solid waste processing at the project involves the crushing, screening and blending of materials to generate desired products. It is proposed that solid waste processing and raw material stockpiling is to

occur within an enclosed space with water misting sprays applied to suppress dust within the buildings.

Only finished products are proposed to be stockpiled in outdoor areas in external storage bays, Water will be used to mitigate dust emissions and minimise wind generated dust emissions from this source.

Stockpiling of waste and processed material will occur on the south eastern area of the building in designated bays. It is intended that trucks will tip the waste at the 'receivals area' for distribution by front end loader to the stockpile bays. Smaller stockpile areas are located internally at the crushing plant and undercover at the screening plant.

Waste material arriving and being processed on site will comprise of a variety of waste types including building and demolition waste, foundry sand, reclaimed asphalt, hazardous soils, slag and fly ash. These waste types may contain non- trivial levels of contaminants materials including but not limited to Type 1 and Type 2 Substances (metals) However, the assessment has only considered dust emissions from the premises.

The AQIA should consider the potential for any air pollutants likely to be emitted from the various materials that will be delivered, stored and processed at the facility.

Recommendation: TA-Air recommend the AQIA be revised to include assessment of all air pollutants, including slag and fly ash (constituents), emitted from each source at the premises.

Maximum Daily Production Rates

The proposed masonry facility is assumed to operate 24 hours, 365 days per year and this has been reflected in the dispersion model. The emission rates adopted in the AQIA are based on emission factors referenced from emission estimation technique manuals and production throughputs.

However, it has not been described how the production throughput has been averaged. As such, it is unclear if the emission rates adopted in the AQIA reflect maximum daily activity rates and hence peak emission rates.
As detailed in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (Approved Methods), a detailed discussion of the methodology used to calculate the expected pollutant emission rates for each source should be provided.

Additionally, if no data is available to describe the distribution of emission rates, the maximum measured or calculated emission rate should be used. Maximum daily rates should be calculated based on the maximum achievable daily processing rate for the facility, opposed to a daily average rate.

Recommendation: TA-Air recommend the AQIA be revised based on maximum proposed daily processing rates based on the facilities design. A detailed discussion of the method used to calculate the emission rates should also be provided."

Todoroski Air Sciences who undertook the AQIE for BRS Ingleburn have prepared an independent response to the items raised by EPA TA-Air.

7 RMS LETTER – DATE 01 JULY 2019

Roads and Maritime has reviewed the submitted information and notes that the EIS has addressed the issues adequately. Roads and Maritime has no comments for the Department to consider in the determination of the development application.

BRS thanks RMS for their input.

8 CAMPBELLTOWN CITY COUNCIL LETTER – DATE 12 AUGUST 2019

Traffic and Operational Issues

It is noted that the two existing weighbridges on site are within 20 metres of the Kerr Road cul-de-sac. As part of the increased storage and processing capacity of the plant, it is considered likely that a number of additional incoming loads would be delivered by truck and 'dog' tipper trailers and, as this vehicle configuration is up to 19 metres in length, would only allow one of these trucks to queue directly behind the entry to either weighbridge. As a result, there is a risk of vehicles queuing on Kerr Road, which may inhibit vehicle manoeuvring through the cul-de-sac.

BRS recognises the need for effective heavy vehicle management accessing, within, and departing the site. All heavy vehicles arriving to the site will require scheduling or pre-notification of arrival allowing for management of vehicle loads. If the premises is at capacity, vehicles will be advised to delay their journey to the site. If vehicles arrive without scheduling and no capacity is available, they will be turned away.

A total of seven queuing spaces have been provided within the site beyond the weighbridge; these queuing spaces can hold a single truck and dog or other articulated vehicle or two liquid trucks affording a total of 14 que spaces if exclusively occupied by liquid trucks. A total of 6 heavy vehicles of various sizes are expected to arrive to the site per hour with the maximum time on site projected to be below 30 minutes each. A management policy of prioritising an incoming truck over outgoing is possible if the need arises.

In the circumstance where a scheduled heavy vehicle arrives early or late overlapping with another heavy vehicle, sufficient capacity is afforded within the site to prioritise entering vehicles over leaving vehicles until scheduled flow returns.

There also appears to be some conflict on submitted drawings showing either both or one of the weighbridges as being used for incoming weigh-in, rather than outgoing. Clarification from the applicant on the entry/exit procedure should be sought. Council understands that vehicles need to be weighed both in and out; as such there appears to be potential for conflict with the queuing proposed. Should only one weighbridge be used for incoming vehicles in order to facilitate more orderly ingress/egress of vehicles, there is likely to be greater potential for vehicle queuing in Kerr Road, which is not a desirable outcome.

The two weighbridges are of different sizes and as a result one weighbridge is limited to liquid cartage and vac trucks only. Both weighbridges therefore serve both in and out functions.

Council would also recommend further investigation/information be provided on the proponent's means for delivering materials inside the building, noting the size of the vehicles shown on drawings and the size/location of proposed stockpiles. Of particular interest is the means of loading/unloading at the hazardous AAS soils location. Reliance on a single medium rigid vehicle operating internal to the building does not appear to reflect regular operations at this and other similar waste recovery facilities and is not consistent with the pre-dominant transport vehicle for this type of waste, being the 'truck and dog' tipper.

The use of a medium rigid vehicle has been reviewed and space has been proved to accommodate the movement of a truck and dog sized vehicle within the building. Due to the time taken to process (24 hours minimum per batch), deliveries of these waste materials are limited.

Previous assessments by Council and the Sydney West Joint Regional Planning Panel had encouraged and approved internal loading/unloading of materials that have a propensity to create dust and noise. It is recommended that the Department consult conditions of 'deferred commencement' consent 1113/2013/DA-DE at the site, which required internal only loading and unloading of waste at the site.

Deliveries of solid waste is proposed outside in the south eastern portion of the site. A dedicated tip and spread area has been noted within the site plans located in front of the feedstock roller door. The tip and spread area is supported by mitigation measures such as a drainage bund consisting of a grated drain which circles the area along with dust supressing water sprays. Due to the proximity of the tip and spread area to the building, material may be quickly moved inside the building once checked and approved by staff. This new system allows for effective management of dust and runoff and is to be supported with the noise wall. Overall, the impacts of this system are expected to be low with the mitigation measures proposed.

Section 4.1.1 of the EIS includes a table listing all the waste streams to be accepted on site including, among other items, virgin excavated natural material (VENM), building and demolition waste, soil, asphalt, garden waste, bulky goods waste, street sweepings, grits/sediments collected from stormwater management systems, office and packaging waste, hazardous soils and cured concrete waste.

By nature, some of these materials will be delivered as pre-sorted loads, (i.e. entire loads of VENM, building and demolition waste and/or material etc.). Given the unloading area proposed, all deposited waste would need to be cleared from the discharge area prior to the next vehicle's delivery to prevent cross-contamination of these waste streams. This may delay unloading, resulting in reduced inbound vehicle movements per hour and increased potential for queues to form in Kerr Road. More information should be provided to explain how the proponent proposes to maintain the integrity of each pre-separated waste stream. This is especially important for VENM, and other categories of contaminating wastes, where avoidance of cross-contamination is imperative.

Solid waste deliveries destined for the crushing area are all delivered to the proposed tip and spread area and are to be handled in accordance with EPA's minimum standards for managing construction waste in NSW. Solid waste deliveries have been timed at 25 minutes per vehicle with less than 2 solid waste deliveries per hour expected. This enables washdown of the tip and spread area prior to receiving a varied waste load. With the provision of the drainage bund supporting the tip and spread area, the washdown procedure is expected to be quick and effectively managed through the dedicated drainage system.

Due to the efficiency and speed of washdown within the tip and spread area no cross contamination is expected when varied loads arrive on site.

Licensing requirements for the EPA are also likely to stipulate an inspection regime for incoming loads. Further details on where this would take place (with a view to reducing queuing potential) should be provided by the proponent.

A description of the solid waste receivals procedure has been provided within Section 4.2.1 of the EIS.

In order to accurately review the potential traffic impacts of the development, Council recommends that the proponent be requested to produce weighbridge data for the past 12 months in order to gain a more accurate view of traffic movements at the site — including (but not limited to) typical vehicle size/mass and typical time spent at the site loading or unloading.

The revised traffic impact assessment has included a more detailed breakdown of projected traffic movements to and from the site. Due to the proposed liquid waste system the existing weighbridge data is not anticipated to be representative of expected conditions due to different heavy vehicles arriving at the site and differing receivals procedures and times.

See Appendix D of this RTS Report and Section 7.6 of the EIS for further discussion of traffic generation for the proposed development.

Environmental Issues

Council recommends that further investigative works or information be provided in relation to the migration of airborne dust emanating from the premises travelling from the site — either by air or by deposit on roads and in local stormwater systems.

The AQIA provided with the exhibited EIS is considered sufficient as it adopts a worst-case scenario for dust generation on the site, that is all sources are assumed to be located out in the open. As a result, the dispersion modelling has not accounted for the potential reductions associated with the activity occurring within an enclosed building (door open or not). The building enclosure would reduce dust emissions by approximately 70-90% by minimising wind effects, allowing for controlled moisture and preventing the travel of pollutants.

The AQIA is therefore considered sufficient for a full assessment of the proposed development.

The SEARS include a requirement for a "risk assessment of the potential environmental impact of the development…" and "a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment" and, in respect of air quality and odour, "details of proposed mitigation, management and monitoring measures".

As mentioned earlier, it is Council's position that (ideally) incoming waste would be deposited and sorted internally to minimise the transfer of noise and dust from the site. If this is not practical (although it appears possible on the 'proposed site plan' that through routing of vehicles inside the building could be undertaken), it is recommended that all areas of the site where waste is to be stored and/or loaded, unloaded and relocated are to have misting systems installed which must always remain operational for dust suppression purposes.

Dust supressing measures have already been proposed for the site and include water sprays on all roller doors, atop any stockpile bunding, over all solid waste processing equipment, within the concrete batching plant, and supporting the tip and spread receivals area. The internal location of all stockpiling and solid waste processing further reduces the potential for dust generation.

The proposed dust mitigation system to be implemented to support the existing dust suppression system is considered appropriate to manage dust impacts on the surrounding environment.

Environmental Operations Management Plan

An overarching management plan that details the site's operations and provides detailed information regarding the means by which methods and equipment would be employed at the site to reduce its potential impacts on the local environment does not appear to have been provided with the application.

This all-encompassing plan would 'tie in' the operations and environmental outcomes described in

consultant reports provided with the application. Council recommends that the Department pursues submission of such a plan at this stage of its assessment as a means to ensure that the range of reports provided and operational management details either provided or implied are accounted for.

Suggested requirements that the plan should include are (but are not limited to):

- *Identification of all statutory and other obligations that the proponent is required to fulfil in relation to operation of the facility, including all consents, licences, approvals and consultations*
- *A description of the roles and responsibilities for all relevant employees involved in the operation of the facility*
- *Overall environmental policies and principles to be applied to the operation of the facility*
- *Standards and performance measures to be applied to the facility, and a means by which environmental performance can be periodically reviewed and improved, and*
- *Management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent.*

An environmental operations management plan (EOMP) will be prepared prior to the commencement of the proposed development; however, this is largely dependent on the final approval of the facility and applicable conditions. These conditions may dictate significant management and monitoring to be undertaken by the proponent. It is expected that the preparation of an EOMP will be a condition of consent requiring submission to DPIE and Council prior to commencement of works.

Flooding

Council advises that the subject property is a Flood Control Lot with respect to 1% Annual Exceedance Probability (AEP) flood due to overland flow through the 30m wide easements on the northern and eastern sides of the property.

This property is also affected by overland flow through the cul-de-sac head of Kerr Road, where another drainage easement runs parallel to the adjacent property (15 Kerr Road). The weighbridges and site shed/office are currently located in this easement and are relied upon in the subject application. This appears to contradict a restriction on the lands title.

The proposed stockpiles and associated bay walls and receivals area is within the 30m wide easement for drainage of water. These would have an impact on flood behaviour and potentially an adverse impact on neighbouring properties. The stockpiled materials and sump water are also likely to be mobilised in a storm event, potentially creating a detrimental impact on water quality. The stockpile and receivals areas must not be located within these easements. Works and storage in these areas appear to contravene a restriction on the land's title, which notes that 'no building, erection of structure, excavation, filling or alteration of surface levels is permitted.'

The finished goods bays which are located on the common boundary of the subject property with 14 Kerr Rd are considered likely to have a significant impact on flood behaviour. Council has undertaken modelling and determined that these works are likely to cause an increase in flooding on the upstream property (up to 200mm in the 20% AEP Event, and an additional 100mm in the 1% AEP Event), which is considered unacceptable.

With these matters in mind, it appears that operations across the site need to be reconsidered by the proponent. At the least, further detailed information and modelling on water control across the site must be provided by the proponent should the current site operations wish to be pursued as the easements to drain water are heavily relied upon for storage and other integral components of the

development.

Council is able to provide further information in relation to site flooding to assist the Department should it request such.

The proposed external stockpiles, bay walls, and finished goods bays have been removed from the proposed development. The only element which remains is the extension of the noise wall through the drainage easement however this noise wall has been redesigned with hinged flaps which will facilitate the overland flow of surface water through the easement in accordance with the goals of the easement.

Compliance with existing approved plans and the Building Code of Australia

Council's review of the 'approved site plan' provided with the subject application notes some inconsistencies with the most recent development consent (as modified) issued for the site (Council ref. 948/2015/DA-I, modification B). The 'approved site plan' appears to be missing required landscaping, particularly along the northern boundary. The setback of the wheel wash bay from the 'approved site plan' and Council's approved plan are also not consistent. Council's development control plan requires landscaping within boundaries of industrial sites to soften their appearance and enhance streetscapes.

The site's frontage to Kerr Road minimises views of the operation and is consistent with the industrial nature of the surrounding area.

The north eastern portion of the site which fronts Henderson Road provides the site's other street presentation. Henderson Road is elevated at this location due to a rail bridge which allows for direct views into the site along with other industrial operations which also present to Henderson Road. Due to this elevation, landscaping within the site is considered to have minimal 'softening' impact on the existing building and operations on the site. Existing street trees are located along the road reserve and offer a small amount of visual buffering to the site.

Given the industrial nature of the area the predominant character for the area is large warehouse developments with significant hardstand areas. This is consistent with other recent development which present to Henderson Road.

As such, the existing landscaping present on the site is considered appropriate as it maintains the dominant character of the industrial area.

The office space inside the building nominated on the 'approved site plan' is currently subject to separate investigation by Council. Further investigation may also need to be undertaken regarding the building's status as a 'fire isolated building' pursuant to the Building Code of Australia and the implications this has for structures (tanks) and bulk storage areas that are located on the southern and eastern sides.

Fire management plans and sprinkler system plans have been provided within the exhibited EIS, see Appendix P. A BCA compliance assessment has been provided alongside the exhibited EIS, see Appendix G. The recommendations of the report have already been implemented.

BRS strive to ensure the safety of staff, visitors and the general public as part of its ongoing operations including in regard to fire risk.

Conclusion

The application exhibits a number of logistical challenges having regard to the constraints of the site. These constraints include its size, the floor plan of the existing buildings and the restrictions on land use on all sides of the building for either flooding or fire access purposes.

Council is concerned that not enough information has been provided in some key areas, including site operation and flooding to fully demonstrate the site's potential to cater for such a tonnage increase. Until this information is provided, there is limited certainty regarding opportunity to minimise development impact on existing nearby residents and other industrial neighbours.

With the removal of the external stockpiles along with the previously approved finished product bays, the site constraints have been alleviated in regard to heavy vehicle movement through the site. A targeted traffic analysis has been undertaken demonstrating that the site is capable of handling and managing the anticipated heavy vehicle load.

All other impacts on the surrounding area meet applicable guidelines with the exception of one non-compliance in regard to air quality which arose due to the background dust levels in Ingleburn already exceeding applicable criteria. With all proposed mitigation measures in place the proposed development will operate in accordance with all applicable guidelines and criteria and provide ongoing positive economic returns for Ingleburn, the Campbelltown local government area and the Greater Sydney Region whilst minimising waste disposal contributing to the circular materials economy for Sydney.

9 FIRE AND RESCUE NSW LETTER – DATE 20 JUNE 2019

Recommendation/s

Should development consent be granted, that the following condition form part of the instrument of consent:

a) That Clauses E1.10 and E2.3 of Volume One of the National Construction Code (NCC) be complied with to the satisfaction of FRNSW. In particular, that the following aspects of the development be assessed and appropriately addressed:

i) That stockpile storage within any building and/or open yard storage on the allotment be limited in size and volume and arranged to minimise the likelihood of fire spread.
ii) That the arrangement of stockpiles of combustible material, stored externally, on the allotment be sufficiently separated to permit Fire & Rescue NSW (FRNSW) vehicle access between stockpiles.
iii) That the site is served by a fire hydrant system that has a minimum water supply capability appropriate to the site's largest stockpile's fire load.
iv) That significant buildings used to process recyclable material are provided with a smoke hazard management system that facilitates Fire & Rescue NSW (FRNSW) firefighting operations.
v) If deemed necessary, by virtue of applying Clauses E1.10 and E2.3 to the development, that any significant building used to process recyclable material is provided with an appropriate automatic fire suppression system.
vi) That the site be provided with an effective means to contain an appropriate volume of contaminated fire water runoff. The capacity of containment to be commensurate with the concurrent discharge rate of the facility's hydraulic fire systems.

Should the recommended condition be imposed, please be assured that FRNSW will engage constructively with the proponent (and their consultants) to expeditiously address the matters raised above.

The proposed internal stockpile in the north western corner of the building is proposed be provided with an automatic fire suppression system. The solid wastes proposed to be processed on the site consist of inert and non-combustible wastes that have minimal impact on fire risk. The only flammable wastes include transfer wastes only and will be contained within the designated dangerous goods and chemical storage bay within the building. This area is segregated from other waste materials inhibiting risk associated with fire spread.

The site contains sufficient capacity to contain contaminated fire runoff.

BRS will engage with FRNSW prior to the commencement of works (post approval) to ensure consistency with their requirements.

10 SYDNEY WATER LETTER – DATE 18 JULY 2019

Water Servicing

+ *The existing drinking water infrastructure in the area has capacity to service the proposed development*

Wastewater Servicing

+ *The existing wastewater infrastructure in the area has capacity to service the proposed development*

Trade Waste

+ *The applicant may require an updated consent to discharge trade wastewater from Sydney Water.*

BRS will engage with Sydney Water to secure an updated trade waste agreement in alignment with the proposed development.

SECTION B

11 SAFEWORK NSW - DATE 9 March 2020

The provided documents described processes involving asbestos and other hazardous chemicals which present feasible potential risk of worker exposure. With little further detail to describe the proposed controls to manage this risk SafeWork NSW would take this opportunity to highlight several legal duties under the Work Health and Safety legislation:

- *Chapter 8 (clauses 419-529) of the Work Health and Safety Regulation 2017 (WHS Reg) is dedicated specifically to work involving Asbestos and legal duties of the PCBU (person conducting a business or undertaking) to manage these risks. These include (but is not limited by):*
    - *Duty to ensure an Asbestos Register and Asbestos Management Plan are prepared, maintained and kept at the workplace.*
    - *Duty to provide health monitoring to workers at risk of exposure when carrying out work.*
    - *Control of asbestos exposure risk and other WHS risks by applying the Hierarchy of control measures. It should be noted that higher order controls should be aimed for, and PPE remain as a last order control. Guidance material relevant to ensuring worker safety is freely available from the SafeWork NSW website www.safework.nsw.gov.au.*
- *Other WHS matters which may require more clarification in the future include:*
    - *The storage and handling of caustic soda liquid, sulfur acid and sodium hypochlorite should be reviewed carefully and appropriate control measures and safety devices be considered for implementation. Table 8 of the subject document states that caustic soda liquid, sulfuric acid and sodium hypochlorite are to be stored in the Eastern Chemical bund - these three hazardous chemicals would tend to be chemicals no compatible to be stored together in the same bunded area. Please refer to Clause 357 Containing and managing spills of the WHS Regulation and ensure compliance.*
    - *There seems to be virtually nothing in this document about worker safety such as the positioning of safety showers, eye washes, first aid, PPE etc, all of which will be essential mitigative controls to include for ongoing operation of the proposed plant.*
- *Note that WorkCover NSW is now known as SafeWork NSW.*

This is by no means an exhaustive list, rather some broad areas of concern from our perspective which did not appear to be addressed in the documentation provided. Should we be able to provide any further assistance, please do not hesitate to contact us.

In relation to the comments associated with asbestos, it is understood that the above requirements are for asbestos in solid form or in airborne form. However, BRS will not handle any asbestos in solid or airborne forms but rather water containing asbestos. This means that the small quantities of very tiny asbestos fragments are suspended in water at all times. Therefore, there is no free asbestos. The workers will not be handling any asbestos since the procedure is very clear, the water containing asbestos will be received in tankers which will be unloaded directly in the storage tanks to prevent

any spills. The water containing asbestos will be pumped directly into the storage tanks dedicated for this specific stream of waste. Again, workers will not handle this material or be exposed to any free asbestos since the liquid containing asbestos will go through a comprehensive filtering process to remove any asbestos particles from it. The asbestos particles will be collected by and stuck to the filters which will be replaced regularly in accordance with manufacturers' specifications to ensure that the filters removal efficiency is maintained at the highest levels.

Based on the fact sheet titled: "Asbestos in Drinking Water" published by Western Australia Department of Health on 22 June 2016, asbestos fibres suspended in drinking water are not hazardous to human health even if they are swallowed. A summary of the fact sheet is provided below.

- *"Asbestos in drinking water may come from a variety of sources including asbestos-cement water pipes and roofing material.*
- *Asbestos fibres may be found in drinking water are not considered to be hazardous to human health.*
- *The 2004 Australian Drinking Water Guidelines and World Health Organisation have not set a guideline value for asbestos due to the absence of evidence that asbestos is hazardous to health.*
- *Rainwater tank sludge from AC roofs should be kept wet at all times while being removed and disposed.*
- *Any maintenance to rainwater soak wells from AC roofs should only be done when the soil is wet to prevent the release of any dust.*
- *Building materials manufactured after 1987 are unlikely to contain asbestos, however if you are unsure have it tested by a NATA accredited laboratory."*

In conclusion, if asbestos fibres in drinking water are not hazardous to human health, they will certainly not be hazardous to human health when present in liquid waste.

HEPA stands also for High Efficiency Particulate Absorbing or High Efficiency Particulate Arrestance. In any case based on the properties and characteristics of these filters, they can be used to remove asbestos fibres from liquid waste at higher than 97% removal efficiency.

In summary, the process is similar to any wet and dry vacuum cleaner with HEPA filter. The only difference is that for this industrial use, the filter will have multi layers of filtration materials and the filtering area will be multi-folds greater to ensure that all particles below 0.3 microns are captured.

Asbestos fibres (particles) range from 0.7 to 90 microns. Most HEPA filters remove 99.97% of dust and allergen particles greater than 0.3 microns.

This is the most efficient and effective method to remove asbestos fibres from the liquid waste.

The filters will be replaced by the supplier in accordance with the manufacturer's specifications to ensure that the efficiency of asbestos particle removal is maintained at its highest levels.

In relation to the storage of chemicals that could be incompatible, these will not be stored within the same bunded and roofed area. The chemical storage area will be divided into 3 smaller bunded areas. Only compatible chemicals will be stored in the same bunded area to prevent any chemical reaction, fire or explosion as a result of incidental spills of these chemicals.

Table 2-1-1 below presents all chemicals stored on site with their compatibility (or incompatibility) with each other. This table will be used as a reference when the chemical storage area is upgraded.

Table 2-1-1: Chemical Storage Compatibility

	Hydrocarbons	Kerosine, Oil	Caustic Soda Liquid 60%	Sulfuric Acid 40%	Sodium Hypochlorite 50%
Hydrocarbons					
Kerosine, Oil					
Caustic Soda Liquid 60%				*	*
Sulfuric Acid 40%			*		*
Sodium Hypochlorite 50%			*	*	

Legend:

	Compatible
	Keep Apart, where substances are incompatible
	Segregate From, where substances may react dangerously
*	SDS's are to be consulted to confirm

In addition to the above the chemical storage area will be upgraded to ensure compliance with relevant provisions of AS/ANZ 3833-2007.

In relation to the provision of Personal Protective Equipment (PPE), every employee at BRS has been inducted on BRS activities and has undertaken training relevant to his/her responsibilities. Every employee has been provided with all necessary PPEs to ensure that his/her health and safety are well protected. In addition, BRS has placed several spill kits at strategic locations to ensure that any chemical spills are contained and cleaned-up promptly to prevent any exposure to the employees or potential environmental impact. There are also showers available for the use of employees. BRS has also first aid kits installed at several locations of the plant.

In addition to the automatic plant shut-off systems incorporated in the PCL unit to shut off the plant when certain malfunctions occur, BRS has added another safety layer by installing several shut-off switches at strategic locations to ensure that if the electronically controlled shut-off system fails, any employee will be able to manually shut-off the plant at any time.

Reference should be made to the photographic evidence presented in Appendix L. Other safety and fire management equipment currently installed on site are presented in Appendix O.

12 NSW FRE AND RESCUE SERVICES – DATE 12 MARCH 2020

I've had a look through the RtS and am satisfied that the Applicant has appropriately addressed the relevant comments and recommendations submitted by FRNSW.

In regard to the asbestos contaminated liquid waste (drilling muds and liquids), FRNSW consider that the waste poses minimal risk in regard to a hazardous materials (hazmat) type incident as it is neither friable or readily airborne. It is recommended that the site waste management plan and emergency response plan assess the storage and handling requirements, and implement appropriate controls that give consideration to response actions for both small and large spill incidents. Should a FRNSW hazmat response be required to a large spill, appropriate controls and measures would be implemented by FRNSW incident controllers as part of the mitigation strategy and in accordance with standard operating guidelines.

We agree with the content of the submission received from the NSW Fire and Rescue Services in relation to the management of asbestos contaminated liquid waste. It is clearly evident that the current requirements referred to in the submission received from SafeWork NSW apply to free asbestos rather than asbestos particles suspended in liquid.

13 NSW EPA – DATE 6 MARCH 2020

I refer to your email of 12 February 2020 to the Environment Protection Authority (EPA) in which you provided a link to the Response to Submissions Report (RtS) for the proposed Ingleburn Resource Recovery Facility (SSD 8593) and invited comments and advice from the EPA.

The EPA has reviewed the RtS and notes that a number of the EPA's initial concerns have been addressed. There are some outstanding issues, and while some of these can be dealt with through recommended conditions of consent, the EPA is of the view that further information or clarification is required to enable a complete assessment of the application.

Our assessment of the application and RtS has identified some outstanding issues around waste and water management at the site. Further detail about our comments and concerns is provided in Attachment A and B to assist the Department of Planning, Industry and Environment in the project assessment.

Once information addressing the concerns outlined in Attachment A and B is received, the EPA will be in a position to provide you with our consolidated comments and, if appropriate, recommended conditions of consent.

Attachment A – Water

The EPA has reviewed the response to submissions document and is of the opinion that the proposal does not provide:

- *adequate storage to appropriately manage water quality risks*
- *sufficient details regarding the proposed water management system*
- *an assessment of the potential impact of proposed discharges on the environmental values of the receiving waterway.*

Recommendations are provided below for additional information to ensure the water quality risks are appropriately assessed and managed.

Water management system

The proposed water management system does not provide adequate storage to manage potential water quality risks.

In particular, the storage for run off from the dirty water capture area will overflow to stormwater after only 17.3mm of rainfall in 24 hours. The Water Management Plan (Appendix B of the Environmental Impact Statement) states that under the proposed expansion the number of days the dirty water storage will overtop will increase from the current rate of 20 in 150 years to 1866 in 150 years (representing rainfall of 91.9mm and 17.3mm in 24 hours, respectively). No explanation is provided for this significant decrease in storage capacity.

In the revised design the water being captured and stored from the pavement area is actually even less. Overflow to the stormwater will occur at 10.2mm of rainfall in 24 hours. However, this comment is now considered to be irrelevant, as the proposal has moved all dirty water catchment areas

internally. The remaining hardstand areas will be treated in accordance with any other 'clean water' catchments in industrial areas.

The 91.9mm of storage in the existing scenario has been achieved by incorrectly blocking he stormwater drainage pipes, converting the entire pavement area into a large first flush / storage area. This has now been corrected in this design.

It appears from maps provided in the Environmental Impact Statement and Applicants Response to Submissions that the dirty water capture area includes the 'tip and spread' area. The Applicant's Response to Submissions indicates that the 'tip and spread' area will be bunded and the runoff water collected but it does not specify where the water will be stored.

Where waste transfer occurs external to the building (C&D Tip and Spread Area), the area is to be bunded in accordance with NSW EPA guidelines, with runoff being directed to a blind pit. Water collected in the blind sump will be pumped to the water treatment plant for treatment prior to discharging to sewer or being reused on site. This area will also be undercover and therefore, the volume of water collected in this blind sump is anticipated to be quite minimal.

The Water Management Plan (Appendix B of the Environmental Impact Statement) indicates that dirty water is directed to pavement storage and settling ponds. No settling ponds are indicated on any of the site maps.

The "dirty water" catchment only exists in the existing operation state. All stockpiles and site drop offs now occur internally, or in bunded undercover areas.

It should also be noted that EPA policy is that water pollution should first be avoided. Options to avoid a discharge should first be considered, including increased reuse, discharge to sewer etc.

It is recommended that the applicant demonstrate that all options to avoid or minimise a discharge have been considered and where practical and reasonable, implemented.

Water pollution has been avoided by moving most activities inside the existing building or under cover such as the tip & spread area. Any water entering this area due to unforeseen adverse rain events will be collected in the blind sump.

It is recommended that the applicant provide sufficient storage to manage any residual water quality risks from the dirty water capture area with reference to relevant guidelines for the storage and management of contaminated water (e.g. Environmental Guidelines: Solid waste landfills (EPA, 2016)). Further detail should also be provided about the significant decrease that occurs in dirty water storage capacity under the proposed expansion of the facility.

Refer to civil engineering plans documenting the proposed stormwater management strategy. The stormwater management strategy addresses both water quality and water quantity for surface water runoff.

It is recommended that the applicant provide a site drainage plan for the premises. This should:

- *define site sub-catchment boundaries*
- *identify 'clean', 'dirty' and 'contaminated runoff' sub-catchments*
- *identify the location and provide details of all potential water pollution sources including but not limited to 'dirty' water from internal activities and external operational areas*
- *indicate surface flow directions*

- *include all water management features including pits, pipes, drains, bunds, storages (including water carts), treatment measures and proposed discharge points.*

The drawings included in Appendices C, H and J provide details to address the above.

Discharge impact assessment

Section 45 of the Protection of Environment Operations Act 1997 sets out the matters the EPA must consider when making licensing decisions, including:

- *the pollution caused or likely to be caused by the carrying out of the activity or work concerned and the likely impact of that pollution on the environment*
- *the practical measures that could be taken to prevent, control, abate or mitigate that pollution, and to protect the environment from harm as a result of that pollution*
- *in relation to an activity or work that causes, is likely to cause or has caused water pollution the environmental values of water affected by the activity or work, and the practical measures that could be taken to restore or maintain those environmental values.*

The Environmental Impact Statement and Applicant's Response to Submissions do not provide the information required to consider these matters.

There could potentially be a range of pollutants present in runoff from internal activities and the external operational area, including the 'tip and spread' area, that is collected in the dirty water pavement storage. Pollutants that may be present in the dirty water at elevated concentrations could include for example:

- *ammonia as a toxicant*
- *biochemical oxygen demand*
- *nutrients such as nitrogen and phosphorus*
- *metals such as chromium, copper and zinc*

It appears that runoff from the dirty water areas would be discharged when rainfall of 17.3mm or more is received in 24 hours. Settling in the above ground storage seems to be the only form of treatment the dirty water receives prior to discharge to the stormwater system.

The appropriateness of the treatment cannot be assessed as the Environmental Impact Statement and Applicant's Response to Submissions do not characterise the quality of the discharges or assess their potential impact on the environmental values of the receiving waterway.

By moving all drop off and pick up areas, as well as all storage areas internal to the building footprint, or in undercover bunded areas, the dirty water pavement storage has been removed from the proposed operations.

Pollution from hardstand areas following rainfall events is now limited to standard industrial areas and has been treated to meet council treatment targets for Total Nitrogen, Total Phosphorous, Gross Pollutants and Suspended Solids.

However, due to the operations proposed for the development, the stormwater management strategy includes the proposed monitoring of water quality levels at 2 locations. Immediately upstream of the site boundary and immediately downstream. An ongoing 12-month monitoring program will ensure all potential pollutants exceed relevant targets.

Refer to stormwater management report.

If controlled discharges are required, it is recommended that the applicant provides a discharge impact assessment. This assessment should include details of the measures that have been considered and those proposed to be implemented to minimise discharges of pollutants.
For each proposed discharge point, this assessment should:

- *estimate the expected frequency and volume of discharges*
- *characterise the expected quality of the treated discharges in terms of the typical and maximum concentrations of all pollutants likely to be present at non-trivial levels (this should be based on a risk assessment of the activities and materials on site and the expected performance of the proposed treatment measures)*
- *assess the potential impact of the proposed discharge on the environmental values of the receiving waterway consistent with the national Water Quality Guidelines (ANZG, 2018; including comparison of the predicted water quality to the relevant guideline values for slightly to moderately disturbed ecosystems)*
- *where relevant, identify appropriate measures to mitigate any identified impacts.*

Refer to stormwater management report.

Pollution from hardstand areas are now limited to standard industrial areas and therefore determining pollutants and heir levels is now irrelevant. However, we are proposing 2 monitoring locations to test for any potential pollutants and will ensure relevant targets are met.

The two (2) water monitoring locations/points are located upstream and downstream of the site to ensure that the impact of the activities is identified and quantified scientifically, and if required appropriate remedial actions are taken.

Consistent with the principles of the NSW Water Quality Objectives, the discharge impact assessment should demonstrate that the proposal will maintain the environmental values of the receiving waterway where they are currently being achieved or contribute to restoring the environmental values where they are not currently being achieved.

Refer to stormwater management report.

Pollution from hardstand areas are now limited to standard industrial areas and therefore determining pollutants and heir levels is now irrelevant. However, we are proposing 2 monitoring locations to test for any potential pollutants and will ensure relevant targets are met.

The two (2) water monitoring locations/points are located upstream and downstream of the site to ensure that the impact of the activities is identified and quantified scientifically, and if required appropriate remedial actions are taken.

Attachment B – Waste

The EPA has reviewed the response to submissions document and is of the opinion that further clarification is required in relation to the management of waste, both liquid and solid.

We note that the applicant intends to store up to 15,000 tonnes of waste on site at any one time and process up to 225,000 tonnes per annum. While the proposed amount of waste to be stored on site at any one time has been reduced from what was originally proposed in the Environmental Impact Statement, the EPA has concerns that given that all waste will be stored internal to the building, and given the complexity of the proposed vehicular movements inside the building that need to be accounted for, this may not be practically possible.

It is recommended that the applicant demonstrate that the proposed storage capacity of 15,000 tonnes is practical and achievable given the footprint of the building and the proposed site use and layout.

It is recommended that the applicant identify the quantity of waste that can practically be stored in each of the dedicated storage bays or tanks shown on the proposed site layout. This information should then be used to inform the limit of waste able to be stored at the site at any one time.

Based on the EPA's guidelines, the Institute of Engineers Australia and other publications acceptable to the EPA, the specific density for solid wastes varies between 1.5 and 2.2 t/m^3 (tonnes per cubic meter) depending of the type, stream and characteristics of the wastes. We consider a conservative approach that the majority of solid materials stored on the site have been either fully or partially processed with a specific density of the average of 1.85 t/m^3. For the liquids, the density varies between 1.0 t/m^3 and 1.6 t/m^3. An estimated average of the density will be 1.3 t/m^3.

Keeping in mind that on site there are two (2) skip bins at 15 m^3 capacity each. One skip bin is used to store all recyclable waste materials that can no longer be recycled at BRS site and are transported to another lawfully licensed facility for further recycling and refinement.

Another skip bin is used to store non-recyclable waste materials which cannot be recycled and is transported directly to a lawfully licensed facility for disposal.

Reference should be made to Appendices C and H which includes:

- *Specific Site Layout showing all in-ground and above ground liquid waste storage facilities such as pits, tanks and silos,*
- *Specific Site Layout showing all solid waste/resource storage facilities such as bays, silos and open areas*

Table 2-3-1 below presents the existing and proposed solid material storage bays including their capacities and locations. The same table includes also the existing and proposed liquid material storage tanks and pits with their capacities and locations.

Table 2-3-1: BRS Storage Capacities of all existing and proposed structures

Name	Location	Materials form	Materials Type/Stream	Capacity m^3	Capacity Tonnes
DM1	Internal	Sludge	Treated Mud Sludge	50	
DM2	Internal	Sludge	Treated Mud Sludge	50	
JMT1	Internal	Liquid	Oily Water	50	
JMT2	Internal	Liquid	Oily Water	50	
JMT3	Internal	Liquid	Oily Water	10	
JMT4	Internal	Liquid	Oily Water	10	
J101	Internal	Liquid	Treated Water	56	
J102	Internal	Liquid	Treated Water	56	
J103	Internal	Liquid	Treated Water	56	
J104	Internal	Liquid	Treated Water	56	
JS1	Internal	Sludge	Oily Water	10	
JS2	Internal	Sludge	Oily Water	10	
S201	Internal	Liquid	Sewer Water	30	
S202	Internal	Liquid	Sewer Water	30	
S203	Internal	Liquid	Sewer Water	30	

S204	*Internal*	*Liquid*	*Sewer Water*	*39*	
A01	*Internal*	*Liquid*	*Asbestos Containing Liquid*	*40*	
Drill Mud Pit	*External*	*Liquid*	*Drilling Mud*	*363.24*	
J120 Pit	*External*	*Liquid*	*J120*	*528*	
NDD/Cement Slurry Pit	*External*	*Liquid/Slurry*	*NDD*	*154.37*	
DAF Unit	*Internal*	*Liquid*	*Oily Water*	*40*	
Total capacity of Liquid Waste				*1,718.61*	*2,234.2*
Filter Cake Bay x 1	*External*	*Solid*	*ENM*	*416*	
Crushing Room x 1	*Internal*	*Solid*	*C&D*	*288*	
Crushing Plant Bays x 3	*Internal*	*Solid*	*Recovered Aggregate*	*622*	
Bays Outside Crushing Plant x 3	*External*	*Solid*	*Various*	*350*	
Tip and Spread Areas x 2	*Internal and External*	*Solid*	*C&D*	*40*	
Storage Bays in Building x 5	*Internal*	*Solid*	*Various*	*750*	
Skip Bin x 1	*External*	*Solid*	*Recyclable*	*15*	
Skip Bin x 1	*External*	*Solid*	*Non-Recyclables*	*15*	
Skip Bin x 2	*Internal*	*Solid*	*Various*	*20*	
Concrete Works Area	*Internal*	*Solid*	*Recovered Resource (Aggregate, Dust, Foundry Sand, Recovered Glass Sand, etc)*	*60*	
Concrete batching Plant	*Internal*	*Solid*	*Raw materials*	*70*	
Total Capacity of Solids				*2,646*	*4,895*
Grand Total					*7,129.2*

In summary, there is sufficient capacity to store up to 1718 m^3 or 2234 tonnes of liquid wastes and 2646 m^3 or 4895 tonnes of solid waste on site.

14 DPIE – DATE 3 APRIL 2020

ATTACHMENT 1

GENERAL
Waste

1. *Provide tonnages (throughput and storage) of all waste types (including liquid waste and hazardous soils) entering and exiting the site (both liquid and solid waste).*

As previously advised, it is extremely difficult to predict the accurate quantity of each waste type or waste stream since most wastes are received at the facility on a project basis (by batch) rather than on a continuous process.

Notwithstanding the above, table 7 on page 30 of the previously submitted RTS included details of typical quantities of wastes received on site. This table is included below as Table 2-4-1.

Table 2-4-1 - Typical Quantities of Each Waste Type Accepted on the Site

Material Group	Percentage of total material accepted on the site	Calculated quantity of material (tonnes)		
		Daily	Weekly	Annually
Solids Waste Stream	20%	123	865	45,000
Concrete Waste Stream	15%	92	649	33,750
Sands and Soil Stream	15%	92	649	33,750
Oily Water Stream	15%	92	649	33,750
Sewer Waste Stream	15%	92	649	33,750
Other Liquid Stream	5%	30	216	11,250
Drill Mud Waste Stream	15%	92	649	33,750

Based on our experience with the C&D waste stream, we present a breakdown (based on 100,000 tonnes per annum processing capacity) of the quantities of different materials that are present in the C&D waste stream. These materials are included in table 2-4-2 below.

Table 2-4-2: RRF Estimated Weight Balance for C&D Waste

Input material	Estimated quantity per annum @100,000 tpa processing capacity	Estimated Percentage @ 100,000 tpa processing capacity	IN/OUT

Asphalt	*1,219*	*1.219%*	*IN*
Bricks or Concrete	*13,131*	*13.131%*	*IN*
Soil/VENM	*85,600*	*85.6%*	*IN*
Rejects/Reloads	*50*	*0.05%*	*IN*
RRF (glass, paper, plastics)	*458*	*0.458%*	*OUT*
Metals	*158*	*0.158%*	*OUT*
Aggregate	*27,339*	*27.339%*	*OUT*
ENM	*71,845*	*71.845%*	*OUT*
Landfill	*200*	*0.2%*	*OUT*
TOTAL Input	*100,000*	*100%*	
TOTAL Output	*100,000*	*100%*	

2. *Ensure the process flow diagrams for all waste processing activities provided in the RTS are reflective of the described process.*

Process flow diagrams for all waste types and streams were reviewed and updated early this year. These flow diagrams have been reviewed and updated again prior to being submitted to the Department. These diagrams are included in Appendix D for completeness.

Site Plans

1. *The following items should be clearly shown and labelled on the site plan:*
    a. *noise wall including length and height of existing and proposed*
    b. *all roller doors*
    c. *all operations/activities*
    d. *the drainage bund surrounding the new solid waste receivals area/C&D tip and spread area*
    e. *the items in the process flow diagram in the RTS (Figure 3), being the homogeniser, weight feeder liquid reagents, dry regent feeder, dry regent silos and the location of the curing settling of treated waste pending disposal*
    f. *the designated loading area for hazardous soil and ASS*
    g. *the liquid tank for each liquid waste type*
    h. *the C&D waste validation area*
    i. *concrete batching plant, including the new enclosure, two new silos for cement and sand, load cell, aggregate feeder, mixer hopper, swing in hopper*
    j. *the dedicated equipment for asbestos contaminated liquid waste, including labelling all components as listed in Table 11 in the EIS*
    k. *the on-site laboratory*
    l. *the filter listed on the flow diagrams for oily liquid waste grease trap waste and sewer waste*
    m. *the concrete batching silos silo that would store hazardous waste*

a. *The existing and proposed noise walls are now included in the site plan.*
b. *All roller doors designed for future access to the building are included in the site plans.*
c. *The site plans include all current and proposed activities.*
d. *The area was chosen to ensure that all surface water drains by gravity to the back of the tip and spread area. However, this will no longer be relevant after the construction of the steel awning which will cover fully this area as well as the external storage bays by preventing the ingress of any rainwater in these areas.*
e. *Several sections of the proposed site plans are presented in more details in separate plans.*

f. This area is shown on the revised site plans.
g. All tanks are now marked as designated for the specific intended use of them.
h. The C&D waste validation area being the storage bays of finished products is shown on the site plan.
i. A new plan for the already approved concrete batching plant is presented with the revised and new site plans.
j. A new plan for the asbestos contaminated liquid waste is provided with the revised and new site plans.
k. The on-site laboratory is shown on the revised site plans. It is located in Building B on Level 1.
l. As previously advised, the grease trap waste has been removed from this development application. The location of the filters for sewer and J120 waste are shown on the revised and new site plans.
m. The concrete batching plant silos will only store materials associated with the concrete batching process. Hazardous soils are stored in designated storage bays.

Reference should be made to Appendix C for all revised site plans and layouts which include the requested additional information.

PROPOSED WASTE PROCESSING ACTIVITIES

Construction and Demolition (C&D) waste

1. Provide details of:
a. where the C&D waste loads would be mixed to form product and how plasterboard would be received, stored and processed
b. where the waste validation area would be located
c. the types of waste would be stored in the storage bays labelled "feed stockpile", "20 mm", "10 mm" and "dust"
d. the C&D crushing plant
e. how solid waste material would be transported to internal stockpiles from the processing area

a. Plasterboard is not received in bulk form or as a separate stream of waste but rather in small quantities as part of the C&D waste like any other waste facility in NSW receiving mixed C&D waste.
b. As previously stated, the C&D waste validation area being the storage bays of finished products are located within and near the crushing and screening plant.
c. The feed stock is the accepted, approved and sorted C&D waste after it has gone through the first 2 inspections points including the Tip & Spread Area. The crushing and screening process produces three different sizes of crushed materials; <20mm (also called road base), <10mm and <6mm (also called crusher dust). All these materials are classified as Recovered Aggregate.
d. The C&D crushing plant includes a crusher, a screen and storage bays. Refer to Appendix C for a copy of the crushing and screening plant showing all details of different components of that plant.
e. The solid waste material is and will continue to be transported between the different stages of the process using a front-end loader.

Reference should be made to the testing required in accordance with the EPA's Resource Recovery Orders for different end products included in Appendix D.

Concrete batching plant

1. *Provide details of:*
   a. *how the crushed glass used for the concrete batching plant would be managed and stored, including managing the odour and leachate that could be generated from the crushed glass*
   b. *how waste from the C&D processing area would be moved internally within the site to be used in the concrete block manufacturing process*
   c. *where the 12 different types of recovered materials listed on page 38 of the EIS would be stored within the warehouse when, in the revised site diagrams in the RTS, there are only five bays labelled "soils", "soils", "concrete agg", "road base" and "sand"*
   d. *the height of the concrete batching plant and additional machinery including silos*
   e. *how much cement and sand can be stored in the silos and where the cement and sand are sourced from*
   f. *what recovered materials are purchased for concrete block manufacturing and where it would be stored*
   g. *where the concrete and the recovered materials are mixed to form the blocks*

a. *The crushed glass received on site is already cleaned at the source. Therefore, there are no odours generating from this material. Since the crushed glass is stored internally, it is not exposed to rain or other additional water source other than the normal water mists which are very well monitored to prevent saturation of materials which may result in the generation of leachate. No further mitigation controls are necessary or required.*
b. *As previously stated, all C&D waste materials are and will continue to be moved between different processing stages and different sections of the plant using a front-end loader.*
c. *There are bays inside the crushing and screening plant, others are adjacent to the crushing and screening plant, others are under the existing awning and the rest are within the enclosed building. All the bays are now shown on the revised site plans included in Appendix C.*
d. *Details of the concrete batching plant are shown on the revised and new site plans.*
e. *Approximately 60 tonnes in each silo but the weight will depend on the specific density of each material. These materials are sourced from Boral. Refer to Appendix N for a copy of cement transfer procedure.*
f. *The only materials that are bought are GP cement and they are placed in the dedicated GP Cement silo.*
g. *Within the footprint of the concrete batching plant.*

Hazardous soils

1. *Provide details of:*
   a. *all hazardous waste that would be treated on site (including the tonnages of each hazardous waste soil)*
   b. *what the hazardous waste soil would be treated for, including details of the liquid reagents that would be added (how much liquid or solid reagent will be added?)*
   c. *where the liquid and solid reagent would be stored. Are the liquid and solid reagents classified as dangerous goods? How many tonnes of the solid and liquid reagent would be stored on site at any given time?*
   d. *the immobilisation approval required*
   e. *the NATA accredited laboratory that would be used to test the hazardous soil*
   f. *how cross contamination would be prevented and managed. e.g. contaminated soils and ASS would be using the same pugmill, how will cross contamination be prevented?*

2. The EIS states that hazardous soils and fly ash would be stored in the concrete batching silos while the RTS states treated hazardous soils would be disposed of after they had been mixed. Please clarify if they would be stored in the silo after or before treatment and if the silo be dedicated to hazardous waste.

3. Please advise:

- *a. the classification of the immobilised soil and where the immobilised soil waste would be disposed of*
- *b. the batch sizes for processing hazardous soils*
- *c. the location of the designated loading area for hazardous soils and ASS, the lime storage area for ASS treatment, and the treated soil and ASS storage area*
- *d. how much treated and untreated hazardous soil and ASS the bunds can hold (in tonnes and at any one time)*
- *e. how leachate from the bund within the designated area would be collected and directed to the liquid waste treatment process for treatment*
- *f. how leachate from the bunded area would be managed to prevent contamination of the liquid waste treatment process*
- *g. the relationship between the filter cake process and the treatment of hazardous soils and include this process in Figure 3 of the RtS*
- *h. what type of heavy vehicle would be used to transport treated ASS and hazardous soils offsite*
- *i. where the curing/settling process of treated hazardous soil take place*

Following careful consideration of the development by the management of BRS, it was determined that this waste is removed from the proposed development.

Liquid Waste Treatment

1. *Provide details of:*
   - *a. what the liquid waste would be tested for*
   - *b. the inspection/testing procedures for incoming liquid wastes*
   - *c. the tonnages of each liquid waste stored and treated on site*
   - *d. what size heavy vehicle would be used to transport liquid waste to and from the site*
2. *Please advise why TSS measured prior to discharge, how often is the liquid waste tested, and what NATA accredited laboratory would be used to classify/test the liquid waste?*
3. *From the flow diagram sewage solids use the same filter press as drilling mud. How would it be ensured drilling mud does not become contaminated?*
4. *How does drilling mud, cement slurry and concrete washout get moved through the sieve, noting this is first in the process description but is not listed on the flow diagram?*
5. *A filter is listed on the flow diagrams for oily liquid waste grease trap waste and sewer waste. Please describe how this fits into the process.*

1

- *a. Testing procedures are included in Appendix N of this RTS*
- *b. The inspection/testing was included in the testing procedures as well as in the flow charts/diagrams presented in Appendix D*
- *c. The quantities of liquid wastes will vary depending on the clients. Based on current and projected estimates, J120 is estimated to be approximately 500 tonnes, Sewer 500 Tonnes, NDD/Drilling Mud/ Cement Slurry/ Stormwater 500 tonnes. All other liquid wastes will be approximately100 tonnes*
- *d. Normal Vacuum trucks (7 tonnes) and tankers (16 tonnes)*

2: The TSS or TDS is measured in accordance with our consent conditions with Sydney Water. This can be done onsite using our own instruments. Similar testing is undertaken by Sydney Water on a quarterly basis. We also have used ALS which are NATA accredited laboratories
3. This is incorrect. The sewer does not go to the filter presses. It has its own machinery to separate solids and grits, and it is independent of the filter press and existing plant
4. These materials are moved through the process using vacuum and pumps
5. As previously advised, there will not be grease trap waste. The filter is there to capture any oversize foreign material so it does not end up in the process where it can block or cause damage to the other parts of the system

Reference should be made to the testing required in accordance with BRS standard testing procedures and where relevant the EPA's Resource Recovery Orders for different end products included in Appendix D.

Drilling mud

1. *Provide detail of:*
    a. *how the different batches of drilling mud filter cake would be separated to ensure each sampled batch can be identified*
    b. *how much drilling mud filter cake can be stored in the bins*

    a. *Each batch is stockpiled separately until completion of testing.*
    b. *The mud filter cake will not be placed in bins but rather stockpiled under cover. Reference should be made to Table 2-3-1 for details of storage capacities for all materials.*

    Reference should also be made to Appendices C and H for copies of plan showing storage locations and capacities.

ENVIRONMENTAL IMPACTS

Traffic

1. *The Department has concerns regarding potential clashes between vehicles during the various waste activities. Provide swept path analysis (SPA) showing:*
    a. *two waste liquid vehicles delivering at one time (in accordance with the timestep chart).*
    b. *a solid waste heavy vehicle truck passing a solid waste heavy vehicle pickup*
    c. *how a heavy vehicle can pass another vehicle while unloading drilling mud or sewage*
    d. *the heavy vehicle type that will be used to transport ASS and hazardous soil on and off-site.*
    e. *how heavy vehicles will manoeuvre around the tip and spread area*
2. *It appears from the SPA titled 'TURN04' a heavy vehicle would drive into the 'road base storage bay' in a forward direction then reverse into the building to load/unload liquid waste storage tanks. If trucks are driving into the 'road base storage bay' how would sediment be prevented from being tracked outside the building?*
3. *Provide details on how the smaller vehicles entering the main building would access the wheel wash*
4. *It appears the queueing spots are located haphazardly on the SPA, demonstrate how heavy vehicles can safely manoeuvre within the site with eight trucks at maximum peak hour on site with each truck taking approximately 30 minutes to unload.*
5. *Based on the revised TIA, haulage numbers have been based on truck size not weighbridge records. The means the TIA could have overestimated tonnage and underestimated traffic* numbers, please address.

It appears that the timestep chart may have misrepresent the traffic management within the site. This may have led to the concerns raised by the Department.

All vehicles must comply the BRS procedure titled “Traffic Stacking and Queuing Procedure V1 August 2019” included in Appendix E and its updates.

All heavy vehicles must go through the wheel wash before leaving the site. There are several signs within the site to remind all drivers of this requirement. Any non-compliant driver will be given a warning. Refer to Appendix L for photos of signs already installed on site to direct all outgoing trucks through the wheel wash.

The following notes must be read in conjunction with the revised traffic related site layouts/plans and turning paths for the different sizes and locations of vehicles.

- All trucks arriving on site must adhere to the existing BRS procedure titled" Traffic Stacking and Queuing Procedure" as updated from time to time,
- The total number of vehicles entering the site is 9 per hour; 3 truck & dogs, 5 HRV/MRV (normal truck, vac truck, tanker) and 1 concrete agitator (empty),
- Based on the unloading and loading procedures for all waste materials, it takes between 21-28 minutes for the any vehicle to enter and leave the site. This means that the number of vehicles present on site is unlikely to be more than 4 at any one time,
- We have taken a more conservative approach and assumed that 7 vehicles will be on site at any one time.
- The vehicles are not all stationary but rather moving through the process as described in the unloading/loading procedures.
- No vehicles longer than 12.5 (HRV) will be entering the building,
- All transactions are pre-booked and accepted only at the agreed times to prevent queuing internally and externally,
- All drivers have been instructed to exit through the wheel wash as shown in the signs posted in the yard,
- All drivers have been instructed to give way to all trucks that have completed their job (unloading or loading) first to avoid conflict with priority.

It appears that the previously submitted site layouts/plans may have been based on a theoretical Worst Case Scenario used in the Noise Impact Assessment rather than what actually happens on site on a daily basis which is based on the hourly traffic movements.

This matter has been addressed by both the traffic engineer and architect (Appendix E).

The traffic engineer has also confirmed the following:

- The existing access was assessed against AS2890.1 and AS2890.2 and determined to comply. The access requirements are not that difficult as the site is at the end of an industrial standard cul-de-sac.

- Due to the fact that in that area all are industrial developments the site’s peak traffic is likely to coincide with the road network peak therefore that is what the assessment was based on. This results in a worst-case conservative assessment of the impacts of the development. That is how all TIA are done do and TfNSW have never had an issue with this approach.

- The department is correct, the traffic generation is based on the information that was provided by KDC in regard to vehicle sizes and types to be used on the site and not weighbridge data. However, the traffic generation used is similar to every TIA we have done and to date TfNSW and all other Councils have not had any issue with it.

- The access to the site is suitable and it is within an industrial area.

The Traffic engineer stated: "I have seen many much worse accesses approved in developments I have dealt with by Councils, TfNSW and the Department even in recent times".

Following review of the traffic generation section of the TIA report, we confirm that the number of vehicles required to transport the waste materials to the site has been overestimated rather than underestimated. This can be easily confirmed mathematically by reviewing the information presented in Table 2-4-1 and calculating the number of each type of vehicles to be used for the quantities of materials to be transported.

Appendix E includes all revised turning paths for different sizes and locations of vehicles as well as "Traffic Stacking and Queuing Procedure V1 August 2019".

Surface Water Management

1. *Please advise:*
   a. *how water in the bunded tip and spread area would be removed*
   b. *how leachate would be collected from the storage bays*
   c. *how firewater would be removed follow shutting of the drain*

Reference should be made to the comprehensive response to the EPA's water management comments in the previous section. Notwithstanding this, responses to the above specific comments are provided below.

a. *Following the construction of the awning and noise barrier (wall), no rainwater will be entering the tip and spread area or the adjacent materials storage bays. Therefore, there will be no need to remove the water from that area since there will be none. However, if required the water will be pumped into the water treatment system for treatment.*
b. *Similar to the above response, no leachate will be generated since there will be no rainwater falling in that area.*
c. *The firewater will be removed using existing submersible pumps that are in different existing collection and retention pits as well as the final collection pit where the shut-off valve is installed. The firewater would be easily pumped directly into the on-site water treatment plant for treatment and re-use on site. However, if all liquid storage facilities are full, firewater could be pumped out into a tanker for a temporary storage until sufficient space is available in the water treatment plant or the liquid storage facilities.*

Fire Management

1. *Please describe the fire upgrades undertaken and advise how the waste material stored and processed within various areas of the building has been considered as part of the fire upgrades.*
2. *Please demonstrate if the site has capacity to hold fire sufficient water.*

NSW Fire and Rescue Services considered the proposed development and deemed that there is no risk of any material catching on fire and thus has not asked for any upgrades of the existing provisions currently installed and deployed on site. The site adheres to current relevant legislation requiring the use of fire extinguishers and hoses which are located throughout the plant and building. All these fire extinguishers and hoses are tested regularly to ensure compliance with legislation.

Currently, the site has 18 fire extinguishers, 7 hose reels and 3 fire blankets. These devices (equipment) are inspected regularly by an accredited company and when necessary, they are either repaired or replaced as required.

Notwithstanding the above, all roofs have water sprayers installed for dust suppression purposes. These can be turned on manually at any time to assist in containing and extinguishing fires, if required.

Due to the fact that the site has large collection and retention pits as well as it is fully bunded to ensure that only controlled discharges of surface water to the external stormwater system occur in accordance with the Stormwater Management Plan. The capacity of the existing above ground water tanks can also be used to pump fire water into them, if necessary.

Appendix H includes locations and sizes of all in-ground water storage and retention pits. The total capacity of these pits alone is 2,250,850 litres.

The methodology for calculating the amount of contaminated fire-fighting water to be contained and the methodology of containment follow the recommendations in the document HIPAP No. 2 – Fire Safety Study Guidelines (DUAP 1993) and the Best Practice Guidelines for Containment Water Retention and Treatment Systems (HMPCC 1994).

Identification of Materials and Hazards

The principle potential hazard that could occur on the site that would produce contaminated water would be a fire. It is possible that the firewater used to fight or contain a fire would become contaminated with some of the waste materials that are kept on the site.

During a fire event it is expected that depending on the location and extent of the fire, part of these waste materials could be contaminated and that some would be spilt as a result of containers failing due to thermal stress. These spilt wastes (liquids and/or solids) could therefore contaminate the spent firewater.

Estimation of Potential Contaminated Firewater Volume

A worst-case fire on the site has been used to calculate the maximum amount of contaminated firewater. This would involve a fire consuming an entire building. The number of hose reels should be calculated in accordance with relevant guidelines. Since the facility and building are already constructed and operated to the satisfaction of most authorities, the number of fire-fighting equipment has already been determined and has not been questioned by any authority. Furthermore, many inspections have been previously undertaken by most authorities including NSW Environment Protection Authority (EPA), Campbelltown Council, SafeWork NSW and others. In addition, a highly qualified and experienced company has been undertaken the regular service and maintenance of all firefighting. Table 2-4-3 below shows the number all fire-fighting equipment currently installed, serviced and maintained on site. Table 1 includes also other emergency related devices such as Exit signs.

Table 2-4-3: Existing Fire-Fighting Equipment

Quantity	*Type*
27	*Exit Sign*
3	*Fire Blanket*
7	*Hose Reel*
11	*Fire Extinguisher ABE*
7	*Fire Extinguisher CO2*

Since there are no fire hydrants on the site, we can assume that a fire hydrant on the road would be used, if required. Alternatively, a fire truck could be used in addition to the existing fire hoses. The largest building on site has a total floor area of approximately 3,000 m^2. The minimum required fire hydrants for a building of this size would be one (1) hydrant. If a street hydrant is provided for hydrant fire-fighting water, the discharge of the hydrant and hose reels for 90 minutes will be equal to the quantity shown in Table 2-4-4 below.

Table 2-4-4: Quantity of Required Contaminated Firewater

Total Containment Required	
Hose reels *Operational discharge of 0.33 L/s* *0.33 L/s x 60 s/min x 90 min = 1,782 L* *7 x 1,782 L = 12,474 L*	*12,474 L*
Fire Hydrant *Operational discharge of 10L/s* *10L/s x 60s/min x 90 min. = 54,000L* *1 x 54,000 L = 54,000 L*	*54,000 L*
Total firewater containment required	*66,474 L*

Firewater Containment System

As previously stated currently on site there is a total of 2,250,850 Litres of in-ground water retention capacity let alone the capacity of the whole unroofed and bunded areas as well as the so many silos. The in-ground water storage capacity is more than 33 times more that the required quantity of firewater generated for 90 minutes. However, if we considered that all liquid storage structures (existing and proposed) can be used to contain fire water, if required, the capacity of these structures will be more than 50 times the required capacity to contain the fire water in case of a fire.

Based on the calculations of the required fire water as shown below, the existing in-ground water storage structures have the capacity to hold more than 30 times the potentially firewater generated as a result of a fire.

Consequences of Contaminated Firewater

If no system was in place to contain used firewater then it could flow off site and could pollute the adjacent land as well as possibly enter local waterways, especially if the water was contaminated with significant levels of waste materials. However, based on the above, this scenario is highly unlikely to occur on this site since the in-ground water storage capacity alone is more than 30 times more than what is required.

Noise Assessment

1. *Please advise if all vehicles have been considered in the revised noise assessment including liquid waste trucks? Please clarify the number of waste trucks per hour included in the assessment.*

The Noise Impact Assessment (NIA) was undertaken based on a "Worst Case Scenario" which is highly unlikely to occur ever on this site. This approach is to demonstrate that if the proposed development complies with the adopted noise criteria for the "Worst Case Scenario", it will comply for

any other scenario.

The NIA took into consideration the movements of liquid waste trucks, with their movement path as it was shown in Figure 3.1 of the NIA. However, it appears that the liquid waste truck movement details were accidently omitted from Table 16 of the NIA report. The NIA report has been amended to include these details and it is attached to this RTS as Appendix K.

To confirm, the acoustic engineer has included truck movements in the assessment by modelling three (3) solid waste truck movements per hour and three (3) liquid waste trucks per hour. The modelling included also four (4) trucks idling in designated queuing spaces of the yard and one (1) truck & dog tipping outside the crushing & screening plant. As previously stated, this scenario is unlikely to occur since it takes less than 30 minutes to complete unloading or loading of any truck with any waste type/stream within the site. This means that only half of the above stated number of trucks is likely to be on site at any one time.

Additional Questions

1. *Provide details of the onsite laboratory (described in the audit)*
2. *It appears the on-site landscaping has been removed to allow better movement of vehicles – this has not been previously approved so must be included as part of the of the application.*
3. *The EIS discusses a proposed second weighbridge but it appears this has already been constructed and is operational. Please confirm if this now needs to be included in this application.*
4. *Provide details of the approval for site office approved by Council, including DA and site plans*
5. *Describe the proposed bunker walls and demonstrate that they will be structurally fit for purpose, especially those adjacent to the glass office walls.*

1. *The laboratory is used to test materials to ensure that they meet the acceptance criteria in order to be treated onsite. This includes testing such as Flashpoint, pH, and Performance testing such as flocculation and separation. This eliminates any waste being brought to site that is outside of our acceptance criteria and not compatible with plant and equipment used to treat the waste. It also eliminates any risk of potential harm to staff.*
   The laboratory is also used for preliminary testing for the batch treatment process to ensure that the chemistries being used are dosed in an economical and efficient manner to ensure health and safety of operators are well protected.
   Lastly, the laboratory is and will continue to be used for Research and Development for both current and future processes. This is undertaken to ensure that BRS is using and conducting the most efficient and economical way of treating the wastes whilst looking at new technologies that can be used in the Australian market.
2. *Based on Google Earth Pro, no landscaping was removed for several years now. On the contrary, the landscaping and vegetation are flourishing in a very pleasing manner due to the sprinkling system installed and care of the occupier. Photographic evidence of current vegetation and landscaping on site is provided in Appendix L.*
3. *This is a portable weighbridge and not a fixed weighbridge. It was put in during maintenance of existing weighbridge to ensure compliance with current environmental legislation as to weigh every vehicle on the way in and out.*
4. *We are unsure what site office this comment refers to. The internal site office was approved by Council long time ago as part of the original development consent. The weighbridge office which is a mobile office (not fixed) was installed to provide better management of incoming and outgoing traffic as well as to have a better view of all loads at Inspection Point 1.*
5. *The bunker walls are made out of very solid concrete blocks which are cemented together to give them additional structural stability and prevent cross contamination. This matter will be addressed in more details during the construction stage. Each block weighs approximately 2.2 tonnes and its*

dimensions are 1600mmX800mmX810mm. The blocks are designed to interlock on both top and bottom sides to provide additional structural integrity. Engineering drawings of these blocks are provided in Appendix C.

HAZARDS

SEPP 33

- *It is understood the Applicant has verified which waste materials could be classified as dangerous goods (DG) under the Australian Dangerous Goods Code and intends not to store or transport DG (DG waste inclusive) beyond the screening threshold quantities listed in the Department's Applying SEPP 33. Therefore, the Applicant concluded only on this basis that the SSD is not potentially hazardous under SEPP 33, thus not requiring a preliminary hazard analysis to be prepared.*
- *However, from Applying SEPP 33 (Appendix 3, Example 2), the Applicant should note that an SSD can be potentially hazardous on the basis of risk factors beyond those covered by the preliminary risk screening. That is, the SSD can be potentially hazardous if there could be an off-site risk due to a combination of hazards even if DG quantities are below the screening threshold quantities. For this SSD, packaged DG would be stored collectively within the Eastern Chemical Bund shown in RTS Appendix F (page 18). Packaged DG includes caustic soda, sulphuric acid and sodium hypochlorite, totalling up to 16,000 L (around 16 tonnes). Spills of these materials into a common bund may release toxic gases such as chlorine and sulphur dioxide which may impact residential developments 80 m from the SSD. This issue is also noted by SafeWork NSW who is the DG regulator.*

1. *To assess if the SSD is not potentially hazardous, the Applicant must provide enough information on how incompatible materials within the eastern chemical bund would be segregated to prevent the release of toxic gases. If sufficient information is provided, the Department can verify if the SSD is potentially hazardous and condition appropriately.*
2. *Information should include but not be limited to the specific storage arrangements within the eastern chemical bund or how the design of the bund itself can comply with the relevant Australian Standards and codes of practice (i.e. it is not sufficient to merely state that the SSD will comply with standards).*

Reference should be made to the response to SafeWork NSW included in Section 2.1.

We understand the concerns of the Department as it may not have been made clear in the RTS that the chemical storage area located adjacent to the crushing and screening plant is within a dedicated room. This room will be divided into three (3) sections; each section will be dedicated to different types of chemicals in accordance with the advice of the qualified consultant to ensure that only compatible materials will be stored within each section. Currently the room has 2 walls, and the remainder will be bunded to ensure that each section will have a minimum capacity to capture at least 110% of the capacity of the largest container within that section. The floor and the walls are fully concreted and sealed. Similarly, the bunds will be fully sealed to ensure that any spills will be fully captured within the bunded area/s.

Notwithstanding the above all chemicals are stored on a self-bunded base/pallet that is suitable for that container as supplied by the chemical company.

In addition to the above, HAZKEM Dangerous Goods Consulting has provided the response outlined below to address the above matters.

- *Hazkem Pty Ltd were engaged by KDC Pty Ltd to perform a SEPP 33 Assessment with regards to the proposed storage of this recycling facility. Utilising the Applying SEPP 33 Guidelines, we have determined via the screening process that this site is deemed to be not potentially hazardous based on the proposed storages.*

- *The SEPP 33 Assessment has been completed on the assumption as per advice by KDC Pty Ltd that Bulk Recovery Solutions Pty Ltd would be storing and handling all onsite Dangerous Goods in full accordance with the relevant Australian Standards. Without being privy to the internal design and bunding arrangement of the dedicated storage space, HAZKEM has assessed with the assumption that the mixed class storage area would be designed compliantly utilising the relevant standard of AS/NZS 3833-2007. AS/NZS 3833-2007 outlines detailed segregation requirements for both products that are incompatible and for those that react dangerously. This ensures a safe storage for any DG on the premises and highlights any potential storage and handling issues.*

- *The design of the internal Dangerous Goods area when designed to AS/NZS 3833 will incorporate segregation within the store between products based on the SDS as follows:*
- *Where the substances being kept are incompatible*
    - *they shall be separated in a separate compound; or*
    - *they shall be segregated by a distance of at least 3m, except that, when both substances are solids, this distance may be reduced to 1m*
- *Where the substances being kept might react dangerously -*
    - *they shall be segregated by at least 5m (measured from the upper interior edge of the bund); and*
    - *they shall not be kept within the same compound, or in compounds that share a common drainage system.*

On the basis that the site will be storing all dangerous goods compliantly it can be determined that items deemed to react dangerously with one another (for example Sulphuric Acid and Sodium Hypochlorite) will be adequately segregated and located in separate compounds. As such based on the above and the assumption that the sites storages would be stored compliantly the assessment of the mixing of product that may react dangerously was omitted from the assessment as it was deemed to not be applicable to this site's day to day operation.

The proposed mixed class storage area incorporates the storages included in Table 2-4-5.

Table 2-4-5: Chemical Storage Details and Quantities

Product	Quantity	UN	Class and PG
Hydrocarbons	2000 litres	3295	3 PG II, III
Kerosine, Oil		1223	3 PG III
Caustic Soda Liquid 60%	2000 litres	1824	8 PG II
Sulfuric Acid 40%	2000 litres	2796	8 PG II
Sodium Hypochlorite 50%	1000 litres	2582	8 PG III

Furthermore, the SEPP 33 Assessment Report was revised by the same consultant and the revised

report is included in Appendix P.

Liquid containing asbestos

- *Even if the SSD is not potentially hazardous under SEPP 33 and conditions can be applied to prevent the SSD becoming potentially hazardous after approval, the SSD will be storing and handling "liquid containing asbestos" (LCA). In noting NSW EPA's submissions and consulting with SafeWork NSW (asbestos regulator).*
- *The processing of LCA at the scale proposed in the SSD is not typically encountered in NSW. It is also uncertain if any consent authority in NSW has approved a development which includes LCA processing. As such, it remains uncertain if the method of LCA processing described in the EIS and RTS (i.e. LCA through a simple filter press + HEPA filter) can be designed to comply with all relevant requirements, especially when the LCA could contain various types of asbestos with a range of particle/fibre sizes which can be below 12 microns (respirable range).*
- *In reviewing the EIS and RTS, the Applicant has not provided sufficient and consistent information to describe LCA processing, including the storage arrangements for the LCA and the products after LCA processing (filter cake). Moreover, the process flow diagram:*
  - *indicates the use of "HEPA Filter Cartridges" to purify liquids, which is inconsistent with HEPA filtration technology (i.e. HEPA stands for high efficiency particulate air);*
  - *may indicate the use of a centrifuge in addition to filtration equipment ("Kosun Black Rhino"). This could indicate micron-scale particle/fibre sizes which cannot be separated by conventional filtration technology;*
  - *indicate mixing solids with LCA processing streams result in solid compounds of unknown properties;*
  - *indicates the use of flocculants as part of LCA processing, which may indicate that "Sludge Tank 1" being operated as a settling tank. In noting that the sludge will pass through "Filter Press 1", it is uncertain where the supernatant ('clear') liquid will go after the settling process;*
  - *does not clearly indicate how LCA enters the LCA treatment process; and*
  - *depicts different tank sizes when compared with RTS Appendix (page 18) and other site layout diagrams in the EIS and RTS.*

- *It is requested that the Applicant's engineer/specialist provide a detailed run-down on the LCA process to fully resolve the above items. The above items are not an exhaustive list but are the main items to which other items will follow.*

Based on the fact sheet titled: "Asbestos in Drinking Water" published by Western Australia Department of Health on 22 June 2016, asbestos fibres suspended in drinking water are not hazardous to human health even if they are swallowed. A summary of the fact sheet is provided below.

- *"Asbestos in drinking water may come from a variety of sources including asbestos-cement water pipes and roofing material.*
- *Asbestos fibres may be found in drinking water are not considered to be hazardous to human health.*
- *The 2004 Australian Drinking Water Guidelines and World Health Organisation have not set a guideline value for asbestos due to the absence of evidence that asbestos is hazardous to health.*
- *Rainwater tank sludge from AC roofs should be kept wet at all times while being removed and disposed.*
- *Any maintenance to rainwater soak wells from AC roofs should only be done when the soil is wet to prevent the release of any dust.*
- *Building materials manufactured after 1987 are unlikely to contain asbestos, however if you are unsure have it tested by a NATA accredited laboratory."*

In conclusion, if asbestos fibres in drinking water are not hazardous to human health, they will certainly not be hazardous to human health when present in liquid waste.

HEPA stands also for High Efficiency Particulate Absorbing or High Efficiency Particulate Arrestance. In any case based on the properties and characteristics of these filters, they can be used to remove asbestos fibres from liquid waste at higher than 97% removal efficiency.

In summary, the process is similar to any wet and dry vacuum cleaner with HEPA filter. The only difference is that for this industrial use, the filter will have multi layers of filtration materials and the filtering area will be multi-folds greater to ensure that all particles below 0.3 microns are captured.

Asbestos fibres (particles) range from 0.7 to 90 microns. Most HEPA filters remove 99.97% of dust and allergen particles greater than 0.3 microns.

This is the most efficient and effective method to remove asbestos fibres from the liquid waste.
The filters will be replaced by the supplier in accordance with the manufacturer's specifications to ensure that the efficiency of asbestos particle removal is maintained at its highest levels.

SECTION C

15 DPIE – DATE JULY 2020

- *The June 2020 RTS only provides a response to comments on a previous version of the RTS. Please update the document to include a response to submissions received during the exhibition of the development while ensuring all comments on the RTS are also addressed.*
- *Please clearly articulate in the front section of the report, all components of the development that have changed from the original proposal.*
- *Given the extent of changes to the development, a request to amend the DA in accordance with Clause 55 of the Environmental Planning and Assessment Regulation 2000 is required.*

Site Plans

The Department notes the following comments have been raised previously and remain outstanding:

- *The Department requires updated plans which:*

Most of the matters raised below were included in the plans. Notwithstanding the above, all site plans have been updated further and are included in Appendix C.

- *label the location where waste would be sorted and classified into individual listed waste types (Standard 2 of the "EPA Guidelines: Standards for managing construction waste in NSW").*

The waste would be sorted in the area located inside the crushing and screening building. As you may be aware, the waste will be classified at the storage bays after processing not before. The sorted waste will be placed in the bays provided outside and inside the building as well as skip bins that are dedicated for the various streams such as timber, metals, landfilling waste, etc…

- *include labelled diagrams of all plant and equipment to match the process flow diagrams. This includes storage silos, the concrete batching plant and asbestos liquid waste processing equipment. It is noted only the layout for the crushing and screening plant has been provided.*

It is not possible to include all different equipment and plants on one site plan only due to the large number of such equipment. All equipment and plants have been labelled at different site plans. Refer to Appendix C for detailed 2D and 3D site plans which include details of the various plants.

- *show where all wastes types would be stored including, but not limited to, crushed glass, fly ash, grit and screenings from sewage treatment systems, slag, firewater, leachate, groundwater, industrial oily water, restricted solid waste and municipal waste.*

The updated list of storage facilities and compatible waste storage bays include the proposed locations for all waste types and streams. Refer to Appendix H for names, locations, dimensions, capacities and compatibilities of all storage facilities. Tables 15-1 and 15-2 below include the requested information. Figure 15-1 provides additional details as well.

- *show and label the site office, weighbridge office and laboratory and chemicals storage area.*

These were labelled in the previously submitted documents. Nevertheless, they are now highlighted further on the updated site plans. Refer to Appendix C for detailed 2D and 3D site plans which include details of the site features including the above requested items. Figures 15-2 and 15-3 provide details of such plans. However, Appendix C includes more detailed 2D and 3 D plans.

- *include all roller doors (roller doors are only labelled on the current site plan).*

All roller doors were included on the site plans. However, the roller doors are now highlighted further on the updated site plans. Refer to Appendix C for detailed 2D and 3D site plans which include details of the site features including the above requested items.

- *provide the approved plans for the site office and lab.*

The current site office was included in the site plan approved by Council in DA No: 948/2015/DA-I dated 23 March 2015. The site plan was referred to in condition a – "Approved Development". The plan was included in Figure 0-2 "Site Layout" Ref141296_EIS_Rev2 dated April 2015. A copy of this plan is included in Appendix G.
We have attempted to find the approved plans for both the site office and laboratory through Council's website to no avail. We will advise you further on the laboratory as soon as this becomes available.

The Department requests you address following additional comments which are based on the revised RTS:

- *ensure all tanks are to scale as some of the smaller volume tanks are larger on the plans.*

The tanks were shown on 2D plans which makes it really difficult to show their heights. This is the reason for including the volumes of these tanks to ensure that tanks with different 2D areas and different heights are reflected correctly in volume as was requested by the Department in previous comments.

- *show and label all storage bays, including those inside the crushing and screening plant as well as those adjacent to it.*

All storage bays including those listed above are labelled. However, these storage bays are now highlighted further on the updated site plans. Refer to Appendix H for details of all storage structures including names, locations, dimensions, capacities and compatibilities.

Storage Capacity

The Department notes the following comments have been raised previously and remain outstanding:

- *Provide the storage capacities of all existing and proposed structures at the site in tonnes.*

This was provided in Table 2-3-1 of the previously submitted RtS as a total for the reasons provided below and explained in as previously advised it is not possible to predict the specific density of each material. Only approximate specific densities can be assumed. Any approximate or estimated specific density can be assumed in the conversion from volume to mass/weight. In addition, in some cases, different compatible materials will be stored in the same storage bay/storage tank. Refer to Tables 15-1 and 15-2 below for detailed information.

The Department requests you address following additional comments which are based on the revised

RTS:

- *Please clearly articulate the proposed maximum waste storage capacity on site. It is noted the RTS refers to a storage capacity of 7,129.2 tonnes and 15,000 tonnes.*

In the previously submitted RTS, it was clearly demonstrated in table 2-3-2 that the total storage capacity was approximately 7,129.2 tonnes not 15,000 tonnes. The 15,000 tonnes were referred to by the EPA in a way which requested new calculations to determine the maximum storage capacity at the premises so the authorised amount could be specified in the BRS licence. The total capacity of all storage facilities is estimated to be 12,795.3 tonnes. Based on the potential shapes of the stockpiled materials which will depend greatly on the location of the storage bay, the maximum quantity of waste to be stored at any one time is estimated at 9,765 tonnes. In the revised calculations we assumed that the solid wastes specific density is 1.8t/m^3 and the specific density of liquid wastes is 1.1 t/m^3.Refer to Appendices C and H for details of the above information.

However, the requested storage capacity at any one time is 8,000 tonnes which is very conservative amount to ensure that there is a flexibility in the management of waste storage on site. Refer to the Tables 15-1 and 15-2 as well as Figure 15-1for comprehensive details of all storage facilities within the boundaries of the site.

Asbestos Liquid Waste

The Department notes the following comments have been raised previously and remain outstanding:

- *The Department has concerns that the proposed high efficiency particulate air (HEPA) filter is not appropriate for filtering liquids, including liquids containing asbestos (LCA). The Department notes Australian Standards, including AS 4260-1997 REC 2018 Clause 1.3.6, define HEPA filters as a "high efficiency particulate air (HEPA) filter". AS 4260-1997 REC 2018 specifically refers to this filter as "tested at rated airflow capacity", meaning it is not suitable for filtering liquids.*
- *Clarify the technical matters raised previously including the use of settling tanks and centrifuges as part of the LCA process.*
- *The Department requests you address following additional comments which are based on the revised RTS:*
- *Should you wish to pursue the use of a HEPA filter in the manner proposed, it is requested that you provide manufacturers specifications in support and details of other facilities currently operating with development consent using HEPA filters for this purpose.*

The proposed treatment methodology of Asbestos Containing Liquid (ACL) has been modified to be consistent with an already approved treatment methodology. This methodology is included in Appendix D. In summary, the methodology transforms the ACL into a spadable solid which can then be easily transported to a lawfully licensed facility for disposal. Appendix D includes all details associated with the whole ACL processing from the time the vehicle arrives on site until it leaves the site and for all operators associated with this specific activity.

Stormwater

The Department requests you address following additional comments which are based on the revised RTS:

- *The stormwater system for the development is relying on an awning to cover the proposed tip and spread area. The awning is subject to DA 801/2020/DA-O which is currently under assessment by Council. As the awning is not an approved structure, the Department must consider a worst case scenario in which it is not constructed. Therefore, it is requested you*

respond to previous questions on water management raised by the Department and the EPA.

- *Further details are required as to how the external areas would be a clean catchment given the activities in these areas include front-end loaders transporting product, mud trucks releasing mud into the mud pits and trucks accessing the wheel wash.*
- *The tipping procedures show that all waste vehicles are hosed out before leaving the site, however, it is not clear where this occurs or what this process entails.*

The revised stormwater management plan, water balance and accompanying plans have taken into consideration that there is an approved awning over the storage bays located outside the Crushing and Screening Plant. Campbelltown Council assessing officers informed BRS that the Development Application for the construction of the awning has been approved and that the Development Consent is being finalised.

All non-covered areas that may have any activities undertaken on them have now been considered as non-clean areas. These areas have been included in the catchment calculations and computer modelling.

All vehicles are not required to be hosed down especially the vehicles transporting C&D waste from external sources. These vehicles will leave the premises via the wheel wash which removes any traces of dirt, dust or mud from their wheels and underbodies. Other vehicles are cleaned at the unloading areas to ensure that the water used for the cleaning remains within that specific area and to prevent cross contamination of non-compatible materials.

It should be noted that when BRS receives the Development Consent and approved plans for the awning, they will be submitted to the Department, EPA and other Authorities.

Waste Management

The Department notes the following comments have been raised previously and remain outstanding:

- *Provide a detailed breakdown of the quantities of incoming liquid waste and general solid wastes (non- putrescible) that would be received and processed at the site. Table 1-1 lists the approved waste types and it also lists the additional wastes proposed to be received but the quantities of incoming wastes haven't been provided. Table 2-4-1 only provides quantities based on broadly categorised groups and Table 2-4-2 only provides estimated quantities for construction and demolition waste based on 100,000 tpa not 225,000 tpa.*
- *Demonstrate how the site would meet the requirements of Standards 2-4 of the "EPA Guidelines: Standards for managing construction waste in NSW including Standard 4.1.4 noting there is no bunker wall between the sand, road-base and concrete/ag.*
- *As previously requested, please update flow diagrams to reflect the process descriptions in the EIS.*
- *Describe and show on a plan where construction and demolition waste would be mixed to form product.*
- *Please clarify where the glass fines come from and whether they are a bought material like GP cement.*

As you are aware, it was agreed between the Department and BRS that the total quantity of wastes imported to the site will be reduced from 500,000 tonnes to 225,000 tonnes. This new agreed quantity includes both solid and liquid wastes. This is the reason for choosing to have 100,000 tonnes of solid waste and 125,000 tonnes of liquid wastes.

All waste steams will be stored in separate bays as described in the storage compatibilities

table presented in Appendix H. Refer to the 2D and 3D site plans included in Appendix C for confirmation of the walls dividing the storage bays.

Table 15-3 presented below provide the requested information as estimates only since it is extremely difficult to predict accurate quantities of specific waste types and streams. The quantities of wastes of different streams will be dictated by the construction industry, priority projects, etc… within Sydney Metropolitan Area.

- *The Department requests you address following additional comments which are based on the revised RTS:*
- *Page 24 point M states "hazardous soils are stored in designated storage bays" where on page 5 of the revised RTS it is noted hazardous soil treatment has been removed from the development application.*
- *The Plant Layout Locations plan in Appendix C shows waste bunkers outside, and page 24 of the revised RTS states the construction of the steel awning which will cover fully this area as well as the external storage bays by preventing the ingress of any rainwater in these areas". Yet elsewhere, the RTS states that no storage bay will be located outside.*
- *The 'Sewer Plant Flow Diagram', drawing number BRSLS-003, in Appendix D shows a sewage truck tipping waste into 'Process 2'. Please describe this process and confirm whether this action was accounted for in the odour assessment.*
- *Please clarify why concrete, sands and soil are not considered part of the solid waste stream.*
- *If it is proposed to accept kerbside domestic recycling on site, please demonstrate where it would be stored and separated and demonstrate how vehicle conflicts between heavy vehicles and small vehicles would be avoided.*
- *If it is proposed to accept restricted solid waste, please demonstrate where it would be stored and describe how much can be stored at the site at any one time.*

Reference to Hazardous soils in this context is a typo and we confirm that hazardous waste has been removed from the development.

Reference to storage bays located outdoors implies that they are outside the building and not covered and it is correct that these storage bays would have been covered when the awning is approved which is now confirmed.

This is only an indicative representation in the flow diagram. The sewerage will be pumped to the storage pit using a pump and a flexible hose that is connected directly to the storage pit and/or tank depending on the quantity of the sewerage received.

Concrete and sands are both to be used in the concrete batching plant, so they are resources not wastes. Soil is included in the C&D waste stream which is normal.

All solid wastes that need to go through processing (i.e. sorting, crushing and/or screening) will be unloaded in the Tip & Spread Area to comply with EPA's requirements.

Small vehicles belong to either staff members, contractors or visitors (i.e. EPA & Council employees). Staff members will arrive and park their vehicles in the dedicated parking spaces before trading commence. Contractors and visitor will park their vehicles outside the active working areas adjacent to the main gate of the site. All heavy vehicles are pre-booked and must call the weighbridge office before arriving to ensure that they are right on schedule. The facility has been operating without any such an incident for many years.

Storage of restricted solid waste is shown in the site plan and storage facilities compatibilities table.

Traffic

The Department notes the following comments have been raised previously and are outstanding:

- The site has weighbridge data from the existing operations. It is requested that this data is relied upon to inform the traffic impact assessment.
- The traffic stacking and queuing procedure requires further information to demonstrate the site can operate without waiting/queueing on the public road network. Additionally, please demonstrate:
- how arriving vehicles would be managed, noting Figure TURN05 indicates a small liquid waste truck cannot enter the site while a C&D truck queues.
- how a heavy vehicle would move to and from the tip and spread area while a heavy vehicle is queuing adjacent to this area.
- Provide the additional swept path plans as requested previously or explain why they are not required.
- The RTS hasn't addressed previous comments regarding safety concerns in relation to reversing trucks conflicting with cars parked or queuing vehicles or the potential for a reversing vehicle to reverse into one of the tanks

As you may be aware, based on the EPA's guidelines information associated with the make, model, number of axles, size and capacity of the vehicles transporting wastes from and to a licensed waste facility is not required. The requested information is not recorded and so it is not available.

The traffic stacking and queuing procedure has been revised and updated to reflect the above comments and comments received from Council. This revised procedure is presented in Appendices E and F. Based on the revised procedure and the revised TIA, no queuing will be required within or outside the boundaries of the site. In an emergency, all vehicles will be directed to other lawfully approved facilities that can accept the type of waste that supposed to be imported to BRS.

Refer to updated traffic management within the site based on the revised Traffic Impact Assessment which considered the processing capacity of 225,000 tonnes (100,000 tonnes of solid waste and 125,000 tonnes of liquid waste).

Every traffic management plan includes a note stating that the vehicles are not stationary but rather moving through the site since there is no need for any vehicles to queue within or outside the boundaries of the site. This is the only way vehicles can be presented on a plan. It is for illustration purposes only. Please read the notes included in every plan. All internal traffic management plans are presented in Appendix E.

The additional requested swept paths are not possible scenarios. Refer to the loads timestep included in Appendix I for confirmation that there will be not more than 4 heavy vehicles on site at any one time.

The Department requests you address following additional comments which are based on the revised RTS:

- *Page 28 of the revised RTS states the timestep chart has misrepresented the traffic management within the site. Please provide an updated timestep analysis to accurately detail the number of vehicles on site at any one time.*
- *Page 29 of the original RTS has noted the original traffic assessment was based on a worst case scenario, however, on Page 30 the revised RTS states the numbers were incorrect.*

Please update the traffic assessment with the correct numbers while ensuring they are based on a worst case scenario.

- **An Updated Timestep analysis chart has been completed and it is included in Appendix I. This chart is based on the newly agreed proposed processing capacity of 225,000 tonnes per year (100,000 tonnes of solid waste and 125,000 tonnes of liquid waste) rather than 500,000 tonnes per year.**

- **The Traffic Impact Assessment has been updated to reflect the new proposed processing capacity and proposed waste storage at any one time being 8,000 tonnes as well as the revised Stacking & Queueing procedure included in Appendices E and F. The revised TIA is included in Appendix F.**

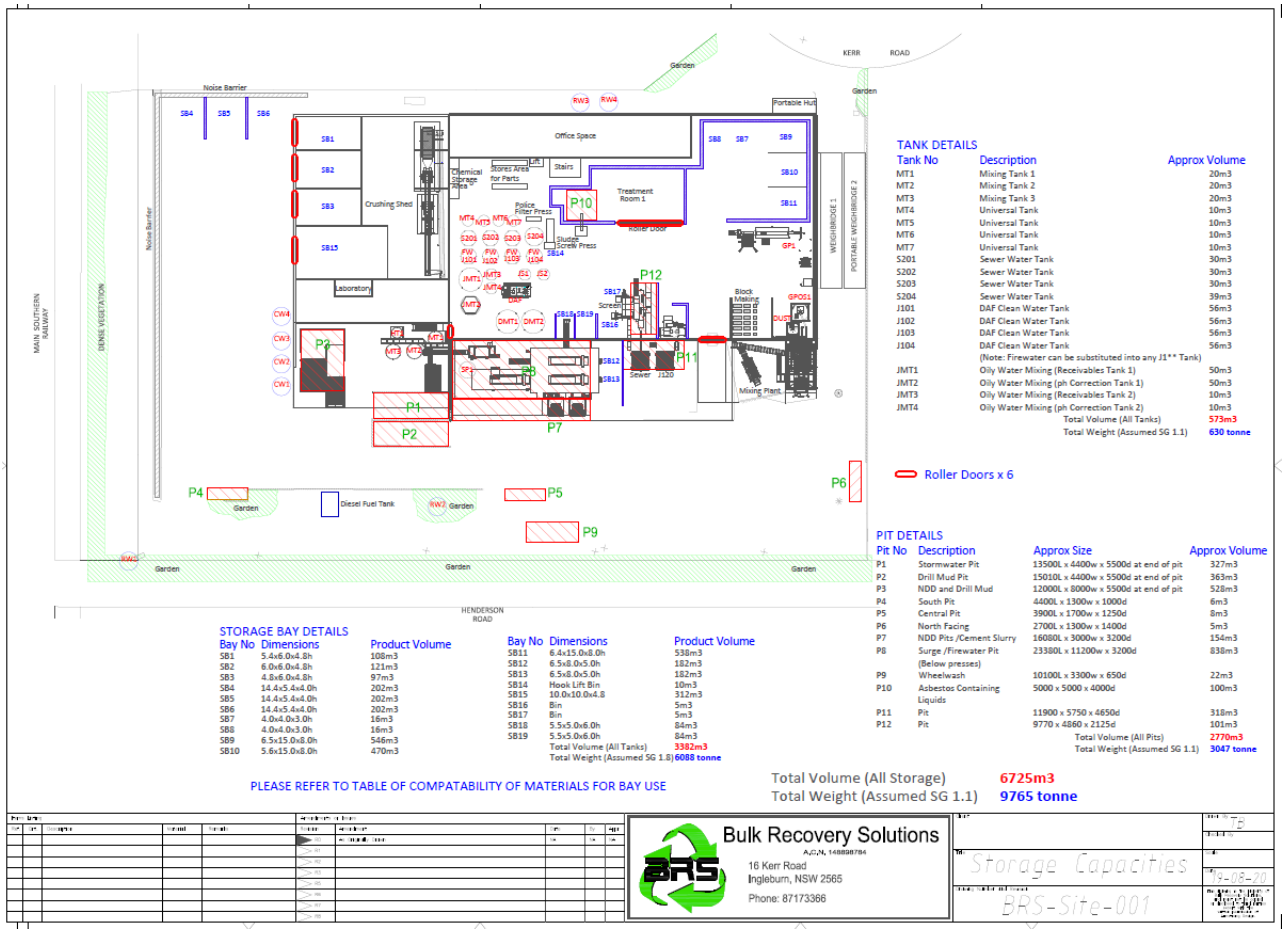
Table 15-1: Waste Storage Facilities Names and Capacities

Name	Type	Capacity m^3	Capacity Tonnes	Product Volume m^3	Product Weight Tonnes
SB1	< 5MM DUST	155.5	279.9	108	194.4
SB2	10MM AGGREGATES	172.8	311.04	121	217.8
SB3	20MM AGGREGATES	138.2	248.76	97	174.6
SB4	OUTSIDE 1	311	559.8	202	363.6
SB5	OUTSIDE 2	311	559.8	202	363.6
SB6	OUTSIDE 3	311	559.8	202	363.6
SB7	FOUNDRY SAND	48	86.4	16	28.8
SB8	ROADBASE	48	86.4	16	28.8
SB9	CONCRETE AGG	780	1404	546	982.8
SB10	SOILS (CT1 & CT2)	672	1209.6	470	846
SB11	SOILS (CT1 & CT2)	768	1382.4	538	968.4
SB12	FILTERCAKE BAY 1	260	468	182	327.6
SB13	FILTERCAKE BAY 2	260	468	182	327.6
SB14	HOOK LIFT BIN	10	18	10	18
SB15	Pre Crushing (Tip & Spread)	480	864	312	561.6
SB16	Bin	5	9	5	9
SB17	Bin	5	9	5	9
SB18	Grit Sand Sewer	165	297	84	151.2
SB19		165	297	84	151.2
TOTAL		5065.5	9117.9	3382	6087.6
MT1	Mixing Tank 1	20	22		
MT2	Mixing Tank 2	20	22		
MT3	Mixing Tank 3	20	22		
MT4	Universal Tank	10	11		
MT5	Universal Tank	10	11		
MT6	Universal Tank	10	11		
MT7	Universal Tank	10	11		
S201	Sewer Water	30	33		
S202	Sewer Water	30	33		
S203	Sewer Water	30	33		
S204	Sewer Water	39	42.9		
J101	Treated DAF Water	56	61.6		
J102	Treated DAF Water	56	61.6		
J103	Treated DAF Water	56	61.6		
J104	Treated DAF Water	56	61.6		
JMT1	RECEIVABLES 1	50	55		
JMT2	PH CORRECTION 1	50	55		
JMT3	RECEIVABLES 2	10	11		
JMT4	PH CORRECTION 2	10	11		
TOTAL		573	630.3		
P1	Stormwater Pit	327	359.7		
P2	Dril Mud Pit	363	399.3		
P3	NDD & Dril Mud	528	580.8		
P4	South pit	6	6.6		
P5	Central pit	8	8.8		
P6	North facing	5	5.5		
P7	NDD Pits/Cement Slurry	154	169.4		
P8	Surge/Firewater pit	838	921.8		
P9	Wheelwash	22	24.2		
P10	Asbestos Containing Liquid	100	110		
P11	Pit	318	349.8		
P12	Pit	101	111.1		
TOTAL		2770	3047		
GRAND TOTAL					
CAPACITY				8408.5 m^3	12795.3 tonnes
PRODUCTS				6725 m^3	9765 tonnes

Table 15-2: Waste Storage Facilities Names and Compatibilities

Bay	Type																				
	Dust	10mm	20mm	Roadbase	Sand	Concrete Agg	Soils	Filtercake	C&D	Oil Sludge	Sewer Grit	Sewer Grit<20mm	NDD	DRILL MUD	STORMWATER	CEMENT SLURRY	J120	K130	N205	N140	GROUNDW	ACL
SB1	X	X	X	X	X	X	X	X	X													
SB2	X	X	X	X	X	X	X	X	X													
SB3	X	X	X	X	X	X	X	X	X													
SB4	X	X	X	X	X	X	X	X	X													
SB5	X	X	X	X	X	X	X	X	X													
SB6	X	X	X	X	X	X	X	X	X													
SB7	X	X	X	X	X	X	X	X	X													
SB8	X	X	X	X	X	X	X	X	X		X											
SB9	X	X	X	X	X	X	X	X	X		X											
SB10	X	X	X	X	X	X	X	X	X		X											
SB11	X	X	X	X	X	X	X	X	X		X											
SB12								X														
SB13								X														
SB14										X												
SB15									X													
SB16											X	X										
SB17											X											
SB18											X											
SB19																						
MT1													X	X	X	X					X	
MT2													X	X	X	X					X	
MT3													X	X	X	X					X	
MT4															X							
MT5															X							
MT6															X							
MT7															X							
S201																		X				
S202																		X				
S203																		X				
S204																		X				
J101										X							X					
J102										X							X					
J103										X							X					
J104										X							X					
JMT1										X							X					
JMT2										X							X					
JMT3										X							X					
JMT4										X							X					
P1															X						X	
P2													X	X								
P3													X	X								
P4															X							
P5															X							
P6															X							
P7													X			X						
P8																						
P9															X							
P10																						X
P11															X							
P12															X							

Figure 15-1: Locations, Names, Dimensions and Capacities of Waste Storage Facilities



TANK DETAILS

Tank No	Description	Approx Volume
MT1	Mixing Tank 1	20m3
MT2	Mixing Tank 2	20m3
MT3	Mixing Tank 3	20m3
MT4	Universal Tank	10m3
MT5	Universal Tank	10m3
MT6	Universal Tank	10m3
MT7	Universal Tank	10m3
S201	Sewer Water Tank	30m3
S202	Sewer Water Tank	30m3
S203	Sewer Water Tank	30m3
S204	Sewer Water Tank	39m3
J101	DAF Clean Water Tank	56m3
J102	DAF Clean Water Tank	56m3
J103	DAF Clean Water Tank	56m3
J104	DAF Clean Water Tank (Note: Firewater can be substituted into any J1** Tank)	56m3
JMT1	Oily Water Mixing (Receivables Tank 1)	50m3
JMT2	Oily Water Mixing (ph Correction Tank 1)	50m3
JMT3	Oily Water Mixing (Receivables Tank 2)	10m3
JMT4	Oily Water Mixing (ph Correction Tank 2)	10m3
	Total Volume (All Tanks)	573m3
	Total Weight (Assumed SG 1.1)	630 tonne

PIT DETAILS

Pit No	Description	Approx Size	Approx Volume
P1	Stormwater Pit	13500L x 4400w x 5500d at end of pit	327m3
P2	Drill Mud Pit	15010L x 4400w x 5500d at end of pit	363m3
P3	NDD and Drill Mud	12000L x 8000w x 5500d at end of pit	528m3
P4	South Pit	4400L x 1300w x 1000d	6m3
P5	Central Pit	3900L x 1700w x 1250d	8m3
P6	North Facing	2700L x 1300w x 1400d	5m3
P7	NDD Pits /Cement Slurry	16080L x 3000w x 3200d	154m3
P8	Surge /Firewater Pit (Below presses)	23380L x 11200w x 3200d	838m3
P9	Wheelwash	10100L x 3300w x 650d	22m3
P10	Asbestos Containing Liquids	5000 x 5000 x 4000d	100m3
P11	Pit	11900 x 5750 x 4650d	318m3
P12	Pit	9770 x 4860 x 2125d	101m3
	Total Volume (All Pits)		2770m3
	Total Weight (Assumed SG 1.1)		3047 tonne

STORAGE BAY DETAILS

Bay No	Dimensions	Product Volume
SB1	5.4x6.0x4.8h	108m3
SB2	6.0x6.0x4.8h	121m3
SB3	4.8x6.0x4.8h	97m3
SB4	14.4x5.4x4.0h	202m3
SB5	14.4x5.4x4.0h	202m3
SB6	14.4x5.4x4.0h	202m3
SB7	4.0x4.0x3.0h	16m3
SB8	4.0x4.0x3.0h	16m3
SB9	6.5x15.0x8.0h	546m3
SB10	5.6x15.0x8.0h	470m3

Bay No	Dimensions	Product Volume
SB11	6.4x15.0x8.0h	538m3
SB12	6.5x8.0x5.0h	182m3
SB13	6.5x8.0x5.0h	182m3
SB14	Hook Lift Bin	10m3
SB15	10.0x10.0x4.8	312m3
SB16	Bin	5m3
SB17	Bin	5m3
SB18	5.5x5.0x6.0h	84m3
SB19	5.5x5.0x6.0h	84m3
	Total Volume (All Tanks)	3382m3
	Total Weight (Assumed SG 1.8)	6088 tonne

PLEASE REFER TO TABLE OF COMPATABILITY OF MATERIALS FOR BAY USE

Total Volume (All Storage) 6725m3
Total Weight (Assumed SG 1.1) 9765 tonne

Bulk Recovery Solutions
A.C.N. 148898784
16 Kerr Road
Ingleburn, NSW 2565
Phone: 87173366

Storage Capacities
BRS-Site-001

Figure 15-2: 2D Site Plan showing Site Structures and Features

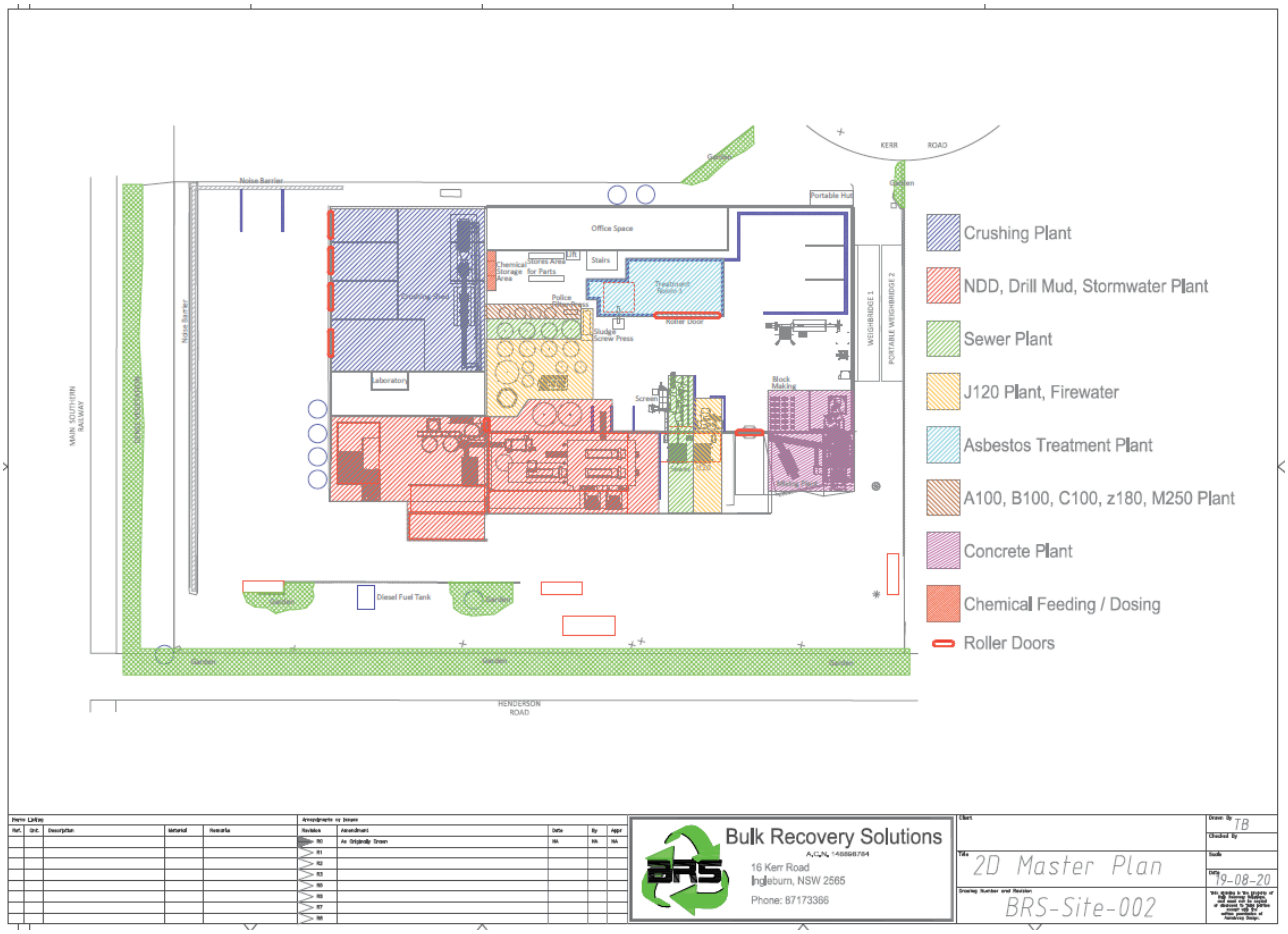


Figure 15-3: 3D Site Plan showing Site Structures and Features

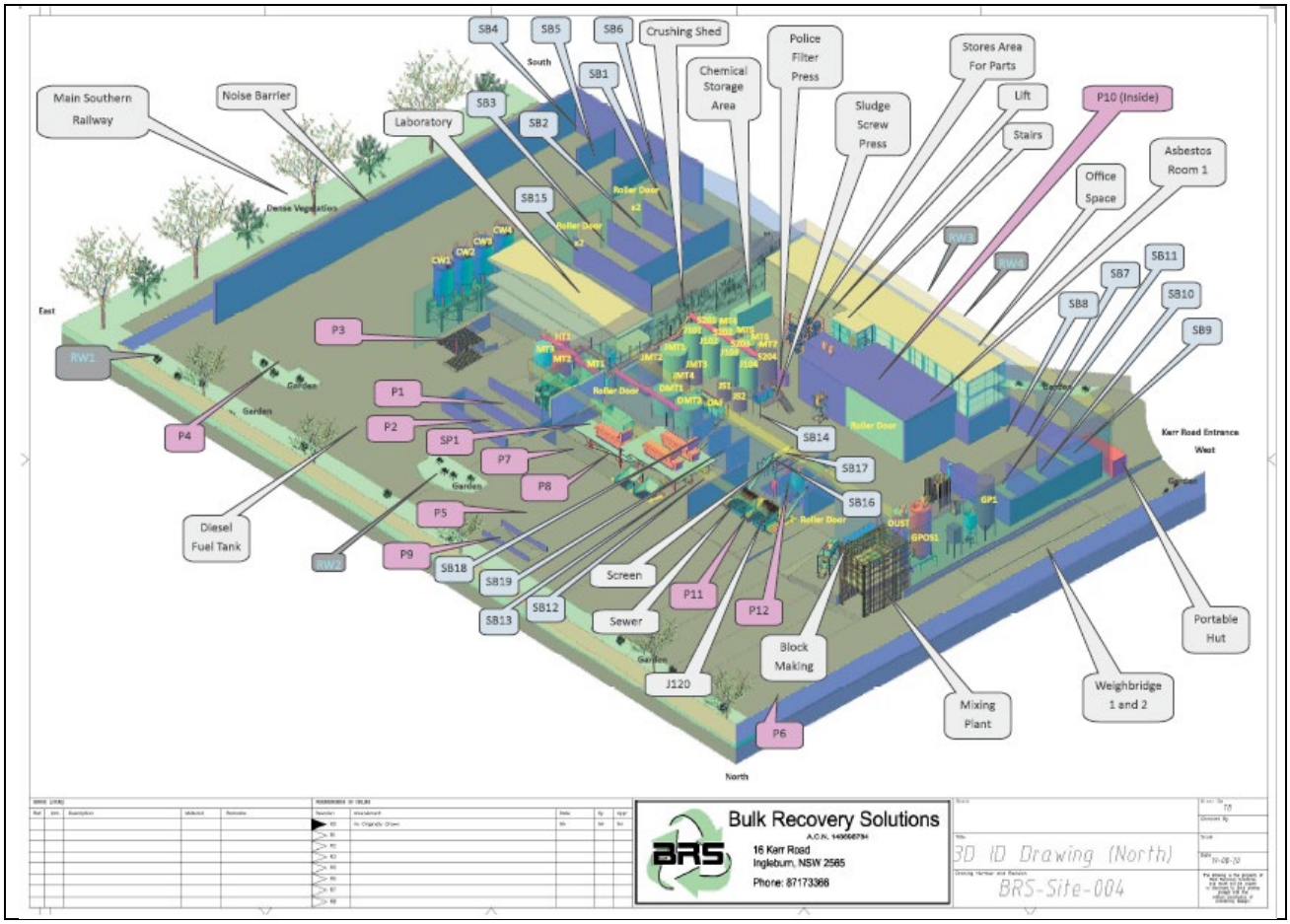


Table 15-3: Approximate Quantities for Existing and Proposed Waste Streams

Solid Waste Stream	Estimated quantity per annum @100,000 tpa processing capacity	Estimated Percentage @ 100,000 tpa processing capacity	IN/OUT
Asphalt	1,000	1%	IN
Bricks or Concrete	12,000	12%	IN
Soils/sand	6,000	6%	IN
VENM	3,000	3%	IN
Municipal waste	2,000	2%	IN
Building and demolition waste	60,000	60%	IN
Commercial waste	5,000	5%	IN
Processed foundry sand	5,000	5%	IN
Recovered glass sand	2,000	2%	IN
Recovered fines	500	0.5%	IN
Basalt fines	500	0.5%	IN
Slag	500	0.5%	IN
Grit from STPs	500	0.5%	IN
Fly Ash	2,000	2%	IN
Concrete blocks (part of)	12,500	12.5%	OUT
Dust	3,000	3%	OUT
RRF (glass, paper, plastics)	500	0.5%	OUT
Metals	450	0.45%	OUT
Aggregate	12,000	12%	OUT
ENM	71,000	71%	OUT
Landfill – Non recyclable	550	0.55%	OUT
TOTAL Input	100,000	100%	
TOTAL Output	100,000	100%	
Liquid Waste Stream	**Estimated quantity per annum @125,000 tpa processing capacity**	**Estimated Percentage @ 125,000 tpa processing capacity**	**IN/OUT**
Drilling Mud	17,500	14%	IN
NDD	56,250	45%	IN
Stormwater	11,250	9%	IN
Concrete slurry	6,250	5%	IN
Oily water	6,250	5%	IN
Industrial wastewater	5,000	4%	IN
Sewage sludge	5,000	4%	IN
Asbestos containing liquid	8,750	7%	IN
Firewater	8,750	7%	IN
Discharge to sewer	12,500	10%	OUT
Water reuse on site	90,000	72%	OUT
Concrete block (part of)	10,000	8%	OUT
Transported off site as solids	2,500	2%	OUT
Asbestos waste	10,000	8%	OUT
TOTAL Input	125,000	100%	
TOTAL Output	125,000	100%	

16 NSW EPA – DATE 15 JULY 2020

Attachment A – Water
Water Management System

In our comments on the original Response to Submissions document (see our letter to the Department dated 6 March 2020), we raised a number of concerns relating to the proposed water management plan for the proposal and sought additional information to ensure that risks to water quality could be adequately assessed.

We note that rather than providing all of the additional information requested in our letter, the applicant now proposes to implement a revised Water Management Plan that involves the installation of an awning over the 'tip and spread' area to reduce the size of the dirty water catchment (refer RRtS – Appendix J - Revised Water Management Plan and Water Balance prepared by DRB Consulting Engineers dated 15 June 2020).

The Stormwater Management Plan and Water Balance Report has been revised and updated by taking into consideration the following aspects:

- **EPA comments,**
- **Approved awning,**
- **Revised site plans,**
- **Relocation of the Tip & Spread Area inside the building,**
- **The EPA's advice in its General Terms of Approval which was included in the Land and Environment Court Orders 10527 of 2006 with judgement date being 19 February 2007 and ordered by the court on 9 March 2007. A copy of the above judgement is included in Appendix G. The EPA requested that: "*Paved and sealed areas must be provided with a first flush stormwater management system designed to capture the first 10mm of stormwater for each square meter of catchment area for subsequent reuse*".**

The EPA has reviewed the revised Water Management Plan and determined that clarification on the following points is required before a proper assessment can be made:

- *It is stated in the revised Water Management Plan that all dirty water catchment areas have been moved internally ('Response to EPA comments'). The 'tip and spread' area, which is part of the dirty water area, is proposed to be covered with an awning and isolated from the rest of the site through bunding. However, the wheel wash and tracking areas remain exposed and should be included in the dirty water catchment.*

The Water Management Plan has been revised to incorporate the existing stockpile bays and thewheel wash and tracking areas. However, the awning has been approved. A clear catchment plan showing 'clean' water and 'dirty' water catchments can be seen in the report.

- *The system that the dirty water area drains to, and the treatment it receives, need to be specified. It is stated in the revised Water Management Plan that 12,888m^2 of the site drains to the 120kL harvesting tank. This is only 62m^2 less than the entire site, implying that all internal areas, clean areas, dirty areas and a portion of the 'tip and spread' area drains to the 120kL harvesting tank. It is unclear what parts of the site remain to drain to the existing stormwater system which is proposed to be 'unblocked', removing storage capacity.*

The 'dirty' water catchment being captured and conveyed to the existing first flush pits and underground Settling Tank is 4,700m^2. Therefore, based on a minimum 10mm of settling volume required, a minimum tank of 47kL would be required.

BRS identified a need for as much water reuse as possible. As such, roof water from catchments R1, R2 and R4 are also directed to the underground Settling Tank. Although this water is considered 'clean', the Setting Tank was increased to 120kL to capture at least 10mm of the total catchment draining to it (11,094m^2 total).

The Tip and Spread area will be internal, and therefore, does not drain to the settling tank.

The remaining roof catchment area R3 will bypass the Settling Tank and will be connected directly into the Stormfilter Treatment chamber and OSD Tank.

Whereas the existing concrete hardstand area at the site entry and to the west of the existing building (approx. 1,040m^2) will bypass the Settling and OSD Tank.

- *The Water Management Plan needs to clearly articulate which catchment areas will drain to the harvesting tank and receive treatment in the Stormfilter Chamber. It also needs to outline the conditions under which the treatment process is bypassed and to define the expected water quality that will be discharged to stormwater from the treatment process.*

See above. The catchments have been clearly shown on the plans and identified in the report. However, a description of these catchments has also been provided above.

The Operation and Maintenance plan will be prepared to ensure that the 120kL tank is completely empty at the end of each day. As such, the tank will collect a minimum of 10mm of runoff from the 'dirty' water catchment and will have additional volume to collect a further 15mm of runoff from the 3 'clean' water roof catchments R1, R2 and R4 and the 'clean' hardstand catchment area C1.

- *Section 3.4 of the revised Water Management Plan states that drainage easement at the site was created to allow overland flow from the railway line land to traverse the site. The applicant should clarify whether the Water Management Plan and water balance considers runoff that could enter the site from railway line and from any other sources beyond the site boundary.*

The Water Management Plan has not considered overland flow in the site water management or water balance calculations. It is expected that if water is actually being conveyed through the site from upstream catchments, greater than 10mm of rainfall has already fallen, and it is a 'major' storm event. In this case, any contaminants are considered minor and diluted.

Additionally, in our letter dated 6 March 2020, we made the following recommendation:

- *It is recommended that the applicant provide sufficient storage to manage any residual*

water quality risks from the dirty water capture area with reference to relevant guidelines for the storage and management of contaminated water (e.g. Environmental Guidelines: Solid waste landfills (EPA,2016)).

The water storage of 10mm of each and every rainfall event is considered appropriate in accordance with EPA's guidelines and as previously requested by the EPA. It is also in accordance with the already approved guidelines for the site.

The proposed 120kL harvesting tank described in the revised Water Management Plan will only capture the first 10mm of rainfall that falls over the site. It also appears that the whole site may, unnecessarily, drain to the harvesting tank. As such, the recommendation contained in our letter from 6 March 2020 is still appropriate to address the issue.

As discussed above, 10mm of rainfall is all that is required for this site in accordance with the EPA's request.

Furthermore, some 'clean' water is diverted from roof water catchments R1, R2 and R4, and hardstand catchment C1, because BRS would like the additional water captured for reuse. It should be noted that the tank was increased to 120kL to ensure 10mm of rainfall off this area is also captured (effectively treating the roof area as 'dirty' water).

Finally, we note that the awning now proposed to be installed over the 'tip and spread' area is subject to a separate Development Application with Campbelltown City Council. If development consent is not granted in relation to the construction of this awning, all information previously requested by the EPA regarding water management at the site will be required in order for the EPA to be in a position to adequately assess the proposal.

The awning is now approved. However, the Tip and Spread area has been moved inside regardless.

Attachment B – Waste
Waste Storage Capacity

We note that, in the RRtS, the applicant has reduced the amount of waste proposed to be stored at the site at any one time from the initially proposed figure of 15,000 tonnes to 7,129 tonnes. The applicant has provided some detail around the densities of both solid and liquid wastes used in the calculation of this amount.

However, the EPA requires additional information justifying the capacity of each storage bay to be used in the storage of solid waste in order to assess the true capacity for waste storage of the proposal. We request that the applicant provides:

- *all calculations used to determine the storage capacity of each bay as shown in Table 2-3- 1 of the RRtS;*
- *the footprint of each bay in square metres;*
- *the proposed stockpile height in each bay; and*
- *the stockpile shape factor for each bay.*

In the previously submitted RTS, it was clearly demonstrated in table 2-3-2 that the total storage capacity was approximately 7,129.2 tonnes not 15,000 tonnes. The 15,000 tonnes were referred to by the EPA in a way which requested new calculations to determine the maximum storage capacity at the premises so the authorised amount could be specified in the BRS licence. The total capacity of all storage facilities is estimated to be 12,795.3 tonnes. Based on the potential shapes of the stockpiled materials which will depend greatly on the location of the storage bay, the maximum quantity of waste to be stored at any one time is estimated at 9,765 tonnes. In the revised calculations we assumed that the solid wastes specific density is 1.8t/m^3 and the specific density of liquid wastes is 1.1 t/m^3.Refer to Appendices C and H for details of the above information.

However, the requested storage capacity at any one time is 8,000 tonnes which is very conservative amount to ensure that there is a flexibility in the management of waste storage on site.

Refer to the Tables 15-1 and 15-2 as well as Figure 15-1for comprehensive details of all storage facilities within the boundaries of the site. Figure 16-1 below shows the proposed shapes of the stockpiled solid wastes.

Asbestos Containing Liquids

Under section 144AAA (1) of the Protection of the Environment Operations Act 1997 (the Act), a person disposing of asbestos waste off the site at which it is generated must do so at a place that can lawfully receive the waste. Additionally, under section 144AAB of the Act, a person must not cause or permit asbestos waste in any form to be re-used or recycled.

If any asbestos fibres are not captured by the proposed filter system those fibres would end up in the sewer system (not a place that can lawfully receive asbestos waste) and potentially in sewage sludge which is recycled by Sydney Water as biosolids. Accordingly, it is imperative that any water proposed to be discharged from the site is free of asbestos fibres.

In our letter dated 10 July 2019, we advised that we had concerns that the proposed methodology for the treatment of asbestos containing liquids may not adequately remove all asbestos fibres prior to discharge to sewer. We requested additional information about the process and any associated testing. We also recommended that the proponent ensure that the discharge of this material to sewer is covered by the trade waste agreement with Sydney Water.

New information provided in the RRtS document has raised some additional concerns including:

- *Appendix D of the RRtS (Tipping Procedures/Flow Diagrams) indicates that upon arrival at the site drivers of trucks carrying asbestos containing liquids will be provided with a small bottle and asked to tip some of their load into the bottle and give it to a site attendant for analysis. It is unclear how this will be achieved without the material impacting the driver and attendant or spilling onto the ground and becoming uncontained.*

- *Appendix D of the RRtS (Tipping Procedures/Flow Diagrams) indicates that after emptying their load of asbestos containing liquid, the driver is required to hose out his truck. It is possible that washout water will contain asbestos fibres and it is unclear how the wash out will be achieved without fibres impacting the driver and attendant or spilling onto the ground and becoming uncontained. This conflicts with statements made elsewhere in the application that all asbestos liquid waste will be fully contained.*

- *Clogging of filters. The asbestos containing liquids include drilling muds which, by their nature, will have a high sediment load. It is unclear how the efficiency of the filters will be maintained, given they will be vulnerable to clogging by the solids in the water.*

- *It is unclear whether the filter press in the Asbestos Containing Liquids process will have the ability to retain asbestos sized fibres in the filter cake. This should be clarified as it appears that any liquids separated by the filter press will discharge directly to the sewer.*

- *The proponent claims that HEPA filters are commonly used for removing asbestos from water but has not demonstrated this with any examples. The proponent also claims that HEPA filters can be used to remove asbestos fibres from liquid waste at higher than 97% removal efficiency. This suggests that 3% of fibres may still be discharged even when the filters are operating at optimum efficiency. For the reasons outlined above, any discharge of asbestos fibres would be unacceptable. We recommend that Planning requests that the applicant provide copies of the manufacturer's technical specification for the filters, along with documentation attesting to their ability to adequately remove asbestos fibres from liquids.*

- *No clear testing regime for verifying that discharge waters are free of asbestos has been described. The Proponent has stated that discharge waters will be routinely tested by a NATA accredited laboratory, but the testing frequency and methods have not been described.*

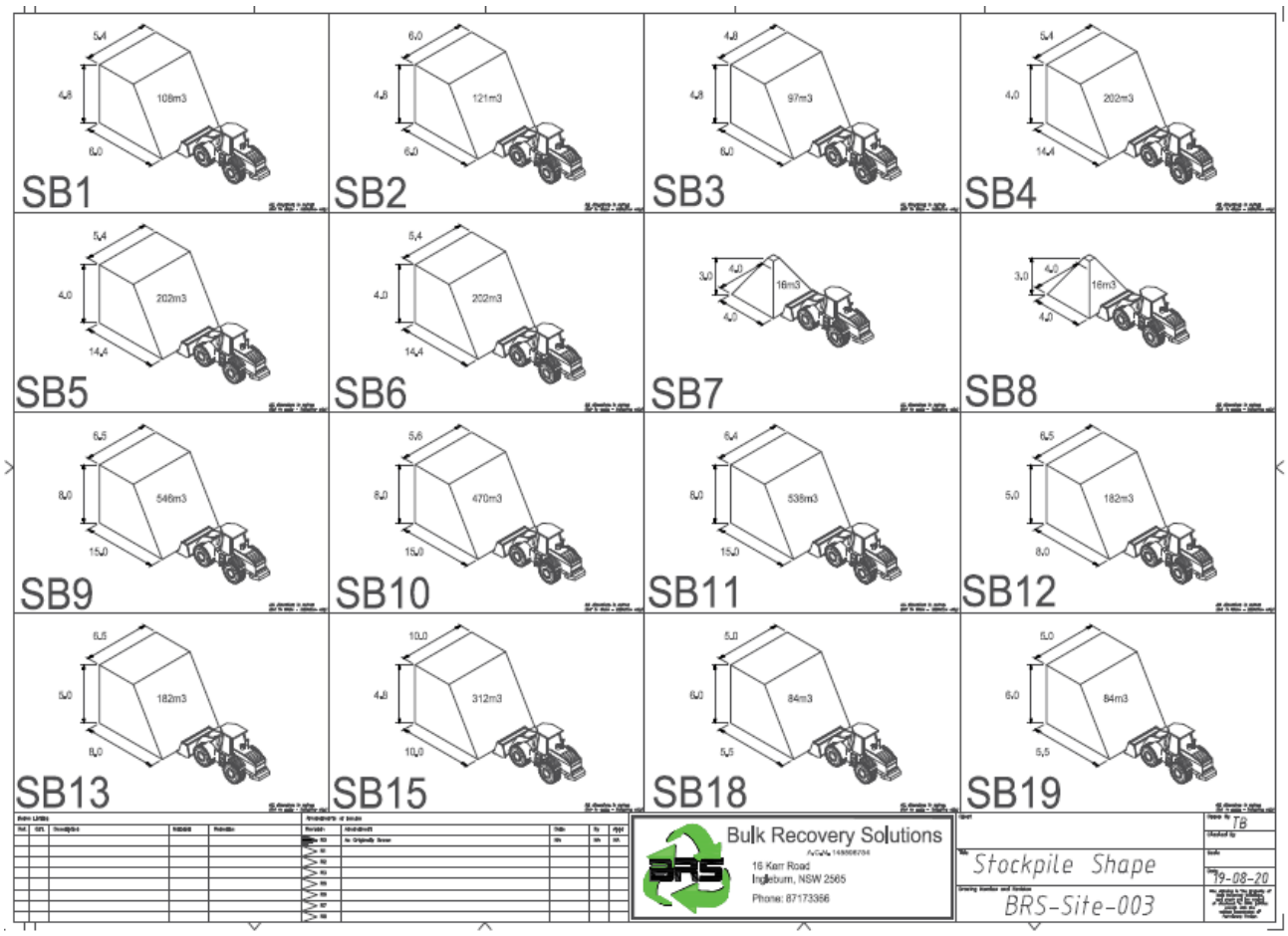
- *Limited information has been provided on the detail of how the system will be maintained (including cleaning and replacement of filters) to ensure safety, integrity, and effectiveness of the system. It is understood that many of these tasks would be undertaken by the equipment supplier, however methodologies and frequencies of servicing have not been explained.*

The EPA recommends that Planning obtain advice from a suitably qualified and experienced person in relation to the proposed methodology for the treatment of asbestos containing liquids and to provide advice on the concerns raised above.

Further, whilst the proponent has previously indicated its intention to engage with Sydney Water about the need for a new Trade Waste Agreement that covers discharges from the proposed asbestos containing liquids line, no information has been provided as to progress with these discussions. As such, it remains unclear whether the discharge of this material to sewer is covered by any agreement.

The proposed treatment methodology of Asbestos Containing Liquid (ACL) has been modified to be consistent with an already approved treatment methodology. This methodology is included in Appendix D. In summary, the methodology transforms the ACL into a spadable solid which can then be easily transported to a lawfully licensed facility for disposal. Appendix D includes all details associated with the whole ACL processing from the time the vehicle arrives on site until it leaves the site and for all operators associated with this specific activity.

Figure 16-1: Proposed Shapes of Stockpiled Solid Wastes



17 CAMPBELLTOWN CITY COUNCIL – 31 AUGUST 2020

These are comments relate to the Traffic Assessment Report for Kerr Road.

- *Council's normal position is that any required parking including any required queuing, loading, unloading for any vehicles (cars, trucks etc) that are required for a use shall take place wholly on the site and not within the surrounding local road network.*

BRS site is not open for the public in the meaning that no transport from and/or to the site will be accepted on an ad-hoc basis, The revised Traffic Stacking and Queuing Procedure Version 2 dated September 2020 clearly shows that all jobs are pre-booked through the operations office in coordination with the weighbridge operator prior to arrival to the site for tipping to assist in scheduling and avoid traffic congestion onsite.

In addition, the above procedure provides clear instructions to all drivers associated with the BRS facility to avoid parking their vehicles outside the boundaries of the site or within the nearby streets.

Refer to Appendices E and F for a copy of the above procedure.

Based on the revised Traffic Impact Assessment (TIA) included in Appendix F, no queuing will be required within or outside the site due to the relatively small number of hourly vehicle movements. The calculations have been based on the amended processing capacity of 225,000 tonnes per year (100,000 tonnes of solid wastes and 125,000 tonnes of liquid wastes) rather than 500.000 tonnes per as it was initially proposed. The calculations took into consideration the proposed storage capacity of 8,000 tonnes at any one time and the re-use onsite most water generated mostly from the liquid waste.

In summary, the combination of pre-booking of jobs and coordination of vehicles arrival times, no queuing inside or outside the site will be required.

- *It is highly unlikely that Council has ever approved a development that allows truck queuing on the road directly in front of the subject site or elsewhere in the surrounding road network.*

Noted

In respect of the proposed development and Traffic Assessment Report, the following issues are raised.

- *Without having taken a site inspection, Council's mapping system shows that Lancaster Road is single lane each way with no dedicated road shoulder areas. It runs through the middle of the industrial area. Page 5 of the Traffic Assessment Report states that Lancaster Road near the site is a two-lane, two way sealed road with on-street parking lanes. The photo identifying Lancaster Road shows that it is a single lane each way road with no on-street parking lanes. Council's aerial photos also show that it is single lane each way and has no dedicated on-street parking lanes.*

This matter is subject to interpretation of the definitions of different road as published by the Transport for NSW.

- *Council's aerial photo as well as the photos in the report show that Lancaster Road is currently*

being used for cars and trucks to park on the street which is assumed for businesses that front Lancaster Road.

Noted. Refer to the above response.

- *Aero Road and Kerr Road are not able to be used for truck queuing as the roads are already congested with trucks and cars parking on the street from business along those roads. Photographs 7 and 8 confirm this.*

Noted. Refer to above response

- *The report has indicated that existing traffic is not included in the assessment however has been picked up in the traffic counts carried out. An assessment of the existing traffic as well as the proposed traffic as a result of the proposed use is required.*

The Revised TIA has been amended to reflect the above comments by including the existing traffic as well as the proposed traffic because of the proposed activities. Refer to Section 2.5 of the TIA.

- *The weekday daily vehicle trips calculations on page 11 is wrong. In addition, calculation should be based on rounded up numbers. It is not possible to do 3.28 vehicle trips per hour, its 4 trips per hour.*

The revised calculations have been confirmed by the traffic engineer and are presented in Section 2.5 of the revised TIA.

- *The report has determined the capacity of the road network with all roads being two-lane two-way roads except Williamson Road and Henderson Road. Lancaster Road and Aero Road are not a two-lane two-way roads. The report states that the capacity of these roads is 1,800 vehicle trips per hour (900 vehicle trips per hour x2) however should be 200 vehicle trips per hour. The report is required to be amended with traffic studies done on the existing traffic as well as the proposed traffic due to the development.*

The Revised TIA has been amended to reflect the above comments by including the existing traffic as well as the proposed traffic because of the proposed activities. Refer to Section 2.5 of the TIA.

The report does not provide a thorough assessment of whether the site provides sufficient car parking spaces for the development as insufficient information was provided. The report should be amended to provide a detailed car parking assessment based on the plans of the proposed development.

The revised TIA includes details of the proposed car parking on site in Section 3.4.

- *The report states that there are suitable loading arrangements and queuing areas for heavy vehicles within the site will be satisfactory for the increased production for the site however the proposal relies on trucks queuing in Lancaster Road which demonstrates there is insufficient area on site for loading and queuing.*

Refer to the above response. No queuing will be required inside or outside the site.

In conclusion, Council does not support the queuing of trucks along Lancaster Road. There are no formal road shoulders provided for vehicles to park on the side of Lancaster Road with the road only being one way each lane. Lancaster Road is already used by vehicles parking on the street which is assumed to be from the business that front Lancaster Road. Queuing of trucks on Lancaster Road would lead to congestion within this road as well as adversely impact upon the business that front this road. All trucks waiting to access the site are to queue within the subject site. If this cannot occur, consideration should be given to reducing the size of the proposed development.

Refer to the above response. No queuing will be required inside or outside the site.

SECTION D

18 COMMUNITY SUBMISSIONS

SE-67499 - Withheld Name

I object to increasing the throughput and storage capacity of hazardous waste. This is far too close to residential areas.

The hazardous waste proposed to be received on site are in the form of contaminated soils and contaminated liquids. The hazardous soils are proposed to be handled inside a building away from residential properties within designated bays equipped with appropriate management measures to contain the material. Once treated, the waste will be transported to appropriately licenced facilities for final disposal.

The handling of hazardous waste requires stringent handling and management procedures. The processing is limited to a single processing point which is 10m by 10m with a height of 5m. Each batch processed requires a minimum of 24 hours of processing and testing before it is directed to disposal off site. In addition, the processing space is shared with the processing of Acid Sulfate Soils which similarly requires a minimum of 24-hour processing time. Due to these limitations the amount of hazardous soils processed at the site will be a very small component of the overall operation.

The notable hazardous liquid proposed to be received on the site is asbestos containing water. This waste, by its nature, arrives via a sealed liquid cartage truck and is then pumped into a sealed treatment system. The system separates the asbestos from the liquid allowing for safe handling and disposal of solid asbestos at appropriately licenced facilities.

The site itself is zoned for industrial purposes and is located within the Ingleburn Industrial Precinct. The overall industrial precinct caters to a wide range of industrial land uses and provides a significant employment opportunity.

Additional comments: October 2020 – Hazardous Waste has been removed from the development. Matter resolved.

SE-68184 - Matthew Nicholls

Having been a resident for 15 years, I am concerned that the facility is not commensurate with the surrounds and nearby residential area. Current planning has indicated 'medium density' housing is intended, and high density further towards the town centre from my address. The proximity to homes, noise pollution, hours of operation and 'dust' that I have witnessed on many occasions from the site are cause for concern. I have personally observed increased levels of air pollution in the area, clouds of dust frequently generated from the site. I feel strongly that the facility is not suited to the area and to allow further expansion is not in the best interests of the community, Ingleburn village and local residents. I have previously consulted with neighbours in the area those I have spoken to agree. I have reviewed the majority of the proposal and find that the commentary about the 'majority' of work being conducted indoors, does not preclude any environmental, noise, air, water, pollution the site generates. Further the proximity to water courses is not considered.

Consideration to relocation of the site is requested if further expansion is necessary. The application is not consistent with the surrounding 'industrial' businesses. Waste recovery facilities should not be expanded nor introduced in residential proximity.

The letter drop they have claimed was not received in my mailbox either.

The facility is located within an IN1 General Industrial zone within the Ingleburn industrial area adjoining a heavy rail line. Resource recovery facilities are considered an industrial type development and are essential for the ongoing waste management needs of the Greater Sydney Region. As a result, the location of the proposed development is considered commensurate with the surrounding industrial precinct in which it is located.

The proposed development has been accompanied by an air quality impact assessment which assessed impact on dust as a result of the proposed development. The air quality assessment modelled the proposed development under the worst- case scenarios. The proposed development was found to exceed relevant criteria (25µg/m³) on a single day where the background air quality was already at 24.9µg/m³. Further to this, it found the annual average background air quality for the Western Sydney area (measured at the NSW OEH Liverpool monitoring station) are already exceeding criterion.

Notwithstanding that the impact on air quality is considered to be appropriate within the context of the site, the proponent has decided to remove external stockpiling of material from the application.

Noise modelling for the proposed development has also been undertaken. It was found that the proposed operation would meet all applicable noise criteria during operational hours. The existing noise wall is proposed to be extended to further manage noise generation on the site along with all waste processing occurring inside.

No watercourses have been mapped within proximity to the site and as a result no impacts on the local watercourses are expected.

SE-68742 - Alexandra Rouen

It is too close to residential properties with noise and cement dust already being a problem, expanding the size and operating time will cause massive issues for the surrounding residents. Many of which are young families and the elderly.

It will raise major health concerns in the future for long standing residents, due to the nature of cement dust. It will likely also destroy property values for the area.

The BRS operation is existing and has operated within the Ingleburn Industrial Precinct for a long period of time. Industrial areas such as the Ingleburn industrial precinct have been designated as such to protect them from residential encroachment thereby contributing to their viability into the future.

The crushing operations on the site are existing. Only the processing capacity is proposed to be expanded with no increase in operating hours for this component. The existing noise mitigation measures will remain in place. Solid waste stockpiling is proposed to occur within the main building as far away from residential properties as possible.

The concrete batching operation is existing. No expansion in capacity is proposed with the only changes being extended operating hours and modern batching equipment within a new enclosure which will reduce dust and noise impacts.

As the operation is already existing and its located within a long-standing industrial precinct adjoining a heavy rail line, there is unlikely to be any decrease in property values as a result of the development.

SE-69212 - Name Withheld

The facility is too close to the residential area and the sporting ground. The residents can already hear the loud banging noise comes from the facility during the day and there are a lot of elderly people living within a few hundred meters of this facility. I have a great concern over the noise and air quality within 500 meters of this facility if the project is going ahead.

The proposed development has been accompanied by an air quality impact assessment (AQIA) which assessed the impact of dust generation on a number of residential properties in proximity to the site. The air quality assessment modelled the proposed development under the worst-case scenarios. The proposed development was found to exceed relevant criteria (25µg/m³) on one day where the background air quality was already at 24.9µg/m³. Further to this, it found the annual average background air quality for the Western Sydney area (measured at the NSW OEH Liverpool monitoring station) are already exceeding criterion.

Noise modelling for the proposed development has also been undertaken. It considered the impact of the proposal on a number of residential properties in proximity to the site. It was found that the proposed operation would meet all applicable noise criteria during operational hours. The existing noise wall is proposed to be extended to further manage noise generation on the site along with all waste processing occurring inside the building on site.

Based on the noise and air quality assessments the proposed development will have minimal impact on the area by virtue of meeting applicable environmental criteria. Further to this, the proposed development is located within a large industrial precinct and is considered an industrial type use appropriate for the area.

SE69239 - Name Withheld

The basis on my opposing of the expansion is predominantly on Health & Safety of both Staff and contractors who attend my workplace.

Key notes as follows

- *Current increased flow of Tip trucks/Concrete agitators has made Kerr road quite a dangerous street â€“ It is a 50km/h zone and quite regularly (as common across all of Sydney) these vehicles are running at estimated speeds of 80 to 100 km/h, This has caused major concerns for both my logistics contractors entering/exiting property along with staff along with several near miss incidents â€“ Bulk Recovery solutions have made no attempts to monitor the way their customers are treating safety prior to entering or post leaving their site.*
- *Concrete agitators as well as pump trucks regularly washing out excess in gutters if unable to enter Bulk Recovery solutions in time*
- *Excessive dust issues on windy days caused by current plant*
- *Excessively unclean roads which are then washed down into storm water drains by unregistered plants driving up and down Kerr road*

If expansion is allowed it is furthermore creating unsafe/unhealthy conditions for all other residents in Kerr Road. With current issues due to operations quite a regular occurrence
As far as noted no infrastructure upgrades have been proposed to accommodate the increased excessive traffic flow nor any reason given to believe that correct health and safety procedures will be implemented as they have not been in the past.

Regards.

While road safety it ultimately the responsibility of the driver, BRS ensures that all drivers undertake site inductions which include details of the designated heavy vehicle route, road safety procedures and internal procedures. BRS actively updates the induction presentation and provides updates to all drivers. BRS values safety for all employees and drivers and will continue to advocate for safe driving for all employees and drivers attending the site.

All existing muddy liquids and concrete slurry tipoff points are provided with full washdown facilities. All drivers are inducted to the site with the required tipoff and cleanout procedures being explained.

BRS aims to minimise dust impacts on the surrounding area through the implementation of internal operations, water sprays and management measures. The proposal includes the internal storage of waste materials along with an internal solid waste receivals area; this arrangement compliments the internal crushing operation. New water sprays will be implemented on all waste storage areas with existing water sprays already implemented to support the crushing area. The new concrete batching plant includes an enclosure and water sprays to minimise dust generated by the batching operation.

All vehicles are to be directed through a wheel wash to prevent tracking of dust through clean areas and BRS further manages dust through washdown of all external works areas. With all dust management procedures implemented the proposed development meets all applicable air quality requirements and guidelines as demonstrated within the Air Quality Impact Assessment undertaken by Air Sciences and provided at Appendix C of the EIS.

SE-69240 - Name Withheld

The air quality in the area has progressively gotten worse over the last 10 months. I have Asthma and it has gotten worse in these 10 months and i now rely on my medication daily, i used to use it twice a week.

From what we can seen from the road they have uncovered waste materials in there yard for processing, the wind picks up this and distributes it around our local area. I am curious to know if this is Asbestos?

If the increase production of waste there will be a lot more trucks on our road and this is getting dangerous now with the amount of trucks, it will not be long before there is an accident involving their trucks.

The water they spray on Kerr Rd, i am not sure if this is even legal. If the water is clean shouldn't it be put into the drains. This water will be dirty and contain some type of contaminant that is not known to anyone. The water is from their trucks to clean out any waste materials, then sprayed onto the road.

The proposed development has been accompanied by an air quality impact assessment which assessed the impacts on dust as a result of the proposed development. The air quality assessment modelled the proposed development under the worst-case scenarios. The proposed development was found to exceed relevant criteria (25µg/m³) on one day where the background air quality was already at 24.9µg/m³. Further to this, it found the annual average background air quality for the Western Sydney area (measured at the NSW OEH Liverpool monitoring station) are already exceeding criterion.

External stockpiling of material has been removed from the application with an internal stockpiling area proposed to be provided within the north western portion of the main building. No asbestos is received by the existing operation.

The number of heavy vehicles generated by the proposed development will result in 197 vehicle trips per day (1 in and 1 out) during the proposed operating hours for solid waste. The existing industrial road network present in the Ingleburn industrial precinct has sufficient capacity to cater for the proposed development with a large amount of capacity spare. Minimal impact on intersection efficiency is anticipated by the proposed development with the RMS providing no criticism of the proposed development.

No water is proposed to be discharged in the street. BRS actively inducts and informs drivers not to allow spillage of any material onto the road. BRS will continue to work with drivers to prevent any unauthorised material leaving the site.

SE-69248 - Name Withheld

Noise pollution, increased heavy traffic in the area and air pollution are my main concerns for objecting to this project.

The proposed development has been accompanied by an air quality impact assessment which assessed impact on dust as a result of the proposed development. The air quality assessment modelled the proposed development under the worst- case scenarios. The proposed development was found to exceed relevant criteria (25µg/m³) on one day where the background air quality was already at 24.9µg/m³. Further to this, it found the annual average background air quality for the Western Sydney area (measured at the NSW OEH Liverpool monitoring station) are already exceeding criterion.

Despite the impact on air quality being considered to be appropriate within the context of the site, the proponent has decided to remove external stockpiling of material from the application.

Noise modelling for the proposed development has also been undertaken. It was found that the proposed operation would meet all applicable noise criteria during operational hours. The existing noise wall is proposed to be extended to further manage noise generation on the site along with all waste processing occurring inside the building on site.

Heavy vehicle traffic will increase as a result of the proposed development however, a traffic impact assessment has been conducted which found the existing road network has sufficient capacity to meet the worst case traffic impacts likely to be generated by the development both now and into the future. In addition, RMS provided no criticism of the proposed development.

SE-69330 Name Withheld

I am property owner of xx xxx xxxxxxxxxx, please put this application as a double objection to the above application relating to 16 Kerr Road Ingleburn No. SSD8593

During the past 18 months I have spent considerable amount of money to renovate both my properties for rental.

I have personally experienced excessive noise and vibration along with severe odour directly from the operation at 16 Kerr Road Ingleburn

This operation has caused me damage as I have had to reduce the rental of both properties due to the actions of this company

The tenants have continually made complaints regarding chemical smells, at times sulage smells and thudding noise which has impacted there quality of living

I also raise concern with the distance from a natural water course; the operation of this nature is situated within very close proximity to residential zoning especially as the area has future high rise building approval for 1000 dwellings

After some enquiries I have been advised that this operation should NOT be approved as there is waste streams and methods of operation exceed the limits and are within 40 meters of a natural water body, so chemical, sulage and effluent storage should be prohibited on this property due to the close proximity of residential zoning and the waterway. Crushing, grinding and separation works must not be within 250m of residential zoning and 100 meters of natural water way, along with the noise impact this should NOT be approved.

I object unconditionally by way of above along with additional heavy vehicles on the roads as they are already congested. Not to mention that this development will have an impact on the neighbourhood amenity and comfort of living for the current residence and the additional 1000 new high-rise dwelling earmarked for the area

This development is designated and integrated.

I xxxxx xxxxxx declare that I have never donated or been affiliated with any political party/organisation

Xxxxxx xxxxxxxxx Yours Faithfully

XXXXX XXXXXXX

The operation currently only accepts one waste which required assessment for odour impacts, namely foundry sand. No sewage or effluent wastes are accepted to the site. Foundry sand does not generate exceptionally high odour levels that are difficult to manage, or a type of odour that is unusual in the context of an industrial area. The existing foundry sand is blended with clean sand and with other inert materials to reduce any opportunity for odour to be emitted. This process occurs within the building within a silo. It is suggested that another operation may be generating the chemical spell, sewage or effluent smells in the area at the present time.

In regard to the proposed development, the operation intends to accept sewage and effluent wastes for treatment. These wastes are proposed to arrive to the site via sealed cartage truck and will be

delivered to a treatment system. The storage tanks inside the main building are sealed with any component of the larger treatment system which may vent to air equipped with a charcoal filter which will effectively minimise odour generation.

No water courses are located in proximity to the site noting the heavy rail line, Henderson Road and other industrial land uses are located within 40m of the site.

Noise modelling for the proposed development has also been undertaken. It was found that the proposed operation would meet all applicable noise criteria during operational hours. The existing noise wall is proposed to be extended to further manage noise generation on the site along with all waste processing occurring inside the building on site.

All proposed liquid wastes are proposed to be stored within self-bunded storage tanks located within the main building and outside any potential flood zone. The tanks are to be sealed and fitted with spill and overflow detection alarms. At any point where the liquid waste system is able to vent to open air, noting the DAF system as an example, the vent is to be equipped with a charcoal filter to mitigate any potential smell. Once again, the proponent is not currently accepting any of these wastes and any smell experienced may be for one of the many other operations located within the Ingleburn industrial precinct.

The quoted distances appear to be taken from the EP&A Regulation 2000 and are applicable to Designated Development under Schedule 3. These distances are not buffer zones and only provide a threshold for a higher level of detail and assessment. The proposed development is considered to be State Significant Development as the processing capacity exceeds the applicable threshold under Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011.

Heavy vehicle traffic will increase as a result of the proposed development however, a traffic impact assessment has been conducted which found the existing road network has sufficient capacity to meet the worst-case traffic impacts generated by the development both now and into the future. In addition, RMS provided no criticism of the proposed development.

SE-69243 - Calane Pty Ltd ATF John Edward Star Second Family Settlement

Dear Independent Planning Commission,

Re Development Application SSD-8593 (16 Kerr Road Ingleburn, NSW 2565)
As the owner of the neighbouring property (15 Kerr Roads Ingleburn) we object in the strongest possible way to Development Application SSD-8593. If approved, this development will cause immeasurable harm to the businesses that operate out of 15 Kerr Road. The environmental harm, economic damage and damage to the local community that we believe will flow from this Development Application (if approved) has been outlined in the attachment named "Objection to Development Application SSD-8593".

Additionally, we believe that other businesses located along Kerr Road will suffer from a dramatic increase in heavy vehicle movements (see attachment "Complaints from Local Businesses"). Residents have also expressed serious concerns about this Development Application (as evidenced by the attached petition which has been signed by over 40 residents).

We ask that the Independent Planning Commission seriously consider the points raised in this objection and take note of the fact that both residents and local businesses oppose this Development Application.

Yours sincerely Frederick Newman

Attachment -

Note: For brevity in the response, the items listed under 'The Objection' of the attached document have been responded against below.

1. Existing operation is not complying with the current Development Consent. They are breaching the consent in various areas including:

a. *Deliveries (B-doubles and other heavy vehicles are having to wait on Kerr Road prior to entering the Site);*
b. *There are insufficient car spaces on site;*
c. *Stockpiling and processing are occurring externally from the building; and*
d. *Contaminated water is draining into the stormwater system.*

An independent audit prepared byGHD has been undertaken and is provided alongside the revised EIS and this Response to Submissions. While the report identified 10 non-compliances, these were minor in nature and would not have a significant impact on overall compliance. Refer to Appendix Q of the revised EIS for the independent audit.

Two weighbridges are proposed as part of the proposed development. Internal heavy vehicle stacking is proposed for the development along with scheduling of heavy vehicle prior to their commencement of journey to the site. This proposed system will ensure the efficient movement of vehicles into and out of the site.

A total of 30 spaces meeting Australian Standard dimensions are proposed on the site. Which is considered appropriate given maximum projected staff numbers on site.

External stockpiling of material including the existing finished product bays in the rear portion of the site have been removed from the proposed development. Material will be tipped externally within a designated tip and spread area in accordance with EPA guidelines, however this material will be

moved into the building for processing.

Any runoff from the site is currently collected and reused on the site and not directly discharged to stormwater. All stormwater pits include pit inserts which capture sediment. These are regularly cleaned and replaced as needed. A revised stormwater system is proposed as part of the EIS which will improve the existing system and meet modern OSD requirements.

2. There has been minimal to no community consultation.

Consultation letters were delivered to all premises as outlined within the exhibited EIS. Further clarifications regarding the townhouse complex to the east of the site have been included within the revised EIS. A newspaper advertisement was also posted to the local newspaper requesting further comment on the proposed development. See Section 3 for further discussion.

3. The Site area is too small to accommodate any increase in operational capacity without creating unacceptable safety risks and burdening nearby roads.

The capacity of the local road network has been considered within the EIS and a traffic impact assessment provided at Appendix D of the RTS Report or Section 7.6 of the EIS. The road network including intersections was found to have sufficient capacity to cater the existing development and the proposed development.

With the proposed second weighbridge implemented and internal heavy vehicle stacking, the proposed development is considered able to cater to the increased traffic load projected. The spaces after the weighbridge provide for 7 truck and dogs or 14 liquid cartage/vacuum trucks with 2 queue spaces provided before the weighbridge. Further to this, all heavy vehicle loads are to be scheduled prior to commencement of journey to the site to allow for the averaging of loads across the proposed delivery hours. In the case of heavy vehicles arriving to site out of scheduled time (early or late), the site has sufficient capacity to temporarily prioritise entering vehicles over exiting vehicles.

The NSW RMS provided no opposition to the proposed development in regard to the traffic generation and road network impacts.

4. Land zoned IN1 General industrial is not suitable for a development of the size proposed.

Resource recovery facilities are considered to be an industrial type land use and meets the objectives of the IN1 General Industrial zone.

5. Kerr Road cannot sustain current vehicle movements and can certainly not accommodate an additional 17,728 heavy vehicle movements per annum. These heavy vehicles will be composed of trucks ranging from 18 metres to 25 metres.

Applying the stated figure of 17,728 heavy vehicle movements per annum against working days (minus public holidays) and averaged daily operating hours, the total would be 3.6 heavy vehicle movements per hour. Kerr Road and the site are both considered capable of handling 3.6 heavy vehicles per hour.

6. The time required to unload incoming waste, if done in accordance with the EPA Waste Management Guidelines will inevitably result in truck lines forming along Kerr Road and potentially spilling over into Aero Road.

a. Truck lines beginning at the entry point of the Site and extending along Kerr Road have been

observed on multiple occasions. Logic dictates that with an increase of more than 7 times the current incoming volume, this problem will likely become significantly worse.

Truck and dogs delivering to site will spend approximately 25 minutes on the site. This includes, weighing in, manoeuvring, tipping, spread inspection, and weigh out all done in accordance with the EPA's minimum standards for managing construction waste in NSW. It must be noted that solid waste deliveries are projected to total half of the total capacity with the other half projected to be liquid and muddy wastes arriving via liquid cartage and vacuum excavation trucks.

With the internal queue spaces providing 7 post-weighbridge queue spaces and vehicle scheduling minimising overlap of vehicles, the proposed development is not expected to result in vehicle stacking on Kerr Road.

7. An additional 17,728 heavy vehicle movements from the M5 to Kerr Road will likely have a negatively impact the local community, local roads and businesses in the area.

The capacity of the impacted road network has been considered within the EIS and a traffic impact assessment provided at Appendix D of the RTS Report or Section 7.6 of the EIS. The road network including intersections was found to have sufficient capacity to cater to all existing development and the proposed development.

8. Brooks Road cannot sustain any further increase in heavy vehicle movements.

The capacity of the impacted road network has been considered within the EIS and a traffic impact assessment provided at Appendix D of the RTS Report or Section 7.6 of the EIS. The road network and intersections including Brooks Road and Brooks Road/Williamson Road roundabout were found to have sufficient capacity to cater to all existing development and the proposed development.

9. The wheel wash bay is failing to adequately clean trucks that leave the Site. As a result, contaminated particles are being transported from the Site on to nearby roads.

BRS aims to prevent the tracking of materials offsite. This will be achieved via routine washdowns of the hardstand surfaces on site. Inspection of the effectiveness of the wheel wash will occur in response to this concern.

10. The access to the Site is too narrow for two weighbridges.

AWE currently occupies the main building. AWE designs weighbridges and has ensured there is sufficient room for two weighbridges. It is noted that the space is constrained and as a result, the proposed new weighbridge is limited to liquid cartage, vacuum trucks, and medium rigid vehicles only.

11. The Site's access is too narrow to accommodate two weighbridges while also allowing for a safe walkway for drivers moving between their vehicles (parked on the weighbridge) and the weighbridge office. Consequently, we believe that drivers exiting their vehicles, while on the weighbridge, are being exposed to an unacceptably high level of risk. Due to the constraints faced by the Applicant in terms of the width of the access point, we do not believe that this safety risk can be suitably mitigated.

a. *Moreover, when the weighbridges are in operation, there is no additional access point. In the event of an emergency, this prevents emergency services from accessing the Site quickly.*

No incidences have occurred where drivers have sustained an injury accessing or leaving their

vehicle on the weighbridge.

12. An increase in volume from 30,000TPA to 225,000TPA will likely result in an increased risk of air contamination. In our view, this is a serious health concern for employees of nearby businesses and local residents.

An air quality impact assessment (AQIA) has been undertaken which assesses a worst-case scenario for the site. The AQIA found the proposed development would have minimal impact on air quality and would only exceed the applicable criteria where background air quality levels are exceptionally high or already exceed those criteria.

It must be noted that external stockpiling of material along with the existing rear product bays have been removed from the application. All stockpiling and solid waste processing is to occur within the building. A range of dust suppression measures are proposed including a range of water sprays, routine site washdowns and the implementation of a drainage bund on the proposed tip and spread area.

The dust generated by the proposed is expected have minimal impact on the existing air quality in the Ingleburn area. BRS is committed to ensuring dust generation is kept to a minimum.

13. An increase in operations will, in all probability lead to an increase in noise pollution. This will negatively impact on residents and the operation of nearby businesses.

A noise impact assessment has been undertaken assessing the all high noise generating aspects of the operation against the applicable noise criteria and guidelines, see Appendix E of this RTS Report. Worst case scenarios have been assumed including all plant and equipment operating simultaneously. All aspects of the operation meet the applicable criteria during their proposed operating periods with the operation expected to have minimal acoustic impacts.

14. Contamination of stormwater systems due to an inability to manage the levels of incoming and outgoing hazardous waste.

Hazardous soils are proposed to be accepted indoors and to the designated hazardous waste treatment area. Hazardous waste will not enter the stormwater system. Hazardous soil is a minor component of the overall operation and is limited to a single 10m x 10m area with a maximum stockpile height of 5m with no stockpiling of hazardous soils is to occur outside of the processing area. The treatment process for a batch is at minimum a 24-hour process.

Water captured from the hazardous soils treatment area will be directed to the liquid waste treatment system for handling as leachate. As a result, no hazardous soils are likely to enter the stormwater system.

15. The location of the Site is subject to flooding. It is our view that open stockpiles on land that is subject to flooding should never be permitted due to the risk that they pose to the environment.

No stockpiles are to be proposed within the overland flow path. All stockpiling is to be located internal to the main building which is not located within an overland flow path.

16. In our view, the proposed plans to construct an awning on the Site to enclose the open stockpiles would not comply with NSW building codes.

While the previously proposed awning was compliant with BCA requirements, it has been removed

from the application along with the external stockpiling of material.

17. The Applicant has failed to comply with previous conditions relating to fencing and tree lines. In our view, the Applicant has chosen not to comply with these conditions in an effort to make more space available for the processing and storing of hazardous and restricted waste.

No hazardous or restricted waste is currently accepted on the site. It is noted that alterations have occurred to the landscaping on the site, however these works have been undertaken in an effort to better accommodate heavy vehicle movements through the site and to meet on site parking requirements.

The granting of consent will formalise these minor alterations to the site.

18. Reports commissioned by the Applicant are not reliable.

All assessments and reports have been undertaken by suitably qualified and experienced consultants. All assessments have been undertaken in accordance with the relevant guidelines and requirements applicable to the proposed development. Relevant government agencies including the NSW EPA and RMS have considered the assessments against the relevant guidelines and requirements and have provided their comments as part of the exhibition process. Minor revisions to specialist reports in response to the agency comments have been made.
19. Final Comments.
Note: Final Comments section restates previously discussed points. For further brevity, the final point which was not previously discussed has been addressed.

Finally, it should be pointed out that if this Development Application is approved by the Independent Planning Commission it will encourage other waste operators to set up major waste resource recovery facilities in areas that are clearly not suitable for such operations. Developments of this nature should be reserved for land zoned IN3 Heavy Industrial as they are inherently dangerous and intrusive operations. If approved the decision will indicate that the rights of the private citizen are being eroded in favour of major developments.

IN3 Heavy Industrial zones are generally reserved for dangerous and offensive development. The proposed resource recovery facility is able to successfully mitigate against its environmental impacts and further is not considered to be a hazardous or offensive development. As noted within the SEPP33 Risk Screening any dangerous goods to be located on the site are in such small quantities that they do not trigger the need for any higher forms of assessment.

Furthermore, Campbelltown City Council has not adopted any IN3 Heavy Industrial zones as part of the Campbelltown LEP 2015 and as a result, would not have any waste management facilities located in the LGA without their permissibility within IN1 zones.

APPENDICES