ENVIRONMENTAL IMPACT STATEMENT
GOW STREET RECYCLING CENTRE
81 GOW STREET, PADSTOW NSW 2211

Prepared for: Gow Street Recycling Centre
Department of Planning, Industry and Environment (DPIE)

Prepared by: Emma Hansma, Senior Engineer
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Benbow ENVIRONMENTAL

Engineering a Sustainable Future for Our Environment

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Form 2

Submission of
environmental impact statement (EIS)
prepared under the Environmental Planning and Assessment Act 1979 Section 78(A)

EIS prepared by

name	Richard T Benbow
qualifications	Bachelor of Science (Engineering) With Merit
address	Benbow Environmental 25-27 Sherwood Street Northmead NSW 2152

in respect of

development application

applicant name	Gow Street Recycling Centre
applicant address	81 Gow Street, Padstow NSW 2211
land to be developed: address	81 Gow Street, Padstow NSW 2211
lot no, DP/MPS, vol/fol etc	Lot A DP103140
proposed development	Construct a liquid waste dewatering facility. Process 250,000 tonnes of liquid waste per year. Operate 24/7

or
☐ map(s) attached

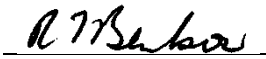
environmental impact statement

☑ an environmental impact statement (EIS) is attached

certificate

I certify that I have prepared the contents of this Statement and to the best of my knowledge

- it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000,
- contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and
- the information contained in the statement is neither false nor misleading.

signature 

name	Richard T Benbow
date	31/08/2021

LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of Gow Street Recycling Centre, as per our agreement for providing environmental services. Only Gow Street Recycling Centre is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by Gow Street Recycling Centre for the purposes of preparing this report.

Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.

DOCUMENT CONTROL

Prepared by:	Position:	Signature:	Date:
Emma Hansma	Senior Engineer		31 August 2021
Linda Zanotto	Senior Environmental Engineer		31 August 2021
Damien Thomas	Environmental Scientist		31 August 2021
Kate Barker	Environmental Scientist		31 August 2021
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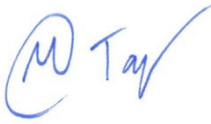
Matthew Taylor	Environmental Scientist		31 August 2021
R T Benbow	Principal Consultant		31 August 2021
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Linda Zanotto	Senior Environmental Engineer		31 August 2021
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R T Benbow	Principal Consultant		31 August 2021

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1	24-7-2020	Draft / Rev1	L Zanotto	R T Benbow
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DOCUMENT DISTRIBUTION

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5	30-7-2021	Gow Street Recycling Centre, DPIE	Benbow Environmental
6	24-8-2021	Gow Street Recycling Centre, DPIE	Benbow Environmental
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STUDY TEAM

R.T. Benbow	Benbow Environmental	Consultation, Alternatives, Description of Proposal, Environmental Impact Statement Compilation, Internal Review
Emma Hansma	Benbow Environmental	Project Management, Executive Summary, Justification, Description of the Proposed Development, Hazards and Risk, Soil and Water Assessment, Consultation, Environmental Impact Statement
Linda Zanotto	Benbow Environmental	Project Management, Waste Management, Planning Assessment, Key Issue Risk Assessment, Consultation, Internal Review
Kate Barker	Benbow Environmental	Air Quality Assessment, Emergency Plan, Traffic Management Plan, Environmental Impact Statement Compilation
Matthew Taylor	Benbow Environmental	Air Quality Assessment, Description of the existing environment, Site History, Greenhouse Gas Assessment, ESD, Cumulative Impacts, Summary of Impacts & Mitigation Measures, Health, Socio-economic impacts, Visual, Environmental Impact Statement Compilation, Phase II Detailed Site Investigation, Environmental Management Plan, Construction Environmental Management Plan
Damien Thomas	Benbow Environmental	Soil and Water Assessment, Phase II Detailed Site Investigation, Acid Sulfate Soil Management Plan
Victoria Hale	Benbow Environmental	Noise Impact Assessment, BDAR waiver, Flora and Fauna, Heritage, Environmental Impact Statement Compilation
Benny Chen	ML Traffic	Traffic Impact Assessment, Car Park Certification, Swept Path Analysis
Penny McCardle	McCardle Cultural Heritage	Aboriginal Cultural Heritage Assessment

	Indesco	Stormwater Drainage Design and Flood Modelling
	C & A Surveyors	Survey Plan
	Abode Design	Office Building Plans
Giulio Ranieri	Style Developments Pty Ltd	Existing Site Plan, Proposed Site Plan and Equipment Layout
	Motec	Machinery Plant Design

ABBREVIATIONS

ABL	Assessment background level
ABS	Australian Bureau of Statistics
AEP	Annual Exceedance Probability
AMMAAP	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW
ASS	Acid Sulfate Soil
ASSMP	Acid Sulfate Soil Management Plan
BDAR	Biodiversity Development Assessment Report
BOM	Bureau of Meteorology
C&D	Construction and Demolition
CEMP	Construction Environmental Management Plan
DA	Development Application
DCP	Development Control Plan
DECC	Department of Environment and Climate Change (now NSW EPA)
DEWHA	Department of the Environment, Water, Heritage and the Arts
DPI	Department of Primary Industry
DPIE	Department of Planning, Industry and Environment
DoP	Department of Planning
EES	Environment Energy and Science Group
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP	Emergency Plan
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FR NSW	Fire and Rescue New South Wales
LEP	Local Environmental Plan
LPG	Liquefied Petroleum Gas
Mbgl	Metres below ground level
NES	National Environmental Significance
NIA	Noise Impact Assessment
NPI	National Pollutant Inventory
NPfI	Noise Policy for Industry
NRC	Natural Resources Commission
NOW	New South Wales Office of Water
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
NSW RNP	New South Wales Road Noise Policy
PASS	Potential Acid Sulfate Soil
PHA	Preliminary Hazard Analysis
$PM_{2.5}$	Particulate matter less than 2.5 μm in aerodynamic equivalent diameter
PM_{10}	Particulate matter less than 10 μm in aerodynamic equivalent diameter
POEO	Protection of Environment Operations Act (1997)
RAP	Reclaimed asphalt pavement
RBL	Rating background level
RNP	NSW EPA Road Noise Policy
ROW	Right of Way
RTA	Roads and Traffic Authority

SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
TfNSW	Transport For NSW
TMP	Traffic Management Plan
Tpa	Tonnes per annum
TSC Act	Threatened Species Conservation Act 1995
TSP	Total suspended particulates
VENM	Virgin Excavated Natural Material

UNITS OF MEASUREMENT

°C	degree centigrade	(unit of temperature)
dB(A)	A-weighted decibels	(unit of noise)
dB(lin)	Linear-weighted decibels	(unit of noise)
g	gram	(unit of mass)
kg	kilogram	(unit of mass)
kL	kilolitre	(unit of volume)
KPa	kilopascal	(unit of pressure)
m	metre	(unit of length)
m^3	cubic meter	(unit of volume)
T	Tonne (1000 kg)	(unit of mass)
µg	microgram	(10^{-6} gm – unit of mass)
µg/m^3	microgram/cubic meter	(concentration)
ODU	odour detection unit	(unit of odour)

EXECUTIVE SUMMARY

Benbow Environmental has been engaged by Gow Street Recycling Centre to undertake an Environmental Impact Statement (EIS) to support the establishment and operation of a new proposed liquid waste dewatering plant at the existing recycling facility located at 81 Gow Street, Padstow NSW.

The proposed development seeks approval to:

- Establish a liquid waste dewatering facility;
- Process 250,000 tonnes of liquid waste per year through the dewatering facility; and
- Operate the dewatering facility 24/7.

The maximum quantity of liquid waste that can be processed through the dewatering plant in a 24-hour period is approximately 1,500 tonnes. Approximately 450 tonnes of clean water would be generated each day.

The proposed dewatering plant will be located within an existing building that will require additions and alterations, be fully enclosed with aggregate storage bays to be covered and walled. The proposed dewatering plant is expected to generate negligible additional environmental impacts. Instead, this development is expected to significantly improve environmental impacts due to the proposed stormwater system upgrade and improved dust controls.

Tanker trucks and concrete trucks would bring the liquid waste from construction sites around Sydney.

The proposed dewatering facility is the subject of this application. The existing C&D recycling facility would continue to operate under the existing development consent DA-51/1997 at the approved capacity of 80,000 tonnes per annum. The existing facility is not and will not be part of the development and will continue to operate under the existing consent.

The site holds an environment protection licence (10943) for resource recovery and waste storage for building and demolition waste and asphalt waste (including asphalt resulting from road construction and waterproofing works), with a processing capacity of 80,000 tonnes per year, and a maximum storage quantity of 7,300 tonnes at any one time.

This EIS provides an assessment of all potential impacts of the proposed development on the existing environment and provides for appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts.

A summary of the detailed assessments is included below:

STRATEGIC CONTEXT

The site is situated within an industrial zone (IN1 - General Industrial) under the Bankstown Local Environmental Plan 2015. The surrounding area consists primarily of general industry and includes some low-density residential areas, with the nearest residential area located 330 m

South East of the site. The proposal is for a waste or resource management facility which falls under the definition of "general industry" and is permissible with consent in the IN1 zone.

The site currently has consent DA-51/1997 to operate the existing 80,000 tpa capacity C&D recycling facility and this activity would continue to operated under this consent. The EIS demonstrates that the proposed dewatering plant would not prevent compliance with the existing consent.

The proposal constitutes State significant development under the State Environmental Planning Policy (State and Regional Development) 2011 as a "Waste and resource management facility" as it involves the handling of more than 1,000 tonnes per year of other aqueous waste.

The existing EPL licence (10943) for resource recovery and waste storage at the site will need to be updated to include waste processing (non-thermal treatment) for non-thermal treatment of liquid waste and the storage of liquid waste. Hence this proposal is an integrated development.

JUSTIFICATION

With the growing number of NSW Government Infrastructure projects located in Western Sydney, the demand for treatment facilities to deal with dewatering drilling mud and concrete washout waste generated by the construction industry is continuing to increase in this area. Furthermore, a demand exists for facilities to treat liquid waste, as disposal is costly to industry and water is increasingly becoming a more precious resource, yet few facilities are presently available to recycle such waste. While not available at this point in time, the potential exists to recycle the treated water resulting from the dewatering process as an alternative to discharging it to tradewaste.

The proposed development would establish a dewatering plant to process drilling mud and concrete washout waste into reusable products. The proposed new plant would provide improved resource recovery systems resulting in an increased rate of recovery and a higher quality reusable product. The facility would also provide a means to increase recycling, and indirectly divert waste from landfill and reduce illegal dumping. In this way, the proposal supports and is consistent with a number of statutory policies including the "Waste Avoidance and Resource Recovery Act, 2001" (WARR Act), the "NSW Waste Avoidance and Resource Recovery Strategy 2014-21" and the "National Waste Policy 2018".

Although not a legal requirement, the EPA are now requiring waste facilities to be enclosed. The proposed dewatering plant will be fully enclosed with aggregate bays covered and walled. The existing and approved C&D operations will continue to operate under the current consent and licence.

SITE SUITABILITY

The justifications for selecting the subject site and for establishing the dewatering plant are listed as follows:

- The site is already developed and has consent to accept drilling mud;

- The site previously operated a dewatering/washing plant that processed drilling mud and the new dewatering plant would be an improved upgrade to what previously existed;
- The proposal is considered to be the most cost-effective process with minimal environmental impact;
- The site is not in a sensitive land use area;
- The development is a permitted use with consent;
- The development generates local employment;
- Transport routes are readily available and the local road network is capable of handling the additional truck movements;
- The site has sufficient room for on-site parking and truck manoeuvring;
- Local markets for construction materials will become more competitive, leading to fiscal returns for consumers and developers;
- The site's ability to recycle C&D waste will reduce the amount of raw materials extracted for new developments, consequently reducing environmental impacts of new local developments;
- The site's ability to recycle multiple types of waste will reduce the quantity of waste that is deposited to landfill, which will increase the sustainability of future construction projects;
- The site is located in a suitable location to serve current and future infrastructure and construction projects; and
- The proposed development will have extensive environmental safeguards to provide assurance in regards to the expected degree of environmental impacts.

AIR QUALITY

An Air Quality Impact Assessment (AQIA) has been undertaken for the proposed development. A full copy of the AQIA is provided as Appendix 1.

The assessment determined the predicted dust and particulate matter contribution from the existing and proposed site operations for particle sizes $PM_{2.5}$, PM_{10} and total suspended particulates (TSP). It also determines the impacts associated with greenhouse gas (GHG) emissions from the site.

The assessment does not include an assessment of odour impacts, as no odour is expected to be generated from the proposed development.

The AQIA was prepared in accordance with:

- NSW EPA *"Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales"* (2016); and
- Australian Government *Department of the Environment and Energy, August 2019 Australian National Greenhouse Accounts – National Greenhouse Accounts Factors*.

A brief summary of the findings is presented below:

Dust Impact Assessment

The proposed development is expected to generate negligible additional dust impacts as the dewatering plant is enclosed and the operations are wet. The proposed development is expected to

significantly reduce dust impacts as the water from the dewatering plant will be utilised for dust suppression and the additional controls on the existing C&D crusher and screen are proposed.

The air dispersion model AERMOD was used for the prediction of off-site dust impacts associated with the air emissions from the proposed operations. Two scenarios were included in the air dispersion modelling:

> Scenario 1 – modelled emission sources with general mitigation measures recommended and
> Scenario 2 – modelled emission sources with an additional custom flexible hood and vacuum ducting applied to the crusher/screen.

The assessment aimed to demonstrate the predicted dust impacts from site activities on neighbouring receptors with and without the use of the flexible hood and vacuum ducting applied to the crusher/screener. Preliminary dust monitoring undertaken on- and off-site demonstrate that current dust emissions from site activities exceed NSW EPA criteria.

Results of air impact modelling for both scenario 1 and scenario 2 demonstrate that incremental dust levels were reduced with the inclusion of a custom hood covering applied to the crusher/screener by ~12-46% at the most heavily impacted receptor (R11; 89 Gow Street, Padstow). It is recommended that all controls listed for Scenario 2 be applied onsite on site to ensure continued compliance and further reduce dust impacts from the proposed development on all nearest receptors, both industrial and sensitive.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous additions assessment was conducted for the most impacted receptor (R11; 89 Gow Street, Padstow). The 24 hour averaging period for PM_{10} showed 2 additional days of exceedance, however this is attributed to the elevated background concentration levels of 48.23 µg/m^{3}and 46.21 µg/m^3. The 24 hour averaging period for $PM_{2.5}$ demonstrated no additional days of exceedance.

It is noted that the dust from the dewatering plant stockpiles represent negligible emissions as they are several orders of magnitude less then more significant sources.

With the proposed site activities and additional dust controls in place, it is considered that emissions to air from the site's operation are unlikely to cause harm to resident's health or the environment.

Greenhouse Gas (GHG) Assessment

Scope 1 GHG emissions from the proposed development are limited to diesel fuel consumption from plant and equipment operation on site. Scope 2 GHG emissions are limited to electricity consumption during site operations. Scope 3 emissions encompass a wide range of potential sources which are expected to be negligible for the proposed development. Therefore, Scope 3 GHG emissions were not assessed any further.

Annual GHG emissions for Scope 1 and Scope 2 GHG emissions for the operation of the C&D and drilling mud dewatering facilities are estimated to be 955 t CO_2-e.

Australia's total GHG emissions as at December 2019 (the most recent inventory update) was estimated to be 532.5 Mt CO_2-e (Australian Government, Quarterly Update of Australia's National Greenhouse Gas Inventory: December 2019). In comparison, the estimated annual GHG emission for proposed development is 0.00096 Mt CO_2-e. Therefore, the annual contribution of GHG emissions from the proposed development in comparison to the Australian greenhouse emissions in 2019 is approximately 0.0000018%.

GHG contributions from the proposed development are considered negligible.

NOISE AND VIBRATION

A full Noise Impact Assessment (NIA) has been undertaken for the proposed development and is provided in Appendix 2. The noise impact assessment was undertaken in accordance with the following guidelines:

- NSW Environmental Protection Authority, Noise Policy for Industry (EPA, 2017);
- Department of Environment, Climate Change and Water NSW, Road Noise Policy (DECCW, 2011);

The nearest receivers were identified and project specific noise criteria were established. The site operations were modelled using the predictive noise software, Sound Plan V7.3.

Operational noise levels are predicted to comply with the project specific criteria at all residential receivers during all time periods. During the night from 10pm – 6am the crusher, vacuum truck pump and excavator should not be used. An internal pump can be used at night such that the tanker truck vacuum pump is not needed.

Sleep disturbance was assessed during the night time period and compliance with the criteria is achieved at all residential receivers. Compliance with the guidelines set out in the NSW Road Noise Policy was predicted at all considered receptors.

While further noise mitigation measures are not required, the following noise mitigation measures are recommended in order to proactively further reduce noise levels at surrounding receivers:

- Prohibition of extended periods of on-site revving/idling;
- Keeping the roller shutter door closed where possible;
- Minimisation of the use of truck exhaust brakes on site;
- Enforcement of low on-site speed limits; and
- Onsite vehicles and machinery to be maintained in accordance with a preventative maintenance program to ensure optimum performance and early detection of wearing or noisy components.

WATER

The proposed development is expected to generate negligible additional stormwater impacts. The proposed development is expected to significantly reduce impacts to stormwater as the stormwater system will be upgraded and the collected first flush water from the site will be processed through the dewatering plant, preventing the majority of stormwater from leaving the site.

The site contains a drainage easement that runs across the site with existing stormwater pits connecting the two drainage pipelines within the easement via existing underground pipelines. Overland flooding is an issue with this existing arrangement and has resulted in sediment laden runoff from the site on occasions.

The proposed development involves upgrading the stormwater system to enable adequate management of leachate and on-site stormwater which has been designed to Council requirements. The proposed stormwater system will provide onsite detention and water quality treatment and include BCP stream guard pollution control at stormwater pits, then a silt arrestor followed by the 200kL Rocla Plastream underground detention tank and stormwater isolation valve.

The system would capture first flush (20mm) site stormwater (leachate) which would initially be treated through an arrestor and detained within the two underground storage tanks before being treated through the dewatering plant.

The proposed development would require mains water for use in the office and amenities. All other water usage would be recycled water sourced from the dewatering facility and rainwater tanks on site. Recycled water would be used for dust suppression purposes through water sprayers to suppress dust on the existing external C&D storage bays, in the existing wheel wash and for washing down purposes. Excess recycled water from the dewatering plant would be discharged to sewer under a Tradewaste Agreement with Sydney Water.

Baseline data obtained through sampling and characterisation of existing site stormwater found that the results matched water quality for a “slightly to moderately disturbed system”. Modifications to the existing stormwater system are expected to improve stormwater quality.

An Erosion and Sediment Control Plan has been developed for implementation during construction to minimise potential impacts to waters. Erosion and sediment controls include geotextile inlet filters for existing stormwater pits, sediment fence for the perimeter of the construction zone and a shaker pad for stabilised site access by trucks.

The proposed development does not involve discharges to waterways. The stormwater system upgrade has been designed to only discharge rainwater after a heavy rain event (>20mm) with the first flush water being treated. A water monitoring program would be implemented to ensure stormwater discharge meets relevant ANZECC criteria.

FLOODING

Consultation with Canterbury-Bankstown Council in relation to flooding issues was undertaken and it is noted that Council advised that NO flood / overland flood study was necessary providing requirements were to be complied with.

However, due to changes in the development as part of the retaining wall design, a flood assessment is required. Indesco have prepared this assessment based on the site’s proposed stormwater system design to the site and in consultation with Council. Flood modelling was carried out and found that the proposed development would not generate any considerable flood impacts with respect to the local overland flow.

SOIL

The proposal would involve soil disturbance during construction. Implementation of erosion and sediment controls would adequately manage any onsite soil excavation. Soil sampling undertaken as part of a Phase II Detailed Site Investigation confirmed that no contamination is present. However, due to the discovery of acid sulfate soils, an ASS Management Plan is required for the excavation works and has been submitted with the application.

TRAFFIC AND PARKING

The proposed development would generate additional truck movements associated with operation of the dewatering plant. Truck types that will access the site include medium rigid trucks, liquid tankers and B-doubles. At maximum proposed capacity, heavy vehicle trips per day are expected to include 44 on average for the C&D facility and 128 for the dewatering plant. Site layout plans demonstrate there is ample room on site for trucks to manoeuvre, weigh their loads upon entry and exit, unload and/or load, wait, and enter and exit the site in a forward direction. A traffic management plan has been prepared that provides operational measures to manage on-site traffic on a daily basis would be implemented at the site.

Vehicles unloading at the dewatering plant typically take 10-25 minutes to unload. Trucks picking up solid materials via FEL typically take around 15 minutes to load and vehicles dropping off solid materials typically take 1-2 minutes to unload.

The site layout would be altered and result in a total of fifteen (15) car parking spaces. This is compliant with the Canterbury-Bankstown Council and provides sufficient parking for expected staff numbers.

A traffic impact assessment was undertaken by Motion Traffic Engineers (Appendix 9) and a brief summary of findings is provided below.

The proposed liquid waste facility is a moderate trip generator for the weekday AM and PM peak hours. The additional trips from the proposed liquid waste facility can be accommodated at the nearby intersection without significantly affecting intersection performance, delays or queues. The forecast modelling for years 2021 to 2036 at priority intersections demonstrates that there will be no significant change in level of service, queung distance nor the degree of saturation. There are no traffic engineering reasons why a planning permit for the proposed liquid waste facility at 81-87 Gow Street in Padstow should be refused.

WASTE MANAGEMENT

The site is an existing resource recovery facility for construction and demolition waste. The addition of the dewatering plant would allow for liquid waste such as drilling mud and concrete washout waste to be treated resulting in some recovery of material, with the resulting water treated to a standard suitable to reuse on site. All proposed liquid waste processing activities would be undertaken within an enclosed building. Little waste requiring disposal is expected to be generated by the dewatering process.

The site has approval to process 80,000 tpa of C&D waste and store 7,300 tonnes of C&D waste at any one time. The proposed development would result in processing of 250,000 tonnes per

year of liquid waste and require on-site storage of an estimated additional 1,400 tonnes of waste at the site. The additional waste storage would be within an enclosed building or within covered and walled storage bunkers.

The recovered materials generated from the existing C&D facility include aggregates, soils and sands that are sold to the public from the site.

Materials recovered from the proposed dewatering plant would include treated water, recycled aggregates and biscuit (filter cake) resulting from the filter pressing of the sediments/silt in the liquid waste. Aggregates would be recycled under the relevant resource recovery exemption and order. The treated water would be reused on-site for cleaning purposes or for dust suppression. Any remaining treated water would be discharged to tradewaste. Filter cake would be applied to land under a resource recovery exemption or sent to a licensed landfill.

Waste would be managed in accordance with relevant waste legislation and guidelines under an Environmental Management Plan which includes an Incoming Waste Procedure and waste specification for drilling mud, as demonstrated in the Waste Management Report accompanying this EIS.

HAZARDS AND RISK

The site will store 65,000 L of diesel in a self-bunded diesel tank. Additionally, the site will also hold other various chemicals that are used for trucks and machinery, including degreaser, oils and lubricants. Small quantities of a flocculant will be stored on site to aid in recovery of mineral ores and remove suspended material from wastewater. All of these chemicals will be stored inside on bunded pallets.

A preliminary risk screening of the proposed development in accordance *with State Environment Planning Policy No. 33 – Hazardous and Offensive Development* (SEPP 33) found the quantities of dangerous goods onsite do not exceed the threshold quantities for applying SEPP 33 and therefore a Preliminary Hazard Analysis (PHA) is not required.

In order to identify and characterise the nature of potential fire events, a series of Hazard Identification Charts have been compiled to assess any potential fire events for the proposed development. Fire risk is relatively low at this facility. The FR NSW 'Fire safety guideline – Fire safety in waste facilities', and dated February 2020 does not apply to the site due to the minimal combustible materials stored.

BIODIVERSITY

There is no vegetation present on site as the site is fully developed and is covered in a concrete hardstand. Current structures on site are not used as a habitat by any endangered species. The site does not impact habitat connectivity or flight path integrity.

A biodiversity assessment waiver was completed and emphasises that the site will cause negligible disruption to the surrounding environment.

Landscaping would be provided at the site frontage as shown in the landscape plan provided.

HERITAGE

A search of the NSW State Heritage Inventory found no Aboriginal places or items of heritage on, or within the vicinity of the site and that the site is fully concreted with no vegetation. However, planned excavations may result in ground disturbance and therefore a full Aboriginal cultural heritage assessment report has been prepared by McCardle Cultural Heritage.

No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey. The following recommendations were made:

1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and
2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

CONSULTATION

The EIS addresses issues raised through the consultation process with local government, statutory authorities, the proponent, adjoining properties and nearest sensitive receptors. Extensive consultation was undertaken with regulatory authorities including a number of meetings and follow up emails. Topics of discussion and outcomes of these meetings are provided in detail in this EIS.

A community consultation leaflet was prepared and sent to selected surrounding landowners and occupiers via post on 30th June, 2020. Upon feedback from the DPIE in the adequacy review of the draft EIS, this leaflet was revised and re-sent on 12 November 2020 to surrounding landowners and occupiers which included those receivers identified in the noise and air reports. These locations were based on the nearest affected industrial receivers and the nearest residential areas. No objections or issues of concern were raised.

CONCLUSIONS

The environmental assessment process has enabled the potential impacts of the proposed development to be evaluated, and control strategies to be devised in order to ensure compliance with regulatory standards.

To ensure the impacts of the proposed development are kept low, Gow Street Recycling Centre have prepared the following plans: Traffic Management Plan, Emergency Plan, Construction Environmental Management Plan (CEMP) and Environmental Management Plan (EMP) which accompany this application.

A Statement of Commitments is provided as Section 14. The Statement of Commitments summarises the commitment made by Gow Street Recycling Centre to implement the environmental controls designed into the development. The size and nature of the proposed

increase in capacity are considered to be suited to this site and the request is made that approval be granted.

Approval is requested.

Contents Page

Tables Page

Figures Page

Appendices

Attachments

1. INTRODUCTION

Benbow Environmental has been engaged by Gow Street Recycling Centre to prepare an Environmental Impact Statement (EIS) for the proposed liquid waste dewatering plant at the recycling facility located at 81 Gow Street, Padstow NSW. The proposal is State significant development and integrated development.

The site holds an environment protection licence (10943) for resource recovery and waste storage for building and demolition waste and asphalt waste (including asphalt resulting from road construction and waterproofing works), with a processing capacity of 80,000 tonnes per year, and a maximum storage quantity of 7,300 tonnes at any one time.

The proposed development seeks approval to:

- Establish a new liquid waste dewatering facility;
- Process 250,000 tonnes of liquid waste per year; and
- Operate 24/7.

Outcomes of discussions with the Department indicate that the proposed development would operate under an SSD approval and the existing C&D facility would remain under the existing Council approval.

The purpose of this EIS is to satisfy the requirements outlined in Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Additionally, this EIS will support the variation to an Environment Protection Licence (EPL) in order for Gow Street Recycling to operate the liquid waste dewatering plant at the site.

1.1 INTRODUCTION TO THE PROPONENT

Gow Street Recycling Centre (GSRC) is a small family owned and operated business, established in 2016 when the Padstow facility was purchased. GSRC are a specialist resource recovery centre for building and demolition waste which provides an alternative to landfill by recycling various types of waste and recovering that material into a recycled, reusable product for use in building and construction.

Their Padstow site is well positioned to cater for both Sydney Metro and South West region waste streams. Gow Street Recycling Centre is committed to providing high-quality products and services to the public and takes great pride in building strong relationships with the community.

The site operates under Council approval DA-51/1997 obtained on 29 August 1997 for the use of the site as a transfer station handling 80,000 tonnes per annum of road waste material. This approval has been amended twice as follows:

DA-51/1997/2 - 24 September 2013 which is a S91(1A) amendment that authorises the transfer station handling 80,000 tonnes per annum of road waste material and clarifies the material permitted and 24-hr operation. Under this amendment, the facility is authorised to process general solid waste including glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal, VENM, building and demolition waste, asphalt waste, cured concrete waste, any mix of the above materials and drilling mud. Changes to car parking were also included.

DA-51/1997/3 – 17 February 2015, a S96(1A) amendment to extend trial period to operate 24/7 for another 12 months.

Copies of these consent conditions are provided in Attachment 4.

It should be noted that under DA-51/1997/2, drilling mud is authorised as a waste material on site. Clause 16 of the approval allows the following:

16) For the purposes of a transfer station operating on site, the types of materials permitted to be brought to the site under the term "road waste material" and resulting purely from roadworks, are limited to the following:

a) General solid waste (non-putrescible):
- *i) Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal;*
- *ii) Virgin excavated material;*
- *iii) Building and Demolition waste;*
- *iv) Asphalt waste;*
- *v) Cured concrete waste;*
- *vi) Any mixture of the wastes referred to above.*

b) Drilling mud, meaning a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal or directional drilling or potholing. This does not included drilling mud that has been generated by:

- *i) Deep drilling for mineral, gas or coal exploration; or*
- *ii) Drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS).*

As the site has operated since 1997, the approval is still applicable, however, drilling mud was never added to the EPL as an approved incoming waste.

A dewatering/washing facility at the site was built between 2007 and 2009, and was in operation from 2009 to late 2016 before being demolished and replaced with aggregate bays (2017).

A new improved dewatering plant is proposed as part of this application.

1.1.1 Relationship with other Industries or Facilities

The proponent has a strong professional relationship with industry members, and related waste facilities as well as subcontractors in the construction industry across Sydney. The proponent is committed to a "ZERO HARM" approach in their business. This approach employs safety and sustainability practices to create awareness and build strong relationships with their various stakeholders.

1.2 PROJECT OVERVIEW

The proposed development will take place at 81 Gow Street, Padstow, and will consist of establishment and operation of a liquid waste dewatering plant within an existing building on site, with an annual processing capacity of 250,000 tonnes which includes 300,000 litres of liquid storage in tanks and inground pits.

Approval is being sought to add the liquid waste dewatering plant and operate this simultaneously with the C&D activities which will remain under the existing development consent DA-51/1997 and continue to operate at the approved capacity of 80,000 tonnes per annum.

Alterations and additions to the existing building on site would be undertaken for the installation of the dewatering plant and would require inground pits, sumps and bunkers, filter press, slurry homogeniser tanks, flocculant station, screw separator and screen, and conveyors.

The dewatering plant would operate separately from the existing C&D facility. There would, however, be some cross-over between operations as follows:

- Less than 10% of the recycled aggregates and fines produced from the dewatering plant (9,500 tpa) would require crushing. This material would be processed through the site's existing C&D plant which is licenced to process 80,000 tpa.
- Treated water from the dewatering process would be reused on site for dust suppression purposes on the existing external storage bunkers.
- The weighbridges and the existing wheel wash would be utilised by trucks associated with the C&D facility and proposed dewatering plant.
- Site offices and car parking would be used for site employees for both the existing C&D activities and the proposed dewatering activities.

The operation of the facility involves the following activities to be undertaken on site:

Liquid Waste Dewatering Plant

- Receive liquid waste including drilling mud and concrete washout waste from tanker trucks and concrete trucks into the 108,000 L inground pits which is transferred to the floc (flocculant) plant;
- The floc plant settles sands and aggregates to the bottom and transfers this mixture to the screens;
- The screens remove the sands and aggregates, these are then recycled under the relevant resource recovery exemption and order;
- Remaining suspended silts and clays from the screening process are transferred to the slurry homogeniser which stirs the silt to avoid settling and maintains a homogenous mixture of suspended silts for filtrations purposes. This mixture is sent to the filter press.
- Silt and clays are dewatered using a filter press. The solids are disposed of at a licenced landfill. Clean water is removed for reuse within the dewatering plant or on-site or sent to tradewaste;

The dewatering plant would also process the first 20 mm on-site stormwater that is captured within a 200kL underground tank. The stormwater system will be upgraded, the proposed system consists of BCP stream guard pollution control at stormwater pits, then a silt arrestor followed by the 200kL Rocla Plastream underground detention tank. After the first 20 mm of stormwater is

captured within the underground tank, the remaining clean overflow generated during a heavy rainfall event would be discharged into the stormwater system through the existing stormwater easement connection.

A stormwater isolation valve will be installed after the 200kL underground containment to be used to contain contaminate stormwater.

1.2.1 Objectives of the Proposal

The main objective of the proposal is to install a dewatering facility that improves the efficacy of Gow Street Recycling's operations. Secondary objectives include:

- Creating a facility to efficiently process liquid waste, reducing likelihood of illegal dumping; and
- To operate the facility to a high environmental standard and ensure cleaner production principles are implemented.

1.2.2 Staging of the Proposal

The proposal will be undertaken in one stage.

1.2.3 Need for Development

Waste generated from construction and demolition (C&D) activities historically ends up in landfill. Increasingly, businesses are seeing waste as a potential resource which has resulted in a growth of recycling facilities to repurpose waste C&D in NSW. A similar demand exists for facilities to treat liquid waste, as disposal is costly to industry and water is increasingly becoming a more precious resource, yet few facilities are presently available to recycle such waste. Gow Street Recycling Centre wishes to capitalise on this need by expanding their recycling centre to include a liquid waste dewatering plant that treats drilling mud and concrete washout water.

Padstow is a suburb located in south-western Sydney. This location and the surrounding suburbs is a rapidly growing area of NSW. Current infrastructure projects within close proximity to the site include:

- Bankstown Station Precinct, including the Sydenham to Bankstown Urban Renewal Corridor; and
- The new Bankstown-Lidcombe Hospital

In addition, the construction of Badgerys Creek airport, employment and growth centres and the associated infrastructure projects as well as the increasing demand for residential developments means this region is generating significant quantities of liquid waste associated with this construction activity. This proposed development is needed to provide an additional process specifically to treat liquid waste from such projects and convert them into usable products.

1.3 DEVELOPMENT ALTERNATIVES

This section of the EIS discusses alternatives to the proposed development in regards to both the site location and the proposed methods of operation.

1.3.1 Alternative Locations

As the site's existing recycling facility has been able to operate without detriment to both the surrounding community and the environment, installation of the liquid waste treatment facility at this site is considered to be the most viable option.

1.3.2 Alternative Design and Processes

The proposed method of treating liquid waste utilises a number of techniques including rotating and vibrating screens for the removal of large sands and aggregates. Flocculants for the concentrating the large sands and aggregates to increase the efficiency of the screens. Slurry homogenisers to ensure a homogenous silt density which ensures efficient and effective filtering using the filter press and reduces maintenance from settling of silts and clays, some of which could solidify within the system if not constantly stirred.

The proposed method of treating liquid waste is dewatering which is considered to be one of the more conventional approaches. Other methods are available; however, no specific environmental and economic benefits have been identified in the current literature which would warrant a change in current production methodologies.

The proposed development is considered to be the most cost-effective process with minimal environmental impact.

1.3.3 Site Selection

The subject site has been chosen for the liquid waste dewatering facility for the following reasons:

- The subject site has ample room available to cater for the proposed operations.
- The subject site is located in a well-established industrial area with adequate services.
- The subject site is not in a sensitive land use area and has adequate separation distance from residential areas and ecologically sensitive receivers (i.e. waterways).
- The proposed development is a permitted use with consent at the subject site.
- The proposed development would service areas throughout NSW and, therefore, the subject site is well positioned when compared to alternative locations.
- The existing facility at the subject site has extensive environmental safeguards, some of which can be utilised for the proposed development, providing assurance in regards to expected degree of environmental impacts.

In conclusion, the proposed development has been selected as the preferred option due to its ability to satisfy the objectives of the proposal, the advantages of utilising this current site and the reliability of proposed environmental impact mitigation measures, and those already available at the existing facility.

1.3.4 Alternative Site Layout & Dust Control Measures

In response to EPA's request that options be considered as part of this proposal for enclosing C&D operations, a number of alternatives were investigated to reduce cumulative dust impacts including:

- Enclose the C&D operations in a building in the current location. This option resulted in too much disruption to current activities and loss of business and was considered financially unviable.
- Enclosing the C&D operations in a building in the current location in stages. Again, construction activities could not be carried out safely whilst operations take place, and moving the crusher and screen to a different location on site would likely result in non-compliances. This option cannot be done without stopping current work activities during each stage.
- Moving the C&D operations to the front of the site and constructing a building in this location. There is insufficient room in this area.

Other options to partially enclose the operations were also considered including:

- Erecting shade sails over the C&D operations;
- Use of an inflexible material or awning to cover the C&D operations.

As an alternative to an enclosure, additional dust control measures were considered including:

- Upgrade to the water misting system to provide improved coverage and more effective suppression of dust particles;
- Covering the crusher and screen with a flexible hood and vacuum ducting to capture dust emissions directly from each process.

The above alternative dust control measures are considered feasible options. Air modelling shows with these measures in place, the proposed site activities and additional dust controls in place, it is considered that emissions to air from the site's operation are unlikely to cause harm to resident's health or the environment.

1.3.5 "No project" Option

The consequences of not proceeding with the project would be to deny the wider community of the benefits resulting from the increase in waste recycling.

If the 'no project' option was implemented, the demand for liquid waste recycling would only rise, increasing the cost of this service across NSW, incentivising illegal dumping of waste.

1.4 EIS Function and Structure

1.4.1 EIS Function

The EIS report has two main functions. Firstly, the EIS is required to document the existing built and natural environment and assess all potential impacts that the proposal may have on various environmental and social aspects. Based on the impact assessment, the EIS discusses the

management and control measures required by the proposed development to mitigate negative impacts and to achieve compliance with any criteria that applies to the proposal or site.

Secondly, the other function of the EIS is to provide all necessary information needed by the consent authority, the community, the various government authorities and the applicant to make informed decisions in relation to the proposed development, including its approval.

1.4.2 EIS Structure

The EIS is organised into the following three main sections:

- **Executive Summary**
  This summarises the proposed development, justification and the environmental assessment of the proposal.

- **Main Contents of the EIS**
  The main contents of the EIS describe the proposed development in detail, including the location and settings, the planning framework, the process description and other operational details. Then, the existing environment and the identification of issues are presented, followed by all necessary assessments of the potential environmental and, to a minor extent, social impacts. For each issue, safeguards and mitigation measures are addressed. The need and justification for the project are also included, together with a statement of commitments prepared for the proponent.

- **Appendices and Attachments**
  The Appendices contain the site plans and technical support documents, the Attachments include the requirements of the Secretary's Environmental Assessment Requirements (SEARs) and community consultation leaflet.

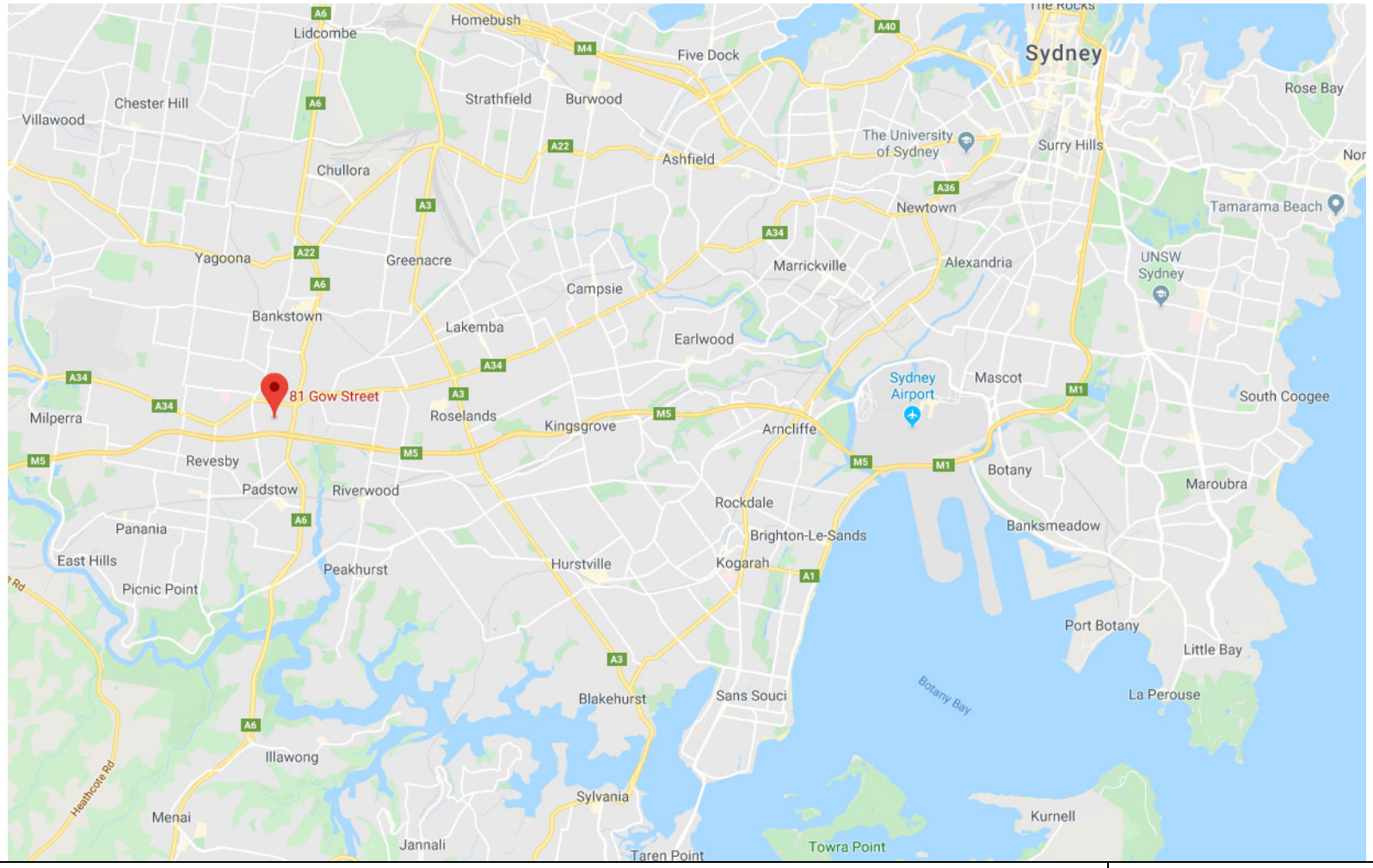
2. LOCATION AND SETTINGS

This section describes the existing site and location of the development. The site's surrounds are characterised and a general description of the environment likely to be affected, is provided.

2.1 SITE LOCATION

The development is located on a 575 m^2 section at 81 Gow Street, Padstow ("the subject site"), Lot A, DP103140. Figure 2-1 shows the site location in a regional context, with the site's local context shown in Figure 2-2. The site's current layout is shown in Figure 2-3.

Figure 2-1: Site Location in a Regional Context



↑N

Source: Google Maps 2019

Legend: Site location

Benbow Environmental
25-27 Sherwood Road
Northmead NSW 2152

Figure 2-2: The Site Location in a Local Context

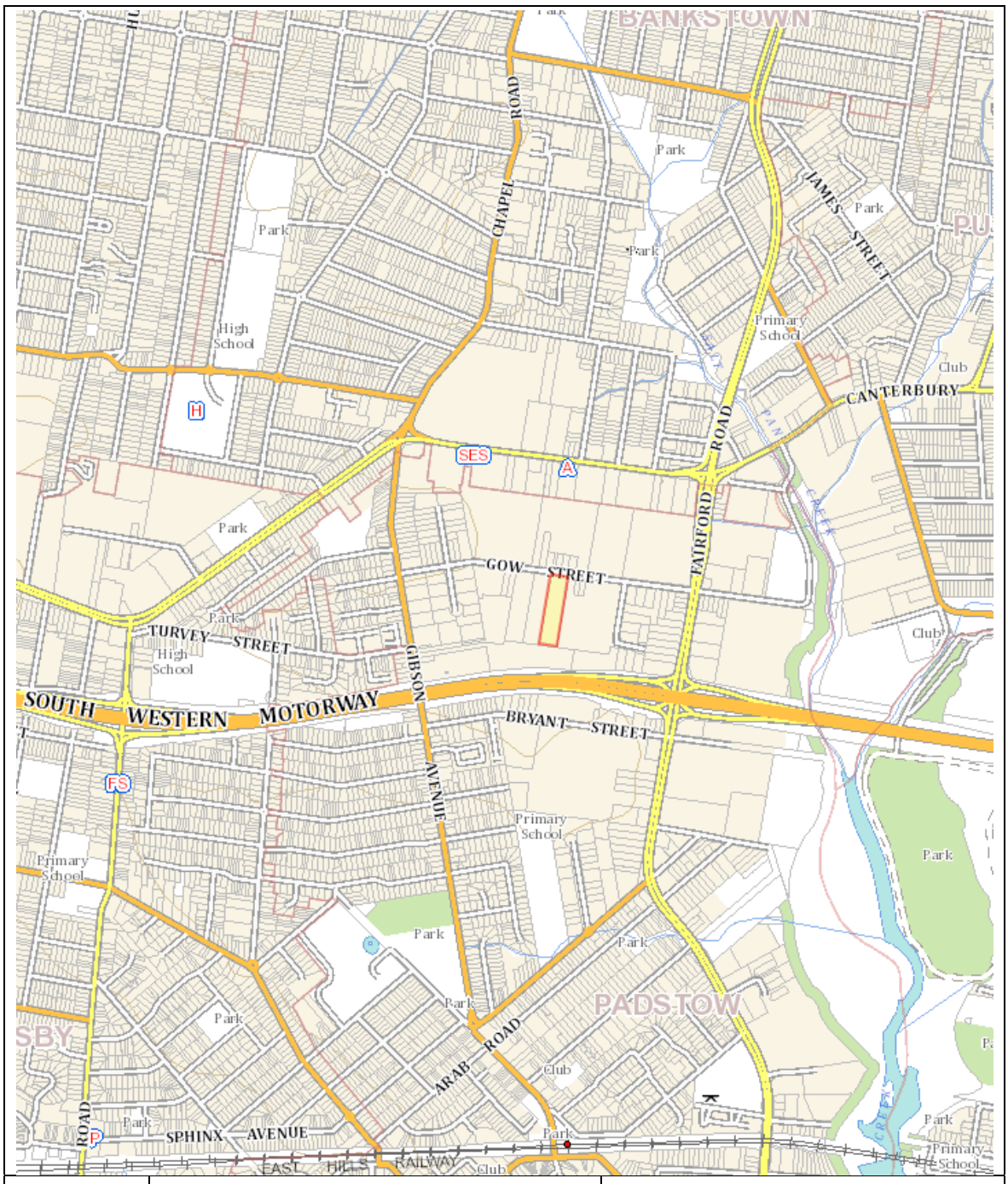


Figure 2-3: Aerial Photograph of The Site's Current Layout

2.2 SITE DESCRIPTION

The existing development site is a fully developed industrial premises with a total area of approximately 10,115 m^2. The entire site consists of sealed concrete hardstand.

There is currently no existing vegetation or landscaping on the site. Existing vehicle access to the site is via two driveways from Gow Street. Vehicles currently enter and exit via the western driveway. The eastern driveway is a service driveway. There are 9 car spaces located adjacent to the western entry driveway that are used by staff.

There are currently two weighbridges at the site. Trucks are required to be weighed upon entry and exit to the site. A wheel wash is located along the western boundary prior to the

weighbridge on the exit driveway. All trucks currently leave the site after passing through the wheel wash.

A 6 metre drainage easement runs through the centre of the site and is shown on the existing site plan in Figure 2-4 as dashed lines.

The site contains three existing buildings. An existing warehouse that is to be extended and is the proposed location for the new dewatering plant. An existing office and amenities building that is to be demolished and a demountable that is used as a lunchroom that is to be removed. There is also an existing awning located to the east of the car parking spaces that is to be removed. A diesel tank is located in this area.

The majority of the C&D activities take place on the southern half of the site. The southern boundary contains an 8.5 metre high wall that extends approximately 50 metres along the eastern boundary and 80 metres along the western boundary. This wall provides protection to surrounding areas from noise and dust and also provides a visual shield to the site from adjoining properties. The bottom 4.5 metres of the wall is made of precast concrete blocks while the top 4 metres is metal cladding. The existing crusher and conveyors are located in the south-eastern corner of the site and surrounded on three sides with concrete walls. Storage bunkers are located predominantly on the western side of the site and consist of precast concrete blocks. The contents of the bunkers consist of various sized aggregates, soil, sand, turf, concrete and garden mix. The existing site plan in Figure 2-4 shows the contents of each storage bunker.

Two large stormwater drainage pipe lines (diameter 1,500 mm), traverse underground in the centre of the site. Eight existing onsite stormwater pits connect to these two main lines via 1,050 mm, 450 mm, 300 mm and 250 mm diameter underground pipelines.

2.2.1 Existing Resource Recovery Facility

The site contains an existing resource recovery facility with approval under DA-51/1997 to process up to 80,000 tonnes per year and store tpa of construction and demolition (C&D) waste and has a storage capacity of 7,300 tonnes at any one time. The existing facility is not and will not be part of the development and will continue to operate under the existing consent. The facility is authorised to accept the following wastes:

- General solid waste (non-putrescible) including:
  - Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal;
  - Virgin excavated material;
  - Building and Demolition waste;
  - Asphalt waste;
  - Cured concrete waste;
  - Any mixture of the wastes referred to above.

- Drilling mud, meaning a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal or directional drilling or potholing. This does not included drilling mud that has been generated by:
  - Deep drilling for mineral, gas or coal exploration; or
  - Drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS).

It should be noted that the facility currently does not accept drilling mud and this waste type is currently not included on the Site's EPL.

The site is fully developed and consists of two weighbridges, a wheel wash, a warehouse building, demountable office and a demountable lunchroom. Crushing and screening equipment are located in the south-east corner and there are 12 pre-cast concrete external storage bunkers for the storage of incoming wastes and recovered materials. A detailed description of the existing facility and an existing site plan is provided in Sections 2.2 and 2.2.1.

The existing development site is a fully developed industrial premises with a total area of approximately 10,115 m^2. The entire site consists of sealed concrete hardstand.

Approved hours of operation of the existing resource recovery facility are between 6.00am - 6.00pm on weekdays and 7.00 am - 6.00 pm weekends.

A description of the existing processes is provided in the following section.

2.2.1.1 Existing Process Description

The following steps are undertaken at the existing approved resource recovery facility:

- Incoming waste is received pre-sorted from skip bin facilities and is inspected at the weighbridge upon arrival at the site.
- Acceptable waste is weighed and recorded.
- Trucks unload the waste at the pre-crushed storage area.
- Material is crushed and screened to suitable sizes.
- Recovered material is stored in designated external storage bunkers.
- Materials are loaded onto trucks and weighed before leaving the site via the wheel wash for off-site reuse as road-base material.

Waste dockets are maintained for record keeping purposes.

2.2.1.2 Existing Waste Storage

Waste storage bunkers are shown on the existing and proposed site plan.

A summary of the waste type, storage area dimensions and storage capacity is provided in the table below:

Table 2-1: Existing Bunker Dimensions and Storage Capacity

Type	Width (m)	Length (m)	Height (m)	Volume m^3
Sand	4.725	6.654	4	126
Topsoil	4.019	6.654	4	107
Turf underlay	3.954	6.654	4	105
Natural 10 mm aggregates	4.04	6.654	4	108
Organic garden mix	4.042	6	4	97
30-100 mm aggregates	4.121	4	4	66

Table 2-1: Existing Bunker Dimensions and Storage Capacity

Type	Width (m)	Length (m)	Height (m)	Volume m^3
ENM/VNM/GSW (1)	5.337	9.225	4	197
ENM/VNM/GSW (2)	3.96	5.967	4	95
ENM/VNM/GSW (3)	6.087	(15.291+10.481)/2 =12.886	4	314
Concrete	6	12.09	4	290
Waste receivals	14	12.09	4	677
20 mm aggregates	35.289	7.825	4	1105
Fine aggregates	8.542	7.825	4	267
Dust	14.91	7.825	4	467
Processing area	12	18	4	864
			Volume total	4883
			Tonnes total	7300

2.2.1.3 External C&D Operations Justification

The NSW EPA typically require all waste processing and storage to occur inside a building, for any new developments or modifications to developments. As such, the SEARs have requested strong justification for the on-going operations of the C&D facility externally.

The key reasons for the NSW EPA requirements are:

- Noise — Enclosing noisy operations reduces noise impacts.
- Air Quality — Enclosing dust generating operations or other air pollutant generating operations significantly reduces offsite impacts, as pollutants that become airborne are less likely to leave the building, the majority settling within.
- Water — Enclosing wastes prevents rain water from coming in contact with the waste, mobilising pollutants that may enter stormwater and leave the site, to potentially contaminate rivers/creeks/streams etc.

However, despite this requirement there is no governing NSW legislation that mandates waste be processed and stored inside.

This is an ongoing issue with waste facilities across NSW and the world at large.

Most wastes are not very valuable as a cost per tonne and constructing buildings that are capable of handling the quantities needed to be cost effective and are safe from a fire safety perspective is frequently cost prohibitive for a development.

In NSW this is particularly apparent, especially in the Sydney Basin because the cost per square meter of land is higher than most places on the planet. This is further exacerbated by parking requirements, reducing allowable productive space.

For waste facilities that process combustible materials the cost is further increased by the NSW FR Guidelines where the stockpiling, requirements reduce allowable productive space and the automated sprinkler requirements increase costs of operating within buildings.

All of these factors tend to culminate in an increased demand to export waste overseas where the legislation is less stringent. Of course the people living and working in and nearby these facilities, would be inherently subject to much greater risks of fire, air, noise and water pollution. Also significantly increasing CO_2 emissions per tonne of waste recycled.

It is therefore of paramount importance that the EPA work with NSW recycling businesses, particularly small businesses on cost effective case-by-case environmental solutions for waste facilities.

This particular site in Padstow NSW is one of the few facilities available to process C&D waste in the area. It is prohibitively expensive to build a building necessary to process the quantities of wastes required. This cost is significantly increased by the downtime the existing C&D facility would have to undertake as well as the substantial loss of business due to the interruption to regular clients that take their waste to Gow Street.

The proposed development will significantly reduce environmental impacts:

- Water generated from the dewatering plant will be used as dust suppression to reduce dust impacts.
- Shade sails will be constructed, at significant expense which will reduce dust impacts.
- New stormwater system will be constructed which will significantly reduce stormwater impacts, especially compared with the existing stormwater infrastructure on-site.

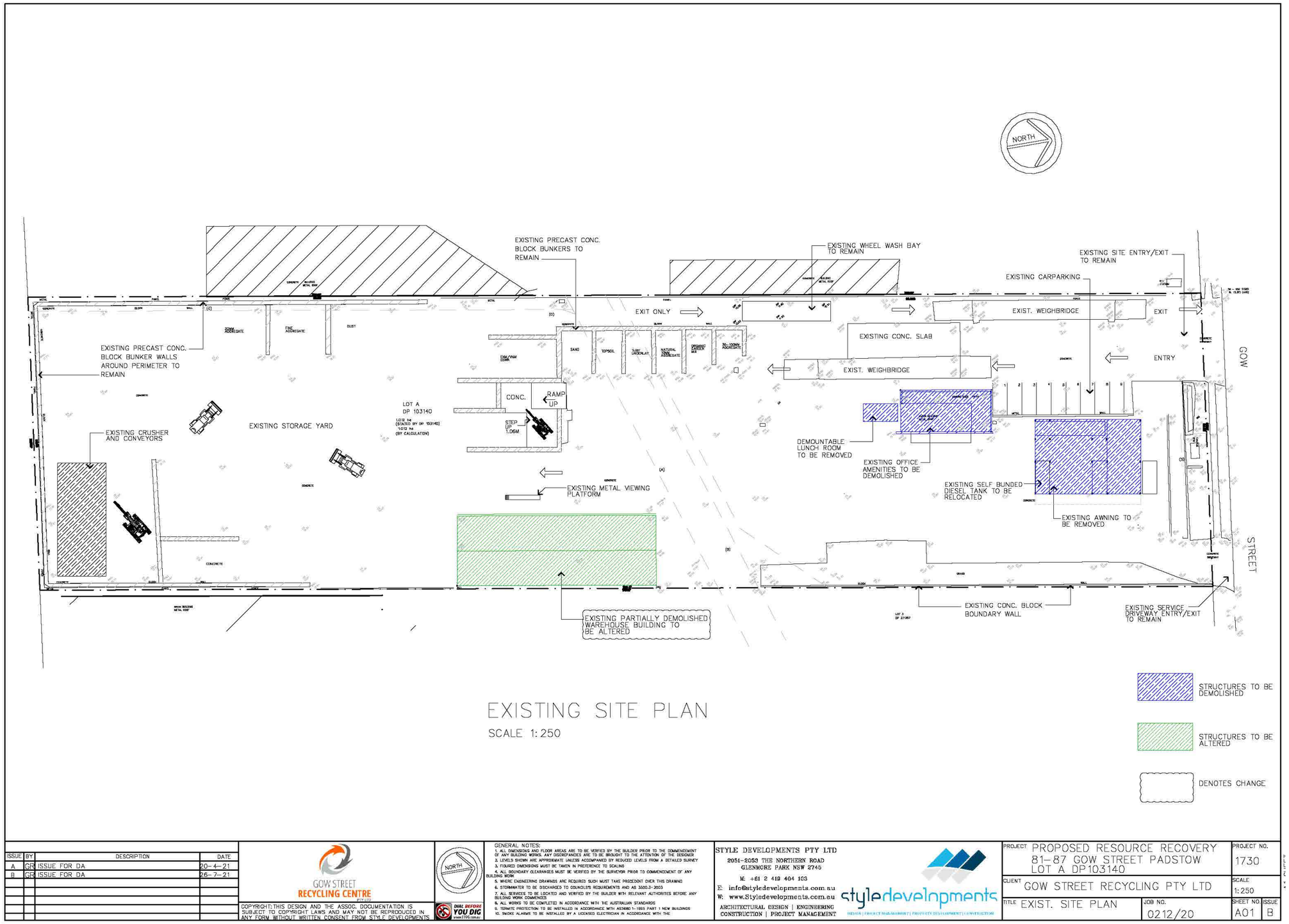
At this stage, there will be no increase to C&D quantities received on-site. Therefore the impacts will be substantially reduced.

Gow Street Recycling and Benbow Environmental commit to validating the efficiency of these controls before seeking any further stages in the development.

2.3 EXISTING SITE LAYOUT

Figure 2-4 shows the existing site plan of the development.

Figure 2-4: Existing Site Plan

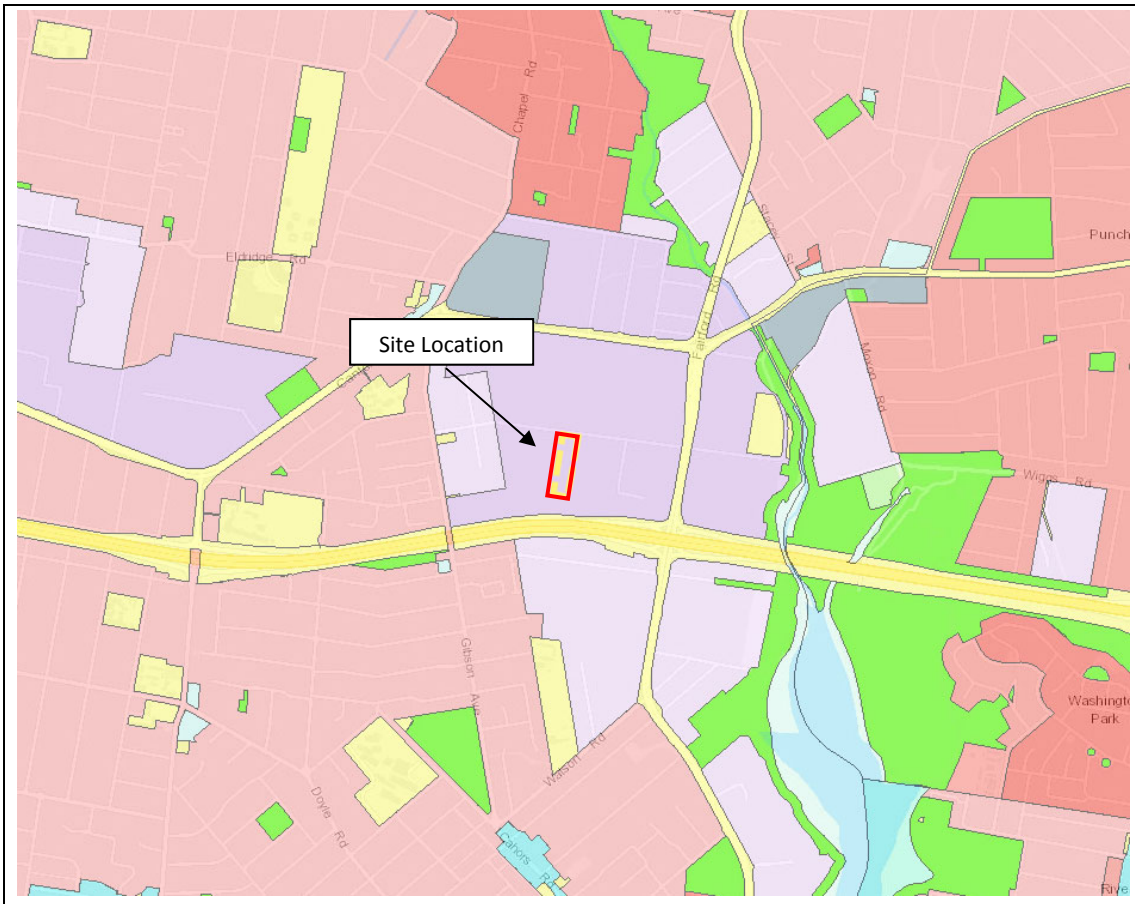


2.4 LAND USE

The site is situated within zone IN1, General Industrial, under the Bankstown Local Environmental Plan (LEP) 2015 as shown in Figure 2-4. The surrounding zonal land classes include: to the South, SP2, Special Infrastructure (the South Western Motorway), to the far west, IN2 (Light Industrial) and to the south-west, west, north and east, R2 (Low Density Residential) and RE1 (Public Recreation).

Salt Pan Creek, a natural waterway, lies approximately 760 m due east. The T8 – Airport and South Rail line is located 1.6 km south of the site. The closest residential areas are to the south west (200 m) and west (380 m). The surrounding land zoning is shown in Figure 2-4.

Figure 2-4: Surrounding Land Use Zoning



Source: https://www.planningportal.nsw.gov.au not to scale

Legend:

Site location:

- B1 - Neighbourhood Centre
- B2 - Local Centre
- B3 - Commercial Core
- B4 - Mixed Use
- B5 - Business Development
- B6 - Enterprise Corridor
- B7 - Business Park
- B8 - Metropolitan Centre
- E1 - National Parks and Nature Reserves
- E2 - Environmental Conservation
- E3 - Environmental Management
- E4 - Environmental Living
- IN1 - General Industrial
- IN2 - Light Industrial
- IN3 - Heavy Industrial
- IN4 - Working Waterfront
- R1 - General Residential
- R2 - Low Density Residential
- R3 - Medium Density Residential
- R4 - High Density Residential
- R5 - Large Lot Residential
- RE1 - Public Recreation
- RE2 - Private Recreation
- RU1 - Primary Production
- RU2 - Rural Landscape
- RU3 - Forestry
- RU4 - Primary Production Small Lots
- RU5 - Village
- RU6 - Transition
- SP1 - Special Activities
- SP2 - Infrastructure
- SP3 - Tourist
- W1 - Natural Waterways
- W2 - Recreational Waterways
- W3 - Working Waterways

2.5 LOCAL COMMUNITY

2.5.1 Padstow and the Surrounding Area

The suburb of Padstow is located approximately 22 km south-west of Sydney's Central Business District. It is within the Canterbury-Bankstown Council. Surrounding suburbs include; Bankstown, Revesby, Peakhurst, Riverwood and Punchbowl.

Padstow has five primary schools (four public and one Catholic) and no secondary schools.

Padstow Railway Station is the main public transport route through the suburb and lies on the Sydney Trains Airport and South Line. Additionally, there are several bus routes that travel through Padstow, all of which are operated by Transdev NSW.

2.5.2 Population Demographics

The Australian Bureau of Statistics (ABS) conducts a national census every 4 years. Data presented below has been sourced from the last census survey conducted in 2016.

At the time of the 2016 census, the population within the suburb of Padstow consisted of 13,306 people, of which 50.8 % were males and 49.2 % female. Of the total persons residing in Padstow, 5,804 people reported as being employed, of which approximately 70 % worked full-time and 30 % part-time. The largest occupation representation is professionals 21.4 %, followed by %, clerical and administrative workers 18.8 %, technicians and trade workers 13.5 %, managers 11.1 %, sales workers 9.1 %, community and personal service workers 8.7 %, labourers 8.2 % and machinery operators and drivers 7.3 % (ABS 2016).

2.6 NEAREST SENSITIVE RECEIVERS

The closest residential receivers are detailed in Table 2-2 and shown in Figure 2-5. The nearest residences are located 240 m southeast of the site along Bryant Street. Padstow Primary School is the nearest school located approximately 485 m south of the site.

The nearest waterway is Salt Pan Creek, approximately 760 m east of the site. Salt Pan Creek flows through Bankstown, Padstow and connects to Georges River at Padstow Heights.

The nearest ecological receiver is Salt Pan Creek Reserve, which is 685 m to the east of the site.

Table 2-2: Nearest Sensitive Residential and Non-Residential Receivers

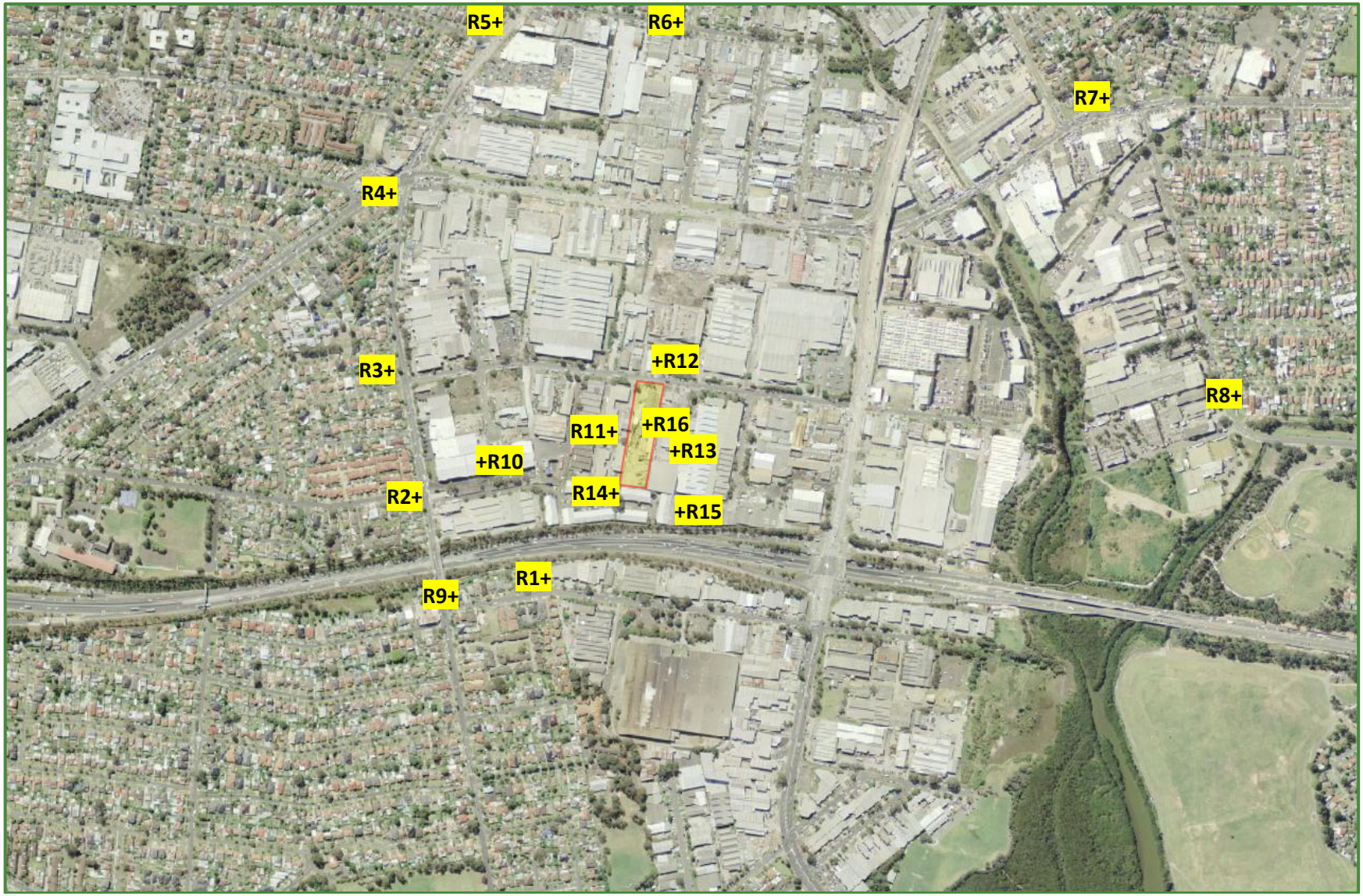
Receptor ID	Address	Direction from Site	Lot & DP	Approx. Distance from Proposed Development	Type of Receptor
R1	24 Bryant Street, Padstow	SW	17 DP 18539	240 m	Residential
R2	59 Gibson Avenue, Padstow	W	1 DP 18270	430 m	Residential
R3	39 Gibson Avenue, Padstow	W	2 DP 26399	500 m	Residential

Table 2-2: Nearest Sensitive Residential and Non-Residential Receivers

Receptor ID	Address	Direction from Site	Lot & DP	Approx. Distance from Proposed Development	Type of Receptor
R4	168 Canterbury Road, Bankstown	NW	3 DP 10428	610 m	Residential
R5	76 Chapel Road, Bankstown	NW	6 DP 132453	780 m	Residential
R6	61 Marshall Street, Bankstown	N	4 DP 13275	700 m	Residential
R7	26 John Street, Punchbowl	NE	1 DP 36047	900 m	Residential
R8	62 Moxon Road, Punchbowl	E	1 DP 1129073	1030 m	Residential
R9	98-100 Gibson Avenue, Padstow	SW	11 DP 1208760	390 m	School Classroom
R10	9 Gatwood Close, Padstow	W	71 DP 1163243	290 m	Place of Worship
R11	89 Gow Street, Padstow	W	A SP 103140	Adjacent	Industrial
R12	82 Gow Street, Padstow	N	2 DP 392634	Adjacent	Industrial
R13	79 Gow Street, Padstow	E	3 DP 371357	Adjacent	Industrial
R14	78 Gibson Avenue, Padstow	S	SP 22907	Adjacent	Industrial
R15	9 Wordie Place, Padstow	SW	12 DP 242730	Adjacent	Industrial
R16	81 Gow Street, Padstow (on-site)	-	-	On-site	Dust monitor location

Note: distances measured from the boundaries of the site

Figure 2-5: Receptor Map



2.7 SITE HISTORY

2.7.1 DA History

The development history of the site is presented in the table below. This provides the history of approvals obtained for the site.

Table 2-3: Council's Development and Building Application and Consent Records from 81 Gow Street, Padstow

Year	Number	Description
2019	CD-91/2019	Demolition of Existing Warehouse/Storage Shed
2016	DA-818/2016	Installation of a weighbridge
2016	CC-603/2016	Installation of a weighbridge
2014	DA-51/1997/3	Transfer Station Handling 80,000 Tonnes Per Annum of Road Waste Material S96(1A)
2013	DA-844/2013	Use of material crushing plant within existing waste management facility
2012	DA-51/1997/2	Transfer Station Handling 80,000 Tonnes Per Annum of Road Waste Material S96(1A)
2007	DA-478/2007	Partial use of premises as a metal recycling depot
2005	DA-202/2005	Use of premise for storage
2004	DA34/-2004	Subdivision into 2 lots
2000	DA-968/2000	Inclusion of crushing and screening works at existing transfer station
1999	DA-799/1999	Construction of storage bins and use of crusher/sorter
1999	DA-51/1997/1	Transfer Station Handling 80,000 Tonnes Per Annum of Road Waste Material S96(2)
1998	BA-1237/1998	Concrete Slab and Waste Bin
1998	DA-207/1998	Subdivision into 2 lots
1998	DA-19/1989	Annex at side of building; Concrete and roof rear loading areas & add
1997	DA-51/1997	Transfer Station Handling 80,000 Tonnes Per Annum of Road Waste Material
1997	DA-67/1997	Proposed Torrens Title Subdivision into 2 lots
1994	DA-373/1994	Parking of trucks and storage of freight and mechanical repairs
1994	BA-962/1994	Partition Wall
1993	BA-1719/1993	Warehouse
1993	DA-573/1993	Construction of a warehouse
1992	BA-566/1992	Partial Enclosure Existing Support
1991	DA-3/1991	Construction of a new warehouse UNIT 2
1988	BA-557/1988	Concrete over existing driveways
1986	DA-561/86	Use of factory for the purpose of polystyrene foam moulding, cutting and fabrication.
1986	DA-528/86	Alterations and additions to existing premises for the use of the rear part of the site as a transport terminal.
1985	DA-126/85	Use of existing factory premises for the collection, shredding and baling of paper.
1978	DA-120/78	Dismantle, rebuild and sell new, used and re-conditioned automotive parts and accessories and for the wholesale of used motor vehicles.
1967	BA-1451/67	Erection of a framed brick factory.

Copies of these development approvals were requested from Council and can be found in Attachment 4.

2.7.2 Aerial Photographs

Aerial photographs obtained from the NSW Department of Lands and Google Earth for the following years were reviewed to describe the site features and surrounding areas at various timelines:

- 1955;
- 1986;
- 1991;
- 2004;
- 2016; and
- 2019.

The historical aerial photographs have been included in Attachment 5. The site boundaries are shown on the close up photographs. A summary of the review is presented in Table 2-4.

Table 2-4: Site History

Year	Site	Surrounding Areas
1955	A residence and adjacent shed are located in the north-western corner of the site. The remainder of the site is cleared of vegetation and a small watercourse traverses the centre of the site, east-west.	Residences and large shed structures are located on lots north and east of the site. Surrounding lots are mostly undeveloped, with vegetation and small structures located west, south and east of the site. Beyond the immediate surrounds of the site, numerous residential suburbs have been established in Punchbowl (east) and Revesby (south-west).
1986	The site has been fully developed and sealed, no vegetation remains. Two (2) structures – a large warehouse near the north boundary and a smaller shed south of this – are established. Numerous shipping containers and vehicles are present in the rear (southern) yard (in line with DA-528/86).	Immediate surrounding lots north, south and west are developed. The adjoining lot in the west is undeveloped. Numerous large warehouse structures are present on many lots surrounding the site. Further growth and development in the residential suburbs surrounding the site.

Table 2-4: Site History

Year	Site	Surrounding Areas
1991	Existing structures are still on the site. A number of shipping and transport containers remain in the rear yard. The remainder of the site remains unchanged.	Further development and growth in all surrounding lots (larger warehouses/structures in place). The lot west of the site has been developed and contains a number of unit structures. The future M5 South-West Motorway area south of the site has been cleared and is being prepared for construction. The future A6 Davies/Fairford Road east of the site has been cleared also.
2004	An additional shed structure can be seen located along the eastern boundary. The rear yard is free of shipping and transport containers. A crusher/screener can be seen in the rear yard and material stockpiles are visible along the western boundary (in line with DA-51/1997, DA-799/1999 and DA-968/2000).	Further development and growth in all surrounding lots. The industrial estate surrounding the site has grown considerably, as have the residential areas/suburbs at all points surrounding the site. The M5 has been completed and is now fully functional. The A6 has also been completed as an arterial road servicing north-south.
2016	The smaller shed is being utilised as a washing/dewatering plant and the rear of the yard has stockpile bays installed along the east and west boundary.	Minimal changes to the surrounding area. Further development and growth in all surrounding lots.
2019	Addition of weighbridge on site towards entry (in line with DA-818/2016 or CC-603/2016). The washing/dewatering shed has been demolished and external material bays are now in its place along the western boundary. Additional stockpile bays are located at the rear of the site. The remainder of the site remains unchanged.	Minimal changes, development and growth in all surrounding lots.

3. PLANNING FRAMEWORK

This section provides an assessment of the proposed development in accordance with all relevant statutory planning controls.

3.1 COMMONWEALTH CONTROLS

3.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) would apply to the development of the subject land. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places – defined in the EPBC Act as matter of national environmental significance.

The proposed development would not have a significant impact on matters of national environmental significance and it is not on Commonwealth land. Therefore, the Provisions of the Act do not have application and the approval of the Minister is not required.

3.2 STATE CONTROLS

3.2.1 Environmental Planning and Assessment Act and Regulation

The *Environmental Planning and Assessment Act 1979 (EP&A Act)* and the *Environmental Planning and Assessment Regulation 2000 (EP&A Regulation)* provide the framework for environmental planning in NSW. The EP&A Act and the Regulation include provisions to ensure that proposals, which have the potential to impact on the environment, are subject to detailed assessment. Under this legislation the proposed development is defined as integrated development.

3.2.1.1 Designated development

32 Waste management facilities or works

(1) Waste management facilities or works that store, treat, purify or dispose of waste or sort, process, recycle, recover, use or reuse material from waste and:

(a) that dispose (by landfilling, incinerating, storing, placing or other means) of solid or liquid waste:

(i) that includes any substance classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste, or

(ii) that comprises more than 100,000 tonnes of "clean fill" (such as soil, sand, gravel, bricks or other excavated or hard material) in a manner that, in the opinion of the consent authority, is likely to cause significant impacts on drainage or flooding, or

(iii) that comprises more than 1,000 tonnes per year of sludge or effluent, *or*

(iv) that comprises more than 200 tonnes per year of other waste material, or

(b) that sort, consolidate or temporarily store waste at transfer stations or materials recycling facilities for transfer to another site for final disposal, permanent storage, reprocessing, recycling, use or reuse and:

(i) that handle substances classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste, or

(ii) that have an intended handling capacity of more than 10,000 tonnes per year of waste containing food or livestock, agricultural or food processing industries waste or similar substances, or

(iii) that have an intended handling capacity of more than 30,000 tonnes per year of waste such as glass, plastic, paper, wood, metal, rubber or building demolition material, or

(c) that purify, recover, reprocess or process more than 5,000 tonnes per year of solid or liquid organic materials, or

(d) that are located:

(i) in or within 100 metres of a natural waterbody, wetland, coastal dune field or environmentally sensitive area, or

(ii) in an area of high watertable, highly permeable soils, acid sulphate, sodic or saline soils, or

(iii) within a drinking water catchment, or

(iv) within a catchment of an estuary where the entrance to the sea is intermittently open, or

(v) on a floodplain, or

(vi) within 500 metres of a residential zone or 250 metres of a dwelling not associated with the development and, in the opinion of the consent authority, having regard to topography and local meteorological conditions, are likely to significantly affect the amenity of the neighbourhood by reason of noise, visual impacts, air pollution (including odour, smoke, fumes or dust), vermin or traffic.

(2) This clause does not apply to:

(a) development comprising or involving any use of sludge or effluent if:

(i) the dominant purpose is not waste disposal, and

(ii) the development is carried out in a location other than one listed in subclause (1) (d), above, or

(b) development comprising or involving waste management facilities or works specifically referred to elsewhere in this Schedule, or

(c) development for which State Environmental Planning Policy No 52—Farm Dams and Other Works in Land and Water Management Plan Areas requires consent.

The proposed development will process more than 1,000 tonnes per year of sludge or effluent and is defined as designated development under Clause 32. However, under Clause 4.10(2) of the Environmental Planning and Assessment Act 1979, *Designated development does not include State significant development despite any such declaration*.

The proposed development is State Significant Development under The State Environmental Planning Policy (State and Regional Development) 2011, as shown in Section 3.2.5.5.

3.2.1.2 Integrated development

Part 4, Division 4.8, Section 4.46 of the EP&A Act defines what constitutes an "Integrated development". Integrated development is development (not being State significant development or complying development) that requires development consent and one or more of the following licenses or approvals listed in Table 3-1.

Table 3-1: Licence/Approval Requirements as Integrated Development

Legislation	Require License or Approval
Coal Mine Subsidence Compensation Act 2017	No
Fisheries Management Act 1994	No
Heritage Act 1977	No
Mines Subsidence Compensation Act 1961	No
Mining Act 1992	No
National Parks and Wildlife Act 1974	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	**Yes**
Roads Act 1993	No
Rural Fires Act 1997	No
Water Management Act 2000	No

The site currently holds an EPL licence (10943) for resource recovery and waste storage. The EPL will need to be varied to include the liquid waste dewatering activities and storage.

Hence this proposal is integrated development.

3.2.1.3 Section 4.15 (1) – Matters for Consideration

Under Section 4.15 of the EP&A Act, in determining a development application a consent authority is to take into consideration such of the following matters as are relevant to the development, the subject of the development application.

(a) The provisions of:

(i) Any environmental planning instrument

The *Bankstown Local Environmental Plan 2015* applies to the subject land. The subject land is zoned IN1 General Industrial. Under the provisions of this zone the proposed use is permitted with consent as demonstrated in Section 3.3.1.1.

(ii) Any draft environmental planning instruments that have been placed on public exhibition.

None at this stage.

(iii) Any Development Control Plans

The proposed use has been assessed in accordance with the Bankstown DCP 2015 in Section 3.3.2.

(iv) Any matters prescribed by the regulations.

None at this stage.

(b) The likely impact of the development including environmental impacts in both the natural and built environment and social and economic impacts in the locality.

- *Context and Setting*

The proposed use will complement the surrounding area and strengthen the overall economic development of the area.

- *Potential Impact on Adjoining Properties*

There will be no negative impact on the adjoining or surrounding industrial or other adjoining properties as demonstrated throughout this report and supporting technical assessments.

- *Access, Transport and Traffic*

A traffic and parking assessment has been undertaken and found that the proposed design of the development is acceptable in all aspects of its traffic design. The nearby intersections perform well to accommodate additional traffic of the development site. There are no public parking opportunities near the development, all parking demand would be contained on site.

- *Public Domain*

The proposed use will have a positive contribution to the public domain.

- *Utilities*

The existing utilities are available to service the proposed development. Connection to Sydney Water's Tradewaste system will be required.

- *Heritage*

A search of the NSW Heritage Register and Council's LEP found no heritage items on or close to the site. However, an Aboriginal cultural heritage assessment was a requirement of the EES SEARs due to the need to excavate as part of the proposal. No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey.

- *Other Land Resources*

The proposed development will take waste products from construction sites and recycle them into valuable resources for reuse.

- *Critical Habitat*

The land does not include or comprise critical habitat.

- *Air and Microclimate*

There are no microclimate issues. An air quality impact assessment has been conducted and found that there will be no significant impacts from the operation of the dewatering plant.

- *Waste*

The site is an existing resource recovery facility for construction and demolition waste. The addition of the dewatering plant would allow for liquid waste such as drilling mud and concrete washout waste to be treated resulting in some recovery of material and wastewater of a standard suitable to reuse on site. Little waste requiring disposal is expected.

- *Energy*

The proposed operation would not involve energy intensive activities therefore there are no energy issues.

- *Noise*

Detailed noise impact assessments have been conducted in accordance with the NSW Noise Policy for Industry, Interim Construction Noise Guideline and the NSW Road Noise Policy. The noise assessments concluded that the proposed development will not generate significant noise impacts.

- *Natural Hazards*

Flooding was identified as a potential natural hazard. A flood assessment was undertaken to ensure no impacts would result from the proposed development.

- *Social Impact in the Locality*

No negative social impacts have been identified.

- *Economic Impact in the Locality*

The proposed use will contribute to the economic development of the area.

- *Site Design and Building Form*

The site is already developed and consists of infrastructure for the C&D resource recovery facility. The proposed dewatering facility would be located inside a new purpose-built building that will replace an existing building. A new office is proposed to be constructed adjacent to the existing weighbridge and has been designed in accordance with relevant DCP requirements and the Building Code of Australia (NCC 2019). These changes are not expected to significantly impact on the existing site design and building form. A discussion of visual amenity is provided in the EIS.

- *Construction*

Construction of the office, and fit out and extension of the existing building for the dewatering plant is expected to be completed within a four-month timeframe.

The construction works involve some excavations for the inground water containment pits and sumps, stormwater system upgrade and footings for the equipment installation. Due to the presence of acid sulfate soils, an Acid Sulfate Soil Management Plan provided with this development application is required to be implemented.

- *Cumulative Impacts*

There are no cumulative impact issues given the nature of this locality.

(c) The suitability of the site for the development.

The proposed development is appropriate for this site.

(d) Any submissions made in accordance with the Act.

No submissions at this stage.

(e) The public interest

There are no aspects of the proposed use that would be contrary to the public interest.

3.2.2 Protection of the Environment Operations Act 1997

Part 1 in Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) lists premise-based activities that are scheduled activities and, as such, that require a licence under the Act. The facility already holds an Environment Protection Licence (#10943) for resource recovery and waste storage of building and demolition waste including asphalt waste. This includes a processing capacity of 80,000 tpa, and a maximum storage quantity of 7,300 tonnes at any one time.

The proposed development includes the processing of liquid waste which is defined by the following scheduled activity under Clause 41 of Schedule 1 of the Act:

> ***41 Waste processing (non-thermal treatment)***
>
> *(1) This clause applies to the following activities:*
>
> > *"**non-thermal treatment of general waste**", meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing otherwise than by thermal treatment.*
> >
> > *"**non-thermal treatment of hazardous and other waste**", meaning the receiving of hazardous waste, restricted solid waste or special waste (other than asbestos waste or waste tyres) from off site and its processing otherwise than by thermal treatment.*
> >
> > *"**non-thermal treatment of liquid waste**", meaning the receiving of liquid waste (other than waste oil) from off site and its processing otherwise than by thermal treatment.*
> >
> > *"**non-thermal treatment of waste oil**", meaning the receiving of waste oil from off site and its processing otherwise than by thermal treatment.*
> >
> > *"**non-thermal treatment of waste tyres**", meaning the receiving of waste tyres from off site and their processing otherwise than by thermal treatment.*

(2) However, this clause does not apply to the processing of any of the following:

a) stormwater,

b) contaminated soil,

c) contaminated groundwater,

d) sewage within a sewage treatment system (whether or not that system is licensed).

(3) Each other activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if—

(a) it meets the criteria set out in Column 2 of that Table, and

(b) 50% or more by weight of the total amount of waste received per year requires disposal after processing.

Comment:
The proposal involves the non-thermal treatment of liquid waste and would have on site at any one time more than 200 kilograms of liquid waste thus Clause 41 applies.

42 Waste storage

*(1) This clause applies to **waste storage**, meaning the receiving from off site and storing (including storage for transfer) of waste.*

Comment:
The proposed development will receive waste from off site and will store more than 5 tonnes of liquid waste on site at any one time, thus Clause 42 applies.

In summary, the proposed development requires a variation to the existing EPL to add the following scheduled activities:

- 41 – Waste Processing (Non-thermal treatment) – for Non-thermal treatment of liquid waste; and
- 42 – Waste storage (storage of liquid waste).

3.2.3 Biodiversity Conservation Act 2016

The subject land is not biodiversity certified land within the meaning of Part 8 of the *Biodiversity Conservation Act 2010*. There is no element of the Biodiversity Offsets Scheme that applies to the land under Part 8 of the same Act. The subject land does not contain threatened species.

3.2.4 NSW Heritage Act 1977

The subject land does not contain an item of environmental heritage and there are no items of environmental heritage in the immediate vicinity of the subject land that would be impacted by its proposed use. Therefore, there are no issues in relation to the *NSW Heritage Act 1977*.

3.2.5 State and Regional Environmental Planning Policies

A number of State Environmental Planning Policies (SEPPs) and Deemed SEPPs (previously knowns as Regional Environmental Plans) as well as Draft SEPPs, apply to the subject land and are listed in below in Table 3-2. The most relevant SEPPs are then discussed in greater detail.

Table 3-2: State and Regional Environmental Planning Policies

Policy	Comments
GMREP No 2 – Georges River Catchment	**No application: Discussed below**
SEPP (Affordable Rental Housing) 2009	No application
SEPP (Coastal Management) 2018	**No application: Discussed below**
SEPP (Building Sustainability Index: BASIX) 2004	No application
SEPP (State Significant Precincts) 2005	**No application: Discussed below**
SEPP (Miscellaneous Consent Provisions) 2007	No application
SEPP (State and Regional Development) 2011	**No application: Discussed below**
SEPP (Exempt and Complying Development Codes) 2008	No application
SEPP (Housing for Seniors or People with a Disability) 2004	No application
SEPP (Infrastructure) 2007	**Applies. Discussed below.**
SEPP (Mining, Petroleum Production and Extractive Industries) 2007	No application
SEPP No 1 – Development Standards	No application
SEPP No 19 – Bushland in Urban Areas	No application
SEPP No 21 – Caravan Parks	No application
SEPP No 33 – Hazardous and Offensive Development	**No application: Discussed below**
SEPP No 44 – Koala Habitat Protection	No application
SEPP No 50 – Canal Estate Development	No application
SEPP No 55 – Remediation of Land	**Applies: Discussed below**
SEPP No 62 – Sustainable Aquaculture	No application
SEPP No 64 – Advertising and Signage	No application
SEPP No 65 – Design Quality of Residential Apartment Development	No application
SEPP No 70 – Affordable Housing	No application
SEPP (Primary Production and Rural Development) 2019	No application
SEPP (Vegetation in Non-Urban Areas) 2017	No application
Draft SEPP – Integrating Land Use and Transport	No application
Draft SEPP (Environment) 2017	No application

3.2.5.1 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

The proposed development does not trigger the thresholds listed in SEPP No. 33 – Hazardous and Offensive Development and would not fit the definition of 'potentially hazardous industry' or 'hazardous storage establishment'. This is demonstrated in Section 8.6.2.

3.2.5.2 State Environmental Planning Policy No. 55 – Remediation of Land

The proposed development does require some excavation; therefore SEPP No. 55 – Remediation of Land applies. This includes the excavation of an area for the liquid waste dewatering plant receiving pit.

A limited Phase II ESA was performed by Benbow Environmental, with soil sampling undertaken in February 2020, found the areas proposed for excavation, are free from contamination. The investigation also revealed the presence of acid sulfate soils (ASS) and as such, any future excavations require an ASS management plan before commencement of earth works.

3.2.5.3 State Environmental Planning Policy (Infrastructure) 2007

Waste management and resource recovery facilities are permitted with consent on land zoned IN1 – General Industrial under Clause 121 of Division 23, Part 3, of the *State Environmental Planning Policy* (SEPP) *(Infrastructure) 2007*, as reported below.

> ***121 Development permitted with consent***
> *(1) Development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.*
>
> Where:
> ***prescribed zone** means any of the following land use zones or a land use zone that is equivalent to any of those zones:*
> *(a) RU1 Primary Production,*
> *(b) RU2 Rural Landscape,*
> ***(c) IN1 General Industrial,***
> *(d) IN3 Heavy Industrial,*
> *(e) SP1 Special Activities,*
> *(f) SP2 Infrastructure.*
>
> ***waste or resource management facility** means a waste or resource transfer station, a resource recovery facility or a waste disposal facility.*
>
> ***resource recovery facility** means a facility for the recovery of resources from waste, including such works or activities as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from waste gases and water treatment, but not including re-manufacture of material or goods or disposal of the material by landfill or incineration.*
>
> ***waste or resource transfer station** means a facility for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.*

Under Clause 8 of the SEPP (infrastructure) 2007, where there is an inconsistency between this Policy and other environmental planning instruments, this Policy prevails.

Therefore, the development for the purposes of the resource recovery facility is permissible with consent.

3.2.5.4 State Environmental Planning Policy (State Significant Precincts) 2005

The development is not within a state significant precinct and the provisions of the SEPP (State Significant Precincts) 2005 do not apply.

3.2.5.5 State Environmental Planning Policy (State and Regional Development) 2011

The aims of SEPP (State and Regional Development) 2011 is to identify development that is state significant development, state significant infrastructure or critical state significant infrastructure. Under Clause 8 (1) of the *State Environmental Planning Policy (State and Regional Development) 2011*, development is potentially state significant development if it is specified in Schedule 1 or Schedule 2. Clause 23(3) of Schedule 1 is relevant to the proposed activities:

> ***23 Waste and resource management facilities***
> *(1) Development for the purpose of regional putrescible landfills or an extension to a regional putrescible landfill that:*
> *(a) has a capacity to receive more than 75,000 tonnes per year of putrescible waste, or*
> *(b) has a capacity to receive more than 650,000 tonnes per year of putrescible waste over the life of the site, or*
> *(c) is located in an environmentally sensitive area of State significance.*
>
> *(2) Development for the purpose of waste or resource transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.*
>
> *(3) Development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste.*
>
> *(4) Development for the purpose of waste incineration that handles more than 1,000 tonnes per year of waste.*
>
> *(5) Development for the purpose of hazardous waste facilities that transfer, store or dispose of solid or liquid waste classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste that handles more than 1,000 tonnes per year of waste.*
>
> ***(6) Development for the purpose of any other liquid waste depot that treats, stores or disposes of industrial liquid waste and:***
> *(a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or*
> ***(b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.***

The proposed development **is state significant** as it involves the handling of more than 1,000 tonnes per year of other aqueous waste. An Environmental Impact Statement (EIS) is required to accompany an application for state significant development. Additionally, the subject site is not an identified site under Schedule 2 of the SEPP.

3.2.5.6 Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment

The following provides an assessment of the proposed development in accordance with Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment (REP2).

The general aims and objectives of the REP2 is to:

> *1a) to maintain and improve the water quality and river flows of the Georges River and its tributaries and ensure that development is managed in a manner that is in keeping with the national, State, regional and local significance of the Catchment,*

b) to protect and enhance the environmental quality of the Catchment for the benefit of all users through the management and use of the resources in the Catchment in an ecologically sustainable manner,
c) to ensure consistency with local environmental plans and also in the delivery of the principles of ecologically sustainable development in the assessment of development within the Catchment where there is potential to impact adversely on groundwater and on the water quality and river flows within the Georges River or its tributaries,
d) to establish a consistent and coordinated approach to environmental planning and assessment for land along the Georges River and its tributaries and to promote integrated catchment management policies and programs in the planning and management of the Catchment,
e) (Repealed)
f) to provide a mechanism that assists in achieving the water quality objectives and river flow objectives agreed under the Water Reform Package.

As demonstrated throughout this EIS, the proposed development does not involve the removal of water from the river system or groundwater. Nor will the development release wastewater and/or wastes into surface or groundwater receptors. The site would employ safeguards to prevent the release of potential contaminants. Therefore, the proposed development is consistent with the aim of the SEPP.

Clause 11(22) includes particular Provisions in respect of Waste management facilities or works being:

22 WASTE MANAGEMENT FACILITY OR WORKS

Definition
Development for the purpose of waste management facilities or works described in Schedule 3 (Designated Development) to the Environmental Planning and Assessment Regulation 1994.

Planning controls
Development consent required unless on flood liable land, in which case it is prohibited.
Advertised.

Specific matters for consideration
A system is to be required to manage leachate surface controls on the land on which the waste management facility or works is or are proposed.
A site management plan is to be required for the land on which the waste management facility or works is or are proposed.
The likelihood of groundwater contamination.
The adequacy of the proposed leachate management system and surface water controls.
The long-term stability of the final landform and the adequacy of the site management plan.
Where the proposed development involves extraction of material, whether an adverse impact on the Georges River or its tributaries will result.

These matters for consideration have been addressed in this EIS, relevant sections are:

- Leachate would not be generated as part of the dewatering activities as the process is enclosed. However a system has been designed to manage leachate from the site as a whole which includes C&D activities, as part of this development.
- An environmental management plan will be implemented at the site.
- Groundwater contamination is addressed in Section 6.3.2.
- Surface water controls are addressed in Section 8;
- Site rehabilitation is addressed in Section 5.10; and
- No extraction of material is proposed.

It can be determined that the proposed use is not inconsistent with the Aims and Objectives of the Policy, whilst the matters for consideration are satisfied.

The subject property is not 'flood liable land' for the purposes of cl.11 of REP 2 and the proposed development is permissible development with consent.

Note: if an inconstancy arose between REP 2 and SEPP 2007 the later would prevail to the extent of the inconsistency.

3.2.5.7 State Environmental Planning Policy (Coastal Management) 2018

Division 1 Coastal wetlands and littoral rainforests area
10 Development on certain land within coastal wetlands and littoral rainforests area

1) The following may be carried out on land identified as "coastal wetlands" or littoral rainforest on the Coastal Wetlands and Littoral Rainforests Area Map only with development consent:

(a) the clearing of native vegetation within the meaning of Part 5A of the Local Land Services Act 2013,

(b) the harm of marine vegetation within the meaning of Division 4 of Part 7 of the Fisheries Management Act 1994,

(c) the carrying out of any of the following:

(i) earthworks (including the depositing of material on land),

(ii) constructing a levee,

(iii) draining the land,

(iv) environmental protection works.

The area of proposed works is not located within land mapped as Coastal Wetland and therefore State Environmental Planning Policy (Coastal Management) 2018 does not apply.

3.3 LOCAL CONTROLS

3.3.1 Local Environmental Plan

The *Bankstown Local Environmental Plan 2015* applies to the subject site.

The proposed development is considered to be generally consistent with the particular aims of the Plan under Part 1, Clause 1.2 (2), in particular (a) and (g)as follows:

(a) to manage growth in a way that contributes to the sustainability of Bankstown, and recognises the needs and aspirations of the community,

(b) to protect and enhance the landform and vegetation, especially foreshores and bushland, in a way that maintains the biodiversity values and landscape amenity of Bankstown,
(c) to protect the natural, cultural and built heritage of Bankstown,
(d) to provide development opportunities that are compatible with the prevailing suburban character and amenity of residential areas of Bankstown,
(e) to minimise risk to the community in areas subject to environmental hazards by restricting development in sensitive areas,
(f) to provide a range of housing opportunities to cater for changing demographics and population needs,
(g) to provide a range of business and industrial opportunities to encourage local employment and economic growth,
(h) to provide a range of recreational and community service opportunities to meet the needs of residents of and visitors to Bankstown,
(i) to achieve good urban design in terms of site layouts, building form, streetscape, architectural roof features and public and private safety,
(j) to concentrate intensive trip-generating activities in locations most accessible to rail transport to reduce car dependence and to limit the potential for additional traffic on the road network,
(k) to consider the cumulative impact of development on the natural environment and waterways and on the capacity of infrastructure and the road network,
(l) to enhance the quality of life and the social well-being and amenity of the community.

3.3.1.1 Permissibility

The land zoning for the subject land is described as IN1 – General Industrial under the provisions of the *Bankstown Local Environmental Plan 2015*, which applies to the subject site.

The proposed development is considered permitted with consent as it falls under the definition of "general industries". The following definitions are of relevance:

> ***resource recovery facility*** *means a building or place used for the recovery of resources from waste, including works or activities such as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration.*
>
> ***Note.***
>
> *Resource recovery facilities are a type of* ***waste or resource management facility****—see the definition of that term in this Dictionary.*
>
> ***Industry*** *means any of the following-*
>
> *a)* **General industry**,
> *b)* Heavy industry,
> *c)* Light industry,
>
> But does not include
>
> *d)* Rural industry, or
> *e)* Extractive industry or
> *f)* Mining

> ***General Industry*** *means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity. -*
>
> ***Industrial activity*** *means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity. -*

In addition waste management and resource recovery facilities are permitted with consent under Clause 121 of Division 23, Part 3, of the *State Environmental Planning Policy* (SEPP) *(Infrastructure) 2007*, as discussed in Section 3.2.5.4.

The following objectives apply.

> ***Zone IN1 General Industrial***
> ***1. Objectives of zone***
> - *To provide a wide range of industrial and warehouse land uses.*
> - *To encourage employment opportunities.*
> - *To minimise any adverse effect of industry on other land uses.*
> - *To support and protect industrial land for industrial uses.*
>
> ***2 Permitted without consent***
> *Nil*
>
> ***3 Permitted with consent***
> *Agricultural produce industries; Building identification signs; Business identification signs; Depots; Food and drink premises; Freight transport facilities; Garden centres;* ***General industries****; Hardware and building supplies; Hospitals; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Medical centres; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Roads; Tank-based aquaculture; Timber yards; Vehicle sales or hire premises; Warehouse or distribution centres; Any other development not specified in item 2 or 4*
>
> ***4 Prohibited***
> *Agriculture; Air transport facilities; Airstrips; Amusement centres; Biosolids treatment facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Centre-based child care facilities; Charter and tourism boating facilities; Commercial premises; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Home occupations (sex services); Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Pond-based aquaculture; Port facilities; Residential accommodation; Respite day care centres; Restricted premises; Rural industries; Schools; Sewage treatment plants; Signage; Tourist and visitor accommodation; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies*

Note: The proposal is not for a "water recycling facility" as this refers to a place used for the treatment of sewage effluent, stormwater or waste water for use as an alternative supply to mains water, groundwater or river water.

3.3.1.2 Zoning Requirements

The site is located in an area of Zone IN1 under the provisions of the Bankstown Local Environmental Plan 2015. The LEP states that the objectives of this zone are:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

The proposal is for the establishment of a dewatering facility on an existing industrial site. Relevant definitions are listed below;

> ***general industry*** *means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.*
>
> ***heavy industry*** *means a building or place used to carry out an industrial activity that requires separation from other development because of the nature of the processes involved, or the materials used, stored or produced, and includes:*
> *(a) hazardous industry, or*
> *(b) offensive industry.*
> *It may also involve the use of a hazardous storage establishment or offensive storage establishment.*
>
> ***industry*** *means any of the following:*
> *(a) general industry,*
> *(b) heavy industry,*
> *(c) light industry,*
>
> *but does not include:*
>
> *(d) rural industry, or*
> *(e) extractive industry, or*
> *(f) mining.*
>
> ***light industry*** *means a building or place used to carry out an industrial activity that does not interfere with the amenity of the neighbourhood by reason of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, or otherwise, and includes any of the following:*
> *(a) high technology industry,*
> *(b) home industry.*

The proposed use is consistent with the definition of "general industry" and is permissible with consent in the zone. Furthermore, the proposed use is not covered by any of the categories in the prohibited development schedule for this Zone. It would readily meet the objectives of the plan as outlined above.

3.3.1.3 General LEP Provisions

3.3.1.3.1 Building Height

Clause 4.3 relates to Height of Buildings. The Height of Building Map sheet HOB_005 is displayed below in Figure 3-1. As shown, there are no restrictions on the height of buildings at the proposed development site.

Figure 3-1: Height of Building map

↑N

Source: NSW Government, 2020

Legend:

J	9.0	U1	30.0
K	10.0	U2	32.0
L	11.0	V1	35.0
N1	13.0	V2	38.0
N2	14.0	W	41.0
O	16.0	X	47.0
P	17.0	Y	53.0
Q1	19.0	Area 1	
Q2	20.0	Area 2	
S	23.0		
T1	25.0		
T2	26.0		
T3	29.0		

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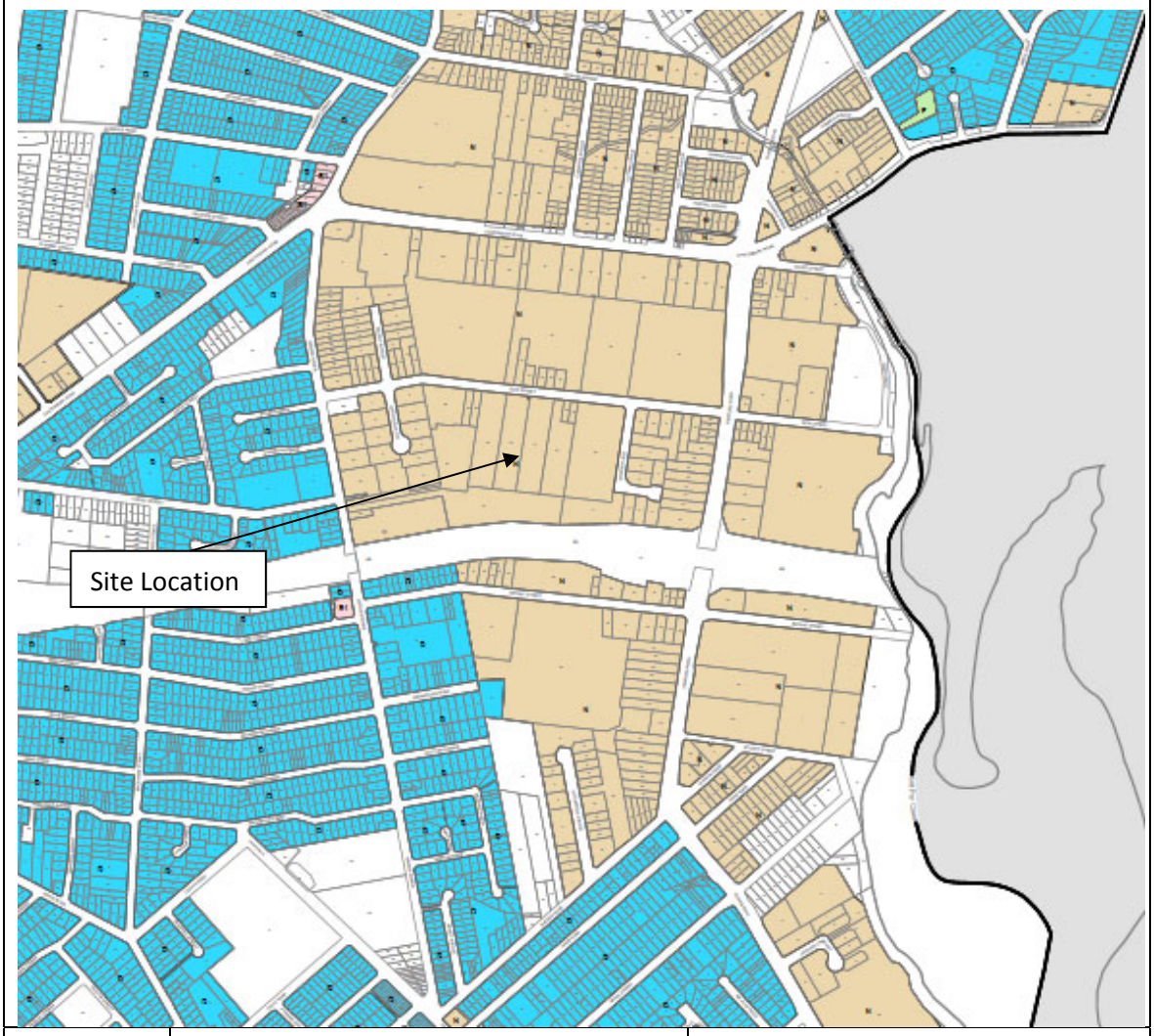
25-27 Sherwood Road
Northmead NSW 2152

3.3.1.3.2 Floor Space Ratio

Clause 4.4 relates to floor space ratio requirements. The Floor Space Ratio Map Sheet FSR_005 is shown below in Figure 3-2. The site has a maximum Floor Space Ratio of 1:1.

Figure 3-2: Floor Space Ratio Map



↑N

Source: NSW Government, 2020

Legend:

D	0.5	V	3
F	0.6	Y	4.5
H	0.7		Area 1
I	0.75		Area 2
N	1		Area 3
P	1.25		Area 4
S1	1.5		Area 5
S2	1.75		Area 6
T	2		
U	2.5		

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25-27 Sherwood Road
Northmead NSW 2152

3.3.1.3.3 Flood Planning

Clause 6.3 relates to flood planning. The site is within a medium flood risk area as shown in Section 6.3.3. A flood assessment has been undertaken to ensure the design of the site will not impact on flood waters.

3.3.1.3.4 Terrestrial Biodiversity

Clause 6.4 relates to biodiversity. There is no vegetation on site. Biodiversity is discussed in Section 6.4. No trees will be removed as part of this development.

3.3.1.3.5 Heritage Conservation

Clause 5.10 of the Bankstown LEP Heritage conservation objectives are as follows:

(1) Objectives The objectives of this clause are as follows—
- *(a) to conserve the environmental heritage of Bankstown,*
- *(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- *(c) to conserve archaeological sites,*
- *(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.*

There are no identified heritage items on or within the immediate vicinity of the site. Due to the need to undertake excavation for the development, an Aboriginal Heritage assessment report has been undertaken.

3.3.1.3.6 Earthworks

Under the Bankstown LEP, Clause 6.2 is relevant to earthworks;

(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

(2) Development consent is required for earthworks unless—
- *(a) the earthworks are exempt development under this Plan or another applicable environmental planning instrument, or*
- *(b) the earthworks are ancillary to development that is permitted without consent under this Plan or to development for which development consent has been given.*

(3) In deciding whether to grant development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters—
- *(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,*
- *(b) the effect of the development on the likely future use or redevelopment of the land,*
- *(c) the quality of the fill or the soil to be excavated, or both,*
- *(d) the effect of the development on the existing and likely amenity of adjoining properties,*
- *(e) the source of any fill material and the destination of any excavated material,*

(f) the likelihood of disturbing relics,

(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,

(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

The proposed development requires some excavations. This includes the excavations required for the liquid waste dewatering plant's inground pits. These earthworks are ancillary to this development application. In addition, the earthworks are minor in nature and are therefore not expected to cause disruption to drainage patterns, soil stability, adjoining properties, waterways nor effect likely future use of the land. No fill material would be required. Destination of excavated material would be managed under the Acid Sulfate Soil Management Plan. Excavations are not expected to disturb relics as none were found during site surveys as stated in the Aboriginal Heritage Assessment Report.

The proposed development complies with this Clause.

3.3.1.3.7 Acid Sulfate Soils

Clause 6.1 relates to acid sulfate soils. The site is mapped on the Acid Sulfate Soils Map Sheet ASS_005 as containing Class 5 acid sulfate soils. The Phase II report identified the site contains acid sulfate soils. Therefore this clause applies and an Acid Sulfate Soil management plan has been prepared.

3.3.2 Development Control Plans

This section outlines the Bankstown DCP requirements that apply to the proposal. Additionally, for applicable controls the table outlines how the proposal will comply with the DCP.

Table 3-3: Bankstown DCP Requirements

Requirements	Compliance	Comments
Part A - Precinct Controls		
1 – Centres	N/A	The site is not located in a centre.
2 – Corridors	N/A	The site is not located along the Hume Highway corridor.
3 – Key Infill Development Sites	N/A	The site is not located in a key infill development site.
Part B – General Controls		
1 – Residential Development	N/A	Not relevant to the proposed development.
2 – Commercial Centres	N/A	Not relevant to the proposed development.
3 – Industrial Precincts		
3.2 – Building Envelopes	Complies	Site plans are located in Appendix 8.
3.3 – Building Design	Complies	Site plans are located in Appendix 8.
3.4 – Environmental Management	Complies	Air Quality Impact Assessment and Noise Impact Assessment are located in appendix 1 and 2 respectively.
3.5 – Ancillary Development	Complies	Fences and signs will not be altered. Chemicals will be stored in a bunded area. This is explained in further detail in Section 8.6.1.
3.6 – Chullora Technology Park	N/A	The site is not located at this location.
3.7 - Nos. 52 and 60 Roberts Road in Greenacre	N/A	The site is not located at these locations.
4 – Sustainable Development		
4-2 – Water Conservation Controls	N/A	Neither requirement W1 or W2 are relevant to the site.
4.3 – Energy Minimisation Controls	N/A	Criteria under this clause is not exceeded and as such, this is not relevant to the proposed development.
5 – Parking	Complies	Parking will meet requirements of this clause, and is outlined in Section 5.7.6.
6 – Child Care Centres	N/A	Not relevant to the proposed development.
7 – Educational Establishments	N/A	Not relevant to the proposed development.
8 – Places of Public Worship	N/A	Not relevant to the proposed development.
9 – Sex Services Premises	N/A	Not relevant to the proposed development.
10 – Telecommunications Facilities	N/A	Not relevant to the proposed development.
11 – Tree Preservation Order	Complies	No trees will be removed from the site. As such, the development complies with the DCP.
12 – Flood Risk Management	Complies	The site is not identified as low, medium or high flood risk on the DCP Flood risk management map.
13 – Waste Management and Minimisation	Complies	Discussed in Waste Management Report, located in Appendix 3.

The proposed development is consistent with the aims and objectives of the Bankstown DCP and complies with requirements.

3.3.3 Existing Development Consent Conditions

The table below demonstrates that the site would be able to comply with existing development consent conditions with the addition of the proposed dewatering plant.

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
DA-51/1997, 29 August 1997			
1	Development shall take place generally in accordance with plans and details submitted to Council on 30 January 1997 in respect of Development Application 51/97 except where varied by the conditions that follow.	Copies of approved plans have been received.	Yes.
2	This consent will lapse five years from the endorsed date of consent unless either the use together with the completion of necessary building works has physically commenced, or an extension of the consent has been granted by Council.	Building works were completed.	Yes
3	The submission of a Certificate under Section 73 of the Water Board (Corporatisation) Act, 1994, prior to the release of the Building Application. For further information contact the Urban Development Officer at the Parramatta Office of Sydney Water, Telephone 9843 6236 or 9843 6241.	Assumed compliance	Yes

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
Soil and Water Management			
4	All activity shall be conducted in a manner that has no impact upon the amenity and environment of the nearby area by reason of the emission or discharge of dirt, dust, silt, sand or otherwise from the site. In this regard a soil and water management plan prepared by a registered surveyor or engineer shall be submitted to Council with the Building Application for approval showing the existing sediment controls together with proposed control methods to ensure compliance with this condition. Soil and water management controls shall include the heavy duty concrete paving of all areas subject to vehicle movements and connection to the stormwater drainage system via a sediment trap, and the method of ensuring that all vehicles that access the site do not trail waste material onto the roadway. Soil and water management controls detailed in the approved plan shall be implemented and maintained to the satisfaction of Council at all times.	The site is covered in heavy duty concrete paving. Sediment traps are installed. A wheel wash is installed to prevent trailing of waste onto the roadway. The stormwater drainage system has been redesigned as part of this DA to capture the first 20mm and treat this in the dewatering plant whilst the clean overflow would be sent via a silt arrestor to the street stormwater system.	Yes
Stormwater Drainage			
5	All stormwater run-off shall be collected and conveyed to an inspection pit on the site and adjacent to the existing drainage easement in accordance with a drainage design approved by Council. The drainage design submitted for approval with the building plans shall comply with the requirements of Council's policy of Control of Stormwater Runoff from Development Sites.	Stormwater drainage design has been upgraded as part of the proposed development.	Yes
Carparking			
6	Carparking spaces for 30 vehicles shall be provided for the overall site in marked spaces in the manner generally shown on the approved site plan and such spaces are to be kept clear and available at all times.	This condition has been amended (see below).	N/A
Use Of Site			
7	All waste materials shall be stored in containers located either within the building or behind screen walls in accordance with the requirements of Council.	This condition is obsolete. Approved plans from 2014 show external storage bunkers.	N/A

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
8	All loading and unloading of vehicles, storage of goods or materials and all industrial activity shall take place wholly within the site, in a manner that does not interfere with parking areas, driveways or landscaping.	The site complies with this condition	Yes
9	The hours of operation shall be limited to between 6.00am - 6.00pm on weekdays and 7.00 am - 6.00 pm weekends.	The C&D facility will continue to operate during these hours.	Yes
Environmental Protection			
10	The use of the premises shall incorporate facilities that will prevent the discharge of any pollutant, including noise, which may degrade the environment or be prejudicial to its inhabitants.	Additional mitigation measures installed for the proposal will also provide safeguards for existing activities.	Yes
11	All pollution control devices (including drainage systems, sumps and traps) shall be regularly maintained.	Managed under an EMP	Yes
12	All liquid wastes shall be collected and disposed of in a manner which does not pollute the stormwater system.	Complies. The stormwater system will be upgraded as part of this proposal.	Yes
13	All paints, chemicals and other liquids shall be stored in approved receptacles which are to be located in a bunded area constructed in accordance with Council's guidelines.	The site will continue to comply with this requirement.	Yes
DA-51/1997/2, 24 September 2013			
1	Development shall take place generally in accordance with plans and details submitted to Council on 30 January 1997 in respect of Development Application 51/97, unless altered amended or superseded by the Section 96(1A) Amendment Application No. DA-51/1997/2, lodged with Council on 1 June 2012, and accompanied by Plans: REF: 1229-1 dated 3 June 2013, prepared by G.J. Atkins & Associates and CAD REF 116785 - 2A, dated 20 June 2013, prepared by RPS Australia East PIL (indicative layout only - no building works approved), all affixed with Council's approval stamp dated 24 SEP 2013, except where varied by the conditions that follow.	These plans have been superseded by a S96 application in 2014. New plans have been prepared as part of this proposed development for approval which will supersede the currently approved plans.	Yes

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
6	Carparking spaces for sixteen (16) vehicles shall be provided for the overall site in marked spaces in the manner generally shown on the approved site plan, as amended in red, and such spaces are to be kept clear and available at all times.	Based on the DCP, the site requires 8 car spaces. The new site plan shows 15 car spaces. This condition will need to be removed as part of a S4.55 modification.	S4.55 to be submitted
9	The hours of operation shall be limited to between 6.00am - 6.00pm on weekdays and 7.00am - 6.00pm on weekends. a) The hours of operation of the approved use shall be unlimited, 24 hours a day, 7 days per week, for a period of 12 months from the date of this determination notice. Once the 12-month trial period has lapsed, the hours of operation shall revert to the approved hours detailed in Condition 9 above, unless a further application has been submitted to and approved by Council for hours outside those specified in Condition 9. The 24 hour operation of the facility shall at all times comply with the relevant recommendations/conclusions. of the Noise Assessment Report No. 13151 Version A, prepared by Wilkinson Murray, dated 6 June 2013, noting that no approval has been granted for the installation and/or operation of a crushing machine under the subject determination notice.	The 12-month trial for 24/7 operations has lapsed. The C&D facility will operate within hours 6.00am - 6.00pm on weekdays and 7.00am - 6.00pm on weekends.	N/A

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
16	For the purposes of a transfer station operating on the site, the types of materials permitted to be brought to the site under the term "road waste material" and resulting purely from roadworks, are limited to the following: a) General solid waste (non-putrescible): i. Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal; ii. Virgin excavated material; iii. Building and Demolition waste; iv. Asphalt waste; v. Cured concrete waste; vi. Any mixture of the wastes referred to above. b) Drilling mud, meaning a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal or directional drilling or potholing. This does not include drilling mud that has been generated by: i. Deep drilling for mineral, gas or coal exploration; or ii. Drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS).	These waste types are currently accepted at the existing C&D facility with the exception of drilling mud.	Yes
DA-51/1997/3. 17 February 2015			
1	Development shall take place generally in accordance with plans and details submitted to Council on 30 January 1997 in Respect of Development Application 51/97, unless altered, amended or superseded by the Section 96(1A) Amendment Application No. DA-51/1997/2, lodged with Council on 1 June 2012, and accompanied by Plans: REF: 1229-1 dated 3 June 2013, prepared by G.J. Atkins & Associates and CAD REF: 116785 - 2A, dated 20 June 2013, prepared by RPS Australia East P/L (indicative layout only - no building works approved), all affixed with Council's approval stamp dated 24 SEP 2013, or unless altered, amended or superseded by the Section 96(1A) Amendment Application No. DA-51/1997/3, lodged with Council on 24 September 2014, except where varied by the conditions that follow.	Approved plans are provided in Attachment 6. Revised plans will supersede these.	No[1]

Table 3-4: Compliance with existing consent conditions

No.	Condition	Comment	Complies?
9	The hours of operation shall be limited to between 6.00am - 6.00pm on weekdays and 7.00am - 6.00pm on weekends. a) The hours of operation of the approved use shall be unlimited, 24 hours a day, 7 days per week, for a further period of12 months from the date of this determination notice. Once the 12-month trial period has lapsed, the hours of operation shall revert to the approved hours detailed in Condition 9 above, unless a further application has been submitted to and approved by Council for hours outside those specified in Condition 9. The 24 hour operation of the facility shall at all times comply with the relevant recommendations/conclusions of the Noise Assessment Report No. 1315.1 Version A, prepared by Wilkinson Murray, dated 6 June 2013, noting that no approval has been granted for the installation and/or operation of a crushing machine under the subject determination notice.	The 12-month trial for 24/7 operations has lapsed. The C&D facility will operate within hours 6.00am - 6.00pm on weekdays and 7.00am - 6.00pm on weekends.	N/A

Note 1: A S4.55 modification application is required for the C&D facility which will operate under the current DA-51/1997 for updated site layout, waste storage bunkers and car parking spaces. The S4.55 modification will be submitted following approval of this development application.

4. CONSULTATION

Consultation with government departments and the local community plays an important role in ensuring that all potential environmental impacts are evaluated and the most important issues are prioritised. The following sections provide details on consultation and stakeholder engagement, such as that with regulators and government bodies. Key aspects and assessment requirements identified through the consultation process are also summarised in the following sections, together with the reference to where these aspects and requirements have been addressed in the report.

4.1 STAKEHOLDER ENGAGEMENT

Liaison with all relevant government authorities regarding the proposed development and requirements of the EIS has been ongoing since the inception of the project. Consultation has been undertaken on a formal basis. Summarised below are all the regulatory stakeholders that have been consulted as part of this development application, together with the details of such consultation.

4.1.1 Department of Planning, Industry and Environment (DPIE)

A request for the Secretary's Environmental Assessment Requirements (SEARs) and related Scoping Report was sent to the Planning Services Division and SEARs (document reference SSD-10450) with the requirements attached (Attachment 2). The DPIE included input from specific DPIE departments: Environment, Energy and Science Group (EES) and (DPIE) Water and the Natural Resources Access Regulator (NRAR); as well as separate agencies/regulators including: NSW Environment Protection Authority (EPA), Ausgrid, Transport for NSW (TfNSW), Sydney Water and Fire and Rescue NSW.

A draft EIS was submitted to the Department on 7 September 2020 based on available SEARs. Note that formal Council requirements had not been received at this stage. An adequacy review was received from the Department on 30 September 2020. Council requirements were received on 8 October 2020.

Following the adequacy review of the draft EIS, a letter response was provided detailing work being undertaken to address concerns raised and a meeting was held via Microsoft Teams at 10am on 18 November 2020. Items discussed at the meeting included:

Current Council Approval

- The Department are satisfied that the application relates to the dewatering plant only as essentially there is little cross over between this and the C&D operations. The current approval for the C&D facility can therefore stay with Council. The SSD approval will relate only to the dewatering plant.
- The Department also indicated that they would not require the C&D operations to be enclosed as these activities are already approved and not part of the SSD application.
- Therefore the shade sails proposed for air mitigation of the C&D operations are not part of the SSD application. A separate modification application to Council will be required for approval of the shade sails.

EIS content

- In regard to the above, a clear description of the components of the SSD application and any cross over with the C&D operations will be needed in the EIS.
- Included should be details regarding how concrete washout waste is received – eg: how/where concrete vehicles are washed out on site.
- Included should be a description of potential contamination issues and/or separation of waste streams and how this will be managed.

Consultation

- The Department would like water issues discussed further with EPA and Council.
- The Department indicated approved plans from Council should be able to be obtained with land owner's consent.

Draft EIS date

- A draft EIS addressing issues raised to be submitted early January.

Benbow Environmental contacted Council regarding the issue of approved plans with the consent of the owner, however Council did not agree and therefore BE requested the Department email Council directly.

4.1.2 DPIE's Environment Energy and Science Group (EES)

The EES comments are included in the SEARs.

4.1.3 (DPIE) Water and the Natural Resources Access Regulator (NRAR);

The (DPIE) Water and NRAR comments are included in the SEARs.

4.1.4 NSW Environment Protection Authority (EPA)

Key issues and assessment requirements from the EPA were included in the SEARs. Ongoing consultation with the EPA has been undertaken. This includes numerous letters and phone conversations from late 2019, particularly dealing with the installation of shade sails and their suitability for use to control dust emissions from C&D operations. In addition, a letter to provide an update on the project design was emailed on 16 November 2020 to request a meeting to discuss these changes and the additional assessments being undertaken. An email response was received from the EPA on 16 November requesting an indication of availability for meeting dates and details on specific issues to be discussed. A date for the meeting was arranged for 11am on 12 January 2020. The agenda issued included:

1. EPL Variation
   The facility has an existing consent for the processing of drilling mud. This is included in the current 80,000 tpa capacity of the site. An EPL variation application has been submitted to EPA.

2. Changes to proposed development
   Confirm that the proposed development is for a 250,000 tpa dewatering plant. The existing C&D facility that processes 80,000 tpa will not change.
   Based on feedback from agencies (adequacy review), changes to the proposal include modification to building – design work for changes to the building is currently being

prepared. Additional stormwater infrastructure, a new retaining wall, design of a leachate/first flush/stormwater management system and a flood assessment will be required. This work is being undertaken by Indesco.

3. Revised Site Plans
   A new architect has been engaged to prepare a full set of detailed plans including existing site plan, proposed site layout, floor plan showing equipment locations and details of storage tanks for the new dewatering plant.

4. SSD Application
   A meeting with the Department was undertaken on 18/11/2020. The Department has indicated that the SSD application relates only to the proposed dewatering facility. The existing C&D approval will stay with Council. In this regard, the proposed shade cloth will be part of a modification application and not be part of the SSD application. This will also impact on the Air Quality Impact Assessment which will assess air impacts from the dewatering plant as the C&D operation is not changing. An AQIA for the C&D operations will be undertaken as part of the modification application for the shade sails.

5. EPA concerns

A summary of items discussed is as follows:

- EPL variation – a Section 60 notice requesting further information was sent on 25 November 2020 regarding the EPL variation. This information is being prepared as part of the SSD application and will be provided at a later stage. EPL variation will be put on hold until requested information is received.
- EPA note that the period between 2018 to 2020, there were several non-compliances regarding water running off onto an adjoining property which were ignored. A penalty notice and an official caution were issued.
- As recently as last month, EPA received a dust complaint from a neighbouring property during windy weather. EPA conducted an inspection of the site did not observe dust emissions at the time, but did note dust accumulated on roads, kerbs and pathway around the premises indicating that the dust originated from the site. Complainant was concerned about dust entering the building and settling on cars.
- Based on these observations, EPA are reluctant to approve any changes if the proposal does not include enclosing the facility.
- EPA reviewing dust assessment and note that as well as dust being a concern during operation of the crusher, it is also a concern before and after operations in the open spaces as no watering down is being undertaken at these times. The tip and spread area was noted to be muddy with dust accumulated on roadways.
- Best practice controls should be implemented on site such as enclosing operations.
- Benbow note that the issue with enclosing the entire facility is that the structure would need to cover an enormous area that would be costly.
- Constructing shade sails as a dust measure for current C&D operations has been proposed. However, EPA note this approach may become less effective if capacity is increased.
- The AQIA will need to consider cumulative impacts (i.e: dust from current C&D operations) and dust emissions from stockpiles would be uncontrolled even with use of shade sails as EPA do not consider shade sails to be a control measure.
- Consider whether treated water from dewatering plant is appropriate to use for dust suppression.
- Consider potential odour of drilling mud.

- How will potential contamination of incoming waste be managed? This will be addressed within an Environmental Management Plan submitted with the application.
- Due to the non-compliance history of the site, additional and effective dust control are required. Demonstration that proposed dust controls will be effective is required.
- A stormwater drainage plan is needed.
- The noise assessment should consider Fact Sheet C of the noise policy for low frequency noise from existing equipment.
- Vibration may need to be considered in terms of potential to impact on the adjacent buildings at 79 Gow Street.
- Cumulative assessments for dust and noise are needed and how dust and noise will be managed on site.
- An Acid Sulfate Soil management plan is required.
- Options for enclosing the facility in stages and other methods will be considered. Consideration for an enclosure to be constructed in stages or for partial enclosure as part of a risk assessment which identifies high risk areas to be covered first. The option to use different materials such as waterproof/impervious material and design similar to an airplane hangar (dome-type structure) should be considered in place of shade sails. Tunnelling effects to be considered & one end fully enclosed.

4.1.5 City of Canterbury-Bankstown (Council)

Key issues and assessment requirements from Canterbury-Bankstown Council were **not** included in the SEARs as detailed in the DPIE SEARS cover letter. Council provided requirements in a separate letter dated 22 May 2020 which was received by email from the Department on 8 October 2020. Council's Stormwater System Report (SSR) was obtained which indicated a flood assessment for the site was not required.

A letter detailing proposed changes to the development was sent requesting a meeting via email on 12 November 2020. This was followed up on 18 November 2020. A meeting was undertaken via Microsoft Teams on 15 December 2020 and included representatives of Council, Benbow Environmental and Indesco. A summary of the items discussed is provided as follows:

<u>Changes to proposed development</u>

- The development no longer includes a concrete batching plant or increase in capacity of the existing C&D facility. The proposal involves establishment and operation of a dewatering facility with some minor cross -over with existing C&D operations.

<u>Approval pathway</u>

- Outcomes of a meeting with the Department indicated the dewatering facility would be approved under a separate SSD approval and the existing C&D facility would operate under the current Council consent.
- Council will follow up with the Department the rationale behind this decision and discuss how the two consents will be managed.

<u>Approved plans</u>

- It was noted that the Department requested a copy of the approved plans from Council directly and these have not yet been provided.

Environmental Issues

- Traffic
  - Require EIS to include breakdown on truck sizes and times including nomination of the largest vehicle that will access the site.
  - Provide swept path diagrams to show the largest truck manoeuvring at the site and demonstrating it can enter and leave in a forward direction.
  - Car parking on-site will need to cater for additional employees.
  - A clear delineation between pedestrians and vehicles will need to be shown on a traffic management plan with controls to be put in place.
  - The traffic assessment needs to consider existing traffic generation versus proposed.
- Waste
  - Ensure the site has a tradewaste agreement
  - Waste vehicles need to enter and leave in a forward directions
  - No other issues raised in regard to the draft waste management plan.
- Contamination
  - The contamination report provided was all good.
  - An acid sulphate soil management plan will need to be submitted with the application.
- Noise
  - Noise report will need to consider traffic.
  - A cumulative assessment will be provided with consideration given to the existing development
  - Plant and machinery on site to be included.
- Air quality
  - Council notes there have been complaints in regards to air.
  - These complaints relate to dust fallout on cars at the adjoining property.
  - This development will include provision for additional dust suppression by implementing water sprayers on stockpiles and use of treated water from the proposed dewatering plant for this purpose.
- Community Consultation
  - Benbow to provide Council with the extended area community consultation leaflet was distributed.
- Visual impacts
  - Views of the site will need to be demonstrated.
  - Identification of potential locations for landscaping is required.
  - Council to provide a list of suitable species and these when planted will need to be protected from impacts from trucks.
- Stormwater and Flooding
  - Site is flood protected and a drainage easement runs across the site.
  - Considerations as to whether the proposal affects Council easement in terms of traffic loading, structurally and ensure access to the easement is not impeded.
  - Council require the structural assessment and survey of pipe to determine exact location.
  - Show how new site footprint impacts on flood behaviour.
  - A 2-flow model is available from Council and is to be used with local aspects to consider residual impacts to properties upstream and downstream.
  - Indesco to request easement data and flood study from Council.
  - Stormwater to be contained on site with first flush ideally to be treated through dewatering plant.
  - Indesco to prepare concept design for review to determine whether a S68 is required.
  - Flood model will work to 100 year flood and consider PMF level and freeboard.
  - Council require a flood evacuation plan.

- Consider the existing storage bay locations in relation to the easement.
- Assess whether there would be any impact to Salt Pan Creek.

4.1.6 Transport for NSW (TfNSW)

The TfNSW comments are included in the SEARs. A letter detailing changes to the proposed development and the outcomes of the draft traffic assessment was emailed to TfNSW on 16 November 2020. A meeting to discuss these aspects was requested. The TfNSW responded via email on 18 November 2020 and indicated that as the changes did not relate to traffic, no meeting was needed.

4.1.7 Fire and Rescue NSW (FR NSW)

The FR NSW comments are included in the SEARs. A meeting was held with FR NSW on Thursday 8th of July, the outcomes of the meeting were as follows:

- The site contains fire extinguishers and hose reels but currently there is no hydrant system. The need for a hydrant system is dictated by the BCA and any site containing a building with a floor area larger than 500m2 requires a hydrant system.
- FR NSW recommended that provisions be put in place for future site changes.
- FR NSW questioned the site's ability to retain any contaminated fire fighting water. The proposed stormwater system upgrade would provide a 200 kL capacity to contain water runoff. A stormwater isolation valve is to be installed as part of this system to ensure water runoff can be contained on site.
- FR NSW advised an Emergency Plan with Information Package is needed after approval.

4.1.8 Sydney Water

A letter was sent to Sydney Water on 16 November 2020 requesting a meeting to discuss the project and requirements in more detail. No response from Sydney Water had been received at the writing of this report.

4.1.9 Ausgrid

Ausgrid requests "*in consultation with relevant agencies prepare a services and utilities impact assessment which: assesses the capacity of existing services and utilities and identify any upgrades and required to facilitate the development and assesses the impacts of the proposal on existing utility infrastructure and service provider assets and describe how any potential impacts would be managed".* Comments are included in the SEARS in Attachment 2. Services and Utilities Impact Assessment is provided in Appendix 10.

4.2 COMMUNITY CONSULTATION

A community consultation leaflet was prepared and sent to selected surrounding landowners and occupiers via post on 30th June, 2020. Upon feedback from the DPIE in the adequacy review of the draft EIS, this leaflet was revised (Attachment 1) and re-sent on 12 November 2020 to surrounding landowners and occupiers which included those receivers identified in the noise and air reports. These locations were based on the nearest affected industrial receivers and the nearest residential areas and are shown in Table 4-1.

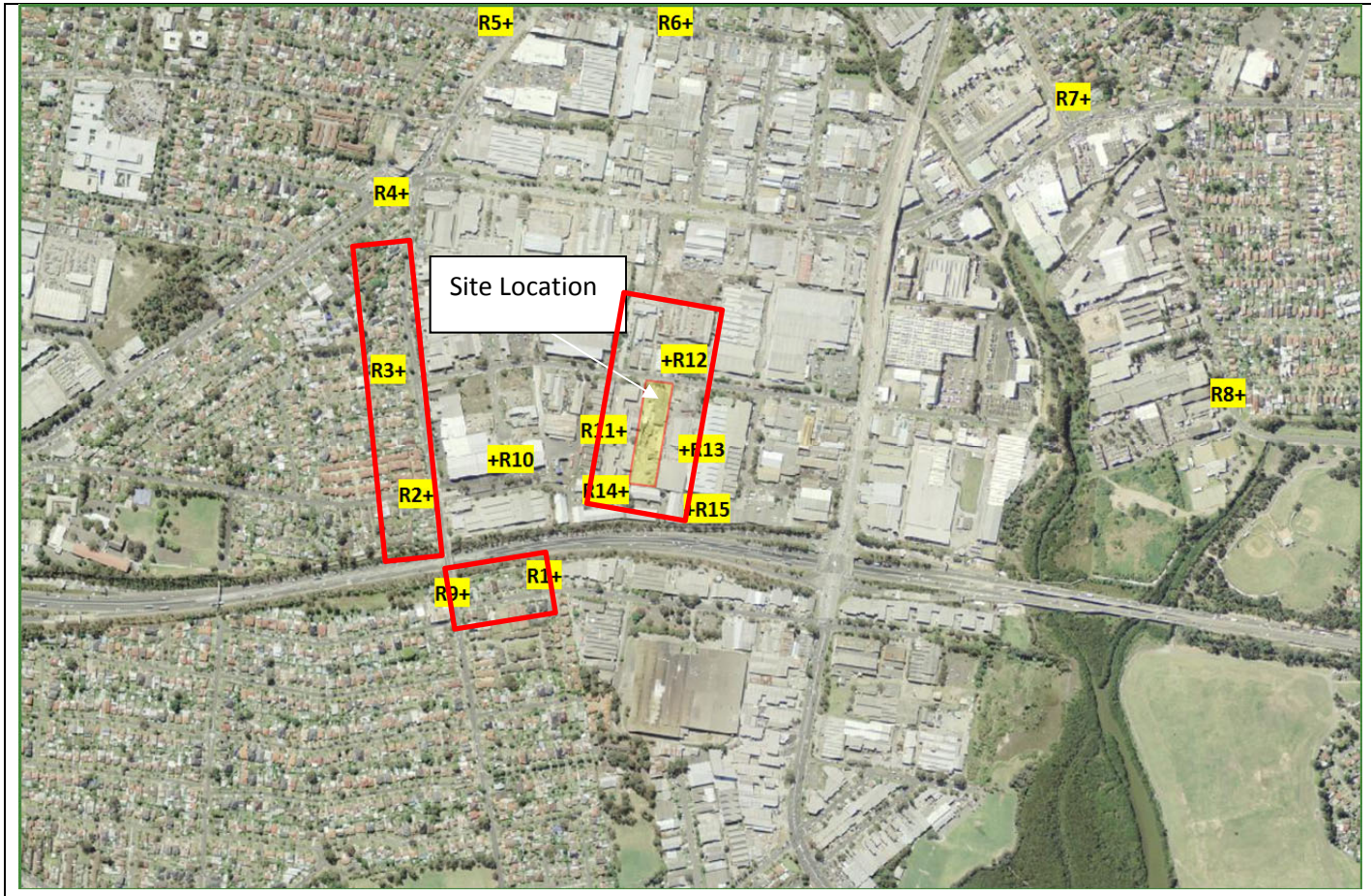
Table 4-1: Distribution of community leaflet

Address	Direction from Subject Site	Noise/Air Receptor ID
7 Gibson Avenue, PADSTOW NSW 2211	W	-
7A Gibson Avenue, PADSTOW NSW 2211	W	-
9 Gibson Avenue, PADSTOW NSW 2211	W	-
9A Gibson Avenue, PADSTOW NSW 2211	W	-
13 Gibson Avenue, PADSTOW NSW 2211	W	-
14 Gibson Avenue, PADSTOW NSW 2211	W	-
15 Gibson Avenue, PADSTOW NSW 2211	W	-
17 Gibson Avenue, PADSTOW NSW 2211	W	-
19 Gibson Avenue, PADSTOW NSW 2211	W	-
21 Gibson Avenue, PADSTOW NSW 2211	W	-
23 Gibson Avenue, PADSTOW NSW 2211	W	-
23A Gibson Avenue, PADSTOW NSW 2211	W	-
27 Gibson Avenue, PADSTOW NSW 2211	W	-
29 Gibson Avenue, PADSTOW NSW 2211	W	-
31 Gibson Avenue, PADSTOW NSW 2211	W	-
33 Gibson Avenue, PADSTOW NSW 2211	W	-
35 Gibson Avenue, PADSTOW NSW 2211	W	-
37 Gibson Avenue, PADSTOW NSW 2211	W	-
39 Gibson Avenue, PADSTOW NSW 2211	W	R3
41 Gibson Avenue, PADSTOW NSW 2211	W	-
43 Gibson Avenue, PADSTOW NSW 2211	W	-
45 Gibson Avenue, PADSTOW NSW 2211	W	-
45A Gibson Avenue, PADSTOW NSW 2211	W	-
47 Gibson Avenue, PADSTOW NSW 2211	W	-
49 Gibson Avenue, PADSTOW NSW 2211	W	-
51 Gibson Avenue, PADSTOW NSW 2211	W	-
53 Gibson Avenue, PADSTOW NSW 2211	W	-
55 Gibson Avenue, PADSTOW NSW 2211	W	-
57 Gibson Avenue, PADSTOW NSW 2211	W	-
59 Gibson Avenue, PADSTOW NSW 2211	W	R2
61 Gibson Avenue, PADSTOW NSW 2211	W	-
63 Gibson Avenue, PADSTOW NSW 2211	W	-
65A Gibson Avenue, PADSTOW NSW 2211	W	-
65 Gibson Avenue, PADSTOW NSW 2211	W	-
67 Gibson Avenue, PADSTOW NSW 2211	W	-
69 Gibson Avenue, PADSTOW NSW 2211	W	-
78 Gibson Avenue, PADSTOW NSW 2211	SW	R14
100 Gibson Avenue, PADSTOW NSW 2211	W	R9
1/69 Gow Street, PADSTOW NSW 2211	W	-
69-73 Gow Street, PADSTOW NSW 2211	W	-
77 Gow Street, PADSTOW NSW 2211	W	-
79 Gow Street, PADSTOW NSW 2211	W	R13
80 Gow Street, PADSTOW NSW 2211	N	-
82 Gow Street, PADSTOW NSW 2211	N	R12

Table 4-1: Distribution of community leaflet

Address	Direction from Subject Site	Noise/Air Receptor ID
84 Gow Street, PADSTOW NSW 2211	N	-
5/86 Gow Street, PADSTOW NSW 2211	N	-
86 Gow Street, PADSTOW NSW 2211	N	-
88 Gow Street, PADSTOW NSW 2211	N	-
3/89 Gow Street, PADSTOW NSW 2211	W	-
89 Gow Street, PADSTOW NSW 2211	W	R11
12/89 Gow Street, PADSTOW NSW 2211	W	-
90B Gow Street, PADSTOW NSW 2211	N	-
24 Bryant Street, PADSTOW NSW 2211	S	R1
22 Bryant Street, PADSTOW NSW 2211	S	-
20 Bryant Street, PADSTOW NSW 2211	S	-
18 Bryant Street, PADSTOW NSW 2211	S	-
16 Bryant Street, PADSTOW NSW 2211	S	-
14 Bryant Street, PADSTOW NSW 2211	S	-
12 Bryant Street, PADSTOW NSW 2211	S	-
10A Bryant Street, PADSTOW NSW 2211	S	-
10 Bryant Street, PADSTOW NSW 2211	S	-
8A Bryant Street, PADSTOW NSW 2211	S	-
6 Bryant Street, PADSTOW NSW 2211	S	-
4 Bryant Street, PADSTOW NSW 2211	S	-
2 Bryant Street, PADSTOW NSW 2211	S	-
168 Canterbury Road, BANKSTOWN NSW 2200	NW	R4
76 Chapel Road, BANKSTOWN NSW 2200	NW	R5
61 Marshall Street, BANKSTOWN NSW 2200	NW	R6
26 John Street, PUNCHBOWL NSW 2196	NE	R7
62 Moxon Road, PUNCHBOWL NSW 2196	E	R8
9 Gatwood Close, PADSTOW NSW 2211	W	R10
9 Wordie Place, PADSTOW NSW 2211	SW	R15

Figure 4-1: Map showing distribution of community leaflet



↑N
Not to scale

Legend:
Leaflets distributed to residences within the red boundary
Leaflets distributed to receivers identified in the noise & air reports **+R**

Benbow Environmental
25-27 Sherwood Street,
Northmead NSW 2152

No face to face community consultation was undertaken due to COVID-19. No phone calls or emails were received from residents as a result of both mail outs.

4.3 ASSESSMENT REQUIREMENTS

The Secretary's Environmental Assessment Requirements (SEARs) SSD-10450 obtained for the proposed development include key issues and requirements identified by DPIE, EES, (DPIE) Water /NRAR, NSW EPA, TfNSW, Sydney Water, Fire and Rescue NSW, Canterbury-Bankstown Council and Ausgrid which have been provided in the following tables. A copy of the SEARs is also provided in Attachment 2.

Table 4-2: DPI&E Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
General Requirements		
The environmental impact statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation). In addition, the EIS must include:		
• a detailed description of the development, including:	1.2.3	1-4
- the need for the proposed development	15.1	15-1
- justification for the proposed development	1.2.2	1-4
- likely staging of the development	5.1.5	5-5
- likely interactions between the development and existing, approved and	5	5-1
- proposed operations on-site and within the vicinity of the site	5.3	5-8
- plans of any proposed building works.		
• consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments	3	4-38
• a risk assessment of the potential environmental impacts of the development identifying the key issues for further assessment	8.5.3	8-23
• a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes:		
- a description of the existing environment, using sufficient baseline data	6	6-14
- an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes	10	10-1
- a description of the measures that would be implemented to avoid, minimise mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/ or contingency plans to manage significant risks to the environment.	12	12-1
• a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.	12.2	12-3
The EIS must also be accompanied by a report from a qualified quantity surveyor providing:		
• a detailed calculation of the capital investment value (CIV) of the development as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000, including details of all components of the CIV	5.7.4 14	5-10 14-1
• an estimate of the jobs that will be created by the development during the construction and operational phases of the development		
• certification the information provided is accurate at the date of preparation		

Table 4-2: DPI&E Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Key Issues		
Community and Stakeholder Engagement – including:		
• a community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of consultation, including justification for the approach • a report on the results of the implementation of the strategy including issues raised by the community and surrounding landowners and occupiers • details of how issues raised during consultation have been addressed and whether they have resulted in changes to the development • details of the proposed approach to future community and stakeholder engagement based on the results of consultation.	4.2	4-6
Suitability of the Site – including:		
• details of the development consents and approved plans for the existing development, including for all structures, plant and equipment • a detailed justification that the site can accommodate the development • a detailed justification that the site can accommodate the proposed processing capacity and storage of liquid waste combined with the existing storage of general solid waste (construction and demolition waste).	1.3 15.1	1-5 15-1
Waste Management – including:		
• a description of all waste streams that would be accepted at the site including the maximum weekly, monthly and annual throughputs • details of the source of the waste streams to justify the need for the proposed processing capacity • a description of waste processing operations, including a description of the technology to be installed, resource outputs, and the quality control measures that would be implemented • details of the existing operations including the storage and processing of construction and demolition waste • details of the interaction between the existing operations and the proposed operations • details of how waste would be stored and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with • details of the development's waste tracking system for incoming and outgoing waste • details of the waste management strategy for construction and ongoing operational waste generated • the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.	Appendix 3	
Air Quality and Odour – including:		
• a quantitative assessment of the potential air quality and odour impacts of the development in accordance with relevant NSW Environment Protection Authority (EPA) guidelines • the details of buildings and air handling systems and strong justification for any material handling, processing or stockpiling external to a building • a greenhouse gas emission assessment • details of proposed mitigation, management and monitoring measures.	Appendix 1	

Table 4-2: DPI&E Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Traffic and Access – including:		
• details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes. Traffic flows are to be shown diagrammatically to a level of detail sufficient for easy interpretation • an assessment of the predicted impacts of traffic on road safety and the capacity of the road network, including consideration of cumulative traffic • impacts at key intersections, using SIDRA or similar traffic modelling • plans demonstrating how all construction and operation vehicles, including those awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network • detailed plans of the proposed site access and parking provision on site in accordance with the relevant Australian Standards • swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site • plans of any proposed road upgrades, infrastructure works, or new roads required for the development.	Appendix 9	
Soil and Water – including:		
• an assessment of potential impacts to soil and water resources, topography, hydrology, groundwater, drainage lines, watercourses on or nearby the site, including mapping and description of existing background conditions and cumulative impacts • a detailed site water balance including identification of water requirements for the life of the development, measures that would be implemented to ensure an adequate and secure water supply is available for the development and a detailed description of the measures to minimise the water use at the site • characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving water) • details of stormwater/wastewater management system including the capacity of onsite detention system(s), onsite sewage management and measures to treat, reuse or dispose of water • detailed flooding assessment • a description of erosion and sediment controls.	Appendix 6	
Noise and Vibration – including:		
• a quantitative assessment of potential construction, operational and traffic noise and vibration impacts, including cumulative impacts, in accordance with relevant NSW Environment Protection Authority guidelines • details and justification of the proposed noise mitigation, management and monitoring measures.	Appendix 2	

Table 4-2: DPI&E Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Fire and Incident Management – including:		
• detailed information regarding the proposed structures addressing relevant levels of compliance with Volume One of the National Construction Code (NCC) • details of how stockpile storage will be limited in size and volume and arranged to minimise the likelihood of the fire spreading • technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment and fire (including location of fire hydrants and water flow rates at the hydrant) management and containment measures 5 • consideration of consistency with NSW Fire & Rescue Fire Safety Guideline Fire Safety in Waste Facilities (February 2020) • details regarding the site's ability to contain appropriate volume of contaminated fire water run-off.	8.6.3	8-29
Biodiversity – including:		
an assessment of the biodiversity impacts in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR) or a waiver for the preparation of a BDAR under the Biodiversity Conservation Act 2016.	8.4	8-17
Heritage and Aboriginal Cultural Heritage – including:		
An assessment of Aboriginal cultural heritage values that exist across the development documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR) or an assessment of Aboriginal cultural heritage issues which satisfies the requirements of the National Parks and Wildlife Act 1974 (NSW).	9.3	9-3
Hazard and Risk – including:		
Preliminary hazard analysis (PHA) adopting a Level 1 qualitative risk analysis as per the Department's Multi-level Risk Assessment and prepared in accordance with the Department's Hazardous Industry Planning 4 Advisory Paper No. 6, 'Hazard Analysis'. The PHA must verify potential dust explosion hazards within the building, identify any additional hazards arising from the SSD, verify the existing safeguards and identify any additional safeguards to control the risks from the facility as a whole.	8.5.3	8-23
Contamination – including:		
An assessment of site suitability under the provisions of State Environmental Planning Policy No. 55 – Remediation of Land.	3.2.5.2	3-8
Cumulative Impacts including:		
particularly in relation to air, noise, and traffic associated with other nearby industrial and commercial operations.	10	10-1

Table 4-3: EES Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Biodiversity and BDAR Waiver Request		
EES is currently reviewing the BDAR Waiver request for this SSD. Until EES has undertaken this review it is recommended the SEARs include the attach biodiversity requirements.	8.4	8-17
Flooding		
EES recommends the SEARs include the attached EES standard flooding requirements.	8.3 Appendix 6	8-14
Aboriginal Cultural Heritage		
The Scoping Report notes a search of the NSW State Heritage Inventory found no Aboriginal places or items of heritage on, or within the vicinity of the site and that the site is fully concreted with no vegetation and therefore a full Aboriginal and Cultural Heritage Assessment is not considered required (Section 6.6, page 23). EES notes however that the proposed development may require excavation work (section 5.3.1.2, page 17). If the excavation is likely to disturb the ground surface it is recommended an Aboriginal cultural heritage assessment report is prepared. EES recommends the SEARs include the attached Aboriginal cultural heritage requirements.	9.3	9-3
Urban Tree Canopy and Landscaping		
The Scoping report states the proposed development will not result in the removal of existing vegetation or a change to landscaping of the site (section 6.7, pages 24-25). If a landscape plan is required for this SSD, EES recommends the SEARs require that the plan: • includes details on the native vegetation community (or communities) and native plant species that once occurred in this locality • specifies that any landscaping will use a diversity of local provenance species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that once occurred on the site to improve biodiversity • includes a list of local provenance species (trees, shrubs and groundcovers) to be used in the site landscaping • uses advanced sized trees, providing sufficient area/space to allow any planted trees to grow to maturity on the site.	8.4	8-17

Table 4-4: (DPIE) Water/NRAR Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
General		
• The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased. • A detailed and consolidated site water balance. • Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. • Proposed surface and groundwater monitoring activities and methodologies. • Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://www.industry.nsw.gov.au/water).	Appendix 6 8.3	8-14

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
A. Executive Summary - EPA		
The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.	0	
B. The Proposal		
1. Objectives of the Proposal		
• The objectives of the proposal should be clearly stated and refer to: a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced; b) a life cycle approach to the production, use or disposal of products; c) the anticipated level of performance in meeting required environmental standards and cleaner production principles; d) the staging and timing of the proposal and any plans for future expansion; e) the proposal's relationship to any other industry or facility.	1.2.1	1-4
2. Description of the Proposal – General		
• Outline the production process including: a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc); b) any life-cycle strategies for the products.	5	5-1
• Outline cleaner production actions, including: a) measures to minimise waste (typically through addressing source reduction); b) proposals for use or recycling of by-products; c) proposed disposal methods for solid and liquid waste; d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points; e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge; f) soil contamination treatment and prevention systems.	5.9	5-13
• Outline construction works including: a) actions to address any existing soil contamination; b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site); c) construction timetable and staging; hours of construction; proposed construction methods; d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.	5.3	5-8
• Include a site diagram showing the site layout and location of environmental controls.	See site plans	

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Air		
• Identify all sources or potential sources of air emissions from the development. Note: emissions can be classed as either: ► point (e.g. emissions from stack or vent); or ► fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, ► exhausts, loss from load), land clearing and construction works). • Provide details of the project that are essential for predicting and assessing air impacts including: a) the quantities and physio-chemical parameters (e.g. concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored; b) an outline of procedures for handling, transport, production and storage; c) the management of solid, liquid and gaseous waste streams with potential to generate emissions to air.	Appendix 1	
Noise and Vibration		
• Identify all noise sources or potential sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials. • Specify the times of operation for all phases of the development and for all noise producing activities. • For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.	Appendix 2	

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Water		
• Provide details of the project that are essential for predicting and assessing impacts to waters including: a) the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on http://www.environment.nsw.gov.au/ieo/index.htm, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000); b) the management of discharges with potential for water impacts; c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal. • Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts e.g. effluent ponds) and showing potential areas of modification of contours, drainage etc. • Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.	Appendix 6	

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Waste and Chemicals		
Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's Waste Classification Guidelines 2014 (as amended from time to time) • Provide details of liquid waste and non-liquid waste management at the facility, including: a) the transportation, assessment and handling of waste arriving at or generated at the site; b) any stockpiling of wastes or recovered materials at the site; c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site; d) d) the method for disposing of all wastes or recovered materials at the facility; e) e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility; f) f) the proposed controls for managing the environmental impacts of these activities. • Provide details of spoil disposal with particular attention to: a) the quantity of spoil material likely to be generated; b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil; c) the need to maximise reuse of spoil material in the construction industry; d) identification of the history of spoil material and whether there is any likelihood of contaminated e) material, and if so, measures for the management of any contaminated material; f) designation of transportation routes for transport of spoil. • Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes. • Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage. • Reference should be made to the guidelines: EPA's Waste Classification Guidelines 2014 (as amended from time to time).	8.6.1	8-25
ESD		
• Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including: a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations; b) proper valuation and pricing of environmental resources; c) identification of who will bear the environmental costs of the proposal.	11	11-1
3. Rehabilitation		
• Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).	5.10	5-13

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
4. Consideration of Alternatives and Justification for the Proposal		
• Consider the environmental consequences of adopting alternatives, including alternative: a) sites and site layouts; b) access modes and routes; c) materials handling and production processes; d) waste and water management; e) impact mitigation measures; f) energy sources. • Selection of the preferred option should be justified in terms of: a) ability to satisfy the objectives of the proposal; b) relative environmental and other costs of each alternative; c) acceptability of environmental impacts and contribution to identified environmental objectives; d) acceptability of any environmental risks or uncertainties; e) reliability of proposed environmental impact mitigation measures; f) efficient use (including maximising re-use) of land, raw materials, energy and other resources.	1.3	1-5
C. The Location		
1. General		
• Provide an overview of the affected environment to place the proposal in its local and regional environmental context including: a) meteorological data (e.g. rainfall, temperature and evaporation, wind speed and direction); b) topography (landform element, slope type, gradient and length); c) surrounding land uses (potential synergies and conflicts); d) geomorphology (rates of landform change and current erosion and deposition processes); e) soil types and properties (including erodibility, engineering and structural properties, dispersibility, permeability, presence of acid sulfate soils and potential acid sulfate soils); f) Ecological information (water system habitat, vegetation, fauna); g) availability of services and the accessibility of the site for passenger and freight transport.	2.1	2-1
2. Air		
• Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models. • Describe surrounding buildings that may affect plume dispersion. • Provide and analyse site representative data on following meteorological parameters: a) temperature and humidity; b) rainfall, evaporation and cloud cover; c) wind speed and direction; d) atmospheric stability class; e) mixing height (the height that emissions will be ultimately mixed in the atmosphere); f) katabatic air drainage; g) air re-circulation.	6	6-14

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
3. Consideration of Alternatives and Justification for the Proposal		
• Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality. • Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.	1.3	1-5
4. Water		
• Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: http://www.environment.nsw.gov.au/ieo/index.htm should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.	6.3	6-16
4. Soil Contamination Issues		
• Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.	3.2.5.2	3-8
D. Identification and Prioritisation of Issues/Scoping of Impact Assessment		
• Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account: a) relevant NSW government guidelines; b) industry guidelines; c) EISs for similar projects; d) relevant research and reference material; e) relevant preliminary studies or reports for the proposal; f) consultation with stakeholders. • Provide a summary of the outcomes of the process including: a) all issues identified including local, regional and global impacts (e.g. increased/ decreased greenhouse emissions); b) key issues which will require a full analysis (including comprehensive baseline assessment); c) issues not needing full analysis though they may be addressed in the mitigation strategy; d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).	7	7-1
E. The Environmental Issues		
1. General		
• The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution. • Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements. *Note: The level of detail should match the level of importance of the issue in decision making which is dependent on the environmental risk.*	8	8-1

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Describe Baseline Conditions		
• Provide a description of existing environmental conditions for any potential impacts.	6	6-14
Assess Impacts		
• For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers. • Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts. • The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts e.g. assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc. • The assessment needs to consider impacts at all phases of the project cycle including: exploration (if relevant or significant), construction, routine operation, start-up operations, upset operations and decommissioning if relevant. • The level of assessment should be commensurate with the risk to the environment.	8.1 Appendix 1	8-1

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Describe Management and Mitigation Measures		
• Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. • Proponents are expected to implement a 'reasonable level of performance' to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A 'reasonable level of performance' involves adopting and implementing technology and management practices to achieve certain pollutant emissions levels in economically viable operations. • Technology-based criteria evolve gradually over time as technologies and practices change. • Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts. • Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include: a) operational procedures to manage environmental impacts; b) monitoring procedures; c) training programs; d) community consultation; e) complaint mechanisms including site contacts; f) strategies to use monitoring information to improve performance; g) strategies to achieve acceptable environmental impacts and to respond in event of exceedances.	8.1 Appendix 1	8-1
2. Air		
Describe Baseline Conditions		
• Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data.		

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Assess Impacts		
• Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point. • Estimate the resulting ground level concentrations of all pollutants. Where necessary (e.g. potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the EPA. • Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals. • Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations. • For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate. *Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.* • Reference should be made to relevant guidelines, including but not limited to Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC, 2016); Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2007); Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006); Technical Notes: Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006); Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads (DECC, 2009).	8.1 Appendix 1	9-1
Describe Management and Mitigation Measures		
• Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.	8.1 Appendix 1	8-1

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
3. Noise and Vibration		
Describe Baseline Conditions		
• Determine the existing background (LA90) and ambient (LAeq) noise levels, as relevant, in accordance with the NSW Noise Policy for Industry. • Determine the existing road traffic noise levels in accordance with the NSW Road Noise Policy, where road traffic noise impacts may occur. • The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including: a) details of equipment used for the measurements; b) a brief description of where the equipment was positioned; c) a statement justifying the choice of monitoring site(s), including the procedure used to choose the site(s), having regards to Fact Sheets A and B of the NSW Noise Policy for Industry; d) details of the exact location of the monitoring site and a description of land uses in surrounding areas; e) a description of the dominant and background noise sources at the site; f) day, evening and night assessment background levels for each day of the monitoring period; g) the final Rating Background Level (RBL) value; h) graphs of the measured noise levels for each day should be provided; i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring.	8.2 Appendix 2	8-5

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Assess Impacts		
• Determine the project noise trigger levels for the site. For each identified potentially affected receiver, this should include: a) determination of the project intrusive noise level for each identified potentially affected receiver; b) selection and justification of the appropriate amenity category for each identified potentially affected receiver; c) determination of the project amenity noise level for each receiver; d) determination of the appropriate maximum noise level event assessment (sleep disturbance) trigger level. • Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible effects on sleep. Determine expected noise level and noise character likely to be generated from noise sources during: a) site establishment; b) construction; c) operational phases d) transport including traffic noise generated by the proposal; e) other services. *Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).* • Determine the noise levels likely to be received at the reasonably most affected location(s) (these may vary for different activities at each phase of the development). • The noise impact assessment report should include: a) a plan showing the assumed location of each noise source for each prediction scenario; b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site; c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc; d) methods used to predict noise impacts including identification of any noise models used; e) the weather conditions considered for the noise predictions; f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario; g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived; h) an assessment of the need to include modification factors as detailed in Fact Sheet C of the NSW Noise Policy for Industry.	8.2 Appendix 2	8-5

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional feasible and reasonable mitigation measures. • The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation: a) Where relevant noise/vibration levels cannot be met after application of all feasible and reasonable mitigation measures the residual level of noise impact needs to be quantified; • For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS. • Where blasting is intended an assessment in accordance with the Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment: a) bench height, burden spacing, spacing burden ratio; b) blast hole diameter, inclination and spacing; c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.	8.2 Appendix 2	8-5

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Describe Management and Mitigation Measures		
• Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc. • For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include: a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage; b) control of traffic (eg: limiting times of access or speed limitations); c) resurfacing of the road using a quiet surface; d) use of (additional) noise barriers or bunds; e) treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern; f) more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension; g) driver education; h) appropriate truck routes; i) limit usage of exhaust brakes; j) use of premium muffles on trucks; k) reducing speed limits for trucks; l) ongoing community liaison and monitoring of complaints; m) phasing in the increased road use.	8.2 Appendix 2	8-5

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
4. Water		
Describe Baseline Conditions		
• Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts). • Note: Methods of sampling and analysis need to conform with an accepted standard (e.g. Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC 2004) or be approved and analyses undertaken by accredited laboratories). • Provide site drainage details and surface runoff yield. • State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: • http://www.environment.nsw.gov.au/ieo/index.htm. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice. • State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 Guidelines for Fresh and Marine Water Quality (http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANCECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater. • State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries or the NSW Salinity Strategy (DLWC, 2000) (http://www.environment.nsw.gov.au/salinity/government/nswstrategy.htm). • Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained.	8.3 Appendix 6	8-14

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include: a) lake or estuary flushing characteristics; b) specific human uses (e.g. exact location of drinking water offtake); c) sensitive ecosystems or species conservation values; d) d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc; e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment; f) historic river flow data where available for the catchment.		
Assess Impacts		
• No proposal should breach clause 120 of the *Protection of the Environment Operations Act* 1997 (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations). • Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source • and discharge point including residual discharges after mitigation measures are implemented. • Include a rationale, along with relevant calculations, supporting the prediction of the discharges. • Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater). • Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow). • Identify any potential impacts on quality or quantity of groundwater describing their source. • Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation. • Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils. • Containment of spills and leaks shall be in accordance with EPA's guidelines section 'Bunding and Spill Management' at http://www.epa.nsw.gov.au/mao/bundingspill.htm and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.	8.3 Appendix 6	8-14

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered: a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The EPA will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment. *Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.*	8.3 Appendix 6	8-14
Describe Management and Mitigation Measures		
• Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls. • Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies. • Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements. • Outline pollution control measures relating to storage of materials, possibility of accidental spills (e.g. preparation of contingency plans), appropriate disposal methods, and generation of leachate. • Describe hydrological impact mitigation measures including: a) site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition); b) minimising runoff; c) minimising reductions or modifications to flow regimes; d) avoiding modifications to groundwater. • Describe groundwater impact mitigation measures including: a) site selection; b) retention of native vegetation and revegetation; c) artificial recharge; d) providing surface storages with impervious linings; e) monitoring program.	8.3 Appendix 6	8-14

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• Describe geomorphological impact mitigation measures including: a) site selection; b) erosion and sediment controls; c) minimising instream works; d) treating existing accelerated erosion and deposition; e) monitoring program.	8.3 Appendix 6	8-14
• Any proposed monitoring should be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC 2004).	8.3 Appendix 6	8-14
5. Soils and Contamination		
Describe Baseline Conditions		
• Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.	Appendix 5	
Assess Impacts		
• Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of: a) disturbing any existing contaminated soil; b) contamination of soil by operation of the activity; c) subsidence or instability; d) soil erosion; e) disturbing acid sulfate or potential acid sulfate soils. • Reference should be made to relevant guidelines including but not limited to Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011); Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA, 2015)>.	Appendix 5	
Describe Management and Mitigation Measures		
• Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including: a) erosion and sediment control measures; b) proposals for site remediation – see Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land (Department of Urban Affairs and Planning and Environment Protection Authority, 1998); c) proposals for the management of these soils – see Acid Sulfate Soil Manual (Acid Sulfate Soil Advisory Committee 1998) and Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Advisory Committee 1998).	Appendix 5	
6. Waste and Chemicals		
Describe Baseline Conditions		
• Describe any existing waste or chemicals operations related to the proposal.	8.5 8.6.1 Appendix 3	8-18 8-25
Assess Impacts		
• Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals. • Reference should be made to the EPA's Waste Classification Guidelines 2014 (as in force from time to time).	8.6.1 Appendix 3	8-25

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• If the proposal is an energy from waste facility it must: ► demonstrate that the proposed operation will comply with the NSW EPA's Energy from Waste Policy Statement; ► describe of the classes and quantities of waste that would be thermally treated at the facility; ► demonstrate that waste used as a feedstock in the waste to energy plant would be the residual from a resource recovery process that maximises the recovery of material; ► detail procedures that would be implemented to control the inputs to the waste to energy plant, including contingency measures that would be implemented if inappropriate materials are identified; ► detail the location and size of stockpiles of unprocessed and processed recycled waste at the site; ► demonstrate any waste material (e.g. biochar, ash) produced from the waste to energy facility for land application is fit-for-purpose and poses minimal risk of harm to the environment in order to meet the requirements for consideration of a resource recovery order and /or exemption by the EPA; ► detail procedures for the management of other solid, liquid and gaseous waste streams; ► describe how waste would be treated, stored, used, disposed and handled on site, and transported to and from the site, and the potential impacts associated with these issues, including current and future offsite waste disposal methods; and ► identify the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.	8.5 Appendix 3	8-18
Describe Management and Mitigation Measures		
• Outline measures to minimise the consumption of natural resources. • Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste. • Outline measures to support any approved regional or industry waste plans.	8.5 Appendix 3	8-18
7. Cumulative Impacts		
• Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute. • Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region. • Identify infrastructure requirements flowing from the proposal (e.g. water and sewerage services, transport infrastructure upgrades). • Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (e.g. travel demand management strategies).	10	11-1
F. List of Approvals and Licences		
• Identify all approvals an licences required under environment protection legislation including details of all schedule activities, types of ancillary activities and types of discharges (to air, land, water).	13	13-1

Table 4-5: NSW EPA Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
G. List of Approvals and Licences		
• Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (e.g. outline of an environmental management plan). • The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.	12	12-1
H. Justification for the Proposal		
• Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.	15	15-1

Table 4-6: TfNSW Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Transport for NSW - General		
A detailed traffic impact assessment should be prepared and include, but not be limited to, the following: 1. Daily and peak traffic movements likely to be generated by the proposed redevelopment (including vehicle type and the likely arrival and departure times) and volumes likely to be generated during construction and operation, including a description of haul route origins and destinations, including; a) An inbound and outbound vehicle profile by time of day and day of week (if travel patterns differ across the week); b) Site plan and operating plan to demonstrate that the site will be managed such that queues do not develop on Gow Street; c) Site plan showing the proposed layout of the processing plant, storage and handling facilities and truck circulation layout that demonstrates the site will accommodate the most productive vehicle types (noting that the surrounding road network accommodates 25/26 metre B-doubles); d) Site layout that illustrates how loading and unloading (including waiting areas) will occur in relation to covered and uncovered areas for the different material types; e) Map the catchment for this processing centre to demonstrate that it is located in a suitable location to serve the construction industry from the perspective of not generating additional trips over long distances between construction sites, batching plants, this facility and land fill locations; f) The rationale for the expansion in fuel storage and clarification of how the storage expansion will be staged between the existing operations; Stage 1 (this proposal) and stage 2; g) Details of the driver facilities provided on site; h) Details of the origin/destination of dangerous goods movements to/from the site; and i) Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site for both light and heavy vehicles. 2. All affected intersections should be examined/ modelled and the need/associated funding for upgrading or road improvement works (if required), including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model as prescribed by TfNSW (former Roads and Maritime). These should include, but not be limited to: a) Gow Street at Fairfield Road; and b) Gow Street at Gibson Avenue. The traffic modelling should consider the scenarios of year 2026, 2031, 2036 and the year until the facility cease operation. 3. Details of the proposed accesses and the parking provisions associated with the proposed redevelopment including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle widths, etc). 4. Proposed number of car parking spaces and compliance with the appropriate parking codes.	Appendix 9	

Table 4-6: TfNSW Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
5. To ensure that the above requirements are fully addressed, the traffic impact assessment must properly ascertain the cumulative study area traffic impacts associated with the redevelopment (and any other known proposed developments in the area). This process provides an opportunity to identify a package of traffic and transport infrastructure measures required to support future development. Regional and local intersection and road improvements, vehicular access options for adjoining sites, public transport needs, the timing and cost of infrastructure works and the identification of funding responsibilities associated with the development should be identified. 6. TfNSW requires the Environmental Assessment report to address the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling); the potential for implementing a location-specific sustainable travel plan (eg 'Travelsmart' or other travel behaviour change initiative); and the provision of facilities to support non-car mode share for travel to and from the site. This will entail an assessment of the accessibility of the development site by public transport. The detailed traffic impact assessment should address the relevant planning provisions, goals and strategic planning objectives in the following: ► Future Transport 2056 and supporting documents; ► Draft NSW Freight and Ports Plans; ► Guide to Traffic Generating Developments 2002(RTA); – TDT 2013/04a Guide to Traffic Generating Developments, and; ► Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development.	Appendix 9	

Table 4-7: Sydney Water Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
• Sydney Water has a 400 mm VC branch carrier wastewater main located within the subject site • Sydney Water requests that detailed domestic and industrial water and wastewater demands be specified within the Environmental Impact Statement • Indicative stormwater, trade wastewater and water re-use quantities should also be included within the EIS report • It is recommended that the proponent engages a Water Servicing Coordinator and meetings are held between the proponent and Sydney Water to ensure that Sydney Water's requirements inform the design process. Sydney Water also requests that the Department of Planning, Industry and Environment include the following Secretary's Environmental Assessment Requirements relating to the provision of water-related services for the subject site:	8.3 Appendix 6	8-14
Water-Related Infrastructure Requirements		
1. The proponent of the development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and if required, recycled water services have been made. 2. The proponent must obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or any other Sydney Water asset, including any easement or property. When determining landscaping options, the proponent should take into account that certain tree species can cause cracking or blockage of Sydney Water pipes and therefore should be avoided. 3. Strict requirements for Sydney Water's stormwater assets (for certain types of development) may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets, such as avoiding building over and/or adjacent to stormwater assets and building bridges over stormwater assets. The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required. 4. As this development creates trade wastewater, Sydney Water has trade wastewater requirements which need to be met. By law, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. The proponent must obtain Sydney Water approval for this permit before any business activities can commence. Given this development comprises industrial operations, wastewater may discharge into a sewerage area that is subject to wastewater reuse. Please contact Sydney Water's Business Customer Services to send your permit application or to find out more information. They can be contacted at the following email address: businesscustomers@sydneywater.com.au.	8.3 Appendix 6	8-14

Table 4-7: Sydney Water Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Integrated Water Cycle Management		
5. The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any water conservation measures that are likely to be proposed. This will allow Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development.	8.3 Appendix 6	8-14

Table 4-8: Fire and Rescue NSW Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Fire Rescue NSW – General Comments		
• It is understood that a SEPP 33 assessment will be undertaken as part of the development of the Environmental Impact Statement (EIS). • It is recommended that advice and considerations contained within FRNSW's Fire Safety Guideline – Fire safety in waste facilities be addressed. Advice and recommendations contained within the guideline have been developed to enable FRNSW to adequately manage an incident at such facilities. • It is recommended that advice and considerations contained within FRNSW's Fire Safety Guideline – Emergency Vehicle Access be addressed. This is required such that FRNSW are able to safely access all parts of the site where an incident may occur. • It is recommended that provisions be made for the containment of contaminated fire water run-off based on the worst credible fire scenario for the site. Any system(s) provided is to be automatic in nature and should not rely upon on-site staff or emergency services personnel to access or activate provided systems or valves in the event of fire. • It is recommended that if the development proposes to incorporate a fire engineered solution (FES), whether a building design having a performance solution in accordance with the National Construction Code (NCC) or other infrastructure where building codes are not applicable, FRNSW should be engaged in the fire engineering brief (FEB) consultation process at the preliminary design phase, post approval of the development application. FRNSW also recommend that clauses E1.10 and E2.3 be addressed where a FES is required. • It is recommended that a Condition of Consent be included that would require the fire and life safety measures for the development to be reassessed for adequacy in the event that either; significant changes are made to the site configuration, processing capacity is increased or there are changes to either the accepted waste streams or a significant increase in streams that are combustible in nature. • It is recommended that the emergency plan for the waste facility in accordance with AS 3745–2010 Planning for emergencies in facilities be prepared for the development. An external consultant should be engaged to provide specialist advice and services in relation fire safety planning and developing an emergency plan.	8.5.3	8-23

Table 4-9: Ausgrid (Utilities) Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Ausgrid – General Comments		
• Assesses the capacity of existing services and utilities and identify any upgrades required to facilitate the development • Assesses the impacts of the proposal on existing utility infrastructure and service provider assets and describe how any potential impacts would be managed."	Appendix 10	

Table 4-10: Canterbury Bankstown Council Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Canterbury Bankstown Council – General Comments		
Statutory and Strategic Context		
Include consideration of the Bankstown Local Environmental Plan 2015, including the zone objectives of the IN1 General Industrial Zone. Address the relevant provisions, goals and strategic planning objectives of the Local Strategic Planning Statement (LSPS), *Connective City 2036*.	3.3.1	3-12
Flood, Drainage and Stormwater		
Clearly demonstrate that Council's existing drainage easement and drainage pipe is not impacted as a result of the development through supporting structural certification and hydraulic assessments, where necessary. Easement considerations include the following: a. Retention of access from the roadway (i.e. Gow Street) for maintenance vehicles (such as excavators). b. Provision of working space (e.g. for excavator booms) around the drainage infrastructure c. Not constructing any permanent structures within the width of the easement d. Installation of structural footings below the zone of influence of the pipe trench Any proposed modifications or connections to Council's drainage easement infrastructure requires Council approval via Section 68 of the Local Government Act.	8.3.1.1	8-15
The stormwater pipeline and associated easement is to be clearly shown on all relevant civil, architectural and landscaping plans. Council notes that the pipelines may not be centrally located within the easements.	Appendix 4	
Address the relevant provisions of the Bankstown DCP Part B12 – Flood Risk Management (especially all applicable facets of Schedule 5) and NSW Floodplain Development Manual (2005).	Appendix 12	
Prepare a Flood Impact Assessment through consultation with Council engineers to demonstrate no adverse flooding impacts and ensure flood hazards are mitigated to reduce flood liability and risk to life. This is to include: a. Council's available flood information (SSR – Stormwater System Report) is to be obtained for the development site. b. The flood impact assessment is to be calibrated against Council's catchment-wide flood study unless demonstrated otherwise through rigorous justification. c. Consideration of potential reductions in flood storage for the area and appropriate mitigation to minimise impacts. d. Assessment of the flood hazard based on the ARR2019 flood hazard curves (H1 to H6). e. Evacuation/egress for events up to the PMF is to be considered f. Council has no objection to the continued use of ARR1987 for the hydrological and hydraulic modelling, as per Council's catchment flood study.	Appendix 12	
Consider a dedicated overland flow path as a means of safety conveying flows of flood risks and impacts. Particularly in the event that the on-site stormwater systems (including any tanks and conduits) are exceeded or blocked in extreme events up to the 1% AEP (100- year ARI).		

Table 4-10: Canterbury Bankstown Council Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
Demonstrate the appropriateness of an inground pit for the dewatering plant with consideration to the flood and stormwater site affectations. If a pit is to proceed, provide a Leachate Management Plan to minimise the risk of site contamination.	Appendix 12	
Acid Sulphate Soils		
Consider undertaking an Acid Sulphate Soils Management Plan as the site is in Class 5 Acid Sulphate Soils (ASS) and is within 500m of Class 2 ASS (as per Sheet 5 of Bankstown LEP 2015).	Appendix 16	
Operation		
Provide an Operational Management Plan through consultation with relevant Council officers that outlines how the following impacts will be managed: • Increased heavy vehicle movements on nearby residential streets at all hours of the day and night. Including additional weights on lower order roads than currently anticipated. • Increased impacts on noise, air quality and vibration to surrounding uses • Potentially pollution generating activity on a site flood affected site contaminating nearby waterbodies. • It is recommended that truck movements associated with the site avoid Gibson Avenue during sensitive hours of operation.	Appendix 17	
Transport and Accessibility		
Provide a Traffic Impact Assessment (TIA) for the operation of traffic (all modes) which is to the satisfaction of Council's Traffic Engineer. The TIA should: • Demonstrate internal truck circulation and onsite queuing for both the proposed and existing developments. • Provide further details on the potential secondary access point and integration with existing and/or proposed uses. Council notes that works have recently occurred on the eastern boundary of the site, potentially a secondary access point that has not been included on the scoping report. • Elaborate on the expected number of heavy vehicle movements including the type of vehicles being utilising, with the tare and gross vehicle masses to understand the actual traffic implications. • Demonstrate the primary and secondary routes anticipated for heavy vehicles movements to and from. Council notes that there is no left turn out of Gow Street onto Fairford Road requiring an alternative route when exiting the facility, likely past residential properties. Increased truck noise past residential properties during sensitive hours is not supported. • Clarify and identify existing weight restrictions of roads in the heavy vehicle routes. • Identify proposed car parking arrangements. Noting that the site plan appears (12 shown) to be inconsistent with the scoping report (16 noted) and the existing layout (7 approx.).	Appendix 9	
The Construction Management Plan should also consider: • Management of pedestrian movements during construction • The impact of on-site parking and access arrangements of construction vehicles, construction workers to and from the site and service vehicles, and their impact to existing parking in and around the site and surrounding area.	Appendix 15	

Table 4-10: Canterbury Bankstown Council Assessment Requirements and EIS Reference

Environmental Assessment Requirements – Key Issues	EIS Reference	
	Section	Page No
The draft Traffic Management Plan (TMP) for the operation of traffic (all modes) should be prepared to the satisfaction of Council's Traffic Engineer.	Appendix 9	
Noise, Air Quality and Vibration		
Produce and provide a Noise Impact Assessment (NIA) and Full Quantitative Air Quality and Odour Impact Assessment (AQOIA) through consultation with the EPA and Council.	Appendix 1 and 2	
Consider a sound wall to the rear of the property to minimise noise impacts on surrounding residential populations.	Appendix 2	
Waste Management		
Considering the scale and intensity of the proposed development, a trade waste agreement should be included as part of the development.	Appendix 3	
Urban Design		
The design of the development is to consider the following matters: • Entries & frontage: Design to clearly articulate pedestrian and vehicle entries & frontages. Vehicular entries should be seen from at least 100m away. • Use of landscaping. • Interface Impact to surrounding land uses. • Accessible paths of travel to enter and move through the site.	Appendix 8	
Ecologically Sustainable Development		
Demonstrate good water sensitive urban design and landscaping, inclusive stormwater drainage solutions. Council notes that the site currently has little to no landscaping. Additional landscaping would be favourable to the area and assist in minimising stormwater runoff and heat island effects.	11	11-1
Plans and Documentation		
• Provide an elevation of the proposed development from Gow Street • Highlight primary and secondary accessible routes to and from the facility for heavy vehicles • Section of proposed pit including and proposed containment measures.	Appendix 8	
Consultation		
Council recommends that the extent of community consultation be extended to reflect the area affected by noise, air quality, odour and transport issues as a minimum.	4.2	4-6

5. DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development involves the construction and operation of a liquid waste dewatering facility to be established at the existing Gow Street Recycling Centre.

The proposed dewatering facility would have a processing capacity of 250,000 tonnes per annum and would accept drilling mud and concrete washout waste. The new facility would store a maximum of 1,400 tonnes of waste at any one time which includes approximately 300 tonnes of liquid waste and 1,100 tonnes of solid waste.

The dewatering plant operations are proposed to take place on site 24 hours a day, 7 days a week. The existing C&D facility would continue to operate within the approved hours of operation: 06:00 and 18:00 Monday to Friday, and 07:00 and 18:00 on weekends. The existing facility is not and will not be part of the development and will continue to operate under the existing consent.

The dewatering plant would operate on a site that contains an existing resource recovery facility but would essentially be a separate operation. There would be some cross-over between the two operations and this section provides a description of the existing facilities and processes, those proposed and explains how these two independent processes will operate and be managed at the site.

5.1 PROPOSED LIQUID WASTE DEWATERING FACILITY

Establishment and operation of a liquid waste dewatering plant is proposed. This plant would essentially operate separately from the existing approved resource recovery facility, however, there would be some minor interactions between processes. The proposal consists of the following elements:

- Construction of purpose-built building to enclose the dewatering facility. This would replace the existing warehouse building that would be demolished.
- A new office building would be constructed. This would replace the existing demountable office and amenities building as well as the demountable lunchroom that would be removed from site. The new office building would be used by staff of both the existing and proposed developments.
- Installation of dewatering equipment including a flocculant station/pit, screw separator and screen, slurry homogeniser, 2 x 60 kL silos, and filter press.
- A truck unloading area inside the building.
- Six (6) inground pits and sumps inside the building. Pits and sump details are as follows:
  - Inground Pit (receivals), 8.0 x 4.5 x 3.0 m deep (Volume: 108,000 L)
  - Floc Plant: Clean water pit, 3.0 x 2.835 x 2.5 m deep (Volume: 21,263 L)
  - Floc Plant: Dirty water pit (1), 2 x 2.835 x 2.5 m deep (Volume: 14,175 L)
  - Floc Plant: Dirty water pit (2), 3.33 x 2.835 x 2.5 m deep (Volume: 23,601 L)
  - Floc Plant: Sump Pit, 1.6 x 2.835 x 2.5 m deep (Volume: 11,340 L)
- Six (6) bunkers. Four (4) bunkers would be located inside the building and two (2) would be located external to the building under an awning. Bunker contents and dimensions are:
  - Bunker 1: Filter cake 6.3 x 8.5 m
  - Bunker 2: Sand 5.07 x 5.805 m
  - Bunker 3: Sand 5.295 x 5.805 m
  - Bunker 4: Sand 5.295 x 5.805 m

  - Bunker 5: Aggregate, 6.2 x 4.0 m
  - Bunker 6: Aggregate, 6.2 x 4.0 m
- Extension of the boundary wall up to new building behind the new aggregate bunkers.
- Connection to Sydney Water tradewaste under an agreement.
- Stormwater upgrades including a first flush system that directs the first 20 mm of on-site stormwater to a silt arrester and detention tank which will be used in the dewatering plant while the clean overflow is discharged to the stormwater easement using the existing stormwater connection during a heavy rain event.

A proposed site plan and equipment layout are provided in Appendix 8. A description of the dewatering process is provided in the following sub-section.

5.1.1 Proposed Process Description

The dewatering facility would operate as a recycling facility for the drilling mud and concrete washout water and stormwater captured onsite. The facility would involve the following activities:

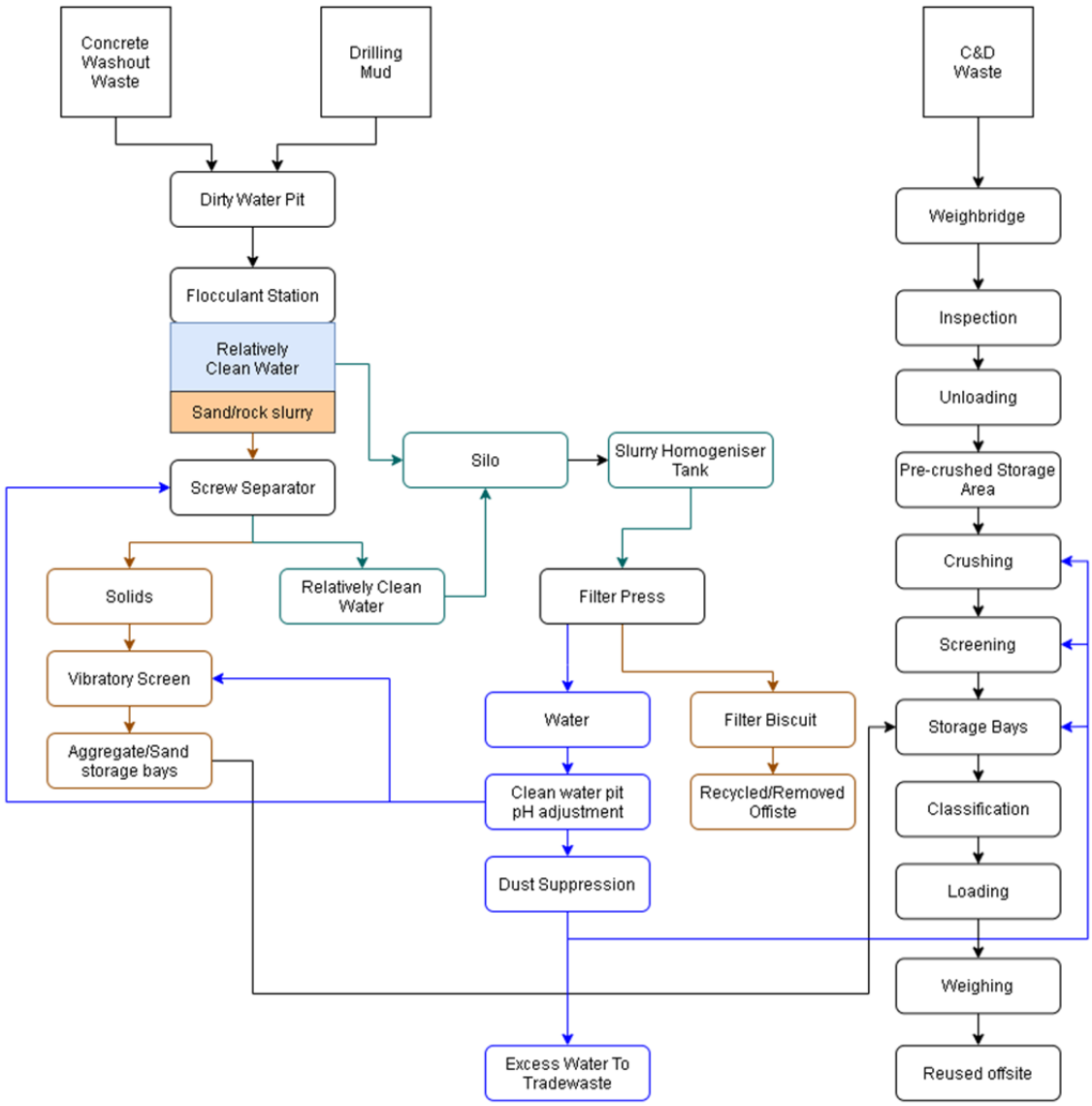
- Unloading of drilling mud/concrete washout water into dirty water containment pits.
- This liquid is transferred into the dirty water pit and then into the flocculent station.
- The flocculants assist in settling sediments at the bottom of the tank.
- The sand/rock/sediment slurry is pumped from the bottom of the tank and into a screw separator.
- The screw separator removes the solids from the water.
- The solids are then transferred to a vibrating screen where the aggregates and sands are conveyed to internal and external storage bays.
- The water from the flocculent station and the screw separator is pumped to the two 60 kL silos, the slurry homogeniser tank and then into the filter press.
- The filter press removes the remaining silts and the cleaned water is pumped to the clean water pit.
- The sediments/silt from the filter press becomes a fine biscuit which is removed offsite as for application to land under the Treated Drilling Mud Exemption 2014 or to landfill.
- The filter press requires intermittent backwashing where backwash water is pumped to the dirty water pit to be reprocessed through the system.
- The clean water pit would be pH adjusted and then used for cleaning aggregates and sand during the screening process, dust suppression and washdown onsite. Excess water would be sent to tradewaste under a Trade Waste Agreement.

Site washdown water and stormwater will be collected in a 200 kL underground tank and through the above dewatering system.

The maximum quantity of liquid waste that can be processed through the dewatering plant in a 24-hour period is approximately 1,500 tonnes. Approximately 450 tonnes of clean water is generated each day. This can easily accommodate stormwater runoff and the proposed 250,000 tonnes per annum.

A process flow diagram is presented in Figure 5-1. This shows the existing processes, new processes and interactions between the two operations.

Figure 5-1: Process Flow Diagram



5.1.2 Raw Materials

Two waste types will be received as "raw materials" to the process.

- Drilling mud; and
- Concrete washout waste.

The above waste streams would be sourced from construction and infrastructure projects within the local and regional area.

The first 20 mm of on-site stormwater captured within a pit would also be treated through the dewatering plant.

5.1.2.1 Drilling mud

The drilling mud to be received is to be non-destructive digging waste which is a water-based drilling mud containing clay (usually bentonite) and various non-odorous chemicals. The odorous drilling mud types include oil-based muds and synthetic based muds which are generally used on offshore rigs. The site would not receive oil-based or synthetic-based muds.

Under the Treated Drilling Mud Order 2014, the following definitions are provided:

> ***Drilling fluid*** *means a mixture of water and chemical additives including but not limited to bentonite, soda ash (sodium carbonate), sodium hydroxide, lime and polymers.*
>
> ***Drilling mud*** *means a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling or potholing. This does not include drilling mud that has been generated by:*
>
> *(a) Deep drilling for mineral, gas or coal exploration; or*
> *(b) Drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS)*

The drilling mud would meet the above definitions to enable the treated drilling mud to be applied to land under the resource recovery exemption. The chemical additives listed above are all known to be odorless as stated in relevant safety data sheets. One chemical of concern is barium sulphate which has the potential to be odorous due to the presence of sulphate which could potentially be reduced to hydrogen sulphide under anaerobic conditions. Drilling mud containing barium sulphate will NOT be accepted.

5.1.2.2 Concrete washout waste

Concrete washout waste is the resulting slurry generated after concrete is poured at a construction site. The concrete washout waste is produced when the chutes and drums of ready mixed concrete trucks, the hoppers of concrete pump trucks, wheelbarrows and hand tools are washed out with water to remove the residual concrete and prevent this from hardening on the equipment.

Concrete is a mixture of cement, water and aggregate material, usually a mixture of sand and gravel or crushed stone. The cement is generally made from a mixture of limestone and other clay containing oxides of calcium, aluminium, silicon and other metals. These materials are heated in a kiln, then pulverised to produce cement powder.

Concrete washout waste may therefore contain traces of toxic metals such as Chromium VI and is caustic and corrosive, with a pH of around 12. pH adjustment through addition of an acid or carbon dioxide would reduce the pH to acceptable levels.

Concrete wash out water would be sourced from concrete trucks returning from construction jobs that need to be washed out before returning to their existing concrete batching plants. Many concrete batching plants do not contain the facilities on site to manage concrete wash out water and therefore the new dewatering plant would provide a facility to treat this waste.

Concrete trucks would enter the loading area of the dewatering plant and wash out directly into the dirty water containment pit. This process would be enclosed within the facility.

5.1.2.3 On-site stormwater

On-site stormwater would be captured from the hardstand area into a first flush system where the first 20mm of rainwater would be treated through the dewatering plant. Any clean overflow would be captured on site through a silt arrestor before being discharged to the street stormwater system.

A stormwater isolation valve will be installed after the 200kL underground containment system, to contain contaminated stormwater if required.

5.1.3 Finished Product

Essentially the finished products include – aggregates, sand, filter cake (biscuit) and treated water. The dry component of the drilling mud would result in recovered aggregates, sand or become a "biscuit" that can be applied to land under the Treated drilling mud exemption 2014 or sent to landfill. The aggregates would be processed through the existing recycling plant and on-sold to customers. The wet component is treated water that would be reused on site for dust suppression for the existing external storage bunkers or sent to tradewaste under an agreement with Sydney Water.

5.1.4 Discharge Points

There are no discharge points to air, water or land.

5.1.5 Interactions Between the Processes

The dewatering facility will receive a maximum of 250,000 tpa of liquid waste.

- Approximately 60% is water: 150,000 tpa
- Approximately 2% is fine filter cake (general solid waste): 5,000 tpa
- Approximately 38% is recycled aggregates and fines: 95,000 tpa

The majority (>90%) of the waste aggregates and fines (between 1 - 50 mm) do not require crushing but only screening. This will occur within the dewatering plant with the sorted material transferred directly into each appropriate storage bay.

Less than 10% of the recycled aggregates and fines (9,500 tpa) would require crushing. This material would be processed through the site's currently operating C&D plant which is licenced to process 80,000 tpa. As the plant currently processes <70,000 tpa, this additional volume can be absorbed without exceeding the existing licence limit.

The dewatering plant would operate separately from the existing C&D facility. There would be some cross-over between operations as follows:

- Less than 10% of the recycled aggregates and fines produced from the dewatering plant (9,500 tpa) would require crushing. This material would be processed through the site's existing C&D plant which is licenced to process 80,000 tpa.

- Treated water from the dewatering process would be reused on site for dust suppression purposes on the existing external storage bunkers.
- The weighbridges and the existing wheel wash would be utilised by trucks associated with the C&D facility and proposed dewatering plant.
- Site offices and car parking would be used for site employees for both the existing C&D activities and the proposed dewatering activities.

5.1.6 Potential cross contamination

There is not considered to be any cross-contamination issues with concrete washout waste and drilling mud as the properties of these wastes' streams are very similar. It is common practice for facilities to receiver both drilling mud and concrete washout at dewatering facilities in NSW.

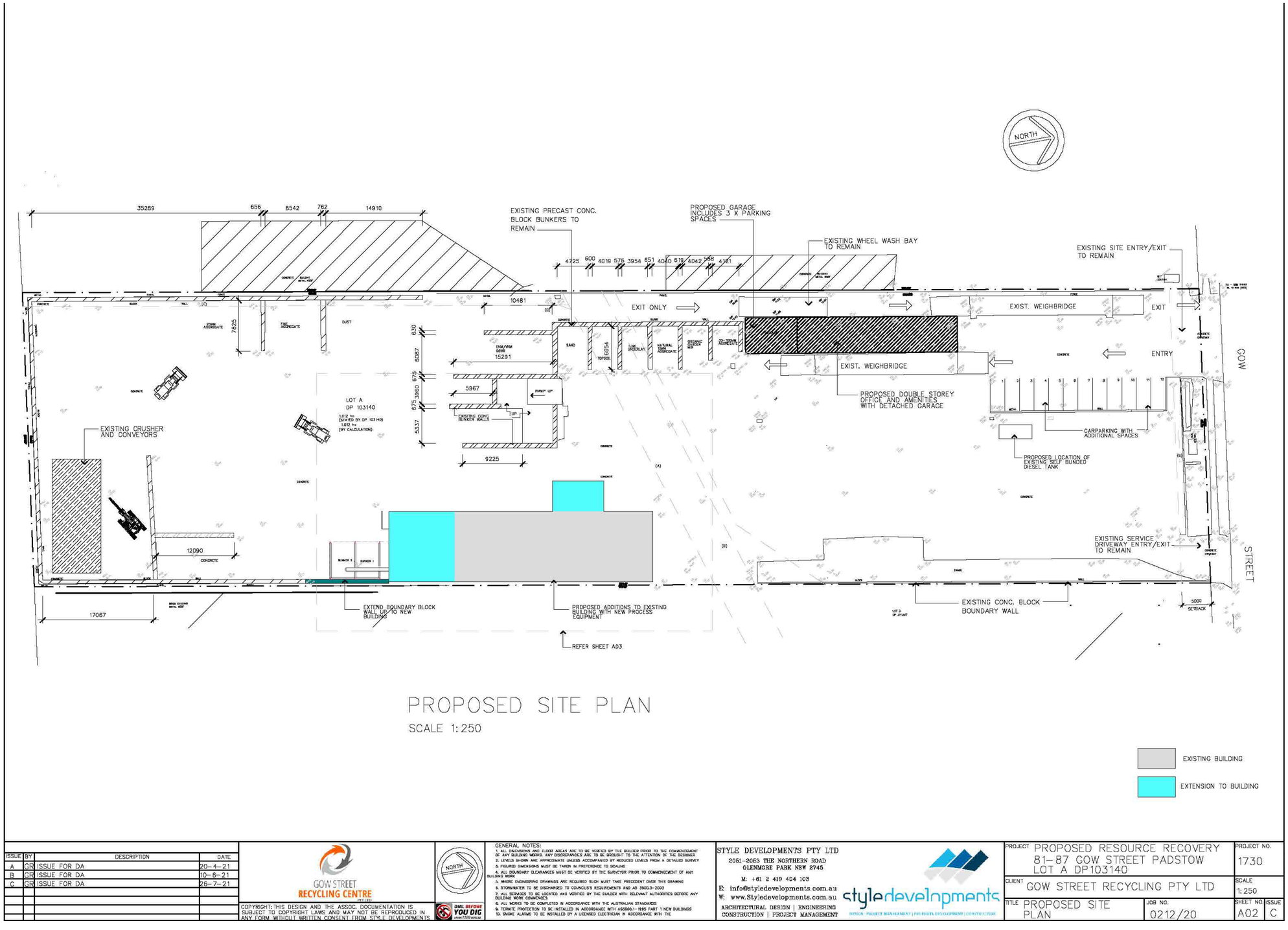
If contaminated liquid wastes are received either in the form of drilling mud or concrete washout waste in the dewatering plant they have the potential to contaminate solid and liquid storage. If the liquid is used as a dust suppression, it will have the potential to contaminate the construction and demolition waste stockpiles. Therefore, it is essential that no contaminated wastes are processed on site.

5.2 SITE PLANS

The proposed site plan for the liquid waste dewatering facility is shown in Figure 5-2 below. A full set of plans is provided in Appendix 8 and include:

- A00 - Cover Sheet
- A01 - Existing Site Plan
- A02-B - Proposed Site Plan Rev B
- A03 - Propose Floor Plan
- A04 – Elevations
- A05 – Elevations
- A06 - Building Sections
- A07 - Equipment Elevations
- A08 - Rigid truck queuing plan
- A09 - B-Double Queuing plan
- A10 - Truck load and unloading plan

Figure 5-2: Proposed Site Plan



PROPOSED SITE PLAN

SCALE 1:250

ISSUE	BY	DESCRIPTION	DATE
A	GR	ISSUE FOR DA	20-4-21
B	GR	ISSUE FOR DA	10-6-21
C	GR	ISSUE FOR DA	26-7-21

GOW STREET RECYCLING CENTRE PTY LTD

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GENERAL NOTES:
1. ALL DIMENSIONS AND FLOOR AREAS ARE TO BE VERIFIED BY THE BUILDER PRIOR TO THE COMMENCEMENT OF ANY BUILDING WORKS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER.
2. LEVELS SHOWN ARE APPROXIMATE UNLESS ACCOMPANIED BY REDUCED LEVELS FROM A DETAILED SURVEY
3. FIGURED DIMENSIONS MUST BE TAKEN IN PREFERENCE TO SCALING
4. ALL BOUNDARY CLEARANCES MUST BE VERIFIED BY THE SURVEYOR PRIOR TO COMMENCEMENT OF ANY BUILDING WORK
5. WHERE ENGINEERING DRAWINGS ARE REQUIRED SUCH MUST TAKE PRECEDENT OVER THIS DRAWING
6. STORMWATER TO BE DISCHARGED TO COUNCIL'S REQUIREMENTS AND AS 3500.3-2003
7. ALL SERVICES TO BE LOCATED AND VERIFIED BY THE BUILDER WITH RELEVANT AUTHORITIES BEFORE ANY BUILDING WORK COMMENCES
8. ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS
9. TERMITE PROTECTION TO BE INSTALLED IN ACCORDANCE WITH AS3660.1-1995 PART 1 NEW BUILDINGS
10. SMOKE ALARMS TO BE INSTALLED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH THE

STYLE DEVELOPMENTS PTY LTD
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PROJECT: PROPOSED RESOURCE RECOVERY 81-87 GOW STREET PADSTOW LOT A DP103140			PROJECT NO.: 1730
CLIENT: GOW STREET RECYCLING PTY LTD			SCALE: 1:250
TITLE: PROPOSED SITE PLAN	JOB NO.: 0212/20	SHEET NO.: A02	ISSUE: C

5.3 VALUE

Donald Cant Watts Corke prepared a Quantity Surveyors Report for the proposed development. This report confirmed the capital investment value of the development is $3,691,075. The QS report is provided as Appendix 14.

5.4 CONSTRUCTION WORKS

The liquid waste processing plant and new office will be constructed onsite and is expected to be completed within four-months.

The construction works involve:

- Removal of demountable office and lunchroom.
- Upgrade of the stormwater infrastructure and containment system.
- Modifications to the existing industrial building including excavations for inground pits;
- Installation of dewatering plant equipment, footings, water containment pits.
- Installation of additional dust controls for the existing construction and demolition waste recycling facility including upgraded sprinkler system and flexible hood and vacuum ducting over the crushing and screening equipment.
- Construction of the proposed office building.

The construction works involve excavations for the water containment pits, stormwater system upgrade and footings for the equipment installation. The Phase II soil contamination report (see appendix 5) found no evidence of existing on site contamination. However the presence of Acid Sulfate Soils were detected, therefore an Acid Sulfate Soil Management Plan is required prior to the commencement of excavations works.

All excavated soils will be managed in accordance with the Acid Sulfate Soil Management Plan and classified in accordance with the Waste Classification Guidelines.

Erosion and sediment controls will be implemented during construction works and are presented in Appendix 4.

Construction works would be undertaken in accordance with a construction environmental management plan.

5.5 EQUIPMENT

Existing equipment that is currently approved for use at the facility includes;

- Crusher;
- Screen;
- Front End Loader x 2;
- Excavator x 2; and
- Trucks x 3.

The proposed dewatering plant will include the following equipment:

- Screen spray bar pump;
- Vibrating screen;
- conveyors
- Screw separator;
- Submersible pump;
- Flocculant station and dosing system;
- Stainless steet tank/silos;
- Slurry homogeniser tanks;
- Filter feeding centrifugal pump;
- Filter press; and
- Pipework valves etc.

Details of the proposed equipment are provided on the proposed floor plan and equipment layout, and elevation and section drawings in Appendix 8.

5.6 CHEMICALS

Diesel will be stored within a self bunded tank externally. All other chemicals will be stored internally on bunded pallets or within dangerous goods storage cabinets. The chemicals will include:

Existing:
- 65,000 L of diesel (in a self bunded tank);
- 200 L of degreaser;
- 200 L of truck wash;
- 1,000 L of engine oil;
- 200 L of transmission oil;
- 200 L of differential oil; and
- 200 kg of grease and lubricants

Proposed:
- 250 kg of flocculant; and
- 440 L of corrosive substances (acid/base used for pH adjustment).

5.7 OPERATIONAL DETAILS

5.7.1 Utility Connections

5.7.1.1 Water

The site is connected to mains water.

5.7.1.2 Sewage and Wastewater

The site is connected to the main sewage system. The site will require connection to tradewaste.

5.7.1.3 Electricity

The site is connected to the electricity network.

5.7.1.4 Telecommunications

Services are to be provided by a local network.

5.7.2 Gas, Petrol and Diesel

A 65,000 litre, self bunded tank provides diesel fuel for trucks and mobile equipment is used onsite.

5.7.3 Hours of Operation

The dewatering facility proposes to operate for 24 hours / seven days a week.

The approved operational hours for the C&D facility are: 06:00 and 18:00 Monday to Friday, and 07:00 and 18:00 on weekends. The existing facility will continue to operate within these hours.

5.7.4 Employment

The site currently employs nine (9) full-time staff, with most to be retrained in order to operate the new equipment. Approximately ten (10) additional full-time jobs will be created. Sub-contractors will be hired for the construction phase.

5.7.5 Traffic

The operation of the dewatering plant would generate additional traffic. Traffic associated with the proposed dewatering plant include liquid tankers and concrete trucks unloading liquid waste, medium ridged and B-doubles for picking up aggregates and sands and additional car movements due to increased staff. There would also be some medium rigid trucks removing filter cake. The remainder of the separated components of the liquid waste resulting from its treatment through the plant would be further processed in the existing C&D as part of the approved capacity. The wastewater would be sent to tradewaste, requiring no trucks to remove this waste type.

The main vehicles accessing the site include:

- Cars of site staff and visitors which would be restricted to the allocated parking areas only;
- Medium rigid trucks;
- B–Doubles; and
- Liquid tanker trucks; and
- Concrete trucks.

At maximum proposed capacity, heavy vehicle trips per day are expected to include 44 on average for the C&D facility and 128 for the dewatering plant. These trips would be distributed over the hours of operation.

There are two access driveways to the site from Gow Street. The main western entrance would be used to access the site, the other eastern driveway would only be used for service vehicles.

There is ample room on site during peak times for queuing of trucks to prevent queuing on the street.

Vehicles unloading at the dewatering plant typically take 10-25 minutes to unload. Trucks picking up solid materials via FEL typically take around 15 minutes to load and vehicles dropping off solid materials typically take 1-2 minutes to unload.

Further details on traffic associated with the operation of the site is provided in Section 9.4.

A full traffic and parking assessment is provided in Appendix 9. A Traffic Management Plan is also provided with the development application in Appendix 9.

5.7.6 Parking

Condition 6 of DA-51/1997/2 requires that Carparking spaces for sixteen (16) vehicles shall be provided for the overall site in marked spaces. Changes to the site layout and requirements of Bankstown Development Control Plan 2015 have also been considered in the following table.

Table 5-1: Car Parking Rates

Land use	Parking Requirement	Gross Floor Area	No. Spaces Required
Industries and light industries including vehicle body repair workshops and vehicle repair stations	1 space per 100 m^2 of gross floor area	Dewatering Building: 587 m^2	5.87
	Note 2: Where an office component does not exceed 20% of the total gross floor area, 1 car space per 100 m^2 of gross floor area Any additional office space will be assessed at a rate of 1 car space per 40 m^2 of gross floor area	New office building: 182 m^2 Total gross floor area: 769 m^2 First 20% of factory floor Remaining office space.	 1.53 0.73
		Total car spaces required:	8

Under the Bankstown DCP, 8 car spaces are required. 15 car spaces have been provided including 12 spaces adjacent to the entrance driveway and 3 spaces in the garage adjacent to the office building. The proposed development complies with the DCP.

5.7.7 Site Security

Staff will be on site 24/7 which provides security. The industrial building has existing security provisions.

5.8 EMISSIONS AND WASTE

An outline of the potential emissions and wastes resulting from the proposed development is provided in the following sub-sections. Detailed assessments are provided in Appendix 3 of the EIS.

5.8.1 Air and Odour

There may be dust generated from the two new aggregate bunkers associated with the dewatering plant. Odorous material would not be accepted on site. An Air Quality Impact Assessment has been undertaken that considers the site's current and proposed activities and is provided in Appendix 1.

With the proposed site activities and additional dust controls in place, it is considered that emissions to air from the site's operation are unlikely to cause harm to resident's health or the environment.

5.8.2 Noise and Vibration

On a typical operational day, noise sources associated with the dewatering plant will come from the following sources:

- 1 x Vacuum truck pump;
- 2 x Conveyors
- 3 x Indoor pumps;
- 1 x Screw Separator (indoors); and
- 1 x Vibrating Screen (indoors).

Existing noise sources would be from the crusher, screen and on-site vehicles. A noise assessment in provided in appendix 2.

5.8.3 Water and Wastewater

Water is used for:

- Washing the aggregates and sands within the dewatering plant;
- Dust suppression; and
- Office and amenities.

As per this proposal, Waste water will be received at the site as drilling mud and concrete truck washout. The waste water will be held in storage tanks until it is processed and reused for onsite purposes such as cleaning the concrete surface, dust suppression and washing of aggregate. If an excess of treated water is generated and cannot be reused onsite, it will be sent to trade waste in accordance with a trade waste agreement.

Groundwater is not proposed to be extracted nor used for the proposed development. Mains water would continue to be used for the office and amenities.

5.8.4 Waste

Essentially the dewatering facility would accept drilling mud and concrete washout waste and treat these to generate three finished products – recovered aggregates that can be sold, filter cake "biscuit" that may be applied to land under the Treated drilling mud exemption 2014 (if applicable) or sent to landfill and treated water which can be reused on site.

Recovered aggregate from the dewatering facility will be crushed and screened at the existing C&D recycling facility on site, and if required rewashed at the dewatering facility.

The resulting treated drilling mud (fine biscuit) which represents less than 10% of the materials from the dewatering process can be applied to land as engineering fill or for use in earthworks under the Treated Drilling Mud Exemption 2014. If requirements of the Treated Drilling Mud Order 2014 cannot be met, this biscuit would be sent to landfill as general solid waste.

The treated water would be used on-site for dust suppression and washing purposes in the existing construction and demolition (C&D) recycling facility. The site may generate excess treated water from time to time, that is unable to be used onsite, any such water will be sent to trade waste in accordance with a trade waste agreement.

5.9 Cleaner Production Actions

Cleaner production involves improving the environmental and economic efficiency of production processes, products and services. The proposed dewatering facility involves the following cleaner production actions:

- Additional wastes would be recovered improving environmental processes;
- Aggregates and sands are produced synergising with the existing C&D facility providing increased production/efficiency of this supply;
- Services are improved as the site will provide a location for an increased variety of construction wastes (adding concrete washout and drilling mud); and
- Clean water is generated which will be used for dust suppression reducing the requirement for drinking water consumption and increasing efficacy of dust mitigation.

5.10 Site Rehabilitation

The proposed development is unlikely to require any rehabilitation.

6. EXISTING ENVIRONMENT

6.1 GEOLOGY AND SOILS

6.1.1 Geological and Soil Landscapes

The 'Sydney 1:100 000 Geological Map Sheet 9130' describes the geological composition of the area as Ashfield Shale (Rwa) which is part of the Wianamatta Group and comprises of dark-grey to black claystone-siltstone and fine sandstone-siltstone laminate.

The soil map 'Soil Landscape of Sydney 1:100,000 Sheet 9130' shows that the subject site is located in a 'Blacktown' (bt) area and is described as follows:

> *Blacktown (bt)*
>
> *Landscape – gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Local relief to 30 m, slopes are usually <5%. Broad rounded crests and ridges with gently inclined slopes. Cleared Eucalypt woodland and tall open-forest (wet sclerophyll forests).*
>
> *Soils – shallow to moderately deep (<100 cm) Red and Brown Podzolic Soils (Dr3.21, Dr3.11, Db2.11) on crests, upper slopes and well-drained areas, deep (150-300 cm) Yellow Podzolic Soils and Soloths (Dy2.11, Dy3.11) on lower slopes and in areas of poor drainage.*

6.1.2 Acid Sulfate Soils (ASS)

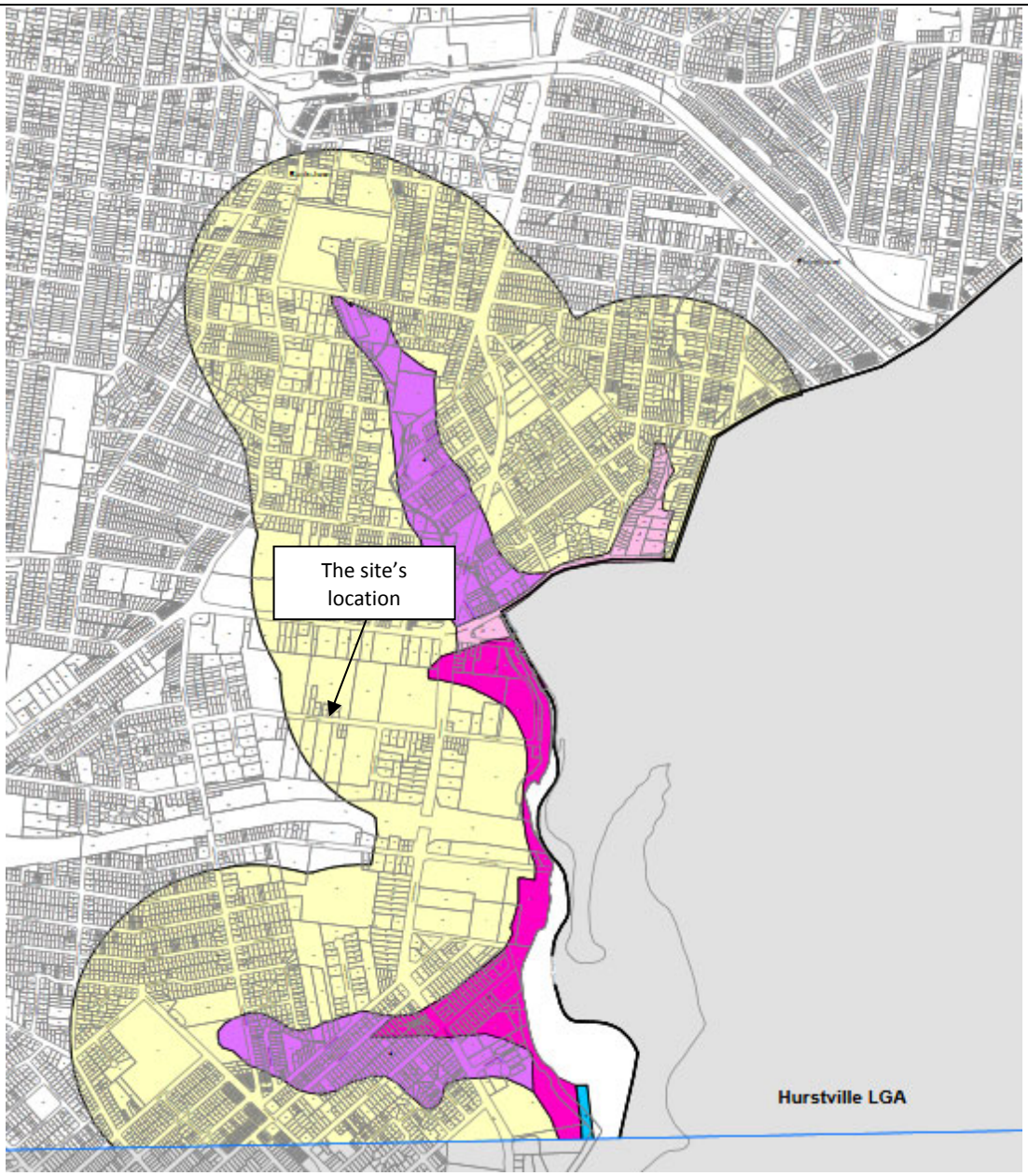
Acid Sulfate Soils (ASS) are naturally occurring soils and sediments that form under waterlogged conditions. They contain iron sulfide (predominantly pyrite) and when water logged, or in an anoxic environment, ASS remain benign. However, if drained, excavated or exposed to air by a lowering of the water table, the sulfides react with oxygen to form sulfuric acid, sometimes in large quantities (for every tonne of sulfidic material that completely oxidises, 1.6 tonnes of pure sulfuric acid is produced). ASS contains traces of metals such as iron, aluminium and arsenic. Once acid forms, it mobilises any metals held within the soil. Rainfall washes this mixture into the surrounding environment polluting land and nearby waterways. Accumulation of acid and metals becomes toxic to plants and animals, especially aquatic organisms. Built structures are highly susceptible to ASS, as acid will slowly corrode concrete, steel, roads and building foundations.

The Bankstown LEP 2015 ASS map (see Figure 6-1), shows the subject site is located within an area of Class 5 soils. Class 5 is categorised as;

"Acid sulfate soils are not typically found in Class 5 areas. Areas classified as Class 5 are located within 500 metres on adjacent class 1,2,3 or 4 land."

Due to the proposed construction and excavation works, an ASS assessment was undertaken. The results are detailed within the soil and water assessment (see Appendix 6).

Figure 6-1: Acid Sulfate Soil Map



Source: Bankstown LEP 2015

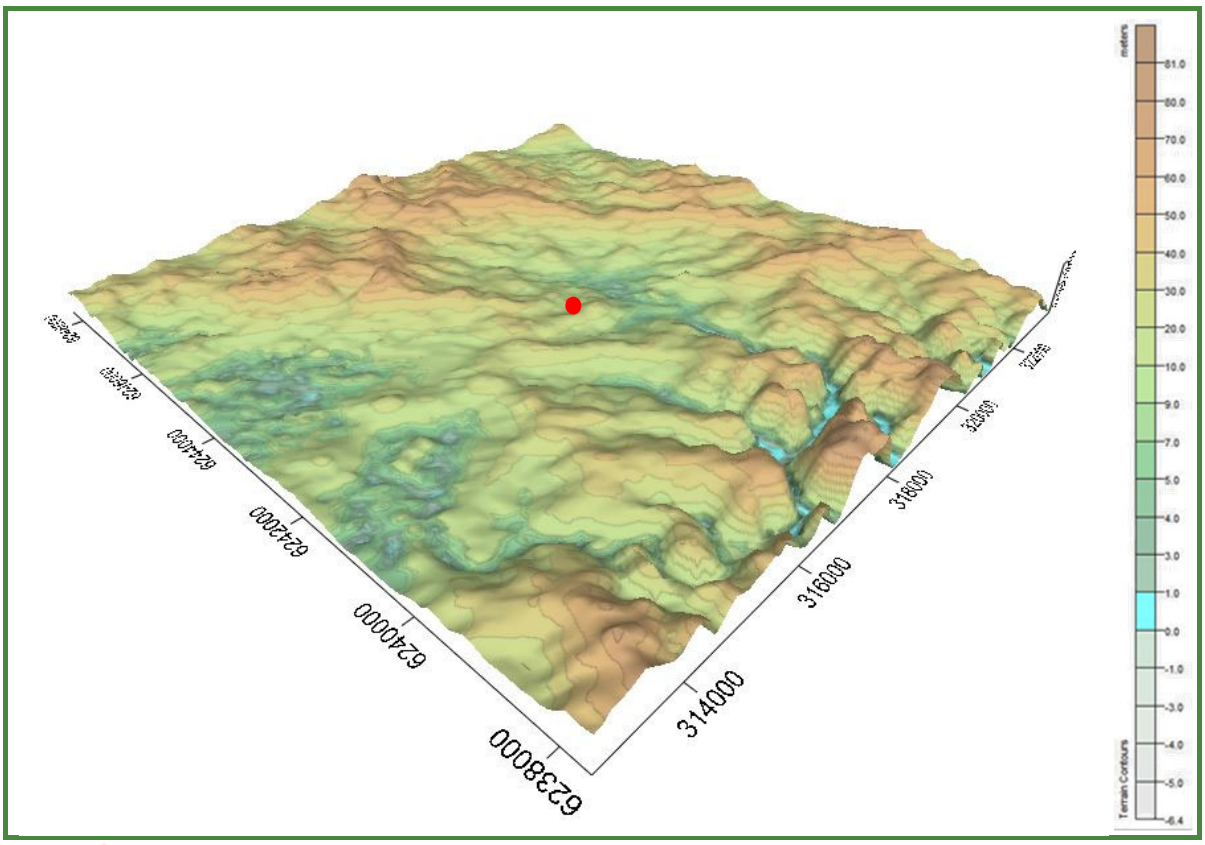
↑N Not to scale	**Legend**: **Acid Sulfate Soils** 1 Class 1 2 Class 2 3 Class 3 4 Class 4 5 Class 5	Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152

6.2 TOPOGRAPHY

The site is located within an industrial area. Its surface is covered in concrete hardstand and is generally flat, with a slight rise towards the southern end of the property.

A three-dimensional view of the local topography surrounding the site has been provided in Figure 6-2, with the terrain/vertical axis exaggerated by a factor of 10. It should be noted that this figure approximates the actual terrain, based on information that has been digitised from local contour maps.

Figure 6-2: Local Topography with Vertical Exaggeration of 10



Note: ● = Approximate location of site

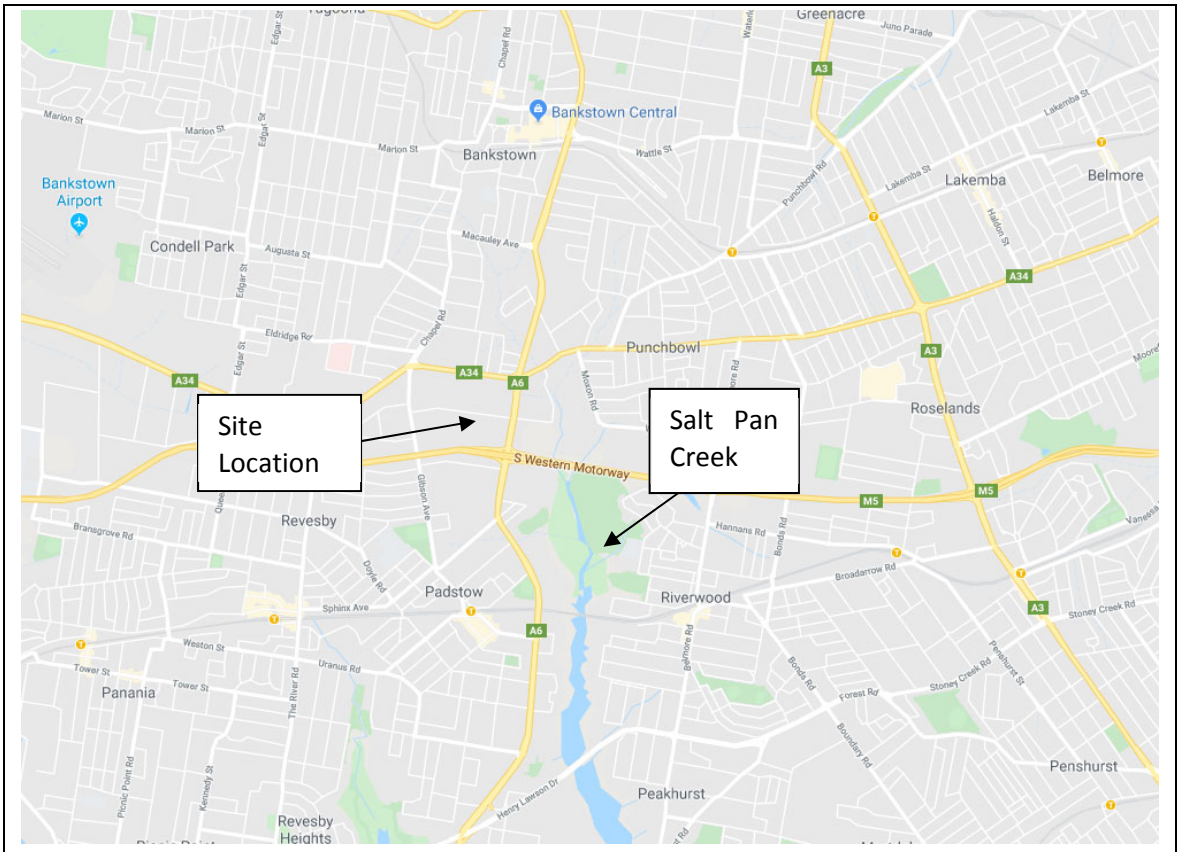
6.3 HYDROLOGY

The following section details the hydrological aspect of the site and surrounding region. Specifics on surface water, waterways and groundwater have been described, together with overall catchment issues such as salinity and flooding.

6.3.1 Waterways and Catchment

The site contains no waterbodies, with the nearest water source being Salt Pan Creek, located approximately 760 m SE from the site (Figure 6-3). The creek's headwaters are located at Mt Lewis, approximately four km NE from the site. The creek flows south-easterly before reaching its confluence with the Georges River, at Riverwood. Salt Pan Creek's catchment is approximately 26 km^2 and is prone to flooding due to urban development and the removal of vegetation.

Figure 6-3: Nearest Waterways



Source: Google Maps 2020

↑N Not to scale		Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152

6.3.1.1 Water Quality and River Flow Objectives

This section provides the Water Quality Objectives (WQOs) and the River Flow Objectives (RFOs) for the Georges River catchment. WQOs and RFOs are used to develop plans and actions affecting water quality and river health. There would be no discharge into any waterways from the proposed development as stormwater will be captured and reused onsite. Excess water captured at the site would be disposed as trade waste water Nevertheless, WQOs and RFOs are provided for here for completeness of information for the potentially receiving waters.

The subject site is located in 'Waterways affected by Urban Development'. The relevant WQOs and RFOs are summarised below in Table 6-1 and Table 6-2 respectively. If needed, key water quality indicators and related numerical criteria (default trigger values) relevant to assessing and monitoring the health of aquatic ecosystems can be found at: http://www.environment.nsw.gov.au/ieo/GeorgesRiver/report-02.htm

Table 6-1: Relevant Water Quality Objectives (WQOs)

WQO	Objective
Aquatic Ecosystems	*Maintaining or improving the ecological condition of waterbodies and their riparian zones over the long term*
Visual Amenity	*Aesthetic qualities of waters*
Secondary Contact Recreation	*Maintaining or improving water quality for activities such as boating and wading, where there is a low probability of water being swallowed*
Primary Contact Recreation	*Maintaining or improving water quality for activities such as swimming in which there is a high probability of water being swallowed*

Table 6-2: Relevant River Flow Objectives (RFOs)

RFO	Objective
Maintain wetland and floodplain inundation	*Maintain or restore the natural inundation patterns and distribution of floodwaters supporting natural wetland and floodplain ecosystems*
Maintain Natural Flow Variability	*Maintain or mimic natural flow variability in all streams*
Maintain Natural Rates of Change in Water Levels	*Maintain rates of rise and fall of river heights within natural bounds*
Minimise Effects of Weirs and Other Structures	*Minimise the impact of instream structures*

6.3.1.2 Catchment Management Plan

Georges Riverkeeper Strategic Plan 2018-2022 is a four year plan produced by Georges Riverkeeper, a catchment management group. Georges Riverkeeper facilitates proactive waterway management that is adaptive and integrated across other areas of member councils, rather than being reactive and piecemeal. There are five focus areas in the Strategic Plan, these are:

- Catchment Actions Program, (previously the Riverkeeper Program)
- River Health Monitoring Program
- Storm water Program
- Research Program
- Education and Capacity Building Program

6.3.2 Groundwater

According to the Australian Groundwater Explorer, there are four groundwater bores within 500 m of the subject site. Available data for these bores is presented in Table 6-3.

Table 6-3: Available Data for Groundwater Bores within 500 m of the Subject Site.

Bore	Depth (m)	Standing Water Level (m)	Salinity
GW111382.1.1	7.0	-	True
GW109275.1.1	7.0	-	False
GW111383.1.1	6.1	-	True
GW111381.1.1	4.5	-	True

The Phase I ESA, conducted by Benbow Environmental (BE), suggested a potential existed for groundwater to have been contaminated due to past practises. These include;

- Sediment from onsite roadways;
- Heavy metal particulates;
- Oil leaching from stained concrete surfaces;
- Lead based paints used prior to 1970; and
- Hydrocarbons leaking from an historical underground storage tank.

The limited Phase II ESA conducted by BE in early 2020 found no evidence for gross soil or groundwater contamination as having occurred.

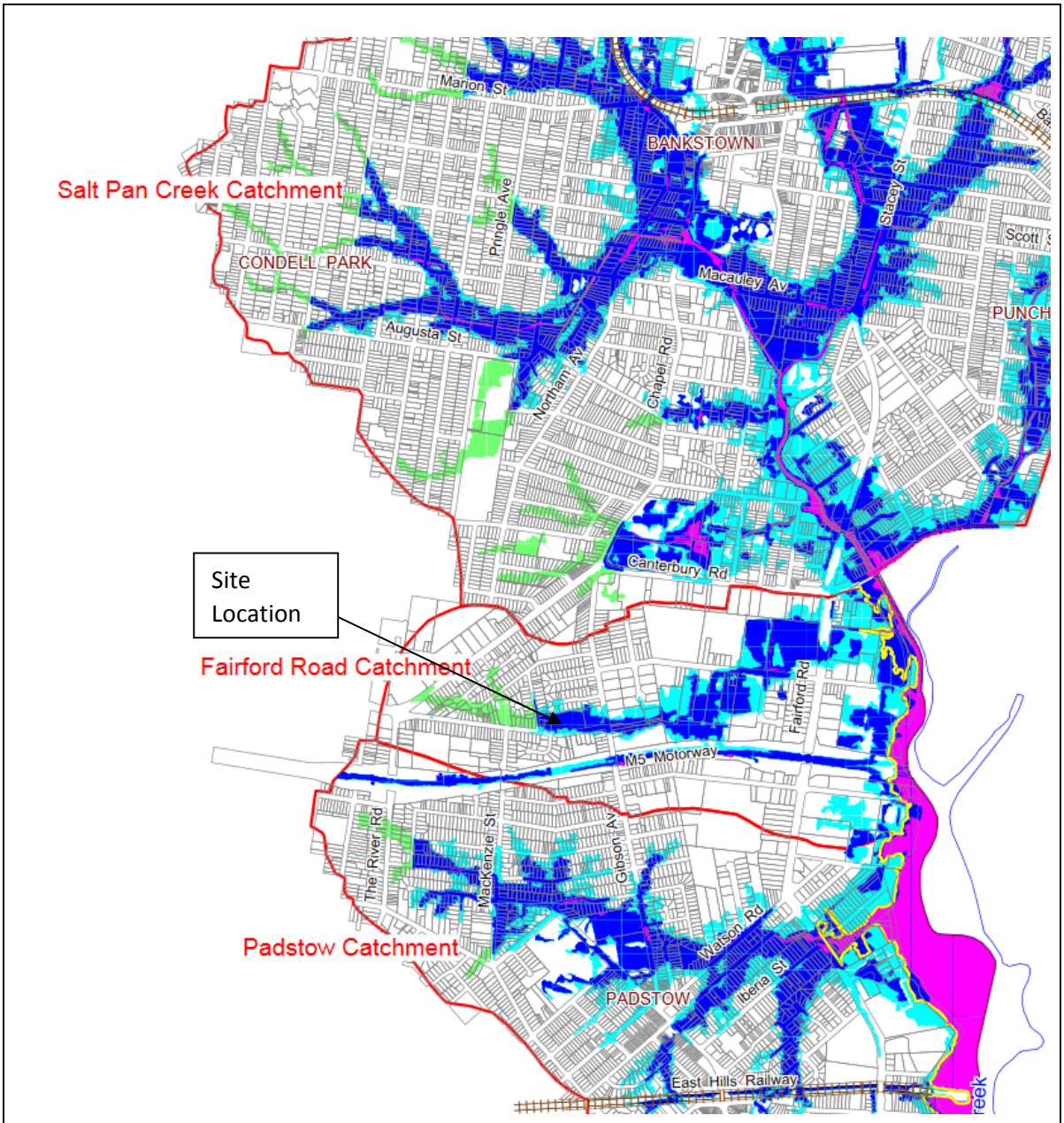
6.3.3 Flooding

Flood maps created by the Canterbury Bankstown Council indicate that the site is located in medium risk flood hazard area (Figure 6-4).

The waste storage areas and buildings within the proposal area are within the 1:100 AEP (Annual Exceedance Probability) flood zone. The 1% AEP flood is approximately equal to the 1 in 100 year Average Recurrent Interval (ARI) flood event (or simply 100 year flood). This means there is a 1% chance that a flood will occur over this section of the site in any given year.

A flood impact assessment report is provided in Appendix 12.

Figure 6-4: Provisional Flood Risk Categories Map



Source: Canterbury Bankstown Council 2019

6.4 FLORA AND FAUNA

A targeted search was undertaken using data from the BioNet Atlas of NSW Wildlife website to identify any threatened species in the area surrounding the proposed development. The search criteria included all valid records from the past five years of entities threatened in NSW (listed under the *Threatened Species Conservation Act 1995*) and entities threatened nationally (listed under the *Environment Protection and Biodiversity Conservation Act 1999*) within a selected area.

The selected area incorporated the entirety of the Canterbury-Bankstown LGA, including the proposed development. The results from the search are listed in Table 6-4, and presented in their geographical context in Figure 6-5.

The targeted search shows that there are two endangered population species that have been sighted within close proximity to the subject site.

The first of these is the Gosford Wattle, *Acacia prominens*. An isolated population of the species exists in the Hurstville and Kogarah LGAs nearby to the site, with records of the wattle dating back to the 19th Century. Due to the small volume of remaining vegetation within these LGAs, the Gosford Wattle is considered endangered in these areas.

The second listed species is the Tadgell's Bluebell, *Wahlenbergia multicaulis*. This perennial, tufted herb has blue flowers, with petals 2 – 10 mm in length. There are 13 known locations of the species in NSW, with the majority in Sydney's western suburbs. Major threats to the species, includes weed invasion, habitat loss and genetic swapping.

The Bankstown LEP 2015 Map does not identify the subject site as containing either critical habitat or biodiversity. The nearest area of biodiversity is situated around Salt Pan Creek, approximately 760 m east of the site. A vast array of flora species and populations exist throughout the catchment area, including one endangered species (coastal saltmarsh) and two endangered Forest populations; Cooks River Castlereagh Ironbark Forest and Sandstone Transition Forest.

Table 6-4: List of threatened species in the selected area within the last 5 years

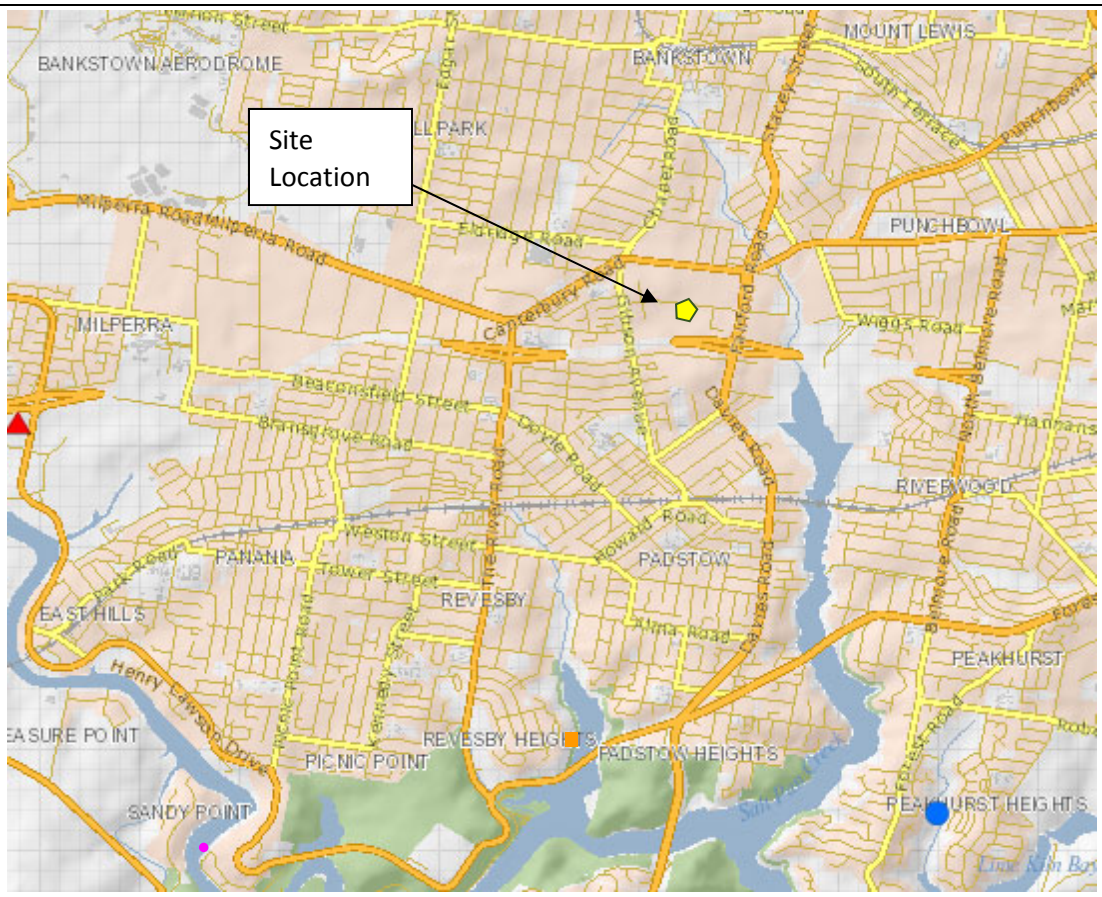
Kingdom	Clade	Scientific Name	Common Name	NSW Status	Sightings
Animalia	Accipitridae	*Haliaeetus leucogaster*	White-bellied Sea-Eagle	Vulnerable Protected	1
Animalia	Accipitridae	*Hieraaetus morphnoides*	Little Eagle	Vulnerable Protected	2
Animalia	Burhinidae	*Burhinus grallarius*	Bush Stone-Curlew	Endagered Protected	1
Animalia	Rostratulidae	*Rostratula australis*	Australian Painted Snipe	Endangered Protected	1
Animalia	Psittacidae	*Glossopsitta pusilla*	Little Lorikeet	Vulnerable Protected	1
Animalia	Strigidae	*Ninox Strenua*	Powerful Owl	Vulnerable Protected Specialty Class 3	11
Animalia	Phascolarctidae	*Phascolarctos cinereus*	Koala	Vulnerable Protected	9

Table 6-4: List of threatened species in the selected area within the last 5 years

Kingdom	Clade	Scientific Name	Common Name	NSW Status	Sightings
Animalia	Pteropodidae	*Pteropus poliocephalus*	Grey Headed Flying Fox	Vulnerable Protected	282
Animalia	Emballonuridae	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	Vulnerable Protected	1
Animalia	Molossidae	*Micronomus norfolkensis*	Eastern Coastal Free-tailed Bat	Vulnerable Protected	2
Animalia	Vespertilionidae	*Chalinolobus dwyeri*	Large-eared Pied Bat	Vulnerable Protected	1
Animalia	Vespertilionidae	*Falsistrellus tasmaniensis*	Eastern False Pipistrelle	Vulnerable Protected	1
Animalia	Vespertilionidae	*Myotis macropus*	Southern Myotis	Vulnerable Protected	2
Plantae	Dilleniaceae	*Hibbertia puberula*	Wedge Guinea Flower	Endangered	1
Plantae	Fabaceae	*Acacia prominens*	Gosford Wattle	Endangered Population	1
Plantae	Asterids	*Wahlenbergia multicaulis*	Tadgell's Bluebell	Endangered Population	1
Plantae	Fabaceae	*Acacia pubescens*	Downy Wattle	Vulnerable	69

Note: Data taken from between December 2014 and December 2019.

Figure 6-5: Nearby Endangered Population Flora Sightings



Source: BioNet Atlas of NSW Wildlife (2019)

↑N Not to scale	LEGEND: ▲ - Tadgell's Bluebell ● - Gosford Wattle ⬠ - Site Location	Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152

6.5 Noise Amenity

The existing acoustic environment of the site and surrounding area is typical of an urban environment with background noise levels dominated by traffic noise. Details of the existing acoustic environment including background noise monitoring are provided in Section 8.2.2.

6.6 Background Air Quality

Background air quality parameters were obtained from the closest NSW EPA Chullora air quality monitoring station located approximately 5 km north of the subject site. Typical of the majority of air quality monitoring stations throughout the Sydney basin, elevated background dust (PM_{10} and $PM_{2.5}$) levels are present. Details of the monitored dust levels are provided in section 8.1.2.

6.7 CLIMATE

This section provides background information on the meteorological conditions of the existing area surrounding the proposed development. The referenced meteorological information for rainfall and temperature has been sourced from the Bureau of Meteorology (BoM) monitoring station at Bankstown Airport AWS, Station No. 066137. This station is located approximately 6.3 km south east of the subject site and is considered suitable for reference to general climate conditions in the local area.

6.7.1 Temperature

The mean annual minimum and maximum temperatures at Bankstown Airport AWS are 12.0°C and 23.3°C respectively. The lowest temperatures occur in July, with a mean maximum of 17.4°C and a mean minimum of 5.1°C. The hottest temperatures are recorded during January, with the highest maximum average of 28.5°C. This data is shown in Table 6-5.

Table 6-5: Temperature Statistics at Bankstown Airport AWS

Months / Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Maximum Temperature (ºC)	28.5	27.9	26.4	23.8	20.6	17.8	17.4	19.0	21.7	23.9	25.4	27.5	23.3
Mean Minimum Temperature (ºC)	18.3	18.2	16.3	12.8	9.4	6.8	5.1	6.0	8.7	11.9	14.4	16.7	12.0

Source: Bureau of Meteorology, 2019
Note: Statistics are based on data collected from the Year 1968 to 2019

6.7.2 Rainfall

Rainfall data from Bankstown Airport AWS shows the mean annual rainfall of 868 mm, with a monthly mean of 72.3 mm. February is the wettest month, having a mean rainfall of 101 mm, while the driest month July, has a mean of 42.7 mm. The mean annual number of rainy days (i.e. days with rain above 1.0 mm) is calculated as 81.3 days. This data is shown in Table 6-6 below.

Table 6-6: Rainfall Statistics – Bankstown Airport AWS

Months / Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Rainfall (mm)	91.9	101.0	100.5	83.0	63.5	80.3	42.7	49.2	44.6	60.1	75.4	68.5	868.0
Decile 5 (Median) Rainfall (mm)	74.6	75.0	78.6	57.5	51.4	57.2	29.6	24.6	37.0	39.2	67.8	56.6	885.8
Mean No. of Days of Rain ≥ 1 mm	8.0	7.9	8.5	6.6	6.5	6.8	5.2	4.5	5.3	6.7	7.9	7.2	81.1

Source: Bureau of Meteorology, 2019
Note: Statistics are based on data collected from the Year 1968 to 2019
Note: Red indicates maximum values, whereas blue indicates minimum values

6.7.3 Wind

Seasonal wind rose plots for this site utilising Bankstown Airport AWS 2018 data have been included as Figure 6-6.

Based on the information presented from the 2018 data for Bankstown Airport, annual average wind speeds of 3.22 m/s and a calms frequency of 16.35% were estimated. Annual winds from the south-east were found to be dominant and were present for approximately 13% of the time.

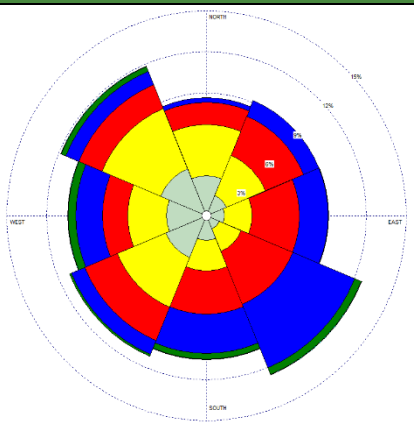
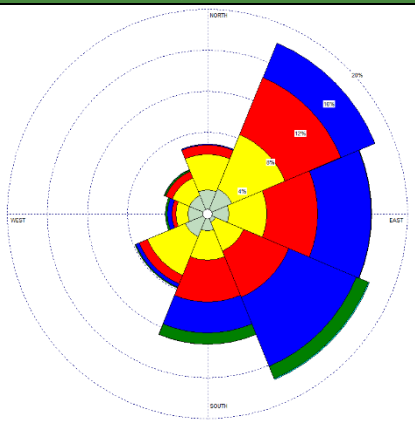
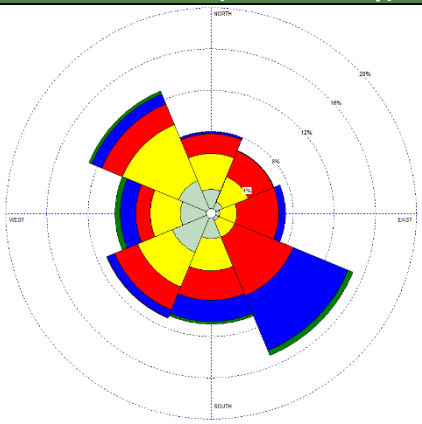
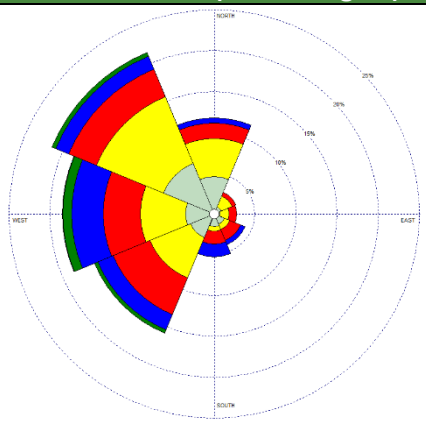
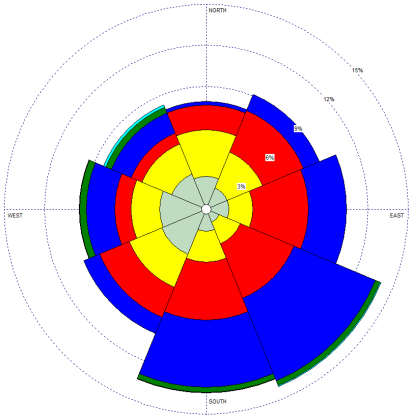
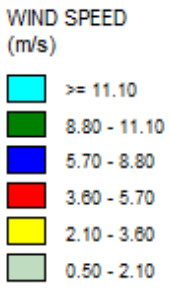
The average summer wind speed was estimated to be 3.68 m/s, with a calms frequency of 11.21%. North-easterly and south-easterly winds were found to be dominant both at a frequency of around 18%. Winds from the east were found to be present for approximately 16% of the time while the remainder of the wind directions have contributions of less than 13%.

In autumn, dominant winds were blowing from the south-east (14%) and north-west (13%). All other wind directions occurred at frequencies less than 11%. The average autumn wind speed was 3.00 m/s with a calms frequency of 18.88%.

The winter season data showed the prevalence of winds from the south-west, west and north-west at frequencies of 16%, 18% and 21% respectively. All other wind directions occurred at frequencies less than 12%. The average winter wind speed was determined to be 2.82 m/s with a calms frequency of 17.53%.

In the spring time, average wind speeds of 3.39 m/s with a frequency of calms of 17.68% were recorded. Dominant strong winds were found to be present from the south east (14%) and south (13%). The rest of the wind directions were found to be present at frequencies less than 11%.

Figure 6-6: Wind Rose Plots for the Referenced Meteorological Station – Bureau of Meteorology Bankstown Airport AWS (2018)

All Seasons	Summer Season (December – February)
	
Average Wind Speed: 3.22 m/s Calms Frequency: 16.35% Axis Frequencies: 3%, 6%, 9%, 12%, 15%	Average Wind Speed: 3.68 m/s Calms Frequency: 11.21% Axis Frequencies: 4%, 8%, 12%, 16%, 20%
Autumn Season (March – May)	**Winter Season (June – August)**
	
Average Wind Speed: 3.00 m/s Calms Frequency: 18.88% Axis Frequencies: 4%, 8%, 12%, 16%, 20%	Average Wind Speed: 2.82 m/s Calms Frequency: 17.53% Axis Frequencies: 5%, 10%, 15%, 20%, 25%
Spring Season (September – November)	**Legend**
	
Average Wind Speed: 3.39 m/s Calms Frequency: 17.68 % Axis Frequencies: 3%, 6%, 9%, 12%, 15%	

7. IDENTIFICATION AND PRIORITISATION OF ISSUES

The identification and prioritisation of the potential environmental impacts of the proposed development were fundamental steps in preparing the EIS.

This process involved the following stages:

1. Review of the proposal and existing site operations

Initial meetings with the proponent were undertaken to discuss the details of the proposal. This established the nature of the proposal. An inspection of the site and surrounding areas was undertaken which lead to identification of potential sensitive receptors.

2. Identification of planning requirements

Review of planning instruments that apply to the land was undertaken to determine any planning constraints and zoning rules affecting the property.

3. Guidelines and reference material

Past reports for the existing site and relevant NSW government/industry guidelines were reviewed.

4. Preparation of Scoping Report

Experience with similar projects and a previous Scoping Report assisted in development of a Scoping Report that outlined the proposal and potential environmental impacts.

5. Consultation with regulatory authorities & stakeholders

Secretary's Environmental Assessment Requirements for the EIS from the DPIE were obtained. This included feedback from Ausgrid, NSW EPA, DPIE (EES and Water), NSW Fire and Rescue, Sydney Water and TfNSW.

These steps led to the design and objectives of the Proposal.

7.1 KEY ISSUE RISK ASSESSMENT

The SEARs required a risk assessment identifying key issues. This has been undertaken following the risk assessment methodology outlined in the following sections.

7.1.1 Risk Criteria

The following sub-section defines the risk criteria used in this assessment.

7.1.1.1 Consequence Estimation

Consequence descriptor is used to quantify the potential on-site and off-site impacts in terms of environmental, health and financial impacts. Consequence is described in the following table.

Table 7-1: Consequence Table

Level	Descriptor	Consequences Or Impact Description
1	Insignificant	Confined on-site environmental impacts able to be promptly rectified. No injuries. Financial loss less than $2,000.
2	Minor	Confined environmental impacts requiring short term recovery with potentially little or no off-site impacts. First Aid treatment. Financial loss $2,000 to $20,000.
3	Moderate	Confined environmental impacts requiring medium term recovery both on-site and off-site. Medical treatment required. Financial loss $20,000 to $200,000,
4	Severe	Unconfined environmental impacts requiring long term recovery and leaving residual damage both on-site and off-site. Extensive injuries, loss of product capability. Financial loss $200,000 to $1M.
5	Catastrophic	Widespread environmental impact requiring long term recovery and leaving major damage both on-site and off-site. Death. Financial loss more than $1M.

7.1.2 Likelihood Estimation

This aspect involves determining how likely an event is to occur. Likelihood is the chance that something might happen and is defined for the purposes of this assessment in the following table.

Table 7-2: Likelihood Table

Level	Descriptor	Likelihood Description
A	Almost Certain	Very likely. The event is expected to occur in most circumstances.
B	Likely	Strong possibility. The event will probably occur in most circumstances.
C	Possible	The event might occur at some time.
D	Unlikely	Not expected. There is a slight possibility the event could occur at some time.
E	Rare	Highly unlikely. The event may occur only in exceptional circumstances.

7.1.3 Level of Risk

The level of risk is defined by the following table.

Table 7-3: Level of Risk Table

		Consequence				
		Insignificant 1	Minor 2	Moderate 3	Severe 4	Catastrophic 5
Likelihood	A (almost certain)	MEDIUM	HIGH	HIGH	VERY HIGH	VERY HIGH
	B (likely)	LOW	MEDIUM	HIGH	HIGH	VERY HIGH
	C (possible)	LOW	MEDIUM	MEDIUM	HIGH	HIGH
	D (unlikely)	LOW	LOW	MEDIUM	MEDIUM	H (10)
	E (rare)	LOW	LOW	LOW	LOW	LOW

Key issues are identified by any level of risk medium and above. The level of assessment can be based on the risk level and is discussed in the risk table. Key issues identified with a high or very high level of risk would need to be quantitatively assessed.

Issues with a low risk level are not considered key issues. A brief discussion is considered adequate for these issues.

7.1.4 Key Issue Risk Table

Table 7-4 presents the risk assessment that identifies the key issues of the project.

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
STATUTORY AND STRATEGIC CONTEXT	The proposal constitutes state significant development based on the proposed capacity of the dewatering plant under Clause 23 of the State and Regional Development SEPP. The proposal is required to comply with state, regional and local planning instruments. The risk associated with not complying with planning instruments is assessed.	Severe	Possible	H	A planning assessment is required to assess the proposal against all relevant planning strategies, environmental planning instruments and development control plans.	Yes
SUITABILITY OF THE SITE	The materials and processes associated with the proposal present a risk of causing pollution if the site is not suitable for the proposed use.	Severe	Possible	H	A detailed justification for the proposal and suitability of the site is provided.	Yes
COMMUNITY & STAKEHOLDER ENGAGEMENT	The risk of members of the community being impacted by the development could result if aspects are not managed appropriately. Stakeholder engagement is required as the project is state significant.	Severe	Possible	H	Community consultation and stakeholder engagement is an essential part of the EIS process. Opportunity for stakeholders & the community to provide input into requirements for the EIS and to express concerns was required.	Yes
WASTE MANAGEMENT	Waste forms the basis of the development in that the facility would undertake resource recovery and waste processing. Waste classifications for both inputs and outputs include general solid waste (non-putrescible) and liquid waste. No hazardous or toxic waste is included. Resource recovery orders and exemptions are applicable. Potential for waste to contaminate the environment is a risk.	Severe	Possible	H	A detailed waste management assessment is required.	Yes

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
AIR QUALITY & ODOUR	Dust Cumulative dust issues are associated with the existing C&D activities. Dust would also be generated when aggregates are removed from the drilling mud waste stream. Dust needs to be assessed for the combined existing and proposed development.	Severe	Likely	H	A quantitative air quality impact assessment is required due to the dust generated from the existing process and potential for additional dust impacts.	Yes
	Odour No odorous materials would be accepted on site. Restrictions of the type of drilling mud allowed at the site are posed by the existing consent. No changes to this are proposed.	Insignificant	Unlikely	L	An odour assessment is not warranted.	
	Greenhouse Gas Emissions The project is unlikely to meet thresholds under the NGER Act. Additional energy use would result in GHG emissions.	Minor	Likely	M	GHG emission assessment is provided.	
SOILS & WATER	Flooding The property is subject to flood related development controls. Changes to the site may result in changes to flood impacts off-site.	Moderate	Possible	M	A flood assessment is required.	Yes
	Water The development requires changes to roofed areas and will require excavations and retaining walls. Changes to stormwater infrastructure will be required. The process will treat liquid waste. Treated water would be reused on site. Changes to water interactions will result.	Severe	Likely	H	Stormwater design and music modelling (quantitative assessment) is required. A water qualitative assessment would address the potential impacts to surface and groundwater.	

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
	<u>Soil</u> Past site uses warrant a preliminary site investigation to determine the contamination status of the site. Outcomes of this would inform whether sampling and analysis is required. Disturbance to soil is required for underground tanks (OSD) and excavations for stormwater infrastructure and dewatering tanks.	Moderate	Possible	M	Contamination is assessed in accordance with SEPP 55. A soil assessment would address the potential impacts to land.	Yes
NOISE & VIBRATION	Additional noise generating equipment is required for the operation of the dewatering plant. 24/7 operations are proposed. Sensitive receptors are located in close proximity to the site.	Severe	Possible	H	A quantitative noise impact assessment is required.	Yes
TRAFFIC & TRANSPORT	Additional truck movements would be associated with the 250,000 tonnes of drilling mud to be processed potentially resulting in impacts to the existing road network and intersections.	Severe	Likely	H	A full traffic assessment is required.	Yes
FIRE & INCIDENT MANAGEMENT	There is limited combustible waste to be stored at the site. The majority of waste is non-combustible. As this development is a waste facility, the FRNSW guidelines for waste facilities needs to be addressed.	Moderate	Possible	M	Fire risk needs to be assessed.	Yes
HAZARD & RISK	<u>Chemicals</u> No significant quantities of hazardous chemicals are to be used in the process. Quantities of chemicals are relatively minor and do not trigger SEPP 33, therefore a preliminary hazard analysis is not required.	Minor	Possible	M	SEPP 33 risk screening required. Chemical management issues addressed.	Yes

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
	<u>Biosecurity</u> Biosecurity is not considered an issue as there are no putrescible or odorous waste to be accepted.	Insignificant	Unlikely	L	Brief discussion included.	No
	<u>Bushfire</u> The land is not bushfire prone.	Minor	Unlikely	L	Brief discussion included.	No
BIODIVERSITY	Preliminary findings determined that land does not include or comprise critical habitat, nor is it in the immediate vicinity of any threatened species. The land has been previously cleared of all vegetation. A BDAR waiver application has been submitted.	Insignificant	Rare	L	Brief discussion included.	No
HERITAGE	A search of the NSW State Heritage Inventory found no Aboriginal places or items of heritage on, or within the vicinity of the site and that the site is fully concreted with no vegetation and therefore a full Aboriginal and Cultural Heritage Assessment is not considered required. EES notes however that the proposed development may require excavation work. If the excavation is likely to disturb the ground surface it is recommended an Aboriginal cultural heritage assessment report is prepared. The development requires excavation work that will disturb the ground surface.	Moderate	Possible	M	An aboriginal heritage assessment is required.	Yes
VISUAL	The site is a fully developed industrial site. Based on preliminary plans, changes on site would not significantly impact on the visual appearance of the site.	Minor	Unlikely	L	A discussion of visual amenity has been provided.	No

Table 7-4: Key Issues Risk Assessment

Environmental Aspect	Discussion of Development Features & Potential Impacts	Raw Risk			Assessment Requirements	Key Issue
		Consequence	Likelihood	Raw Risk Level		
ECOLOGICAL SUSTAINABLE DEVELOPMENT	Additional processes are likely to impact on environmental aspects. The proposal is state significant. Therefore, ecological sustainable development needs to be discussed in detail.	Moderate	Possible	M	ESD discussed in detail	Yes
CUMULATIVE IMPACTS	Due to the size and nature of the proposed development, controlling for direct environmental impacts would minimise any cumulative impacts from the proposed development. Some aspects such as noise, dust impacts, traffic and stormwater have been assessed cumulatively in their assessments.	Moderate	Possible	M	Cumulative impacts are briefly discussed. Results of any cumulative assessments are provided.	Yes
HUMAN HEALTH AND SAFETY	Preliminary investigations into the potential impacts to human health resulting from liquid waste recycling facilities are either negligible or appropriately mitigated. Furthermore, the nature of the drilling mud is inert or chemically inactive. No hazardous materials are associated with the processing operations.	Minor	Unlikely	L	A detailed assessment is not warranted. A brief discussion on human health is provided.	No
SOCIO-ECONOMIC	Employment is expected to be for 10 positions. The development is expected to have small positive contributions to the community in terms of socio-economic impacts.	Minor	Unlikely	L	Socio-economic aspects are briefly discussed.	No

7.2 SUMMARY OF KEY ISSUES

Issues identified with a risk level of medium, high and very high are considered to be key issues that require detailed assessment. Assessment requirements for each key issue are identified in Table 7-4. No very high risk level issues were identified. The following are the key issues:

Key issues with high risk level, requiring detailed assessment:

- Statutory and strategic context – A detailed planning assessment is required.
- Suitability of the site – A detailed justification for the proposal and suitability of the site is required.
- Community and stakeholder engagement – meaningful consultation of potential affected community, adjoining properties and regulatory authorities is needed.
- Waste management – A detailed waste management assessment and plan is required.
- Air Quality and odour – A detailed dust impact assessment is needed. An odour assessment is not warranted.
- Water – Stormwater design and music modelling is also required along with a qualitative assessment of surface and groundwater impacts.
- Noise and Vibration – A full noise impact assessment is needed.
- Traffic and Transport – A detailed traffic impact assessment is required.

Medium risk key issues include:

- Flooding - A flood assessment has been identified as being required.
- Soil – Contamination requires assessment in accordance with SEPP55. A soil assessment needs to address potential impacts to land.
- Fire and Incident Management – Fire risk requires assessment.
- Hazard and Risk – A SEPP33 preliminary risk screening is needed.
- Heritage – An aboriginal heritage assessment is required.
- Ecological sustainable development will be discussed in detail.
- Cumulative impacts would be addressed for high risk issues and a summary provided.

Low risk issues need to be briefly addressed and include:

- Odour – An odour assessment is not warranted and justification is provided.
- Biosecurity.
- Bushfire.
- Biodiversity – A BDAR waiver was issued.
- Visual amenity.

8. ENVIRONMENTAL IMPACTS AND SAFEGUARDS

8.1 AIR QUALITY

An Air Quality Impact Assessment (AQIA) has been undertaken for the proposed development. A full copy of the AQIA is provided as Appendix 1. A summary of the AQIA is provided in this section.

The assessment determines the predicted dust and particulate matter contribution from the existing and proposed site operations. It also determines the impacts associated with greenhouse gas (GHG) emissions from the site.

The assessment does not include an assessment of odour impacts, as no odour is expected to be generated from the proposed development. A brief discussion is provided below.

This AQIA has been prepared in accordance with the NSW EPA guidelines *"Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales"* (2016) (AMMAAP), which shall henceforth be referred to as the *Approved Methods*. Additionally, the GHG assessment has been prepared in accordance with the Australian Government *Department of the Environment and Energy, August 2019 Australian National Greenhouse Accounts – National Greenhouse Accounts Factors*.

8.1.1 Odour Impacts

Odour is not expected to be emitted from the site as there are no odour producing materials processed at the site. However, drilling mud has the potential to be odorous depending on its source or chemical presence/reactions.

The drilling mud received by the facility is non-destructive digging waste, which is a water-based drilling mud containing clay (usually bentonite) and various non-odorous chemicals. Odorous drilling mud types (including oil-based muds and synthetic based muds) which are generally used on offshore rigs, would not be received by the facility.

Under *The Treated Drilling Mud Order 2014*, the following definitions are provided:

> ***Drilling fluid*** *means a mixture of water and chemical additives including but not limited to bentonite, soda ash (sodium carbonate), sodium hydroxide, lime and polymers.*
>
> ***Drilling mud*** *means a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling or potholing. This does not include drilling mud that has been generated by:*
>
> *(c) Deep drilling for mineral, gas or coal exploration; or*
> *(d) Drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS)*

The drilling mud would meet the above definitions to enable the treated drilling mud to be applied to land under the resource recovery exemption. The chemical additives listed above are

all known to be odourless, as stated in relevant safety data sheets. One chemical of concern is barium sulphate, which has the potential to be odorous due to the presence of sulphate which could potentially be reduced to hydrogen sulphide under anaerobic conditions. Drilling mud containing barium sulphate would not be accepted at the facility.

Additionally, drilling mud received at the site would require customers agreeing to and complying with the following criteria, prior to the site accepting the drilling mud delivery:

1. A mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling or potholing.
2. Does not include drilling mud generated by:
    a. deep drilling for mineral gas or coal exploration; or
    b. drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS); or
    c. drilling through soil contaminated by a hazardous contaminant
3. Does not contain any of the following:
    a. Restricted simulation fluids
    b. Any characteristics under the Australian dangerous goods code (e.g: explosives, flammable or emitting flammable gases, oxidising, containing organic peroxides, poisonous, infectious, corrosive, toxic)
4. Free from:
    a. Detectable offensive odours;
    b. Glass, metal, plastics, rubber and coatings; and
    c. Pests or vermin infestations

As the drilling mud to be accepted would be free from detectable offensive odour (odourless), a detailed odour assessment is not considered warranted.

8.1.2 Local Air Quality

Background air quality parameters were obtained from the closest NSW EPA Chullora air quality monitoring station located approximately 5 km north of the subject site. As such, this station is considered to be site-representative. The relevant assessable pollutant parameters available from the monitoring station are PM_{10} and $PM_{2.5}$. Data was obtained for 2015 as it was considered the most representative year.

A summary of this data is provided in Table 8-1.

Table 8-1: Summary of 2015 Data for $PM_{2.5}$ and PM_{10} from Chullora Air Quality Monitoring Station.

Pollutant	Averaging period	Concentration (µg/m^3)
$PM_{2.5}$	Maximum 24 hr average for 2015	**37.21**
	2nd highest 24 hr average for 2015	19.25
	3rd highest 24 hr average for 2015	18.37
	Annual average for 2015	**8.62**
PM_{10}	Maximum 24 hr average for 2015	**64.56**
	2nd highest 24 hr average for 2015	48.23
	3rd highest 24 hr average for 2015	46.21
	Annual average for 2015	17.59

Note: Bold values exceed the *Approved Methods* criteria.

8.1.3 Dust Impact Assessment

The air dispersion model AERMOD was used for the prediction of off-site dust impacts associated with the air emissions from the proposed operations. Two scenarios were included in the air dispersion modelling:

Scenario 1 – modelled emission sources with general mitigation measures recommended and
Scenario 2 – modelled emission sources with an additional custom flexible hood and vacuum ducting applied to the crusher/screen.

The assessment aimed to demonstrate the predicted dust impacts from site activities on neighbouring receptors with and without the use of the flexible hood and vacuum ducting applied to the crusher/screener. Preliminary dust monitoring undertaken on- and off-site demonstrate that current dust emissions from site activities exceed NSW EPA criteria.

Results of air impact modelling for both scenario 1 and scenario 2 demonstrate that incremental dust levels were reduced with the inclusion of a custom hood covering applied to the crusher/screener by ~12-46% at the most heavily impacted receptor (R11; 89 Gow Street, Padstow). It is recommended that all controls listed for Scenario 2 be applied onsite on site to ensure continued compliance and further reduce dust impacts from the proposed development on all nearest receptors, both industrial and sensitive.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous additions assessment was conducted for the most impacted receptor (R11; 89 Gow Street, Padstow). The 24 hour averaging period for PM_{10} showed 2 additional days of exceedance, however this is attributed to the elevated background concentration levels of 48.23 µg/$m^3$and 46.21 µg/m^3. The 24 hour averaging period for $PM_{2.5}$ demonstrated no additional days of exceedance.

With the proposed site activities and additional dust controls in place, it is considered that emissions to air from the site's operation are unlikely to cause harm to resident's health or the environment.

8.1.4 Dust Control Measures

To mitigate potential current and future dust emissions off-site, GSRC propose to construct a flexible hood and vacuum ducting around the crusher and screen to control dust emissions, ensuring continued compliance with NSW EPA criteria and further reducing dust impacts from the proposed development on all nearest receptors, industrial and sensitive.

The air quality mitigation measures (for dust control) that are included in the air dispersion model and proposed development are as follows:

- All dust generating activities will have direct dust suppression sprays;
- All dust generating activities areas will have perimeter dust suppression sprays;
- Truck loading and unloading, front end loader shovelling will occur in bays with 2-3 m high walls/windbreaks;
- Stockpiled materials are stored within storage bays are enclosed bays with 2-3 m high walls and have directs dust suppression sprays applied; and
- Activities in the southern end of the site will have additional wind breaks due to the 8.5 m walls surrounding these activities front end loaders, and stockpiles excluded).
- Crusher and screen are covered by a flexible hood and vacuum ducting.

8.1.5 Greenhouse Gas (GHG) Assessment

Scope 1 GHG emissions from the proposed development are limited to diesel fuel consumption from plant and equipment operation on site. Scope 2 GHG emissions are limited to electricity consumption during site operations. Scope 3 emissions encompass a wide range of potential sources which are expected to be negligible for the proposed development. Therefore, Scope 3 GHG emissions were not assessed any further.

Annual GHG emissions for Scope 1 and Scope 2 GHG emissions for the operation of the C&D and drilling mud dewatering facilities are estimated to be 955 t CO_2-e.

Australia's total GHG emissions as at December 2019 (the most recent inventory update) was estimated to be 532.5 Mt CO_2-e (Australian Government, Quarterly Update of Australia's National Greenhouse Gas Inventory: December 2019). In comparison, the estimated annual GHG emission for proposed development is 0.00096 Mt CO_2-e. Therefore, the annual contribution of GHG emissions from the proposed development in comparison to the Australian greenhouse emissions in 2019 is approximately 0.0000018%.

GHG contributions from the proposed development are considered negligible.

8.2 NOISE

A Noise Impact Assessment has been undertaken for the proposed development. A full copy of is provided as Appendix 2.

8.2.1 Nearest Receptors

Table 8-2 below identifies the nearest sensitive receptors that have the potential to be affected by the proposed development. An aerial photograph showing the location of the sensitive receptors in relation to the site are shown in Figure 8-1. These receptors were selected based on their proximity and directional bearing from the subject site.

Table 8-2: Nearest Sensitive Receptors to the Subject Site

Receptor ID	Address	Lot & DP	Approx. Distance from Proposed Development	Type of Receptor
R1	24 Bryant Street, Padstow	Lot 16 DP 18539	240 m SW	Residential
R2	59 Gibson Avenue, Padstow	Lot 1 DP 18270	380 m W	Residential
R3	166 Canterbury Road, Bankstown	Lot 1 DP 10428	585 m NW	Residential
R4	40A Hoskins Avenue, Bankstown	Lot 3 DP 511905	700 m N	Residential
R5	1A Stacey Street, Bankstown	Lot 1 DP 103437	925 m NE	Residential
R6	60 Moxon Road, Punchbowl	Lot 92 DP 13801	1055 m E	Residential
R7	40 Kentucky Road, Riverwood	Lot 340 DP 225388	1355 m SE	Residential
R8	17 Watson Road, Padstow	Lot 11 DP 658501	755 m SSE	Residential
R9	Padstow North Primary School, Halcyon Avenue, Padstow	Lot 32 DP 10031	485 m S	School/ Childcare Centre
R10	Salt Pan Creek Reserve, 66C Fairford Road, Padstow	Lot 7005 DP 93365	685 m E	Recreational Reserve
R11	89 Gow Street, Padstow	Lot A SP 103140	Adjacent W	Industrial
R12	82 Gow Street, Padstow	Lot 2 DP 392634	Opposite N	Industrial
R13	79 Gow Street, Padstow	Lot 3 DP 371357	Adjacent E	Industrial
R14	78 Gibson Avenue, Padstow	SP 22907	Adjacent S	Industrial
R15	9 Wordie Place, Padstow	12 DP 242730	Adjacent SW	Industrial

Figure 8-1: Nearest Sensitive Receptors to the Subject Site

8.2.2 Existing Acoustic Environment

The level of background and ambient noise is assessed separately for the daytime, evening and night time assessment periods. The NSW EPA Noise Policy for Industry defines these periods as follows:

- **Day** is defined as 7.00am to 6.00pm, Monday to Saturday and 8.00am to 6.00pm Sundays and Public Holidays;
- **Evening** is defined as 6.00pm to 10.00pm, Monday to Sunday and Public Holidays; and
- **Night** is defined as 10.00pm to 7.00am, Monday to Saturday and 10.00pm to 8.00am Sundays and Public Holidays.

An attended noise measurement was conducted on the 24th of September at one (1) residential location.

8.2.2.1 Measured Noise Levels

8.2.2.1.1 Short Term Operator Attended Noise Monitoring Results

Attended noise monitoring was conducted on Tuesday the 11th of March 2019 in order to gain an understanding of the background noise sources of the area. Noise contributions were obtained from ambient noise sources such as local fauna, road traffic and industrial sources. The results of the short-term attended noise monitoring are displayed in Table 8-3 below.

The attended measurements showed that the background noise levels were dominated by road traffic and noise from trucks passing by.

Table 8-3: Short Term Attended Noise Monitoring

Location / Time	Noise Descriptor				Comments
	L_{Aeq}	L_{A90}	L_{A10}	L_{A1}	
24 Bryant Street, Padstow	60	57	63	67	*Cars, M5 < 63 dB(A)* *Truck, M5 < 72 dB(A)* *Motorbike, M5 < 68 dB(A)* *Wind through trees, < 50 dB(A)* *Bird chirp close < 62 dB(A)*

8.2.2.1.2 Long-Term Unattended Noise Monitoring Results

The data was analysed to determine a single assessment background level (ABL) for each day, evening and night time period, in accordance with the NSW EPA Noise Policy for Industry. That is, the ABL is established by determining the lowest tenth-percentile level of the L_{A90} noise data over each period of interest. The background noise level or rating background level (RBL) representing the day, evening and night assessment periods is based on the median of individual ABL's determined over the entire monitoring period. The results of the long-term unattended noise monitoring are displayed inTable 8-4.

Table 8-4: Unattended Noise Monitoring Results, dB(A)

Monitoring Location and associated receptors	Assessment Background Level ABL (L_{90})		
	Day	Evening	Night
Logger A	53	50	42

8.2.3 Meteorological Conditions

The full Noise Impact Assessment (Appendix 2) assessed whether wind and temperature inversions are considered to be a feature of the area with the following conclusions:

- There is one instance where during a period/ season more than 30% of wind speeds are less than 3 m/s in the plus and minus 45 degree arc from source to receiver. therefore wind effects have been included in the assessment.
- The analysis conducted on the 2019 weather data highlighted that during winter 38.29% of the nights presented temperature inversion conditions, therefore these effects have been included in the noise impact assessment.

The following conditions will be considered in this noise impact assessment considered:

- Neutral Weather Conditions
- Temperature Inversion

Details of the considered meteorological conditions have been displayed in Table 8-5.

Table 8-5: Meteorological Conditions Assessed in Noise Propagation Modelling

Classification	Ambient Temp.	Ambient Humidity	Wind Speed	Wind Direction (blowing from)	Temperature Inversion	Affected Receiver	Applicability
A	Neutral	10°C	70%	–	–	No	All
B	Inversion	10°C	70%	2 m/s	3°C/100 m	Yes	All
C	Gradient Flow	10 °C	70%	3 m/s	From SW	No	R8

8.2.4 Operational Noise Impact Assessment

8.2.4.1 Project Noise Trigger Levels

The project noise trigger levels for the site have been established in accordance with the principles and methodologies of the NSW Noise Policy for Industry (EPA, 2017).

The table below presents the rating background level, project intrusive noise level, recommended amenity noise level, and project amenity noise level. The project noise trigger level is the lowest value of intrusiveness or project amenity noise level after conversion to $L_{Aeq\ 15\ minute}$, dB(A)

equivalent level. Sleep disturbance trigger levels associated with operational activities are presented in Table 8-6 below.

Table 8-6: Project Noise Trigger Levels (PNTL) for Operational Activities, dB(A)

Receiver	Type of Receptor	Time of day	Rating background noise level	Project intrusiveness noise level $L_{eq\ 15\ minute}$	Recommended amenity noise level $L_{Aeq\ period}$	Project amenity noise level $L_{Aeq\ 15\ minute}$ [1]	PNTL $L_{Aeq\ 15\ minute}$	Sleep Disturbance L_{Amax}
R1-R8	Residential – Urban	Day	53	58	60	**58**	**58**	-
		Evening	50	55	50	**48**	**48**	-
		Night	42	47	45	**43**	**43**	**57**
R9	School Classroom - Internal	Noisiest 1-hour when in use	-	-	50[2]	50[2]	**50**	
R10	Place of worship	When in use	-	-	50[3]	48	**48**	-
R11-R15	Industrial Premises	When in use	-	-	70	68	**68**	-

Notes:
1) These levels have been converted to $L_{Aeq\ 15\ minute}$ using the following: $L_{Aeq\ 15\ minute} = L_{Aeq\ period} + 3$ dB (NSW Noise Policy for Industry Section 2.2).
2) In the case where existing schools are affected by noise from existing industrial noise sources,the acceptable LAeqnoise level may be increased to 40 dB LAeq(1hr).
3) 10 dB has been added to the internal criteria to give the outdoor noise limit

8.2.4.2 Predicted Impacts

Noise propagation modelling was carried out using Sound PLAN v7.3. Two operational scenarios were considered in the noise model. The first scenario considered a day and evening situation in which all equipment were running for 100% of the time over the 15 minute assessment period, with two vehicle movements being considered within a 15 minute period. The second scenario occurs during the night and considers a full operational scenario but without the crusher, excavator and external vacuum pump operating. Scenario 2 also considers temperature inversion weather conditions and wind conditions for R8. Results of the predictive noise modelling of the operational scenarios are shown in Table 8-7.

The modelled scenarios are predicted to comply with the $L_{eq(15\ minute)}$ project specific criteria at all sensitive receptors. Exceedance of the L_{AMax} sleep disturbance is not predicted at any residential receptors.

During the night from 10pm – 6am the crusher, vacuum pump and excavator should not be used.

It is therefore concluded that the proposed site activities will not have a detrimental impact on surrounding receivers. Proactive noise control measures are recommended in Section 6.3 of the Noise Impact Assessment (Appendix 2).

Table 8-7: Predicted Noise Levels – Operational Activities dB(A)

Receptor	Project Criteria $L_{eq(15\ minute)}$			Project Criteria L_{Amax}	Scenario 1 – Day and Evening	Scenario 2 – Night (temperature inversion/R8 wind conditions)	
	Day	Evening	Night		Predicted $L_{eq(15\ minute)}$	Predicted $L_{eq(15\ minute)}$	Predicted L_{Amax}
R1	58	48	43	57	43 ✓	42 ✓	48 ✓
R2	58	48	43	57	37 ✓	38 ✓	46 ✓
R3	58	48	43	57	32 ✓	32 ✓	48 ✓
R4	58	48	43	57	28 ✓	27 ✓	37 ✓
R5	58	48	43	57	34 ✓	35 ✓	42 ✓
R6	58	48	43	57	43 ✓	42 ✓	49 ✓
R7	58	48	43	57	28 ✓	33 ✓	47 ✓
R8	58	48	43	57	20 ✓	23 ✓	37 ✓
R9	50			N/A	37 ✓	38 ✓	N/A
R10	48			N/A	41 ✓	42 ✓	N/A
R11	68			N/A	58 ✓	57 ✓	N/A
R12	68			N/A	64 ✓	64 ✓	N/A
R13	68			N/A	62 ✓	61 ✓	N/A
R14	68			N/A	56 ✓	51 ✓	N/A
R15	68			N/A	56 ✓	52 ✓	N/A

✓Complies × Non-compliance

8.2.4.3 Noise Control Measures

During the night from 10pm – 6am the crusher, vacuum truck pump and excavator should not be used. An internal pump can be used at night such that the tanker truck vacuum pump is not needed.

Whilst further noise controls are not predicted to be required to meet the operational noise criteria, the following management practices are recommended as good practice:

- Prohibition of extended periods of on-site revving/idling;
- Keeping the roller shutter door closed where possible;
- Minimisation of the use of truck exhaust brakes on site;
- Enforcement of low on-site speed limits; and
- On-site vehicles and machinery to be maintained in accordance with a preventative maintenance program to ensure optimum performance and early detection of wearing or noisy components.

8.2.5 Road Traffic Noise Impact Assessment

The maximum number of truck movements along Gibson Ave during the daytime is assumed to be 15 per hour. The maximum number of truck movements along Gibson Ave during the night time is assumed to be 4 per hour. The worst case residential receiver utilised in the assessment is 59 Gibson Ave. Trucks have been modelled passing this house as moving point sources travelling at the posted speed of 60km/hr. The predicted results are shown in the following table.

Table 8-8: Predicted Levels for Road Traffic Noise

Receptor	Noise Criteria		Site Contribution	
	Day $L_{Aeq, 1\ hour}$	Night $L_{Aeq, 1\ hour}$	Day $L_{Aeq, 1\ hour}$	Night $L_{Aeq, 1\ hour}$
59 Gibson Ave (R2)	55	50	54 ✓	48 ✓

For the residential dwellings that front onto Gibson Ave, the predicted noise levels associated with the vehicle movements from the site would be below the criteria for local roads.

Step 3 of Section 3.4.1 of the RNP identifies possible reasonable and feasible control measures when exceedances of either the outlined criteria. As no exceedances are predicted, the proposed vehicle movements comply with the RNP, and no additional mitigation strategies are recommended.

8.2.6 Statement of Potential Noise Impacts

The noise impact assessment was undertaken in accordance with the following guidelines:

- NSW Noise Policy for Industry (EPA, 2017);
- NSW Road Noise Policy (RNP) (DECCW, 2011); and
- Canterbury Bankstown Development Control Plan (DCP) 2015.

Assessment criteria for noise emissions from the subject site were used to determine whether the potential noise impacts from the site were within the derived limits or in exceedance of the guidelines.

The nearest receivers and noise criteria were identified. The site operations were modelled using the predictive noise software, Sound Plan V7.3.

The activities proposed by the proponent were found to be within the framework of the NSW EPA Noise Policy for Industry.

The modelled scenarios are predicted to comply with the $L_{eq(15\ minute)}$ project specific criteria at all sensitive receptors. Exceedance of the L_{AMax} sleep disturbance is not predicted at any residential receptors.

The noise assessment predicted that if the assumptions presented are carried out, noise levels would be met at all surrounding residential receivers during all time periods.

During the night from 10pm – 6am the crusher, vacuum pump and excavator should not be used. An internal pump can be used at night such that the tanker truck vacuum pump is not needed.

Compliance with the guidelines set out in the NSW Road Noise Policy was predicted at all considered receptors.

No major construction will take place therefore construction noise and vibration impacts are considered minimal.

8.3 SOIL AND WATER

Stormwater concept designs and a Flood Impact Assessment Report are presented in Appendix 4 and 12 respectively. A qualitative soil and water assessment report has been undertaken and is provided in Appendix 6.

8.3.1 Existing Site Conditions

The site is located within an industrial area. Its surface is covered in concrete hardstand and is generally flat, rising slightly at the southern end of the property.

The site contains no waterbodies with the nearest water source being Salt Pan Creek, located approximately 760 m SE from the site. A drainage easement consisting of two large stormwater drainage pipelines (diameter 1,500 mm), traverse underground in the centre of the site. Eight existing onsite stormwater pits connect to these two main lines via 1,050 mm, 450 mm, 300 mm and 250 mm diameter underground pipelines.

Overland flooding is an issue with this existing arrangement and has resulted in sediment laden runoff from the site on occasions.

The existing water quality at the point of discharge was sampled and analysed. The default guideline values (DVG) adopted for the site is the 95% level of species protection recommended for application for slightly to moderately disturbed ecosystems under the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018). The results complied with

the guideline values for "Slightly-moderately disturbed ecosystems" with the exception of pH which was slightly higher than the criteria. Therefore based on this data, the stormwater runoff can be described as "slightly-moderately disturbed".

The 'Sydney 1:100 000 Geological Map Sheet 9130' describes the geological composition of the area as *Ashfield Shale (Rwa)* which is part of the Wianamatta Group and comprises of dark-grey to black claystone-siltstone and fine sandstone-siltstone laminate.

Soil logs from the limited Phase II Environmental Site Assessment (ESA) confirm the site as having red and brown Podzolic soils with highly plastic (high clay content) subsoils. The conclusions of the ESA found no evidence of soil contamination within the proposed areas marked for excavation. However, the ESA confirmed the presence of acid sulfate soils (ASS).

8.3.1.1 Existing Drainage Easement and Drainage Pipe

A condition report and survey of Council's existing drainage easement and drainage pipe is provided in Appendix 11. This drainage pipe is not impacted as a result of the proposed development. The development will utilise the existing connection to connect to the site's proposed upgraded stormwater system.

8.3.2 Proposed Stormwater System Upgrade

The proposal involves construction and operation of a liquid waste dewatering facility on the site where an existing C&D recycling plant operates. Upgrade of the stormwater system to enable adequate management of leachate and on-site stormwater has been designed to Council requirements. The proposed stormwater system will provide onsite detention and water quality treatment and include two underground storage tanks with a capacity to hold a total of 200kL, with silt arrestor pit.

The system would capture first flush site stormwater (leachate) which would initially be treated through an arrestor and detained within the two underground storage tanks before being treated through the dewatering plant.

A stormwater isolation valve will be installed after the 200 kL underground containment system. This can be used to prevent the discharge of potentially contaminated stormwater/firefighting water if required.

Stormwater system upgrades require excavations to be undertaken. An acid sulfate soil management plan has been prepared and will be implemented during excavations.

8.3.3 Proposed Water Requirements

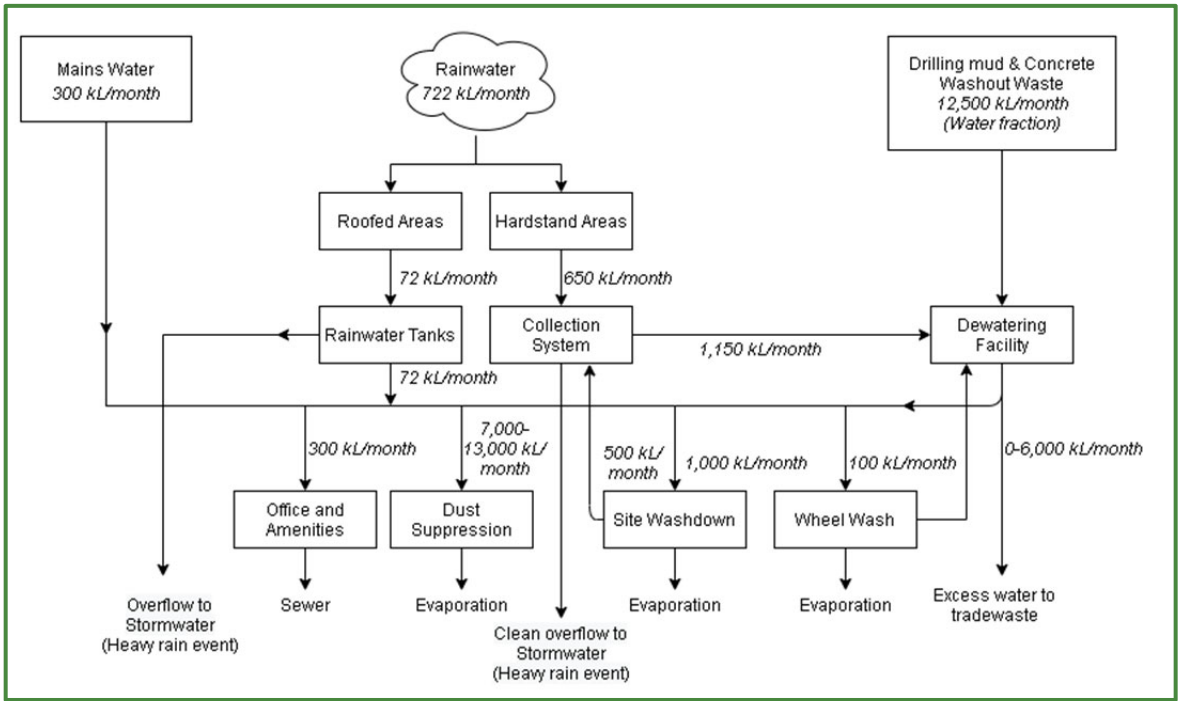
The proposed development would require mains water for use in the office and amenities. All other water usage would be recycled water sourced from the dewatering facility and rainwater tanks on site.

The dewatering facility would accept liquid waste including drilling mud and concrete washout water from external sites and process this to produce solid and liquid components. The solid components being filter cake and aggregate would be stored within storage bays on before being

sent to landfill or processed through the existing on-site C&D recycling facility. Resulting treated water from the dewatering plant would be used on site for dust suppression purposes through water sprayers to suppress dust on the existing external C&D storage bays, in the existing wheel wash and for washing down purposes. Excess treated water would be discharged to sewer under a Tradewaste Agreement with Sydney Water.

A site water balance is provided below (Figure 8-2).

Figure 8-2: Site Water Balance



8.3.4 Flooding

A Flood Impact Assessment Report is provided in Appendix 12. *The results of the flood assessment generally indicate that the proposed development:*

1. Do not generate flooding issues at the subject site due to local overland flow;
2. Do not lead to adverse flooding impacts on the surrounding areas; and
3. Does not create safety issues at the subject site and the surrounding areas.

8.3.5 Potential Impacts to Water

Potential impacts to water are from pollutants entering the stormwater system and being discharged from the site. These pollutants are primarily total suspended solids, which may alter the pH and also include Hydrocarbons, PAH, Nitrogen, Phosphorus, Ammonia, BTEX. A conceptual model of potential contaminants and their source is provided in detail in the soil and water report provided in appendix 6. With the controls in place the risk potential for impacts to water are low.

8.3.6 Potential Impacts to Soil

The most likely contamination sources are from the onsite use of fuel and oils, either through spillage during refuelling and/or maintenance activities or from waste materials stored onsite. Any contaminants left on the hardstand surface would likely be collected by stormwater runoff. However, as stormwater is intended to be collected and reused onsite, any contaminates in surface waters will also be captured and removed.

- Potential spillages of diesel and lubricating oil could occur during refuelling and equipment maintenance; the risk would be minimised through procedures and training in appropriate methods and signage showing how to avoid spills and the use of appropriately trained contractors.

- Good housekeeping practices are important to prevent contamination. These include regular cleaning of all hardstand areas, inspection of the integrity of equipment and inspection, cleaning and maintenance of stormwater/surface water system.

8.3.7 Mitigation Measures

During Construction

- An Erosion and Sediment Control Plan which include Erosion and sediment controls such as geotextile inlet filters for existing stormwater pits, sediment fence for the perimeter of the construction zone and a shaker pad for stabilised site access.

During Operation

- BCP Stream Guard Pollution Control Pit or equivalent at stormwater pits;
- Silt arrestor;
- 200kL underground containment;
- Reuse of stormwater within the dewatering plant;
- Spill kits;
- Environmental Management Plan;
- Water monitoring program;
- Housekeeping.

8.4 FLORA AND FAUNA

8.4.1 Biodiversity Assessment

A biodiversity assessment waiver was completed alongside this EIS, and is located in Appendix 7. There is no vegetation present on site as the site is fully developed and is covered in a concrete hardstand. Current structures on site are not used as a habitat by any endangered species. The site does not impact habitat connectivity or flight path integrity. The waiver emphasises that the site will cause negligible disruption to the surrounding environment.

8.4.2 Species

Section 6.4 lists the endangered and vulnerable species within a 10 km radius of the site. No endangered or threatened species are situated within the industrial zoned area that the

proposed development is located. Nor are they situated near the proposed development itself. Therefore, flora and fauna impacts are considered negligible.

8.4.3 Statement of Effects on Surrounding Environment

The surrounding environment will not be impacted by the development. This EIS and the BDAR waiver, in Appendix 7, emphasise the lack of biodiversity that exists on the subject site. Additionally, all endangered species are located outside the industrial area that the proposed development is located and as such are not threatened by it.

8.5 WASTE GENERATION AND MANAGEMENT

A Waste Management Report is provided in Appendix 3 which addresses the SEARS (10450) requirements. As the facility is an existing C&D recycling plant and proposes to add a dewatering plant to treat liquid waste, the waste management report provides details of wastes to be received, processed and stored, and describes the on-site management of waste. All processing and storage of waste associated with the dewatering plant would be within an enclosed building. Two storage bunkers would be roofed and walled. A summary is provided in the following sub-sections.

8.5.1 Incoming Waste

Two waste streams would be accepted at the facility including Commercial and Industrial (C&I) waste and Construction and Demolition (C&D) waste. C&D waste is associated with the existing C&D facility.

The existing C&D recycling plant is licensed to accept the following materials:

- Building and demolition waste; and
- Asphalt waste (including asphalt resulting from road construction and waterproofing works).

The incoming waste associated with the proposed dewatering plant is included in the C&I waste stream, is classified as “liquid waste” and includes the following:

- Drilling mud (non-destructive digging waste); and
- Concrete washout waste.

This waste would be sourced from construction sites.

The following waste description is applicable:

> ***Residues or rejects*** *(RES): Residues from industrial or manufacturing processes such as wool wash, drilling mud, pond waste, slag, filter cake, fibre cement, cell scale. (exclusions: fly ash or bottom ash).*

Table 8-9 provides details of incoming waste as part of the existing C&D facility (shaded cells) and the proposed dewatering facility.

8.5.2 Recovered Materials and Outgoing Waste

Aggregates, treated water and filter cake (biscuit) would be generated from the processing of the liquid waste in the dewatering facility.

Recovered aggregate from the dewatering facility will be recycled under relevant resource recovery exemptions or occasionally, crushed and screened at the existing C&D recycling facility on site.

The resulting treated drilling mud (fine biscuit) which represents less than 10% of the materials from the dewatering process can potentially be applied to land as engineering fill or for use in earthworks under the Treated Drilling Mud Exemption 2014. If requirements of the Treated Drilling Mud Order 2014 cannot be met, this biscuit would be sent to landfill as general solid waste.

The treated water would be used on-site for dust suppression and washing purposes in the existing construction and demolition (C&D) recycling facility. The site may generate excess treated water from time to time, that is unable to be used onsite, any such water will be sent to trade waste in accordance with a trade waste agreement.

Recovered materials and wastes generated and their management at the site from both the existing C&D facility (shaded cells) and proposed dewatering facility are detailed in Table 8-10.

Table 8-9: Incoming Waste Types, Quantities and Management

Waste Stream	Estimated Total Incoming Quantity	Waste Classification	Waste Description	Weekly Quantity (tonnes)	Monthly Quantity (tonnes)	Yearly Quantity (tonnes)	Management
C&D Waste	80,000 tpa	General Waste (Non-putrescible)	Bricks	308	1333	16,000	Incoming pre-sorted waste loads undergo initial inspection via the weighbridge then is placed in designated storage bays (Areas 1, 2 and 3 – processing area, waste receivals and uncrushed concrete bays) to be crushed and screened through existing infrastructure. Recovered products are stored on site within existing designated bays.
			Tiles	154	667	8,000	
			Concrete	492	2133	25,600	
			Asphalt	154	667	8,000	
			Sandstone	123	533	6,400	
			VENM/ENM	308	1333	16,000	
C&I Waste	250,000 tpa	Liquid waste	Drilling mud	3846	16667	200,000	Drilling mud and concrete washout waste would be brought onto site in tankers/concrete trucks and unloaded into the dirty water pit inside the building. The liquid is treated within the enclosed facility.
			Concrete washout water	962	4167	50,000	

Table 8-10: Recovered and Generated Waste Types, Quantities and Management

Waste Type	Estimated Maximum Quantity	EPA Waste Classification[1]	Relevant Resource Recovery Order	Management
Aggregates – 20 mm or 10 mm	60,000 tpa	General soil waste (non-putrescible)	The recovered aggregate order 2014	This crushed then screened into varying standard sizes and directed to the designated external storage bays in Area 4. Sold for reuse in construction projects under the recovered aggregates order 2014.
Fines (-60 aggregate)	4,000 tpa	General soil waste (non-putrescible)	The recovered aggregate order 2014	The smallest aggregate size that is screened through the process. This is stored in external storage bay in Area 4. Sold for reuse in landscape supplies.
Soil	16,000 tpa	General soil waste (non-putrescible)	The recovered aggregate order 2014	Excavated material that is brought on site is processed into soils that are reused as engineered materials off-site under the recovered aggregate order 2014. This material is stored in designated bays in Areas 5 and 6.
Treated water	150,000 tpa	Liquid waste	N/A	This is the treated water from the dewatering plant that is stored in the clean water pit. This water would be of a suitable quality to reuse on site for various dust suppression and cleaning purposes. Excess water would be sent to tradewaste.
Aggregates & Sand	95,000 tpa	General soil waste (non-putrescible)	The recovered aggregates order 2014	Aggregates including sand generated from the dewatering process are transferred via conveyor to be stored in five designated storage bays within the enclosed dewatering facility. These aggregates are sold for reuse off site under the recovered aggregates order if applicable may be further processed through the C&D plant.

Table 8-10: Recovered and Generated Waste Types, Quantities and Management

Waste Type	Estimated Maximum Quantity	EPA Waste Classification[1]	Relevant Resource Recovery Order	Management
Filter cake (biscuit)	5,000 tpa	General soil waste (non-putrescible)	The treated drilling mud order 2014 The recovered aggregates order 2014	Filter cake (biscuit) is generated from the filter press and stored in a bunker inside the building. Where possible, the filter cake would be applied to land off site under the treated drilling mud order 2014 or the recovered aggregates order if applicable. Where the RRO does not apply, filter cake is to be sent to landfill.
Non-recyclable waste	150 tpa	General solid waste (non-putrescible)	N/A	General waste that cannot be recycled may be generated from time to time. This is stored within a designated bin on site and sent to a licensed landfill.
Office & Amenities Waste	10 tpa	General solid waste (Putrescible)	N/A	This waste is ancillary to the process and is serviced by a licensed waste contractor.
Office Recyclables	24 tpa	General solid waste (non-putrescible)	N/A	This waste is ancillary to the process. It is transferred offsite to a licensed recycling facility for further processing. E.g. Visy Recycling

Notes:

1. Waste classification according to *Waste Classification Guidelines* provided.

8.5.3 Maximum Processing Quantities

The site has an approved processing capacity of 80,000 tonnes per year of C&D waste. The proposed dewatering facility requires approval to process 250,000 tonnes of liquid waste per year. This would result in a total maximum processing quantity of 330,000 tonnes per annum of waste at the facility.

8.5.4 Waste Storage

8.5.4.1 Maximum Storage Capacity

The site currently has approval to store 7,300 tonnes of waste at any one time. Waste storage quantities associated with the new dewatering facility will require storage of 1,400 tonnes of waste.

The site requires approval to store a maximum of 8,700 tonnes of waste at any one time.

8.5.4.2 Existing Waste Storage

On-site storage of incoming waste and recovered materials associated with the existing C&D facility will not change. External bunkers in Areas 1, 2 and 3 are used to stored incoming waste. External bunkers in Areas 4, 5 and 6 are used to store recovered materials. Dust suppression is currently applied via water sprayers. The treated water from the proposed dewatering plant would be used for this purpose. Storage bunker details are provided in the following table:

Table 8-11: C&D Facility Existing Waste Storage Bunker Details

Area	Bunker	Material Description	Width (m)	Length (m)	Volume (m^3)
1	1	Incoming C&D waste (Processing area	12	18	864
2	1	Waste receivals – uncrushed material – Bick/tile/concrete	14	12.09	677
3	1	Uncrushed concrete	6	12.09	290
4	1	10 mm Aggregate	4.04	6.654	108
	2	20 mm Aggregate	35.289	7.825	1105
	3	30-100 mm Aggregate	4.121	4	66
	4	Fine aggregates	8.542	7.825	267
5	1	ENM/VENM/GSW – Screened	5.337	9.225	197
	2	ENM/VENM/GSW – Screened	3.96	5.967	95
	3	ENM/VENM/GSW – Screened	6.087	12.886	314
6	1	Sand	4.725	6.654	126
	2	Topsoil	4.019	6.654	107
	3	Turf Underlay	3.954	6.654	105
	4	Organic garden mix (soil)	4.042	6	97
	5	Dust	14.91	7.825	467
				Total Maximum Capacity	4883 m^3 7300 tonnes

8.5.4.3 Proposed Waste Storage

New waste storage areas associated with the dewatering plant would consist of inground pits and silos for liquid waste and storage bunkers for aggregate and filter cake. These storage areas are within the building or within covered walled bunkers. A summary is provided below:

Table 8-12: Dewatering Facility Storage Area Details

Area	Storage Type	Material Description	Volume (m^3)	Estimated Tonnes
7	Inground Pit	Dirty water pit accepting drilling mud and concrete washout waste	108	108
8	Inground Pit	Clean/treated water	70.4	70.4
9	Stainless steel silos	Two cylindrical tanks each with a capacity of 60,000 L for processing of liquid waste	120	120
10	Bunker (1)	Aggregate – external bunker	99.2	148.8
	Bunker (2)	Aggregate – external bunker	99.2	148.8
	Bunker (3)	Fine aggregate/sand – internal bunker	117.7	176.6
	Bunker (4)	Fine aggregate/sand – internal bunker	122.9	184.4
	Bunker (5)	Fine aggregate/sand – internal bunker	144.5	216.8
	Bunker (6)	Filter press waste – internal bunker	146.5	219.8
		Total Maximum Storage Capacity		**1393.6**

Accounting for a factor of safety, additional waste storage required on site is 1,400 tonnes at any one time.

8.5.5 Legal Requirements

The management and storage of waste on site would comply with relevant legislation and guidelines as detailed in the Waste Management Report.

8.5.5.1 EPL Variation

The facility will require a variation to the existing environment protection licence for the increase in waste storage quantities and for the processing of liquid waste. Scheduled activities under the POEO Act associated with the dewatering plant include:

- Clause 41 – Non-thermal treatment of liquid waste; and
- Clause 42 – Waste storage

8.5.5.2 Waste Tracking Requirements

The existing and proposed facility does not accept waste that needs to be tracked under the waste tracking system, Schedule 1 of the Waste Regulation. The facility would record waste movements using the existing weighbridge and docket system.

8.5.5.3 Resource Recovery Orders and Exemptions

Relevant resource recovery exemption orders including: the recovered aggregate order 2014 and the treated drilling mud order 2014. Quality control measures would be put in place in order to comply with these orders. In the event the material does not comply with the order, alternative uses for the material such as use in concrete or other products would be investigated.

8.5.6 Waste Management

A waste management plan detailing the waste associated with the proposed development in line with Council requirements for demolition, construction and ongoing waste is provided with the development application.

Waste would be managed on site as described in the tables detailed earlier and in the Waste Management Report.

8.5.6.1 Incoming Waste Procedure

An incoming waste procedure would be implemented which details the procedure for inspection of C&D loads and management of any non-conforming waste. Liquid waste loads would be managed in a similar manner. A waste specification for drilling mud is provided which sets requirements for incoming loads that need to be complied with. This would ensure that drilling mud received would be odorless.

8.6 HAZARDS AND RISKS

This section presents the hazards and risks associated with the proposed modifications.

8.6.1 Chemicals and Dangerous Goods Storage

The site will store 65,000 L of diesel in a self bunded diesel tank. Additionally, the site will also hold other various chemicals that are used for trucks and machinery, including degreaser, oils and lubricants. Small quantities of a flocculant (a non-dangerous good) will be stored on site to aid in recovery of mineral ores and remove suspended material from wastewater. All of these chemicals will be stored inside on bunded pallets.

Table 8-13: Chemical Storage

Product Name	UN No.	ADG/GHS	GHS Signal Word	Quantity Storage Capacity	Storage Type	Storage Location
Diesel	3082	ADG: non-dangerous good (Combustible Liquid C1) GHS: Aspiration Hazard: Category 1; Carcinogenicity: Category 2; Flammable Liquids: Category 4; Hazardous to the Aquatic Environment – Long-term hazard: Category 2	DANGER	65,000 L	Self-bunded storage tank	Outside
Polyelectrolyte flocculant	N/A	Eye Damage/ Irritation: Category 1	N/A	250 kg	Bunded pallets	Inside
Degreaser	Not regulated	Eye Damage/ Irritation: Category 2A Skin Corrosion/Irritation: Category 2	WARNING	200 L	Bunded pallets	Inside
Truck Wash	Not regulated	Eye Damage/ Irritation: Category 2A Skin Corrosion/Irritation: Category 2	WARNING	200 L	Bunded pallets	Inside
Engine Oil	Not regulated	N/A	N/A	1000 L	Bunded pallets	Inside
Transmission Oil	Not regulated	N/A	N/A	200 L	Bunded pallets	Inside
Diff Oil	Not regulated	N/A	N/A	200 L	Bunded pallets	Inside
Grease and Lubricants	Not regulated	Grease: N/A Lubricant: Flammable Aerosol Category 1 Gas Under Pressure: Compressed gas Aspiration Toxicity Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (Nervous System effects)	Grease: N/A Lubricant: Danger	200 kg	Bunded pallets	Inside

Table 8-13: Chemical Storage

Product Name	UN No.	ADG/GHS	GHS Signal Word	Quantity Storage Capacity	Storage Type	Storage Location
pH Adjustment Chemicals	1830 1824	Corrosive to Metals - Category 1 Skin Corrosion - Sub-category 1B Eye Damage - Category 1 ADG: Class 8	Danger	400L	Chemical storage cabinet (Acids stored separate to bases)	Inside

8.6.2 Preliminary Risk Screening

Details of Dangerous Goods (DG Code) and/or Hazardous Chemicals (GHS Classification) typically used and stored onsite, with current and proposed storage quantities provided in Table 8-14. Safety Data Sheets (SDS) of all the listed chemicals are available on request.

Chemical management requires a facility to comply with the requirements of the *Work, Health and Safety Regulation 2017*. Notification to SafeWork Australia is not required as chemical quantities do not exceed the manifest quantities.

Requirements in Australian Standards also need to be applied when a facility stores more than minor quantities of a hazardous substance/chemical belonging to one of the nine Classes of Dangerous Goods. The basis of management for chemical safeguards for these classes is described in the following Australian Standards:

- AS 1940–2017 *The storage and handling of flammable and combustible liquids;*
- AS 3780-2008 *The storage and handling of corrosive substances*;
- AS/NZS 1596:2014 *The storage and handling of LP Gas;* and
- AS 4332–2004 *The storage and handling of gases in cylinders.*

Storage of all hazardous chemicals would comply with the above standards. General controls that need to be met for adequate chemical management at the site are as follows:

- Provision of adequate fire protection services;
- Provision of spill kits near chemical storage area;
- Site securely locked when not in operation;
- Up to date environmental and safety management procedures and systems; and
- Personnel regularly trained and competency tested in matters regarding the use of firefighting equipment.

A preliminary risk screening of the proposed development in accordance *with State Environment Planning Policy No. 33 – Hazardous and Offensive Development* (SEPP 33) has been undertaken, with results provided below. The quantities of dangerous goods do not exceed the threshold quantities for applying SEPP 33. Therefore, a Preliminary Hazard Analysis (PHA) is not required.

Table 8-14: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored	Triggers SEPP 33
Class 1.2	5 tonne	Explosives	None	None	No
Class 1.3	10 tonne	Explosives	None	None	No
Class 2.1	10 tonne or 16 m^3 if stored above ground 40 tonnes or 64 m^3 if stored underground or mounded	Flammable Gases	None	None	No
Class 2.2	Not Relevant	Non-flammable, non-toxic gases	None	None	Not relevant
Combustible Liquid C1	**Not relevant**	**Combustible liquid with flashpoint of 150°C or less**	**Diesel stored in self-bunded tank**	**65,000 L**	**Not Applicable**
Combustible Liquid C2	Not relevant	Combustible liquid with flashpoint exceeding 150°C	None	None	Not Applicable
Class 2.3	5 tonne	Anhydrous ammonia	None	None	No
	1 tonne	Chlorine and sulphur dioxide stored as liquefied gas in contains <100 kg	None	None	No
	2.5 tonne	Chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg	None	None	No
	100 kg	Liquefied gas kept in or on premises	None	None	No
	100 kg	Other toxic gases	None	None	No
Class 3	Assessed by reference to figures 8 & 9 of applying SEPP 33	Flammable liquids PG I, II and III	None	None	No
Class 4.1	5 tonne	Flammable Solids	None	None	No
Class 4.2	1 tonne	Substances liable to spontaneous combustion	None	None	No
Class 4.3	1 tonne	Substances which, in contact with water, emit flammable gases	None	None	No

Table 8-14: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored	Triggers SEPP 33
Class 5.1	25 tonne	Ammonium nitrate – high density fertiliser grade	None	None	No
Class 5.1	5 tonne	Oxidising substances	None	None	No
Class 5.1	2.5 tonne	Dry pool chlorine – in containers <30 kg	None	None	No
Class 5.1	1 tonne	Dry pool chlorine – in containers >30 kg	None	None	No
Class 5.1	5 tonne	Any other Class 5.1	None	None	No
Class 5.2	10 tonne	Organic peroxides	None	None	No
Class 6.1 PGI	0.5 tonne	Toxic substances	None	None	No
Class 6.1 PGII & III	2.5 tonne	Toxic substances	None	None	No
Class 6.2	0.5 tonne	Infectious substances	None	None	No
Class 7	All	Radioactive Material	None	None	No
Class 8 PGI	5 tonne	Corrosive substance	None	None	No
Class 8 PGII	**25 tonne**	**Corrosive substance**	**Both degreaser and truck wash to be stored in bunded area. pH adjustment chemical**	**800L**	**No**
Class 8 PGIII	50 tonne	Corrosive substance	None	None	No

8.6.3 Fire

8.6.3.1 Fire Risk Assessment

8.6.3.1.1 Hazard Identification Charts

In order to identify and characterise the nature of potential fire events, a series of Hazard Identification Charts have been compiled. The compiled charts are provided overleaf. The charts, for the purpose of this study, only assess the potential fire events of the proposed development. Each chart consists of four columns:

Column 1: *Functional/Operational Area*
The process area of the Site involved with the potential event is listed e.g. Flammable Liquid Store.

Column 2: *Possible Initiating Event*
The events that are considered to be likely or realistic are listed. Where the possible consequences are similar, the events are listed together and individually numbered.

Column 3: *Possible Consequences*
The outcomes from an event occurring are listed e.g. Fire, Explosion.

Column 4: *Prevention/Protection Measures*
The measures designed into the function/operation of the particular area of the site are listed. The measures include for example safeguards, design features, management methods and operator training.

Table 8-15: Event/Consequence Analysis Table

Functional/Operational Area	Possible Initiating Event	Possible Consequences	Prevention/Protection Measures
Diesel • Diesel tanker refuelling fire • Mobile equipment/trucks refuelling using diesel storage tank • Diesel tank pool fire	1. Vehicle collision: dispenser is hit, parked tanker is hit, tanker hose is hit 2. Fuel leak: tanker drives off with hose still connected, tank is overfilled, tank vent is blocked, equipment failure, filling non-compliant container, person leaving nozzle unattended 3. Equipment leak: Equipment that operates on diesel is not properly sealed after refuelling. 4. Smoking and other personal ignition sources 5. Lightning strike 6. Adjacent property fire 7. Arson	1. Vapour is ignited causing fire or spill, damage to property, injury or death. 2. Fuel is ignited in equipment causing equipment damage or destruction, or the loss of life. 3. Spilt fuel enters the environment, soil, stormwater, ground water	1. Diesel tank designed to comply with AS1940, AS1692 and AS1657. 2. Tanker driver training – handling of flammable liquids, spill kit training, check volumes, monitor filling, emergency stop. 3. Overfill protection, 4. Fill Gauges; 5. Fill point signage; 6. Containment system (self-bunded tank); 7. Safe location of fill point; 8. No smoking on site; 9. Signage prohibiting use of ignition sources; 10. Staff dangerous goods training; 11. Nozzles with safety cut out valve; 12. Low speed limit; 13. Fire extinguishers 14. Fire service equipment available; 15. Emergency response plan includes actions to take if a fire occurs; 16. Fully fenced site and locked gates during after-hours; 17. Smoke detectors within building 18. Stormwater isolation valve.
Chemical Storage Area • Refilling of lubricant • Flocculant • Various chemicals	1. Smoking 2. Broken fluorescent light 3. Arson 4. Adjacent property fire 5. Lightning Strike 6. Lubricant leaking/spillage 7. Damaged by moving car or truck	1. Lubricant is ignited, causing fire which can lead to damage to property, injury or death. 2. Chemicals enter the groundwater, environment, soil or stormwater. 3. Nearby trucks or cars are damaged or set alight.	1. Storage of chemicals to comply with AS1940; 2. Low Speed Limit; 3. Smoke detectors in building; 4. No smoking policy in and near the building; 5. Signage prohibiting the use of ignition sources; 6. Staff training to prevent spillages and leakages; 7. Containment system (Chemicals are stored in a self-bunded area) 8. Fire extinguishers;

Table 8-15: Event/Consequence Analysis Table

Functional/Operational Area	Possible Initiating Event	Possible Consequences	Prevention/Protection Measures
Fire in office building	1. Smoking 2. Appliance fire 3. Broken fluorescent light 4. Faulty electrics 5. Arson 6. Adjacent property fire 7. Heaters near flammable objects	1. Full scale building fire; 2. Possible spread of fire to other areas.	1. No smoking on site; 2. Fire extinguishers; 3. Fire service equipment available; 4. Emergency response plan includes actions to take if a fire occurs; 5. Fully fenced site and locked gates during after-hours; 6. Smoke detectors within building.
Screening Equipment	1. Smoking 2. Broken fluorescent light 3. Arson 4. Adjacent property fire 5. Equipment Malfunction	1. Full scale equipment fire; 2. Damage to equipment and personnel; 3. Possible spread of fire to other areas.	1. Regular servicing of equipment; 2. Staff training on equipment; 3. No smoking on site; 4. Fire extinguishers; 5. Fire service equipment available; 6. Emergency response plan includes actions to take if a fire occurs; 7. Fully fenced site and locked gates during after-hours;
Crusher	1. Smoking 2. Broken fluorescent light 3. Arson 4. Adjacent property fire 5. Equipment Malfunction	1. Full scale equipment fire; 2. Possible spread of fire to other areas.	1. Regular servicing of equipment 2. Staff training on equipment; 3. No smoking on site; 4. Fire extinguishers; 5. Fire service equipment available; 6. Emergency response plan includes actions to take if a fire occurs; 7. Fully fenced site and locked gates during after-hours;

Table 8-15: Event/Consequence Analysis Table

Functional/Operational Area	Possible Initiating Event	Possible Consequences	Prevention/Protection Measures
Mud Dewatering Plant	1. Smoking 2. Broken fluorescent light 3. Arson 4. Adjacent property fire 5. Equipment Malfunction	1. Full scale equipment fire; 2. Possible spread of fire to other areas.	1. Regular servicing of equipment 2. Staff training on equipment 3. No smoking on site 4. Fire extinguishers 5. Fire service equipment available 6. Emergency response plan includes actions to take if a fire occurs 7. Fully fenced site and locked gates during after hours 8. Smoke detectors within building

8.6.3.2 Fire Safety in Waste Facilities

Fire and Rescue NSW developed guidelines regarding fire safety within waste facilities titled, 'Fire safety guideline – Fire safety in waste facilities', and dated February 2020. The proposed development does not apply, as per section 3 of the Fire Safety Guidelines (February 2020):

> *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 50 m^3 of combustible waste material.*
>
> ***Note:** Fire safety requirements still apply to waste facilities not covered by this guideline.*

Definitions:

> *Combustible waste material – means any solid waste material that can readily ignite and burn under normal conditions, which includes:*
> - *Paper and cardboard*
> - *Wood and wood based products*
> - *Plastic*
> - *Rubber*
> - *Textiles*
> - *Waste derived fuels such as refuse derived fuels (RDF), solid recovered fuels (SRF) and processed engineered fuels (PEF)*
> - *Metal with combustible contaminants; and*
> - *Any other waste material which may pose a notable fire risk like above.*

The proposal is for liquid waste treatment, therefore the guideline does not apply to this area of the facility. Furthermore, the site will store less than 50 m^3 of combustible waste material therefore this guideline does not apply.

8.6.3.3 Stockpile Sizes

As discussed above minimal combustible wastes will be stored on site, therefore the size of stockpiles do not present a risk of fire spreading on the site.

8.6.3.4 National Construction Code (NCC)

The dewatering plant will occupy an existing building that would be extended. With the equipment installed it is required to comply with Volume One of the National Construction Code (NCC).

The building housing the dewatering plant is already built requiring only minor extensions and is expected to be in compliance with the code. A BCA compliance report can be undertaken if required. The main requirement due to the use of the building as a dewatering plant is assessing whether the site meets the fire exit distance given the locations of the equipment.

Provision D1.4ci of the NCC BCA Volume 1 is of most relevance:
no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m;

The floor plan has been reviewed and as the building has a small footprint; all accessible locations including pathways around equipment easily comply with this provision.

Provision E1.3ai of the NCC BCA Volume 1 is also of relevance:
A fire hydrant system must be provided to serve a building having a total floor area greater than 500m^2.

The floor plan shows the building with the extensions would have a floor area of 587 m^2. Therefore, a hydrant system that meets the requirements of AS 2419.1 must be provided.

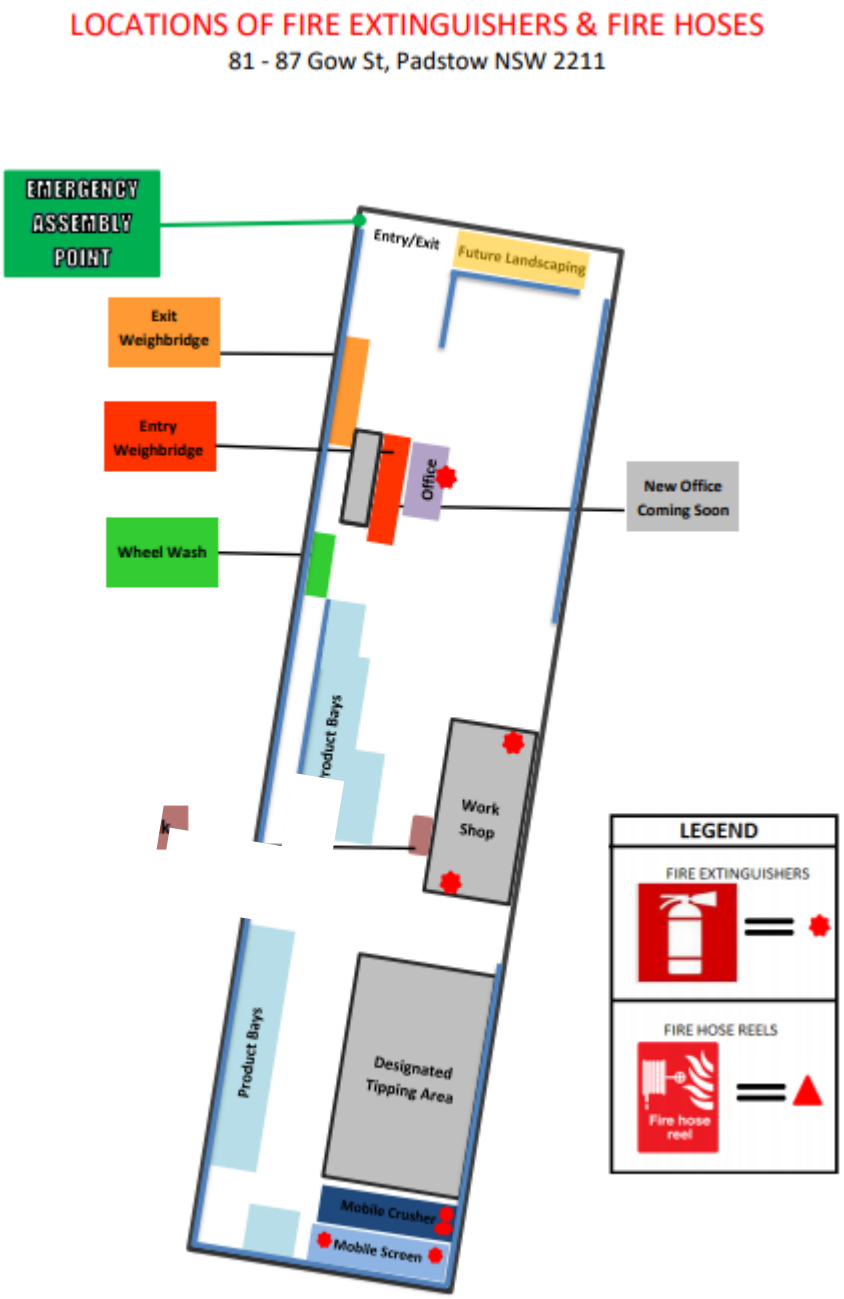
8.6.3.5 Contaminated Fire Fighting Water

The site has limited capacity to contain contaminated fire-fighting water. Based on the proposed stormwater concept design, the site could contain up to 200kL of contaminated fire-fighting water in the stormwater containment system. An isolation valve would be installed to ensure any contaminated fire fighting water runoff can be contained on site. As the fire risk from the facility is low, no additional containment is considered warranted.

8.6.3.6 Firefighting Equipment

The following figure presents the existing firefighting equipment present at site.

Figure 8-3: Fire Extinguishers & Hose Reels



8.6.3.7 Assessment of Fire Threat

There is a potential fire risk from diesel use on the site. However, the tank is fully compliant with AS1940 and as such, the risk of a fire starting is low. The handling and management of the diesel, if undertaken with care, is also extremely unlikely to start a fire. The malfunctioning of equipment also presents another possible fire risk. However, proper maintenance of the equipment should eliminate any serious risk of fire. Due to the nature of the operation, there is a risk of fire occurring from arson or an off-site fire, although these are also unlikely.

The Emergency Plan, which will be completed in accordance with AS3745–2010, will need to provide work practice procedures to reduce this risk to a low level. This is provided in Section appendix 18. No further assessment is considered warranted.

The following safeguards and recommendations would be adhered to at the site to control potential fire risks:

- Fire detection systems are installed and operated in accordance with AS 1670.1:2004.
- Diesel is to be stored and transferred in accordance with AS1940.
- Fire services at the site are to be maintained in accordance with AS 1851–2012.
- Emergency lighting and exit signage are to be provided in accordance with the BCA and AS 2293–2005.
- Specific on site personnel are to be trained in specific site procedures, emergency procedures and the use of hose reels. Hose reels near to the tank farm would have foam available.
- Strict control of ignition sources to be enforced on site.
- Maintenance and housekeeping practices provided in accordance with AS/NZS 4745:2012.
- A hydrant system would be provided for the dewatering building in accordance with AS 2419.1.

8.6.3.8 Bushfire Hazard

The subject site is not located on bushfire prone land. Fire safety equipment adequate for the proposed modifications would be provided on site as discussed in the previous section. No further assessment is warranted.

8.6.4 Flooding

Initial consultation with Canterbury-Bankstown Council in relation to flooding issues was undertaken and Council advised that NO flood / overland flood study is necessary providing requirements were to be complied with.

However, due to changes in the development as part of the retaining wall design, a flood assessment is to be provided. Indesco have prepared a flooding assessment in line with addressing other issues in relation to stormwater. Council have been consulted during this assessment.

The full assessment is provided in Appendix 12.

8.6.5 Incident Management

The site's Emergency Plan and Pollution Incident Response Management Plan (PIRMP) address incident management. Incident management specifically relating to pollution incidents is also included in Section 4.4 of the Site's Environmental Management Plan.

The Emergency Plan is provided as Appendix 18 and the Environmental Management Plan as Appendix 17. The PIRMP is available on the website: www.gsrc.com.au. This would be updated for dewatering activities upon approval of the dewatering plant.

8.6.5.1 Emergency Shutdown Contingency Plans

Emergency plant shutdowns are very rare. Shutdowns due to emergency incidences such as fire or flooding are addressed in the site emergency plan.

If machinery breakdown occurs, then the incoming material storage areas would accumulate waste. There are three full time fitters onsite which can resolve most mechanical issues with equipment onsite. In the unlikely event they cannot resolve a breakdown issue a technician would be called out repair the breakdown. If the breakdown cannot be fixed in time to ensure the site does not accumulate more waste than the Environment Protection Licence allows, the following contingency measures are available:

- Hire replacement equipment such as mobile crusher and screen;
- Call off scheduled deliveries of waste; and/or
- Transporting unprocessed waste offsite to another resource recovery facility licenced to receive that waste.

Staff are available at all times to manage onsite traffic, with the exception of evacuation scenarios where the safety of personnel take priority over traffic management.

9. SOCIAL IMPACTS AND SAFEGUARDS

This section addresses the most significant social impacts that could result from the proposed development, which are human health and traffic issues. Visual impacts and heritage are also discussed briefly.

9.1 HUMAN HEALTH

Potential health impacts from the proposed development have been assessed with reference to the *Health Impact Assessment Guidelines* (enHealth, 2001). Identified issues concerning human health are detailed below.

9.1.1 Air Quality

Impacts to air from the proposed development are primarily related to dust emissions, as discussed in Section 8.1. Chemical compound and odour emission levels were considered negligible or deemed absent from the proposed development.

Dust from the proposed development will be appropriately managed and controlled with proposed and existing mitigation measures on site. Predicted dust emission levels from the proposed development are below the *Approved Methods* criteria and will result in very minor ground level concentrations. Therefore, air quality impacts with regards to human health are considered negligible.

9.1.2 Noise

High noise levels can potentially cause health impacts (e.g. hearing loss) to workers who are exposed to it on a daily basis. Control practices that will be in place to minimise the risk of exposure to employees include the use of appropriate PPE and undertaking systematic equipment maintenance. Additionally, occupational noise assessments can be carried out initially to monitor noise levels associated with the proposed development.

Potential health impacts associated with external environmental noise are considered unlikely based on the results from the Noise Impact Assessment (Appendix 2), which show that noise impacts at nearest sensitive receptors are expected to be negligible.

9.1.3 Fire Risk

Smoke released from a fire would cause a potential risk to human health through inhalation, as well as burns from a fire. Potential fire risks may be associated with flammable chemicals, faulty machinery/plant or combustible materials on site.

With correct maintenance of equipment, and adequate fire services and equipment in place, the risk of a fire occurring on site is considered to be low.

Additionally, the nature of the materials to be accepted on site (drilling mud and concrete washout liquid wastes) are non-combustible and therefore unlikely to pose a fire risk.

9.1.4 Chemical Spill

Potential adverse impacts to health could result from unintended human contact with hazardous chemicals, upon their accidental release within the building and/or externally to the site, through the stormwater system. The possibility of such an event occurring is considered to be low and a number of safeguards are in place to reduce the risk of chemical spills at the proposed development.

Potential hazards associated with chemicals on site will be reduced and mitigated due to the following:

- Storage and handling of chemicals will be undertaken within the enclosed building area, reducing the risk of contaminants making contact with the environment and the surrounding community;
- All chemicals are to be safely stored according to the relevant Australian Standard, including bunding for storage of dangerous goods and spill clean-up equipment is available on site to clean up potential chemical spills should these occur;
- In addition to chemicals being stored within bunded areas, chemicals will be stored upon sealed hardstand, further limiting potential health impacts from the accidental release of hazardous chemicals to on-site workers or the local community; and
- A Safety Data Sheet register would be maintained and the identification of chemicals stored on site and their potential hazards would be included in training as part of the site's EMP.

9.1.5 Employee Health and Safety

All employees would undergo appropriate training as part of site induction and be provided with appropriate Personal Protective Equipment (PPE) for their role, such as ear plugs (if required), high visibility clothing and safety boots. The employer would ensure the operation is conducted as approved and appropriate resources are available for work safety. The proposed development would be required to comply with the following Acts and Regulations relating to health and safety:

- Work Health & Safety Act 2011; and
- Work Health & Safety Regulations 2017.

Employees would be trained in the appropriate safety procedures applicable to their role including use of firefighting equipment.

9.2 VISUAL IMPACTS

Figure 9-1 below shows the existing view of the site from Gow Street. Site changes will be confined to the rear of the site and within an existing building. This will not result in significant changes to the site appearance from Gow Street and therefore visual impacts will be negligible.

Figure 9-1: Existing view of site from Gow Street

9.3 HERITAGE

As per correspondence with the Department of Planning, Industry & Environment (Ref: SSD-10450) in response to the supporting scoping report for the proposed development, "a search of the NSW State Heritage Inventory found no Aboriginal places or items of heritage on, or within the vicinity of the site and that the site is fully concreted with no vegetation and therefore a full Aboriginal and Cultural Heritage Assessment is not considered required. EES notes however that the proposed development may require excavation work. If the excavation is likely to disturb the ground surface it is recommended an Aboriginal cultural heritage assessment report is prepared".

Planned excavations may result in ground disturbance and therefore a full Aboriginal cultural heritage assessment report has been prepared by McCardle Cultural Heritage. A summary of the process and outcomes of the assessment is presented below:

> *The project area lies within the Cumberland Plain, which is a broad and shallow basin that stretches westwards from Parramatta to the Hawkesbury-Nepean River and southwards from Windsor to Thirlmere. The project area has undergone excavation and fill works for the existing recycling facility resulting in a disturbed landscape with none of the original landforms remaining.*
>
> *The underlying geology of the project area is the Wianamatta Group geological formation, specifically the Bringelly Shale geological unit. The Bringelly Shale formation is primarily composed of shale, with occasional calcareous claystone, laminate, and coal (Bannerman*

and Hazelton 1990, p. 28). The absence of suitable raw materials types in the project area, such as mudstone and silcrete, indicates that stone materials suitable for manufacturing stone artefacts would have been transported into the project area.

Situated on the Blacktown residual soil landscape, the geomorphology of the local area includes texture contrast soils that consist of an upper soil Horizon A and underlying B (referred to as duplex soils). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively and within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons.

In terms of fresh water availability, the project area is located over 770 metres west of a 3rd order creek (Salt Pan Creek) and the closest reliable fresh water is the Georges River located 5 kilometres west of the project area. Thus, the project area was not well resourced in terms of fresh water availability, and as water is essential for survival, the project area would not have been suitable for camping.

In relation to land uses and associated impacts to the landscape and associated cultural materials, European settlers extensively cleared the original native vegetation in the 1800's and since then the investigation area has been subject to additional clearing, excavation and fill works associated with the existing recycling facility and associated infrastructure. These direct impacts to the land and associated cultural materials that may be present are easy to see and understand.

A search of the AHIMS register indicate there are no known Aboriginal sites recorded within two kilometres of the project area Based on the AHIMS results and regional assessments, patterns of past Aboriginal land use have been identified. Previous assessments have identified that artefact scatters and isolated finds are the most prominent site type. These assessments have also identified that both landform and distance to water were important factors in past Aboriginal land use. Elevated landforms within 50 metres of reliable water appear to have been the most favoured. In relation to fresh water sources, the higher the stream order (and more reliable water source) the higher the numbers of sites and site densities and both decrease with distance from the resource. Raw materials are predominantly silcrete and mudstone followed by chert and quartz and artefact types are mainly flakes, broken flakes and flaked pieces. All sites were noted to have been disturbed through past landuses including but not limited to clearing, agricultural and pastoral activities, residential developments, utilities, infrastructure and erosion.

The presence of past Aboriginal people and their use of the landscape are undeniable and evidence is seen in the cultural materials that have survived both natural and human landuses since colonisation of the area in the 1800's. Whilst the regional environment provided resources, including raw materials for tool manufacture, fauna and flora for subsistence, medicinal resources, ceremonial places, and water which is a survival necessity that would have allowed for sustainable occupation of the area, the project area itself comprises a landscape in which water courses are absent which is likely to have been a significant factor in relation to past Aboriginal occupation of the locality.

The absence of resources in the project area may have supported transitory movement such as hunting and gathering, travel and possibly camping by small numbers of people over short periods of time. Non-indigenous settlement and land uses have impacted the investigation area, most noticeably from vegetation removal and excavation works

associated with the current facility. Whilst it is clear Aboriginal people lived across the landscape, the evidence will have been impacted through such land uses. Based on the environmental, cultural and archaeological contexts, it was predicted that very low-density artefacts scatters and isolated finds representative of transitory movement (hunting and gathering, travel) may have been present within the project area, and that such evidence was likely to have been disturbed through past land uses.

The project area was surveyed as one unit based on the disturbed landform. Consisting of a highly disturbed landscape with none of the original landform present, the project area contains an existing recycling facility that has been previously completely excavated and concreted. The project area, being covered in concrete, a typical effective coverage estimation is not possible. No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey and this is likely due to a number of factors including:

- *Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;*
- *The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and*
- *Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.*

Considering general models of occupation for the locality, the results of this and local investigations, the locality may have been utilised by Aboriginal people. As the project area itself is located over 770 metres from the closest water SOURCE and associated resources, the project area is unlikely to have been utilised more than a low intensity usage such as transitory movement or hunting/gathering activities.

As no sites or PADs were identified, there are no impacts on the archaeological record and the following recommendations are made:

3) *The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and*
4) *Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.*

Should any unexpected materials (including heritage items, Aboriginal artefacts or remains) be uncovered during excavation, earthworks or construction, then the following steps would be taken:

1. Cease work immediately. Do not touch the suspect material or object.

2. Contact the Principal Contractor and inform of findings.

3. Set up temporary barricades (tape, bunting, or temporary fencing) to segregate the material and prevent access to the area.

4. Install erosion and sediment controls if necessary. Such controls include hay bales, geotextile fences and sediment barriers to prevent rainwater from transferring the suspect material off site.

5. Cover any stockpiled material containing the suspect material with tarps or plastic sheeting.

6. Arrange inspection by a suitably qualified person to confirm identification of the suspect material. Sampling and testing (if required) will be undertaken as recommended by this consultant. In the event that the object is suspected to be an Aboriginal object a qualified archaeologist will need to confirm this and make further recommendations.

7. If any suspected human remains are discovered during any activity, you must notify the NSW Police and the OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. Do not recommence work at that location unless authorised in writing by the OEH.

8. If material is confirmed to be contaminated, a remedial action plan (RAP) may need to be prepared to deal with the material. Undertake recommendations in the RAP.

9. If the material is not contaminated and poses no threat to the human health or the environment, the barricades can be removed and work can continue as normal.

10. Record details of any unexpected find in the incident register.

The above actions are deemed sufficient for the minor excavations required on site. These actions would be included in an Unexpected Finds Protocol and implemented as part of the Construction Environmental Management Plan.

In addition, the following is noted:

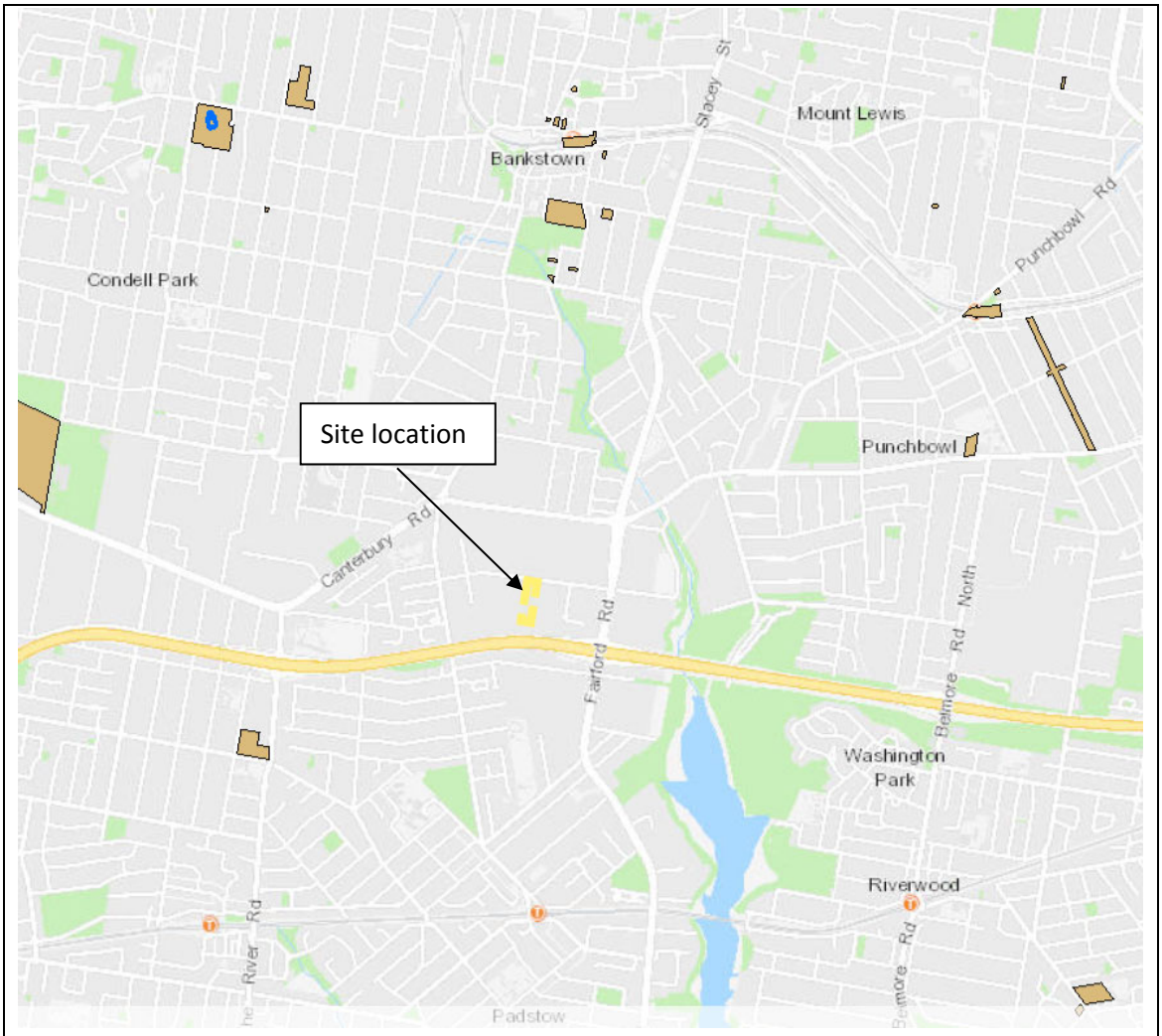
- A search for heritage places and items was conducted via the OE&H State Heritage Inventory, an online heritage database which includes listings from Aboriginal Places, State Heritage Register, Interim Heritage Orders, State Agency Heritage Registers and Local Environmental Plans.

- The subject land was found not to be affected by an Interim Heritage Order under the provisions of the NSW *Heritage Act 1977*. No Aboriginal Places or European heritage locations have been identified or uncovered on the subject site or in its vicinity.

- The site is also not listed as being a heritage item or containing items under the Bankstown LEP 2015.

The nearest general heritage item to the site is "Revesby Public School", 1.4 km to the south-west of the site (Figure 9-2). This site will not be impacted by the proposed development.

Figure 9-2: Heritage map



Source: NSW Planning Portal 2020

The full Aboriginal Cultural Heritage Assessment report is presented in Appendix 13.

9.4 ROAD, TRAFFIC AND TRANSPORT

9.4.1 Existing Road Network

The proposed site is located to the North of the Western Motorway within an area which is generally industrial. The site is accessed via Gow Street which is a local road with one lane each way and a sign posted speed limit of 50 km/hr.

Fairford Road is an arterial road with two lanes with intersection to Gow Street to the east of the site. Fairford Road provides access to the M5 Western Motorway and Canterbury Road.

Gibsons Avenue is a collector road with intersection with Gow Street and provides access to Canterbury Road.

9.4.2 Site Access

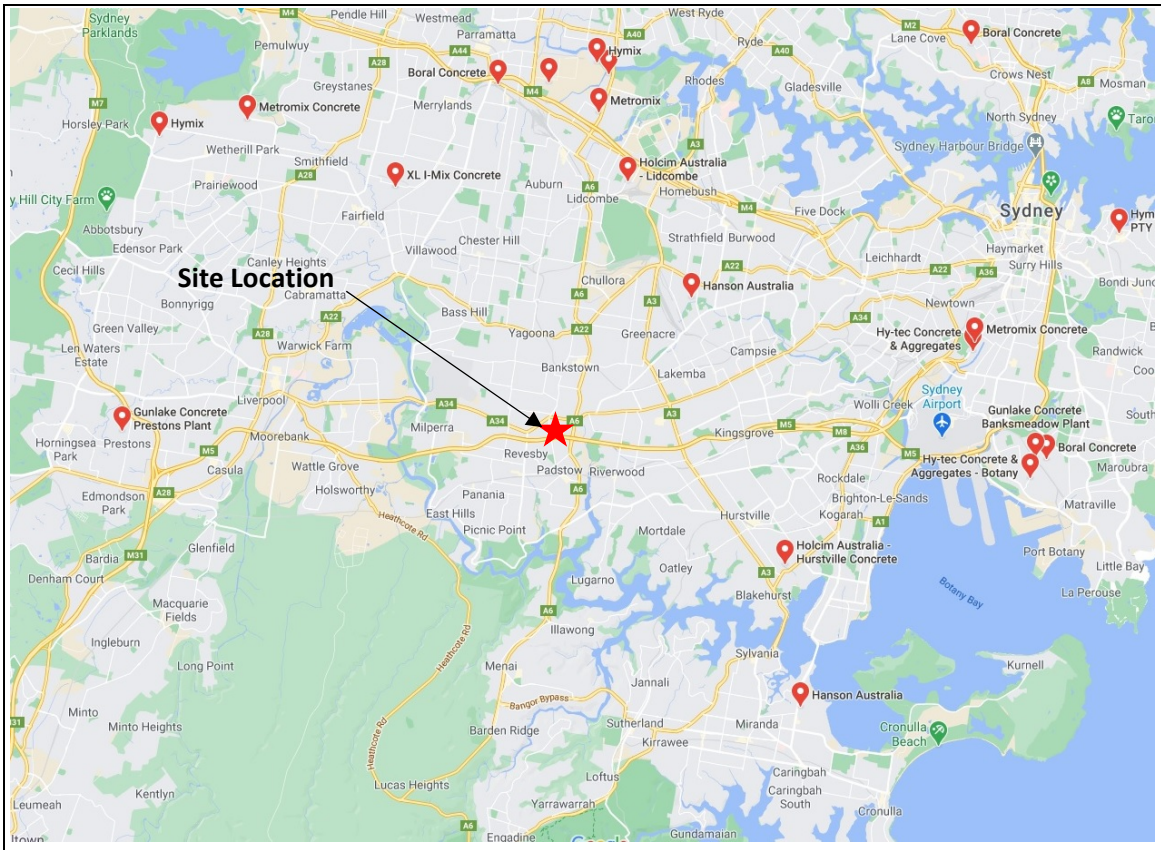
There are two entrance driveways to the development site from Gow Street. The driveway on the north west is the main entrance and exit to the facility. The driveway on the north east is an existing service entry and exit.

9.4.3 Truck Routes

The site is located centrally to enable trucks to access the M5 Western Motorway via Fairford Road, Canterbury Road and The River Road.

A map of the catchment in the following figures demonstrates the site is located in a suitable location to serve the construction industry and would not generate additional trips over long distances between construction sites batching plants and landfill locations. This is because the site would endeavour to serve local construction projects within government areas that are within close proximity of the site. The map shows existing concrete batching plants within the local area that could potentially be customers to the dewatering plant. Likewise, skip bin hire locations are also shown on a catchment where waste is pre-sorted prior to being brought to the site.

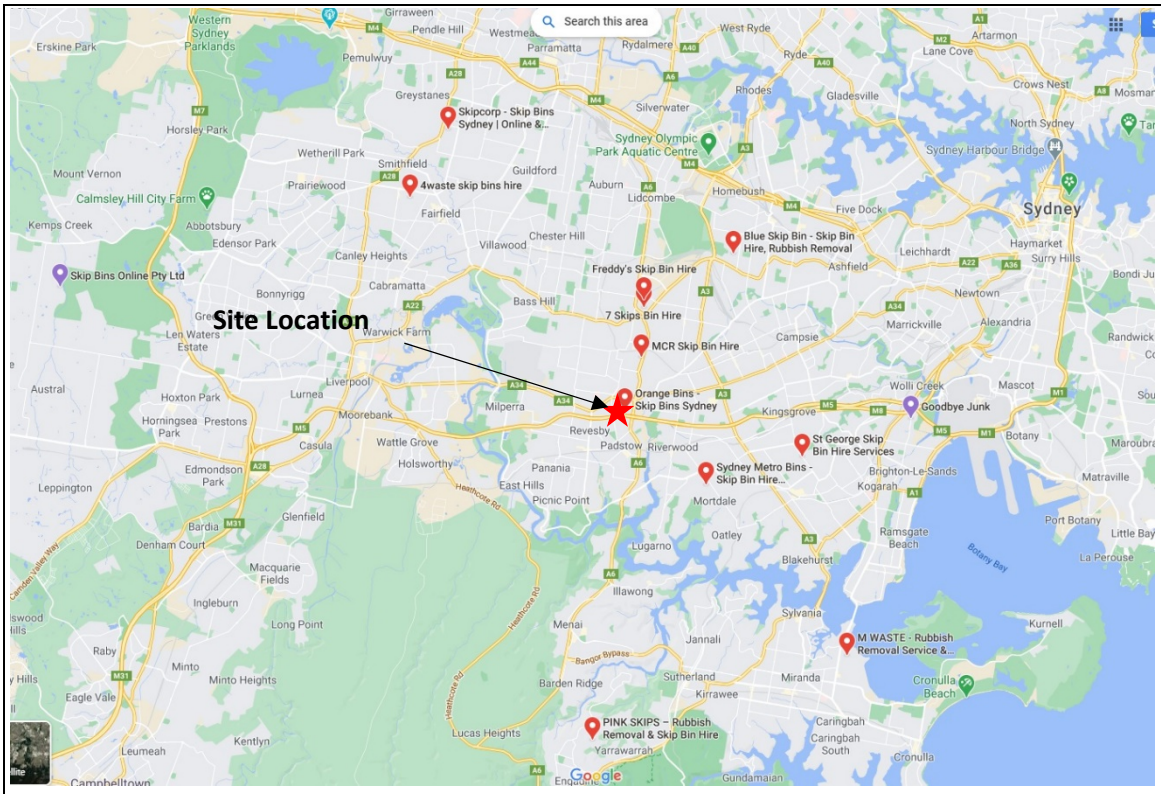
Figure 9-3: Map of Catchment – Concrete Batching Plants



Source: Google Maps 2020

↑N Not to scale	**LEGEND:** Concrete Batching Plant Location Site Location	Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152

Figure 9-4: Map of Catchment – Skip Bin Hire Locations



Source: Google Maps 2020

N Not to scale	**LEGEND:** Skip Bin Hire Location Site Location	Benbow Environmental 25-27 Sherwood Street, Northmead NSW 2152

9.4.4 Traffic Generation

The operation of the dewatering plant would generate additional traffic. The main vehicles accessing the site will include:

- Cars of site staff and visitors which would be restricted to the allocated parking areas only;
- Medium rigid trucks;
- B–Doubles;
- Liquid tanker trucks; and
- Concrete trucks.

At maximum proposed capacity, heavy vehicle trips per day are expected to include 44 on average for the C&D facility and 128 for the dewatering plant. The average daily trip generation of the liquid waste facility are estimated as follows:

- Liquid Waste Trucks (tanker trucks and concrete trucks) – 92
- Solid material Trucks – 36
- Cars/ light vehicles - 8

This accounts for trucks both coming in and going out and assumes 46 liquid tankers in each directed to transport 685 tonnes each day with 15 tonne average capacity. It also includes 18

trucks in each direction with a 10 tonne average capacity transporting 274 tonnes of solid material per day. It also includes 4 cars (staff or other vehicles).

In addition to that there is existing vehicle movements of the C & D facility:

- C&D trucks - 44
- Solid material Trucks – 36
- Cars/light vehicles - 6

This accounts for trucks both coming in and going out and assumes 22 trucks in each directed to transport 438 tonnes each day with 10 tonne average capacity trucks. It also includes 4 cars (staff or other vehicles).

It should also be said that the liquid waste truck peak hour in the day does not coincide with the commuter peak hour. In this case, the majority of liquid waste pickups would occur at the site from 7am onwards.

A liquid waste truck leaving the plant is required to take into account where the plant is located and the travel time from the facility to the construction site. Travelling in peak hour is inefficient since sitting in peak hour queue is unproductive time and is generally avoided.

9.4.5 Expected Truck & Car Distribution

The dewatering facility proposes to operate for 24 hours/seven days a week. However, the majority of liquid waste pickups would occur at the site from 7am onwards. Travelling in peak hour is inefficient since sitting in peak hour queue is unproductive time and is generally avoided. Peak vehicle movements are ten (10) trucks per hour. Table 9-1 displays an example of the truck distribution over a standard 24-hour period.

The peak hours are 8:00am to 9:00am and 5:00pm to 6:00pm for the weekday AM and PM peak hours respectively.

The approved operational hours for the C&D facility are: 06:00 and 18:00 Monday to Friday, and 07:00 and 18:00 on weekends. The existing facility will continue to operate within these hours.

Table 9-1: Expected Truck and Car Distribution

Time	C & D facility				Dewatering Facility			
	Incoming trucks per hour		Outgoing trucks per hour		Incoming trucks per hour		Outgoing trucks per hour	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
1:00	NA	NA	NA	NA	0	1	0	1
2:00	NA	NA	NA	NA	0	1	0	1
3:00	NA	NA	NA	NA	0	1	0	1
4:00	NA	NA	NA	NA	0	2	0	2
5:00	NA	NA	NA	NA	0	2	0	2
6:00	0	1	0	1	0	2	0	2
7:00	0	1	0	1	0	2	0	1
8:00	***3***	***2***	***0***	***3***	***4***	***2***	***0***	***3***

Table 9-1: Expected Truck and Car Distribution

Time	C & D facility				Dewatering Facility			
	Incoming trucks per hour		Outgoing trucks per hour		Incoming trucks per hour		Outgoing trucks per hour	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
9:00	0	2	0	1	0	3	0	4
10:00	0	3	0	2	0	4	0	5
11:00	0	3	0	3	0	5	0	5
12:00	0	3	0	3	0	5	0	5
13:00	0	2	0	2	0	5	0	5
14:00	0	2	0	2	0	5	0	5
15:00	0	1	0	1	0	4	0	4
16:00	0	1	0	1	0	3	0	4
17:00	***0***	***1***	***3***	***2***	***0***	***3***	***4***	***0***
18:00	NA	NA	NA	NA	0	3	0	3
19:00	NA	NA	NA	NA	0	3	0	3
20:00	NA	NA	NA	NA	0	3	0	3
21:00	NA	NA	NA	NA	0	2	0	2
22:00	NA	NA	NA	NA	0	1	0	1
23:00	NA	NA	NA	NA	0	1	0	1
0:00	NA	NA	NA	NA	0	1	0	1
Total	3	22	3	22	4	64	4	64
	6 light/day and 44 heavy/per day				8 light/day and 128 heavy/day			

Note: “Light” vehicles meaning cars, “Heavy” vehicles meaning trucks and liquid tankers

9.4.6 Vehicle Unloading and Loading times

Vehicle loading and unloading times are presented in the following table.

Table 9-2: Vehicle Unloading and Loading Times

	Proposed			Existing	
	Tanker trucks	Concrete trucks	Solid material trucks pickup	C&D drop off trucks	C&D material trucks pickup
Maneuvering around site (minutes)	2	2	2	2	2
Weighbridge time (minutes)	5	5	5	5	5
Average capacity (tonnes)	15	15	10	10	10
Description of unloading/ loading activity	Liquids are pumped out; pumps operate at 10 L/s	Liquids are washed and tipped out	Materials are loaded onto truck via FEL	Materials are tipped out	Materials are loaded onto truck via FEL
Unloading time (minutes)	25	10	N/A	2	N/A
Loading time (minutes)	N/A	N/A	15	N/A	15
Total time on site (minutes)	32	22	22	9	22

9.4.7 Traffic Impact Assessment

A traffic impact assessment was undertaken by ML Traffic Engineers. The report focuses on the proposed liquid waste facility and how the additional trips will impact on the operating performance of priority intersections as a result of operation of the facility. A summary of the outcomes of this assessment are provided below:

- SIDRA analysis was provided for existing and future traffic volumes the intersections of:
  - Stop intersection of Fairford Road with Gow Street; and
  - Priority intersection of Gibson Avenue with Gow Street and Stiles Avenue.

- The intersection analysis was assessed to determine the Degree of Saturation (DS), Average Delay (AVD in seconds) and Level of Service (LoS) at each intersection for the existing traffic volumes, traffic volumes as a result of the proposed development and traffic volumes forecast for future years 2021, 2026, 2031 and 2036.

- SIDRA analysis shows turn movements have a Level of Service (LoS) A (good operation) for the stop intersection of Fairford Road with Gow Street and a LoS A or B (good with acceptable delays and spare capacity) for the priority intersection of Gibson Avenue with Gow Street and Stiles Avenue. Both intersections will have spare capacity.

In summary, the proposed development will be a moderate trip generator for the weekday AM and PM peak hours. The additional trips from the proposed expansion of a liquid waste facility can be accommodated at the nearby intersections without significantly affecting intersection performance, delays or queues. Forecasted traffic volumes (for future years) at both surveyed intersections will run with a good level of service with minor change to queuing distances and degree of saturation.

The full traffic impact assessment is provided as Appendix 9.

9.4.8 Accessibility by Public Transport

There are several bus routes and train services that can be accessed from the closest bus stop to the site which is located 200 metres to the east of the site at the corner of Fairford Road and Gow Street. Bus M91 – Parramatta to Hurstville stops at the Fairford Road/Gow Street stop and later stops at Padstow train station in a southerly direction and Bankstown Station when travelling in a northerly direction. These train stations provide access to the city and the north west (Liverpool or Lidcombe to City via Bankstown) and south west (Macarthur to City via Airport or Sydenham) suburbs of Sydney. Bus S5 – Padstow to Milperra, bus M92 Sutherland to Parramatta and bus 927 to Padstow Heights are also accessible from Bus M91 at Padstow Station.

This network of public transport provides access to and from the site to many suburbs of Sydney.

9.4.9 On-site Traffic

There is ample room on site for trucks to manoeuvre, weigh their loads upon entry and exit, unload and/or load, wait, and enter and exit the site in a forward direction. Internal truck circulation is shown on the truck queuing plan, load and unload plan, and the swept path diagrams. A traffic management plan also provides operation measures to manage on-site traffic on a daily basis.

9.4.9.1 Transport, Queuing and Access

The following table provides a breakdown of vehicle waiting and activity during peak operations.

Table 9-3: Vehicle Waiting and Activity - Peak Operations

Activity	Details
Vehicles waiting to access the site	Up to 2 vehicles can wait in-front of the weighbridge prior to entering the site;
Vehicles at weighbridge	Up to 2 vehicles can weigh on the weighbridge at any one time;
Vehicle load inspections	Up to 3 vehicles either on the weighbridge or in front of the weighbridge can be untarped for load inspection prior to entering the site.
Vehicles within the site, waiting to access unloading areas	Up to 2 vehicles can wait behind the weighbridge at any one time waiting to access the unloading/loading areas
Vehicles unloading/loading times	Up to 3 vehicles can unload at any one time. 1 vehicle can load at any one time. Typically unloading and locating takes approximately 5 minutes.

Table 9-3: Vehicle Waiting and Activity - Peak Operations

Activity	Details
Vehicles exiting the site	Up to 2 vehicles can wait behind the weighbridge at any one time waiting to leave the site
Difference between weekdays and weekends	Weekdays are busier than weekends. Total number of vehicles on weekends is approximately 30% of the total number of vehicles on a weekday. The weekends often have more box trailers, as smaller jobs (households) arrive on site on the weekends.

A worst case scenario analysis showing vehicle stacking/queuing/waiting on site based on the proposed processing capacity, peak delivery times and the duration of time a vehicle is on site is provided in the form of a scaled plans that accompany the site plans in Appendix 8.

- A08 – Rigid truck queuing plan
- A09 – B-Double queuing plan
- A10 – Truck load and unload

9.4.10 Off Street Parking

Fifteen car spaces are provided at the site which as demonstrated in Section 5.7.6 complies with Bankstown DCP. This number of spaces also caters for the expected number of employees being nine (9) current full-time staff, and an additional ten (10) additional full-time staff who would be distributed over 2 shifts. Therefore a maximum of fourteen (14) staff would be required on site at any one time.

10. CUMULATIVE IMPACTS AND SAFEGUARDS

This section provides an assessment of the potential cumulative impacts that may arise as a result of the operations from the proposed development, concurrently or sequentially with other projects in the region.

Cumulative impacts are incremental environmental impacts that are caused by past, present or future activities that, when combined, may have further cumulative effect. In fact, the environmental impacts of any single project upon a receiver or resource may not be significant when considered in isolation; however, the potential impacts may increase when individual effects are considered in combination, either with the same project or together with other projects.

The potential cumulative impacts that could arise from the operations of the proposed development are assessed in the following subsections.

10.1 EXISTING C&D FACILITY

The cumulative environmental impacts from the existing C&D facility have been assessed. This includes cumulative air, noise and stormwater impacts. The following section provides justification in response to NSW EPA request to consider enclosing the existing C&D operations as part of the proposed development.

10.1.1 Enclosed Facility

The existing development which includes the C&D processing operations is approved (DA-51/1997) and is licenced under the *Protection of the Environment Operations Act, 1997*: EPL No. 10943 for the processing of 80,000 tonnes per year of building and demolition waste and asphalt waste, and the storage of up to 7,300 tonnes of waste at any one time. The EPA correspondence dated 20 February 2020 refers to C&D processing activities related to the proposed expansion of the C&D facility. This aspect of the proposed development is no longer part of the application.

The EPA correspondence dated 20 April 2020 refers to the new development which includes the addition of the dewatering facility. It should be noted that the proposed dewatering plant will be enclosed and aggregate bays covered and walled. This is shown on the site plans. The existing and approved C&D operations will continue to operate under the current consent and licence. It is considered unreasonable to request significant changes of this nature to site operations that are already approved. To enclose the entire site is economically infeasible and would result in the business closure. Cost analysis indicates significant upfront expenses are required to provide a large enough building to enclose all (existing and proposed) operations. Numerous options were considered in the planning process with regard to enclosing the facility including:

- Constructing the building in stages;
- Changes to the layout of the facility such as locating the C&D plant and constructing a building at the front (northern end) of the site;
- Enclosing the C&D operations using an awning;
- Providing shade sails over the C&D activities;
- Providing a rigid impermeable material over the C&D activities.

In all cases, the options were found to be either economically infeasible, insufficient room was available or infeasible due to disruption to work activities resulting in loss of income.

The requirement to construct an enclosed building would be considered warranted should expansion of the existing C&D facility be proposed. Should a future application be made with a larger throughput and potentially a concrete batching plant operation on site, returns on this investment would be expected to validate enclosing the facility.

As the existing operations are currently approved, the requirement to enclose these existing activities should not apply as the modification of the facility relates to establishment of a dewatering facility, with the C&D aspect remaining unchanged. The proponent has implemented dust control measures to minimise dust from the existing facility and continues to be pro-active in attempting to manage dust emissions. These measures include:

- Limiting stockpile height to 4 m;
- Constructing three walls around all storage bays;
- Construction of an 8.5 m high boundary wall which serves as a wind break;
- Improved upgraded water misting sprays;
- Addition of a flexible hood and vacuum ducting to capture dust emissions from crushing and screening operations.

It is acknowledged that enclosed recycling facilities are considered best environmental practice in Europe. Such initiatives are financially supported by the government. This is not the case in Australia. Standards for waste facilities are becoming more and more stringent without the financial support of the Australian Government. This needs to change particularly considering that the waste industry is not a very profitable industry.

For the above reasons, the existing C&D facility should not be required to be enclosed.

10.2 AIR QUALITY

This AQIA has been prepared in accordance with the NSW EPA guidelines *"Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales"* (2016) (AMMAAP), which shall henceforth be referred to as the *Approved Methods*. This document specifies particular pollutants which are assessed as a cumulative impact (incremental impact from site + background). The pollutants assessed cumulatively relevant to the subject site are PM_{10}, $PM_{2.5}$ and TSP.

Additionally, the GHG assessment has been prepared in accordance with the Australian Government *Department of the Environment and Energy, August 2019 Australian National Greenhouse Accounts – National Greenhouse Accounts Factors*.

Odour is not considered as a potential emission that would be generated from the proposed development and therefore was not assessed.

The air dispersion model AERMOD was used for the prediction of off-site dust impacts associated with the air emissions from the proposed operations. Two scenarios were included in the air dispersion modelling:

Scenario 1 – modelled emission sources with general mitigation measures recommended and
Scenario 2 – modelled emission sources with an additional custom flexible hood and vacuum ducting applied to the crusher/screen.

The assessment aimed to demonstrate the predicted dust impacts from site activities on neighbouring receptors with and without the use of the flexible hood and vacuum ducting applied to the crusher/screener. Preliminary dust monitoring undertaken on- and off-site demonstrate that current dust emissions from site activities exceed NSW EPA criteria.

Results of air impact modelling for both scenario 1 and scenario 2 demonstrate that incremental dust levels were reduced with the inclusion of a custom hood covering applied to the crusher/screener by ~12-46% at the most heavily impacted receptor (R11; 89 Gow Street, Padstow). It is recommended that all controls listed for Scenario 2 be applied onsite on site to ensure continued compliance and further reduce dust impacts from the proposed development on all nearest receptors, both industrial and sensitive.

In cases of elevated background concentrations, the NSW EPA requires a demonstration that no additional exceedances of the impact assessment criteria will occur as a result of the proposed site activities. Contemporaneous additions assessment was conducted for the most impacted receptor (R11; 89 Gow Street, Padstow). The 24 hour averaging period for PM_{10} showed 2 additional days of exceedance, however this is attributed to the elevated background concentration levels of 48.23 $\mu g/m^3$and 46.21 $\mu g/m^3$. The 24 hour averaging period for $PM_{2.5}$ demonstrated no additional days of exceedance.

With the proposed site activities and additional dust controls in place, it is considered that emissions to air from the site's operation are unlikely to cause harm to resident's health or the environment.

10.3 Noise and Vibration

Operational noise is a critical environmental issue in any area with surrounding residential receivers. The existing background noise levels were used in determining the project criteria for the noise impact assessment (Appendix 2). All relevant noise criteria were satisfied at nearest residential receivers in all time periods.

10.4 Surface Waters

The development proposes a stormwater concept design that utilises the proposed dewatering facility to minimise potential stormwater impacts. This will improve the current stormwater system. Therefore, contribution of the individual site has been appropriately mitigated and cumulative long term impacts are considered to be insignificant.

10.5 Waste Management

A major incident or recurring incidents involving the storage and management of waste products could have potential cumulative impacts if considered in the context of the surrounding area, which has the potential to deal with large volumes of waste generation. Incidents include

accidental spillages that have the potential to enter the surrounding environment causing land and water pollution.

A number of safeguards and management measures would continue to be implemented at the site in order to prevent accidental release of any waste. With these procedures and safeguards in place, the contribution of the site to cumulative impacts from the incorrect handling and management of waste would be insignificant.

10.6 HAZARDS AND RISK

Hazards and risk associated with the proposed development are related to the potential for fires, spillage of chemicals and release of particulates into the surrounding environment.

There are safeguards established at the site to reduce the risk of fires as well as the risk of release of chemicals and particulates, such as the storage of chemicals according to relevant standards including bunding, provision of spill kits and appropriate staff training in emergency response.

Cumulative impacts are not expected due to the current safeguards and procedures in place. These would be maintained.

10.7 TRAFFIC AND TRANSPORT

The traffic impact assessment for the proposed development, undertaken by ML Traffic Engineers, considered cumulative impacts on the existing road network by using existing traffic count data of the surrounding road networks. Key intersections were assessed for the additional traffic generated by the proposal during AM and PM peak hour traffic.

Results of this assessment are presented in Appendix 9. The report concludes that the proposed development is a moderate trip generator for the weekday AM and PM peak hours. The additional trips from the proposed development can be accommodated at the nearby intersection without significantly affecting intersection performance delays or queues.

The proposal would have an acceptable traffic impact and there is no requirement for provision of any new traffic capacity roadworks.

11. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Ecologically sustainable development is defined as "development that meets the need of the present generation without compromising the ability of future generations to meet their own needs". Ecological sustainability requires a combination of good planning, and effective and environmentally sound approach to design, operations and management. The principles of ESD throughout the project's life cycle are outlined in the following paragraphs.

Decision making should be based on sound environmental management principles which consider not only the present, but also the future, particularly in relation to:

- Precautionary principle – if threats of serious or irreversible environmental damage exist, lack of full scientific evidence should not be used as a reason for postponing measures to prevent environmental degradation;
- Inter-generational equity – the present generation should ensure that health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- The conservation of biodiversity and ecological integrity – the conservation of biological diversity and ecological integrity should be a fundamental consideration; and
- The valuation of the environment and resources and the establishment for the efficient use of resources.

The above principles have been incorporated into the overall design of the project and into the management of operations on site. The EIS outlines safeguards that would be implemented on site so that the proposed operations would cause minimal harm to the environment and that resources would be sustained to ensure availability to future generations, through reducing the environmental impacts on the surrounding community.

The main environmental safeguards to be implemented in order to minimise environmental harm, in line with ESD principles, are as follows:

- Implementation of air quality controls;
- Stormwater pollution controls, including fully contained process and storage areas.
- Fire protection services;
- Storage and handling of hazardous chemicals including hardstand area integrity management and maintenance of hazardous chemicals and liquid waste storage area;
- Waste management and stringent procedures to manage the incoming and outgoing waste; and
- Environmental Management Plan (EMP).

The proposed development would not have any foreseeable negative impacts on socio-economic aspects. Instead, a positive contribution from the increased operations on site would be the creation of jobs, with additional employment opportunities being provided. Increased operations are also to focus heavily on servicing the local markets. In addition the proposed development would recover essential resources including water. As a result, the proposal could have positive economic "spin-off" effects in the local region, by enhancing social productivity while not undermining ecological systems. This aspect would be in accordance with the inter-generational equity principle of ESD.

In order to monitor the sustainable performance of a development, various sustainability indicators can be used.

Examples of these indicators are outlined in Table 11-1 and have been addressed in relation to the subject site and its considerations for ESD and sustainable practices. The site's EMP will be is to be continually updated in order to maintain the principles of ESD and monitor the sustainability indicators mentioned in the table.

Table 11-1: Sustainability Indicators

Indicator category	Comments and Description
Community	• Increase in employment opportunities; • Strengthening of local economy; • Level of knowledge based investment increased; • No net loss of heritage or other features, buildings, places of high community importance; and • No loss of community integrity.
Ecosystems	• No net reduction in richness or abundance of flora and fauna species in aquatic or terrestrial environments; • No net reduction in the existing landscaping of the site; • No net increase of pests or disease threats to the health of the ecosystem; and • Reduction of hazards which are threats to the health of the ecosystem (fire, pollution, etc.).
Soils	• No net topsoil erosion; • No increase in area of land affected by salinisation; and • No reduction in soil pH below certain levels.
Water	• No net increase in levels of acidification or toxic substances, heavy metals, nutrient and sediment levels; and • No net reduction in quality of water bodies as aquatic habitats. • Recovery of valuable water resources.
Air	• No net reduction in air quality.
Energy	• Programs to reduce the use of fossil fuels for transportation and energy consumption.

12. MITIGATION MEASURES AND MANAGEMENT

This section provides a summary of the mitigation measures required to ensure that the surrounding natural and built environment is safeguarded from potential impacts of the proposed development. An overview of the site management plans to be used on site is also provided, together with a description of incident management procedures.

12.1 SUMMARY OF CONTROLS AND MITIGATION MEASURES

Table 12-1 presents a summary of the potential impacts of the proposed dewatering plant discussed throughout Section 8, and identifies the environmental safeguards and control measures for the dewatering plant specifically that are recommended throughout the EIS to provide a sufficient level of protection, to both the built and natural environment surrounding the development.

Table 12-1: Summary of Potential Impacts, Environmental Safeguards and Control Measures

Potential Impacts	Safeguards and Control Measures
Air	
Generation of particulate emissions (dust)	• Dewatering plant storage bays to be enclosed/have wind breaks and water sprays. • Dewatering plant clean water to be used for dust suppression.
GHG emissions from site activities.	Opportunities to reduce and manage GHG emissions from site • Source liquid waste from within the vicinity of the project area; • Maintain equipment and on-site plant/vehicles in good working order to maximise fuel efficiency; and • Use high efficiency pumps and associated equipment in the drilling mud dewatering facility.

Table 12-1: Summary of Potential Impacts, Environmental Safeguards and Control Measures

Potential Impacts	Safeguards and Control Measures
Noise	
Generation of noise by use of dewatering plant equipment on site and vehicle movements exceeding compliance levels and resulting in impacts to acoustic amenity and complaints from the community.	During the night from 10pm – 6am the vacuum truck pump should not be used. An internal pump can be used at night such that the tanker truck vacuum pump is not needed. Whilst further noise controls recommended as good practice: • Prohibition of extended periods of on-site revving/idling; • Keeping the roller shutter door closed where possible; • Minimisation of the use of truck exhaust brakes on site; • Enforcement of low on-site speed limits; and • On-site vehicles and machinery to be maintained in accordance with a preventative maintenance program to ensure optimum performance and early detection of wearing or noisy components.
Water	
Contamination of stormwater run-off and consequent impacts on nearby surface waters. Residual impacts after management and mitigation measures: insignificant impacts from potential discharges to water.	• Stormwater concept/containment design including: ► BCP Stream Guard Pollution Control Pit or equivalent at stormwater pits; ► Silt arrestor; ► 200kL underground containment; ► Stormwater isolation valve; and ► Reuse of stormwater within dewatering plant. • Stormwater monitoring program; • Construction erosion and sediment controls; • The site is fully sealed; • Bunded minor chemical storage; • Daily site cleaning; • Regular workplace inspection and high standard of housekeeping; and • Segregated and designated waste bays and bins.
Waste Management	
Potential environmental and off-site impacts associated with excessive generation of waste and potential release of waste to surrounding environment. Residual impacts after management and mitigation measures:	• Dedicated waste storage tanks and storage areas; • Waste minimisation and resource recovery practices implemented; • Additional measures recommended include: ► Waste audits; ► Continual improvement of waste minimisation and resource recovery practices.

Table 12-1: Summary of Potential Impacts, Environmental Safeguards and Control Measures

Potential Impacts	Safeguards and Control Measures
Hazards and Risk	
Incident involving the potential for a spill or fire. Residual impacts after management and mitigation measures: potential for fire to cause serious material damage and impact on human life is low.	• Chemical storage in accordance with relevant standard; • Control of ignition sources, including "no smoking" policy; • Adequate provision for escape; • Adequate fire services; • Spill controls including, DG storage bunding, spill kits and spill kit training; • Building security; • Hydrant system installed for dewatering building; and • Emergency plan and emergency response training.
Human Health	
Impacts stemming from other aspects including air quality, noise and hazards and risk: airborne tissue fibres, high internal noise levels and harmful consequences of a potential fire or chemical spill incident. Residual impacts after management and mitigation measures: minor to insignificant impacts to human health of workers and local community.	• Implementation of EMP; • Use of Personal Protective Equipment; • Undertake occupational health assessments if required; • Regular workplace inspection and high standard of housekeeping; • Regular equipment maintenance; • Safeguards and control measures implemented for Air Quality; • Safeguards and control measures implemented for Hazards and Risks; and • Safeguards and control measures recommended for Noise.
Traffic and transport	
Low to moderate traffic impact	No requirement for road upgrades

12.2 SITE MANAGEMENT PLANS

Various site management plans would need to be prepared or updated by Gow Street Recycling Centre prior to the operation commencing, to ensure that proposed operations will be undertaken in an environmentally safe manner and with consideration to work health and safety. The most important site management plans include the following:

- Emergency Plan (EP) – Appendix 18;
- Environmental Management Plan (EMP) – Appendix 17;
- Construction Environmental Management Plan (CEMP) – Appendix 15;
- Pollution Incident Response Management Plan;
- Traffic Management Plan– Appendix 9; and
- Acid Sulfate Soil Management Plan – Appendix 16.

13. LIST OF APPROVALS AND LICENCES

A list of licences, approvals and permits required for the proposed development are shown in the following table in **bold**.

Table 13-1: Required licences, approvals and permits

Type	Relevant Legislation	Required?	Agency
LICENCES			
Environment Protection Licence	**Clause 34 & 42 of Schedule 1 of the Protection of the Environment Operations Act 1997**	**Yes**	**NSW EPA**
Surface Water Licence	Water Act 1912	No	Office of Water
Groundwater Licence	Water Act 1912	No	Office of Water
Controlled Activity Approval	Water Management Act 2000	No	Office of Water
PERMITS			
Permits under the Fisheries Management Act	Fisheries Management Act 1994	No	DPI Fishing and Aquaculture
Aboriginal Heritage Impact Permit	National Parks & Wildlife Act 1974	No	OEH
Permits under the Heritage Act 1977	Heritage Act 1977	No	OEH
APPROVALS			
Development Consent*	**Environmental Planning and Assessment Act 1979**	**Yes**	**Department of Planning, Industry and Environment**
Alter or erect improvements within a mine subsidence district	Mine Subsidence Compensation Act 1961	No	Mine Subsidence Board
Consent for works and structures in a public road	Roads Act 1993	No	RMS
Sub-division or development of bush fire prone land	Rural Fires Act 1997	No	Commissioner of the NSW Rural Fire Service

*Existing consent is held with Canterbury-Bankstown Council

14. STATEMENT OF COMMITMENTS

Gow Street Recycling Centre commits to the following course of action during the site modifications and operations of the proposed dewatering facility at 81 Gow Street, Padstow:

- Gow Street Recycling Centre will abide by all legal requirements, licence conditions and approvals pertaining to the site.
- Gow Street Recycling Centre will ensure the external areas are kept tidy and free of items and debris to facilitate movement of vehicles on site and minimise potential pollution.
- Gow Street Recycling Centre will implement and maintain the following safeguards and mitigation measures at the site, as detailed in this EIS.
  - Gow Street Recycling Centre should ensure during the night from 10pm – 6am the vacuum truck pump will not be used as well as ongoing maintenance of noisy machinery so criteria are not exceeded and the nearest sensitive receivers.
  - Bunding must be implemented and maintained for the storage of liquid waste and dangerous Goods/hazardous chemicals and combustible liquids in accordance with the relevant Australian Standards.
  - Hardstand processing areas, tanks, blind sump pits and pollution control devices are to be regularly inspected and/or cleaned and maintained in good working condition.
  - Staff must be trained in spill response and emergency procedures, including firefighting techniques.
  - Undertake the upgrade of the stormwater system including BCP Stream Guard Pollution Control Pit or equivalent at stormwater pits, silt arrestor, 200kL underground containment, isolation valve and ensure all aspects are properly maintained.
  - Good housekeeping must be undertaken for all operational and storage areas at the site;
  - Fire hydrant system, services and equipment must be provided, and the existing ones should be maintained, in accordance with BCA and relevant Australian Standards.
  - Vehicles, especially trucks, must be properly maintained in order to reduce noise.
  - All equipment should be regularly inspected and maintained.
  - All staff must wear PPE relevant to their role.
  - Gow Street Recycling Centre will ensure NSW EPA waste record keeping and reporting requirements are adhered to.
- Gow Street Recycling Centre will implement an Environmental Management Plan and ensure it incorporates the commitments, safeguards, mitigation measures and recommendations documented in this EIS.
- Gow Street Recycling Centre will implement an Emergency Plan.
- Gow Street Recycling Centre will update their Pollution Incident Response Management Plan.

15. JUSTIFICATION AND CONCLUDING REMARKS

15.1 PROJECT JUSTIFICATION

With the growing number of NSW Government Infrastructure projects, those with a minimum capital value of $50 million listed on the NSW Infrastructure Pipeline Portal, the demand for treatment facilities to deal with dewatering drilling mud and concrete washout waste generated by the construction industry is continuing to increase around NSW, particularly in Western Sydney.

The proposed development would establish a dewatering plant to process drilling mud and concrete washout waste into reusable products. In this way, the proposal supports and is consistent with a number of statutory policies including the "Waste Avoidance and Resource Recovery Act, 2001" (WARR Act), the "NSW Waste Avoidance and Resource Recovery Strategy 2014-21" and the "National Waste Policy 2018".

The NSW Waste Avoidance and Resource Recovery Strategy 2014-21 is a key policy tool under the WARR Act. The proposed development supports the goals of the strategy:

- Increase recycling – by 2021-22 increase recycling rates for construction and demolition waste from 75% to 80%, and for commercial and industrial waste from 57% to 70%.

  Comment: The proposal would establish a facility to enable recycling wastes from construction projects including drilling mud and concrete washout waste whilst maintaining the C&D recycling facility which also serves this purpose, thereby supporting an increase in the recycling rates for these wastes.

- Divert more waste from landfill – by 2021-22 increase the waste diverted from landfill from 63% to 75%.

  Comment: Establishing the dewatering facility would enable more wastes to be diverted from landfill. Of the 250,000 tonnes per year of liquid waste, it is estimated that the project would result in up to 85% recovery rate.

- Reduce illegal dumping.

  Comment: The proposal supports the reduction in illegal dumping by providing a facility that accepts unwanted wastes.

The National Waste Policy 2018 is an Australian Government initiative that aims to "better support our economy, protect the health of our communities and reduce environmental impacts if we harness the value of materials we dispose of and return them to productive use". The policy provides a framework for collective action for businesses, governments, communities and individuals until 2030. The proposal is consistent with the policy as it would be active in applying the principles of the circular economy, in particular:

- Improve resource recovery – including materials collection systems and processes for recycling and the quality of recycled material we produce;

- Increase use of recycled material and build demand and markets for recycled products.

- Better manage material flows to benefit human health, the environment and the economy.

  Comment: The proposal aims to establish an improved material collection system which has a high rate of recovery for the dewatering process and enabling three reusable products to be generated – filter cake which can be reused under a resource recovery exemption, aggregate which would be processed through the C&D facility and sold as product and treated water, the majority of which would be reused on site for dust suppression purposes and is expected to be of a quality capable of being reused in other potential future processes such as concrete batching.

15.1.1 Market Demand

Waste generated from construction and demolition (C&D) activities historically ends up in landfill. Increasingly, businesses are seeing waste as a potential resource which has resulted in a growth of recycling facilities to repurpose waste C&D in NSW. A similar demand exists for facilities to treat liquid waste, as disposal is costly to industry and water is increasingly becoming a more precious resource, yet few facilities are presently available to recycle such waste. Gow Street Recycling Centre wishes to capitalise on this need by expanding their recycling centre to include a liquid waste dewatering plant that treats drilling mud and concrete washout water.

Padstow is a suburb located in south-western Sydney. This location and the surrounding suburbs is a rapidly growing area of NSW. Current infrastructure projects within close proximity to the site include:

- Bankstown Station Precinct, including the Sydenham to Bankstown Urban Renewal Corridor; and
- The new Bankstown-Lidcombe Hospital

In addition, the construction of Badgerys Creek airport, employment and growth centres and the associated infrastructure projects as well as the increasing demand for residential developments means this region is generating significant quantities of liquid waste associated with this construction activity. This proposed development is needed to provide an additional process specifically to treat liquid waste from such projects and convert them into usable products.

15.1.2 Site Suitability

The justifications for selecting the subject site and for establishing the dewatering plant are listed as follows:

- The site is already developed and has consent to accept drilling mud;
- The site previously operated a dewatering/washing plant that processed drilling mud and the new dewatering plant would be an improved upgrade to what previously existed;
- The proposal is considered to be the most cost-effective process with minimal environmental impact;
- The site is not in a sensitive land use area;
- The development is a permitted use with consent;
- The development generates local employment;

- Transport routes are readily available and the local road network is capable of handling the additional truck movements;
- The site has sufficient room for on-site parking and truck manoeuvring;
- Local markets for construction materials will become more competitive, leading to fiscal returns for consumers and developers;
- The site's ability to recycle C&D waste will reduce the amount of raw materials extracted for new developments, consequently reducing environmental impacts of new local developments;
- The site's ability to recycle multiple types of waste will reduce the quantity of waste that is deposited to landfill, which will increase the sustainability of future construction projects;
- The site is located in a suitable location to serve current and future infrastructure and construction projects; and
- The proposed development will have extensive environmental safeguards to provide assurance in regards to the expected degree of environmental impacts.

15.1.3 Processing Capacity Justification

The site can accommodate the proposed processing capacity and storage of liquid waste combined with the existing storage of general solid waste (construction and demolition waste).

The maximum quantity of liquid waste that can be processed through the dewatering plant in a 24-hour period is approximately 1,500 tonnes. This can easily accommodate stormwater runoff (~650 kL/month) and the proposed 250,000 tonnes per annum.

The source of the waste streams for the dewatering plant would be from construction projects in the local and regional area. There are a list of major infrastructure projects on the pipeline website. Drilling mud and concrete washout waste would be generated in the majority of these projects.

15.1.4 Environmental Improvements

The proposed development is expected to have negligible additional environmental impacts as the dewatering operations are located indoors. The proposed dewatering plant is expected to significantly reduce environmental impacts for the following reasons:

- Treated water will be used as dust suppression, increasing available water supply for dust suppression, reducing dust impacts;
- Additional dust controls will be installed on the existing crusher and screen, reducing dust impacts.
- Upgraded stormwater system will collect first flush and process through the dewatering plant preventing the majority of stormwater from leaving the site and removing the sediment.

15.2 CONCLUDING REMARKS

The environmental assessment process has enabled the potential impacts of the proposed development to be evaluated, and control strategies to be devised in order to ensure compliance with regulatory standards. The development involves:

- Construction of a liquid waste (drilling mud) dewatering facility;
- Processing 250,000 tonnes of liquid waste per year; and
- 24/7 site operations.

The use of a site that is already developed with buildings and infrastructure in place is a major advantage. As a result, the new infrastructure required for the new processes will not have an impact on any on or off-site ecosystems.

The site is well suited for the new and existing processes that have been proposed, and will not negatively impact any existing nearby receptors. It is requested that the proposal be approved.

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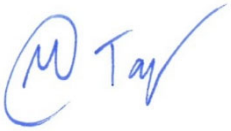

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APPENDICES

ATTACHMENTS