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Environmental Impact Statement Penrith Resource Recovery Facility Nassif Civil Pty Ltd

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This Environmental Impact Statement has been prepared by the following staff of Jackson Environment and Planning Pty Ltd, Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060.

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We declare that:

We declare that: The statement has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

The statement 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.

Report version	Authors	Date	Reviewer	Approved for issue	Date
Draft	R. Loemker, A. Johnston	26/07/2024	A. Johnston	A. Johnston	25/10/2024
Final	R. Loemker	22/11/2024	A. Johnston	A. Johnston	28/11/2024

Executive Summary

Nassif Civil proposes to operate a best practice construction and demolition (C&D) Resource Recovery Facility (RRF) at 29-37 Plasser Crescent North St Marys (Lots 15 & 16 DP263353). The RRF will have an annual waste throughput of up to 99,000 tonnes per annum. Waste received at the RRF will consist of construction and demolition waste in skip bin collected from the Greater Metropolitan region. This Environmental Impact Statement has been prepared by Jackson Environment and Planning Pty Ltd and includes a comprehensive assessment of the potential environmental impacts and mitigation measures.

Site and development

The proposed development is located at 29-37 Plasser Crescent, North St Marys, within the Penrith City Council region. The site comprises two lots (Lots 15 & 16 DP263353) with existing warehouse buildings. Key upgrades include partial demolition of existing structures, construction of a new shed, installation of processing equipment (e.g., vibratory finger screen, density separator, magnetic separator, timber shredder), and installation of conveyor belts for material transfer. The facility will operate from 6 am to 11 pm on weekdays and 7 am to 3 pm on Saturdays, receiving waste via scheduled skip bin deliveries. No timber mulching is to occur after 6pm on weekdays and no truck movements are to occur after 10pm of weekdays.

The site is situated in an E4 General Industrial zone, accessible via Kurrajong Road and Glossop Street. It is surrounded by residential zones and is approximately 700m from St Marys Public School. The total site area is 4,295m², with existing office facilities, bin storage areas, car parking, and truck parking. An existing licenced C&D RRF operates on Lot 16.

The proposed RRF aligns with several government strategies, including the *National Waste Policy Action Plan 2019*, *NSW Waste and Sustainable Materials Strategy 2041*, and the *NSW Circular Economy Policy Statement*. These policies aim to improve recycling rates, support the transition to a circular economy, and enhance waste management infrastructure in NSW.

The site is deemed suitable due to its existing industrial use, accessibility, and infrastructure. The development will mitigate potential environmental impacts, and no alternative sites were considered necessary.

Description of the operations

The facility will process C&D waste within a warehouse using a series of sorting and separating stages, ensuring high recovery rates. Waste will be delivered in skip bins, inspected, and processed within the warehouse. Sorted materials will be stored in designated bays within the warehouse and collected regularly for off-site recycling or disposal.

Sorted waste for further off-site processing / recovery will be collected in 19m semi-trailers on a daily basis for lawful recovery / disposal at other NSW EPA licensed facilities. All waste loading will occur inside the warehouse. Wastes that are compliant with applicable Resource Recovery Orders and Exemptions such as mulch, aggregates, and recovered fines will be transported to customers for on-sale or reuse. Retail sale of these products will not occur on the site.

The facility will not accept hazardous, liquid, or putrescible waste. It aims to achieve a 90% recovery rate of incoming waste. A Waste Minimisation and Management Plan outlines procedures for sorting, storing, and transporting waste materials.

Approval pathway

The development is classified as designated development under the *Environmental Planning and Assessment Act 1979*, requiring an EIS. The proposal is consistent with local and state planning policies, including the *Penrith Local Environmental Plan 2010* and the *State Environmental Planning Policy (Transport and Infrastructure) 2021*.

A variation to the existing Environment Protection Licence (EPL 20975) will be required for the facility, reflecting the increased processing capacity. The proposed development complies with the *Protection of the Environment Operations Act 1999* and the accompanying regulations.

Preliminary Hazard Assessment

A Preliminary Hazard Analysis (PHA) was conducted to identify and assess potential risks associated with the proposed RRF. The PHA determined that the development is not considered a potentially hazardous industry under the *State Environmental Planning Policy (Resilience and Hazards) 2021*. However, mitigation measures have been proposed to manage any identified risks including comprehensive training programs for staff on hazard identification, risk management, and emergency response procedures and developing and implementing detailed emergency response plans to handle potential incidents effectively.

Waste Management

The facility will operate under strict guidelines to ensure compliance with the *Standards for Managing Construction Waste in NSW*. A Waste Minimisation and Management Plan has been developed, detailing procedures for waste inspection, sorting, and storage. Key aspects include implementing a two-stage inspection process to identify and remove unpermitted wastes, such as asbestos and hazardous materials and ensuring construction waste is sorted into individual waste types and stored in clearly labelled and delineated areas to prevent cross-contamination.

Fire Safety and Management

Fire safety and management is based on advice from Lethlean Fire and Environment and the Fire Incident Management Plan by Riskcon Engineering. These reports assess fire risks and propose mitigation strategies for handling combustible materials, including timber, cardboard, and plastics.

The RRF will process both non-combustible materials (concrete, bricks, steel) and combustible materials (timber, cardboard, plastics). Timber poses a moderate fire risk, with a heat of combustion of 18,000 kJ/kg, while plastics, particularly PVC, can release toxic fumes and reach burn temperatures of up to 1,200°C. The facility's overall calorific value of incoming waste is 5,325 kJ/kg, with residuals reaching 9,800 kJ/kg. The facility is classified under Ordinary Hazard 3 (OH3) for fire sprinkler design, suitable for waste handling operations. AS2118.1:2017 allows for limited storage of high-hazard materials, as long as storage limits are maintained.

Fire hazards at the RRF mainly stem from combustible material handling. Fires could spread between stockpiles if separation and containment are not maintained. However, the facility's design, including concrete barriers and separation distances, limits fire spread. The risk of toxic emissions from burning plastics is mitigated by the fire suppression system. Firewater runoff is managed by a containment system designed to capture and isolate contaminants.

Fire prevention includes a permit-to-work system for hot work and strict controls on stockpile size and separation. AS2118.1:2017 allows for the storage of up to 20 m² of combustible materials, with stockpile heights limited to 2.6m. Combustible materials will not be stored in adjacent bays. These materials will be stored at least 2.4m apart to comply with the standard and to reduce the risk of fire spread between storage bays.

Fire detection and suppression will be managed with OH3 fire sprinklers, fire hydrants, hose reels, and portable extinguishers, installed according to AS 2118.1:2017.

In the unlikely event of a fire where the sprinkler system is utilised, the facility has the capacity to contain 136 kL of firewater, which will be tested and disposed of at a licensed liquid waste facility.

Emergency response will follow a comprehensive plan ensuring fire brigade intervention within 14 minutes and coordination through an Emergency Services Information Package.

Air Quality

An Air Quality Impact Assessment report has been prepared by to assess the potential construction and operational dust and odour impacts associated with the proposed development in general accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA, 2022).

A risk-based approach was adopted to assess dust emissions from the construction of the proposed development in accordance with the Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) “Guidance on the Assessment of Dust from Demolition and Construction” (EPUK & IAQM, 2024). The assessment concluded that there would be a negligible risk of dust impacts from construction, and with the implementation of recommended mitigation measures, no significant air quality impacts are expected to occur during the construction and operation of the proposed development.

A quantitative approach was adopted to assess air quality impacts on nearby receptors during the operation of the proposed development. The results of the dispersion modelling indicate that dust concentrations due to the worst-case operation of the proposed development would comply with the established criteria at all sensitive receptors.

Therefore, there would be no adverse air quality impacts associated with the construction and operation of the proposed development.

Noise and Vibration

A noise and vibration impact assessment for the demolition, construction activities, and operational noise emissions of the proposed development was carried out in accordance with the NSW EPA's Noise Policy for Industry (2017).

The assessment identified neighbouring land use, sensitive receivers, and terrain, established the existing acoustic environment, developed project-specific acoustic criteria, and assessed the potential operational, construction noise and traffic noise associated with the proposed development.

Construction activities and associated noise emissions were assessed, showing compliance with noise limits at the nearest sensitive receivers. Although no specific mitigation is required, noise monitoring is recommended at the start of construction and in response to any legitimate complaints to ensure noise levels align with predictions. No significant vibration impacts are anticipated, so no additional mitigation is necessary.

Operational noise emissions were modelled and found to comply with project noise trigger levels (PNTLs) at all nearby sensitive receivers during daytime and shoulder periods. However, exceedances were identified at receiver R02 during evening and PM shoulder periods due to noise breakout from the open roller door of the receival warehouse area. Mitigation measures, including limiting timber mulching and truck movements during evening hours were recommended. With these measures, predicted noise levels at all receivers comply with PNTLs.

Overall, the assessment concludes that, with the recommended mitigation measures, the noise and vibration impacts from the Penrith Resource Recovery Facility will be within acceptable limits, ensuring minimal disruption to the surrounding community.

Soil and Water

A Soil and Water Impact Assessment was conducted for the proposed development. The site's stormwater quality is not expected to be significantly impacted by the increase in truck movements, as they align with typical industrial activities. Additionally, covering the waste processing areas will improve runoff quality since roof catchments are cleaner than trafficable areas. The impervious area will increase slightly, from 94% to 96%, without causing a significant change in peak flow. A 10kL rainwater tank will further reduce runoff volume by supplying non-potable water needs.

Potential stormwater contamination from tracked waste will be mitigated through:

- Maintaining clean work practices;
- Using an existing, sensor-activated wheel wash; and
- Retrofitting 200-micron proprietary litter baskets in all pits to trap pollutants.

MUSIC modelling demonstrates minor water quality improvements due to the new roof, rainwater tank, and litter baskets. Thus, the proposed development poses minimal risk to stormwater quality. Given the site's current and future impervious nature, impacts on hydrology, peak flows, soils, or groundwater are negligible.

The proposed development at Nassif Civil's RRF includes effective environmental risk mitigation strategies, ensuring improved water quality and minimal impact on stormwater, soil, and groundwater. With these measures, the expansion is unlikely to pose significant environmental risks, supporting its approval.

Traffic

A Traffic Impact Assessment has prepared for the proposed development. The assessment reviewed traffic and access impacts, road network capacity, access issues, and safety to determine future traffic generation, assess local road network impact, review access arrangements, and evaluate other transport impacts, including safety. An Operational Traffic Management Plan has been prepared and appended to the Site's Operational Environmental Management Plan.

The proposed development will generate an average of 222 truck movements per day. Employee vehicle movements will increase modestly. The impact on daily traffic flows is minimal, representing less than a 0.5% increase. Peak hour impacts are minor, with the additional truck movements having a negligible effect on intersection performance. Sidra modelling confirms the key intersection of Glossop Street and Kurrajong Road will continue to operate effectively.

The expansion will add about 102 truck movements daily, representing less than 0.5% of total daily traffic. During peak hours, the facility will generate up to 12 additional truck movements per hour. The key intersection of Glossop Street and Kurrajong Road will maintain good service levels with minimal delays and congestion. Safety impacts are minimal, and the redesigned internal layout improves road safety.

The development includes adequate on-site parking, meeting the Penrith City Council Development Control Plan (DCP) requirements.

The site has limited access to public transport, with the nearest train station 1200m away and bus stops within 500m. Although bus services are infrequent, staff will be encouraged to use public transport and car-sharing initiatives will be supported.

No road network upgrades are necessary to accommodate existing traffic flows. The current infrastructure is sufficient for both existing and projected traffic volumes. Any future traffic increases will likely extend peak periods rather than necessitate road upgrades.

The impact on the local road network is minimal, with manageable increases in traffic volumes. The key intersection will continue to operate effectively, and road safety will be maintained. Adequate parking provisions are in place, and public transport impacts are addressed. Overall, the traffic and access arrangements are satisfactory, and no further infrastructure changes are needed.

Biodiversity

An assessment of the potential impacts on biodiversity was conducted, considering the existing environment and the proposed development. The site is located in an industrial area with limited natural habitat. The development will not

result in significant loss of vegetation or impact on local wildlife. Implementing a landscape plan that includes the planting of native species will support local biodiversity and create green spaces within the industrial area.

Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Impact Assessment was carried out to identify any cultural heritage sites or artifacts within the proposed development area. The assessment found no significant Aboriginal heritage sites on the property. However, procedures will be in place to manage any unexpected discoveries during construction, including implementing a stop work protocol in the event of an unexpected discovery of cultural heritage items and notifying relevant authorities and Aboriginal stakeholders if any cultural heritage items are found.

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1. Introduction

1.1. Project overview

Nassif Civil proposes to operate a best practice construction and demolition (C&D) Resource Recovery Facility (RRF) at 29-37 Plasser Crescent North St Marys (Lots 15 & 16 DP263353). The lots, including the stormwater easement to the rear of Lot 15, will be consolidated. The RRF will have an annual waste throughput of up to 99,000 tonnes per annum. Waste received at the RRF will consist of construction and demolition waste in skip bin collected from the Greater Metropolitan region.

To ensure that the development complies with contemporary standards for waste and transfer stations, a number of site upgrades are proposed as part of the development application. These include:

- Partial demolition of the existing structure on Lot 15, DP263353;
- Construction of a new shed on Lot 15, DP263353;
- Installation of an additional 20 m pit style weighbridge inside the site entrance of Lot 15, DP263353;
- Installation of processing equipment, including:
 - A vibratory finger screen;
 - Two elevated manual picking stations;
 - Density separator;
 - Magnetic separator; and
 - Timber shredder.
- Installation of conveyor belts to transfer materials between sorting equipment and storage bays;
- Conveyor belts will traverse both indoors and outdoors, and where outdoors, conveyors will be enclosed to avoid dust generation and reduce noise levels;
- Separate waste storage bays to separate and store sorted waste prior to being loaded onto trucks for off-site recycling and reuse;
- Upgrades to site office, lunchroom, and amenities for staff, truck drivers and visitors; and
- Improvements to landscaping provided to the site.

Nassif Civil proposes to operate the facility for 6am - 11pm Monday to Friday, and 7am - 3pm Saturday. There are no proposed operations on Sundays or public holidays.

Waste will be received in skip bins collected by Nassif Civil and other collection contractors servicing building sites. The general community will not have access to the Site and the facility will not accept waste from the public.

Skip bin deliveries will be scheduled throughout the day between 6am and 11pm (Monday to Friday), and 7am to 2pm on Saturdays.

No timber mulching is to occur after 6pm on weekdays and no truck movements are to occur after 10pm of weekdays.

Bulk load out of processed waste materials will regularly during the week as bays / bins fill up and required off-site recovery or disposal. Bulk loadout of processed waste will be scheduled around collection runs to avoid congestion on site.

All waste receipt and processing will occur inside the warehouse. There will be no outdoor storage of waste.

1.2. Applicant details

The applicant is Nassif Civil Pty Ltd, a family owned and operated Demolition and Excavation Company who also offer skip bin hire services. Nassif Civil has over 30 years of experience in the Greater Sydney region, striving to provide excellence, safety and sustainability in all the services they offer.

Table 1.1 provides contact details for the proponent.

Table 1.1. Nassif Civil Pty Ltd contact information.

Company	Nassif Civil Pty Ltd
Contact	Raymond Bowdens
Postal Address	PO BOX 201 Round Corner NSW 2158
Phone	(02) 8381 1260
Email	raymond@bowdens.com.au
ABN	76 152 049 299

The Site is owned by J & M Nassif Property Group Pty Ltd. A letter of owner's consent is provided in Appendix Z.

1.3. Key features of the site and surrounds

Nassif Civil propose to operate the best practice RRF within the existing warehouse buildings located over two lots at 29-37 Plasser Crescent, North St Marys (Lots 15&16 DP 263353).

The proposed development site is located in the E4 General Industrial zoned area of St Marys within the Penrith City Council region. The site is easily accessible from the Kurrajong Road to the North and Glossop Street to the West. The site is in the vicinity of a Low-Density Residential Zone to the North and Medium Density Residential Zone to the South. St Marys Public school is located at approximately 700 m north-west of the site. The site is accessed by trucks via Kurrajong Road and Glossop Street, connecting the site to Great Western Highway.

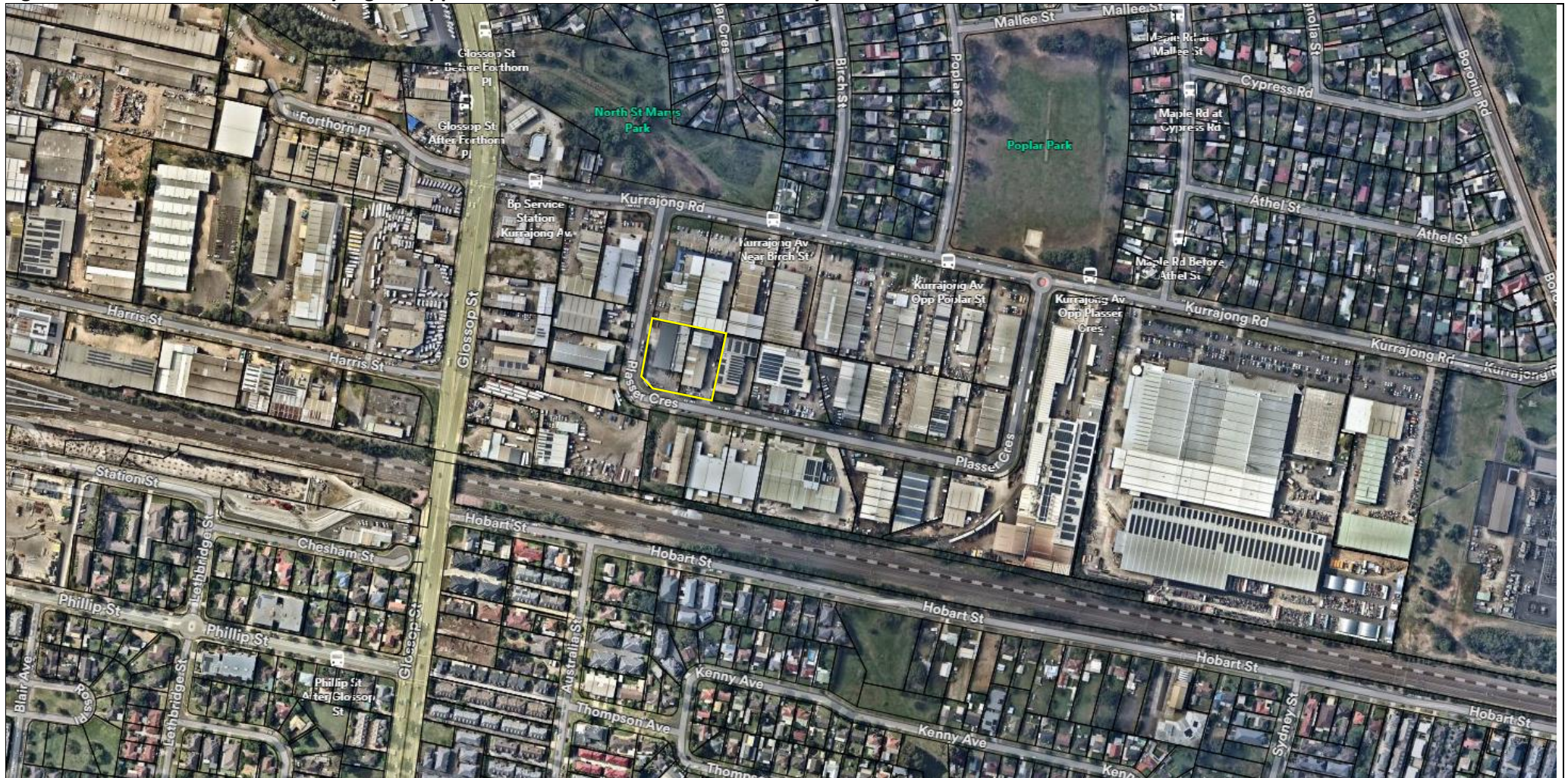
The total site area of the combines lots is 4296m², with Lot 15 making up approximately 2016m² and Lot 16 making up 2280m². Each lot has a shed with office facilities, bin storage areas, car parking area and truck parking area.

Concrete hardstand surrounds the sheds with some gravel areas and limited landscaping along the western fence line. A fence also borders the south and west site boundaries whilst buildings form the northern and eastern boundaries. A stormwater network consisting of down pipes, pits covered with grate filters and non-woven geotextile membrane and underground piping is connected to municipal stormwater network.

Additionally, 33-37 Plasser Crescent has a weighbridge and wheel wash system installed on-site for the existing operations of a 30,000 tonne/year RRF.

The aerial view of the site location and surrounding area is shown in Figure 1.1. An aerial view of the site is shown in Figure 1.2. The Penrith City Council's *Local Environment Plan* (LEP) zones are shown in Figure 1.3.

Figure 1.1. Aerial view of the nearby region. Approximate site boundaries are shown in yellow.



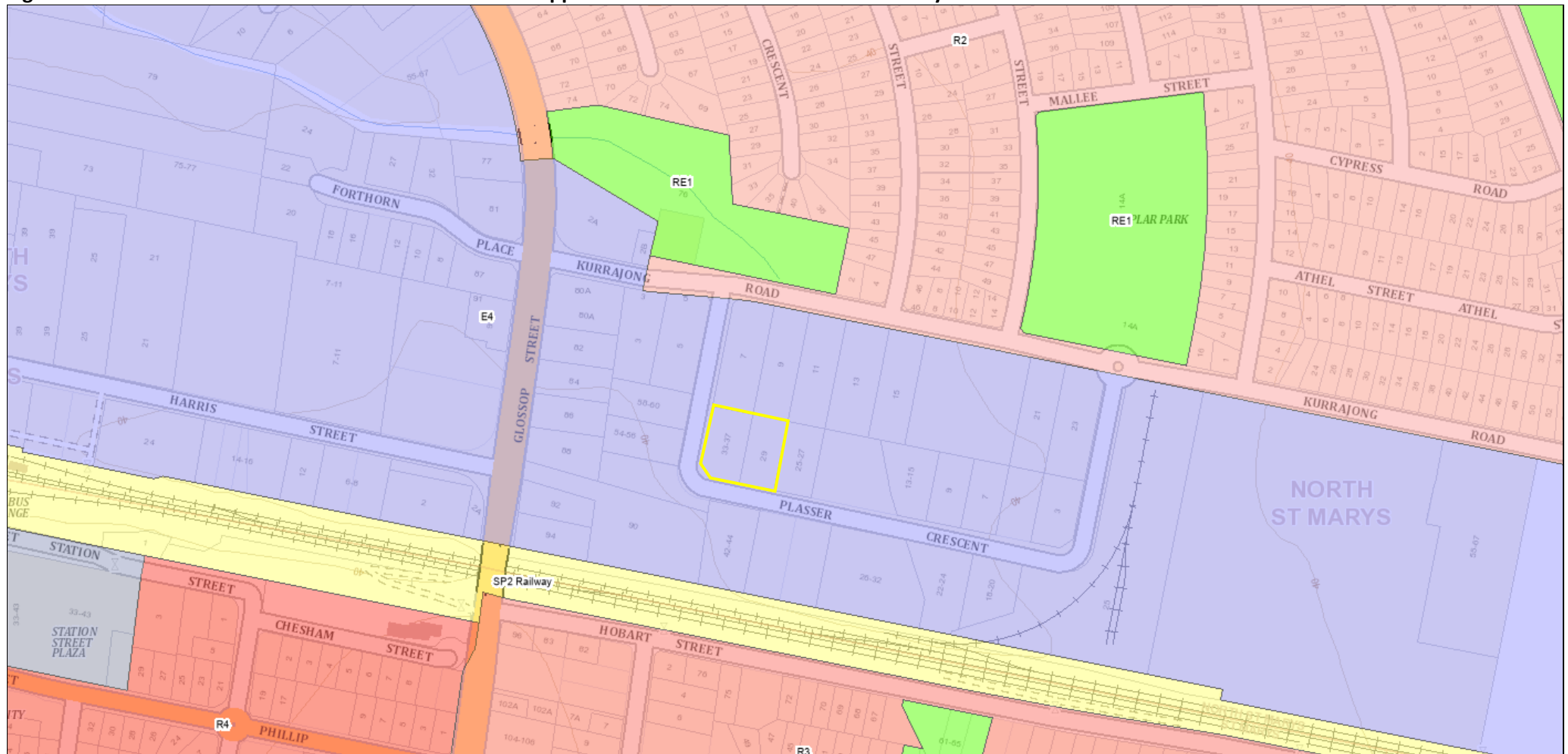
Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	 JACKSON ENVIRONMENT AND PLANNING STRATEGY INFRASTRUCTURE COMPLIANCE PROCUREMENT	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser			Project	C&D Resource Recovery Facility
			Crescent, North St			Title	Aerial photo of site – region
			Marys (Lots 15 &			Scale	Not to Scale
			16 DP 263353)			Source	Nearmap

Figure 1.2. Aerial view of the site. Approximate site boundaries are shown in yellow.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser	Strategy Infrastructure Compliance Procurement	JACKSON ENVIRONMENT AND PLANNING STRATEGY INFRASTRUCTURE COMPLIANCE PROCUREMENT	Project	C&D Resource Recovery Facility
			Crescent, North St	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060		Title	Aerial photo of site
			Marys (Lots 15 &	E: admin@jacksonenvironment.com.au		Scale	Not to Scale
			16 DP 263353)	T: 02 8056 1849		Source	Nearmap
				W: http://www.jacksonenvironment.com.au			

Figure 1.3. Aerial view of the site with Penrith LEP zones. Approximate site boundaries are shown in yellow.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	ENVIRONMENT AND PLANNING STRATEGY INFRASTRUCTURE COMPLIANCE PROCUREMENT	Project	C&D Resource Recovery Facility
						Title	Aerial photo of site
						Scale	Not to Scale
						Source	E-spatial Viewer, DoP

1.4. Site history and existing approvals

Table 1.2 summarises the development consents for 33-37 Plasser Crescent (Lot 16/DP263353). Development Consent (DA10/1166) was obtained for the sorting of waste and waste transfer/recyclables distribution at the Site in April 2011 from the Penrith City Council. At the time, A&C Recycling Services and A&C Bins owned and operated the facility.

In 2016 Macleans Waste Management purchased the property as well as the waste recycling facility and operations.

The property was purchased by Nassif Civil in August 2021.

Table 1.2. Development consents granted for 33-37 Plasser Crescent St Marys (Lot 16/DP263353)

Issue Date	Consent Number	Description
21/04/2011	DA10/1166	Skip Bin Business - Sorting of Waste and Waste Transfer/Recyclables Distribution
10/08/2011	DA10/1166.01	Amend Condition 8 & Remove Conditions 9 & 10 from DA10/1166
08/05/2018	DA 17/1089	Alterations and Additions to an Existing Waste Recycling Facility
11/02/2019	DA 17/1089.01	Modification to increase quantity of waste received and replace mechanical sorting line with excavator

Table 1.3 summarises the development consents for 29-31 Plasser Crescent (Lot 15/DP263353). The lot was most recently used as a dry cement plant.

Table 1.3 Development consents granted for 29-31 Plasser Crescent, St Marys (Lot 15 DP 263353).

Issue Date	Consent Number	Description
08/08/2012	DA/0489	Additions to Existing & Use of Building for Dry Cement Plant

1.5. Development required subject to separate assessment

No additional development subject to a separate approvals process is required for the proposed development.

An application for an Environment Protection Licence (EPL 20975) will be prepared for the facility on the consolidated lot following development approval, and prior to commencement of waste storage and resource recovery activities.

1.6. Description of restrictions or covenants on the Site

No restrictions, and covenants affect the site. A stormwater easement is located on the north side of Lot 15 that accepts water only from Lot 16 (refer to Figure 1.4 and Appendix AC). As part of the development, it is proposed that the lots be consolidated, and the stormwater easement be removed. Nassif Civil has consulted both PCC (refer to Appendix AD) and a Sydney Water Coordinator to confirm that removal of the easement is feasible.

The Section 10.7 Planning Certificates for each lot are contained in Appendix AE.

A Site Survey is provided in Appendix B. Architectural plans are provided in Appendix C.

Figure 1.4. Stormwater easement to be removed following consolidated of Lots 15 and 16.



1.7. Secretary's Environmental Assessment Requirements

In April 2022, a Scoping Report was prepared by Jackson Environment and Planning to inform Penrith City Council of the proposed development, along with a pre-lodgement meeting, and request Secretary's Environmental Assessment Requirements (SEARs). Penrith City Council issued pre-lodgement advice provided on 1 July 2022 (refer to Appendix C).

The SEARs (1694) on 4 July 2022 by Mr Chris Ritchie, Director, Industry Assessments as a delegate of the Secretary of the former Department of Planning and Environment (the Department) consulted with the NSW Environment Protection Authority (EPA) and Transport for NSW (TfNSW). The requirements of the NSW EPA and TfNSW were provided with the SEARs (refer to Appendix E).

In the 2022 Scoping Report, it was advised that the facility would have a processing capacity of up to 60,000 tonnes per annum of waste. For operational purposes, Nassif Civil decided to increase the processing capacity to 99,000 tonnes per annum of waste.

On 15 April 2024, a letter was prepared for the now Department of Planning, Housing and Infrastructure (DPHI) to inform the Department that Nassif Civil intended to receive up to 99,000 tonnes per annum of waste rather than the 60,000, in addition to seeking an extension to the SEARs deadline (refer to Appendix F). It was noted in the letter that the 2022 Scoping Report was adequate, and it was anticipated that no additional impacts beyond those identified in the Scoping Report would result from the processing capacity increasing to 99,000 tonnes per annum. An updated plan set, and project description were provided with the letter.

On 18 June 2024, the Department issued a letter granting a two-year extension to the SEARs. The department considered that the SEARs issued in July 2022 continues to remain relevant to the revised proposal (refer to Appendix G). The Department also provided the NSW EPA and TfNSW with an opportunity to provide further comment on the updated project description.

The NSW EPA considered the proposed increase in processing capacity and reviewed the information provided. Based on the review, the NSW EPA considered the previous advice dated 21 June 2022 (EPA Reference number DOC22/454078-3) continues to remain applicable in relation to the requirements for an Environmental Impact Statement and did not seek additional requirements in response to the proposed increase in throughput.

TfNSW advised that its response dated 20 June 2022 is withdrawn and to be replaced by a new response. The response was attached to the letter provided by the department.

In addition, during the consultation phase of this project (refer to Section 5), Penrith City Council was contacted via letter (dated 5 June 2024) to provide Council with the opportunity to provide additional feedback not already provided in the pre-lodgement advice provided on 1 July 2022. In a letter dated 19 June 2024, Penrith City Council provided additional comments relevant for the preparation of the development application submission (refer to Appendix H).

The relevant agencies comments and requirements have been considered and addressed throughout this EIS. The specific requirements and sections where these requirements have been met are summarised in Appendix A, in the following tables for each respective agency:

- Table A1 - Planning Secretary's Environmental Assessment Requirements (SEAR) 1694
- Table A2 - Transport for NSW
- Table A3 - NSW EPA
- Table A4 - Penrith City Council
- Table A5 - Penrith City Council - Response to Amended Scope post SEARS

2. Strategic Context

This section provides a justification of the proposed development with regards to relevant government strategies, policies, and plans; the regional and local land use planning context; the suitability of the Site and an analysis of alternatives. The strategic context also considers key risks or hazards for the proposed development and whether the project is likely to generate cumulative impacts with other developments in the area.

2.1. Government strategies, policies or plans

Table 2.1 provides an overview of government strategies, policies and plans currently in action that provide strategic support for the proposed development.

Table 2.1. Overview of relevant government strategies, policies and plans that provide strategic support for the proposed development.

Government Strategies, Policies or Plans	Comment
<i>National Waste Policy Action Plan 2019</i>	The <i>National Waste Policy Action Plan</i> sets out the targets and actions to be implemented to guide investment and national action on waste management, recycling and resource recovery to 2030. The Action Plan aims to reduce total waste generation, increase average resource recovery rates across all streams, increase the use of recycled content, and tackle problematic waste streams. The proposed development aligns with the intent of the Action Plan as it will assist in improving recycling rates and the recovery of important and valuable materials (e.g., metals).
<i>NSW Waste and Sustainable Materials Strategy 2041</i>	The NSW Waste and Sustainable Materials Strategy 2041 is aligned with the <i>National Waste Policy Action Plan</i> and outlines the actions to be taken over the next few years to begin the transition to a circular economy within NSW. Whilst this Strategy targets high-volume and problematic waste streams, such as organic waste and single-use plastics, a major target of the Strategy is to achieve an 80% recovery rate from all waste streams by 2030. The Proposed Development will commit to environmental sustainability, waste avoidance and reduction practices. The Proposed Development contributes to increasing and expanding waste and resource recovery infrastructure in the western Sydney region, to help meet the waste targets under the NSW Waste and Sustainable Materials Strategy 2041.
<i>NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs</i>	The NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs outlines the emerging needs in NSW's waste and circular economy infrastructure network. The needs have been grouped by material types with a focus on materials commonly found in municipal solid waste (MSW) and commercial and industrial (C&I) waste streams. Significant gaps exist in our system for the reprocessing of some of these materials that have historically been exported for processing. Nassif is investing more than \$3 million into the NSW economy to develop the facility, helping to create new jobs, economic activity and supporting local communities.
<i>NSW Circular Economy Policy Statement</i>	The proposed development is an example of the circular economy in action focusing on the recovery of valuable resources with a broad range of opportunities for reuse. The Proposed Development is an example of the circular economy in action focusing on the sorting of mixed waste to be further recovered and used in manufacturing, creating jobs, reducing the demand for virgin metals from mining and reducing the life cycle impacts of waste on the environment.

2.2. Existing and continuing use rights / agreements

The proposed development will not rely on any existing use rights for the land.

2.3. Justification and analysis of site suitability

Table 2.2 provides an analysis of the suitability of the Site for the proposed development and provides justification for the Site selection. As the environmental assessment of the proposed development has confirmed that any potential impacts to the environment and human health can be adequately mitigated, no other sites were considered for the proposed development.

Table 2.2. Suitability of the Site to accommodate the proposed development.

Consideration	Justification and Alternative Options
Site and site layout	The Site is an existing, developed property within an established industrial precinct that is separated from residential land uses. Partial demolition of the existing structure on Lot 15, DP263353 are required to accommodate upgrades to the site office, lunchroom, and amenities for staff, truck drivers and visitors. A new shed will also be constructed on Lot 15, DP263353 to accommodate indoor processing of wastes. The sheds on Lot 16 and Lot 15 will be interconnected to allow movement between the lots.
Access modes and routes	Plasser Crescent provides access to the subject site and the adjacent light industrial area. It runs in a semicircular pattern, connecting with Kurrajong Road at both ends. It provides a single lane of travel in both directions and Provides for kerb side parking to both sides. Plasser Crescent operates Under the posted speed limit of 50 km/h. It intersects with Kurrajong Road via simple give way control with Kurrajong Road being the priority road. Kurrajong Road connects with Glossop Street via a 4-way signal-controlled intersection. The major road through the immediate locality is Glossop Street which runs in a predominantly north-south direction to the west of the subject site. It provides an important road link through the locality, providing a connection between the Great Western Highway to the south (approximately 1.3 kms from site) and the increasing development to the north in St Marys and Marsden Park. Glossop Street forms part of the regional road network.
Materials handling and production processes	The facility will include a fully enclosed and integrated Resource Recovery Facility utilising best practice resource recovery equipment.
Waste and water management	The proposed development is expected to achieve a recovery rate of 90% of incoming waste. The proposed development has no water requirements beyond normal staff usage (i.e., kitchen and bathroom facilities) and domestic cleaning.
Impact mitigation measures	Refer to Section 17 for a summary of measures to mitigate any perceived off-site environmental impacts.
Energy sources	The Site can cater to the relatively small energy needs of the proposed development without the need for any alterations or upgrades.

2.4. Cumulative impacts with other development in the area

A review of the NSW Planning Portal application tracker identified one State Significant Development within the vicinity of the proposed development, being the ReDirect Resource Recovery Facility St Marys (SSD-15605372) which is located at 65-73 Dunheved Circuit, St Marys. The development is currently in the EIS preparation stage. This development is located within 5km of the proposed development.

Other State Significant Developments within the vicinity of the proposed development, which have been approved, include:

- St Marys Waste Facility (SSD-8200) – 21 and 25 Dunheved Circuit, St Marys – Approved November 2018
- St Marys Resource Recovery Facility (SSD-10474) – 25 Dunheved Circuit, St Marys – Approved September 2021
- Penrith Waste Recycling and Transfer Facility (SSD-7733) – 46-48 Peachtree Road, Penrith – Approved May 2020.

Whilst the surrounding area contains extensive industrial development, the majority of operations are conducted indoors within a range of warehouse units.

Given the low risk of impacts associated with the proposed development no cumulative impacts are predicted to occur.

3. Description of the Proposed Development

Nassif Civil proposes to operate a best practice construction and demolition (C&D) Resource Recovery Facility (RRF) at 29-37 Plasser Crescent North St Marys (Lots 15 & 16 DP263353). The RRF will have an annual waste throughput of up to 99,000 tonnes per annum. Waste received at the RRF will consist of construction and demolition waste in skip bin collects from the Greater Metropolitan region. Waste will be received in skip bins collected by Nassif Civil and other collection contractors servicing building sites. The general community will not have access to the Site and the facility will not accept waste from the public.

To ensure that the development complies with contemporary standards for waste and transfer stations, a number of site upgrades are proposed as part of the development application. These include:

- Partial demolition of the existing structure on Lot 15, DP263353;
- Construction of a new shed on Lot 15, DP263353;
- Installation of an additional 20 m pit style weighbridge inside the site entrance of Lot 15, DP263353;
- Removal of the office and amenities fit out within the shed on Lot 16;
- Installation of processing equipment, including:
 - A vibratory finger screen;
 - Two elevated manual picking stations;
 - Density separator;
 - Magnetic separator; and
 - Timber shredder.
- Installation of conveyor belts to transfer materials between sorting equipment and storage bays;
- Conveyor belts will traverse both indoors and outdoors, and where outdoors, conveyors will be enclosed to avoid dust generation and reduce noise levels;
- Separate waste storage bays to separate and store sorted waste prior to being loaded onto trucks for off-site recycling and reuse;
- Upgrades to site office, lunchroom, and amenities for staff, truck drivers and visitors; and
- Improvements to landscaping provided to the site.

All waste receipt and processing will occur inside the warehouse. There will be no outdoor storage of waste.

Site plans including internal and external are provided in Figure 2.1 and Figure 2.2 respectively. Elevation plans of the Site are provided in Figure 2.3.

Architectural plans are provided in Appendix C.

3.1. Operational hours

Nassif Civil proposes to operate the facility for 6am - 11pm Monday to Friday, and 7am - 3pm Saturday. There are no proposed operations on Sundays or public holidays.

Skip bin deliveries will be scheduled throughout the day between 6am and 10pm (Monday to Friday), and 7am to 2pm on Saturdays.

No timber mulching is to occur after 6pm on weekdays and no truck movements are to occur after 10pm of weekdays.

Bulk load out of processed waste materials will be made regularly during the week as bays / bins fill up and required off-site recovery or disposal. Bulk loadout of processed waste will be scheduled around collection runs to avoid congestion on site.

Figure 3.1. Proposed site layout (external).



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Site layout (external)
				Source	Nassif Civil Pty Ltd

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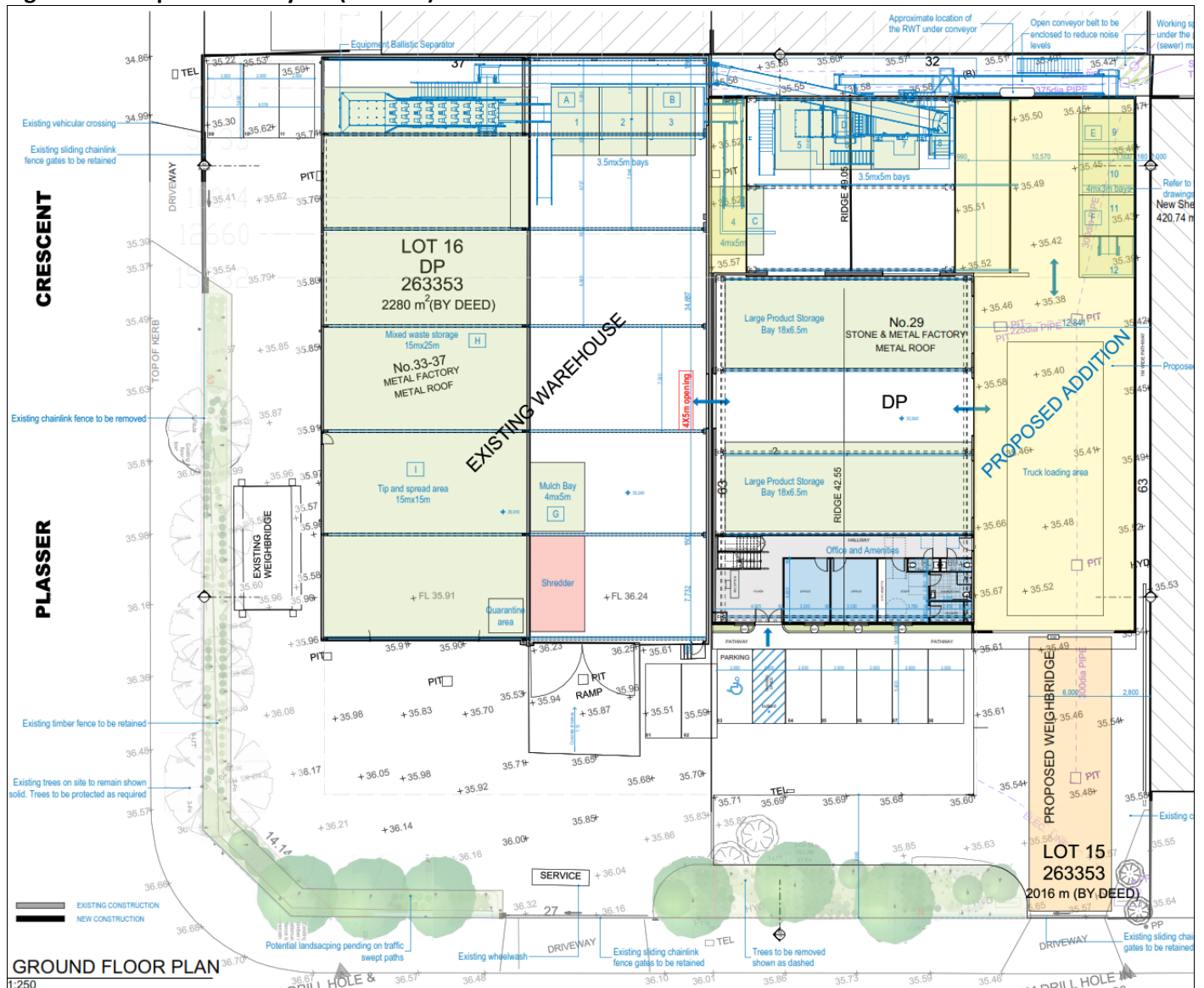
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Figure 3.2. Proposed site layout (internal).



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St	Project	C&D Resource Recovery Facility
			Marys (Lots 15 & 16 DP 263353)	Title	Site layout (internal)
				Source	Nassif Civil Pty Ltd

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Figure 3.3. Elevation plans.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd
24/07/24	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au

Client	Nassif Civil Pty Ltd
Project	C&D Resource Recovery Facility
Title	Aerial photo of site – region
Scale	Not to Scale
Source	Nassif Civil Pty Ltd

3.2. Operations

3.2.1. Waste deliveries

Waste deliveries will occur via skip bins delivered on 12.5m rigid trucks or hook lift trucks. Skip bin sizes will vary between 2m³ and 12m³ and hook lift bins between 15m³ and 30m³.

Vehicles will access the Site via Plasser Crescent on the western side of the existing building on Lot 16 DP263353. All trucks accessing the site do so via the traffic signal-controlled intersection of Glossop Street and Kurrajong Road. Therefore, vehicles will enter Plasser Crescent from the western intersection of Plasser Crescent and Kurrajong Road.

Vehicles will pass over the delivery weighbridge for inspection of non-compliant waste and for assessing the net weight of materials before reversing into the warehouse via the western roller door for tipping of waste.

3.2.2. Waste tipping, spreading and inspection

Once inside the warehouse, vehicles will be directed to the dedicated “tip and spread area” and inspected for non-compliant waste in accordance with the *Standards For Managing Construction Waste In NSW* (NSW EPA, 2019).

Rejected waste will be re-loaded for off-site transport and disposal at an appropriate licensed facility.

Upon tipping of waste (or in the case of rejected load – after being re-loaded), vehicles will exit the warehouse and exit the site in a forward direction using the western driveway on the south side of the of the existing building on Lot 16 DP263353. Vehicles exiting the Site will turn right on to Plasser Crescent.

The waste will be received mixed (unsorted). The waste will include the following:

- Concrete, brick and tile;
- Clean timber;
- Engineered/treated timber;
- Ferrous metals;
- Stainless steel;
- Aluminium;
- Copper;
- Plasterboard;
- Recovered fines (as GSW CT1); and
- Residual waste.

Residual waste consists primarily of plastic (4%), plasterboard/Hebel (40%); engineered/non-recyclable timber (30%); cement/grout (10%); and small portions of other various non-recoverable materials such as steel/greens/cardboard/carpets.

The following wastes will not be accepted at the RRF:

- Special waste;
- Liquid waste;
- Hazardous waste;
- Restricted solid waste; and
- General solid waste (putrescible).

The waste types and quantities to be received at the facility are summarised in Table 3.1.

Table 3.1. Waste types and quantities to be received at the facility.

Bay	Materials	Waste Composition (% by weight)	Annual Incoming Weight (tonnes)	Annual Outgoing Recovered Product (tonnes)	Annual Outgoing Residual Waste (tonnes)
1	Cardboard	4%	3,960	3,960	
2	Gyproc, metal and/or other 2D	5%	4,950	4,950	
3	Timber (2D)	5%	4,950	4,950	
4	Residual Waste (2D)	5%	4,950	-	4,950
5	0-10mm fines	20%	19,800	19,800	
6	10-50mm lights	10%	9,900	9,900	
7	10-50mm heavies	15%	14,850	14,850	
8	Ferrous metals	5%	4,950	4,950	
9	Timber (3D) >50mm	5%	4,950	4,950	
10	CBT >50mm'	20%	19,800	19,800	
11	Residual Waste (3D)	5%	4,950	-	4,950
12	Non-ferrous metal	1%	990	990	
Totals		100%	99,000	89,100	9,900

3.2.3. Waste processing

Accepted waste will be stored in the mixed waste storage bay. This bay is used for the temporary storage of waste materials requiring further sorting and to ensure the “tip and spread area” remains clear for the next waste deliveries. An excavator will load waste into a feed hopper before entering a vibratory finger screen.

The vibratory finger screen will separate the 2-dimensional wastes (flat waste) from the 3-dimensional wastes (bulky waste). Separated 2D waste will then be conveyed to a picking station elevated above designated storage bays. 2D waste will be manually separated and stored as follows:

- Bay 1 - Cardboard;
- Bay 2 - Other recovered materials such as gyprock and metals (ferrous and non-ferrous) as required;
- Bay 3 - Timber; and
- Bay 4 - Residual waste

3D waste from the finger screen will be conveyed to a density separator. The 3D conveyor will traverse from the existing building on Lot 16 DP263353 to the new shed on Lot 15 DP263353. The conveyor will be enclosed where it traverses externally between the buildings to mitigate noise and dust issues. The 3D waste will then be sorted by an elevated density separator with storage bays beneath. The elevated density separator will size separate materials and deposit in the corresponding storage bays as follows:

- Bay 5 - <10mm (recovered fines)
- Bay 6 - 10-50mm (lights)
- Bay 7 - 10-50mm (heavies)

Oversized materials (>50mm) which will predominantly include timber, masonry (concrete, brick and tile) and metals will then be conveyed to a second elevated picking station. The oversized materials conveyor will be enclosed where it traverses along the external back side of the new shed on Lot 15 DP263353 to mitigate noise and dust issues. The oversized materials conveyor will also contain a magnet to separate ferrous materials from the oversized portion. These ferrous materials will be stored in Bay 8 which is a 25m³ skip bin.

Within the picking station, oversized materials will be manually separated and stored as follows:

- Bay 9 - Timber;
- Bay 10 - Concrete, brick and tile;
- Bay 11 - Residual waste; and
- Bay 12 - Other recovered material waste such as metals (non-ferrous) or rigid plastics as required.

Clean, separated timber stored in Bay 3 and 9 may be further processed into mulch using a shredder within the existing building on Lot 15 DP263353 and stored in the designated mulch bay. An articulated loader will be used to transfer materials between the designated bays and will also be used for loading trucks with outgoing products and residual waste.

Separated waste materials are stored in the designated storage bays within the warehouse as shown in Figure 3.4.

3.2.1. Waste storage

Sorted waste / products will be stored in temporary bays throughout the RRF. When the bays are full, the bays will be emptied using an articulated loader. Two “large product storage bays” (each approximately 414 m³) will be utilised for storing waste / product as required so that designated bays retain sufficient capacity. Dividing walls may be used to separate different material types within these bays. The “large product storage bays” may also be used for temporarily storing product prior to loading out however, these bays will not be used for the storage of high hazard wastes such as plastic.

There are multiple storage bays located within the Facility as shown in Figure 2.4. Table 2.1 summarises the storage bin / bay sizes for the individually sorted waste types. Table 2.1 also provides a summary of the available storage for each sorted waste stream (not including large product storage bays). However sorted and recoverable wastes will be collected daily to manage the quantity of waste stored on the Site.

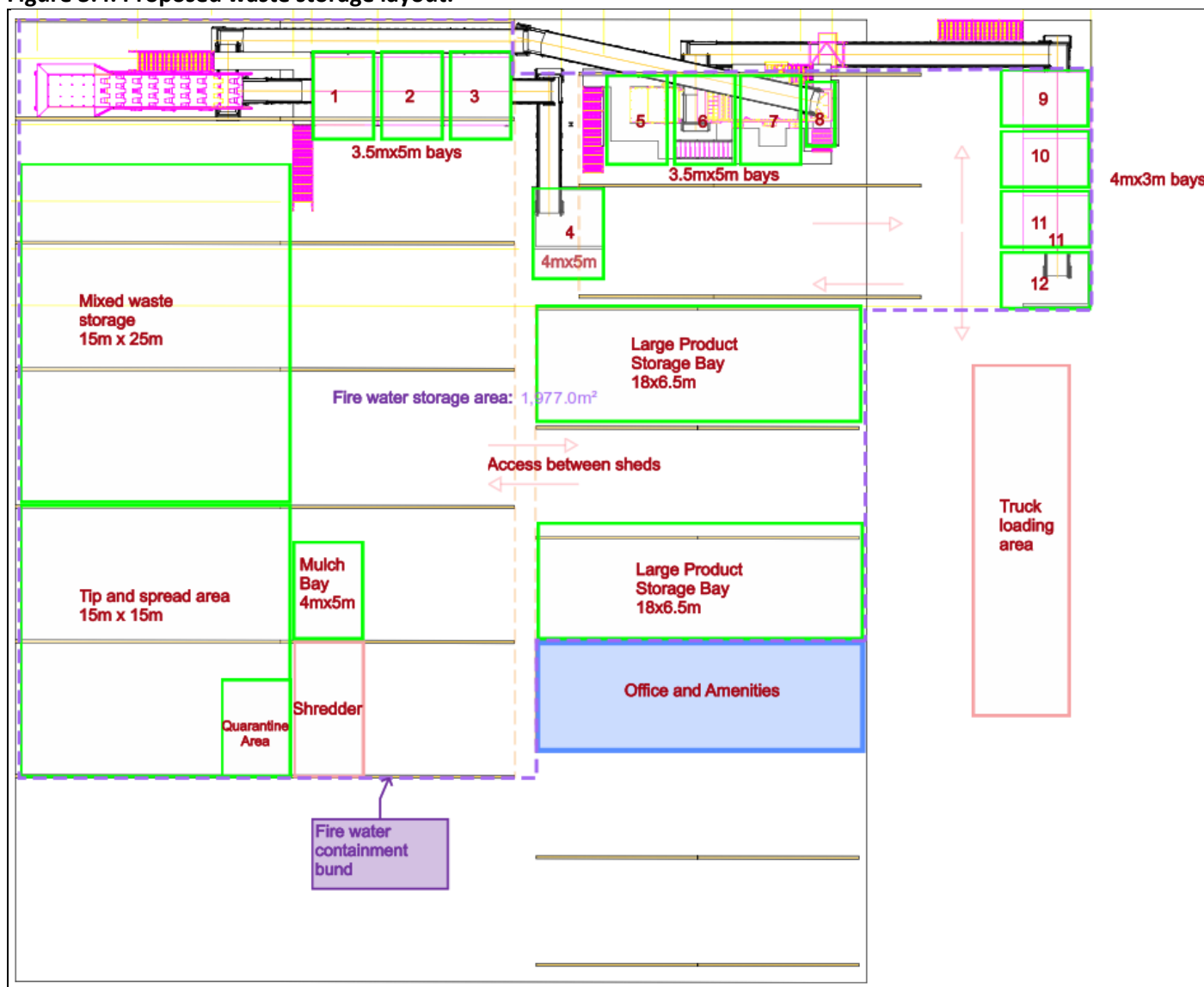
The facility will include a fully enclosed and integrated Resource Recovery Facility with a proposed maximum processing capacity of 99,000 tonnes per annum for processing principally construction and demolition waste materials.

An assessment of the storage capacity of the site based on designated areas for waste receipt, sorting, storage and manufactured products found that the facility can safely store, in separate designated areas, up to a total of 935 tonnes of waste and processed products at any one point in time (refer to Table 3.2).

Sorted materials and residual waste will be transported off-site daily during operational hours, with loads removed when a sufficient volume has accumulated to maximise transport efficiency.

A Waste Minimisation and Management Plan was prepared by Jackson Environment and Planning Pty Ltd. A brief summary of the plan is provided in Section 7. The full Waste Management Plan is provided as Appendix M.

Figure 3.4. Proposed waste storage layout.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Waste storage layout
				Source	Nassif Civil Pty Ltd

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Table 3.2. Waste types, quantities and volumes to be stored within the RRF.

Bay	Materials	Storage Capacity (tonnes)
1	Cardboard	26.9
2	Gyproc, metal and/or other 2D	33.6
3	Timber (2D)	37.0
4	Residual Waste (2D)	26.9
5	0-10mm fines	63.0
6	10-50mm lights	50.5
7	10-50mm heavies	50.4
8	Ferrous metals	27.5
9	Timber (3D) >50mm	23.2
10	CBT >50mm'	28.8
11	Residual Waste (3D)	14.7
12	Non-ferrous metal or rigid plastic	26.4
13	Large product storage bay (fines)	351
14	Large product storage bay (3D)	163.8
Mulch Bay	Clean Timber - Shredded	11.5
Total		935

3.2.2. Sorted waste collection

Sorted waste for further off-site processing / recovery will be collected regularly in 19m semi-trailers on a daily basis for lawful recovery / disposal at other NSW EPA licensed facilities. All waste loading will occur inside the warehouse within the “truck loading area”. Wastes that are compliant with applicable Resource Recovery Orders and Exemptions such as mulch, aggregates, and recovered fines will be transported to customers for on-sale or reuse. Retail sale of these products will not occur on the site.

Vehicles collecting sorted waste will access the Site via the eastern driveway on Plasser Crescent on the south side of the new shed on Lot 15 DP263353. All trucks accessing the site do so via the traffic signal-controlled intersection of Glossop Street and Kurrajong Road. Therefore, vehicles will enter Plasser Crescent from the western intersection of Plasser Crescent and Kurrajong Road.

Vehicles will reverse into the warehouse via the eastern roller door for loading of waste / products. After loading, vehicles will pass over the weighbridge for assessing net weight.

Upon being loaded with waste, vehicles will exit the warehouse through the eastern roller door in the forward direction and return to the weighbridge. Following weighing, vehicles will exit the Site in the forward direction and turn right on to Plasser Crescent.

3.3. Waste materials not accepted

The following materials will not be accepted:

- Special waste (incl. asbestos);
- Liquid waste;
- Hazardous waste;
- Restricted solid waste; and
- General solid waste (putrescible).

3.4. Staff

Up to 14 operations staff will be present on-site at any given time including administration staff, waste handling operators and truck drivers.

Approximately 15 jobs (approximately 5 jobs per \$1M) will be created during the construction works of over a 3–6-month period.

3.5. Traffic

The proposed development will result in an average of 222 truck movements (111 inbound and 111 outbound) per day from Monday to Friday (6 am - 11 pm) and 142 truck movements (71 inbound and 71 outbound) per day on Saturdays.

Incoming waste, delivered in skip bins on 12.5m heavy rigid vehicles, will account for an average of 196 truck movements (98 inbound and 98 outbound) per day on weekdays and 126 truck movements (63 inbound and 63 outbound) on Saturdays.

Waste sorted for off-site processing will be collected daily in 19m semi-trailers, accounting for an average of 26 truck movements (13 inbound and 13 outbound) per day on weekdays and 20 truck movements (10 inbound and 10 outbound) on Saturdays.

Up to 24 employee vehicles may access the site daily across two shifts, with 4 additional staff during the day and 2 during the evening shift.

4. Planning and Legislation Requirements

4.1. Approval pathway

Under the *Penrith Local Environmental Plan 2010* (Penrith LEP), a 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—

The site is located on land zoned E4 (General Industrial). Resource recovery facilities are a prohibited form of development on land zoned E4 (General Industrial) under the Penrith LEP as they are not specified as ‘permitted with consent’. However, *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Infrastructure SEPP) prevails over another environmental planning instrument where there is an inconsistency.

Subsequently, Clause 2.153(1) of the Infrastructure SEPP states:

Development for the purpose of waste or resource management facilities, other than development referred to in subsection (2), may be carried out by any person with consent on land in a prescribed zone.

Under the Infrastructure SEPP land zoned E4 (General Industrial) is a prescribed zone.

Therefore, for the purpose of developing a resource recovery facility on the Site, the proposed development is permitted under the Infrastructure SEPP.

4.2. Licenses and permits required

Clause 34, Schedule 1 of the POEO Act details “Resource Recovery” as a scheduled activity. Recovery of general waste means the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing, otherwise than for the recovery of energy.

A Resource Recovery activity is declared to be a scheduled activity if it meets the following criteria:

“...if the premises are in the regulated area—

- (a) involves having on site at any time more than 1,000 tonnes or 1,000 cubic metres of waste, or*
- (b) involves processing more than 6,000 tonnes of waste per year.*

The site is located in the regulated area and the proposed development will receive and store more than 6,000 tonnes of waste per year. The proposed development will also store waste in amounts that are declared to be a scheduled activity under Clause 42(3)(c), Schedule 1 of the POEO Act.

An application for an Environment Protection Licence (EPL 20975) will be prepared for the facility on the consolidated lot following development approval, and prior to commencement of waste storage and resource recovery activities.

4.3. Commonwealth policy and legislation

The proposed development does not trigger the provisions of any Commonwealth legislation.

4.4. NSW statutory policy and legislation

4.4.1. *Environmental Planning and Assessment Act 1979*

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and the accompanying *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) provide the framework for planning in NSW and include provisions to ensure that proposals which have the potential to impact the environment are subject to detailed assessment, and to provide opportunity for public involvement.

As per Clause 4.12(8) of the EP&A Act, the proposed development must be accompanied by an environmental impact statement (EIS) as the proposed development is designated development.

This EIS provides for the assessment of requirements under Part 4 of the EP&A Act. The Proposal will be assessed by Penrith City Council and determined by the relevant joint regional planning panel (JRPP), in this case the Sydney Western City Planning Panel.

The proposed development is also considered integrated development under section 4.46 of the EP&A Act as the proposed resource recovery facility requires licensing under the *Protection of the Environment Operations Act 1997*. An application for an Environment Protection Licence (EPL 20975) will be prepared for the facility on the consolidated lot following development approval, and prior to commencement of waste storage and resource recovery activities.

The proposed development is consistent with the nominated objectives of the EP&A Act and is considered capable of fulfilling all statutory requirements. The site investigations have determined that the proposed development will not result in any significant negative impacts that cannot be adequately mitigated or managed.

4.4.2. *Environmental Planning and Assessment Regulation 2021*

While the EP&A Act provides the overarching framework for the planning system in NSW, the EP&A Regulation supports the day-to-day requirements of this system. It contains key operational provisions relating to the development assessment and consent process, and requirements associated with public participation. It supplements the broader provisions of the Act and covers matters such as local environmental plans and development control plans, which are used by councils to manage growth and development through the use of land use zoning, development standards and other planning mechanisms. It also contains key operational provisions relating to the development assessment and consent process, requirements associated with development contributions, and fees for planning services.

The proposed development is defined as a 'waste management facility' and is proposed on land zoned as E4 (General Industrial) under the Penrith LEP. The facility will have a processing capacity of up to 99,000 tonnes per annum of waste. Under Part 2, Clause 45 of Schedule 3 of the EP&A Regulation the Proposal is considered 'designated development':

(2) Development for the purposes of a waste management facility or works is designated development if— —

(b) the facility or works sorts, consolidates or temporarily stores waste at a transfer station or material recycling facility for transfer to another site for final disposal, permanent storage, reprocessing, recycling, use or reuse, and —

(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...

As per Clause 4.12(8) of the EP&A Act, the proposed development must be accompanied by an environmental impact statement as the proposed development is designated development.

4.4.3. *Protection of the Environment Operations Act 1999*

The *Protection of the Environment Operations Act 1997* (POEO Act) prohibits any person from causing pollution of waters, or air and provides penalties for air, water and noise pollution offences. Section 48 of the POEO Act requires a person to obtain an Environment Protection License (EPL) from the NSW Environment Protection Authority (EPA) before carrying out any of the activities described in Schedule 1 to the POEO Act.

The scheduled activity that applies to the proposed development is Schedule 1, Clause 34 (3) *resource recovery*. Clause 34 states:

*(1) This clause applies to the following activities—
recovery 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 for the recovery of energy.*

and

*(3) Each 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) either—
(i) less than 50% by weight of the waste received in any year requires disposal after processing,*

Where the Table to this clause states

*if the premises are in the regulated area—
(a) involves having on site at any time more than 1,000 tonnes or 1,000 cubic metres of waste,
or
(b) involves processing more than 6,000 tonnes of waste per year*

4.4.4. *Protection of the Environment Operations (Waste) Regulation 2014*

The *Protection of the Environment Operations (Waste) Regulation 2014* (Waste Regulation) outlines the requirements for waste management, transport, and disposal. The Waste Regulation contains provisions regarding the payment of waste levy contributions, recordkeeping, and the transportation of waste within and outside of NSW for further processing or disposal.

Clause 88 of the POEO Act requires that scheduled waste facilities required to hold an EPL are required to pay the waste levy contributions. The Waste Regulation sets out the manner for calculating the levy payable and the conditions under which it must be paid.

The Waste Regulation is supported by the Waste levy guidelines. These guidelines specify how to measure waste to calculate waste levy liability, the deductions waste operators can claim, and the EPA's requirements for records, surveys and reports. All licensed processing, disposal, recycling and storage facilities within the metropolitan levy area or regional levy area are subject to the levy system.

Furthermore, scheduled waste facilities in a levy-payable area must ensure that there is a weighbridge installed at the facility. An existing weighbridge is installed and located at 33-37 Plasser Crescent and would continue to be used for receipt of wastes. A second weighbridge would be installed at 29 Plasser Crescent and used for export of products and residuals.

4.5. Environmental Planning Instruments and Policies

4.5.1. *State Environmental Planning Policy (Resilience and Hazards) 2021*

Chapter 3 of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) outlines the requirements for a Preliminary Hazard Analysis screening test, required to be undertaken for potentially hazardous or potentially offensive industries. A potentially hazardous industry is defined as a development for the purpose of any industry which, if the development were to operate without employing any measures to reduce or minimise its impact, would pose a significant risk to human health, life or property, or to the biophysical environment.

A preliminary hazard analysis (PHA) has been prepared as part of the EIS (Section 6). The PHA has determined that the proposed development is not considered a potentially hazardous development as per the SEPP 33 Guidelines, therefore, no further Preliminary Hazard Analysis or Multi-Level Risk Assessment has been performed.

Fire safety and management has been assessed and is summarised in Section 8.

4.5.2. *State Environmental Planning Policy (Industry and Employment) 2021*

The relevant aim of *State Environmental Planning Policy (Industry and Employment) 2021* (Industry SEPP) is to ensure that signage is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of a high-quality finish and design. The Industry SEPP does not regulate the content of signage and does not require consent for a change in the content of signage.

Part 3.3, clause 3.7 of the Industry SEPP details advertisements to which this Part applies and states:

- 1) *This Part applies to all signage to which this Policy applies, other than the following:*
 - (a) *business identification signs,*
 - (b) *building identification signs,*
 - (c) *signage that, or the display of which, is exempt development under an environmental planning instrument that applies to it,*
 - (d) *signage on vehicles.*

Signage is proposed to be installed as part of the development to identify the facility. The proposed signage is defined as a 'business identification sign' and therefore the Industry SEPP does not apply.

4.5.3. *State Environmental Planning Policy (Transport and Infrastructure) 2021*

Chapter 2 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Infrastructure SEPP) aims to facilitate the effective delivery of infrastructure across NSW by improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and by providing greater flexibility in the location of infrastructure and service facilities.

Under Clause 2.153(1) of the Infrastructure SEPP, development for the purpose of waste or resource management facility is permissible with consent on land zoned E4 General Industrial.

As per Clause 2.7 of the Infrastructure SEPP, where there is an inconsistency with any other environmental planning instrument, the provisions of the Transport and Infrastructure SEPP prevail. Therefore, waste or resource management facilities are permissible on land zoned E4 under the Penrith LEP, despite the Penrith LEP not expressly permitting development for the purposes of waste or resource management facilities.

4.6. Local planning framework

4.6.1. *Penrith Local Environmental Plan 2010*

The following section provides the local planning and legislative framework for the proposed development. The purpose of this section is to outline the approval process and identify the applicable local planning controls that relate to the *Penrith Local Environmental Plan 2010* (Penrith LEP).

4.6.1.1. *Zone objectives*

The objectives of zone IN1 General Industrial 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;
- To promote development that makes efficient use of industrial land; and
- To permit facilities that serve the daily recreation and convenience needs of the people who work in the surrounding industrial area.

The Site will continue to be used as a waste resource management facility in adherence with the above objectives, which seek to encourage employment opportunities associated with an industrial use, and to ensure development is not likely to detrimentally affect the viability of any nearby residents or businesses.

4.6.1.2. *Land use permissibility*

Whilst the Penrith LEP does not specifically state that Waste facilities are a permissible form of development, as identified above, the Infrastructure SEPP states:

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.

Furthermore, Section 2.151 of the Infrastructure SEPP states:

resource recovery facility, waste disposal facility, waste or resource management facility and waste or resource transfer station have the same meanings as in the Standard Instrument.

The Penrith LEP provides the following definition:

waste or resource management facility means any of the following—

- (a) a resource recovery facility,
- (b) a waste disposal facility,
- (c) a waste or resource transfer station,
- (d) a building or place that is a combination of any of the things referred to in paragraphs (a)–(c).

While the proposed development does not meet the definition of any types of development permitted in IN1 zoning as defined in the Penrith LEP, it meets the definition of a “prescribed zone” under Infrastructure SEPP. As such, development for the purpose of waste or resource management facilities is permissible and may be carried out with consent.

4.7. Penrith Development Control Plan 2014

The *Penrith Development Control Plan 2014* (Penrith DCP) applies to all land in the Penrith City Council area. The Penrith DCP contains more detailed development provisions than those found in the Penrith LEP and are considered by Council when making decisions about individual development proposals. Key parts of the Penrith DCP, specifically Part C1 (Site Planning and Design Principles), and D4 (Industrial Development) apply to the planning proposal¹.

The purpose of the Penrith DCP are:

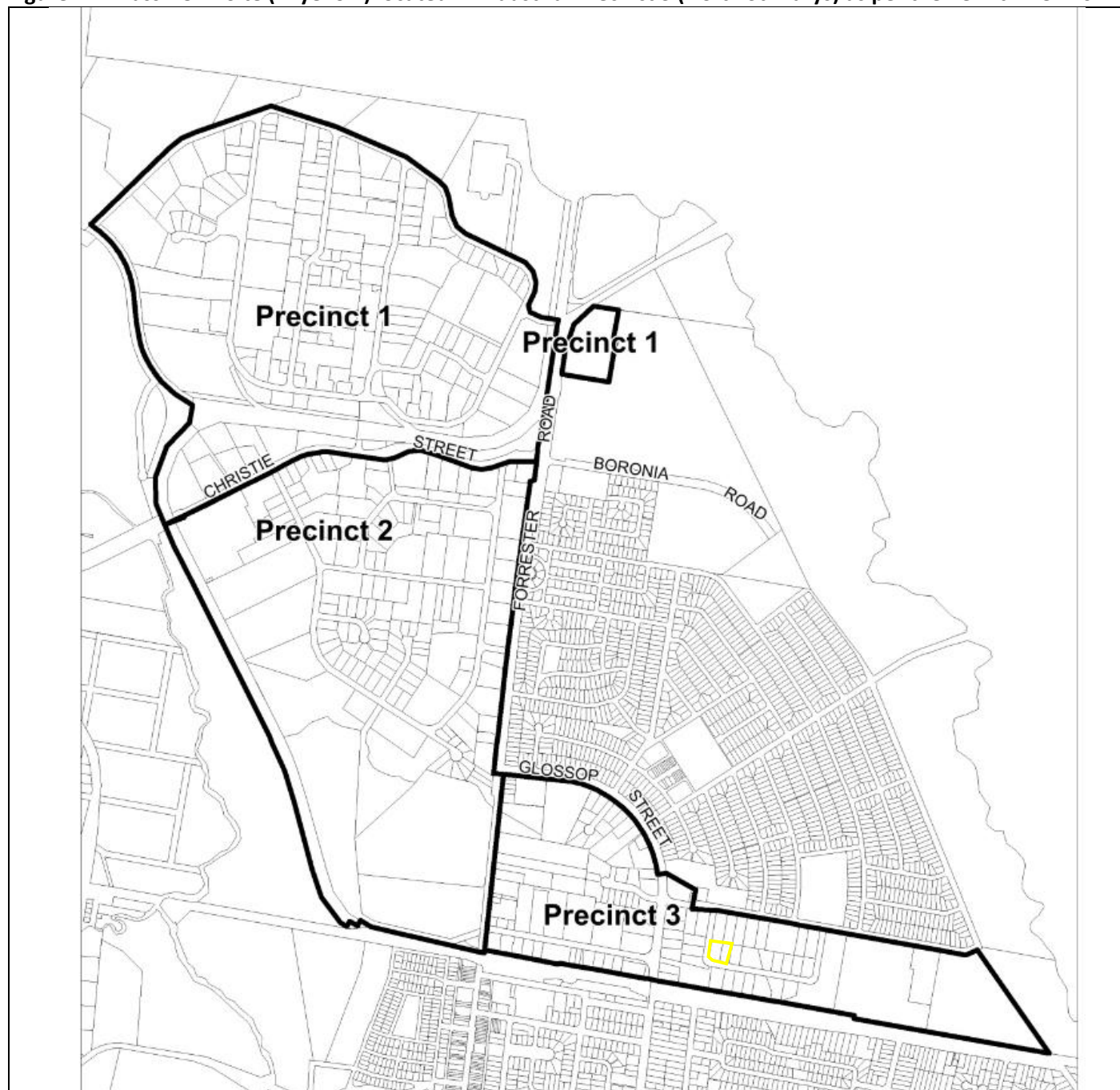
- a) To provide guidance to people wishing to carry out development within the City of Penrith
- b) To promote development which is consistent with Council’s vision for the City of Penrith, namely, one of a sustainable and prosperous region with a harmony of urban and rural qualities with a strong commitment to environmental protection and enhancement.
- c) To ensure development incorporates the principles of sustainable development through the delivery of balanced social, economic and environmental outcomes.
- d) To encourage development which ‘lifts the bar’ in terms of delivering sustainable and healthy communities in the long term.
- e) To foster development that responds appropriately to the natural and built environment, in particular, vegetation; biodiversity corridors; significant waterways; riparian land; significant buildings and gardens; and scenic landscapes and views.
- f) To provide for an urban environment that is active, attractive and safe for residents and visitors.
- g) To ensure the quality of development in the City of Penrith is of a high standard.

The main industrial areas in Penrith are broken down into ten precincts, each with different characters and different controls for each of the precincts. The site is located in the Industrial Precinct 3: St Marys (east of Forrester Road). This is shown in Figure D4.2 in the Penrith DCP, as replicated in Figure 4.1.

The controls for the precinct are further defined in Table 4.1. Compliance requirements and considerations with the Penrith DCP have also been provided in Table 4.1.

¹ Penrith Council Development Control Plan (2014). Internet publication: <https://www.penrithcity.nsw.gov.au/Building-and-Development/Planning-and-Zoning/Planning-Controls/Development-Control-Plans/>

Figure 4.1. Nassif Civil Site (in yellow) located in Industrial Precinct 3 (North St Marys) as per the Penrith DCP 2014.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
27/05/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Penrith DCP 2014 Industrial Precincts
				Source	Penrith DCP 2014

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Table 4.1. Penrith DCP 2014 compliance requirements and considerations.

Penrith DCP Chapter / Section	Relevant DCP Controls	Response
C2 Site Planning and Design Principles		
2.1	Preservation of Trees and Vegetation A person must not remove, clear, prune or otherwise cause harm to any tree or other vegetation prescribed by this Plan, which is proposed as part of development without Development Consent. These works must be assessed as part of a Development Application.	The Architectural Plans (Appendix C) show that only two small exotic trees will be removed. Existing trees will be retained and the Landscape Plan (Appendix Y) shows the proposed improved landscaping separating the new parking and truck turning area from the street.
C3 Water Management		
3.1	The Water Cycle/Water Conservation Any new industrial development or significant alteration and/or addition to an industrial building needs to reduce water consumption by a combination of careful site planning, design and water efficient appliances. All proposed industrial buildings with a roof area greater than 200m ² are required to install a rainwater tank of minimum capacity of 100,000 litres on the site for re-use of water in irrigation, industrial processes, toilet flushing or for other non-drinking purposes through a separate reticulated water supply system. All proposed industrial sites with a hard surface area (including roof area, driveways, parking areas, loading bays, covered storage areas, etc.) greater than 1,000m ² shall submit a water management plan which estimates required water needs, and includes an investigation into the feasibility of the measures listed below, outlines those to be adopted on the site and explains why any measures not adopted were unable to be implemented.	The new roof over the proposed new portion of the warehouse building will be connected to a 10kL rainwater tank to provide recycled water for two staff toilets (with a daily demand of 200L/day) and to supply an outdoor tap used for irrigation of the 8m ² garden beds against the building and 61m ² on lot 15 fronting Plasser Cres (assumed at 0.4kL/ m2/year). A Soil and Water Impact Assessment has been prepared for the proposed development (Appendix R addressing the mitigation measures for the proposed development.
3.2	Catchment Management and Water Quality Penrith City Council's <i>Water Sensitive Urban Design Policy</i> (2013) was prepared to improve water conservation, quality and quantity in both new developments and some redevelopments. The Policy sought to clarify which developments needed to achieve water conservation, quality and quantity outcomes. The Policy has now been incorporated into this section of the DCP.	A Soil and Water Impact Assessment has been prepared for the proposed development (Appendix R) addressing the mitigation measures for the proposed development required to meet water conservation and stormwater quality and quantity targets are defined in Table C3.1 of the Penrith DCP.
3.4	Groundwater	This site is almost entirely impervious, covered with a dense concrete hardstand which complies with NSW EPA requirements for working surfaces and is proposed to remain so, resulting in no risk to groundwater. Furthermore, there is no proposed interaction with groundwater (such as extraction). As such, groundwater impacts have not been assessed further.

Penrith DCP Chapter / Section	Relevant DCP Controls	Response
3.5	Flood Planning The controls in this section only apply to land subject to the flood planning provisions of the LEP.	The site is located clear of the PMF flood extents for South Creek and Ropes Creek as determined from the 'Updated South Creek Flood Study' by Worley Parsons, 2015. The Site is located near to areas that may be affected by the PMF event, however the site itself is clear of any hazard.
3.6	Stormwater Management and Drainage The aim of these controls is to ensure that developments minimise their impact on the water cycle by minimising impervious surfaces, providing on-site storage for stormwater to reduce peak events and ensuring that stormwater systems are upgraded to manage any additional stormwater flows.	This site is almost entirely impervious, covered with a dense concrete hardstand. The new roof over the proposed new portion of the warehouse building will be connected to a 10kL rainwater tank A Soil and Water Impact Assessment has been prepared for the proposed development (Appendix R) addressing the impacts on stormwater management and drainage for the Site.
3.8	Rainwater / Storage Tanks	The new roof over the proposed new portion of the warehouse building will be connected to a 10kL rainwater tank. The rainwater tank will be design and installed as per Penrith City Council's <i>Stormwater Drainage Specification for Building Developments</i> .
C4 Land Management		
4.3	Erosion and Sedimentation All applications for subdivision and development which involve site disturbance must be accompanied by an Erosion and Sediment Control Plan (ESCP)	An ESCP (Appendix S) has been prepared for the minor earthworks required for the installation of the 20m pit-style weighbridge and other building works.
C5 Waste Management		
5.1	Waste Management Plans Applicants are to submit a Waste Management Plan when lodging a development application for: a) Demolition or construction of buildings; b) Change of use of buildings for rural, residential, commercial and industrial developments; c) Subdivision of land and/or buildings; or d) Alterations to 50% or more of the existing gross floor area of buildings, or additions to buildings resulting in a 50% increase (or more) to the existing gross floor area.	A Waste Management Plan has been prepared for the proposed development (Appendix M).
C6 Landscape Design		
6.1	Landscape Design This section classifies all development in the Penrith local government area into 3 categories (see Table C6.2 below). Each of these categories has different requirements in relation to the landscape design component of the development (i.e. different parts of this section apply to different types of developments).	A Landscape Plan has been prepared for the proposed development (Appendix Y).

Penrith DCP Chapter / Section	Relevant DCP Controls	Response
C10 Transport, Access and Parking		
10.2	Traffic Management and Safety Development applications for major development proposals should be accompanied by an appropriate Traffic Report. The Traffic Report should detail the assessed impact of projected pedestrian and vehicular traffic associated with the proposal, with recommendations on the extent and nature of the traffic facilities necessary to preserve or improve the safety and efficiency of the adjacent road system.	A Traffic Impact Assessment has been prepared for the proposed development (Appendix T).
C12 Noise and Vibration		
12.4	Industrial and Commercial Development All development applications where the above controls are relevant are required to provide a Noise Impact Statement prepared by a qualified acoustic consultant in accordance with the requirements set out in the DA Submission Requirements Appendix of this DCP. The Noise Impact Statement should demonstrate acoustic protection measures necessary to achieve an indoor environment meeting residential standards, in accordance with relevant noise criteria, as well as relevant Australian Standards.	A Noise and Vibration Impact Assessment (NVIA) has been prepared for the proposed development (Appendix Q).
D4 Industrial Development		
4.2	Building Height Industrial development should achieve a scale and height in keeping with the existing and desired future character of the area.	The height controls in the Penrith LEP apply to the Site which is set at 12m. The proposed development does not involve increasing the height of any existing buildings on the Site. The new proposed warehouse will have a maximum height of 12m to match the height of the existing buildings. A Visual Impact Assessment has been prepared for the proposed development and demonstrates that the proposed development will not impact the surrounding amenity (refer to Section 13).
4.3	Building Setbacks and Landscape Setbacks for industrial development are to be in accordance with the standards specified in Table D4.1. These setback areas are to be landscaped, but may incorporate an off-street parking area if it can be demonstrated that the location of the car parking area: i. Is within a setback which is at least 13m wide and set behind a landscaped area which is at least 4m wide; ii. Promotes the function and operation of the development;	According to Table D4.1. the building setback for the Site is 9m. The current and proposed buildings setback is 20m. The setback area will incorporate off-street parking, space for truck movements and a landscaped area. Despite not being 4m in width, the Landscape Plan (Appendix Y) and Architectural Plans (Appendix C) show that the proposed landscaping, in addition to the architectural treatments, will reduce the visual impact of the proposed development and enhance the visual amenity of the locality which are significant improvements over the current streetscape of Plasser

Penrith DCP Chapter / Section	Relevant DCP Controls	Response
	iii. Enhances the overall design of the development by implementing design elements, including landscaping, that will screen the parking area and is complementary to the development; and iv. Does not detract from the streetscape values of the locality.	Crescent. This has also been assessed in the Visual Impact Assessment (Appendix W).
4.4	Building Design The relevant controls have been provided below: - All developments shall be designed to present a high standard of urban form incorporating innovative and attractive architectural design of all elevations and roof form. - Large elevations should be articulated by structural variations and/or a blend of external finishes including brick, masonry, pre-coloured metal cladding, appropriately finished 'tilt-slab' concrete or a combination of these materials. - The development must incorporate a variety of external finishes in terms of both colour and type of material used. - Any office and administration component is to be located to the main frontage of the building and be designed as an integral part of the overall building, rather than a 'tack on' addition.	The architectural treatments that are proposed for the proposed warehouse expansion will comply with the Building Design controls. The Architectural Plans (Appendix C) shows that the proposed landscaping, in addition to the architectural treatments, will reduce the visual impact of the proposed development and enhance the visual amenity of the locality which are significant improvements over the current streetscape of Plasser Crescent. This has also been assessed in the Visual Impact Assessment (Appendix W).
4.5	Storage of Materials and Chemicals External storage of goods must be avoided, wherever possible.	No materials are proposed to be stored external to the warehouse buildings.
4.6	Accessing and Servicing the Site Industrial development shall, where appropriate, be designed to: - Allow all vehicles to enter and leave the site in a forward direction; - Accommodate heavy vehicle parking and manoeuvring areas; - Avoid conflict with staff, customer and visitor vehicular and cycle movements; and - Ensure satisfactory and safe operation with the adjacent road system. Full details of the volume, frequency and type of vehicle movements shall be submitted with the development application.	A Traffic Impact Assessment including turning paths (Appendix T) have been provided for the development. The TIA provides details of the volume, frequency and type of vehicle movements. The turning paths show vehicles can enter and exit the site in a forward direction and the site can accommodate heavy vehicle manoeuvrability. No heavy vehicles are proposed to be parked on the Site overnight. The Site can operate safely with minimal conflict with staff, customers and visitors.

Penrith DCP Chapter / Section	Relevant DCP Controls	Response
4.7	Fencing The relevant controls have been provided below: • Be sympathetic to the natural setting and character in form, materials and colour; • Maximise natural surveillance from the street to the building and from the building to the street; • Where site security is required, fencing shall be constructed of black plastic coated 'Chain-link' fence or an approved alternative such as a metal palisade type fence. The overall height of fencing shall be no more than 2.4m. 'Chain-link' or similar fences are not suitable to the site frontage. • Consideration shall be given to the site's front fence being a reduced height particularly around the visitor or employee parking. Alternatively, the front of the premises shall be open to the street to provide a sense of address and to contribute to the streetscape.	The existing timber sound attenuation fence will be retaining within the property's boundary to reduce noise levels. This fence is installed inside the existing lot boundary of Lot 16. The existing black chain-link fence along the lot boundary of Lot 16 will be retained except where the existing timber sound attenuation fence is installed. Treated timber garden edging will be to soften the fence line along this area. A black metal palisade fence will be installed along the front boundary of Lot 16 and Lot 15. This fence will follow the guidelines outlined in the Development Control Plan (DCP), specifically Section D4-4.7 Fencing. Standing at 1.8m tall, the palisade fence will contribute to the property's security while maintaining an attractive appearance from the street. Sliding metal palisade gates will be installed at the entrances to both lots. A Landscape Plan has been prepared for the proposed development (Appendix Y).

4.8. Other relevant policies and guidelines

4.8.1. Fire safety in waste facilities

The *Fire safety guideline: Fire safety in waste facilities* (Fire and Rescue NSW, 2020) provides guidance on the design and operation of waste facilities that receive combustible waste to reduce the risk of fire and to facilitate safe fire brigade intervention. The guideline includes details on the performance requirements for access, fire detection and suppression systems, smoke management, containment of fire water run-off, storage locations and methods, and workplace fire safety.

Fire safety and management has been assessed and is summarised in Section 8.

4.8.2. Standards for Managing Construction Waste in NSW

The Standards for Managing Construction Waste in NSW commenced on 15 May 2019. The Standards have been implemented to:

- Minimise the risk of harm to human health and the environment from asbestos and other contaminants found in construction waste;
- Ensure operators of construction waste facilities implement appropriate processes and procedures to manage these risks; and
- Improve industry and community confidence in the quality of resources recovered from construction and demolition waste.

The Standards apply to all construction and demolition waste facilities with an environment protection licence for waste storage, waste processing or resource recovery.

The Standards require construction and demolition waste facilities to:

- Implement a two-stage inspection process to ensure asbestos waste and other unpermitted wastes do not enter the facility;
- Implement sorting and waste storage requirements to improve the quality of recovered resources and avoid cross-contamination of materials;
- Ensure construction waste is only transported from the facility if it has been handled in accordance with the Standards on-site; and
- Ensure that all staff managing, supervising or undertaking tasks required by the Standards have been appropriately trained.

Where any load is found or reasonably suspected to contain unpermitted wastes, the entire load of waste must be rejected, and must be removed from the facility on the vehicle on which it arrived.

The Standards also include the following requirements:

- Construction waste must be sorted and classified into individual waste types;
- Sorted construction waste must not be mixed with any other type of waste;
- Each individual waste type must be stored separately, and storage areas must be clearly labelled;
- Stockpiles must be clearly delineated and separated by a minimum of three metres; and
- Stockpiles must be checked by staff every business day to ensure waste is correctly stored.

Compliance with the Standards is a compulsory licence condition for all construction and demolition waste facilities. Failure to comply with the Standards is a breach of Section 64 of the POEO Act.

5. Consultation

5.1. Engagement activities

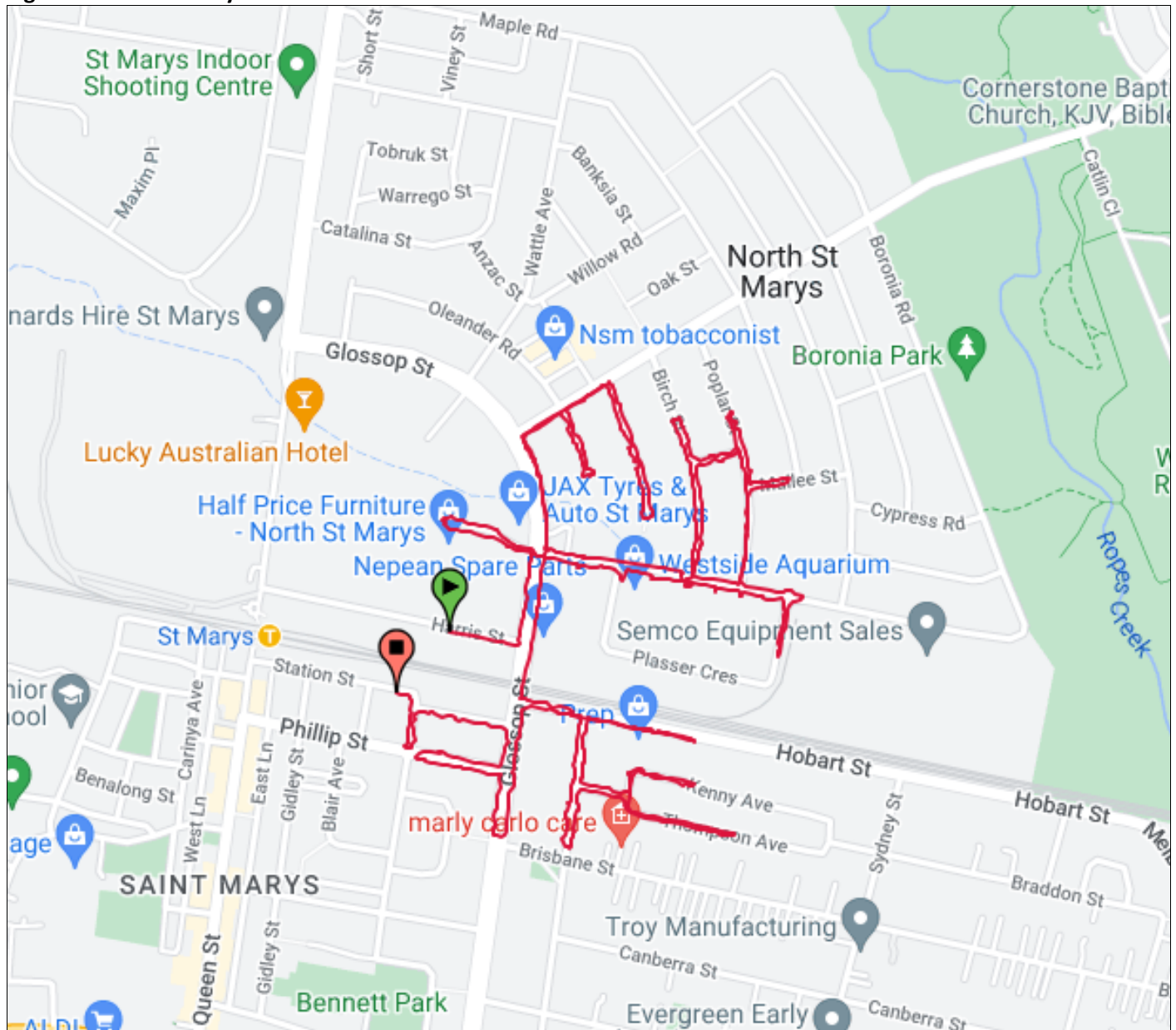
A Community Consultation Plan was prepared for the proposed development (Appendix I). The Community Consultation Plan applies to the period of preparation and exhibition of the EIS and sets out how Nassif Civil will:

- Inform the community and stakeholders about the proposed project, the EIS process and opportunities for participation;
- Help people understand the Proposed Development and the EIS process;
- Encourage participation and seek input during preparation of the EIS, in order to identify issues of potential concern, obtain local insight, and gain feedback on measures to address concerns;
- Use and respond to public input; and
- Build on previous consultation to involve communities and stakeholders in project development.

5.1.1. Community engagement

A letter was distributed to residential properties within 500m of the Site on 16 June 2024 (an example is provided in Appendix J). Figure 5.1 shows the distribution of the letter as provided by the distribution company. The letter provided a summary of the proposed development as well as access to additional information including a fact sheet via the website: <https://www.jacksonenvironment.com.au/penrith-resource-recovery-facility> and an email address for submission of feedback.

Figure 5.1. Community consultation letter distribution.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Community consultation letter distribution
				Source	Australia Printing and Flyer Distribution

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5.1.2. Business engagement

A letter was distributed to businesses within the immediate vicinity of the Site (an example is provided in Appendix K). The letter provided a summary of the proposed development as well as access to additional information including a fact sheet via the website: <https://www.jacksonenvironment.com.au/penrith-resource-recovery-facility> and an email address for submission of feedback.

5.1.3. Agency consultation

An invitation to comment on the proposed development was emailed to the following agencies (an example is provided in Appendix L):

- Department of Planning, Housing and Infrastructure;
- Department of Climate Change, Energy, the Environment and Water;
- NSW Environment Protection Authority;
- Transport for NSW;
- Fire & Rescue NSW;
- Sydney Water;
- WaterNSW; and
- Penrith City Council.

The email contained a letter provided a summary of the proposed development as well as access to additional information including a fact sheet via the website: <https://www.jacksonenvironment.com.au/penrith-resource-recovery-facility> and an email address for submission of feedback. The agencies were requested to provide feedback within 2 weeks of receiving the email.

5.2. Feedback

5.2.1. Community

A total of 960 letters were distributed to residential houses within 500m of the Site. At the time of submission, no submissions from residents had been received.

5.2.2. Businesses

A total of 20 letters were distributed to businesses within the immediate vicinity of the Site. At the time of submission, no submissions from businesses had been received.

5.2.1. Agencies

The following agencies provided feedback:

- Department of Climate Change, Energy, the Environment and Water;
- Sydney Water;
- WaterNSW; and
- Penrith City Council.

The Department of Planning, Housing and Infrastructure, NSW Environment Protection Authority and Transport for NSW have not provided a response. However, on 15 April 2024, a letter was prepared for the Department of Planning, Housing and Infrastructure (DPHI) to inform the Department that Nassif Civil intended to receive up to 99,000 tonnes per annum of waste rather than the 60,000, in addition to seeking an extension to the SEARs deadline (refer to Appendix F). The Department also provided the NSW EPA and TfNSW with an opportunity to provide further comment on the updated project description.

The NSW EPA considered the proposed increase in processing capacity and reviewed the information provided. Based on the review, the NSW EPA considered the previous advice dated 21 June 2022 (EPA Reference number DOC22/454078-3) continues to remain applicable in relation to the requirements for an Environmental Impact Statement and did not seek additional requirements in response to the proposed increase in throughput.

TfNSW advised that its response dated 20 June 2022 is withdrawn and to be replaced by a new response. The response was attached to the letter provided by the department (refer to Appendix G). This has been summarised and addressed in Table A3 in Appendix A.

5.2.1.1. Department of Climate Change, Energy, the Environment and Water

An email response was received from Patricia Borges, Assistant Projects Officer for the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Ms Borges provided a recommendation that all documentation is submitted to the NSW Major Projects Portal and the NSW DCCEEW Water will commence a review of the documents once received in the portal. This is understood to mean the development application and accompanying EIS. Therefore, no further feedback has been sought from DCCEEW.

5.2.1.2. Sydney Water

An email response was received from the Urban Growth Team for Sydney Water. Sydney Water provided a recommendation that all documentation is submitted to the NSW Major Projects Portal and Sydney Water will commence a review of the documents once received in the portal. This is understood to mean the development application and accompanying EIS. Therefore, no further feedback has been sought from Sydney Water.

5.2.1.3. WaterNSW

In a letter dated 26 June 2024, WaterNSW advised that no further investigation is required. The documentation that has been supplied for the proposed development does not indicate any approval under the *Water Management Act* is required.

5.2.1.4. Penrith City Council

Penrith City Council responded by letter dated 19 June 2024 (refer to Appendix H). Penrith City Council provided additional comments relevant for the preparation of the development application submission. This has been summarised and addressed in Table A4 in Appendix A.

6. Preliminary Hazard Assessment

A Preliminary Hazard Analysis (PHA) and environmental risk assessment has been performed to identify potential impacts of the Proposed Development, as well as potentially offensive or hazardous issues that need to be considered as part of the development assessment.

The risk assessment has been performed according to AS/NZS ISO 31000: 2009 *Risk Management – Principles and Guidelines* and the Preliminary Hazardous Analysis has been informed by the *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* (NSW Department of Planning, 2011). The following guidelines published by the NSW Department of Planning in 2011 have also been considered:

- *Hazardous Industry Planning Advisory Paper No 2 - Fire Safety Study Guidelines;*
- *Hazardous Industry Planning Advisory Paper No 3 - Risk Assessment;*
- *Hazardous Industry Planning Advisory Paper No 4 - Risk Criteria for Land Use Safety Planning; and*
- *Hazardous Industry Planning Advisory Paper No 6 - Hazard Analysis.*

The *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (Applying SEPP 33) provides a comprehensive framework for assessing and managing developments that pose potential hazards or offensive impacts to the community and the environment.

The guidelines aim to:

- Ensure developments are appropriately located and designed to minimize risks;
- Protect public health, safety, and the environment; and
- Provide a clear and consistent process for assessing hazardous and offensive developments.

Applying SEPP 33 defines hazardous and offensive industries and outlines the criteria for their assessment. It distinguishes between:

- **Hazardous Industries:** Those that could result in significant risk to public safety or property.
- **Offensive Industries:** Those that may cause a nuisance through emissions like noise, odour, or pollutants.

A PHA serves as a critical component in ensuring that proposed developments that are considered potentially hazardous or potentially offensive are carefully evaluated and managed to mitigate potential risks to public health, safety, and the environment.

6.1. Potentially hazardous or offensive industry

Under the Resilience and Hazards SEPP, a potentially hazardous industry is defined as:

A development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—

- a) to human health, life or property, or*
- b) to the biophysical environment,*

and includes a hazardous industry and a hazardous storage establishment.

Appendix 2 of Applying SEPP 33 provides a checklist to assist in determining whether a proposal meets the definition of a potentially hazardous or offensive industry. For a potentially hazardous industry, the checklist relates to the presence of dangerous goods and otherwise hazardous materials involved in the proposed development. This includes raw materials, intermediates, and products, incompatible materials (including non-hazardous materials), potentially

hazardous waste products, dusts, and storage or processing operations including the use of dangerous goods or hazardous materials in the operation of plant and equipment. For potentially offensive industry, the checklist requests information on materials or processes that may produce air, noise, water, or other emissions with a potential for pollution, and details of pollution control licenses, permits or agreements.

The proposed development will be used for the receipt, processing and storage of C&D waste. Sorted and recoverable wastes will be collected daily to manage the quantity of waste stored on the Site. Consequently, no large quantities of dangerous goods or hazardous materials are proposed to be stored on-site. The only chemicals to be present on-site will be standard cleaning chemicals for general hygiene purposes. No processing plant or equipment that uses dangerous goods or hazardous materials for its operation will be present on-site, and no fuel or LPG is proposed to be stored on-site. Therefore, the proposal is NOT considered potentially hazardous industry.

The operation of the proposed development will not release any potentially offensive emissions. As determined in environmental studies, the only emissions from the proposed development will be those typically associated with developments of similar type and scale, being:

- Noise generation from vehicle movements and processing of waste (indoors); and
- Air quality emissions from vehicle movements and general operations.

The proposed development will not require any pollution control licenses, permits or agreements for any of the emissions. The proposed development is to be in an industrial zoned area alongside other industrial operations away from residential areas. The location will reduce the likelihood that the operation will negatively impact other land uses. Therefore, the proposed development is **NOT** considered a potentially offensive industry and no further assessment has been carried out.

6.2. Environmental risk assessment

Whilst the proposed development is not a potentially hazardous or offensive industry, the following environmental risk assessment has been prepared to consider the risks associated with construction and operation of the proposed development. The environmental risk assessment has been informed by AS/NZ 31000: 2009 *Risk Management Principles and Guidelines*. The risk management process has been informed by the following elements:

- Establish the context;
- Identify the risks;
- Analyse the risks;
- Evaluate the risks; and
- Treat risks.

6.2.1. Methodology

The *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* (NSW Department of Planning (2011)) sets out a process for screening potentially hazardous materials that are stored on site as part of a Proposed Development.

Potential risk typically of holding certain types of hazardous materials on site depends on:

- The properties of the substance(s) being handled or stored;
- The conditions of storage or use;
- The quantity involved;
- The location with respect to the site boundary; and
- The surrounding land uses.

Risk screening needs to be undertaken as part of the SEPP 33 guidelines based on an estimate of the consequences of fire, explosion or toxic release from material(s) being handled. It takes into account information from the proponent on the properties of the materials, quantity, type of storage or use, and location.

The methodology used to inform preliminary hazard analysis and environmental risk assessment has included the following steps:

- Identify and screen the hazards associated with the project;
- Examine the maximum reasonable consequence of identified events;
- Qualitatively estimate the likelihood of events;
- Proposed risk treatment measures;
- Qualitatively assess risks to the environment, member of the public and their property arising from atypical and abnormal events and compare these to applicable qualitative criteria;
- Recommend further risk treatment measures if considered warranted; and
- Qualitatively determine the residual risk assuming the implementation of the risk treatment measures.

6.2.2. Risk Criteria

The following principles have been adopted to identify and assess risk in this assessment. This has been informed by the *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning*² (HIPAP4).

- The avoidance of all avoidable risks;
- The risk from a major hazard should be reduced wherever practicable, even where the likelihood of exposure is low;
- The effects of significant events should, wherever possible be contained within the site boundary; and
- Where the risk from an existing installation is already high, further development should not pose any incremental risk.

6.2.3. Qualitative measurement of consequence, likelihood, and risk

To undertake a qualitative risk assessment, it is useful to describe the levels of consequence of a particular event, and the likelihood or probability of such an event occurring. Risk assessment criteria have been developed in AS/NZS ISO 31000: 2009 which allows the risk assessor to develop risk criteria during the establishment of the context.

In accordance with AS/NZS ISO 31000: 2009, Table 6.1 and Table 6.2 have been reviewed as part of establishing the context of the project. These tables were considered to be consistent with the specific objectives of the preliminary hazard analysis and environmental risk assessment.

Table 6.1. Qualitative measures of probability.

Event	Likelihood	Description
A	Almost certain	Happens often
B	Likely	Could easily happen
C	Possible	Could happen and has occurred elsewhere
D	Unlikely	Hasn't happened yet but could
E	Rare	Conceivable, but only in extreme circumstances

² NSW Department of Planning (2011c). *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning*.

Table 6.2. Qualitative measures of maximum reasonable consequence.

Event	People	Environment	Asset / Production
1	Multiple fatalities	Extreme environmental harm (e.g. widespread catastrophic impact on environmental values of an area)	More than \$1B loss or production delay
2	Permanent total disabilities, single fatality	Major environmental harm (e.g. widespread substantial impact on environmental values of an area)	\$100M to \$1B or production delay
3	Minor injury or health effects (e.g. major lost workday case / permanent disability)	Serious environmental harm (e.g. widespread and considerable impact on environmental values of an area)	\$5M - \$100M loss or production delay
4	Minor injury or health effects (e.g. restricted work or minor lost workday case)	Material environmental harm (e.g. localised and considerable impact on environmental values of an area)	\$250K to \$5M loss or production delay
5	Slight injury or health effects (e.g. first aid / minor medical treatment needed)	Minimum environmental harm (e.g. minor impact on environmental values of an area)	Less than \$250K or production delay

Combining the probability and consequence tables, Table 6.3 provides a qualitative risk analysis matrix to assess risk levels.

Table 6.3. Qualitative risk analysis matrix used in this preliminary hazard analysis and environmental risk assessment.

		Probability ¹				
Consequence		A	B	C	D	E
	1	1 (H)	2 (H)	4 (H)	7 (M)	11 (M)
	2	3 (H)	5 (H)	8 (M)	12 (M)	16 (L)
	3	6 (H)	9 (M)	13 (M)	17 (L)	20 (L)
	4	10 (M)	14 (M)	18 (L)	21 (L)	23 (L)
	5	15 (M)	19 (L)	22 (L)	24 (L)	25 (L)

¹ Legend – L: low; M: Moderate; H: high; Risk numbering: 1 – highest; 25 – lowest risk. Colour coding: Green: tolerable risk; orange: ALARP – as low as reasonably practicable; red: intolerable risk.

Risk acceptance criteria for the project have been formulated following consideration of HIPAP4 and AS/NZS ISO 31000 2009 – *Risk Management Principles and Guidelines*.

In assessing the tolerability of risk, both qualitative and quantitative aspects need to be considered. Relevant general principles considered in this study as documented in HIPAP4:

- The avoidance of all avoidable risks;
- The risk from a major hazard should be reduced wherever practicable, even where the likelihood of exposure is low;
- The effects of significant events should, wherever possible, be contained within the site boundary; and
- Where the risk from an existing installation is already high, further development should not pose any incremental risk.

6.2.4. Hazardous materials

No hazardous materials will be stored on the Site in bulk quantities. Only chemicals required for general cleaning will be stored in each building. These chemicals will not exceed any thresholds identified in the Applying SEPP 33 guidelines.

6.3. Further hazard identification and risk assessment

To help understand further hazards possible as part of the proposed development, a series of potential worst-case scenarios have been assessed to determine possible consequences, likelihood and risk. The NSW Department of Planning's (2011) *Hazardous Industry Planning Advisory Paper No 6 - Hazard Analysis* (HIPAP6) has been used to assist in guiding this analysis.

As per HIPAP6, this assessment has qualitatively assessed the impacts of the largest possible event on people, plant, and the environment. The worst-case scenarios reflect any foreseeable factors that could exacerbate the severity of an accident, including abnormal process conditions, out of hours manning levels, and the potential for control measures to be disabled or rendered inoperable by the accident.

The worst-case scenarios we have assessed include the following:

- Vehicle collision on entry to the site, resulting in fire and possible death;
- Leaks / spills on vehicle entry to the site, with potential impacts on stormwater and fire risk;
- Vehicle theft and malicious damage, leading to equipment failure and injury to person(s);
- Leaks / spills on-site, with potential impacts on stormwater and fire risk;
- Vehicle theft and malicious damage on-site, leading to equipment failure and injury to person(s);
- Vehicle collision between delivery vehicles with other on-site vehicles through driver error, or pedestrian, resulting in possible fire or death;
- Leakage of oil containers in shed, potentially igniting and/or moving into stormwater, through human error or malicious act;
- Fire caused by ignition source (e.g. cigarette, hot work such as welding and incorrectly disposed of lithium batteries) and flammable materials in shed (e.g. fuels, oils) catch fire due to spark from cigarette or hot work or damage to the batteries.

Prevention and treatment measures to reduce the likelihood and resulting consequences from these worst-case scenarios are mapped out in Table 6.4 below. Note that a risk rating category has been prepared to understand the significance of these risks on the environment and human health. Note that the risk ratings estimated as part of the qualitative analysis are specified after implementation of the risk prevention, treatment, and detection measures.

Table 6.4. Hazard identification, scenario, consequence, prevention/treatment measures, and risk rating table.

Facility / event	Cause / comment	Possible scenarios, results & consequences	Prevention, Treatment Measures and Detection Protection Required	Likelihood	Consequence	Risk rating and category (after treatment measures) ¹
Entry to Site						
Vehicle collision	Possible collision of delivery vehicles with other on-site vehicles through driver error, or pedestrian, resulting in possible fire or death	Fire possible outside of the Facility, potentially spreading across the site or to adjacent properties. Possible impacts on stormwater from discharge of fire water.	• Ensure vehicle speed limits and regular driver education • Firefighting equipment • Emergency management / response plan • Pollution incident response management plan / Environmental management plan • Operational traffic management plan • Work health and safety plan • Operator and driver training • Spill response equipment and training • Contact emergency services (Fire and Rescue NSW)	Possible (C)	3	13 (Moderate risk)
Leak / spill	Vehicle collision / damage causes spill / leak of hazardous material	Collision causes leakage of vehicle fuel or oil onto handstand and possible stormwater impacts and a fire risk	• Ensure vehicle speed limits and regular driver education • Firefighting equipment • Emergency management / response plan • Pollution incident response management plan / Environmental management plan • Operational traffic management plan • Work health and safety plan • Operator and driver training • Spill response equipment and training • Emergency response • Communications • Spill containment and sweeping of hardstand • Contact emergency services (Fire and Rescue NSW)	Possible (C)	5	22 (Low risk)
Vehicle theft / malicious damage	Vehicle or material within truck stolen	Components of a truck are stolen and leads to equipment failure and	• Ensure staff compliance with site security measures • Emergency management / response plan	Possible (C)	5	22 (Low risk)

Facility / event	Cause / comment	Possible scenarios, results & consequences	Prevention, Treatment Measures and Detection Protection Required	Likelihood	Consequence	Risk rating and category (after treatment measures) ¹
		possible safety risk to staff	- Operational traffic management plan - Work health and safety plan - Contact emergency services (Police) - Site security / limited access			
Within the Site						
Leak / spill	Vehicle collision / damage causes spill / leak of hazardous material	Collision causes leakage of vehicle fuel or oil onto handstand and possible stormwater impacts and a fire risk	- Ensure vehicle speed limits and regular driver education - Firefighting equipment - Emergency management / response plan - Pollution incident response management plan / Environmental management plan - Operational traffic management plan - Work health and safety plan - Operator and driver training - Spill response equipment and training - Emergency response - Communications - Spill containment and sweeping of hardstand - Contact emergency services (Fire and Rescue NSW)	Possible (C)	5	22 (Low risk)
Theft / malicious damage	Vehicle or material within truck stolen	Components of a truck are stolen and leads to equipment failure and possible safety risk to staff	- Ensure staff compliance with site security measures - Emergency management / response plan - Operational traffic management plan - Work health and safety plan - Contact emergency services (Police) - site security / limited access - Contact emergency services (NSW Police)	Unlikely (D)	5	24 (Low risk)
Storage of diesel fuel	Leakage of fuel	Spill of fuel, and potentially ignite and/or move into stormwater, through	- Ensure fuels stored in fully bunded container. - Staff training on safe storage of fuel. - Emergency management / response plan	Possible (C)	4	18 (Low risk)

Facility / event	Cause / comment	Possible scenarios, results & consequences	Prevention, Treatment Measures and Detection Protection Required	Likelihood	Consequence	Risk rating and category (after treatment measures) ¹
		human error or malicious act	• Pollution incident response management plan / Environmental management plan • Operational traffic management plan • Work health and safety plan • Spill response equipment and training • Emergency response • Communications • Spill containment and sweeping of hardstand • Contact emergency services (Fire and Rescue NSW)			
Fire	Fire caused by ignition source (e.g. cigarette, hot works or lithium batteries)	Flammable material is ignited through contact with an ignition source (e.g. cigarette, battery spark etc.)	• Ensure strict non-smoking policy is enforced at all times • Firefighting equipment • Emergency management / response plan • Pollution incident response management plan / Environmental management plan • Operational traffic management plan • Work health and safety plan • Operator and driver training • Spill response equipment and training • Contact emergency services (Fire and Rescue NSW)	Possible (C)	3	13 (Moderate risk)

6.4. Conclusion

As a result of this analysis, it is suggested that the worst-case scenarios modelled with risk prevention, treatment and detection measures are all moderate or low risks. All risks are low except those that involve fire caused by vehicle collisions, or some other form of ignition.

The Proposed Development is not considered a potentially hazardous development as per the SEPP 33 Guidelines, therefore, no further Preliminary Hazard Analysis or Multi-Level Risk Assessment has been performed.

7. Waste Management

A Waste Minimisation and Management Plan (WMMP) has been prepared for the proposed development (Appendix M). The WMMP provides estimates for waste generation at each stage of the proposed development and details the proposed recycling and disposal options for each waste stream.

7.1. Existing environment

Nassif Civil currently manage and operate the C&D recycling facility at 33-37 Plasser Crescent, North St. Marys (Lot 16 DP 263353). The lot is approved to receive up to 30,000 tonnes of C&D material per annum under DA17-1089 and DA17-1089.01. The adjacent property at 29 Plasser Crescent, North St Marys (Lot 15 DP 263353) is also owned by Nassif Civil and is currently approved for use as a dry cement plant under DA12/0489.

7.2. Impact assessment

7.2.1. Demolition

The demolition and site preparation phase will include the following works:

- Partial demolition of the existing structure on Lot 15, DP263353;
- Removal of a 6m x 20m section of concrete hardstand in the south-east corner of the Site (for installation of the 20m pit style weighbridge);
- Removal of soil beneath the concrete hardstand in the south-east corner of the Site (for installation of the 20m pit style weighbridge).

The existing concrete slab, which is part of a well-built factory, will be retained for future use in constructing the new office space within the warehouse.

Wherever footings are required, the concrete will be cut precisely to fit the size of each footing, ensuring minimal disturbance. Soil disturbance will also be kept to a minimum, with only the areas around the footings and trenches being exposed. The stormwater pipes are not expected to be impacted by the construction activities.

For any plumbing work, the concrete will be cut to open trenches where needed, ensuring the modifications are made with care and precision. Overall, this approach ensures that the existing infrastructure is preserved wherever possible, while allowing for necessary construction adjustment.

Waste generated will be placed in skip bins to be temporarily stored on the concrete hardstand at the front of the Site and taken to an appropriately licensed facility for recycling.

Minor excavation is proposed for the installation of the 20 m pit style weighbridge. Any soil excavated from the pit will be classified in accordance with *Waste Classification Guidelines* (NSW EPA, 2014).

Based on the minimal disturbance of underlying soil, a preliminary site investigation for soil contamination is not warranted.

7.2.2. Construction

The construction phase will include the following works:

- Construction of a new shed on Lot 15, DP263353;
- Installation of an additional 20m pit style weighbridge inside the site entrance of Lot 15, DP263353;
- Installation of processing equipment, conveyor belts and concrete blocks for waste storage bays;

- Upgrades to site office, lunchroom, and amenities for staff, truck drivers and visitors; and
- Improvements to landscaping.

The proposed construction works are shown in the architectural plans (Appendix C).

Minor amounts of concrete, timber, metal and plastics will be generated during the installation of the weighbridge, construction activities, and while connecting various components of the development. These wastes will be segregated to maximise recycling, stored separately in hook lift bins, and will be transported off-site for recycling at a lawful facility.

7.2.3. Operation

The Penrith RRF will have an annual waste throughput of up to 99,000 tonnes per annum. Waste received at the RRF will consist of construction and demolition (C&D) waste in skip bins collected from the Greater Metropolitan region.

The waste will include the following:

- Concrete, brick and tile;
- Clean timber;
- Engineered/treated timber;
- Ferrous metals;
- Stainless steel;
- Aluminium;
- Copper;
- Plasterboard;
- Recovered fines (as GSW CT1); and
- Residual waste.

The following wastes will not be accepted at the Penrith RRF:

- Special waste;
- Liquid waste;
- Hazardous waste;
- Restricted solid waste; and
- General solid waste (putrescible).

The facility will recover an estimated 90% of all incoming waste (or 89,100 tonnes per annum). The remainder of the waste received (9,900 tonnes per annum) will be disposed at a lawful landfill. The products recovered will be sorted and aggregated to be sent to the appropriate recycling facilities.

Sorted waste / products will be stored in bays throughout the RRF. Two “large product storage bays” (each approximately 400m³) will be utilised for storing waste / product as required so that designated bays retain sufficient capacity. The large product storage bays may also be used for temporarily storing product prior to loading out however, these bays will not be used for the storage of high hazard wastes such as plastics.

The office operations associated with the Facility will generate waste from office administration and staff lunch activities. Whilst waste generation from these activities are considered minor, they need to be appropriately managed to ensure that waste is minimised and recycled in accordance with the waste hierarchy in the NSW Government’s *NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027* and the *Waste Avoidance and Resource Recovery Act 2011*.

The operation will generate minimal waste as part of the site office operations. However, a full co-mingled recycling system will be introduced into the office. Co-mingled recycling and general waste will be stored in separate bins in the waste storage area.

7.3. Mitigation measures

The WMMP provides environmental control measures and safeguards that will be implemented to minimise waste generated during the demolition, construction and operation phases of the facility.

Measures include but are not limited to:

- Not receiving materials or waste generated outside the Site for storage, treatment, processing or reprocessing except as expressly permitted by the EPL;
- Not receiving or processing more than 99,000 tonnes of waste per calendar year;
- Weighing all incoming waste received via the existing and proposed weighbridge;
- Informing subcontractors of site waste management procedures;
- Training of project and site personnel in the requirements of the WMMP document including minimising wastes, recognising which types of materials are recyclable, and their obligation to use recycling facilities provided on site;
- Clearly assigning and communicating responsibilities to ensure that those involved in the construction are aware of their responsibilities in relation to the waste management plan;
- Engaging and educating personnel on how the various elements of the waste management plan will be implemented;
- Establishing and signposting specific locations for waste management (e.g. recycling bin locations, material stockpile locations);
- Minimising sediment runoff and dust generation;
- Waste minimisation and reuse initiatives.

8. Fire Safety and Management

Fire safety and management has been assessed based on fire safety advice provided by Lethlean Fire and Environment (Appendix N) and the Fire Incident Management Plan (FIMP) prepared by Riskcon Engineering (Appendix O). Together, these reports outline the fire risks posed by the operations of the RRF and the mitigation measures proposed to be implemented to mitigate fire risks.

8.1. Existing environment

The RRF will handle construction and demolition waste, a mixture of non-combustible and combustible materials. The non-combustible portion includes concrete, bricks, steel and soil which do not pose a significant fire risk. However, combustible materials, including timber, cardboard and small quantities of plastic introduce fire risk due to the high heat release rates and flammability of these materials.

The RRF's operational design incorporates concrete hardstands, non-combustible storage bays, and enclosed processing equipment to reduce fire risk. However, the storage and handling of combustible materials must be carefully managed to prevent ignition and contain fire risks.

As a key material processed at the facility, timber has a heat of combustion of approximately 18,000 kJ/kg and burns at temperatures up to 860°C. While it is not highly volatile, large quantities can sustain combustion for extended periods, presenting a fire risk.

The incoming waste stream's overall calorific value is moderate, at approximately 5,325 kJ/kg, but residual materials left after processing have a higher calorific value of 9,800 kJ/kg. Residual waste consists primarily of plastic (4%), plasterboard/Hebel (40%); engineered/non-recyclable timber (30%), cement/grout (10%) and small portions of other various non-recoverable materials such as steel/greens/cardboard/carpets. Plastics, especially PVC, are fire risk material. They can reach burn temperatures of up to 1,200°C, with a heat release rate as high as 30,000 kJ/kg, and release toxic fumes when ignited.

The facility is classified as a Class 8/7b building, standing less than 25m high. According to the National Construction Code Volume 1 2022, the facility would not be classified as "excessive hazard" unless it stores more than 1,000 m² of wood waste or mixed waste residuals to a height of more than 4m. If these limits are not exceeded, the facility is not required to have automatic fire sprinklers, although these are recommended by Fire and Rescue NSW (FRNSW) for facilities larger than 1,000 m².

FRNSW's *Fire Safety Guideline: Fire Safety in Waste Facilities* suggests that facilities of this size should have automatic fire sprinklers, regardless of the type of waste handled. However, the guideline emphasises that the sprinkler system design should match the hazard class of the materials stored. It does not explicitly recommend high hazard sprinklers for all waste types, and under AS2118.1:2017 (Amendments 1 & 2), C&D recycling facilities are categorised under Ordinary Hazard 3 (OH3), which is suitable for waste transfer stations and recycling facilities.

Although plastics are generally present in all waste streams, AS2118.1 makes an important distinction by excluding plastics recyclers from OH3 and categorising them as High Hazard Process Occupancy. However, AS2118.1 does allow for limited amounts of high hazard materials to be stored in buildings with OH3 sprinklers under the classification of incidental storage, provided certain storage limits and conditions are observed. This is discussed in more detail in the sections below.

8.2. Impact assessment

The primary fire hazards at the Nassif Civil RRF are associated with the handling, storage, and processing of combustible materials, including timber, cardboard, and plastics. While these materials present a potential risk of fire, the likelihood of such events can be mitigated through the facility's strict adherence to fire safety controls measures detailed in the section below.

Combustible materials stored in stockpiles may be susceptible to accidental ignition due to factors such as heat generation or external ignition sources like electrical faults or electrical/hot work.

If a fire were to occur in one stockpile, there is a possibility for it to spread to nearby stockpiles, especially if separation and containment are not adequately maintained. However, the facility's design includes significant safety controls, such as creating sufficient physical separation between stockpiles and concrete barriers, which are intended to prevent or limit the spread of fire.

In the event of a fire involving plastics or synthetic materials, there is the potential for the release of toxic by-products. However, the likelihood of such fires causing widespread harm to the surrounding environment or community is minimised by the facility's fire suppression systems and containment strategies, which are designed to manage fires quickly and efficiently. Given the relatively controlled nature of the facility and the fire suppression measures in place, any adverse effects on local air quality are expected to be limited in scope and duration. The impact on nearby residents and sensitive receptors, such as schools, would likely be minimal.

Firefighting efforts could result in firewater runoff that becomes contaminated with hazardous materials. Soil and water contamination from firewater runoff is a concern during fire events, but the facility has been designed with robust firewater containment measures including a containment system designed to capture and isolate such runoff. This minimises the risk of polluted water entering the surrounding environment.

8.3. Mitigation measures

8.3.1. Fire prevention

Fire prevention strategies are designed to minimise the likelihood of fire ignition and limit the spread of any fire that may occur. A key strategy for controlling ignition sources at the RRF will be the implementation of a permit-to-work system for activities such as hot work and electrical repairs. This system ensures that proper safety precautions, including the use of fire blankets and fire spotters, are in place before any work that could ignite combustible materials. Additionally, smoking will be restricted to designated areas away from waste storage and processing areas, further reducing the risk of accidental fires.

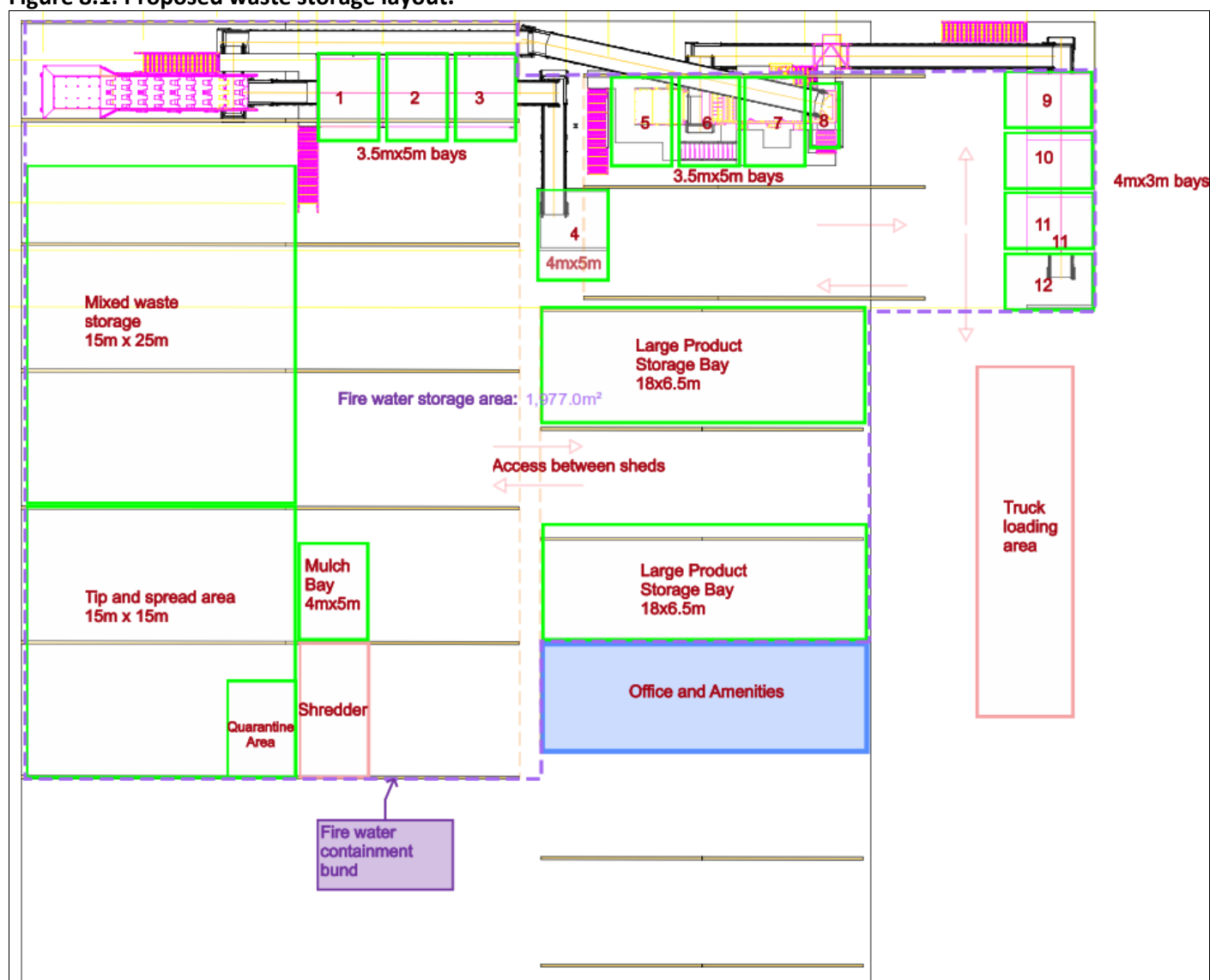
Stockpiles of combustible materials such as timber, plastics, and cardboard will be carefully controlled to reduce the potential fuel load in any area. According to Tables A4.4(A) and A4.4(B) of AS2118.1:2017 *Automatic fire sprinkler systems (General system)*, materials such as paper, cardboard, timber, and PVC are classified under High Hazard Category 3. In context of the RRF, this classification allows for the storage of up to 20 m² of wood and mixed waste residuals, with a maximum storage height of 2.6m. Therefore, the amount of material stored in the Residual Waste Bay (Bay 4) will be restricted to a maximum floor area of 20 m². Similarly, the Mulch Bay will also be limited to 20 m² of floor space for material storage. The height of all sorted combustible materials across the facility will not exceed 2.6m.

To ensure full compliance with AS2118.1:2017, combustible materials will not be stored in adjacent bays, to further limit the risk of fire spreading between combustible stockpiles. These materials will be stored at least 2.4m apart to

comply with the standard and to reduce the risk of fire spread between storage bays. The waste storage layout is provided in Figure 8.1 and in the Site plans in Appendix C.

To further reduce the risk of fire propagation, concrete barriers will be used to store combustible materials in compartmentalised bays. These physical barriers, combined with strict waste segregation protocols, will ensure that any fire is contained to specific areas, limiting the spread to other parts of the facility and enhancing fire control measures.

Figure 8.1. Proposed waste storage layout.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St	Project	C&D Resource Recovery Facility
			Marys (Lots 15 & 16 DP 263353)	Title	Waste storage layout
				Source	Nassif Civil Pty Ltd

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8.3.2. Fire detection and suppression

The facility will be equipped with Ordinary Hazard 3 (OH3) fire sprinklers, which are specifically designed for environments with moderate levels of combustible materials, such as those found in waste processing facilities (refer to Ultra Fire Protection's Fire Services Consultant Advice Notice (CAN) in Appendix AB). These sprinklers will be installed in accordance with AS 2118.1:2017. The street mains will provide fire water supply to the hydrant ring main including the sprinkler system.

In the event of a fire, the OH3 sprinklers will automatically activate, discharging water at a rate of 1.08 m³ per minute for up to two hours, providing an effective and sustained fire suppression capability.

In addition to the sprinkler system, the facility will be equipped with fire hydrants and hose reels positioned strategically throughout the site. These will be installed in compliance with AS 2419.1:2017, ensuring that they provide adequate water pressure and flow to support firefighting operations. This system ensures that first responders have quick and reliable access to the water supply they need to combat any fire effectively.

Portable dry powder fire extinguishers will also be distributed throughout the facility, particularly in areas where combustible materials are stored. Staff will be trained in the correct use of these extinguishers, enabling them to respond swiftly to small fires before they have the chance to escalate. This immediate response capability is critical for ensuring that minor incidents do not develop into larger, more dangerous fires.

8.3.3. Firewater management and containment

To mitigate the risk of environmental contamination resulting from firefighting efforts, the facility has been designed with a robust firewater containment system. In the event of a fire, isolation valves will be activated to prevent contaminated firewater from entering the stormwater system, ensuring that any potential pollutants are contained within the site. The facility's containment capacity will be sufficient to store 136 kilolitres (kL) of firewater, which is designed to accommodate 60 minutes of firefighting operations at full discharge rates.

Once the fire has been extinguished, the contained firewater will be tested for contaminants before firewater is collected by a liquid waste contractor for proper disposal. This process will follow the *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*, ensuring that no polluted water is released into the surrounding environment.

8.3.4. Emergency response and brigade access

A comprehensive emergency response plan will be developed for the facility, as required by HIPAP No. 1 - *Industry Emergency Planning Guidelines* and AS 3745-2010. This plan will provide detailed procedures for the detection, response, and management of fire incidents. It will cover all aspects of fire safety, including evacuation procedures, fire suppression strategies, and coordination with emergency services to ensure a prompt and efficient response.

The Fire Brigade Intervention Model (FBIM) estimates that the fire brigade will be able to initiate a fire attack approximately 14 minutes after ignition. This rapid response time ensures that fires are managed before they can spread significantly, minimising damage to the facility and the environment. Additionally, an Emergency Services Information Package (ESIP) will be prepared, providing first responders with essential information about site access, fire control points, and the specific hazards they may encounter. This package will support effective communication and coordination between facility operators and emergency personnel, enhancing the overall fire response capability.

9. Air Quality Impact Assessment

An Air Quality Impact Assessment (AQIA) was prepared by RWDI for the proposed development (Appendix P). The AQIA has been prepared to assess the potential construction and operational dust and odour impacts associated with the proposed development in general accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW EPA, 2022).

9.1. Existing environment

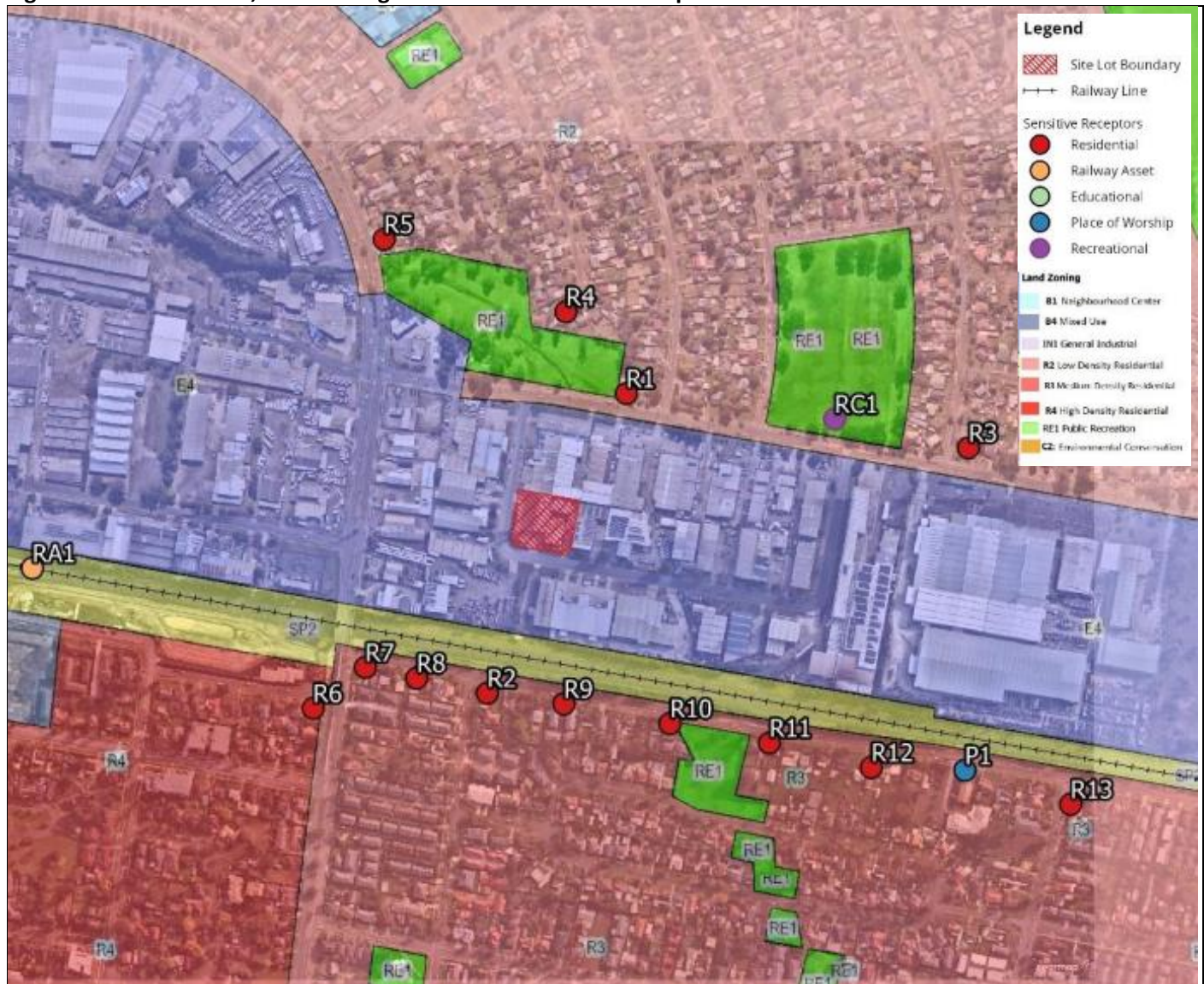
9.1.1. Sensitive receptors

The land use immediately surrounding the site is a mix of commercial, services and industrial suppliers, and is located within the industrial area. Sensitive receivers surrounding the Site are summarised in Table 9.1 and shown in Figure 9.1.

Table 9.1. Sensitive receptors.

Receptors	Address	Type	Coordinates (MGA 56) X	Coordinates (MGA 56) Y
R1	2/7 Kurrajong Road, Cnr Plasser Cres, North St Marys NSW	Residential	294790	6262162
R2	2 Australia St, St Marys NSW	Residential	294636	6261829
P1	42 Plasser Cres, North St Marys NSW	Place of Worship	295167	6261743
RA1	North St Marys NSW	Railway Asset	294130	6261968
RC1	14A Kurrajong Road, North St Marys, NSW	Recreational	295022	6262133
R3	2 Maple Road, North St Marys, NSW	Residential	295171	6262101
R4	35 Cedar Crescent, North St Marys, NSW	Residential	294723	6262253
R5	72 Glossop Street, North St Marys, NSW	Residential	294521	6262333
R6	10 Chesham Street, St Marys, NSW	Residential	294442	6261812
R7	96 Glossop Street, St Marys, NSW	Residential	294500	6261857
R8	82 Hobart Street, St Marys, NSW	Residential	294557	6261845
R9	74 Hobart Street, St Marys, NSW	Residential	294721	6261817
R10	66 Hobart Street, St Marys, NSW	Residential	294839	6261794
R11	59 Hobart Street, St Marys, NSW	Residential	294949	6261773
R12	52 Hobart Street, St Marys, NSW	Residential	295063	6261746
R13	2 Sydney Street, Oxley Park, NSW	Residential	295284	6261705

Figure 9.1. Site location, surrounding land use and sensitive receptors.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Sensitive receptors - AQIA
				Source	RWDI

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9.1.1. Local ambient air quality

No site-specific data are available to determine the existing concentrations of air pollutants at sensitive receptors near the proposed development. Data on existing background pollution concentrations were obtained from the NSW Department of Planning and Environment (DPE) Air Quality Monitoring network. The nearest AQMS measuring the selected pollutants is located at St. Mary's approximately 3.7 km south of the proposed development.

A summary of the ambient air quality monitoring data collected for year 2022 at St. Mary's AQMS is presented in Table 9.2. Note that Total Suspended Particulates (TSP) and deposited dust are not monitored at the station.

Instead, annual average background TSP concentrations were estimated from a relationship with measured PM₁₀ concentrations. This relationship assumes that 40% of the TSP is PM₁₀ and was established as part of a review of ambient monitoring data collected by co-located TSP and PM₁₀ monitors operated for reasonably long periods of time in the Hunter Valley (NSW Minerals Council, 2000).

To estimate annual average dust deposition levels, a similar process to the method used to estimate TSP concentrations is applied. This approach assumes that a TSP concentration of 90 µg/m³ will have an equivalent dust deposition value of 4 g/m²/month. Based on this approach, the background annual average dust deposition was 1.33 g/m²/month for the area surrounding the proposed development.

Table 9.2. Ambient air quality monitoring concentrations used in the AQ assessment.

Pollutant	Averaging Period	Concentration (µg/m ³)	Impact Criteria (µg/m ³)	Ambient Air Quality Concentration as a % of Criteria
Total suspended particulates (TSP)	Annual	26.6	90	30%
Particulate matter ≤10 µm (PM ₁₀)	Annual	11.7	25	47%
	24-hour	29.9	50	60%
Particulate matter ≤2.5 µm (PM _{2.5})	Annual	4	8	50%
	24-hour	12.8	25	51%
Deposited Dust	Annual	1.18	4	29%

Note:

1. Calculated assuming 40% of the TSP is PM₁₀
2. Average of 1-hour data over the year
3. Maximum of 24-hour data over the year
4. Calculated assuming 90 µg/m³ will have an equivalent dust deposition value of 4 g/m²/month

9.2. Impact assessment

9.2.1. Construction

The following stages and typical activities can be expected during construction:

- Minor dust emissions from demolition and staging works;
- Dust emissions from earthworks and civil works;
- Minor Exhaust emissions from vehicles and equipment's; and
- Minor dust emissions from the construction of structure;

Demolition and Excavation is the only construction stage with potential to release substantial dust emissions. Minor dust emissions are expected from all other construction stages.

A qualitative assessment method of dust impacts associated with the construction of the proposed development is considered appropriate for this project. The assessment follows the *"Guidance on the Assessment of Dust from Demolition and Construction"* published by the Institute of Air Quality Management in the United Kingdom (IAQM 2024).

This approach presents the risk of dust soiling and human health impacts associated with four types of activities that occur on construction sites (demolition, earthworks, construction and trackout) and involves the following steps:

- Step 1: Screen the need for a detailed assessment;
- Step 2: Assess the risk of dust impacts arising, based on:

- The potential magnitude of dust emissions from the works; and
- The sensitivity of the surrounding area.
- Step 3: Identify site-specific mitigation; and
- Step 4: Consider the significance of residual impacts, after the implementation of mitigation measures.

The assessment of potential dust impacts from the proposed works indicate that the proposed project will have a negligible risk for all the activities (demolition, earthworks, construction and trackout) for both dust soiling and human health impacts if dust mitigation measures are not implemented, subject to the implementation of the mitigation measures outlined in Section 9.3.1. below.

9.2.2. Operations

Dust emissions during operation of the Proposal have been estimated using emission factors sourced from both locally developed and US EPA developed documentation. The significant sources of dust/particulate emissions associated with the operation of the proposed development are identified as:

- Loading/unloading of material;
- Processing material (timber shredding);
- Truck movements on paved roads; and
- Vehicle Combustion exhaust

No material handling, processing or stockpiling would occur outside the building. Therefore, windblown dust emissions would be negligible. A control factor of 70% has been applied to all sources located inside the building.

The estimated dust emissions associated with the operation of the Proposal are presented in Table 9.3.

Table 9.3. Estimated operational dust emissions.

Source ID's		Total Emissions (kg/year)			Base Emission Rate (g/s)		
IDs	Activity	TSP	PM ₁₀	PM _{2.5}	TSP	PM ₁₀	PM _{2.5}
RA1 - Volume Source	Raw Material Dumped to Stockpile	233.6	93.5	14.2	1.34x10 ⁻²	5.37x10 ⁻³	8.13x10 ⁻⁴
	Load Material into Feed Hopper (Feeding Excavator)	233.6	93.5	14.2	1.34x 10 ⁻²	5.37x10 ⁻³	8.13x10 ⁻⁴
	Vehicle Exhaust Emissions - Receiving Area	3.6	1.4	1.3	2.05x10 ⁻⁴	8.21x10 ⁻⁵	7.75x10 ⁻⁵
PS1 - Volume Source	Screening Material	29.6	10.1	0.9	1.70x10 ⁻³	5.80x10 ⁻⁴	5.42x10 ⁻⁵
	Processing Material	16.2	7.3	1.3	9.29x10 ⁻⁴	4.18x10 ⁻⁴	7.74x10 ⁻⁵
UNLD1 - Volume Source	Unload Processed Material to Stock Piles	233.6	93.5	14.2	1.34x10 ⁻³	5.37x10 ⁻³	8.13x10 ⁻⁴
	Load Processed Material to Truck	1,401.1	560.4	84.9	8.05x10 ⁻²	3.22x10 ⁻²	4.87x10 ⁻³
	Skip Truck Idling - Unloading Area	0.5	0.2	0.2	2.72x10 ⁻⁵	1.09x10 ⁻⁵	1.03x10 ⁻⁵
SLINE1 - Line Volume Source	Loaded Trucks Entering Site	435.4	56.4	13.6	2.50x10 ⁻²	3.24x10 ⁻³	7.83x10 ⁻⁴
	Empty trucks entering site	54.9	7.1	1.7	3.16x10 ⁻³	4.08x10 ⁻⁴	9.88x10 ⁻⁶
SLINE2 - Line Volume Source	Unloaded Trucks Leaving Site	286.2	37	9	1.64x10 ⁻²	2.13x10 ⁻³	5.15x10 ⁻⁴
	Loaded Trucks Leaving Site	153.2	19.8	4.8	8.80x10 ⁻³	1.14x10 ⁻³	2.75x10 ⁻⁴

The approach taken for the operational dust assessment is as follows:

1. Determine meteorological information;
2. Estimate annual dust emissions of each activity associated with worst-case operations of proposed development;
3. Provide emissions and meteorological information to a computer-based dispersion model to predict dust concentrations in the region and at nearest sensitive receptors for the above scenarios; and
4. Compare predicted concentrations with relevant air quality criteria.

9.2.2.1. Fine Particulate matter (PM_{2.5})

Table 9.4 presents the summary of the incremental and cumulative 24-hour average and annual average PM_{2.5} concentrations predicted at each surrounding sensitive receptor.

Table 9.4. Predicted maximum 24-hour and annual average PM_{2.5} concentrations at sensitive receptors.

Receptor	24-hour Averaging Time (Criterion: 25 µg/m ³)		Annual Averaging Time (Criterion: 8 µg/m ³)	
	Incremental Impact (µg/m ³)	Cumulative Impact (µg/m ³)	Incremental Impact (µg/m ³)	Cumulative Impact (µg/m ³)
R1	0.91	11.37	0.33	4.20
R2	1.29	11.19	0.19	4.06
P1	0.16	11.07	0.03	3.90
RA1	0.20	11.07	0.03	3.90
RC1	0.24	11.11	0.07	3.94
R3	0.14	11.08	0.04	3.91
R4	0.88	11.49	0.20	4.07
R5	0.40	11.15	0.08	3.95
R6	0.80	11.07	0.06	3.93
R7	1.00	11.10	0.10	3.97
R8	1.20	11.12	0.14	4.01
R9	1.19	11.21	0.21	4.08
R10	0.62	11.15	0.12	3.99
R11	0.46	11.11	0.08	3.94
R12	0.27	11.08	0.05	3.92
R13	0.10	11.06	0.02	3.89

The results in Table 9.4 show that the Incremental and cumulative 24-hour average and annual average PM_{2.5} concentrations predicted at each surrounding sensitive receptor caused by operational emissions are below the applicable criteria.

9.2.2.2. Coarse Particulate matter (PM₁₀)

Table 9.5 presents the summary of the incremental and cumulative 24-hour average and annual average PM₁₀ concentrations predicted at each surrounding sensitive receptor.

Table 9.5. Predicted maximum 24-hour and annual average PM₁₀ concentrations at sensitive receptors.

Receptor	24-hour Averaging Time (Criterion: 50 µg/m³)		Annual Averaging Time (Criterion: 25 µg/m³)	
	Incremental Impact (µg/m³)	Cumulative Impact (µg/m³)	Incremental Impact (µg/m³)	Cumulative Impact (µg/m³)
R1	5.61	31.88	2.03	13.76
R2	7.90	30.75	1.15	12.88
P1	1.00	30.08	0.21	11.94
RA1	1.23	30.06	0.20	11.93
RC1	1.46	30.3	0.44	12.17
R3	0.83	30.13	0.24	11.98
R4	5.45	32.64	1.25	12.98
R5	2.48	30.57	0.50	12.23
R6	4.89	30.06	0.38	12.11
R7	6.16	30.23	0.62	12.36
R8	7.33	30.38	0.85	12.59
R9	7.14	30.87	1.24	12.98
R10	3.78	30.53	0.75	12.48
R11	2.79	30.28	0.46	12.19
R12	1.68	30.15	0.29	12.02
R13	0.60	30.03	0.14	11.80

The results in Table 9.5 show that the Incremental and cumulative 24-hour average and annual average PM₁₀ concentrations predicted at each surrounding sensitive receptor caused by operational emissions are below the applicable criteria.

9.2.2.3. TSP and Deposited Dust

Table 9.5 presents the summary of the incremental and cumulative annual average of TSP and Deposited Dust concentrations predicted at each surrounding sensitive receptor.

Table 9.5. Predicted annual average TSP concentrations and annual averages of total monthly dust deposition at sensitive receptors.

Receptor	Annual Average TSP ($\mu\text{g}/\text{m}^3$)	Annual Average TSP ($\mu\text{g}/\text{m}^3$)	Deposited Dust ($\text{g}/\text{m}^2/\text{month}$)	Deposited Dust ($\text{g}/\text{m}^2/\text{month}$)
	Incremental Impact	Cumulative Impact (Criterion: $90 \mu\text{g}/\text{m}^3$)	Incremental Impact (Criterion: $2 \text{ g}/\text{m}^2/\text{month}$)	Cumulative Impact (Criterion: $4 \text{ g}/\text{m}^2/\text{month}$)
R1	4.38	31.04	0.13	1.31
R2	2.68	29.34	0.05	1.23
P1	0.38	27.04	0.01	1.19
RA1	0.36	27.02	0.01	1.19
RC1	0.86	27.52	0.02	1.2
R3	0.45	27.11	0.01	1.19
R4	2.59	29.25	0.08	1.26
R5	1.00	27.67	0.02	1.20
R6	0.88	27.54	0.02	1.20
R7	1.44	28.1	0.03	1.21
R8	1.99	28.65	0.04	1.22
R9	2.83	29.49	0.06	1.24
R10	1.61	28.27	0.03	1.21
R11	0.92	27.59	0.02	1.20
R12	0.55	27.21	0.01	1.19
R13	0.26	26.92	0.01	1.19

The results in Table 9.5 show that the incremental and cumulative annual average TSP concentrations and dust depositions predicted at all surrounding sensitive receptors as a result of operational emissions are below the applicable criteria.

9.3. Mitigation measures

9.3.1. Construction

To ensure best practice management, the following mitigation measures are recommended so that construction dust impacts are minimised.

- **Site Management:**
 - Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken.
 - Make the complaints log available to relevant authorities (Council, EPA, etc).
- **Measures for General Construction Activities:**
 - Ensure an adequate water supply on the Site for effective dust/PM suppression/mitigation, using non-potable water where possible and appropriate.
 - Ensure equipment is readily available on Site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

9.3.2. Operations

All sorting operations will occur inside buildings and the existing building has air extraction system and dust filters over the waste receival area. Therefore, the dust impact would be negligible and likely insignificant. Notwithstanding, in an effort to further minimise air quality impacts associated with the Proposal, the following mitigation measures should be implemented where reasonable and feasible:

- Engines of vehicles and plant to be switched off when not in use;
- Vehicles and plant to be maintained in accordance with manufacturer's specifications;
- Reduce drop heights when handling dusty material;
- Dampen excessively dusty material during handling;
- Trafficable areas to be swept/cleaned regularly;
- Vehicles restricted to designated routes;
- On-site speed limits enforced; and
- Vehicle loads to be covered when travelling off-site;

Although the results would comply with the established criteria when the doors are open, it is recommended to keep the doors closed wherever operationally practical.

10. Noise and Vibration Impacts Assessment

A Noise and Vibration Impact Assessment (NVIA) was prepared by RWDI for the proposed development (Appendix Q). The NVIA has been prepared to assess the potential construction and operational noise impacts associated with the proposed development in general accordance with the *Noise Policy for Industry* (NSW EPA, 2017) and other relevant guidelines and standards.

10.1. Existing environment

To characterise the existing noise environment of the project location, RWDI personnel attended site to conduct long-term unattended noise measurements. Two unattended noise monitors were installed on site as shown in yellow in Figure 10.1. Noise monitoring was completed between 25 October 2022 and 10 November 2022.

The locations of the noise monitors were as follows:

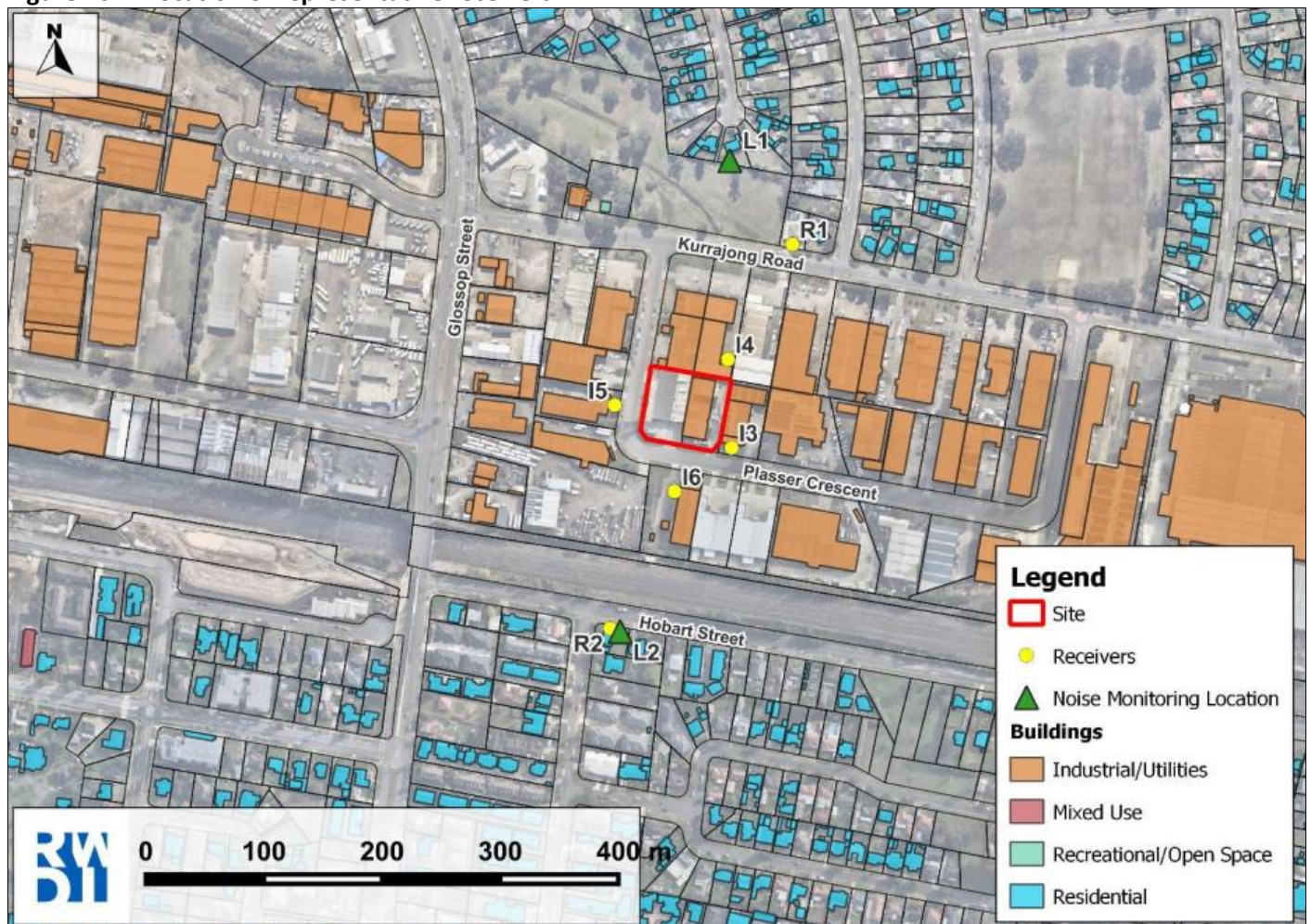
- L1 in the rear yard of 35 Cedar Crescent. This noise monitor is representative of the noise environment for NCA01; and
- L2 in the rear yard of 2 Australia Street. This noise monitor is representative of the noise environment for NCA02.

Representative receivers surrounding the Site are summarised in Table 10.1 and shown in Figure 10.1.

Table 10.1. Sensitive receptors.

Receptors	Address	Type	Distance to Site
R1	2/7 Kurrajong Road, Cnr Plasser Cres, North St Marys NSW	Residential	125m
R2	2 Australia St, St Marys NSW	Residential	165m
I3	25 Plasser Crescent, St Marys	Industrial	East Boundary
I4	3/9 Kurrajong Road, St Marys	Industrial	North Boundary
I5	60 Plasser Crescent, St Marys	Industrial	West Boundary
I6	42 Plasser Crescent, St Marys	Industrial	South Boundary

Figure 10.1. Location of representative receivers.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	Representative Receivers - NVIA
				Source	RWDI

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10.1.1. Project intrusiveness noise levels

The intrusiveness noise criterion aims to protect residential receivers against significant changes in the noise environment due to new development. The project intrusiveness noise criterion states that noise emissions from new development should be no more than 5 dB(A) above the rated background noise level. Based on the rated background noise levels measured on site, the project intrusiveness noise levels are summarised in Table 10.2.

Table 10.2. Project intrusiveness noise levels.

Noise Catchment Area	Time of Day	Rating Background Level (RBL)	Project Intrusiveness Noise Level
		LA90, period dBA	LAeq, 15min dBA
NCA1 (Northern Residential Receivers)	Day (7am- 6pm)	42	47
	Evening (6pm - 10pm)	38	43
	Night (10pm - 7am)	34	39
	AM Shoulder (5am - 6am)	41	46
	PM Shoulder (10pm - 11pm)	35	40
NCA2 (Southern Residential Receivers)	Day (7am - 6pm)	44	49
	Evening (6pm - 10pm)	41	46
	Night (10pm - 7am)	34	39
	AM Shoulder (5am - 6am)	42	47
	PM Shoulder (10pm - 11pm)	37	42

10.1.2. Project amenity noise levels

The project amenity noise criterion is intended to protect receivers against continuing increases in cumulative noise levels from all “industrial” noise sources. The project amenity criterion for any specific receiver is dependent on the land use of the receiver (e.g., residential, commercial, industrial etc.).

The *Noise Policy for Industry* (NPfI) aims to limit continuing increases in noise levels from progressive developments with the application of the amenity criteria. To account for cumulative noise from the development with existing and future industrial premises in the area, the recommended amenity noise level is reduced by 5 dBA (applicable only to residential noise amenity areas) to give the project amenity noise level.

The project amenity noise levels are summarised in Table 10.3.

Table 10.3. NPfI project amenity noise levels.

Receiver	Time of Day	Recommended Amenity Noise Level	Project Amenity Noise Level Criteria dB(A)	Adopted Project Amenity Noise Level Criteria dB(A)
		LAeq, period dBA	LAeq, 15-min	LAeq, 15-min
Residential (Suburban)	Day (7 am - 6 pm)	55	58	53 ¹
	Evening (6 pm - 10 pm)	45	48	43 ¹
	Night (10 pm - 7 am)	40	43	38 ¹
Place of worship	When in use	40 (Internal) 50 ² (External)	-	50
Commercial premises	When in use	70	70	70
Industrial premises	When in use	70	70	70

Note 1: Minus 5 dB applied to account for the cumulative noise from the development with existing and future industrial premises in the area

Note 2: For internal noise criteria typical best practice is to convert the internal noise level to an outside level assuming windows are open. A 10 dB façade loss has been used to convert from internal to external noise levels, based on Development Near Rail Corridors And Busy Roads– Interim Guideline NSW Department of Planning 2008.

10.1.3. Project noise trigger levels

The project noise trigger levels (PNTLs) are defined as the lower of the project intrusiveness and the project amenity noise levels. These overall project noise trigger levels are summarised in Table 10.4 below.

Table 10.4. NPfl overall project trigger noise level criteria.

Receivers	Time of Day	Intrusiveness Criteria	Amenity Criteria	PNTL
		$L_{Aeq, 15min}$ dBA	$L_{Aeq, 15min}$ dBA	$L_{Aeq, 15min}$ dBA
Residential (NCA01)	Day	47	53	47
	Evening	43	43	43
	Night	39	38	38
	AM shoulder	46	-	46
	PM shoulder	40	-	40
Residential (NCA02)	Day	49	53	49
	Evening	46	43	43
	Night	39	38	38
	AM shoulder	47	-	47
	PM shoulder	42	-	42
Industrial premises (NCA03)	When in use	-	70	70
Place of worship (R7)	When in use	-	50	50
Commercial premises (R8)	When in use	-	70	70

Note 1: Day = 7am – 6pm; Evening = 6pm – 10pm; Night = 10pm – 7am

10.1.4. Maximum noise level criteria (sleep disturbance)

The maximum noise level screening criteria aim to protect residential receivers against sleep disturbances from maximum noise level events from premises during the night-time period. This assessment is applicable to NCA1 and NCA2 only.

The maximum noise level criteria are defined as L_{AFmax} 52 dBA or the prevailing RBL plus 15 dB, whichever is greater. The maximum noise level criteria are summarised in Table 10.5.

Table 10.5. Standard and noise-enhancing meteorological conditions.

Receiver	Time of Day	RBL dB(A)	RBL plus 15 dB(A)	Maximum Noise Level
		$L_{90, 15-min}$	L_{AFmax}	Criteria dB(A) L_{AFmax}
NCA01	Day	34	49	52
NCA02	Evening			

L_{AFmax} 52 dBA has been adopted as the maximum noise level criteria for all the residential receivers.

10.1.5. Significance of residual noise impacts

Section 4.2 of the NPfI specifies the following regarding the significance of residual noise impacts:

- If the predicted noise level minus the project noise trigger level is ≤ 2 dBA, the significance of the residual noise is negligible, and the exceedance would not be discernible by the average listener and therefore would not warrant receiver-based treatments or controls.

Noise predictions presented in the noise assessment that are ≤ 2 dBA above the PNTL will not be highlighted as an exceedance.

10.2. Impact assessment – noise

10.2.1. Construction

The proposed construction works are presented in Table 7-1. It is assumed the proposed construction hours will occur within standard construction hours Monday to Friday 7am to 6pm, Saturday 8am to 1pm. No works will occur on Sunday.

Table 10.6. Proposed construction works.

Construction Activity	Description	Construction Equipment
Civil works	• Demolition of some existing structures/buildings occupying the site • Cutting levels to suit required heights • Installation of fill to suit required heights • Compaction of subgrade to engineers' requirements	• 30t Excavator x 3 • Truck and dog x 2 • 18t Drum Roller x 1
Concrete & Structure works	• Minor works footings for new structures and for the weighbridge. • Installation of structural steel portal frames • Installation of sheeting to walls & roof of warehouses • Installation of windows • Painting of external walls	• 40t-50t Mobile Crane x 1 • Line and boom pump x 1 • Concrete truck x 2 • Boom lift/scissor lift x 2 (installation of windows and painting of wall sheeting)

The noisiest construction scenario, Civil Works with demolition, was assessed. Compliance with this scenario assumes compliance with all other constructions scenarios. Predicted noise levels are presented in Table 10.7.

Table 10.7. Predicted Construction Noise Levels and Exceedances.

Receiver	Predicted Noise Level dBA	Construction Noise Management Level <i>L_{Aeq}(15 min)</i> dBA	Highly Affected Noise Level <i>L_{Aeq}(15 min)</i> dBA
R1	32	52	75
R2	51	54	75
I3	69	75	-
I4	41	75	-
I5	56	75	-
I6	67	75	-

10.2.2. Operations

Table 10.8 presents the primary noise sources of generation for the proposed development, as advised by the client. It has been assumed that this operating configuration would occur throughout the proposed operating hours, i.e., 6am to 11pm Monday to Friday, and 7am to 3pm Saturday.

Table 10.8. Schedule of operating equipment.

Location	Item	Sound Power Level dBA	Operation
Receival Warehouse Area	Feeder	105	Internal, operating continuously
	Magnet	83	
	Screen	88	
	Density Separator	98	
	Ballistics Separator	93	
	Excavator(15-20t)	99	Internal, operating 33% of the time
	Shredder/Mulcher	115	Internal, operating 33% of the time
Product Warehouse Area	Front end loader (Volvo L90H)	105	Internal, operating 33% of the time
External	Truck on site at 10km/h	107	2 waste receival, 1 sorted waste collection entering and exiting in 15 minutes
	Truck Reversing	111	1 waste receival, 1 sorted waste collection entering and exiting in 15 minutes

Note: negligible noise impacts are anticipated from the following internal noise sources: material bays, conveyors, and picking stations.

The roller doors located along the southern boundary fronting Plasser Crescent are assumed open in the assessment. As a result, indoor to outdoor breakout noise is considered. Preliminary room breakout calculations were conducted to estimate the breakout noise emissions out of the warehouse through the open roller doors. It has also been assumed that all trucks would switch off engines during loading/unloading while inside.

10.2.2.1. Sleep disturbance

Reversing alarms could have the greatest impact on sleep disturbance at surrounding residential receivers, however predictions indicate maximum noise levels do not exceed the screening level. As such, no further detailed analysis was required.

10.2.2.2. Modifying factors

The NPfI provides correction factors such as tonal noise, low-frequency noise, intermittent noise, and duration. There is no risk of exceeding the PNTL with the maximum 10 dB of penalties for modifying factors. The octave band values do not show any signs of tonality. As such, there is little risk of tonal noise impacts.

10.2.2.3. Predicted operational noise levels

Table 10.9 presents the predicted noise levels applying the mitigation measures recommended above.

Table 10.9. Predicted operational noise levels with mitigation at representative receivers, $L_{Aeq,15min}$ (dBA).

Receiver	Predicted Noise Level (dBA)	PNTL Day	PNTL Evening	PNTL AM Shoulder	PNTL PM Shoulder
R1	16	47	43	46	40
R2	42	49	43	47	42
I3	50	70	70	70	70
I4	22	70	70	70	70
I5	28	70	70	70	70
I6	52	70	70	70	70

10.2.3. Road traffic

It is proposed that all traffic to the site would be via Glossop St/Kurrajong Road before turning onto Plasser Crescent. All traffic leaving the site would turn right onto Plasser Crescent, travelling west, before returning to Glossop St/Kurrajong Road. There are no residential receivers on this proposed route. As such, there would be no noise impact on residences due to additional traffic from the operation of the Project. No further assessment has been completed.

10.3. Impact assessment – vibration

10.3.1. Construction

The drum roller is the only vibration intensive equipment to be used during construction works. The minimum working distance to avoid cosmetic damage during the use of the 18t drum roller is 20 m (as shown in Table 20 – Appendix D TfNSW Construction Noise and Vibration Strategy). Use of the drum roller is not anticipated to occur within 20 m of the nearest sensitive receiver. As a result, compliance with the cosmetic damage criteria and human response criteria will be achieved. No mitigation is required.

10.4. Mitigation measures

RWDI has completed analysis of the source contributions to determine operational controls to mitigate the exceedances of the evening and PM shoulder period. From the analysis RWDI recommends that for the hours of 6pm-11pm Monday to Friday:

- No timber mulching after 6pm; and
- No truck movements after 10pm.

11. Soil and Water Impact Assessment

A Soil and Water Impact Assessment (SWIA) was prepared by Sustainability Workshop Ltd in May 2024 (Appendix R). The SWIA has been completed to understand and evaluate the potential impacts of the proposed development and to determine what, if any, modifications are required to the existing soil and water management at the Site to mitigate any additional impacts.

11.1. Existing environment

The total site area of the combined lots is 4296m², with Lot 15 making up approximately 2016m² and Lot 16 making up 2280m². Each lot has a shed with office facilities, bin storage areas, car parking area and truck parking area.

Concrete hardstand surrounds the sheds with some gravel areas and limited landscaping along the western fence line. The site drains to the rear (north) of the site via a stormwater network consisting of down pipes, pits and underground piping. The site's stormwater network connects to an inter-allotment drainage line which ultimately discharges to a tributary draining northwest to South Creek located approximately 2km from the site. South Creek ultimately drains to the Hawksbury River.

Figure 11.1 shows the existing stormwater infrastructure. Detailed plans are provided in Appendix S.

11.1.1. Acid sulphate soil potential

A review of NSW Soil data indicates that there is no risk of Acid Sulphate Soils being present on the site and furthermore there will be minimal soil disturbance.

11.1.2. Existing groundwater quality

The site is almost entirely impervious, covered with a dense concrete hardstand which complies with NSW EPA requirements for working surfaces and is proposed to remain so, resulting in no risk to ground water. Furthermore, there is no proposed interaction with groundwater (such as extraction). As such, it was not deemed necessary to collect baseline groundwater data and this is not assessed further.

11.1.3. Existing site contamination

There is no known existing site contamination and there will be minimal soil disturbance. The site is fully sealed by concrete, and the demolition and construction activities will only involve minor, controlled disturbances of the ground surfaces. Specifically, concrete will only be cut in limited areas for the placement of footings and necessary trenching for utilities such as plumbing.

Soil disturbance will be highly contained, affecting only small, defined areas such as the weighbridge (~120m²) and an additional ~100m² for footings and trenches. Once these modifications are made, the site will be fully resealed with concrete, restoring the sealed surface condition. The stormwater infrastructure will not be impacted, further ensuring that the existing drainage system remains undisturbed.

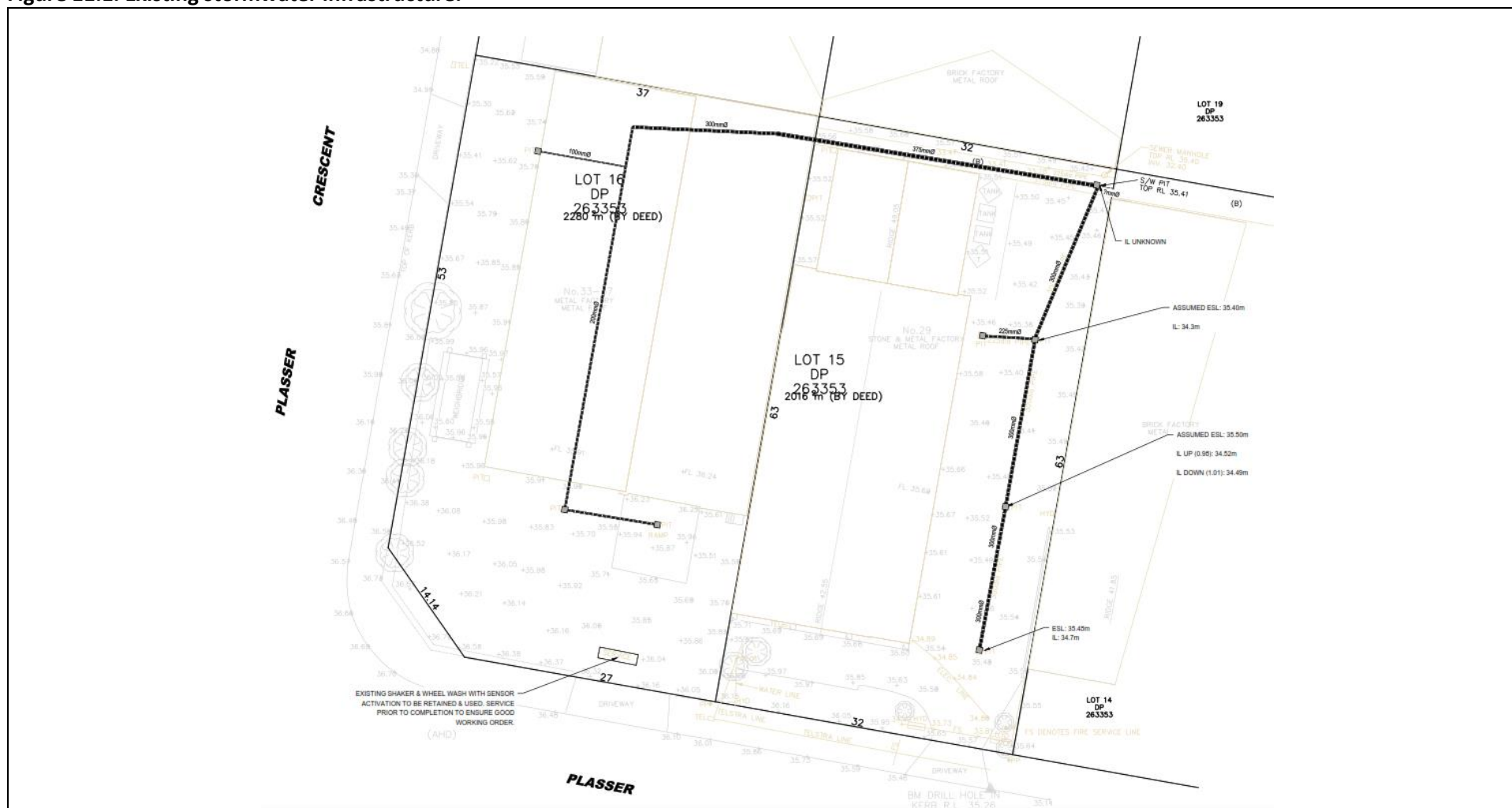
This approach ensures the integrity of the concrete surface and minimises impact or exposure to the underlying soil.

11.1.4. Flooding

The site is located clear of the PMF flood extents for South Creek and Ropes Creek as shown by Figure 11.2 below extracted from the 'Updated South Creek Flood Study' by Worley Parsons, 2015. This shows the site is not likely to be subject to alluvial flooding under any circumstances.

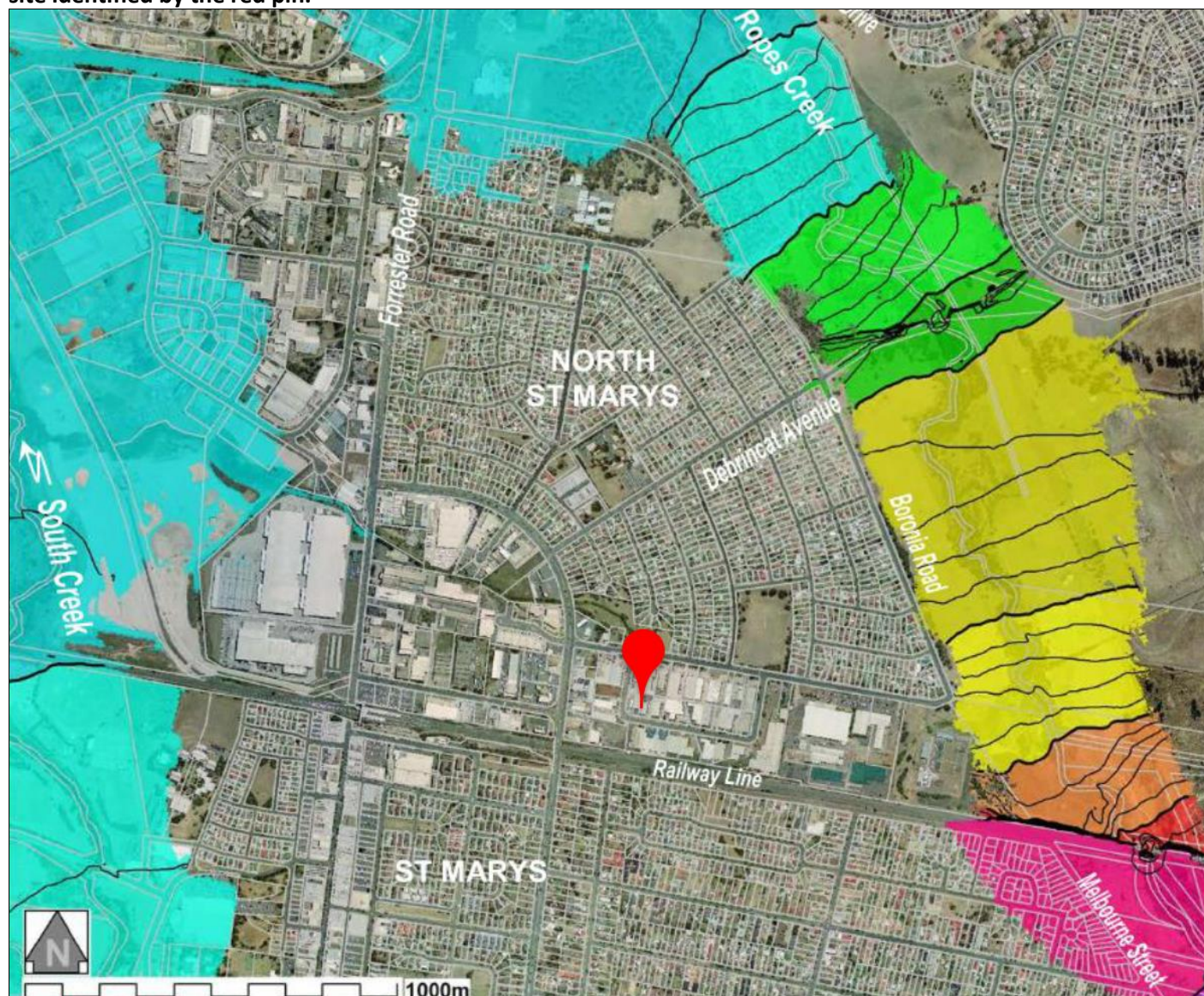
Figure 11.3 below shows the site's location with respect to flooding hazard from local catchment overland flow. While the site is located near to areas that may be affected by the PMF event, the site itself is clear of any hazard.

Figure 11.1. Existing stormwater infrastructure.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Nassif Civil Pty Ltd
24/07/24	Revision A	R. Loemker	29-37 Plasser	Strategy Infrastructure Compliance Procurement		Project	C&D Resource Recovery Facility
			Crescent, North St	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060		Title	Aerial photo of site – region
			Marys (Lots 15 &	E: admin@jacksonenvironment.com.au		Scale	Not to Scale
			16 DP 263353)	T: 02 8056 1849 W: http://www.jacksonenvironment.com.au		Source	Sustainability Workshop

Figure 11.2. PMF Flood Extents (South Creek Flood Study, Worley Parsons Services Pty Ltd, 2015) with the subject site identified by the red pin.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Project	C&D Resource Recovery Facility
				Title	PMF Flood Extents
				Source	Sustainability Workshop

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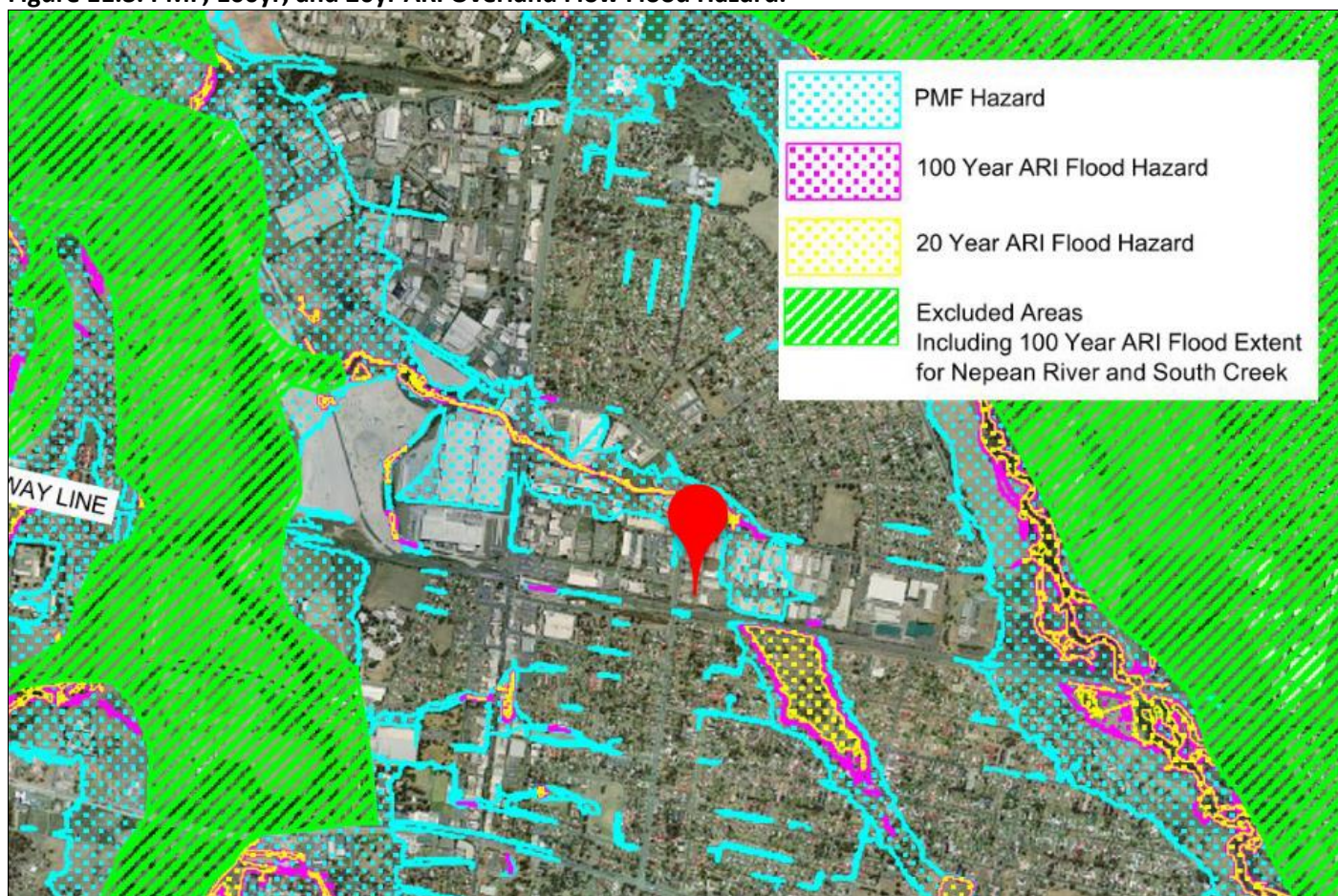
A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060

E: admin@jacksonenvironment.com.au

T: 02 8056 1849

W: <http://www.jacksonenvironment.com.au>

Figure 11.3. PMF, 100yr, and 20yr ARI Overland Flow Flood Hazard.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
24/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St	Project	C&D Resource Recovery Facility
			Marys (Lots 15 & 16 DP 263353)	Title	PMF Flood Extents
				Source	Penrith City Council

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11.2. Impact assessment

11.2.1. Water quality

The proposed development will see only negligible increase in the amount of impervious area (103m²) and therefore will cause no detectable increase in the amount of stormwater runoff generated on the site. The conversion of approximately 190m² (net) of hardstand into a new roof area will see an improvement in the quality of runoff leaving the site, as roof catchments are cleaner than trafficable hardstand catchments.

All sorting and storage is proposed to be undertaken undercover, so there is little risk of stormwater being contaminated via mixing with stockpiled waste, or contaminants leaching from saturated stockpiles.

There is potential for transport operations (i.e. truck deliveries and collection) to cause minor ongoing pollution on site, consistent with the level expected for any industrial zoned area. Furthermore, there is a risk that these vehicle movements could track waste outside the perimeter of the sheds onto open hardstand where it would have the potential to pollute stormwater runoff, however this risk is to be mitigated as discussed below. Therefore, there is a low risk for the proposed development to cause chronic water quality or quantity impacts.

Each of the sheds will also be bunded and so contain any firefighting water. Following a fire emergency, vacuum trucks will remove vacuum the firefighting water and remove it from the site and dispose of it to a lawful facility.

In conclusion there is a negligible acute water quality risk arising from the proposal.

11.2.2. Site water balance

There is no water used in the sorting, processing or storage of waste. The only water demands for the proposed development are for the wheel wash (which is existing), and for staff facilities, including a small amount of drinking water and toilet flushing. The demand for potable water may increase very slightly due to the additional truck activities (water is used in the wheel wash) and a possible increase in staffing numbers.

While there is currently unlikely to be little use of water for irrigation, this is proposed to be supplied from the rainwater tank in order to use some harvested roof runoff from the site, thereby reducing the total volume of stormwater discharged. New toilets will also be supplied with rainwater.

There is no waste water or trade waste produced in the sorting, processing or storing of waste, as such, the only wastewater leaving the site will be the small amount of sewage from staff facilities.

11.2.3. Water balance and stormwater quality modelling

A pre and post development stormwater model was created to assess the pre and post development catchments. There are no existing treatment measures on the site, therefore no treatment nodes were included in the pre-development model. Several treatment nodes were included in the post-development model, including:

- Pit Filter Baskets
- 10kL rainwater tank

Penrith City Council WSUD Policy EH003 titled *Waste Water Urban Design (WSUD) Policy* includes standards for water quality from developments. Given that the site is already (predevelopment) effectively fully impervious and that construction of a new roof over existing hardstand (as is proposed) would not result in a decline in water quality, Penrith City Council were consulted to understand how the proposal would need to address their Policy requirements.

Council agreed that provided the development included a rainwater tank to meet non-potable demands and litter baskets were to be included in existing pits then it was likely that the development would achieve an improvement in water quality and therefore comply with the Policy intent.

The results of the water balance modelling show that the post development scenario results in a reduction in annual runoff leaving the site due to the supply of non-potable demands (toilet flushing and irrigation) (Table 11.1).

Table 11.1. Pre and post development water balance.

	Pre-Development	Post-Development
Total flow generated from the site	2.41ML/year	2.36ML/year
Non-potable demand (toilets and irrigation)	26kL/year*	101kL/year
Rainwater supplied	0kL/year	87kL/year
Demand on Sydney Water network	26 kL/year	4 kL/year
Percentage of non-potable demand met	0%	86%

The water quality modelling results show a reduction across all pollutants from the pre to post development scenarios and the proposal will achieve a noticeable improvement in discharge water quality (Table 11.2).

Table 11.2. Pre and post development water balance.

	Pre-Development	Post-Development	% Reduction
Total Suspended Solids (kg/yr)	238	121	49%
Total Phosphorous (kg/yr)	0.528	0.415	21%
Total Nitrogen (kg/yr)	5.29	4.71	11%
Gross Pollutants (kg/yr)	66.9	37.5	44%

11.3. Mitigations measures

The two proposed mitigation measures include:

- Pit Filter Baskets
- 10kL rainwater tank

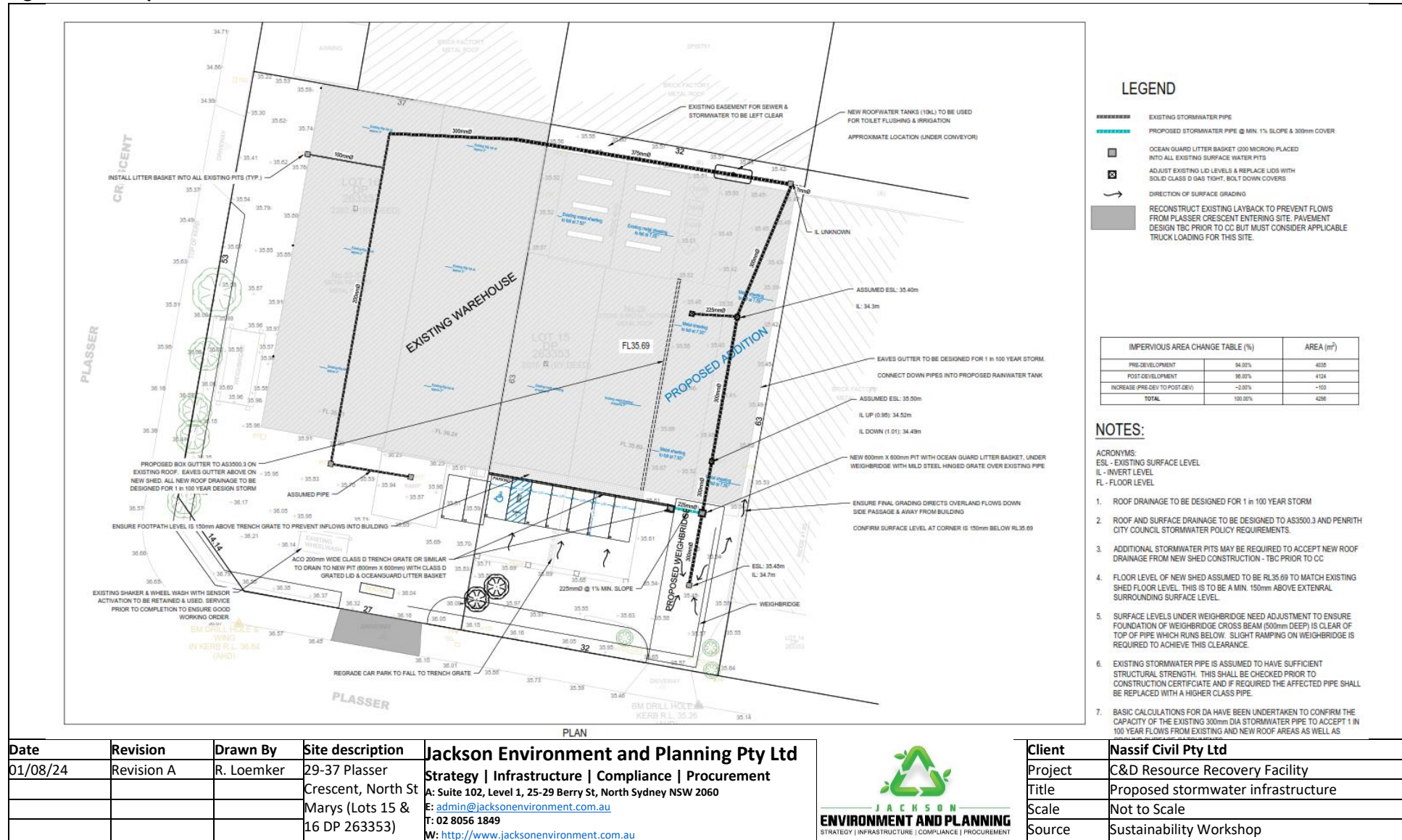
The litter baskets will ensure that if any waste does manage to migrate outside of the building line and get caught up in the stormwater runoff, it will be filtered out and collected in the baskets, prior to the stormwater leaving the site. A rainwater 10kL tank will be installed to capture runoff from the new portion of roof. This has a positive impact on water quality by reducing the quantity of water discharged offsite.

The proposed stormwater infrastructure is shown in Figure 11.4. Detailed plans are provided in Appendix S.

Other mitigations measures include:

- A trafficable bund to be applied to the building to prevent waste from mixing with surface water external to the building
- A detailed Erosion and Sediment Control Plan (ESCP) to be prepared as part of the construction documentation.

Figure 11.4. Proposed stormwater infrastructure.



12. Traffic Impact Assessment

A Traffic Impact Assessment (TIA) was prepared by SECA Solution Pty Ltd (SECA) in July 2024 (Appendix T). The TIA has been undertaken to review the traffic and access impacts associated with the proposed development and:

- Determine the future traffic generation for the development;
- Assess impact on the local road network due to the additional flows;
- Review the access arrangements for the development; and
- Assess any other transport impacts associated with the development including a safety review.

12.1. Existing environment

12.1.1. Road network

Glossop Street, a major north-south road west of the subject site, connects the Great Western Highway (1.3 km south) with St Marys and Marsden Park to the north. As part of Sydney's regional road network, it has two lanes in each direction, turn lanes, and signal-controlled intersections, linking to the Great Western Highway via a 3-way signal-controlled intersection at a 60 km/h speed limit. The Great Western Highway offers high-standard access between Penrith and Parramatta, with three lanes in each direction, signal-controlled intersections, and connections to the M7 and M4, facilitating access across Sydney.

Access to the subject site is through Kurrajong Road and Plasser Crescent. Kurrajong Road, connecting to Glossop Street via a 4-way signal-controlled intersection, has single lanes in each direction, parking on both sides, and non-continual pedestrian footpaths, serving both light industrial and residential areas at a 50 km/h speed limit. Plasser Crescent, forming a semicircular pattern and linking with Kurrajong Road at both ends, provides single lanes in each direction, kerbside parking, and no footpaths, also with a 50 km/h speed limit. It intersects with Kurrajong Road under simple give-way control.

12.1.2. Traffic flows

A traffic study conducted by SECA, with surveys completed by Matrix, analysed peak hour flows at the intersection of Glossop Street and Kurrajong Road. Surveys were done on April 10, 2024, during morning and afternoon peak periods, with additional historical data from May 26, 2017.

Traffic Data Comparison:

- Glossop Street (south of Kurrajong Road):
 - 2017:
 - AM: 1,195 (northbound), 1,338 (southbound), Two-way: 2,533
 - PM: 1,456 (northbound), 1,664 (southbound), Two-way: 3,120
 - 2024:
 - AM: 1,132 (northbound), 1,030 (southbound), Two-way: 2,162
 - PM: 1,539 (northbound), 1,793 (southbound), Two-way: 3,332
- Kurrajong Road:
 - 2017:
 - AM: 282 (eastbound), 279 (westbound), Two-way: 561
 - PM: 287 (eastbound), 429 (westbound), Two-way: 716
 - 2024:
 - AM: 209 (eastbound), 146 (westbound), Two-way: 355

- PM: 253 (eastbound), 369 (westbound), Two-way: 622

Despite the mature road network and high traffic flows on Glossop Street, current traffic flows at this intersection remain similar to past observations, indicating consistent operation over the years.

12.1.1. Daily traffic flows

Normal traffic engineering practice allows for peak hour traffic flows to typically represent 10% of daily traffic flows. Based upon the data collected above this would indicate that the daily traffic flows on Glossop Street would be in the order of 28,000 vehicles per day whilst on Kurrajong Road the daily traffic flows would be in the order of 5,000 vehicles per day, at its western end.

12.1.2. Parking supply and demand

Parking is permitted on both sides of Plasser Crescent and Kurrajong Road. No kerbside parking is allowed along Glossop Street.

There is a high demand for on-street parking along Plasser Crescent and Kurrajong Road. This demand is primarily due to staff parking and vehicles associated with local operations, such as car repair shops, which often have vehicles parked on the street awaiting repair.

Off-street parking is available within various lots on Plasser Crescent, catering to the individual needs of these lots.

12.2. Impact assessment

12.2.1. Access and circulation

Vehicles will access the site via Plasser Crescent. Vehicles will enter through the western side of Lot 16 DP263353 for waste inspection and weighing before reversing into the warehouse for waste tipping. Vehicles collecting sorted waste will use the eastern driveway on the south side of Lot 15 DP263353. All trucks will use the signal-controlled intersection of Glossop Street and Kurrajong Road, entering Plasser Crescent from the western intersection with Kurrajong Road. Light vehicles can use the existing driveway, with parking available in front of the building. Staff arrive before trucks, and no general public access is allowed.

An Operational Traffic Management Plan will be implemented (Appendix U) to manage vehicle movements.

The existing access points on Plasser Crescent will be retained with some widening at the site entry to accommodate semi-trailers entering and exiting in a forward direction. The driveway location will be retained with minor width adjustments.

Inside the warehouse, vehicles will be directed to a dedicated "tip and spread area" for inspection of non-compliant waste as per the NSW EPA 2019 standards. Rejected waste will be reloaded for off-site transport to a licensed facility. Vehicles will exit the warehouse and the site via the western driveway, turning right onto Plasser Crescent. Vehicles collecting sorted waste will reverse into the warehouse via the eastern roller door for loading, then proceed to the weighbridge for net weight assessment before exiting the site in a forward direction and turning right onto Plasser Crescent.

Traffic turning paths are provided in Appendix U.

12.2.2. Parking

Parking for the development is provided for staff on site with access via the existing driveway on Plasser Crescent. A new parking area on the southern side of the building will accommodate 10 cars. According to Penrith City Council

DCP, the parking rate for this development is 1 space per 2 employees or based on floor area. With 14 staff on site, 7 spaces are required; the provision of 10 spaces exceeds the DCP requirements.

12.2.3. Traffic generation

The proposed development will result in an average of 222 truck movements (111 inbound and 111 outbound) per day from Monday to Friday (6 am - 11 pm) and 142 truck movements (71 inbound and 71 outbound) per day on Saturdays.

Incoming waste, delivered in skip bins on 12.5m heavy rigid vehicles, will account for an average of 196 truck movements (98 inbound and 98 outbound) per day on weekdays and 126 truck movements (63 inbound and 63 outbound) on Saturdays.

Waste sorted for off-site processing will be collected daily in 19m semi-trailers, accounting for an average of 26 truck movements (13 inbound and 13 outbound) per day on weekdays and 20 truck movements (10 inbound and 10 outbound) on Saturdays.

Up to 24 employee vehicles may access the site daily across two shifts, with 4 additional staff during the day and 2 during the evening shift.

The existing operation sees approximately 8 truck movements per hour (4 in and 4 out) to handle the transfer of 30,000 tpa. When fully operational, the new project could generate 222 truck movements per day (111 inbound and 111 outbound) from Monday to Friday. Staff movements will occur primarily in the morning, with operational staff arriving before the first truck and departing after the last truck. Four administration staff, 2 more than currently, will arrive and depart during standard working hours, resulting in an additional 4 inbound cars in the morning and 2 extra outbound cars and 2 inbound cars at shift change, with 2 extra departures at 11 PM.

The development will have a relatively low impact on daily traffic movements in the locality of the subject site. At peak operations, there could be 20 truck movements per hour (10 in and 10 out), which is an increase of 12 trips per hour over the existing situation. This results in a total of 222 truck movements per day (Monday to Friday) and 142 truck movements on Saturdays. This additional traffic represents less than 0.5% of the daily traffic flows on Glossop Street, which sees around 28,000 vehicles per day.

During peak hours, the development will generate 29 vehicle movements per hour (16 light and 13 heavy) at shift change between 2pm and 3pm, which is outside of the road peak traffic demands. During the AM peak (7am-9am), the site will generate 13 combined vehicle movements per hour, and during the PM peak (3pm-5pm), the flow will be similar.

The key intersection at Glossop Street and Kurrajong Road has been assessed with Sidra software, showing that the additional 12 truck movements per hour will have a minimal impact. Current traffic flows at this intersection are approximately 2,600 vehicles in the AM peak and 4,000 in the PM peak hour. The additional traffic represents less than a 0.5% increase in the AM peak and 0.3% in the PM peak.

Outside of peak hours, traffic flows decrease significantly, improving intersection operations with reduced delays and congestion. From 6pm to 11pm, the intersection will operate well with minimal delays.

The additional 12 truck movements per hour during peak times will have a minimal and acceptable impact on the intersection at Glossop Street and Kurrajong Road. The overall operation of the intersection and the local road network will not be significantly affected by the development. No time restrictions are required for trucks accessing the site.

12.2.4. Sight distances

The site access points are simple driveways located on a straight section of road, allowing drivers to observe the driveway as they approach. For exiting onto Plasser Crescent, the driveway is near a 90-degree bend, reducing vehicle speeds below the posted limit of 50 km/h. Drivers exiting the site can see approximately 60 metres for vehicles approaching from the west, which corresponds to a safe speed of 40 km/h as per AS2890 standards. Visibility to the left (east) exceeds 120 metres, meeting the AS2890 requirements.

Although a large number of parked vehicles can impact sight lines, truck drivers have a raised seating position allowing them to see over parked cars. Regular drivers familiar with the site layout will be fully aware of access options and conditions

12.2.5. Queuing

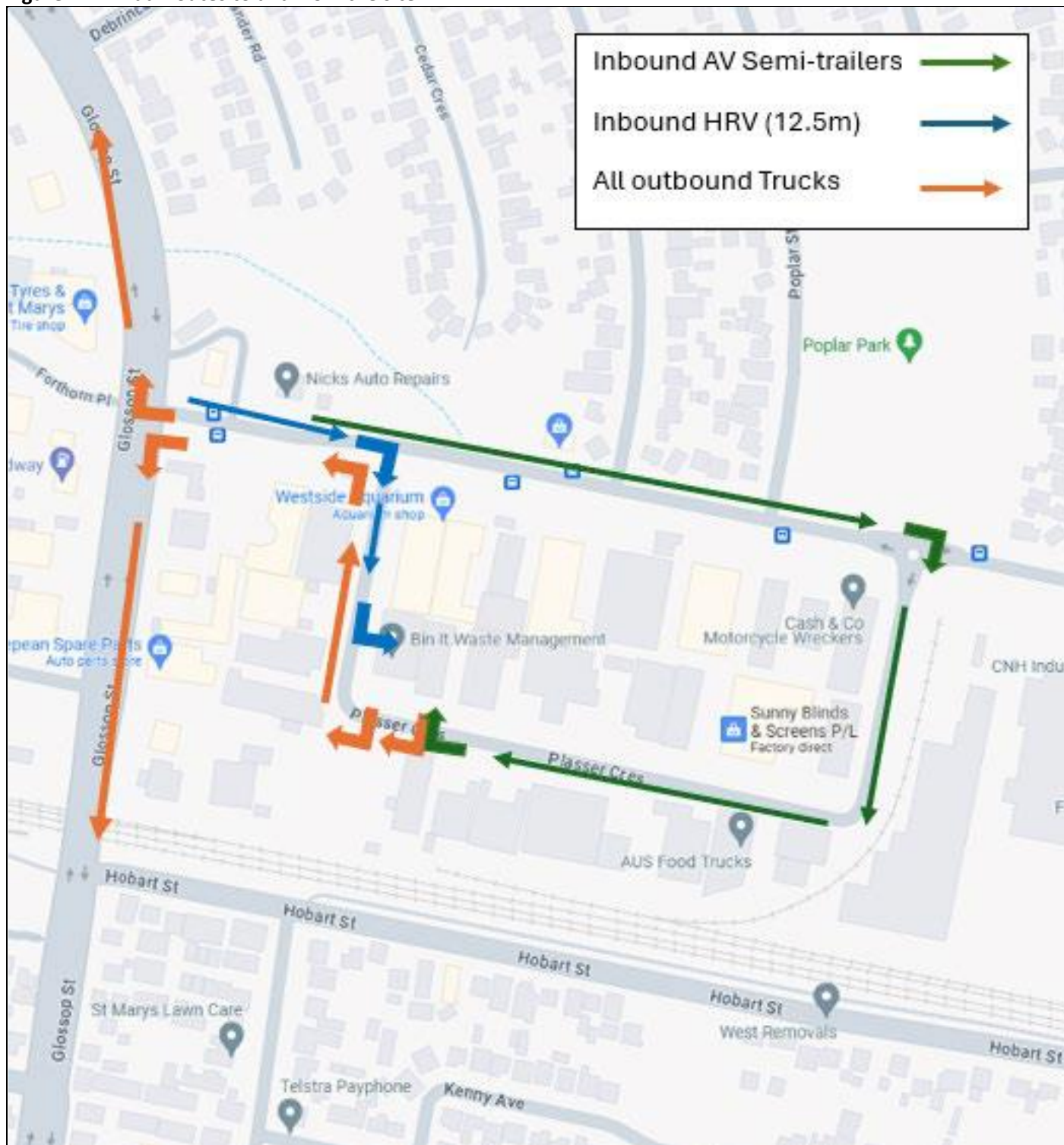
No vehicle queues are expected at the site entry/exit points. The project has low hourly traffic demands, with an upper limit of 10 trucks arriving per hour and an average of 13 truck movements per hour (1 truck every 6-9 minutes). On-site management ensures a maximum of four vehicles on site at any time (one on the weighbridge, one unloading, one within the site prior to the weighbridge, and one loading outbound product).

A Traffic Controller/Scheduler will manage site operations to avoid more than one truck arriving simultaneously and to prevent trucks from standing within the street.

12.2.6. Traffic distribution

All trucks accessing the site will do so via the traffic signal-controlled intersection of Glossop Street and Kurrajong Road, providing direct access to the greater road network. From this intersection, trucks can head north or south along Glossop Street to reach various areas across greater Sydney (refer to Figure 12.1). It is expected that 2/3 of the trucks will travel south on Glossop Street, using either the Great Western Highway or connecting to the M4 Motorway as required, while 1/3 will head north.

Figure 12.1. Haul routes to and from the site.



Date	Revision	Drawn By	Site description	Client	Nassif Civil Pty Ltd
01/08/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St	Project	C&D Resource Recovery Facility
			Marys (Lots 15 & 16 DP 263353)	Title	Haul routes to and from the site
				Source	SECA

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12.3. Mitigation measures

The subject site is to be occupied by a single operator with capacity to schedule truck arrival and departure times. Truck arrivals and departures are to be scheduled by the operator to ensure that vehicles are not required to enter and exit the subject site simultaneously, queuing does not occur on-street, all loading activities are accommodated onsite, and all vehicles enter and exit the site in a forward direction. The site manager is responsible for coordinating truck arrivals and departures with truck drivers via two-way radio to ensure trucks do not arrive and depart simultaneously and queuing does not occur on street.

Reference should be made to the Operational Traffic Management Plan (OTMP) presented in Appendix U which discusses the operational arrangements in more detail. This OTMP will be appended to the Site's Operational Environmental Management Plan (OEMP). The OEMP will be updated upon approval of the facility to include all up-to-date controls and processes that will be determined during the approval stage.

13. Visual Impact Assessment

A Visual Impact Assessment (VIA) was prepared by Jackson Environment and Planning in November 2022 and updated in 2024 (Appendix W). The VIA was conducted in accordance with the *Guidelines for Landscape and Visual Assessment 3rd Edition* (The Landscape Institute with the Institute of Environmental Management and Assessment 2013). The VIA was carried out following the below steps:

- Assess the visibility of the proposal. This includes a review of the existing visual environment/landscape setting of the locality;
- Identify key existing viewpoints and their sensitivity. This requires the preparation of a viewpoint analysis using a representative number of viewpoints located within a reasonable distance of the site located within its visual catchment; and
- Assess visual impacts. A brief description of the proposal is included within this section followed by an assessment of the likely impacts based on a composite of the sensitivity of the view and the magnitude of the proposal being a combination of scale, size and character having regard to the proximity of the viewer.

The methodology employs a systematic evaluation of the visual environment and uses value judgements based on community responses to scenery. This method separates objective aspects (e.g. physical setting, character, visibility of the proposal) from subjective aspects (e.g. compatibility of the proposal within the setting).

13.1. Existing environment

The Site is located within a well-established industrial area (in the E4 General Industrial zoned area) of St Marys. Kurrarong Road is located to the North and Railway (SP2 zone) to the Southwest. The site is in the vicinity of Low Density Residential Zone (R2) to the North and Medium Density Residential Zone (R3) to the South. St Marys Public school is located at an approximate distance of 700 m north-west of the site.

Lot 15 is approximately 2016 m² and Lot 16 is approximately 2280 m² with a total combined site area of 4296 m². Each lot has a shed with office facilities, bin storage areas, car parking area and truck parking area.

Concrete hardstand surrounds the shed with some gravel areas and limited landscaping along the western fence line. A fence also borders the south and west site boundaries whilst buildings form the northern and eastern boundaries.

Figure 13.1 shows the front of 33-37 Plasser Crescent and dominant Site features and Figure 13.2 shows the front of 29-31 Plasser Crescent and dominant Site features.

13.1. Impact assessment

The most dominant site feature of the proposed development is the construction of the new shed on 29-31 Plasser Crescent (Lot 15 DP 263353) and therefore the most likely feature to present a potential visual impact (refer to Figure 13.3)

SEARs 1694 requires the visual impact assessment to consider any external stockpile area arising from the intensification of the use of the site. No wastes are proposed to be stored outdoors. Therefore, further consideration of any external stockpile area is not required.

Therefore, the VIA was focused on the visual impacts of the proposed shed, in addition to changes to the façade on 29-31 Plasser Crescent, and consideration of proposed landscaping works and upgrades to the boundary fence (refer to landscaping plan).

Figure 13.1. View of the front of 33-37 Plasser Crescent (Lot 16 DP 263353) showing dominant Site features.



Figure 13.2. View of the front of 29-31 Plasser Crescent (Lot 15 DP 263353) showing dominant Site features.



Figure 13.3. Architectural design of the Site including the new shed.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	Nassif Civil Pty Ltd
15/07/2024	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)	Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	 JACKSON ENVIRONMENT AND PLANNING STRATEGY INFRASTRUCTURE COMPLIANCE PROCUREMENT	Project	VIA - C&D Resource Recovery Facility
						Title	Architectural design
						Scale	Not to scale
						Source	NearMap

A desktop study was undertaken to determine the probable areas from where views may be affected by the development. Due to the small scale of the project (in terms of infrastructure changes), existing buildings on the Site and surrounding vegetation were considered in the initial analysis. Following the initial desktop study, nine (9) viewpoints were selected around the Site and photographs taken.

Viewpoint locations are provided in Figure 13.4. The individual viewpoint analysis is contained in the VIA (Appendix W).

The visual impacts associated with the Project are anticipated to be minimal on its surrounds.

The location of the proposed development within the existing industrial area limits its visibility from surrounding sensitive receptors. Existing industrial buildings and mature vegetation screen the majority of views from all directions, allowing only potential glimpses of the proposed development.

The proposed development generally has a low impact except for the proposed shed within immediate proximity to the site entrance and the few buildings on the opposite side of Plasser Crescent such as shown at Viewpoint 8.

13.2. Mitigation measures

Mitigation measures have been developed in consultation with the Project's landscape architect (refer to Appendix Y). The landscape plan includes a plant list that proposes a number of mature trees, shrubs, ground cover and grasses.

The Penrith Development Control Plan (DCP) for industrial developments provides guidelines to minimise the visual impacts and enhance landscaping. The landscape plan has been developed with consideration to the Penrith DCP.

The landscape plan provides landscaping to screen the car parking and turning areas by using a mix of dense shrubs, trees, and ground covers to ensure these spaces are visually integrated and not dominant in the streetscape.

To soften the visual impact of industrial buildings, the landscape plan recommends substantial perimeter planting, focusing on public-facing sides and areas adjacent to other properties. The landscaping elements help break up large wall surfaces, while a variety of plant heights and types create a multi-layered, visually interesting landscape.

Architectural design using varied rooflines, façade articulation, and material variation to reduce the perceived mass of the shed. The detailed architectural renderings demonstrate how the shed integrates with the existing streetscape, using colors and textures that complement the surrounding environment.

The setbacks have been incorporated to reduce the visual dominance of the new industrial building. The office and front of the shed has been set back from the street, creating a landscaped buffer zone that enhances the streetscape with attractive planting. A 1m wide corridor has been allowed for between the new shed and neighboring building to reduce the bulk of the new shed, further reduce visual impact, and allow for pedestrian access to the rear.

Once mature, the trees and shrubs will provide better visual integration of the proposed development within the existing landscape character of the area and provide effective screening of the building and car park. The proposed mitigation measures will help mitigate the visual impact of the proposed development from the immediate area, buildings on the opposite side of the road and for passing traffic.

Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au		Client	Nassif Civil Pty Ltd
09/11/2022	Revision A	R. Loemker	29-37 Plasser Crescent, North St Marys (Lots 15 & 16 DP 263353)			Project	VIA - C&D Resource Recovery Facility
						Title	Viewpoint locations
						Scale	Not to scale
						Source	NearMap

The Visual Impact Assessment (VIA) highlights the rigorous evaluation of how the building would appear within its industrial setting. This assessment was aligned with industry standards, considering the site's location within a well-established industrial zone. The landscape and existing structures surrounding the site already limit visibility, and mitigation measures have been designed to reduce any perceived bulk or scale issues.

The new access corridor along the eastern boundary has been introduced to reduce the visual dominance of the building. By shifting this corridor, the development reduces its mass along the streetscape and creates better integration with the surrounding environment. This change, combined with landscaping enhancements, ensures the building fits seamlessly into its industrial setting while reducing its visible impact from key viewpoints.

Additionally, the building's architectural design incorporates varied rooflines, façade articulation, and material variation to break up large wall surfaces and reduce the perceived mass of the shed. The proposed setbacks further diminish the apparent size, creating a landscaped buffer that not only enhances the streetscape but softens the building's visual presence. Landscaping plans, which include a mix of dense shrubs, trees, and ground cover, will further help blend the structure into the surroundings, improving the visual amenity for both nearby properties and passing traffic.

Council's concerns over the potential visual impact have been taken seriously, and the proposal now demonstrates significant effort to minimise bulk and scale issues through these targeted design and landscaping strategies.

14. Biodiversity

14.1. Existing environment

The Site is located within a heavily industrialised area which is highly disturbed and has historically been cleared. Vegetation in the immediate vicinity of the Site has been highly modified due to land clearing and urban development.

The Site does not have any known vulnerable, threatened or protected flora or fauna species located within the site boundaries.

The nearest wetland is located approximately 900m northwest of the Site, on South Creek. Ropes Creek is located approximately 1000m to the east of the Site.

14.2. Impact assessment

Due to the distances to any environmentally sensitive areas (ESAs) and the site's location isolated by built infrastructure, the development activities and the ongoing site operations is unlikely to have any risk of harm to the wetland areas of South creek and Ropes creek.

Two existing small exotic trees are required to be removed as part of the Proposed Development. Both trees are exotic vegetation with one tree being <5m in height and have a <100mm caliper at 1400mm height. The other tree is <3.5m height and within the clearance area of a fire hydrant.

The Proposed Development is unlikely to have any impact on biodiversity in the immediate and surrounding areas.

14.3. Mitigations measures

No mitigation measures are required or recommended. However, the two exotic plants will be replaced with landscaping that is comprised of native species that will provide a buffer between car parking and the street as per the Landscape Plan (refer to Appendix Y).

15. Bushfire

15.1. Existing environment

The proposed development site does not fall within the bushfire prone area.

The Site represents a well-managed industrial allotment within a general industrial area. There is no grassland within 200m of the Site and the nearest bushfire prone vegetation is located approximately 800m from the Proposed Development.

15.2. Impact assessment

No harm or risk of harm has been identified for the proposed development site from bushfire.

15.3. Mitigation measures

As no bushfire impacts are likely to occur because of the Proposed Development, no project-specific mitigation is required.

16. Aboriginal Cultural Heritage Impacts assessment

16.1. Existing environment

A search of the Office of the Environment and Heritage's Aboriginal Heritage Information Management System (AHIMS) on 10 July 2024 does not show any aboriginal objects recorded on the Site or within 200m the Site.

The subject Site is not identified as a heritage item or conservation area under the *Penrith Local Environment Plan* (LEP) 2010. There are no heritage items of local significance within 200m of the Site.

16.2. Impact assessment

The Proposed Development is unlikely to have any impact on Aboriginal cultural or environmental heritage as there will be no off-site impacts. The Proposed Development includes only minor excavations for the installation of the weighbridge. While there is the potential that items of Aboriginal cultural significance could be uncovered, this is considered highly unlikely.

16.3. Mitigation measures

As no Aboriginal cultural or environmental heritage impacts are likely to occur because of the Proposed Development, no project-specific mitigation is required.

17. Compilation of Mitigation Measures

Table 17.1 provides a summary of the proposed mitigation measures to be implemented to reduce the risk of environmental or human health impacts occurring because of the proposed development.

Table 13.1. Summary of the proposed mitigation measures to be implemented during construction or prior to commencement of operation of the proposed development.

Impact	Mitigation Measure
Hazards and Risks	Ensure vehicle speed limits and regular driver education
	Ensure firefighting equipment is available and serviceable and training is provided on its use
	Implement and maintain an emergency management response plan
	Implement and maintain a pollution incident response management plan
	Implement and maintain an Operational traffic management plan
	Implement and maintain a Work health and safety plan
	Ensure strict non-smoking policy is enforced at all times
Waste	Not receiving materials or waste generated outside the Site will be received at the Site for storage, treatment, processing or reprocessing except as expressly permitted by the EPL
	Not receiving or processing more than 99,000 tonnes of waste per calendar year
	Weigh all incoming received via the existing and proposed weighbridge
	Inform subcontractors of site waste management procedures
	Train project and site personnel in the requirements of the WMMP document including minimising wastes, recognising which types of materials are recyclable and obligations to use recycling facilities provided on site
	Clearly assign and communicate responsibilities to ensure that those involved in the construction are aware of their responsibilities in relation to the waste management plan
	Engage and educate personnel on how the various elements of the waste management plan will be implemented

Impact	Mitigation Measure
	Establish and signpost specific locations for waste management (e.g. recycling bin locations, material stockpile locations)
	Implement waste minimisation and reuse initiatives
Fire	Implement a permit-to-work system for any activities that involve potential ignition sources, such as hot work and electrical repairs
	Limit the size of stockpiles for combustible materials such as timber and residual waste. Storage of mulch and mixed waste residuals will be limited to 20m ² of floor area and a maximum height of 2.6 meters
	Combustible materials will be stored at least 2.4 meters apart (i.e. not in adjacent bays)
	Use concrete barriers to store combustible materials in compartmentalised bays
	Install OH3 fire sprinklers, specifically designed for the Site, in compliance with AS 2118.1:2017
	Install hydrants and hose reels strategically throughout the site in accordance with AS 2419.1:2017
	Install dry powder fire extinguishers throughout the facility
	Install isolation valves on stormwater inlets to prevent contaminated firewater from entering the stormwater system
	Maintain the capacity to store 136 kL of firewater, sufficient to accommodate 60 minutes of firefighting operations at full discharge
	Develop a comprehensive emergency response plan in accordance with HIPAP No. 1 - Industry Emergency Planning Guidelines and AS 3745-2010
	Develop an Emergency Services Information Package to assist responders with site access, fire control points, and hazard management.
Air	Ensure engines of vehicles and plant are switched off when not in use
	Ensure Vehicles and plant to be maintained in accordance with manufacturer's specifications
	Reduce drop heights when handling dusty material
	Dampen excessively dusty material during handling
	Regularly clean/sweep trafficable areas
	Restrict vehicles to designated routes
	Ensure vehicle speed limits and regular driver education

Impact	Mitigation Measure
	Ensure vehicle loads are covered when travelling off-site
Noise and vibration	Ensure no timber mulching occurs after 6pm
	Ensure no truck movements occur after 10pm
Soil and water	Install pit filter baskets in all existing stormwater inlets
	Install a 10kL rainwater tank
	Install a trafficable bund to the building to prevent waste from mixing with surface water external to the building
	Implement a detailed Erosion and Sediment Control Plan as part of the construction documentation
Traffic	Implement and maintain an Operational traffic management plan
Visual	Implement landscape plan

18. Ecological Sustainable Development

18.1. The Precautionary Principle

The Precautionary Principle applies where ‘if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation’. Implementing the precautionary principle includes:

- Careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
- An assessment of the risk-weighted consequences of various options.

The Proposal will present no threat of serious or irreversible environmental damage. As part of the due diligence process, all SEARs environmental requirements and statutory provisions including SEPPs and LEPs have been addressed.

18.2. Intergenerational equity

The intergenerational equity principle recognises that ‘the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations’. The occupiable portions of the buildings will provide healthy internal and external environments for workers and visitors. Diverting waste for the recovery of resources avoids disposal of to landfill, and thus avoids an intergenerational source of land, water, and air pollution.

18.3. Conservation of biological diversity and ecological integrity

Ecologically Sustainable Development mandates that the conservation of biological diversity and ecological integrity should be a fundamental consideration in environmental planning and decision-making processes. Biodiversity refers to the variety of all life. Water sensitive urban design using stormwater filtration systems (artificial) will be integrated into the development to meet water quality thresholds. The Facility incorporates onsite landscaping with indigenous, low water use, drought resistant plant species.

18.4. Improved valuation, pricing and incentive mechanisms

This principle requires that environmental factors should be included in the valuation of assets and services in terms of the overall costs to the Proposal. The proposal is consistent with the principle of pursuit of goals “in the most cost-effective way”.

Development of the Proposal imposes an economic cost on the proponent and provides for increased economic activity for a relatively low capital cost. Effects on environmental resources have been given appropriate valuation and assessed in this EIS. The design and operation of the facility will reduce waste to landfill and associated emissions by providing a resource recovery solution for C&D waste

By using this facility customers pay the gap between the cost of sustainable resource recovery and the value of the recovered resources. This places a value on the environmental service of organic recycling.

19. Estimated Development Cost

An Estimated Development Cost (EDC) was prepared by Construction Consultants in accordance with the Department of Planning, Housing and Infrastructure's Planning Circular PS 24-002: *Changes to how development costs are calculated for planning purposes*.

The EDC (excluding GST) is \$3,074,778. A summary is provided in Table 19.1 below. A copy of the full EDC report is provided at Appendix W.

Table 19.1. Estimated Development Cost summary.

Description	\$/ Excl. GST
Demolition and Construction (including plant, equipment, furniture and fittings)	\$2,863,836
Consultant Fees	\$68,155
Authority Fees	\$4,952
Contingency	\$99,034
Escalation	\$106,957
Total Project Cost (Excl. GST)	\$3,074,778

Appendix A - SEARS Table

Table A1. Planning Secretary's Environmental Assessment Requirements (SEAR) 1694

Aspect	Requirements	Section in EIS
General Requirements		
General Requirements	The Environmental Impact Statement (EIS) for the development must comply with these assessment requirements and must meet the form and content requirements in sections 190 and 192 of the <i>Environmental Planning and Assessment Regulation 2021</i> .	N/A. This EIS has been prepared to meet the form and content requirements in sections 190 and 192 of the <i>Environmental Planning and Assessment Regulation 2021</i> .
Key Issues		
Strategic and statutory context	• A detailed justification for the proposal and suitability of the site for the development • A demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies • A list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out • A description of how the proposed expansion integrates with existing on-site operations • A description of any amendments to and/ or additional licence(s) or approval(s) required to carry out the proposed development.	• Section 2.3 • Section 4 • Section 1.5 • Section 3 • Section 1.5
Suitability of the site	• A detailed justification that the site can accommodate the proposed processing capacity, having regard to the scope of the operations and its environmental impacts and relevant mitigation measures • Floor plans depicting the proposed internal layout, including the location of machinery and equipment.	• Section 2.3 • Appendix C
Waste management	• Details of the type, quantity and classification of waste to be received at the site • Details of the resource outputs and any additional processes for residual waste • Details of waste handling including, transport, identification, receipt, stockpiling and quality control • The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the <i>NSW Waste Avoidance and Sustainable Materials Strategy 2041</i>.	Section 7 and Appendix M
Air quality and odour	• A quantitative assessment of the potential air quality, dust and odour impacts of the development, during both construction and operation, in accordance with relevant Environment Protection Authority guidelines	Section 9 and Appendix P

Aspect	Requirements	Section in EIS
General Requirements		
	A description and appraisal of air quality and odour impact mitigation and monitoring measures.	
Hazards and risk	A preliminary risk screening completed in accordance with <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>, Chapter 3 and <i>Applying SEPP 33</i> (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis</i> (DoP, 2011) and <i>Multi-Level Risk Assessment</i> (DoP, 2011).	Section 6
Fire and incident management	- An assessment of bushfire risks and asset protection zones (APZ) in accordance with NSW Rural Fire Service guidelines - Technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment, fire management (including the location of fire hydrants and water flow rates at the hydrants) and containment measures - Details of the size and volume of stockpiles and their arrangements to minimise fire spread and facilitate emergency vehicle access - The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Fire and Rescue guideline <i>Fire Safety in Waste Facilities</i> (FRNSW, 27 February 2020)	- Section 15 - Section 8 and Section 17 - Section 8 - Section 8
Noise and vibration	- A description of all potential noise and vibration sources during construction and operation, including road traffic noise generated from additional truck movements - A noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines - A description and appraisal of noise and vibration mitigation and monitoring measures.	Section 10 and Appendix Q
Soil and water	- A description of local soils, topography, drainage and landscapes - Details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the <i>Water Act 1912</i> and/or the <i>Water Management Act 2000</i> - An assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment - Details of sediment and erosion controls - A detailed site water balance - An assessment of potential impacts on the quality and quantity of surface and groundwater resources - Details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts - Characterisation of the nature and extent of any contamination on the site and surrounding area - A description and appraisal of impact mitigation and monitoring measures.	Section 11 and Appendix S
Traffic and transport	Details of road transport routes and access to the site	Section 12 and Appendix T,

Aspect	Requirements	Section in EIS
General Requirements		
	- Road traffic predictions for the development during construction and operation for both light and heavy vehicles, including traffic modelling, particularly for the Glossop Street/Kurrajong Road/Forthorn Place intersection - Details of the proposed parking provision - Details of service vehicle movements - Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site - An assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development.	Appendix T and Appendix V
Biodiversity	Including a description of any potential vegetation clearing needed to undertake the proposal and any impacts on flora and fauna.	Section 14
Visual	Including an impact assessment at private receptors and public vantage points. Consideration should be given to any external stockpile area arising from the intensification of the use of the site.	Section 13 and Appendix V
Heritage	Including Aboriginal and non-Aboriginal cultural heritage.	Section 16
Environmental Planning Instruments and other policies		
	The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> (Chapter 2) <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (Chapters 3 and 4) <i>Penrith Local Environmental Plan 2010</i> - Relevant development control plans and section 7.11 plans.	Section 4
Guidelines		
	During the preparation of the EIS you should consult the Department's Register of Development Assessment Guidelines which is available on the Department's website at https://www.planning.nsw.gov.au/Assess-and-Regulate/DevelopmentAssessment/Industries. Whilst not exhaustive, this Register contains some of the guidelines, policies, and plans that must be taken into account in the environmental assessment of the proposed development.	Noted
Consultation		
	During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the: Department of Planning and Environment, specifically the:	Section 5

Aspect	Requirements	Section in EIS
General Requirements		
	• Water Group • Environment Protection Authority • Transport for NSW • Fire & Rescue NSW • Sydney Water • WaterNSW • Penrith City Council • the surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.	
Further consultation after 2 years		
	If you do not lodge an application under Section 4.12(8) of the Environmental Planning and Assessment Act 1979 within 2 years of the issue date of these SEARs, you must consult with the Planning Secretary in relation to any further requirements for lodgement.	Noted

Table A2. Transport for NSW

Aspect	Requirements	Section in EIS
Transport and Traffic Impact Assessment (TIS)	Details of all traffic types and volumes likely to be generated by the proposed development during construction and operation, including a description of haul route origins and destinations, including: - Daily inbound and outbound vehicle traffic profile by time of day and day of week (if travel patterns differ across the week). - Site and traffic management plan on how to manage the number of vehicles likely to be generated during construction and operation and awaiting loading, unloading, or servicing can be accommodated on the site to avoid queuing in the surrounding road network. - Detailed plan of proposed layout of internal road network to demonstrate that the site will be able to accommodate the most productive vehicle types and parking on site in accordance with the relevant Australian Standard and Council's Development Control Plan. - Plans detailing how the proposed development connects to adjoining sites to facilitate their future development for their intended purposes. - Swept path diagrams to demonstrate vehicles entering, exiting, and manoeuvring throughout the site. - Details of road upgrades, infrastructure works, or new roads or access points required for the development. - Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan) and the provision of facilities to increase the non-car mode share for travel to and from the site. - Details of the adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand for the proposed development; and - An assessment of traffic and safety impacts of the proposed development on public transport pedestrian and cyclists. - Identify the existing and future transport infrastructure and any possible impacts of the construction and operation of the proposal on this infrastructure and associated mitigation measures. - Opportunities to improve public and active transport and promote sustainable transport initiatives, including through the preparation of a Green Travel Plan.	Section 12 and Appendix T, Appendix U and Appendix V

Table A3. NSW EPA

Aspect	Requirements	Section in EIS
Site Specific Requirements		
Environment Protection Licence	An Environment Protection Licence (EPL) is currently in place for the existing site at 37 Plasser Crescent, St Marys (EPL 20975). If the development is approved a licence variation application must be submitted to the EPA for the increased processing capacity. The EPA also recommends the proponent reviews the relevant thresholds under Schedule 1 of the POEO Act and consider whether any ancillary activities will meet these thresholds. The Environment Impact Statement (EIS) must identify all scheduled activities under Schedule 1 of the POEO Act for which an EPL will be required. The proponent should be made aware that any commitments made in the environmental assessment may be formalised as approval conditions and may also be placed as formal Licence conditions. The proponent should also be made aware that, consistent with provisions under Part 9.4 of the POEO Act, the EPA may require additional financial assurances. The amount and form of the assurance(s) would be determined by the EPA and required as a condition of the EPL.	Refer to Section 4.2 and 4.4.3.
The facility must be enclosed	The EPA requires that all waste and material handling activities, including receipt, sorting, processing, sampling, quarantine, storage and loading must be conducted within a fully enclosed building. Waste and materials, including finished products, must not be stored outside. All used external surfaces, including any external haulage areas or roads, must be sealed hardstand. Any unused external surfaces must be sealed hardstand or vegetated.	Waste and materials, including finished products, will not be stored outside. All waste will be received, processed and stored indoors. Finished products will be stored indoors and loaded into trucks indoors.
Site plan	A detailed site plan of the Premises must be included in the EIS. The site plan must identify at a minimum, but is not limited to: 1. Location of the facility; 2. Traffic flows and directions; 3. Haulage; 4. Waste receipt, processing, storage, and loading (for each waste and material type); 5. Quarantine areas; 6. Infrastructure for environmental controls including dust, noise, water, odour, and wheel wash;	Appendix C, Appendix S and Appendix V

Aspect	Requirements	Section in EIS
	7. Infrastructure for waste receipt, processing, storage, and loading; 8. Weighbridges; 9. Site boundaries; 10. Stormwater drainage areas; 11. Unused stabilised areas; 12. Machinery storage areas; 13. Areas under the <i>Standards for managing construction waste in NSW</i> (the Standards) (if applicable); 14. Any dangerous goods, hazardous goods and/or chemical storage areas (including any fuel storage areas); and bunding.	
Interrelationship between facilities	The EIS must detail and explain any interrelationship between the proposed C&D recycling facility and the current facility operated at the Premises. This includes how these facilities will interact with and be managed in connection with one another.	The Site will be operating as one facility under one operator. The Site will be interconnected internally through openings within the Warehouses.
Waste and material management	The EIS must include a detailed assessment of the waste and material management processes to be undertaken at the Premises. This includes but is not limited to: 1. Details of the sources of each waste type to be received at the Premises; 2. Details of the types and quantities of each type of waste to be received at the Premises; 3. Details of the maximum volume of each waste type and the total maximum volume of waste to be stored on the Premises at any one time; 4. Details of the maximum annual throughput of each waste type and the total maximum throughput to be processed at the Premises; 5. A detailed description of receipt, processing, and storage, and loading procedures for each waste type; 6. Identify all the locations where waste will be stored at the Premises and how batches of waste will be separated; 7. A description of how the proponent will meet the EPA's record keeping and reporting requirements, including weighing material in and out of the Premises (refer to the EPA's Waste Levy Guidelines for more information – available at: https://www.epa.nsw.gov.au/your-environment/waste/waste-levy) ; 8. Details of the type and quantities of materials to be produced and their intended fate including which Licenced facilities and/or places the waste and processed waste will ultimately be received; 9. The intended fates of all other waste and materials received/produced on the Premises which are not suitable for re-use;	Section 7 and Appendix M

Aspect	Requirements	Section in EIS
	10. Details of any materials produced under a Resource Recovery Order, and the controls/procedures in place for meeting the conditions of that order; 11. Details of any materials produced which will require a specific Resource Recovery Order; 12. A description of procedures for dealing with non-conforming waste and materials (i.e. Waste not permitted to be received at the Premises); 13. Details of any testing/monitoring procedures; and 14. Details of storage for unprocessed and processed wastes including the maximum storage capacity for each type of stored waste (the EPA notes each type of waste stored on the Premises for recovery/recycling must be stockpiled separately).	
Waste and material types	The EPA requires detailed information on the waste types proposed to be received at the Premises. For each waste type, the EIS must detail the physical and chemical content of the waste/material, the types of pollution which may result from the storage and processing of that waste/material, and mitigation measures for managing any such impacts. The EIS must explicitly identify each individual type of waste which will be received at the facility, with reference to the EPA's <i>Waste Classification Guidelines</i> (the Guidelines) and also the definitions in Schedule 1 of the POEO Act.	Section 7 and Appendix M
Water management	It is considered best practice by the EPA for facilities to retain all water on site and not discharge any water to limit pollution and contamination. The EPA requires a proponent to first demonstrate that all practical and reasonable alternatives to discharge have been considered and implemented before other options are reviewed. Where discharge of polluted water is unavoidable, the proponent must: • Identify all pollutants that pose a risk of non-trivial harm and the potential impact of those pollutants on the environment; • Implement all practical measures that can be taken to prevent, control, abate or mitigate the pollution and protect the environment from harm; and • Consider the environmental values of water affected by the proposed discharge; and implement all practical measures that can be taken to restore or maintain those values. An assessment of impacts to water, during both construction and operation, must be included in the EIS. This must include at a minimum: • Characterisation of any proposed discharges from the Premises (both volume and quantity); • Assessment of the potential impacts from these discharges; and • Proposed mitigation measures to manage any impacts (discharges includes, but is not limited to, stormwater (contaminated and uncontaminated), and wastewater (such as from dewatering)). Details must be provided of any trade waste agreements which are (or are proposed to be) in place with Sydney Water. Detailed information regarding the management of stormwater during both construction and operation must be included in the EIS. The EPA expects waste and/or material management buildings be constructed to exclude all stormwater and internal surfaces be graded inwards to contain any contaminated water (being any water that has come into contact with waste or other materials which have the potential to cause contamination). The EPA notes even where all waste and material activities are conducted within a fully enclosed building,	Section 11 and Appendix R

Aspect	Requirements	Section in EIS
	materials may be tracked on to external surfaces leading to the generation of contaminated water. Any external areas where vehicles travel or wait for loading/unloading must drain to a stormwater quality treatment device sufficient to remove any contaminants, both solid and dissolved, prior to discharge offsite.	
Wheel wash	Best practice waste facilities install and utilise a wheel wash to reduce the risk of contaminants being tracked onto public roads. The EPA requires a wheel wash to be included as part of the proposal to reduce the risk of tracking of material and contaminants onto public roads.	A wheel wash is already installed at the Site. Refer to Appendix C.
Weighbridge	Waste facilities that require an EPL under the POEO Act are required to pay the waste levy in accordance with section 88 of the POEO Act. As such, this proposal must include a weighbridge in order to comply with the requirements of the waste levy.	An existing weighbridge already installed at the Site. An additional weighbridge will be installed at the Site. Refer to Appendix C.
Occupier/owner of the premises	Sufficient evidence must be provided that the proponent is the lawful occupier and/or owner of the Premises as the EPA cannot issue to an EPL if this has not been provided.	Refer to Appendix Z.
Standards for managing construction waste in NSW	The Standards for managing construction waste in NSW became enforceable on 16 May 2019 and apply to all facilities receiving construction and demolition waste regardless of when approval was/is given for the facility. If the proponent intends on receiving construction and demolition waste, the EIS must provide detailed information as to how compliance with the Standards will be achieved. The proponent should be aware of all the legislative requirements relating to the Standards. The Standards are available at: https://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/constructiondemolition/construction-and-demolition-waste	Section 7 and Appendix M
Fire Safety Guidelines	Fire and Rescue NSW have developed guidelines regarding fire safety within waste facilities titled ' <i>Fire safety guideline – Fire safety in waste facilities</i> ' (the Fire Safety Guidelines). The Fire Safety Guidelines are applicable to any waste facility within NSW involved in the storage, processing or resource recovery of combustible waste material. The EIS must demonstrate how the proposal will ensure compliance with the Fire Safety Guidelines if applicable. The Fire Safety Guidelines are available at: https://www.fire.nsw.gov.au/gallery/files/pdf/guidelines/guidelines_fire_safety_in_waste_facilities.pdf	Section 8 and Appendix N
General requirements for the proposal		
Executive summary		

Aspect	Requirements	Section in EIS
	The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.	Executive Summary
The proposal		
Objectives of the proposal	- The objectives of the proposal should be clearly stated and reference to each warehouse to include: - the size and type of the operation, the nature of the processes and the products, by-products and wastes produced; - a life cycle approach to the production, use or disposal of products; - the anticipated level of performance in meeting required environmental standards and cleaner production principles; - the staging and timing of the proposal and any plans for future expansion; and - the proposal's relationship to any other industry or facility.	Section 1
Description of the proposal	<i>General</i> - Outline the production processes in each warehouse including: - 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); and - Any life-cycle strategies for the products. - Outline cleaner production actions for each warehouse, including: - Measures to minimise waste (typically through addressing source reduction); - Proposals for use or recycling of by-products; - Proposed disposal methods for solid and liquid waste; - 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; - 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; and - Soil contamination treatment and prevention systems. - Outline construction works including: - Actions to address any existing soil contamination; - Any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site); - Construction timetable and staging; hours of construction; proposed construction methods; and - Environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures. - Include a site diagram showing the site layout and location of environmental controls.	Section 3

Aspect	Requirements	Section in EIS
	<i>Air</i> - Identify all sources or potential sources of air emissions from the development. <i>Note: emissions can be classed as either:</i> <i>point (e.g. emissions from stack or vent); or</i> <i>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).</i>	Section 9 and Appendix P
	- 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; and c) The management of solid, liquid and gaseous waste streams with potential to generate emissions to air.	Section 9 and Appendix P
	<i>Noise and vibration</i> - 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.	Section 10 and Appendix Q
	<i>Water</i> - 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 <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i>, ANZECC 2000); b) the management of discharges with potential for water impacts; and 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.	Section 11 and Appendix R

Aspect	Requirements	Section in EIS
	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.	
	<i>Waste and chemicals</i> - 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 each facility, including: - The transportation, assessment and handling of waste arriving at or generated at the site; - Any stockpiling of wastes or recovered materials at the site; - Any waste processing related to the facilities, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site; - The method for disposing of all wastes or recovered materials at the facilities; - The emissions arising from the handling, storage, processing and reprocessing of waste at the facilities; and - The proposed controls for managing the environmental impacts of these activities. - The mitigation measures proposed to be implemented to prevent and mitigate leaks and spills from the treatment plant and other project operations and activities. - Appropriate primary and secondary containment systems should be included as a part of the proposal. - Details of bunding, isolation, overflow prevention and other controls should be provided to demonstrate spill and leak related risks have been appropriately considered and addressed. - Provide details of spoil disposal with particular attention to: - The quantity of spoil material likely to be generated; - Proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil; - The need to maximise reuse of spoil material in the construction industry; - Identification of the history of spoil material and whether there is any likelihood of contaminated; - Material, and if so, measures for the management of any contaminated material; and - 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 <i>Waste Classification Guidelines</i> 2014 (as amended from time to time).	Section 7 and Appendix M
	<i>ESD</i>	Section 18

Aspect	Requirements	Section in EIS
	- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including: - An assessment of a range of options available for use of the resource, including the benefits of each option to future generations proper valuation and pricing of environmental resources - Identification of who will bear the environmental costs of the proposal.	
Rehabilitation	Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).	Not applicable. The Site is an industrial development
Consideration of alternatives and justification for the proposal	- Consider the environmental consequences of adopting alternatives, including alternative: - Sites and site layouts; - Access modes and routes; - Materials handling and production processes; - Waste and water management; - Impact mitigation measures; and - energy sources. - Selection of the preferred option should be justified in terms of: - Ability to satisfy the objectives of the proposal; - 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; and - Efficient use (including maximising re-use) of land, raw materials, energy and other resources.	Section 1
The Location		
General	- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including: - Meteorological data (e.g. Rainfall, temperature and evaporation, wind speed and direction); - Topography (landform element, slope type, gradient and length); - Surrounding land uses (potential synergies and conflicts); - Geomorphology (rates of landform change and current erosion and deposition processes); - Soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils); - Ecological information (water system habitat, vegetation, fauna); and	The entire EIS

Aspect	Requirements	Section in EIS
	g) Availability of services and the accessibility of the site for passenger and freight transport.	
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 effect plume dispersion. - Provide and analyse site representative data on following meteorological parameters: - Temperature and humidity; - Rainfall, evaporation and cloud cover; - Wind speed and direction; - Atmospheric stability class; - Mixing height (the height that emissions will be ultimately mixed in the atmosphere); - Katabatic air drainage; and - Air re-circulation.	Section 9 and Appendix P
Noise and vibration	- 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.	Section 10 and Appendix Q
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.	Section 11 and Appendix R
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.	Not applicable.
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: - Relevant NSW government guidelines; - Industry guidelines; - EISs for similar projects; - Relevant research and reference material; - Relevant preliminary studies or reports for the proposal; and - Consultation with stakeholders.	Refer to Scoping Report and SEARs Application prepared by Jackson Environment and Planning in 2022.

Aspect	Requirements	Section in EIS
	- Provide a summary of the outcomes of the process including: - All issues identified including local and regional impacts (e.g. increased/ decreased greenhouse emissions); - Key issues which will require a full analysis (including comprehensive baseline assessment); - Issues not needing full analysis though they may be addressed in the mitigation strategy; and - 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).	
The environmental issues		
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. <i>Note: The level of detail should match the level of importance of the issue in decision making which is dependent on the environmental risk.</i> <i>Describe baseline conditions</i> - Provide a description of existing environmental conditions for any potential impacts. <i>Assess impacts</i> - 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. <i>Describe management and mitigation measures</i> - 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	The entire EIS

Aspect	Requirements	Section in EIS
	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: - Operational procedures to manage environmental impacts; - Monitoring procedures; - Training programs; - Community consultation; - Complaint mechanisms including site contacts; - Strategies to use monitoring information to improve performance; and - Strategies to achieve acceptable environmental impacts and to respond in event of exceedances.	
Air	<i>Describe baseline conditions</i> - Provide a description of existing air quality and meteorology, using existing information and site <i>Assess impacts</i> - Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge points. - 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. <i>Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.</i>	Section 9 and Appendix P

Aspect	Requirements	Section in EIS
	<i>Describe management and mitigation measures</i> 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.	
Human Health Risk Assessment	- A human health risk assessment must be undertaken in conjunction with the air quality and odour impact assessment. - The human health risk assessment must be undertaken in accordance with Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (enHealth) and must include: a) The inhalation of criteria pollutants and exposure from all pathways i.e., inhalation, ingestion and dermal to specific air toxics; b) A demonstration of how the waste to energy facility would be operated in accordance with best practice measures to manage air emissions with consideration of the Environment Protection Authority's NSW Energy from Waste Policy Statement.	In email correspondence dated 8 July 2024 (Appendix AA) the NSW EPA accepted that the requirement for a Human Health Risk Assessment is not applicable to the proposed development and the requirement can be removed from the scope of SEAR 1694.
Noise and vibration	<i>Describe baseline conditions</i> - 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;	Section 10 and Appendix Q

Aspect	Requirements	Section in EIS
	h) Graphs of the measured noise levels for each day should be provided; and 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. <i>Assess impacts</i> - 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; and 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 affects 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; And e) Other Services. <i>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).</i> - 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; and h) an assessment of the need to include modification factors as detailed in Fact Sheet C of the <i>NSW Noise Policy for Industry</i>.	

Aspect	Requirements	Section in EIS
	- 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. - 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; and c) Type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency. <i>Describe management and mitigation measures</i> - 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;	

Aspect	Requirements	Section in EIS
	j) Use of premium muffles on trucks; k) Reducing speed limits for trucks; l) Ongoing community liaison and monitoring of complaints; and m) Phasing in the increased road use.	
Water	<i>Describe baseline conditions</i> • 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-4vol1.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 ANZECC 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. • 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;	Section 11 and Appendix R

Aspect	Requirements	Section in EIS
	b) Specific human uses (e.g. Exact location of drinking water offtake); c) Sensitive ecosystems or species conservation values; 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 water table, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment; and f) Historic river flow data where available for the catchment. <i>Assess impacts</i> - 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. - 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 over time, where they are not currently achieved in the ambient waters. - Consult with the EPA as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality 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	

Aspect	Requirements	Section in EIS
	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. <i>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.</i> - Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines. - Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact. - Reference should be made to e.g. Managing Urban Stormwater: Soils and Construction (Landcom, 2004), Guidelines for Fresh and Marine Water Quality (ANZECC 2000), Environmental Guidelines: Use of effluent by Irrigation (DEC, 2004). <i>Describe management and mitigation measures</i> - 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: - Site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition); - Minimising runoff; - Minimising reductions or modifications to flow regimes; and - Avoiding modifications to groundwater. - Describe groundwater impact mitigation measures including: - Site selection - Retention of native vegetation and revegetation - Artificial recharge - Providing surface storages with impervious linings - Monitoring program. - Describe geomorphological impact mitigation measures including:	

Aspect	Requirements	Section in EIS
	a) Site selection b) Erosion and sediment controls c) Minimising instream works d) Treating existing accelerated erosion and deposition e) Monitoring program. • Any proposed monitoring should be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC 2004).	
Soils and contamination	<i>Describe baseline conditions</i> • 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. <i>Assess impacts</i> • 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; and e) disturbing acid sulfate or potential acid sulfate soils. • Reference should be made 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). <i>Describe management and mitigation measures</i> • 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); and 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).	Section 11 and Appendix R
Waste and chemicals	<i>Describe baseline conditions</i> ☐ <i>Describe any existing waste or chemicals operations related to the proposal.</i>	Section 7 and Appendix M

Aspect	Requirements	Section in EIS
	<i>Assess impacts</i> - 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) - 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. <i>Describe management and mitigation measures</i> - 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.	
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).	The entire EIS
List of approvals and licences		

Aspect	Requirements	Section in EIS
	Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water)	Section 4
Compilation of mitigation measures		
	- 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.	Section 17
Justification for the Proposal		
	Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.	Section 1

Table A4. Penrith City Council

Aspect	Requirements	Section in EIS
Planning		
Built Form and Landscaping	The industrial areas of Penrith are broken into key precincts. This site sits within Precinct 3. References to diagrams and key controls in relation to industrial development are taken from Chapter D4 Industrial Development of <i>Penrith Development Control Plan 2014</i> (DCP). The site is part of an older industrial estate with some existing poor built form and amenity outcomes, these are not the desired future outcomes and should not be used as examples for any non-complaint aspects of the proposed development.	Section 13 and Appendix V
	The proposal includes construction of a new building located along the eastern side of Lot 15. Significant concern is raised regarding the built form in terms of bulk and scale, and proposed zero building setback from the side (eastern) boundary. The proposed building appears excessively large and visually dominating, enclosing the remainder of the site that is currently used as open carpark/driveway area. It is considered that a reduction in the scale of the building may be needed, as well as an increased setback from the eastern boundary. This is to provide some relief to the built form, noting the extent of existing buildings already on Lot 15 and 16, and to reduce the apparent bulk and scale of the building when viewed from the street and adjoining property. Reducing the scale of the building may further assist in addressing the below issues relating to the location and provision of car parking and landscaping on the site.	
	- The proposal includes 6x car parking spaces within the front setback area. Generally, car parking is not permitted to be located within the front setback area, and car parking is to be set behind the building line, so it is suitably screened from the street (Section 4.3, D4 of Penrith DCP). Front setback areas are required to be embellished with landscaping to enhance the streetscape and soften the presentation of development. Under Section 4.3, car parking within the front setback area may only be considered under certain circumstances, where it is demonstrated that the following criteria is met: a) the location of the car parking area is within a setback which is at-least 13m wide; and b) is set behind a landscaped area which is at-least 4m wide; and c) promotes the function and operation of the development; d) enhances the overall design of the development by implementing design elements, including landscaping that will screen parking areas and is complimentary to the development; and e) does not detract from the streetscape values of the locality. In its current form, the location of car parking within the front setback area is concerning, as there is limited opportunity for screen landscaping. Noting that a large portion of the front of the site is needed for vehicle and truck manoeuvring (as shown on the swept paths). Resulting in insufficient space at the front of the site for the provision of adequate landscaping, inclusive of canopy trees that would be capable of growing to the scale of the buildings on the site.	
	A minimum 9m front building setback is required under Chapter D4 of Penrith DCP 2014.	

Aspect	Requirements	Section in EIS
Planning		
General	Under Chapter C10 of Penrith DCP, the development is required to provide car parking at a rate of 1x space per 75sqm of gross floor area, or 1x space per 2x employees, whichever is the greater. It is unclear from the scoping report how many employees are proposed, so it cannot be clearly determined how many car parking spaces are required. Notwithstanding, the proposal provides 8x new car parking spaces, which appears to be low given the proposed size and capacity of the facility. The application will need to demonstrate that sufficient onsite parking is provided and address the carparking controls under Chapter C10.	
	Location of plant and mechanical equipment including exhausts are to be screened from public places.	All plant and mechanical equipment is contained within the warehouse building
	The application shall outline operational details, including processing undertaken on the site, capacity, hours of operation, employee numbers and management practices.	Section 3
	As the development traverses two separate lots (being Lot 16 and Lot 15 in DP 263353), lot consolidation will be required as part of the application.	Noted
	Should signage be proposed, detailed design plans shall be provided with the application, demonstrating compliance with the controls under Chapter C9-Advertising and Signage of Penrith DCP. Particularly, signage is to be minimised to avoid visual clutter, be integrated into the overall design of the building, and be of high quality and durable material and finishes.	Existing sign on Lot 16 shed to be retained. No additional signage is required.
	Clarification shall be provided as to whether existing consents applying to the site are intended to be surrendered.	Existing consents will be surrendered upon approval of the development
	The application shall address all relevant local controls under Part C-City Wide Controls and Chapter D4 Industrial Development under Penrith DCP 2014.	Section 4.7
Environmental Management		

Aspect	Requirements	Section in EIS
Planning		
Air Quality	An air quality impact assessment prepared in accordance with NSW EPA guidelines must be prepared and submitted with the application. In addition, a management plan that details the controls that will be implemented to prevent dust impacts needs to be prepared and submitted.	Section 9 and Appendix P
Acoustics	An acoustic assessment of the proposal is required. The assessment needs to be prepared in accordance with the NSW EPA's Noise Policy for Industry and other relevant guidelines and standards. Given the proposal will involve operations that night-time period, an assessment of potential sleep disturbance impacts needs to be included.	Section 10 and Appendix N
Environmental Management Plan	An environmental management plan that details all work practices, procedures and controls that will be implemented to prevent environmental impacts needs to be prepared and submitted with the application. The EMP must cover all environmental aspects of the operation including, but not limited to, noise, air quality, and water quality.	An operational environmental management plan (OEMP) exists for the development. The OEMP will be updated upon approval of the facility to include all up-to-date controls and processes that will be determined during the approval stage.
Engineering		
General	Council's engineering requirements for subdivisions and developments, including policies and specifications listed herein, can be located on Council's website at the following link: https://www.penrithcity.nsw.gov.au/buildingdevelopment/development/engineering-requirements-for-developmentsubdivision	Noted
	All engineering works must be designed and constructed in accordance with Council's Design Guidelines for Engineering Works for Subdivisions and Developments and Council's Engineering Construction Specification for Civil Works.	Noted
	All engineering works must be designed and constructed in accordance with Council's Design Guidelines for Engineering Works for Subdivisions and Developments and Council's Engineering Construction Specification for Civil Works.	Noted

Aspect	Requirements	Section in EIS
Planning		
Stormwater	- Stormwater drainage for the site must be in accordance with the following: - Council's Development Control Plan, - Stormwater Drainage Specification for Building Developments policy, and - Water Sensitive Urban Design Policy and Technical Guidelines. - A stormwater plan of the existing stormwater system shall be submitted with the application. - This development is benefited by a drainage easement to drain water over downstream properties. - Water Sensitive Urban Design (WSUD) is required to be provided for the site. - Any water quality system must be within common property and accessible from the street without going through dwellings or private courtyards. - A water sensitive urban design strategy prepared by a suitably qualified person is to be provided for the site. The strategy shall address water conservation, water quality, water quantity, and operation and maintenance. - The application shall include MUSIC modelling (*.sqz file) demonstrating compliance with Council's adopted Water Sensitive Urban Design Policy and Technical Guidelines.	Section 11 and Appendix R
Mainstream and Local Overland Flow Flooding	The site has not been identified as being subject to flood related development controls.	Noted
External Works	Any widening of any driveway or crossover shall ensure a minimum clearance of 1m is available from any public utility service lid, power / light pole or stormwater kerb inlet pit and lintel. The driveway shall also be located a minimum of 1.5m from any street tree. Utility services may be required to be relocated to accommodate the crossover. The applicant is to contact the utility service provider to obtain requirements.	Not applicable
Traffic		
	- The application shall be supported by a traffic report prepared by a suitably qualified person addressing, but not limited to, traffic generation, access, car parking, and manoeuvring. - The application must demonstrate that access, car parking, and manoeuvring details comply with AS2890 Parts 1, 2 & 6 and Council's Development Control Plan. - The proposed development shall be designed to be serviced by a 19m Articulated Vehicle. - A fully dimensioned car parking plan is to be provided demonstrating that car parking bays, car parking aisles and manoeuvring details comply with AS2890 Parts 1, 2 & 6 and Council's Development Control Plan. - The application shall be supported by turning paths for a 19m semi-trailer in accordance with AS2890 clearly demonstrating satisfactory manoeuvring onsite and forward entry and exit to and from the public road.	Section 12 and Appendix T

Aspect	Requirements	Section in EIS
Planning		
Waste		
	The proposed waste collection infrastructure and collection arrangement is not permitted in its current configuration. The scoping report provided to Council staff provides insufficient information to assess for waste planning matters. The following matters shall be addressed: The relevant controls are contained within Chapter C5- Waste Management, and associated “Industrial, Commercial and Mixed-Use Waste Management Guidelines” under Penrith DCP 2014.	Section 7 and Appendix M
Integrated On-site Waste Collection	Waste collection vehicles proposed to service commercial and industrial developments are to be designed in accordance with the vehicle specifications outlined in section 3.5 of the ‘Industrial, commercial and mixed-use waste management guideline’ document. <u>On-site Collection (section 2.2.1)</u> Waste collection vehicles proposed to service commercial and industrial developments are to be designed in accordance with the vehicle specifications outlined in section 3.5 of the ‘Industrial, commercial and mixed-use waste management guideline’ document. <u>Architectural Plans (section 2.2.2)</u> Scaled architectural plans are required to support the development application which demonstrate the site’s entry point, vehicle’s route of travel and manoeuvring comply with a standard waste collection vehicle (section 3.5). <u>Swept Path Models (section 2.2.3)</u> Swept path models to be provided illustrating how a standard waste collection vehicle (section 3.5) will enter, service and exit the site. A 0.5m unobstructed clearance is required from all obstructions for the vehicle’s ingress and egress manoeuvres. The model to provide on-street parking on both sides of the road adjacent to the development to demonstrate unobstructed access during a ‘business as usual’ configuration. <u>Service Clearances (section 2.2.4)</u> For rear loaded vehicles an additional 2m unobstructed loading zone is required behind the vehicle for the loading of 660L and 1,100L bins. Additionally, a 0.5m side clearance is require on either side of the vehicle for driver movements and accessibility. <u>Plan of Operations (2.2.6)</u> All development applications to be submitted with accompanying ‘Plan of Operations’, outlining proposed; Bin Infrastructure Sizes, Collection Frequency, Waste Collection Vehicle Dimensions, Hours of Collection and Access to Waste Collection Room.	Section 7 and Appendix M
Waste Collection Infrastructure	Waste collection infrastructure is to be provided in accordance with section 3.1 of the ‘Industrial, commercial and mixed-use waste management guideline’ document.	Section 7 and Appendix M

Aspect	Requirements	Section in EIS
Planning		
Waste Generation Rates	Proposed generates rates are required to be provided to permit waste collection in accordance with section 3.3 of the 'Industrial, commercial and mixed-use waste management guideline' document. <u><i>Alternate Use (section 3.3.5)</i></u> Note: For commercial and industrial waste streams that are not outlined in section 3.3, supporting documentation is required to validate the proposed volumes for the respective waste streams.	Section 7 and Appendix M
Waste Collection Rooms	All developments are required to provide a waste collection room integrated wholly within the built form to permit a safe and efficient waste collection service. The room to incorporate infrastructure into its design in accordance with section 3.4 of the 'Industrial, commercial and mixed-use waste management guideline' document. Note: Provide an integrated on-site waste collection room within the respective built forms to permit a safe and efficient waste collection service.	Section 7 and Appendix M
Waste Infrastructure Guidelines	For further specific waste operational and infrastructure information refer to the 'Industrial, commercial and mixed-use waste management guideline' document attached: https://www.penrithcity.nsw.gov.au/images/documents/buildingdevelopment/planning-zoning/planningcontrols/Waste_Management_Guidelines_Industrial_Commercial_Mixed_Use.pdf	Section 7 and Appendix M
Documentation to be submitted with Development Application	• Survey Drawing • Site Plan • Architectural Plans • Stormwater Concept Plan • Environmental Impact Statement (EIS) • Waste Management Plan • Traffic and Parking Assessment Report • WSUD Strategy Landscape Plan • Schedule of External Materials and Finishes • Contamination Assessment • Signage Details (if proposed) • Access Statement • Acoustic Report / Statement • Operational Plan of Management	The entire EIS and Appendices

Table A5. Penrith City Council Response to Amended Scope post SEARS

Aspect	Requirements	Section in EIS
Planning		
	- Council's Traffic Engineering Department have reviewed the proposal and require the additional traffic information: - Pre and post development intersection analysis of the Plasser Crescent / Kurrajong Road intersection. - Demonstrated compliance with AS2890.2 for heavy vehicle access to from the site (including, but not limited to, driveway dimensions and internal manoeuvring). - Clearly defined trip generation with regard to all vehicle types, with inbound and outbound trip numbers listed separately and with an hourly average taking into account proposed operational hours for the proposal and clearly defined peak periods. - Nomination of the largest vehicle size and type to access the site, with corresponding swept paths. - Forward entry and exit demonstrated for all vehicles proposed to access the site. - Information on overnight truck parking provision (where applicable), or otherwise where operational vehicles are proposed to depot overnight and during non-operational periods.	
	Council's Development Engineering Department have reviewed the proposal raise no additional comments at this stage.	Noted
	Council's Environmental Health Department have reviewed the SEARs prepared for the original proposal, as well as the EPAs letter dated 21 June 2022. It is considered that no further information would be required at this stage and that the advice contained in the SEARs (and the EPAs requirements) is still applicable.	Noted
	The development continues to fall into the definition of Regionally Significant Development as defined under Clause 2.19 and Schedule 6 of State Environmental Planning Policy (Planning Systems) 2021 with the processing of 99 000 tonnes per annum. Your attention is drawn to the triggers for State Significant Development as defined under Clause 2.6 and Schedule 1 of the SEPP should it be intended to process additional quantities.	Section 4
	I note that you attended a pre-lodgement meeting with Council on 31 May 2022. The comments provided in Council's letter dated 1 July 2022 remain relevant and should be taken into consideration with the preparation of a development application submission.	Noted
	The design concerns raised during the pre-lodgement meeting have not yet been addressed, though you are now progressing the application. Notable concerns are the bulk and scale of building works, setbacks, limited landscaping provision, carparking, site layout and non-compliance with the controls contained in Penrith Development Control Plan 2014.	Noted
	It does appear that the site layout has been modified so that the weighbridge is now located immediately in front of the truck loading area. This would necessitate trucks either reversing into the site or reversing out of the building, possibly reversing onto the street or manoeuvring near the driveway entrances in a fashion that may cause traffic conflict. All vehicle movements to and from the site are to be in a forward direction and vehicle sweep paths are to be shown (as per the advice provided by Council's Traffic Engineer).	Noted

Aspect	Requirements	Section in EIS
Planning	Council’s planning response is that SEAR number 1694 is appropriate with consideration given to the comments made above.	Noted

Appendix B - Site Survey

Appendix C - Architectural Plans

Appendix D - PCC Pre-Lodgement Advice

Appendix E - SEAR 1694

Appendix F - SEAR 1694 - DPHI SEAR extension request letter

Appendix G - SEAR 1694 - Extension Letter

Appendix H - Penrith City Council Advice on amended Scope

Appendix I - Community Consultation Plan

Appendix J - Example community consultation letter

Appendix K - Example business consultation letter

Appendix L - Example agency consultation letter

Appendix M - Waste Management Plan

Appendix N - Fire Safety Advice

Appendix O - Fire Incident Management Plan

Appendix P - Air Quality Impact Assessment

Appendix Q - Noise and Vibration Impact Assessment

Appendix R - Soil and Water Impact Assessment

Appendix S - Soil and Water Impact Assessment - Civil and Stormwater Plans

Appendix T - Traffic Impact Assessment

Appendix U - Traffic Impact Assessment – OTMP

Appendix V - Traffic Impact Assessment - Swept Paths

Appendix W - Visual Impact Assessment

Appendix X - Estimated Development Cost

Appendix Y - Landscape Plan

Appendix Z - Letter of Owners Consent

Appendix AA - Letter from NSW EPA - Human Health Study

Appendix AB - Fire Services Consultant Advice Notice

Appendix AC – Services Location Report

Appendix AD – Penrith City Easement Advice

Appendix AE – Section 10.7 Planning Certificates