

Waste Management Plan – Proposed Metal Recycling Facility

Sydney Metal Traders Pty Ltd



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Version	Authors	Date	Reviewer	Approved for issue	Date
Draft	D. Estephan	03/06/2025	E. Larson	10/10/2025	10/10/2025
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Executive Summary

This Waste Management Plan (WMP) has been developed to demonstrate how waste will be avoided or minimised, reused, recycled and disposed lawfully during the construction and operation of an industrial metal recycling facility at 88 Murrays Flat Road, Towrang, NSW (the Facility). The Facility will receive, sort, cut, shred and separate ferrous and non-ferrous scrap metals, with an annual capacity of up to 30,000 tonnes. Processed metals will be transferred off-site for sale to domestic and export markets.

Demolition activities will be limited to elements within the site boundary and will consist solely of the removal of trees to allow for construction of the facility. All green waste generated will be transported to a licensed off-site recycling facility. The estimated recycling rate for this material is 100%, supporting the project's commitment to sustainable waste practices.

Construction will be undertaken in stages and will include site preparation, installation of hardstand areas, drainage works, sediment basins, biofiltration basin, and office conversion. Waste will be separated on-site into soil, metals, construction materials and recyclables, with disposal to licensed facilities. Recycling during construction is expected to exceed 99.99%.

During operations, incoming loads will be weighed, inspected and directed to designated processing areas. Scrap metal will be processed via shearing, pre-shredding, shredding and separation, maximising recovery of ferrous and non-ferrous metals. Residual floc (20–30% by weight) will be stored in a covered, bunded bay prior to off-site disposal at a licensed facility. Annual outputs are estimated at 18,000 tonnes of ferrous metals, 4,000 tonnes of non-ferrous metals, and 8,000 tonnes of residual waste.

Environmental controls include sealed surfaces, stormwater capture and treatment, spill response, regular inspections, and compliance with EPA licensing requirements. Office operations will maintain a co-mingled recycling system with an estimated 88% recovery rate.

The Facility will contribute to NSW *Waste and Sustainable Materials Strategy 2041* targets by increasing regional recycling capacity, diverting metals from landfill, and supporting a circular economy.

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1. Introduction

This Waste Management Plan (WMP) has been prepared for a proposed metal recycling facility at 88 Murrays Flat Road, Towrang NSW 2580 (Lot 3 DP251779). The development proposal is to receive scrap metal, shred and separate the recovered metals for transport off-site for further recycling (the Proposal/Facility). Operations will be carried out on an area of approximately 6.6 hectares (the Site) out of a total lot area of 32.3 hectares.

The proposed scrap metal processing will be carried out in designated operating areas. Equipment used for the metal processing activities will comprise oxy-cutting, stationary shear, pre-shredder, shredder (hammermill), and downstream separation and sorting equipment.

Around 3% of incoming scrap metal has been processed off site or does not require further processing and is received in a form ready for on-sale. This material includes Copper, Brass, Aluminium, Stainless Steel, Electric Motors, Used Lead Acid Batteries (ULABs) and Lead. Separate waste storage bays will be provided to store sorted and shredded metals prior to being loaded onto trucks for off-site recycling. The waste generated during operations will be safely and lawfully disposed at a licensed landfill.

This WMP has been prepared to meet Goulburn Mulwaree Council requirements.

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) and the *Protection of the Environment Operations Act 1997* (POEO Act) govern the issues of waste generation, reuse, recycling, transport and disposal and prioritise waste solutions according to how successfully they conserve natural resources. Priority is given to reducing the overall amount of waste, followed by the reuse and then recycling of any wastes that are unavoidably created, with disposal as a last resort. The aim is to extract the maximum practical benefits from the products and to manage waste in the best possible way.

1.1. Objectives

This Waste Management Plan (WMP) has been developed to meet the following objectives:

- To maximise reuse and recycling of demolition and construction waste materials;
- To minimise potential adverse impacts relating to the management of waste on the amenity of adjoining properties and within the development; and
- To minimise the amount of waste being deposited in landfill.

1.2. Scope

This WMP assesses how the waste will be dealt with in the most environmentally sustainable way and contains the following information:

- Relevant legislation and guidelines for waste management for the Facility;
- The systems, procedures and initiatives proposed to address the management of waste materials generated during the construction and operation phases of the Facility;
- Safeguards, mitigation measures and monitoring to manage waste impacts during operation;
- Implementation of waste management controls; and
- An effective monitoring, auditing and reporting framework to assess the effectiveness of the controls implemented.

The proposed development also considers environmental best practice and sustainability to reduce the impact of the development on the environment.

1.3. The Site

The subject site is located at 88 Murrays Flat Road, Towrang, within the Goulburn Mulwaree Local Government Area (LGA). The site is situated in a rural environment approximately 190 km south-west of Sydney by road. The total area of the property is 32.3 hectares, with the proposed development to be contained within an area of

approximately 6.6 hectares. The surrounding locality is predominantly rural-residential in character, with isolated dwellings located in the area and the nearest residential area close to 3km to the west of the site. The site currently contains an existing residential building, which is proposed to be repurposed for use as administrative offices. A compacted road base will provide access to this building. The office building will be located away from the operational areas of the site to ensure the safety of non-operational staff.

The proposed development comprises a metal recovery and recycling facility. The facility will be designed to receive, sort, and process scrap metal into a range of product streams suitable for both domestic and international recycling markets and end users. Scrap metal will be sourced from Sydney, the Southern Highlands, Goulburn, the ACT, and surrounding regions. Metal processing activities will be confined to designated operational areas and will involve the use of specialised equipment, including oxy-cutting tools, a stationary shear, a pre-shredder, a shredder (hammermill), and downstream separation and sorting equipment.

The site has access to high-voltage power, and a pad-mount substation will be installed to meet energy demands. The property is not connected to Council's water or sewerage networks, and as such, an on-site effluent management system will be required. An existing effluent system on-site will be assessed to determine its capacity and suitability.

Table 1.1. Summary of key site information.

Site address	88 Murrays Flat Road, Towrang NSW 2580
Lot / Plan number	Lot 3 DP251779
Site area	32.3 hectares
Local Government Area	Goulburn Mulwaree council
Land Use Zone	E5 Heavy Industrial

The following figures provide an overview of the proposed development, including an aerial view of the site, land zoning context, the proposed site plan, the workshop layout, and associated amenities. Refer to Figure 1.1, Figure 1.2, Figure 1.3, Figure 1.4, and Figure 1.5.

1.3.1. Operational Hours

The proposed Site operations hours are:

- Monday to Friday between 6am – 6pm
- Saturdays from 7am – 4:30pm

No operations are to occur on site on Sunday and public holidays. No operation of the hammermill shredder and pre-shredder will occur during the morning shoulder period 6am-7am. Operations during this time include inbound and outbound truck movements, material handlers, and maintenance of plant and equipment. While maintenance and cleaning activities can occur at any time of the day (24 hours), to maintain the efficiency of operations, they will occur predominantly during:

- Monday to Saturday between 6am – 6pm
- Sundays on a 24-hour basis

Figure 1.1. Aerial View of the Proposal site. Blue outline is the Proposed development. Yellow outline is the site boundaries.



Figure 1.2. Land use zoning. Lot boundaries are shown in yellow.

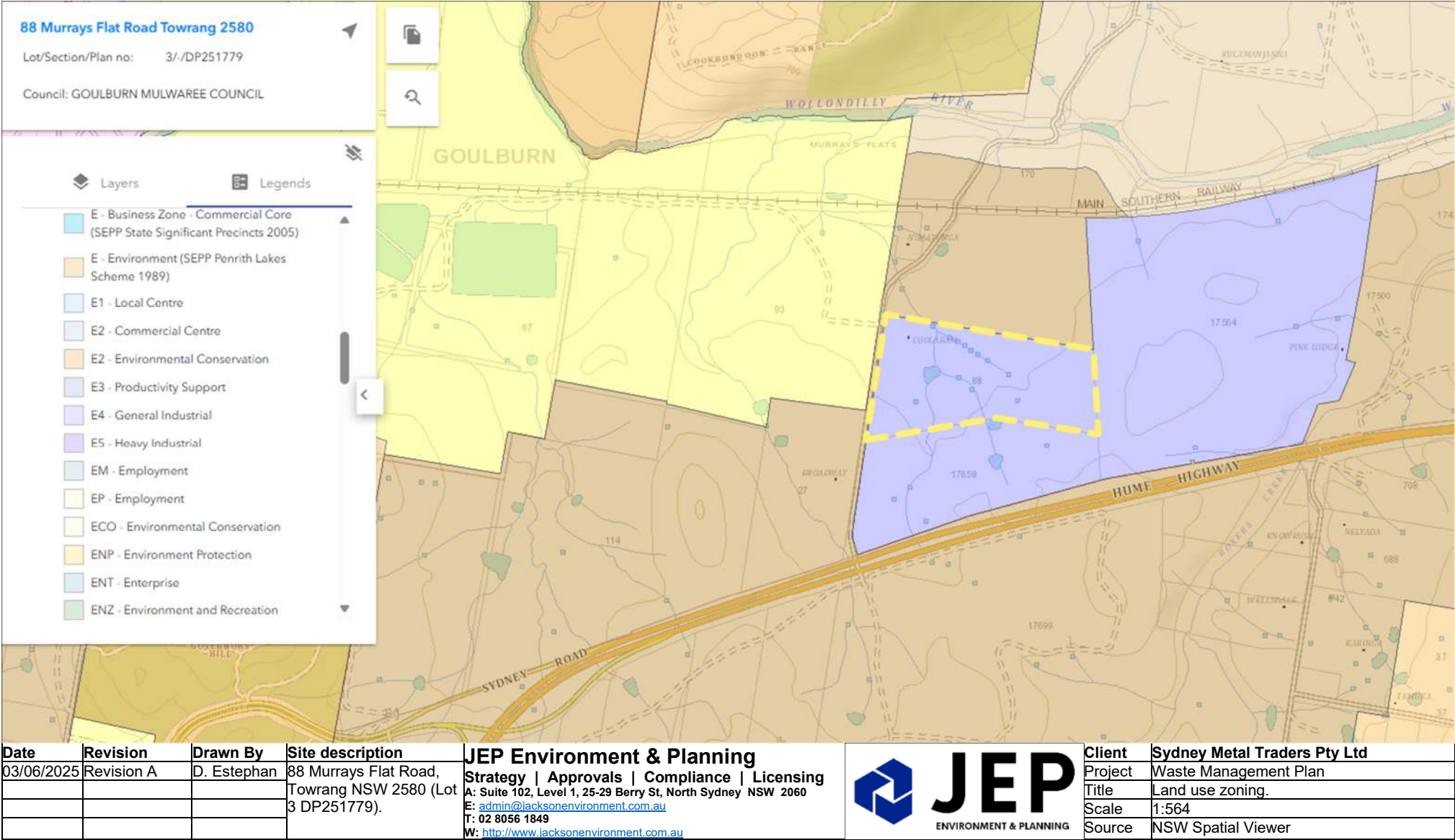
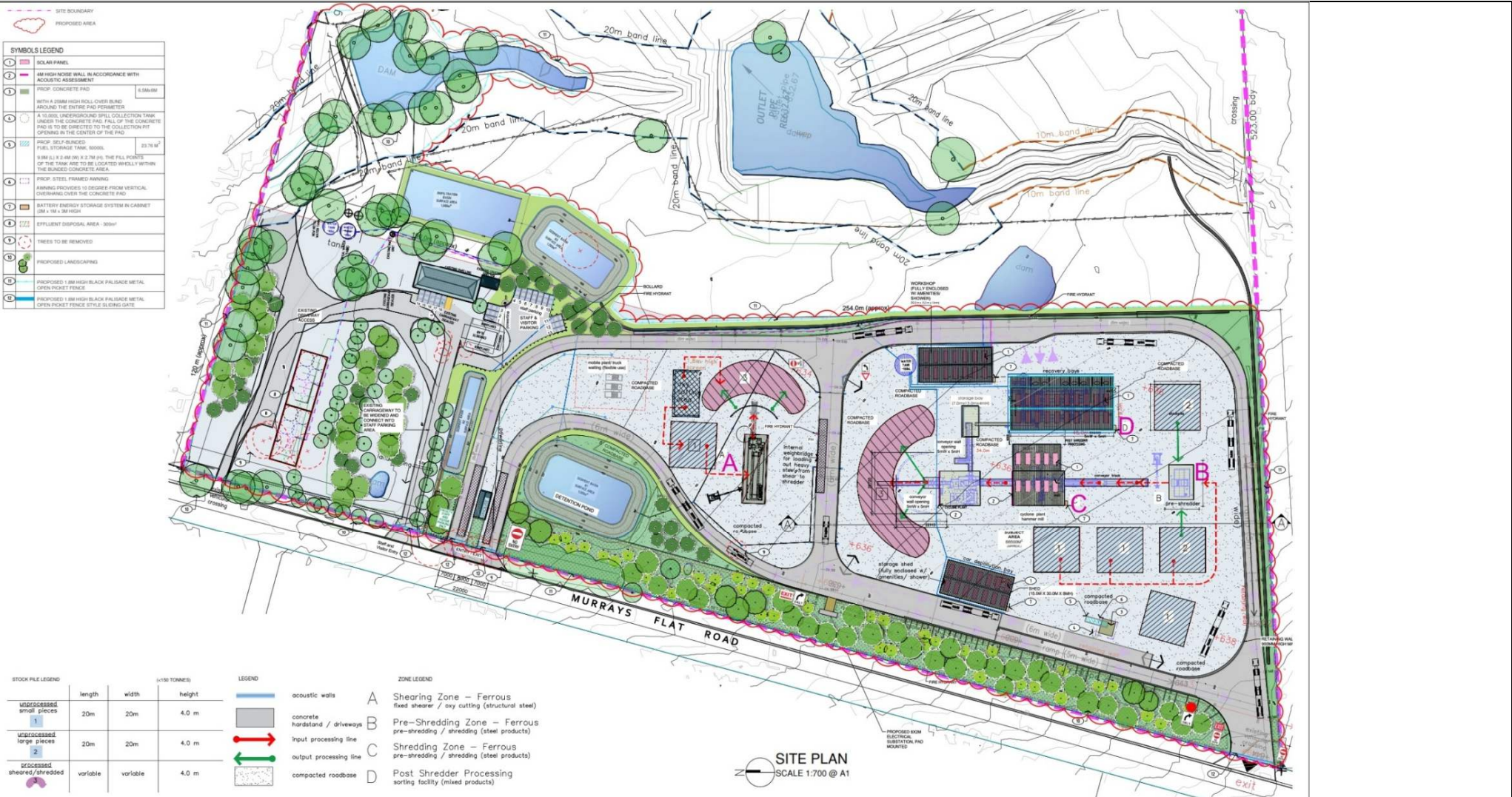


Figure 1.3. Proposed concept plan outlining the location for the Metal Recycling Facility.



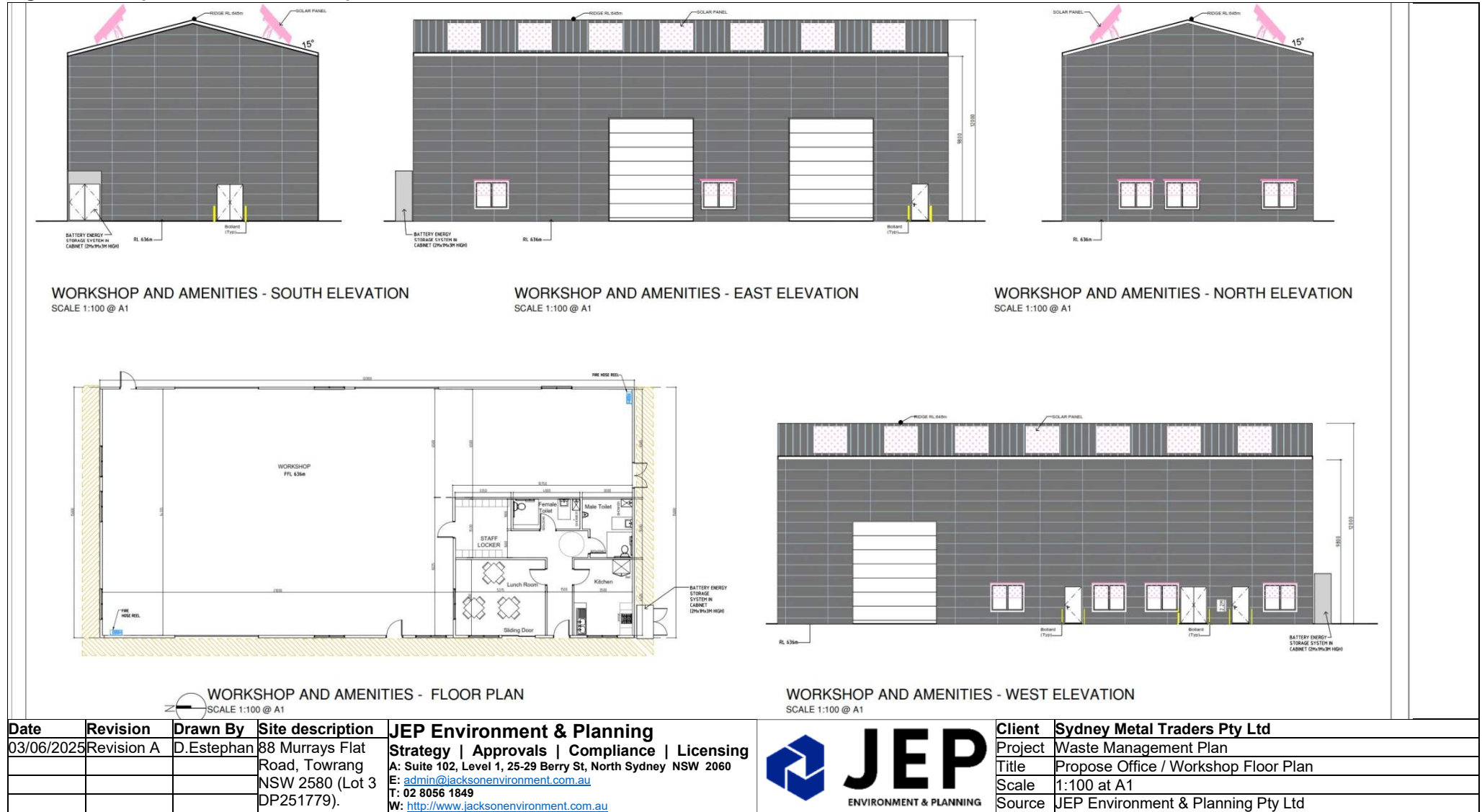
Date	Revision	Drawn By	Site description	JEP Environment & Planning Strategy Approvals Compliance Licensing	Client	Sydney Metal Traders Pty Ltd
03/06/2025	Revision A	D.Estephan	88 Murrays Flat Road, Towrang NSW 2580 (Lot 3 DP251779).	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	Project	Waste Management Plan
					Title	Proposed Concept plan
					Scale	1:100 at A1
					Source	SMT Business Ventures Pty Ltd

Figure 1.4. Proposed Site Plan.



Date	Revision	Drawn By	Site description	JEP Environment & Planning	Client	Sydney Metal Traders Pty Ltd
03/06/2025	Revision A	D.Estephan	88 Murrys Flat Road, Towrang NSW 2580 (Lot 3 DP251779).	Strategy Approvals Compliance Licensing	Project	Waste Management Plan
				A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060	Title	Propose site plan
				E: admin@jacksonenvironment.com.au	Scale	1:100 at A1
				T: 02 8056 1849	Source	JEP Environment & Planning Pty Ltd
				W: http://www.jacksonenvironment.com.au		

Figure 1.5. Proposed Office/Workshop Floor Plan.



1.4. Project overview

Sydney Metal Traders Pty Ltd proposes to develop and operate a Metal Recycling Facility (the Facility) at 88 Murrays Flat Road, Towrang NSW 2580 (Lot 3 DP251779) (the Site). The Facility is designed to process up to 30,000 tonnes per annum (tpa) of ferrous and non-ferrous scrap metals through receipt, sorting, cutting, shredding and storage operations.

The Site is located within the Goulburn Mulwaree Local Government Area and is zoned E4 General Industrial under the *Goulburn Mulwaree Local Environmental Plan 2009*. Development of a metal recycling facility is permissible with consent in this zone. The total lot area is approximately 32.3 hectares, with the operational footprint occupying 6.6 hectares along the western portion of the site.

The Site is located within the Sydney Drinking Water Catchment, and the Proposal is therefore classified as Designated Development under Clause 45(4)(c) of Schedule 3 of the *Environmental Planning and Assessment Regulation 2021*. As a result, an Environmental Impact Statement (EIS) is required, and the application will be assessed by the Southern Regional Planning Panel as Regionally Significant Development.

Key Features of the Proposal

The Facility will include the following components and infrastructure:

- Receipt and Sorting Areas – Bays for the tipping, inspection, and initial sorting of incoming scrap metals;
- Pre-Shredding and Shredding Zones – Equipped with pre-shredders, hammermill shredders, stationary shears and oxy-cutting facilities;
- Post-Processing Separation Facility – Bays for the separation, recovery, and temporary storage of processed ferrous and non-ferrous metals;
- Administrative Infrastructure – Adaptation of the existing on-site cottage into office and staff amenity space including staff parking area;
- Workshop and Maintenance Shed – A fully enclosed 32m x 15m x 12m structure for plant maintenance and operations;
- Mobile and Stationary Equipment – Including loaders, shears, conveyors, radiation detection equipment, and sorting systems;
- Weighbridges – Two entry/exit weighbridges for the accurate measurement of materials and heavy vehicle management and one internal weighbridge;
- Fuel Storage – A 50,000L self-bunded diesel tank, installed on a concrete hardstand with protective bunding and rain cover;
- Landscaping and Visual Screening – A 20-metre-wide landscaped setback along the western and southern Site boundaries;
- Traffic Management and Site Circulation – Paved hardstand access ways using existing access points with the addition of a new exit closer to the Hume Highway to minimise impacts on local roads and residential areas;
- Intersection Upgrades – To improve safe intersection sight distances (SISD), accommodate anticipated turning volumes, and provide a safe environment for both light and heavy vehicles accessing the site, the following intersection and turning upgrades are proposed:
 - CHL Lane: To be constructed at the northern intersection (for eastbound traffic);
 - CHR Lane: To be constructed at the southern intersection (for westbound traffic);
 - Restriction of right-turn movements for vehicles exceeding 9 metres in length, including;
 - Vehicles turning right from Murrays Flat Road to travel westbound on the Hume Highway;
 - Vehicles turning right from the Hume Highway (westbound) into Murrays Flat Road;

- Extending the existing channelised right-turn lane from the Hume Highway (westbound) to Murrays Flat Road to 135 metres, in compliance with Austroads standards;
- Extending and converting the existing auxiliary left-turn lane from the Hume Highway (eastbound) to Murrays Flat Road into a channelised left-turn lane with a length of 135 metres and chevron line marking for guidance;
- Constructing a 1.0-metre-wide median island on Murrays Flat Road, offset by 1.0 metre from the Hume Highway, to separate inbound and outbound traffic and provide safe clearance;
- Installing 'Give Way' signage and associated line marking at both stages of the intersection; and
- Installing signage prohibiting right turns by trucks longer than 9 metres at both stages of the intersection;
- Renewable Energy Infrastructure – The Facility will incorporate rooftop solar photovoltaic (PV) panels installed on the Workshop and Maintenance Shed, with power stored via an integrated Battery Energy Storage System (BESS);
- Wastewater system upgrades for on-site effluent treatment and disposal; and
- Stormwater Management – All operational areas will be constructed of compacted road base incorporating HDPE liners beneath operational areas, stormwater capture systems, and detention basins. The stormwater management system is designed to progressively capture and treat runoff through a series of infrastructure elements.

The Facility will receive and process scrap metal sourced from Sydney, Goulburn, the ACT, Southern Highlands, and surrounding regional areas. Processed materials will be transported to both local and overseas markets for recycling and end use.

The proposed scrap metal processing will be carried out in designated operating areas. Equipment used for the metal processing activities will comprise oxy-cutting, stationary shear, pre-shredder, shredder (hammermill), and downstream separation and sorting equipment.

Around 3% of incoming scrap metal has been processed off Site or does not require further processing and is received in a form ready for on-sale. This material includes Copper, Brass, Aluminium, Stainless Steel, Electric Motors, Batteries (ULABs) and Lead. Separate waste storage bays will be provided to store sorted and shredded metals prior to being loaded onto trucks for off-site recycling. The waste generated during operations will be safely and lawfully disposed at a licensed landfill.

Depollution activities will occur within a purpose-built enclosed shed structure identified in the architectural plans as the Depollution Bay. This area is designed to safely receive end-of-life vehicles (ELVs) for the removal of hazardous fluids and components prior to shredding or further processing. Upon arrival, whole vehicles will be inspected and transferred to the depollution bay where trained personnel will undertake the draining of oils, fuels, brake fluids, coolants, and other hazardous substances, using industry-standard vacuum and containment systems. Fluids will be securely stored in bunded, clearly labelled tanks or containers, pending lawful off-site disposal at a licensed waste facility.

2. Legislative Requirements

2.1. State and Legislative Requirements

The key sources of waste management regulation in New South Wales include:

- The *Protection of the Environment Operations Act 1997*, which provides enforcement provisions, a licensing framework and other tools to protect human health and environment from the inappropriate use of waste;
- The *Protection of the Environment Operations (Waste) Regulation 2014*, which includes thresholds for environment protection licences, and outlines the waste levy system;
- The *Protection of the Environment Operations (Clean Air) Regulation 2021*, which provides regulatory measures to control emissions from various sources including industry;

- The *Waste Avoidance and Resource Recovery Act 2001*, which sets the waste hierarchy and the NSW Waste Avoidance and Resource Recovery Strategy;

The requirements for classifying, handling and disposing of particular types of wastes is defined in the EPA Waste Classification Guidelines.

2.1.1. Protection of the Environment Operations Act 1997

The *Protection of the Environment Operation 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 Act requires a person to obtain an Environment Protection License from the NSW Environment Protection Authority before carrying out any of the premise-based activities described in Schedule 1 of the Act.

The Site is approved for activities which are consistent with the definition of 'Scrap metal processing' as per Clause 26(1) of Schedule 1 of the *Protection of the Environment Operations Act 1997*:

Scrap metal processing, meaning the crushing, grinding, shredding or sorting (but not smelting) of scrap metal of any kind.

'Scrap metal processing' is defined under Clause 26 as a form of 'Metallurgical activity'. Under Clause 26(2) of Schedule 1 of the *Protection of the Environment Operations Act 1997*, thresholds for 'Scrap metal processing' include:

- Capacity to process more than 150 tonnes of scrap metal per day or 30,000 tonnes per year (if not carried out wholly indoors) or 50,000 tonnes per year (if carried out wholly indoors).

Exceedance of these thresholds triggers the requirement for an EPA licence.

The Site will receive principally scrap ferrous metal for sorting, size reduction and transport off-site for further recycling. Most operations are conducted outdoors.

The Site will process less than 150 tonnes per day of scrap metal and less than 30,000 tonnes per year. The Site is therefore under the threshold and therefore no EPA licence is required (as long as thresholds are not exceeded).

2.2. Protection of the Environment Operations (Waste) Regulation 2014

During 2013-14 the EPA carried out an extensive review and consultation process on NSW's waste regulatory framework. The result was the *Protection of the Environment Operations (Waste) Regulation 2014* (the Waste Regulation).

The Waste Regulation improves the EPA's ability to protect human health and the environment and paves the way for a modern and fair waste industry in NSW. The EPA rolled out the new rules stipulated under the Waste Regulation in stages over 2014-2017.

These changes include amended thresholds for environment protection licences and reforms to the waste levy system.

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.

As the Proposal is defined as a 'Metallurgical activity' as per Schedule 1 of the *POEO Act 1997*, the Proposal is not a scheduled activity and is not a waste facility, meaning no weighbridge is required. However, weighbridges are proposed for trade purposes.

2.2.1. Waste Hierarchy

To support the efficient use of resources in NSW, a waste hierarchy has been established by the NSW Government in the *Waste Avoidance and Resource Recovery Act 2001*. The waste hierarchy sets out preferred actions in a 'hierarchy' from most preferred to least preferred to minimise the impact of waste on the environment and public health. The waste hierarchy actions (from most preferred to least preferred) are outlined as follows:

1. Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government;
2. Resource recovery including re-use, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources; and
3. Disposal including management of all disposal options in the most environmentally responsible manner.

The waste hierarchy has been established to guide the appropriate management of waste in NSW by the community, councils, businesses and the NSW Government. The waste hierarchy is underpinned by Ecologically Sustainable Development principles as defined in the *Protection of the Environment Operations Act 1997*. The waste hierarchy is summarised in **Error! Reference source not found..**

The waste hierarchy has guided the development of this plan.

Figure 2.1. The waste hierarchy underpinning the NSW Waste Avoidance and Resource Recovery Act 2001.



2.3. Classification of waste streams

Classifying waste into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal.

The following classes of waste are defined in clause 49 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act) and the NSW EPA's *Waste Classification Guidelines* (2014):

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

Where waste cannot be avoided, reused or recycled it will be classified and appropriately disposed of. The classification of waste is based on the Waste Classification Guidelines (NSW EPA, 2014). The guideline outlines how to assess waste, waste classification and sets out management options for the disposal of classified waste.

Waste classification will involve one or more of the following steps:

1. Establish if the waste should be classified as special waste;
2. If not special waste, establish whether the waste should be classified as liquid waste;
3. If not special waste or liquid waste, establish whether the waste is of a type that has already been pre-classified;
4. If the waste is not special waste, liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste;
5. If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine what class of waste it is. If the waste is not chemically assessed, you must manage the waste as if it were hazardous waste; and
6. If the waste is chemically assessed as general solid waste, a further test is available to determine whether the waste is putrescible or non-putrescible. This test determines whether the waste is capable of significant biological transformation. If you do not wish to undertake this test, you must manage the waste as if it were general solid waste (putrescible).

The EPA's Waste Classification Guidelines provide a clear framework for accepting, testing and determining the management options for waste received to ensure human health and the environment are protected.

The proposed development will only receive scrap metal for processing; therefore, no waste will require classification or tracking.

2.4. NSW Environmental Planning Instruments and Policies

2.4.1. Secretary's Environmental Assessment Requirements (SEARs)

Table 2.1 outlines the information requirements related to waste management specified in SEARs 2038.

Table 2.1. SEAR 2038 requirements relating to waste management.

SEAR Information Requirement	Location of Information
Details of the type, quantity, and classification of waste to be received at the site	Section 3 of this report
Details of the resource outputs and any additional processes for residual waste	Section 3 of this report.
Details of waste handling including transport, identification, receipt, stockpiling and quality control	Section 3 of this report.
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 2.1 of this report.

2.5. Goulburn Mulwaree Development Control Plan 2009

There are no specific development controls relating to the preparation of a Waste Management Plan for the proposed development. However, Council provides general guidance for the preparation of such plans, as outlined in Section 2.6 below.

2.6. Goulburn Mulwaree Waste Management Guide for Developers

The Goulburn Mulwaree Waste Management Guide for Developers has been prepared to assist developers in considering effective waste management practices for both residential and non-residential developments. The guidance provided is of a general nature and may not be applicable to all development types. All documentation submitted to Council as part of a Development Application is assessed on a case-by-case basis to ensure suitability to the specific proposal.

Table 2.2 outlines the key considerations that must be addressed by the developer in preparing the Waste Management Plan.

Table 2.2. Council key consideration for waste management plan.

Council Consideration	Addressed in Proposal
Council provides non-residential waste services for general waste collection within the collection zone. Recycling and organic waste services are not currently available. Rural collections may be available by negotiation dependant on location.	The development will not rely on Council kerbside services. All residual and recyclable waste generated on-site will be transported directly to the Goulburn Waste Management Centre by licensed waste transporters.
Waste management considerations need to be addressed as part of the Development Application. For example, this could be either a dedicated section of a document such as a Statement of Environmental Effects or a separate Waste Management Plan, submitted to Council as part of the Development Application.	Waste management provisions have been detailed in this Waste Management Plan, submitted alongside the Development Application. The Plan outlines all storage, processing, and disposal methods for the proposed operations, consistent with Council's expectations for non-residential developments.
Plans submitted to Council as part of the Development Application must show the following: 1. The storage and collection location of waste receptacles, including the quantity and size of bins; 2. Adequate access and turning paths for waste collection vehicles to meet engineering requirements.	The submitted site plans clearly identify the location, size, and capacity of all waste storage areas, including the unprocessed metal zones, processing zones, and processed recovery bays. The plans also illustrate vehicle access points, bin placement areas, and internal circulation to demonstrate compliance with engineering access requirements.
Wherever possible, the site must be configured to allow waste collection vehicles to enter and exit the site in a forward direction. Access roads must be built to Council standard in order for Council to enter the land for waste collection	The site layout enables waste transport vehicles to enter and exit the premises in a forward direction. Internal access roads and manoeuvring areas are designed to Council standards, ensuring safe and efficient vehicle operation during waste collection and transfer activities.

2.7. Strategic Drivers

2.7.1. NSW Waste and Sustainable Materials Strategy 2041

NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027 outlines the actions NSW will take over the next six years – the first phase of the strategy – to deliver on a set of long-term objectives. The strategy is by \$356 million in funding to help deliver priority programs and policy reforms, including:

- Phasing out problematic single-use plastic items;
- Financial incentives for manufacturers and producers to design out problematic plastics;
- Having government agencies preference recycled content and invest in research and pilots for recycling innovation;
- Introducing tighter environmental controls for energy from waste in NSW, with further consideration of planning and infrastructure needs underway;
- Mandating the source separation of food and garden organics for households and selected businesses; and
- Incentivising biogas generation from waste materials.

Specific targets focus on the environmental benefits and economic opportunities in how we manage our waste, and includes the following:

- Reduce total waste generated by 10% per person by 2030;
- Have an 80% average recovery rate from all waste streams by 2030;
- Significantly increase the use of recycled content by governments and industry;

- Phase out problematic and unnecessary plastics by 2025;
- Halve the amount of organic waste sent to landfill by 2030;
- Reduce litter by 60% by 2030 and plastics litter by 30% by 2025; and
- Triple the plastics recycling rate by 2030.

To complement this strategy, NSW also released the following documents:

- *NSW Plastics Action Plan*, which sets out how we will phase out problematic plastics, tackle litter from plastic items like cigarette butts, and support innovation and research; and
- *NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs*, which sets out the investment pathway required for NSW to meet future demand for residual waste management and recycling.

A major focus area of the strategy is to increase waste infrastructure and services to meet our future needs. The highest priority is to extend the life of existing landfills by reducing the volumes of waste being sent to landfill. Whilst the main focus is on waste avoidance, improving recycling capacity is an important aspect of waste management.

This Proposal will contribute towards the recycling targets of NSW and help achieve a more circular economy through recycling and re-using of materials. The Proposal will help facilitate the use of recycled materials through the recycling of metals, replacing the use of virgin materials and minimising metals disposed of in landfill.

The scrap metal recycling facility will have an average recycling rate of 74%. However, further recycling at offsite facilities licensed to accept the floc material will provide further opportunities for recovery. The overall waste recovery rate during construction is estimated to exceed 99.9%. Estimated office waste recovery is 88%. On average, the recycling rate of the facility will be higher than the 80% recovery rate goal for 2030.

2.7.2. NSW Waste and Sustainable Materials Strategy: A Guide to Future Infrastructure Needs

The *NSW Waste and Sustainable Materials Strategy: A Guide to Future Infrastructure Needs* is a supplement to the *NSW Waste and Sustainable Materials Strategy 2041*. The guide 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 the system for the reprocessing of some of these materials that have historically been exported for processing.

The guide sets out how the NSW Government will support the development of new infrastructure through facilitating infrastructure, e.g., through planning activities; investing in high priority projects; strategically planning for infrastructure with local communities; and aligning policy and regulation with the Strategy. The three key areas of focus, based on extensive analysis of material flows, current and planned capacity and proposed policy changes, are residual waste, organics and plastics.

The guide specifically addresses the current market, processing capacity, throughput and future needs, and the opportunities and challenges associated with processing waste materials across NSW.

Sydney Metal Traders is investing more than \$10 million into the NSW economy to develop the recycling infrastructure, helping to create new jobs, economic activity and supporting local communities. The investment will help bring forward 30,000 tonnes per annum of new recycling capacity in NSW, which will help accelerate progress towards landfill diversion targets.

3. Waste Management

Waste management practices outlined below address the economic, environmental and safety imperatives during operation of the facility. These enhanced management practices also produce triple bottom line benefits including financial efficiencies, sustainable construction methods and a safe work site for the duration of the construction process.

These positive outcomes will be achieved through thorough planning and procurement of exacting measurements reducing upfront costs of construction and preventing the generation of waste.

The benefits of the management practices outlined in the plans will be realised from the outset by both the business and the broader community in the form of reduced costs of disposal, reduced costs of legal liability and common good through:

- Minimising waste by manufacturing building components off site to design specifications;
- Maximising recovery of valuable resources;
- Exercising due diligence for safe disposal of waste; and
- Providing a safe worksite.

3.1. Demolition Phase

As part of the site preparation works for the Proposal, all existing trees within the designated operational area will be removed. This includes trees located within building footprints, access ways, and the proposed landscaped setback areas. The vegetation will be cleared and transported off-site to a licensed recycling facility. Based on the extent of tree removal shown in the plan (See figure 3.2), it is estimated that approximately **20 tonnes** of green waste (tree trunks and branches) will be generated and **100%** of this material will be recycled through approved green waste processing services. See table 3.1 for estimated vegetation removed.

Table 3.1 Estimate vegetation Demolition.

Waste Type	Waste Identified	Waste Description	Disposal Method	Suggested Receiving Facility	Tonnes	Recycling Rate
General Solid Waste (non-putrescible)	Trees	Removal of trees within the operational area	Off-site recycling	Goulburn Waste Management Centre	20	100%
TOTAL Amount of waste generated (tonnes)						20
TOTAL Amount of waste recycled (tonnes)						20
Overall recycling rate						100%

3.2. Construction Phase

The construction period for the proposed development is expected to span approximately six months following receipt of development consent. The works will be undertaken in the following three stages, each generating specific types and volumes of construction waste. This WMP aims to minimise environmental impact by maximising reuse and recycling and ensuring compliant disposal practices.

Stage 1 – Site mobilisation:

- Services search;
- Establishment of environmental management measures including erosion and sediment controls;
- Establish site access, laydown areas; and
- Establishment of stockpile sites.

Stage 2 – Site Preparation Activities:

- Removal of vegetation; and

- Site levelling and fencing.

Stage 3 – Bulk Earthworks, Drainage & Hardstand Construction Activities:

- Excavation and grading;
- Installation of stormwater and drainage systems;
- Utility trenching and connections;
- Construction of hardstand areas including HDPE liner placement' and
- Delivery and installation of mobile metal shredding equipment.

Stage 4 – Conversion of Residential Building to Administration Offices Activities:

- Internal retrofitting and fit-out of the office;
- Installation of fixtures, furniture, and equipment in the office; and
- Upgrade and refurbishment of the On Site Sewage Management System (OSSM).

Stage 5 – Intersection Upgrade Works:

- Excavation and grading of the intersection upgrade area;
- Construction of road pavement layers, including placement and compaction of roadbase materials;
- Asphalt paving and surfacing works;
- Installation of concrete barriers and associated traffic safety infrastructure; and
- Installation of road signage, line marking and other traffic control devices.

Key Site Infrastructure Works:

As part of the overall development, various supporting infrastructure components will also be constructed. These include:

- Three sediment basins and a 1,000 m² biofiltration basin to manage and treat stormwater runoff;
- A 300 m² effluent disposal area to support on-site wastewater management;
- A self-bunded fuel storage tank (50,000L capacity) installed on a bunded concrete pad, with an underground 10,000L spill containment tank;
- A 20-metre-wide landscaped setback along the site boundary and 4-metre-high acoustic walls to reduce visual and noise impacts;
- Internal roadways formed with compacted road base, designed for the safe movement of heavy vehicles (including B-Double and HRV trucks);
- A weighbridge system to support incoming and outgoing material tracking;
- A gatehouse for site access control and logistics management;
- Designated staff and visitor parking areas;
- Retained existing dams for potential stormwater reuse or emergency supply; and
- Construction of key operational buildings and infrastructure, including a shredder shed, workshop and amenities, storage shed and depollution bay, hammer mill and cyclone plant, and the conversion of an existing residential building into administration offices.

These components are integral to the long-term functioning of the metal recycling facility and will be constructed progressively throughout the nominated construction stages.

The waste streams generated on site during the construction phase are summarised in Table 3.2 below. Concrete, timber, metal, soil, and plastics will be generated during site preparation, bulk earthworks, and the conversion of the

existing residential building to administrative use. These materials will be appropriately segregated on site to maximise recovery, stored in separate hook lift bins, and transported off-site for recycling or lawful disposal at the Goulburn Waste Management Centre or other licensed local facilities.

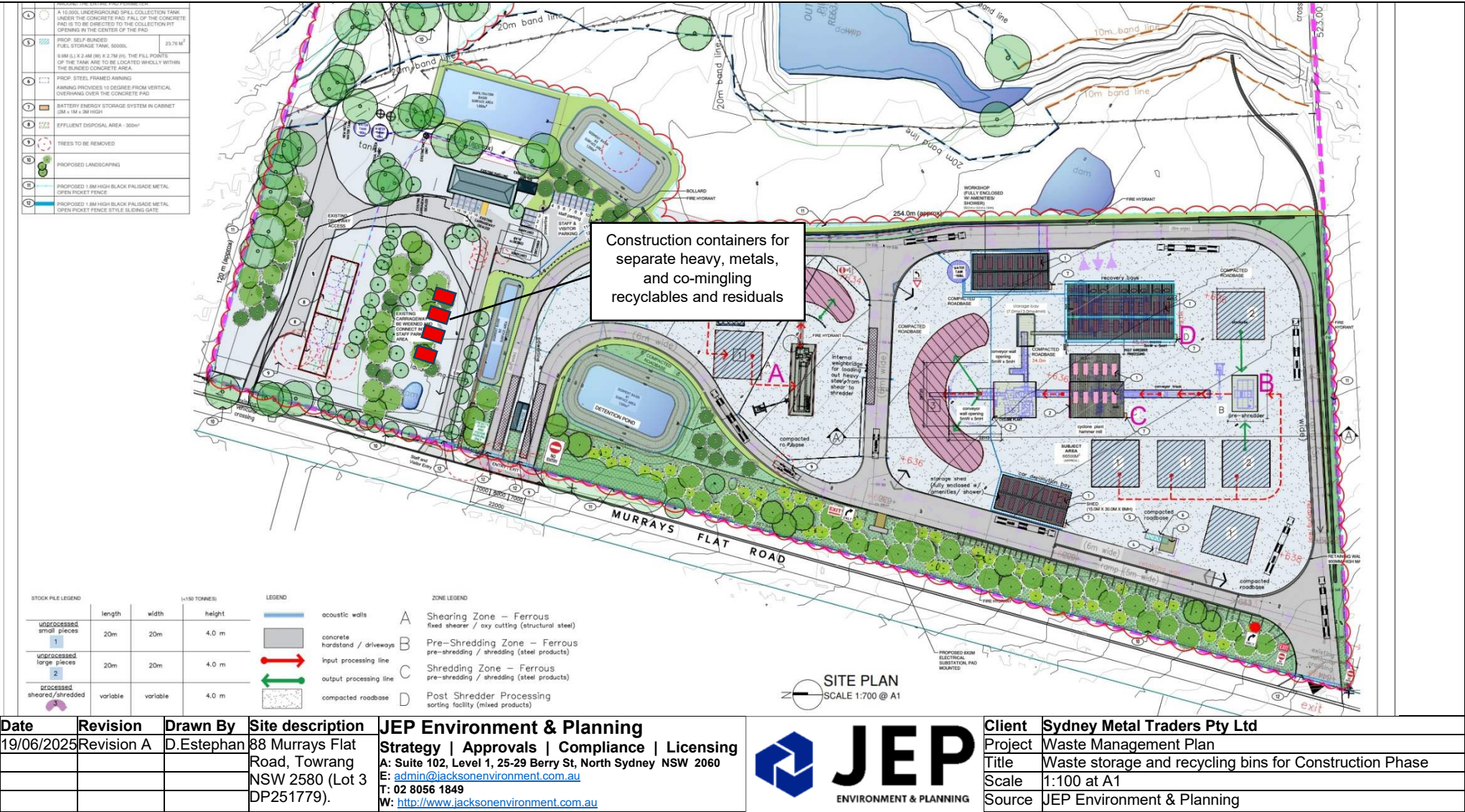
The amount of soil material leftover that is generated by leveling and preparing the Site will be taken off-site for reuse under the relevant Resource Recovery Order and Exemption. The majority of this material is expected to be Excavated Natural Material / Virgin Excavated Natural Material. Based on the cut and fill plan in the stormwater and civil design for the Proposal, the amount will be approximately 33,826 m³. At 1,600kg/m³ average bulk density, this would equal equivalent to 54,122 tonnes.

The overall waste recovery rate during construction is estimated to exceed 99.99%. All waste handling will be undertaken in accordance with relevant environmental legislation and EPA requirements, supporting responsible resource recovery and minimising environmental impact.

Table 3.2 Estimate waste generation during construction phase.

Waste Type	Waste Identified	Waste Description	Reuse/recycling/ Disposal Method	Suggested Receiving Facility	Estimated Tonnes	Recycling rate
General Solid Waste (non- putrescible)	Soil	Soil removed under pavement for stormwater drainage upgrade, spill containment and footings. Removal of Vegetation and site levelling (for the Site and for the intersection upgrades at Murrays Flat Road and the Hume Hwy)	On-site recycling	Beneficially reused under a VENM Certificate or the EPA's <i>Excavated Natural Material Resource Recovery Order</i> 2014	54,602	100%
	Construction waste – "heavy"	Asphalt, concrete from the installation of foundations and services	Off-site recycling	Goulburn Waste Management Centre	7.5	90%
	Construction waste - metal	Ferrous metal off-cuts	Off-site recycling	Goulburn Waste Management Centre	2.5	100%
	Construction waste – "light"	Timber, packaging, glass, plastic, rubber, plasterboard, and ceramics	Off-site recycling/ disposal	Goulburn Waste Management Centre	3.5	40%
	Grit, sediment, litter and gross pollutants	Collected in, and removed from, stormwater treatment devices and/or stormwater management systems	On-site recycling	Goulburn Waste Management Centre	10.5	100%
	Site office waste	Paper, cardboard and co-mingled recycling.	Off-site recycling	Goulburn Waste Management Centre	0.75	100%
Hazardous	Waste oils, fuels, lubricants and chemicals	Waste oils and containers that previously contained Class 1, 3, 4, 5 or 8 substances used for construction plant	Off-site recycling / disposal	Goulburn Waste Management Centre	0.75	0%
General Solid Waste (putrescible)	Site office waste	Generated from worker's lunches.	On-site recycling	Goulburn Waste Management Centre	0.75	0%
TOTAL Amount of waste generated (tonnes)						54,627
TOTAL Amount of waste recycled (tonnes)						54,623
Overall recycling rate						99.99%

Figure 3.1. Placement of waste storage and recycling bins during the construction phase in red boxes.



Date	Revision	Drawn By	Site description	JEP Environment & Planning
19/06/2025	Revision A	D.Estephan	88 Murrays Flat Road, Towrang NSW 2580 (Lot 3 DP251779).	Strategy Approvals Compliance Licensing 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

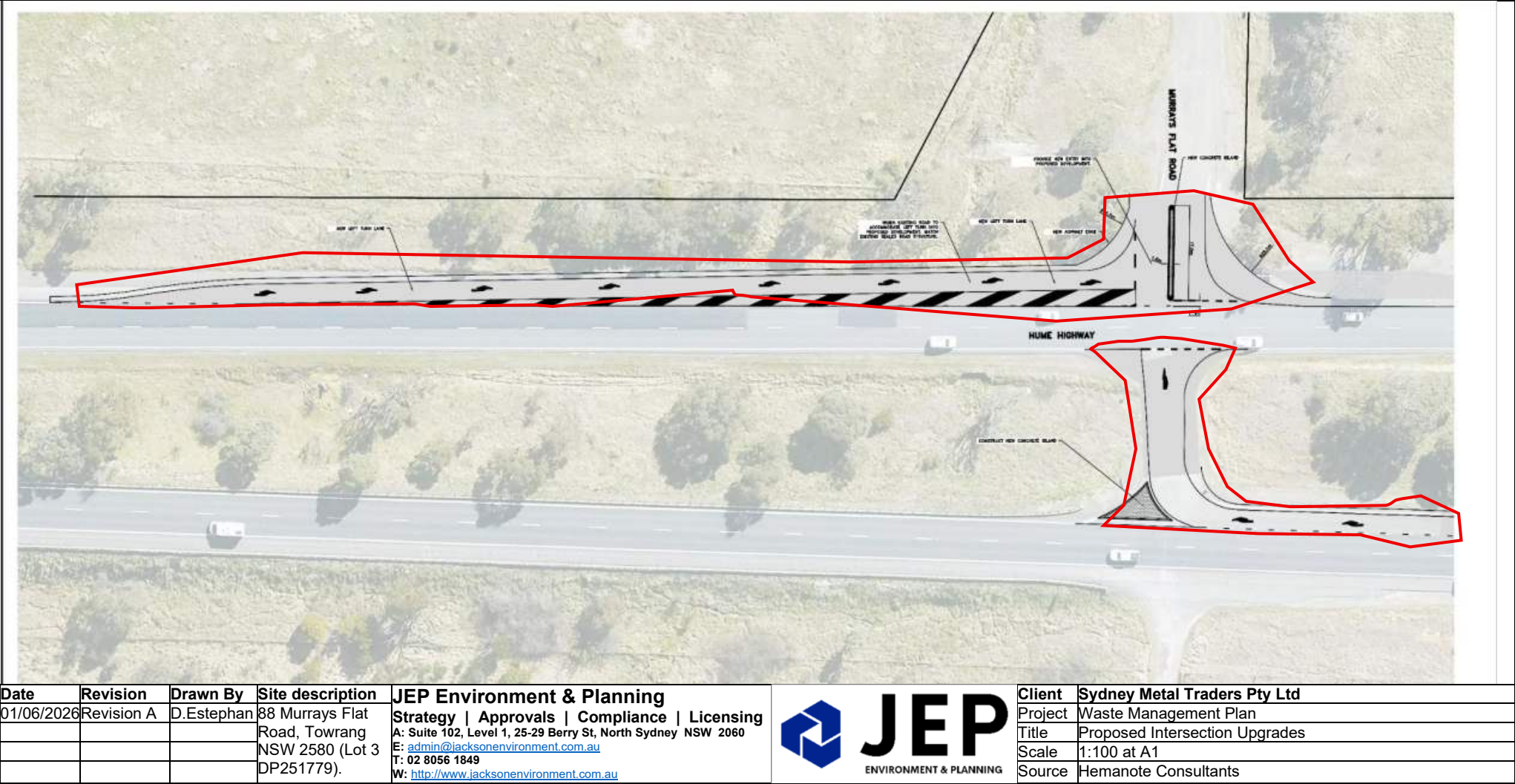


Client	Sydney Metal Traders Pty Ltd
Project	Waste Management Plan
Title	Waste storage and recycling bins for Construction Phase
Scale	1:100 at A1
Source	JEP Environment & Planning

Figure 3.2 Proposed demolition plan, showing the trees to be removed (red cricles).



Figure 3.3 Proposed Intersection upgrades (Red circle showing area for construction)



3.3. Operational Phase

The Site will receive up to 30,000 tonnes per year of scrap metal for sorting and processing. All incoming vehicles will first pass over the inbound weighbridge located at the entrance to the Site. This weighbridge is positioned prior to the main operational area to ensure all loads are recorded before proceeding further. Once weighed, vehicles will move to the gatehouse, where loads will be visually assessed and directed to the appropriate unloading area depending on the type and source of material.

Upon entry into the operational area, vehicles will be directed to one of several designated unloading zones:

- Depollution Bay: A sealed and bunded area for end-of-life vehicles (ELVs), where fluids, batteries, and other hazardous components are safely removed prior to further processing; and
- Ferrous and Non-Ferrous Zones: Areas allocated for the unloading of bulk commercial scrap metal, including steel, aluminium, copper, and other materials.

A series of mechanical processes are carried out on-site to prepare materials for shredding and maximise resource recovery:

- Oxy-Cutting: Oversized and heavy ferrous materials that cannot be processed by the shear are manually cut down to size using oxy-cutting equipment. These materials are then either processed through the shear or stockpiled within the cutting area.
- Stationary Shearing: Large ferrous items such as beams, plate steel, and fabricated sections are processed using a stationary shear. The shear reduces the materials to transportable lengths suitable for either direct sale or further shredding. A dedicated stockpile area adjacent to the shear is used to store pre-processed materials.
- Pre-Shredding: Materials such as car bodies are introduced into a pre-shredder prior to being processed by the hammermill. The pre-shredder homogenises the feedstock, detects unshreddable or explosive items (e.g., gas bottles), and reduces noise and vibration during hammermill operation. Materials from the pre-shredder are transferred via conveyor to the main shredder.
- Shredder/Hammermill: Materials are processed through a hammermill either directly from stockpile or after pre-shredding. The shredder reduces scrap metal into smaller, manageable pieces, lowering storage volume and transport requirements. Outputs from this process include fragmented ferrous and non-ferrous metals, as well as non-metallic residue (floc).
- Downstream Separation: The output from the shredder is conveyed to a downstream plant, beginning with a drum magnet that extracts ferrous metals. These are conveyed to a picking station for manual sorting, then stockpiled in dedicated bays. Non-ferrous metals and floc are directed to an Eddy Current Separator (ECS), where non-ferrous metals are separated from light fractions such as plastic, foam, and soil. Recovered non-ferrous metals are stored in covered bunker bins.
- Floc Management: Floc, which makes up approximately 20 to 30% of the processed output by weight, is conveyed to a covered and bunded containment bay to prevent discharge of contaminants into the Site's stormwater system. This material will be regularly transported off-site to a licensed waste facility for appropriate disposal or recovery. Refer to Figure 3.3 which identifies the process for Site operations.

3.3.1. Waste accepted at the site

The Facility is designed to process up to 30,000 tonnes per annum (tpa) of ferrous and non-ferrous scrap metals through receipt, sorting, cutting, shredding and storage operations. Materials accepted for processing are ferrous and non-ferrous metals of various sizes comprising:

- | | |
|----------------|-------------|
| • Steel | • Aluminium |
| • Carbon Steel | • Copper |
| • Alloy Steel | • Lead |
| • Cast Iron | • Zinc |

- White Goods
- Cars
- Sheet Metals
- Tin
- Batteries
- Stainless Steel

Processed ferrous and non-ferrous materials will be stored in separate covered bays pending transportation. Outbound trucks will be loaded from the Site's stockpile areas and directed back to the weighbridge to record the net weight of recovered materials. Vehicles will then exit the Site via the designated egress point, completing the one-way operational flow. This looped traffic system minimises on-site congestion, improves safety, and ensures accurate waste tracking and reporting.

Estimated output materials from the shredding and separation processing of scrap metals is summarised in Table 3.3. The overall recycling rate of the scrap metal received is estimated at 74%. However, further recycling at offsite facilities licensed to accept the floc material will provide further opportunities for recovery.

Table 3.3. Summary estimate of export forecasts of shredded scrap metal and residuals. Actual may vary.

Export material	Annual Tonnes	Destination	Overall Estimated Percentage
Ferrous metals	18,000	International shipment and/or local destinations.	60%
Non-ferrous metals	4,000	Local destinations.	13.33%
Floc	8,000	Eastern Creek Resource Recovery Park	26.67%

3.3.2. Metal stockpile areas

The site layout is divided into distinct operational zones to manage the receipt, processing, and storage of different metal waste streams. The Unprocessed Metal Zones (Areas 1 and 2) are designed for the storage of small-sized/undersized and large-sized/oversized scrap metal prior to processing, with each pad accommodating a maximum pile size of 1,600 m³.

The Processing Zones include the fixed shearer and shredding areas, represented by the pink curved stockpile pads, which are used to store sheared or shredded ferrous material prior to recovery. Adjacent to these are the Processed Metal Recovery Bases, which comprise six dedicated bays for specific recovered material types, including stainless steel (SUS), copper and aluminium (Cu/Al), wire, 15–120 mm plastic, ferrous iron (Fe iron), and floc/fluff.

These recovery bays are located within the shredder building and are designed for smaller, high-value or specific waste streams, each with a maximum volume of 10 m³. Based on the calculated stockpile capacities, the total maximum volume of metals that can be stored on site at any point in time is 16,580 m³ and the maximum tonnage of metals that can be stored at any point in time is 14,354 tonnes.

The approximate maximum volume and tonnages for each stockpile is provided in Table 3.4.

Table 3.4. The approximate maximum volume and tonnages for each stockpile stored on site.

Stockpiling Area	Types of materials to be received and processed	Source	Waste classification	Maximum volume of metals stored in each area (m ³)	Area of stockpile (m ²)	Length of stockpile (m)	Width of stockpile (m)	Height of stockpile (m)	Bulk Density (Tonnage / m ³)	Maximum amount of each stockpile (tonnes)
Unprocessed Metal Area 1 Zone A	Unprocessed Small Sized / Undersized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	0.5	800
Unprocessed Metal Area 1 Zone C	Unprocessed Small Sized / Undersized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	0.5	800
Unprocessed Metal Area 1 Zone C	Unprocessed Small Sized / Undersized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	0.5	800
Unprocessed Metal Area 1 Zone C	Unprocessed Small Sized / Undersized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	0.5	800
Unprocessed Metal Area 2 Zone B	Unprocessed Large Sized / Oversized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	1.1	1,760
Unprocessed Metal Area 2 Zone C	Unprocessed Large Sized / Oversized	Businesses	General solid waste (non-putrescible)	1,600		20	20	4	1.1	1,760
Processed Metal Stockpile sheared/shredded #1 Zone A	Sheared/shredded (fixed shearer / oxy cutting (structural steel))	Businesses	General solid waste (non-putrescible)	2,396	599	variable	variable	4	1.1	2,636
Processed Metal Stockpile sheared/shredded #2 Zone C	Sheared/shredded (Shredding zone - ferrous and post shredder processing)	Businesses	General solid waste (non-putrescible)	4,524	1,131	variable	variable	4	1.1	4,976
Processed Metal Stockpile Recovery Bases	Stainless Steel (SUS)	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.5	5
	Copper and Aluminium (Cu/Al)	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.2	2

Stockpiling Area	Types of materials to be received and processed	Source	Waste classification	Maximum volume of metals stored in each area (m ³)	Area of stockpile (m ²)	Length of stockpile (m)	Width of stockpile (m)	Height of stockpile (m)	Bulk Density (Tonnage / m ³)	Maximum amount of each stockpile (tonnes)
	Wire	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.5	5
	15-120mm Plastic	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.3	3
	Ferrous iron (Fe Iron)	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.5	5
	Floc/fluff	Businesses	General solid waste (non-putrescible)	10			2.5	4	0.2	2
TOTALS				16,580						14,354
Maximum volume of metals that can be stored on site at any point in time (m³)				16,580						
Maximum tonnage of metals that can be stored on site at any point in time (tonnes)				14,354						

3.3.3. Non-conforming waste materials

Non-ferrous metals will be stored in a designated bay, while floc will be retained in a sealed containment area to minimise environmental impact. Shredder floc is a by-product of scrap metal recycling. Shredder floc can consist of bits of plastic, rubber, textiles, metals, dirt and glass (see Table 3.5). Floc will be contained in a sealed bunker, or floc bay, as the material can be contaminated with heavy metals, oils and hydrocarbons.

Table 3.5. Average shredder floc composition.

Material type	Average composition range (% weight)
Plastics	35 – 55%
Rubber	10 – 20%
Metals	6 – 13%
Textiles	7 – 15%

Floc is discharged via a covered conveyor into a separate covered and contained 25-30m³ skip or hook bin (10 tonne capacity) within a designated concrete block bunker. This will minimise any discharge of oil, grease and other potential pollutants to the Site's stormwater pit. Floc will comprise an estimated 20 to 30% of the input stream. Floc will be regularly transported to a licensed facility that can accept this waste.

Non-conforming waste material may occasionally be received at the Site. Non-conforming material is any hazardous or dangerous waste that is unknowingly brought on-site. Prohibited (non-conforming) materials include:

- Rechargeable batteries;
- Radioactive materials;
- Pressure vessels (gas cylinders, LPG tanks);
- Flammable chemicals or materials, including residuals in drums or tins;
- Toxic, poisonous or infectious materials or residual wastes;
- Refrigerants or ozone depleting gasses;
- Safes;
- Tyres (individual units without rims);
- Transformers (without PCB free certificate);
- Asbestos; and
- Batteries that contain nickel, cadmium, lithium or alkaline;
- Explosives;
- Accumulators;
- Corrosive materials;
- Hazardous materials, wastes or residual material;
- Chemicals, including residual in drums or tins;
- Electronic wastes;
- Boilers (without asbestos free certificate);
- Storage tanks (without clean certificate);
- Putrescible waste.

3.3.4. Site access

Vehicular access to the Site will be provided via three (3) driveways. One (1) driveway on the northern side of the Site will serve the administration office, one (1) driveway on the northern side will accommodate truck movements, and one (1) driveway on the southern side of Murrays Flat Road will be utilised by heavy vehicles during operational activities.

A newly constructed 22-metre-wide access driveway located adjacent to the administration office (to the north) will act as an entry and exit driveway for trucks only. A second access driveway located on the southern corner of the Site will be utilised as an exit-only driveway for trucks, with a width of 20 metres. These access arrangements are designed in accordance with AS2890.2:2018 and are considered adequate for heavy vehicle movements.

The existing access driveway is to be widened to allow two vehicles to pass each other and will serve staff and visitor vehicles, with a width of 5.8 metres, consistent with a low-volume (Category 1) access driveway in accordance with AS2890.1:2004 (Table 3.2). The existing driveway is located more than 6 metres from the tangent point of the adjacent kerb line, in accordance with Figure 3.1 of AS2890.1:2004.

All vehicular access is to be located and constructed in accordance with the approved design plans and relevant standards (AS2890.1:2004 and AS2890.2:2018), ensuring that vehicles are able to enter and exit the Site in a forward direction at all times. A clear sight line triangle (2.5 m x 2 m) is provided on the exit side of the driveway to maintain safe visibility between drivers and pedestrians. Incoming waste tracking and classification

The tracking, monitoring and recording of material movement onto and off site is via an electronic software system. The Data System is the electronic software system that generates and records the data for tracking, monitoring and recording the material movements on-site. This includes the weighbridge systems, scales, input and output material tracking systems, material grade/type and quality and customer details.

Details are recorded at four (4) primary locations:

- Site ingress weighbridge / scales where details such as load type, vehicle weight, vehicle registration, date and time are recorded;
- Unloading where the load is inspected to confirm ingress details and identify non-conforming waste materials;
- Egress weighbridge / scales where here details such as load type, vehicle weight, vehicle registration, date and time are recorded and confirmed; and
- When product is on sold to customers / exported.

All stages are monitored and recorded by cameras.

Further details of the waste monitoring are provided in the Waste Monitoring Program

3.3.5. Incoming waste inspections

The following procedure is followed when a truck enters the Site and is directed to the verified weighbridge:

- Trained personnel inspect the entire top of each load from an elevated inspection point in person or by using a video camera connected to a monitor and determine whether or not the load contains any non-conforming waste;
- Where the load is identified as containing, or is reasonably suspected to contain, any non-conforming waste, the entire load of waste is rejected, and the truck driver is instructed to immediately leave the Site;
- Where the load is not rejected, the details of the vehicle and waste materials are recorded and direct the driver to proceed directly to the appropriate unloading areas;
- The entire load is then tipped in the appropriate unloading areas as directed by the weighbridge personnel;
- The entire load is then spread and visually inspected by trained personnel for any non-conforming waste materials;
- If non-conforming materials are received and identified during unloading, the waste material is returned to the vehicle from which they were delivered and the truck driver is instructed to immediately leave the Site;
- Accepted waste that can lawfully be received at the Site can then be processed and stored appropriately;
- Non-conforming waste material found after unloading are temporarily stored site. The material is then taken to a facility appropriately licensed that accepts that type of waste. Stores of material are cleared as soon as reasonably practicable after receipt.

Recurring incidents of non-conforming waste being delivered to the Site will result in termination of approval to access the Site.

3.3.6. Record Keeping, retention and availability of records

Sydney Metal Traders will ensure that:

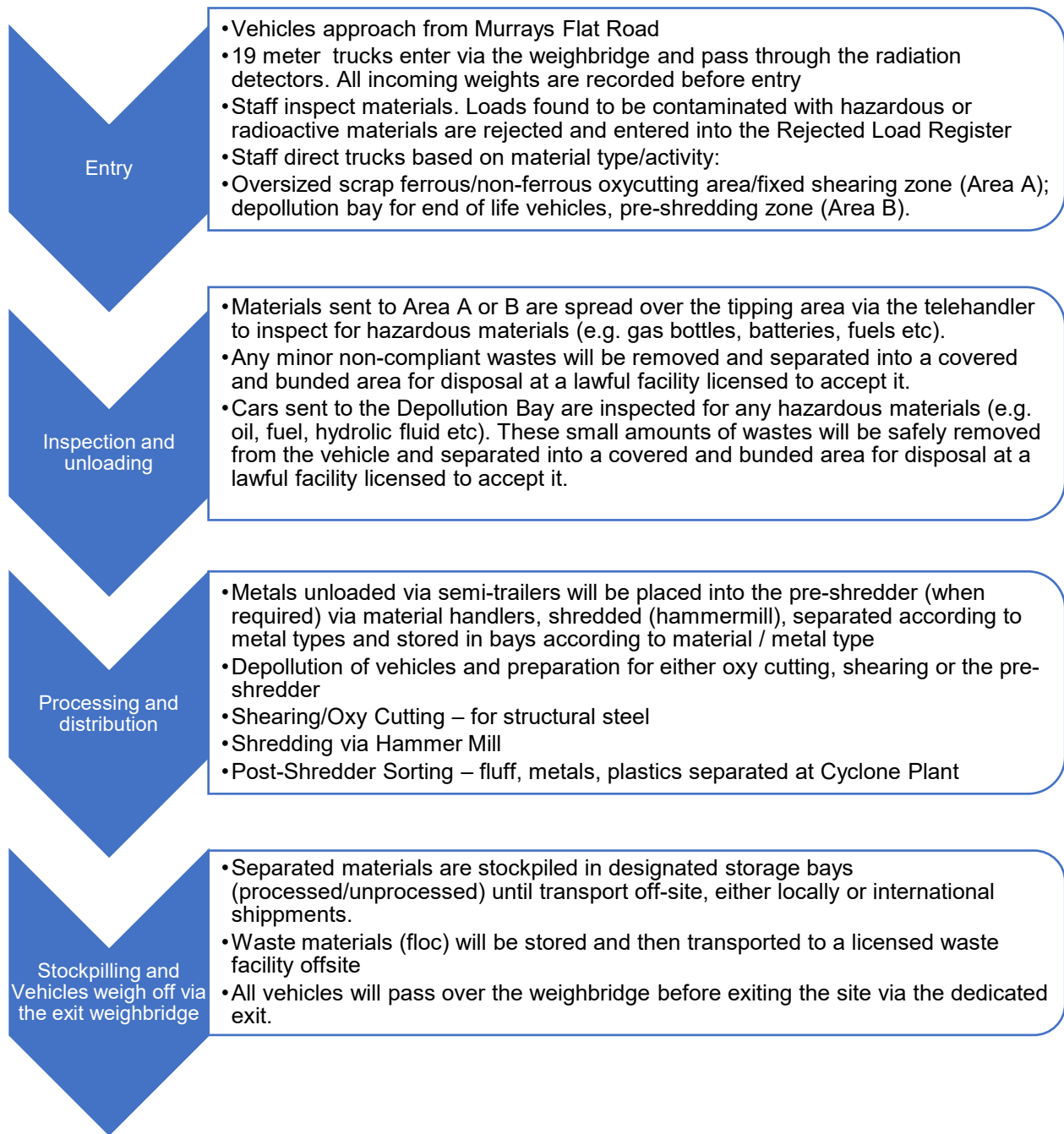
- The original records of the information (such as paper documents) are retained;
- All record-keeping systems are designed so that details of any adjustments to records are recorded against the adjusted record, including that the record has been amended and the extent of the change;
- All electronic records are backed up weekly and the back-up records are stored in a secure location;
- Quantity of waste is recorded.

Information will be record into the electronic data capture system connected to a verified weighbridge ('electronic data capture system'), unless:

- The weighbridge is out of operation; or
- The electronic data capture system malfunctions whilst the weighbridge continues to operate.

In these circumstances, the information required to be recorded for a transaction will be manually recorded and entered into the electronic data capture system as soon as the system resumes operation (with details confirming that the original recording was manual).

Figure 3.3. Process flow chart for Site operations.



3.4. Waste and Recycling measures – Office operations

The office operations associated with Sydney Metal Traders operations 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 minimum and recycled in accordance with the waste hierarchy in the NSW Government's *Waste Avoidance and Resource Recovery Strategy 2014-2021* 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. An overview of waste generation and recycling estimates as part of the office operations is provided in Table 3.6. Waste generation and recycling estimates are from NABERS *Data and Measurement*

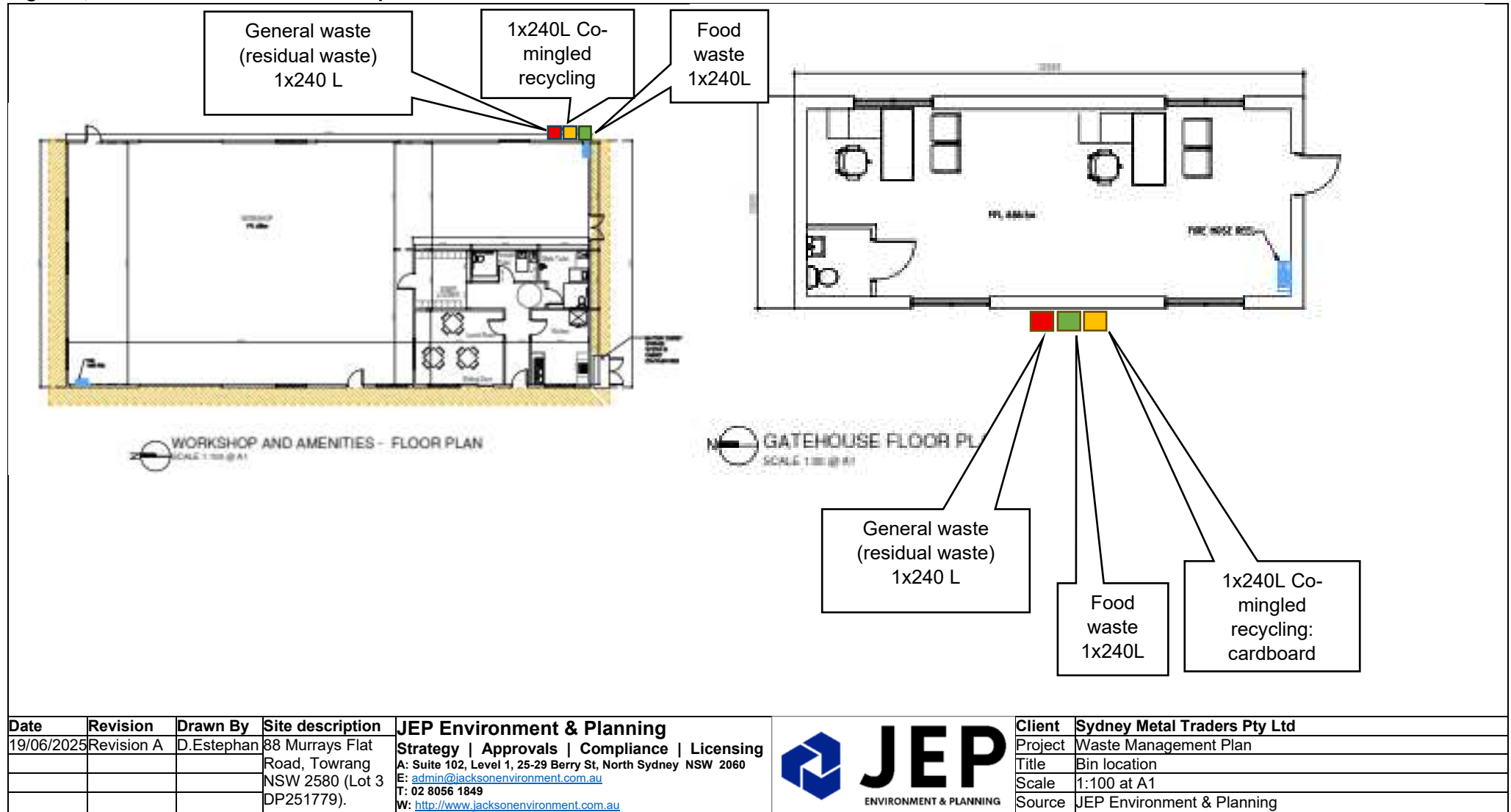
*Standard for Commercial Waste 2020*¹. Bin placement has been distributed across the office, gatehouse, and workshop to facilitate source separation. Figure 3.4 shows the location of all 240 L bins provided for general waste, co-mingled recycling, and food/organics.

¹ National Australian Built Environment Rating System (NABERS) (2020). *Data and Measurement Standard for Commercial Waste*.

Table 3.6. Waste and recycling measures during operations (office operations).

Key Waste Stream	Waste Generation per day per 100m ² floor area (for offices) (m ³)	Weekly waste generation (based on a 6 day working week and office floor area of 60m ²) (m ³)	Bulk density (t/m ³)*	Estimated tonnages per year (tonnes)	Segregation Areas / Containers	Reuse / Recycling / Disposal Method	Waste Type (NSW EPA Pre-classified Waste)	Suggest Receiving Facility	Recycling rate (%)
Co-mingled recycling: plastic / glass containers / metal cans / paper and cardboard	0.006	0.3438	0.2	3.58	1 x 240 L and 1x 120L wheelie recycling bin (emptied weekly or as needed)	Off-site recycling	General waste (non-putrescible)	Goulburn Waste Management Centre	100%
General waste (residual waste)	0.008	0.4584	0.087	2.07	2 x 240 L wheelie 'red' bin (emptied weekly or as needed)	Off-site recycling/ disposal	General waste (non-putrescible)	Goulburn Waste Management Centre	39%
Food and Garden Organics (FOGO)	0.005	0.2865	0.343	5.11	1 x 240 L wheelie recycling 'green' bin (emptied weekly or as needed)	Off-site recycling	Green waste (putrescible)	Goulburn Waste Management Centre	100%
TOTAL Amount of waste generated (tonnes)				10.76					
TOTAL Amount of waste recycled (tonnes)				9.49					
Overall recycling rate				88.2%					

Figure 3,4 Location of bins for Workshop and Amenities and Gatehouse.



4. Environmental Risk Assessment

A risk assessment has been undertaken to identify the level of risk that construction and operations activities may present to waste management.

The following points summarise the key activities identified in the risk assessment relevant to waste management for construction works and operation of the Facility:

- Storage and management of floc from the shredding plant;
- Litter (e.g. food waste, packaging) from the site reaching local waterways;
- Leakage of vehicles during establishment and operational works;
- Excess packaging material deliveries increasing waste generated;
- Inappropriate reuse or disposal of waste items which may be hazardous;
- Fuel and oil spills during plant and equipment use and storage; and
- The location and storage of waste on site prior to reuse or disposal.

4.1. Incident Management – Spills

Spills on-site during construction and operational activities likely to occur are oils, fuel, paints and primers. To better manage a spill incident Spill Response Kits will be kept on-site at various clearly identified locations in easily accessible areas. The MSDS will be placed within sight and near spill kits. The MSDS has clear instructions on spill response management – clean up and disposal.

4.2. Environmental Control Measures

Table 5.1 provides the environmental control measures and safeguards that will be implemented to minimise waste generated during the construction and operation phases of the Facility.

Table 5.1. Environmental control measures.

Control Measures and Safeguards	Timing	Responsibility
Waste management and minimisation will form part of the induction program (which includes environmental due diligence training). All Project and site personnel will be trained in the requirements of this document including minimising wastes, recognising which types of materials are recyclable and their obligations to use recycling facilities provided on site.	Prior to starting on site / Ongoing	Site Manager
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	Prior to starting on site / Ongoing	Site Manager
Engage and educate personnel on how the various elements of the waste management plan will be implemented	Prior to starting on site / Ongoing	Site Manager
Specific locations for waste management (e.g. recycling bin locations, material stockpile locations) will be established on site and signposted appropriately.	Weekly checks	Site Manager
Waste management areas will be adequately managed to prevent sediment runoff and dust generation.	Daily	Site Manager
Construction Method Statements (CMS) will include practices to minimise waste generation and to maximise recycling and reuse of materials including oils, greases, lubricants, timber, glass, and metal.	Prior to start of construction and ongoing	Site Manager
Packaging minimisation and reuse initiatives will be implemented as part of the procurement.	Ongoing	Site Manager
Spill kit to be present on site in the case of any fuel leaks of plant and equipment during the construction phase of the development	Prior to start of construction	Site Manager
Segregated waste disposal containers for the collection and recycling/disposal of all waste streams generated during the construction and operation phases will be provided onsite. Waste disposal containers will have clear signage and instructions for use to avoid cross-contamination. No rubbish shall be disposed of on site.	Daily	Site Manager
Waste will be disposed to an appropriate licensed facility.	Daily	Site Manager
All waste being transported off site must be covered. The transportation must be appropriately licensed to carry that material.	Daily	Site Manager
Incompatible wastes will not be mixed.	Daily	Site Manager
Storage areas would be located away from waterways and the stormwater system.	Daily	Site Manager
Biodegradable products will be used wherever practicable.	Daily	Site Manager
Regular collection of wastes will ensure air emissions are at a satisfactory level. Waste and wastewater management systems will be regularly inspected and audited for ensure proper functioning.	Daily	Site Manager
Conduct regular litter patrols to ensure litter is effectively controlled on site.	Daily	Site Manager

5. Training

All employees, contractors and utility staff working on site will undergo site induction training (which includes environmental due diligence training) and environmental training in relation to waste management issues. The induction will address:

- This waste management plan;
- Relevant legislation;
- Waste minimisation strategies;
- Waste recognition and recycling;
- Available recycling facilities; and
- Energy and water minimisation measures.

Records would be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as “toolbox” training or specific training tailored by the Site Manager.

6. Monitoring and Review

6.1. Inspections and Monitoring

Regular monitoring will be undertaken to track waste management on site (refer Table 6.1). This will be through a series of formal and informal inspections at regular intervals.

Table 6.1. Waste monitoring and review schedule.

Activity	Resources	Responsibility	Frequency
Daily Site inspections (work area)	Site Diary	Site Manager	Daily Issues recorded in Site Diary (by exception) when onsite
Weekly Environmental Inspection	Environmental Site Inspection Checklist	Site Manager	Weekly
Waste removal activities off site	Monthly Register for Waste Materials	Site Manager	Monthly

6.2. Auditing

Audits will be undertaken to assess the effectiveness of environmental controls and compliance with this plan and other relevant guidelines.

A schedule for internal audits providing frequencies and responsibilities is to be determined by the Site Manager as appropriate.

6.3. Environmental Management Review

The effectiveness and proper implementation of the WMP will be reviewed every twelve months or sooner as necessary. Review will be undertaken by the management team. The review will comprise:

- Reviewing the results of audits;
- Evaluation of the system, which improvements and corrective actions will be sought; and
- Evaluation of the operation of the WMP.

6.4. Continual Improvement

Continual improvement of this WMP will be achieved by the continual evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continual improvement process will:

- At least monthly (or as incidents occur):
 - Determine the root cause or causes of deficiencies;
 - Develop and implement a plan of corrective and preventative action to address deficiencies; and
 - Verify the effectiveness of the corrective and preventative actions.

Outcomes of these reviews shall be documented and retained for the duration of the project.