ARCADIS Design & Consultancy for natural and built assets

ST MARYS AWT FACILITY

87 Dunheved Circuit

6 April 2018

Incorporating Hyder

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BINGO RECYCLING AWT FACILITY

St Marys AWT Facility

87 Dunheved Circuit

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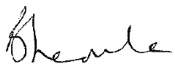
Approver	Brad Searle	

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APPENDICES

1 INTRODUCTION

1.1 Overview

Bingo Recycling (the Applicant) proposes to design, build and operate a Resource Recovery Facility (RRF) (the Proposal) at 87 Dunheved Circuit, St Marys (the Proposal site).

The Applicant is seeking approval for the construction and operation of an RRF with a material handling limit of up to 200,000 tonnes per annum (tpa), including an alternative waste technology (AWT) plant, with an associated biofilter, office building and ancillary facilities. The facility would process wet commercial and industrial (C&I) waste and municipal solid waste (MSW) waste.

The facility would recover the following resources from the waste stream:

- Recyclable materials including ferrous and non-ferrous metals, hard plastics and cardboard recovered via a combination of automated and manual processes for sale into recyclable commodity markets
- Organic materials separated based on size and geometry, then composted onsite
- Refuse Derived Fuel (RDF) that would be prepared onsite for transport offsite to appropriate facilities.

The remaining residual material would be transported offsite and disposed of at landfill. The destination of recovered waste streams will include recyclables sold to local and international re-processors in line with market demand; composted products applied to land in accordance with the relevant Resource Recovery Exemptions; and RDF to appropriate Energy from Waste (EfW) facilities in accordance with the NSW EfW Policy.

The facility would be fully enclosed, where practicable, and include appropriate engineering controls such as biofilters to reduce air quality impacts, and acoustic insulation to mitigate noise impacts on the surrounding environment.

The key components of the Proposal would include:

- Completion of site preparation works including clearing, earthworks and grading
- Construction of pavement, roads, and hardstand; including provision of vehicle access and egress to / from Dunheved Circuit, and provision of onsite car parking
- Construction of the enclosed processing, composting and maturation sheds and associated facilities
- Installation of inbound and outbound weighbridges and wheel wash
- Installation of a designated hazardous and dangerous goods storage area
- Installation of landscaping and signage
- Construction of a sprinkler pump room and stormwater detention tanks
- Construction of a bunded undercover fuel storage area
- Construction of site office and associated facilities.

The key operational components of the Proposal would include:

- Operation of an RRF (including processing and waste delivery and collection) 24 hours per day, 7 days per week
- Processing of up to 200,000 tpa of C&I and MSW waste
- Waste storage of up to three days processing volume of C&I and MSW waste at any given time.
- A water management system including water tanks and a leachate re-use system.

1.2 Site Location

The Proposal site, shown in Figure 1-1, comprises a single parcel of land being 87 Dunheved Circuit, St Marys (Lot 2 in DP 1175850). The Proposal site is approximately 40,000 square metres (m^2) in size and is located approximately 6.5 kilometres (km) from the Penrith City Council town centre. Figure 1-2 shows the location and regional context of the Proposal site.

The Proposal site is located within an established industrial precinct that covers an area of approximately 1000 hectares (ha) and comprises a mix of general, light and storage based industries; including steel and sheet metal fabrication workshops, oil and lubricant storage facilities, transport depots, plant and equipment hire facilities and mechanical repair workshops. The precinct also has several existing waste management and resource recovery facilities and other similar activities licensed under the *Protection of the Environment Operations Act 1997* (POEO Act).

The closest residential receivers are located approximately 1.2 km to the east and west of the Proposal site. These uses are physically separated by a large vegetated area surrounding Ropes Creek to the east of the Proposal site and the Dunheved Golf Course bordering South / Wianamatta Creeks to the west of the Proposal site.

1.3 Existing Approvals and Environmental Protection Licenses

The Proposal site has been historically cleared and is currently unoccupied. The Proposal site is not subject to existing approvals or Environmental Protection Licences (EPLs).

1.4 Purpose of this Report

The purpose of this State Significant Development (SSD) application report is to provide documentation in support of a request for Secretary Environmental Assessment Requirements (SEARs), which would inform the preparation of an Environmental Impact Statement (EIS) under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP) describes development which is considered to be SSD. In particular, where a development would exceed the trigger of handling greater than 100,000 tonnes per year of waste for the purpose of resource recovery or recycling this would be considered SSD and require the preparation of an EIS to accompany any development application (DA). The Proposal would process up to 200,000 tpa and would therefore meet the requirements of SSD.

This report provides an outline of the existing site operations, statutory approvals and a description of the proposed development as well as the identification of key potential environmental issues that may be associated with the Proposal.

Figure 1-1 Local context of the Proposal

Figure 1-2 Regional context of the Proposal

2 PROPOSAL NEED AND OBJECTIVES

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) and the POEO Act provide the legislative basis for regulating waste in NSW. The WARR Act establishes the waste hierarchy for the management of waste, which prioritises avoidance and recycling of waste, with disposal the least desirable outcome. The key waste policy tool under this framework is the *NSW Waste and Resource Recovery Strategy 2014-21* (NSW EPA, 2014) (WARR Strategy), which sets goals that include:

- Avoiding and reducing waste generation
- Increasing recycling – with target recycling rates by 2021-22 of 70 per cent for C&I waste and 70 per cent for MSW
- Diverting more waste from landfill to alternative uses, such as recycling and energy recovery.

The POEO Act establishes the waste levy to incentivise recycling over disposal, while the subordinate *Protection of the Environment Operations (Waste) Regulation 2015* establishes a number of specific instruments that influence the flow and fate of MSW in NSW.

2.1 Need for Proposal

Penrith City Council have confirmed their commitment to the WARR Strategy targets through their *Penrith Waste and Resource Strategy (2017-2026)* (Penrith City Council, 2017). The strategy commits to:

- Reduce waste generation to 7.5 kg/capita/week by 2021
- Achieve 70% diversion of waste from landfill by 2021
- Provide solutions for household problem waste by 2021
- Reduce incidence of litter
- Reduce incidence of illegal dumping
- Participate in regional contracts and services where appropriate.

Penrith City Council have continued this commitment by coming together with ten regional councils to develop the *Western Sydney Regional Waste Avoidance and Resource Recovery Strategy (2014-2017)* (WSROC, 2014). The strategy outlines future directions for resource recovery practices across the region and explores options for addressing waste management challenges. Regional targets have been developed under six themes, that are in line with the WARR Strategy's objectives:

- Avoid and reduce waste generation
- Increase recycling
- Divert more waste from landfill
- Manage problem wastes better
- Reduce litter and illegal dumping
- Improve regional governance.

The need for this Proposal is grounded in both the regional and state government strategies. The *Draft NSW Waste and Resource Recovery Infrastructure Strategy* (NSW EPA, 2017) highlights a processing capacity deficit of mixed waste treatment or alternate waste treatment by 2021-22 of over one million tonnes per annum in New South Wales, which is a barrier to meeting WARR Strategy diversion targets. For the Sydney region specifically, a 558,000 tonne per annum deficit in mixed waste treatment capacity and a 234,000 tonne per annum deficit in energy recovery facility

capacity have been identified in the Draft Strategy. According to the Environment Protection Authority's (EPA's) assessment, the region could be served by three mixed waste treatment facilities in order to facilitate increased resource recovery activity in line with state government targets.

The Applicant is seeking approval to process 200,000tpa of MSW and C&I waste. The Proposal for a mechanical biological treatment facility with an RDF production circuit would help meet current local and regional processing shortfalls for mixed waste treatment.

The production of RDF allows for increased levels of recovery from waste streams. An estimated 40-50 per cent of the MSW feedstock at the Proposal site will be recovered as dry recyclables and composted organic products, with another 30-40 per cent converted into RDF. This would result in at least 80 per cent of the MSW feedstock being diverted from landfill to beneficial reuse. Around 50 per cent of the C&I feedstock at the Proposal site will be recovered as dry recyclables and composted organic products, with another 20 per cent converted into RDF. The facility would have the ability to achieve an overall landfill diversion rate of 80-90%.

The Proposal would result in a number of benefits by contributing towards:

- Converting waste materials into resources to be reused in the productive economy
- Saving increasingly scarce Sydney-basin landfill space
- Reducing greenhouse gas emissions through reduced waste to landfill and displacing fossil fuel-based electricity generation
- Providing NSW with world leading resource recovery technology to minimise reliance on landfilling in the future
- Energy security and diversity by providing RDF for the production of additional low carbon, renewable electricity generating capacity with low price volatility
- Providing fuel for an energy from waste facility (such as the proposed Mt Piper Energy Recovery Project, located near Lithgow in NSW).

2.2 Consistency with Strategic Planning

The Proposal site is situated in close proximity to key regional transport infrastructure, including the M4 Freeway, the Great Western Highway and the Lighthorse Interchange. This access to the transport network both around and leaving the Sydney basin would make the Proposal a strategic asset to help achieve the WARR Strategy's 2021 recycling targets and support the long-term growth of western Sydney.

The Environment Trust via the EPA has been providing grant funding for recycling infrastructure through the $465.7 million Waste Less Recycle More (WLRM) scheme. They have demonstrated particular support for RDF production in the first round of WLRM (2012-17) by awarded grants to process 770,000 tonnes per annum of mixed C&I waste and produce RDF.

Unlike some of the above projects where the RDF is produced for export, the Proposal intends to produce high quality RDF that could be utilised through the Mt Piper Energy Recovery Project that is currently in the NSW Planning Framework, or another suitable local facility. This is a preferred outcome for from environmental and equity perspectives, reducing transport emissions and risks, improving confidence on air emissions standards and providing a local solution to Australia's waste, rather than imposing it on less developed economies.

A local RDF offtake contract also provides greater certainty compared to short-term export agreements subject to international factors such as the willingness of countries

to receive processed waste. China's tightening of contamination limits for recyclables in 2018 demonstrates the risk inherent in global markets.

The majority of Sydney's long-term growth is expected to occur in western Sydney, including the North-West and South-West Growth Areas and the Greater Sydney Commission's long-term '3 cities' vision that features a major new hub around the Western Sydney Airport at Badgery's Creek (Western Parkland City) and significant development in Parramatta (Central River City). The Proposal site is strategically located to serve these growth areas and to transport processed RDF to applications outside the sensitive Sydney basin.

At a local level, Penrith City Council is committed to increasing the volumes of waste diverted from landfill through the *Penrith Waste and Resource Strategy (2017-2026)* and the *Western Sydney Regional Waste Avoidance and Resource Recovery Strategy (2014-2017)*. The additional C&I and MSW processing capacity provided by the Proposal would support delivery of these objectives.

2.3 Alternatives

The Applicant has previously undertaken a comprehensive investigation of sites across the Sydney metropolitan area to find a suitable site for the Proposal. The Proposal site was identified as the most suitable site for a number of reasons, including good road access for heavy vehicles, appropriate industrial zoning, proximity to waste generation sources and lack of current alternatives in the region.

The small number of existing AWT facilities able to process MSW for recovery are relatively dated, with Global Renewables UR-3R facility developed in 2004 and Suez Australia's SAWT facility at Kemp's Creek in 2009. More modern technology in the Proposal will deliver higher quality outputs and greater cost efficiencies.

Veolia's AWT facility at Woodlawn, 170km to the south, is constrained by the throughput limits at the company's Clyde and Banksmeadow railheads.

Another alternative to the Proposal would be depositing waste directly to landfill. The two putrescible waste landfills currently serving Sydney (at Lucas Heights and Woodlawn) have licence limits of 850,000 tpa and 1.1 million tpa respectively, providing limited capacity to absorb currently expected growth in waste generation.

Further, they have expected closure dates of around 2035 and 2046, respectively. These relatively short lifespans for critical infrastructure, combined with the difficulty in securing approvals for new landfills, suggests landfill disposal will become less desirable and affordable in the foreseeable future. Disposal also runs counter to the WARR strategy's recycling goals.

Based on the above factors, construction and operation of the Proposal at the chosen site is considered the most suitable option.

3 PROPOSAL DESCRIPTION

The Applicant is seeking approval for the construction and operation of an RRF to process up to a combined total of 200,000 tpa of C&I waste and MSW. An overview of the proposed waste streams to be processed at the proposed facility are provided in Appendix A.

A concept plan for the Proposal is provided in Figure 3-1. The Proposal would be constructed on a vacant lot at 87 Dunheved Circuit, St Marys. The development would utilise existing road infrastructure, other utility installations and stormwater discharge points where practicable.

The key components of the Proposal would include:

- Completion of site preparation works including clearing, earthworks and grading
- Construction of pavement, roads, and hardstand; including provision of vehicle access and egress to / from Dunheved Circuit, and provision of onsite car parking
- Construction of the enclosed processing, composting and maturation sheds and associated facilities
- Installation of inbound and outbound weighbridges and in-ground wheel wash
- Installation of a designated hazardous and dangerous goods storage area
- Installation of landscaping and signage
- Construction of a sprinkler pump room and stormwater detention tanks
- Construction of a bunded undercover fuel storage area
- Construction of site office and associated facilities.

The key operational components of the Proposal would include:

- Operation of an RRF (including processing and waste delivery and collection) 24 hours per day, 7 days per week (no works on Sundays or public holidays would be undertaken)
- Processing of up to 200,000 tpa of C&I and MSW waste
- Waste storage of up to three days processing volume of C&I and MSW waste at any given time.
- A water management system including water tanks and a leachate re-use system.

Processing of waste would be undertaken within a fully enclosed building including appropriate engineering controls such as biofilters, to reduce air quality impacts on the surrounding environment. The facility would recover the following resources from the incoming waste stream:

- Recyclable metals, hard plastics and carboard, recovered via a combination of automated and manual processes for sale into recyclable commodity markets
- Organic material separated based on size and geometry, then composted onsite
- Refuse Derived Fuel (RDF) made from non-recyclable, non-compostable parts of the waste stream.

The remaining residual material would be disposed of to an appropriately licensed landfill.

The Proposal comprises the following:

- Facilities to weigh and receive deliveries of putrescible waste from both domestic and commercial waste sources

- Plant and equipment to mechanically sort waste from both domestic and commercial sources in order to recover recyclable materials including cardboard, rigid plastic containers, ferrous and non-ferrous metals
- An agitated bay composting facility to process both domestic and commercial waste sources, with associated refining of the composted material into products that meet the requirements of the EPA's Resource Recovery Exemptions
- Enclosed maturation hall for the composted organics
- A RDF circuit that would process parts of the domestic and commercial waste stream in accordance with the NSW Energy from Waste Policy
- Enclosed short-term storage areas for recovered products prior to distribution to end users.

A plan of the Proposal is shown in Figure 3-1.

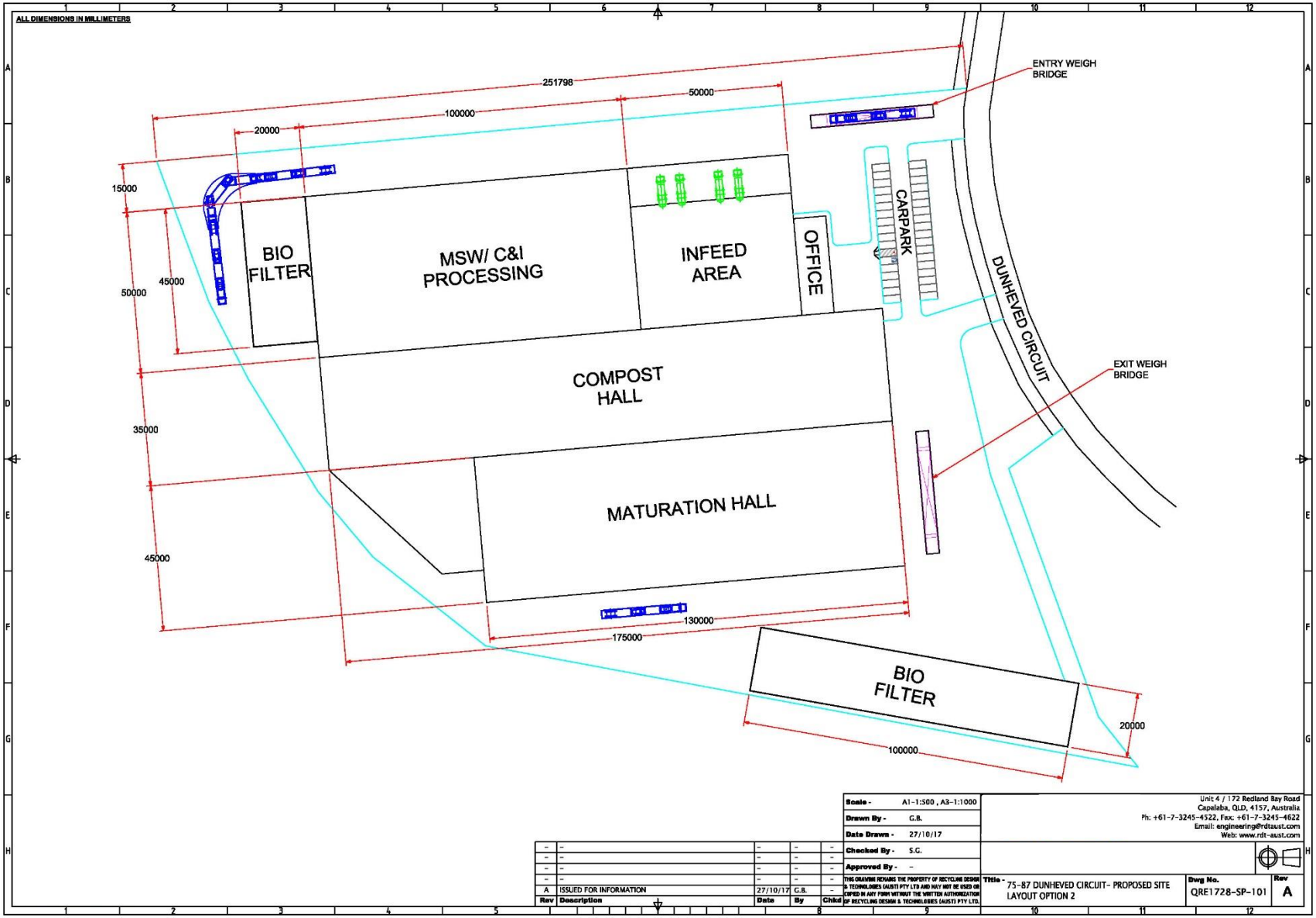

Figure 3-1 Indicative concept plan of the Proposal

3.1 Built form

The Proposal includes the construction of an enclosed building within the footprint shown in Figure 3-1. The Proposal would see the construction of enclosed processing, composting and maturation sheds and associated facilities. The proposed processing sheds would have a maximum height of 14 m and would comprise steel-clad portal frame sheds.

The structures onsite would include the following areas:

- Infeed / receivals are of approximately 2,500m^2
- Mechanical separation and processing area of approximately 6,000m^2
- Compost hall of approximately 5,000m^2
- Maturation and compost refining hall of approximately 4,500m^2
- Biofilters of approximately 3,000m^2
- Water management systems including water tanks and a leachate re-use system.
- Site office, carpark, weighbridge and ancillary facilities
- Landscaping.

The Proposal would be designed and construction in accordance with relevant legislation, regulations and standards.

3.1.1 Equipment

The equipment to be utilised on site would include the following:

- Loaders and excavators
- Industrial street sweeper
- Forklifts
- State of the art in line processing / separating plant
- Conveyors and elevated sorting stations
- Screening equipment
- Shredders
- Agitated bay composting system
- Biofilter
- Recirculated irrigation system
- Recirculated leachate system.

3.2 Construction activities

The key construction components of the Proposal would include:

- Clearing the site
- Earthworks / grading
- Pavement works for roads and hardstand areas
- Construction of an enclosed processing shed incorporating processing facilities and stockpile, storage and handling areas

- Installation of processing plant and equipment
- Construction of an wheel wash unit prior to exit weighbridge Construction of an entry and exit weighbridges
- Construction of a sprinkler pump room and stormwater detention tanks
- Construction of a bunded undercover fuel storage area
- Construction of site office and associated facilities
- Provision of vehicular access and parking.

3.3 Operations

The key operational components of the Proposal would include:

- Receival of MSW and C&I waste within an enclosed tipping area, with manual and mechanical removal of hazardous or problematic items from the waste
- 24-hour operations, seven days per week
- Mechanical processing of waste including separation by size, shape and other physical characteristics.
- Recovery of non-putrescible recyclables items including cardboard, rigid plastic containers, ferrous and non-ferrous metals, for export from the site.
- Composting of putrescible waste via an agitated bay composting system.
- Refining of composted material to produce a soil improvement product for export from the site.
- Production of Refuse Derived Fuel (RDF) involving the shredding of material to target size, QA/QC processes, and the baling or compaction of the RDF for export from the site.
- Waste storage of up to three days processing volume of waste at any given time.
- Export of residual waste from the site for disposal.

Key operational details are included in Table 3-1.

Table 3-1 Key operational details

Operational component	Operational control
Processing limit	200,000 tpa
Waste source	Municipal and commercial waste streams
Types of waste processed	Household municipal solid waste and waste from commercial activities
Operating hours	24hrs a day, seven days a week (required to maintain environmental controls and ideal processing conditions for the waste).
General type of equipment used for processing	Equipment to be utilised on site would include the following: • Loaders and excavators • Forklifts • Conveyors and elevated sorting stations • Screening equipment • Shredders • Agitated bay composting system • Recirculated irrigation system • Recirculated leachate system • Biofilters.
Number of employees	Approximately 60 FTEs

4 PLANNING CONSIDERATIONS

The following section provides an overview of the key legislation and planning instruments applicable to the Proposal. A detailed assessment of all the relevant legislation will be undertaken as part of the EIS.

4.1 Commonwealth Legislation

An initial assessment of the Proposal against Matters of National Environmental Significance under the *Environment Protection and Biodiversity Conservation Act 1999*, suggests that the Proposal would not have a significant impact upon these matters and therefore referral to the Commonwealth Minister for the Environment is not considered warranted.

4.2 NSW Legislation

The EP&A Act and EP&A Regulation provide the regulatory framework for planning approval and environmental assessment in NSW. Part 4 of the EP&A Act provides for control of 'development' that requires development consent from the relevant consent authority. Division 4.7 of Part 4 provides for control of SSD where the Minister for Planning (or delegate) is the consent authority.

The Proposal would be considered SSD under Clause 23 (waste and resource management facilities) of Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011,* which refers to:

> *(3) Development for the purpose of resource recovery or recycling activities that handle more than 100,000 tonnes per year of waste*

4.2.1 Other legislation

The EIS would provide a review of the Proposal against relevant legislation. Legislation that may be applicable to the Proposal includes, but may not be limited to:

- *Protection of the Environment Operations Act 1977 (POEO Act):* The Proposal would be a Scheduled Activity as per Schedule 1 of the POEO Act, and would consequently require an Environment Protection Licence (EPL) under Section 48 of the POEO Act.
- *Contaminated Land Management Act 1977 (CLM Act):* The CLM Act establishes a process for investigating and (where appropriate) remediating land that the Environment Protection Agency (EPA) considers to be contaminated significantly enough to require regulation. The EIS would consider the likelihood of contaminated areas being disturbed as a result of the Proposal. It is noted that the site is not listed on the Contaminated Lands Register, maintained by the EPA.
- *The Waste Avoidance and Resource Recovery Act 2001 (WARR Act):* The WARR Act aims to encourage the most efficient use of resources to reduce environmental harm and ensure that resource management is undertaken in a logical, sustainable and organised manner. The Proposal would promote resource recovery and diversion of waste to landfill.
- *Roads Act 1993.* Roads and Maritime and Penrith City Council would be consulted during the preparation of the EIS.

4.3 State Environmental Planning Policies

The following State Environmental Planning Policies (SEPPs) may be applicable to the Proposal, and would be considered within preparation of the EIS if required:

- *State Environmental Planning Policy No. 33 - Hazardous and Offensive Development (SEPP 33):* SEPP 33 links the permissibility of an industrial development proposal to its safety and environmental performance. The Proposal falls within the definition of a "potentially hazardous industry" or "potentially offensive industry" under the SEPP 33. A preliminary hazard analysis will be undertaken by the Applicant, the findings of which would be presented in the EIS.
- *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55): SEPP 55 aims to promote the remediation of contaminated land with the objective of reducing the risk of harm to human health or other aspects of the environment. Clause 7 of SEPP 55 imposes an obligation on the approval authority to have regard to certain matters before granting approval.
- *State Environmental Planning Policy No.64 (SEPP 64)* – SEPP 64 aims to regulate signage to ensure that it is compatible with the visual character of an area and provides effective communication in suitable locations. SEPP 64 is applicable to all signage, except for signage that is classified as 'exempt development' under an EPI. An assessment of the potential impacts of signage would be undertaken and presented in the EIS.
- *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP): Section 121 of the ISEPP facilitates the development for the purposes of waste or resource management facilities to be undertaken, with development consent within a 'prescribed zone' being IN1 General Industrial. The subject site is zoned IN1 General Industrial under the *Penrith Local Environmental Plan 2010*. Therefore, development of waste or resource management facilities would be permissible on the Proposal site with development consent.

  In addition, the ISEPP identifies development that is considered to be Traffic Generating Development. As per Schedule 3 of the ISEPP, a recycling facility or transfer station of any size or capacity is considered to be a Traffic Generating Development. The EIS will assess traffic impacts in accordance with ISEPP.

4.4 Local Planning Instruments

The relevant local planning instrument is the *Penrith Local Environmental Plan 2010*. The Proposal site is zoned IN1 General Industrial under Penrith Local Environment Plan (LEP) 2010 as shown in Figure 4-1. A "resource recovery facility" is prohibited under the Penrith LEP 2010. However, Division 23 of *State Environmental Planning Policy (Infrastructure) 2007* permits the establishment and operation of a waste or resource management facility on land zoned IN1 General Industrial with development consent. The provisions of the SEPP prevail over the Penrith LEP 2010 in this regard. As such, the proposed development is permissible with development consent.

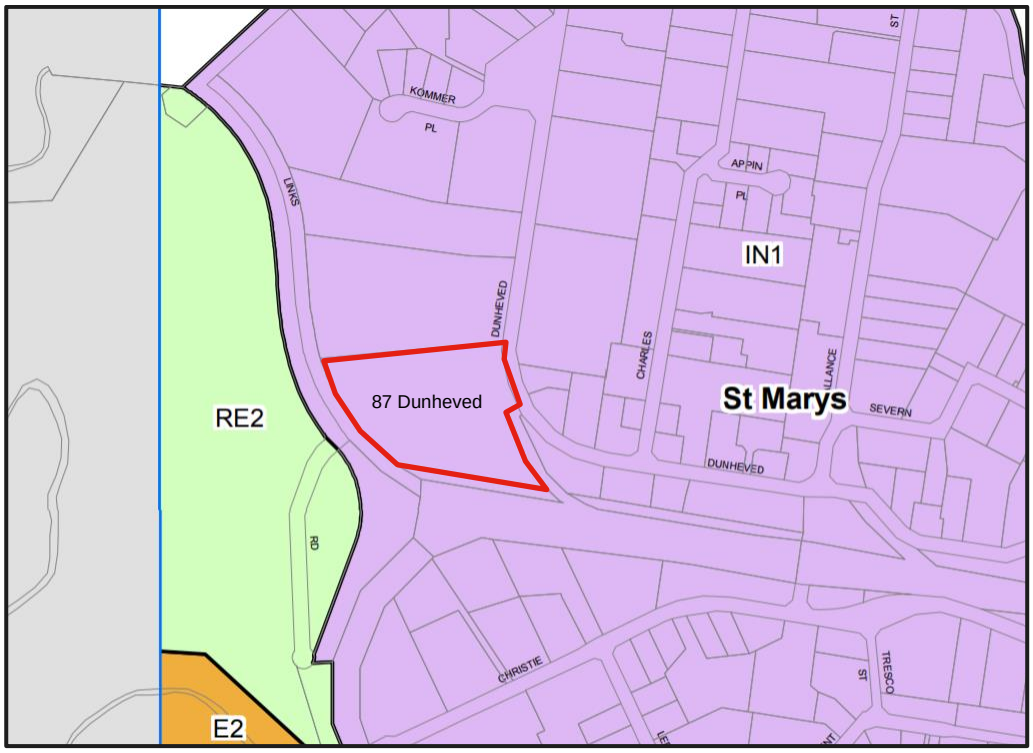

Figure 4-1 Proposal site zoning under Penrith LEP 2010

5 KEY ENVIRONMENTAL ISSUES

5.1 Overview

A preliminary screening of environmental issues was undertaken to establish the requirement for further assessment. A summary of this screening is presented in Table 5-1 below. Issues requiring further assessment have been separated into 'key' and 'other' issues. Key and other issues have been further assessed in Sections 5 and 6 respectively.

Table 5-1 Environmental issues screening

Environmental Aspect	Preliminary Screening	Relevant Sections
Key issues		
Traffic, Access and Car Parking	The Proposal has been identified as a Traffic Generating Development, as per Schedule 3 of the ISEPP. Truck movements may result in impacts on surrounding intersections and roads.	Section 5.2
Air Quality and Odour	Construction and operation including processing of waste, have the potential to generate dust and vehicle emission which may impact on sensitive receivers and the surrounding environment. As a result of the AWT process and the proximity to sensitive receivers (Dunheved Golf Club) there is potential for odour impacts to the surrounding environment if not appropriately managed.	Section 5.3
Noise and Vibration	Noise from traffic and resource recovery operations could result in impacts to surrounding receivers.	Section 5.4
Stormwater, Flooding and Contamination	Management of waste has the potential to impact upon stormwater runoff if not appropriately managed. Surface water management during construction and operation.	Section 5.5
Hazards and Dangerous Goods	Storage and handling of hazardous and dangerous goods on site may result in impacts to the surrounding environment.	Section 5.6
Other issues		
Socio-economic	The business operation would be in keeping with the industrial nature of the surrounding area and will result in socio-economic benefits to the local economy by employing local labour and to the wider region by supporting the	Section 6.1

Environmental Aspect	Preliminary Screening	Relevant Sections
	development of housing and infrastructure projects.	
Waste Management	Construction of the proposal would result in the generation of construction waste. During operation, the Proposal would handle and generate waste which may result in environmental impacts if not appropriately managed.	Section 6.2
Visual amenity	Changes in the visual landscape from construction and operation of the Proposal may result in minor visual impacts to views and changes to the Dunheved Business Park streetscape.	Section 6.3
Issues not requiring further assessment		
Biodiversity	The project is located within an industrial area with limited ecological values and is unlikely to have a significant impact on biodiversity. In accordance with the *Biodiversity Conservation Act 2016*, a State Significant development must be accompanied by a Biodiversity Development Assessment Report (BDAR) (in accordance with the Biodiversity Assessment Method 2017) unless the SEARs for the project specifically state otherwise. A BDAR Exemption Memo has been prepared for the Proposal, and is located as Appendix B. That memo found that the Proposal would not result in any significant biodiversity. Specifically, the Proposal would not result in any significant impacts to: • any biodiversity values as prescribed under Section 1.5 of the *Biodiversity Conservation Act 2016* • any biodiversity values as listed prescribed under Section 1.4 of the *Biodiversity Conservation Regulation 2017* • any areas mapped as containing biodiversity values The Proposal would also not result in any prescribed impacts as identified by the *Biodiversity Conservation Regulation 2017* As a result, the Applicant contends that the Proposal would not result in any significant biodiversity impacts, and that the EIS would not be required to be	-Appendix B

Environmental Aspect	Preliminary Screening	Relevant Sections
	accompanied by a Biodiversity Assessment Report.	
Heritage	A search of relevant publicly available databases did not identify any items or areas of Aboriginal heritage or non-Aboriginal heritage significance within or in close proximity to the Proposal site. As a result of disturbance at the Proposal site there is limited potential for the discovery of unexpected items of heritage value.	-

All potential environmental impacts will be considered further as part of the EIS, including a detailed assessment of the key issues. Potential environmental impacts associated with the Proposal will be considered and if required, managed through the implementation of appropriate mitigation and control measures.

5.2 Traffic, Access and Parking

5.2.1 Overview

The Proposal has been identified as a Traffic Generating Development, as per Schedule 3 of the ISEPP. It is noted that recycling facilities and waste transfer stations of any size or capacity are classified as a Traffic Generating Development.

The Proposal would generate heavy vehicles movements each day during operations. Heavy vehicles would originate from various locations across the greater Sydney region. The majority of vehicles would access Link road via the Great Western Highway, Glossop Street and then Forrester Road. Vehicles would then travel south along Dunheved Circuit to enter/exit the Proposal site via Dunheved Circuit via Link Road.

Heavy vehicles would enter the Proposal site via the northern driveway and be directed to a receiving or tipping area to be tipped into unloading bays which would be clearly defined by line markings and bollards. Waste would be checked for the presence of ‘non-conforming waste’. Any trucks containing ‘non-conforming’ waste would be directed off-site. Authorised trucks would then proceed to deposit waste within the processing facility. Once waste has been deposited onto the tipping floor trucks would continue in a single direction around the outside of the enclosed shed prior to exiting via the outbound weighbridge.

The proposed layout would include ample queuing areas for incoming traffic, and would restrict traffic flows to one direction to minimise traffic conflicts. On-site light and heavy vehicle car parking would be established under the Proposal as shown in Figure 3-1. The proposed layout would include a car park with a separate entry and exit driveway, with capacity to serve approximately 30 staff plus visitors that would be on-site at any one time.

5.2.2 Summary of Issues

5.2.2.1 Construction

Construction of the Proposal would require the use of heavy vehicles to deliver construction plant, equipment and materials as well as remove waste from the Proposal site. The construction period would also result in increased use of light vehicles on the surrounding road network associated with the construction workforce.

5.2.2.2 Operation

The Proposal would result in heavy vehicle movements associated with transportation of waste to the Proposal site. The potential impacts of the operational traffic from the Proposal on the surrounding road network may include:

- Increased heavy and light vehicle traffic may impact traffic movement
- Alterations to local intersection performance
- Potential for limited queuing traffic outside the Proposal site access point
- Alterations to road safety.

Further details regarding potential peak periods and traffic volumes associated with the Proposal will be considered within the EIS.

5.2.3 Proposed Further Assessment

The EIS will be accompanied by a comprehensive Traffic Impact Assessment that will determine the impacts associated with the Proposal for both construction and operational phases. It will also provide consideration of the following aspects:

- The current and future capability of local and regional road infrastructure
- The type and frequency of heavy vehicles proposed to utilise the Proposal site
- The suitability of the proposed site layout to accommodate the predicted heavy vehicle movements from the site
- Details of the internal road layout network and parking in accordance with Australian Standards.

The EIS will include recommendations to mitigate the likely impacts of the development on the road network including manoeuvring arrangements, operational management plans and the suitability of the existing road network to accommodate the Proposal. Appropriate consultation with NSW Roads and Maritime and Penrith City Council will be undertaken to satisfy the requirements of SEPP (Infrastructure) 2007.

5.3 Air Quality and Odour

5.3.1 Overview

A search of the Bureau of Meteorology (BOM) Climate Database was undertaken on 8 November 2017 to determine the temperature, rainfall and wind criteria for the area. The closest BOM weather station is the Penrith Lakes Automatic Weather Station, located approximately 8.3 km northwest of the Proposal site (Station Number 067113). The results indicate the following:

- Temperature data indicates that January is the warmest month, with a mean maximum temperature of 31.0 degrees Celsius (°C), and that July is the coldest, with a mean maximum temperature of 17.8 °C
- Rainfall data indicates that the wettest period for the area is between November to March, with the highest mean monthly rainfall recorded in February (119 millimetres)
- Wind data indicates that mean wind speeds are greater in the afternoon (3pm) than in the morning (9am). Afternoon mean wind speeds tend to be greater in the spring and summer months (< 18.4 km/h).

A search of the EPA Air Quality Data for the closest monitoring station, St Marys, indicates exceedances within the region of the standard for PM_{10} and $PM_{2.5}$.

A search of the National Pollutant Inventory Database was conducted on 22 February 2018 to ascertain the historical and current pollutants being emitted from nearby industries in the vicinity of the Proposal. There were four facilities located within three km of the Proposal site listed on the National Pollutant Register. These industries were found to emit 26, and transfer 11, different substances. The Proposal site is not listed on the National Pollutant Register.

Waste composting and maturation would take place only within the compost and maturation halls, which would be fully enclosed. Biofilter systems (as presented in Figure 3-1) would be connected to the compost and maturation halls to ensure that all odours are treated prior to air being discharged from these areas.

5.3.2 Summary of Issues

5.3.2.1 Construction

During construction, air quality impacts are likely to be caused by dust generation and emissions from earthworks, spoil storage and transport, vehicles, and plant and equipment.

5.3.2.2 Operation

Due to the physical nature of the operational activities, there is the potential for air pollution due to suspended dust particles. The dust which would emanate from the Proposal site would generally be caused by either wind or traffic generated on hardstand areas. The emission sources and major pollutants identified at the Proposal site are as follows:

- Particulate emissions from loading / unloading of waste material
- Particulate emissions from waste material handling / sorting / processing activities
- Particulate emissions from onsite vehicle movements
- Particulate emissions from wind erosion from onsite stockpiles and exposed areas.

Notwithstanding the above, the Proposal site is located in an industrial area and neighbouring properties include a mix of waste management, warehousing, trucking and metalworking industrial activities. The Proposal site is located adequate distances from residential receivers to minimise potential air quality impacts.

Odorous materials such as putrescible waste would be accepted and processed at the Proposal site. Waste composting and maturation would take place only within the compost and maturation halls, which would be fully enclosed. Biofilter systems (as presented in Figure 3-1) would be connected to the compost and maturation halls, as well as the receivals area, to ensure that all odours are treated prior to air being discharged from these areas.

Emissions of products of fuel combustion from delivery trucks and other fixed and mobile equipment at the site are anticipated to be minor. These emissions are most appropriately managed through equipment maintenance programs.

5.3.3 Proposed Further Assessment

An air quality investigation will be conducted as part of the EIS to evaluate the impact of emissions of key pollutants to inform mitigation and management measures for the design and operation of the project. The assessment will:

- Generate a site-representative meteorological dataset. Observational data from the nearest Bureau of Meteorology would be assimilated into the model as required by the NSW EPA.
- Predict air quality impacts from the operation of the facility. In addition, cumulative particulate matter impacts would be assessed.
- Identify feasible and reasonable management measures (particularly dust suppression management measures) to be implemented as a core design parameter.
- Predict the odour impacts from the operation of the facility, and identify feasible and reasonable management measures to be implemented to minimise odour generation.

5.4 Noise and Vibration

5.4.1 Overview

The area directly adjacent to the Proposal site is characterised as an industrial precinct. The closest sensitive receivers to the Proposal include:

- Dunheved Golf Club, adjacent to the Proposal site's western boundary
- The Rembrandt Dutch Club, adjacent to the Proposal site's northern boundary
- Residences in Werrington, approximately 1.1 km to the west
- St Marys Leagues Club, approximately 1.1 km to the east
- Residences in St Marys, approximately 1.0 km to the south east
- Residences in Ropes Crossing, approximately 1.4 km to the north east.

5.4.2 Summary of Issues

Construction

During the construction of the Proposal, noise emissions would vary depending on the construction activities being undertaken. The construction of the Proposal would be likely to have the following impact:

- A number of noise-sensitive receivers may be impacted by construction traffic and the operation of plant and equipment. The extent of impact would vary according to the relationship of the construction works to the receiver location, and the nature of construction work at various stages of the construction process.
- There would be potential for construction vibration impacts on nearby buildings and other structures. The level of impact would depend on the construction techniques used and the offset distances between the vibration source and the sensitive receiver.

Operation

Operational noise would be generated by plant and equipment as well as truck movements. However, given the distance to nearby sensitive receptors noise impacts are expected to be low. All processing operations would be undertaken within an enclosed shed which would significantly reduce noise impacts to surrounding receivers. Due to the distance of the Proposal site from any residential or other sensitive receivers, it is anticipated that the development would not have any significant impact on amenity or result sleep disturbance at these locations. Noise generated from the Proposal would be consistent with the surrounding industrial noise environment. As such operational noise impacts associated with the Proposal are anticipated to be low to moderate.

5.4.3 Proposed Further Assessment

A noise and vibration assessment will be undertaken as part of the EIS to determine the potential impacts of the Proposal, both during construction and operations. The assessment will:

- Establish existing ambient and background noise levels at the potentially most affected off-site receiver locations.
- Identify nearby sensitive receptors, land use and terrain
- Identify sound power levels for each piece of equipment or process
- Assess operational and construction noise impacts in accordance with the Industrial Noise Policy and the Interim Construction Noise Guideline respectively.
- Assess traffic noise consistent with EPA's Road Noise Policy.
- Identify feasible and reasonable noise mitigation measures to address noise exceedances at sensitive receivers noting that initial modelling indicates exceedances are unlikely.

5.5 Stormwater, Flooding and Contamination

5.5.1 Overview

5.5.1.1 Stormwater and Flooding

The Proposal site is proposed to be sealed with concrete hardstand. A stormwater drainage system for the Proposal will be designed during the preparation of the EIS, to accommodate the proposed waste facility and to ensure discharges are within generally agreed expectations of Council.

The Proposal site is not located with Penrith City Council's (PCC) Flood Planning Area as detailed in the Penrith LEP 2010.

5.5.1.2 Contamination

The proposed works would involve sealing the existing ground surface at the site during construction. No further disturbance of the ground surface is proposed during operations.

The proposed works would involve sealing the existing ground surface at the site during construction. No further disturbance of the ground surface is proposed during operations.

A search of the List of NSW Contaminated Sites Notified to the EPA on 22 February 2018 did not identify any contaminated sites within the vicinity of the Proposal site.

The generation of leachate from the management of C&I and MSW waste the Proposal has the potential to result in contamination impacts to the surrounding soils, groundwater and surface water bodies if not appropriately managed.

5.5.2 Summary of Issues

5.5.2.1 Construction

The Proposal may have a potential to have the following impacts:

- Erosion and sediment transport through exposed soils and stockpiled materials
- Water contamination resulting from an increase in sediment loads entering the stormwater system and entering nearby receiving waterways
- Change in overland flows impacting downstream flooding
- Impacts to groundwater as a result of construction of piles and foundations. Any groundwater impacts would be temporary in nature.
- Disturbance of previously contaminated soil.

5.5.2.2 Operation

Once the Proposal is operational, it could have the following impacts:

- Management of putrescible waste at the Proposal site has the potential to generate leachate. If not appropriately managed, leachate has the potential to contaminate the surrounding soils, groundwater and surface water bodies. Leachate generated by the Proposal would be contained, treated and re-used on-site to prevent discharge and contamination.
- Change in overland flow impacting downstream flooding regime
- Spills and leaks from operating machinery resulting in contamination of soil, groundwater and surface water.

5.5.3 Proposed Further Assessment

The EIS will include the following:

- Assessment of potential impacts of the Proposal on soil and water resources, including potential soil contamination, salinity, acid sulfate soils and flooding
- Preparation of a site water balance to support sustainable water use at the Proposal site
- Details of stormwater / wastewater / leachate management systems, including capacity of onsite detention systems and measures to treat, reuse or dispose of
- Recommendations for erosion and sediment control measures during construction and operation of the Proposal. Recommendations will be consistent with the Managing Urban Stormwater: Soils and Construction volume 1 and volume 2 series published by the former NSW Department of Environment and Climate Change (DECC) in 2008.

The EIS will also be accompanied by a Phase 1 contamination assessment report prepared for the Proposal site.

5.6 Hazards and Dangerous Goods

5.6.1 Overview

The proposed operations may require the use and storage of hazardous and dangerous goods, namely Diesel, liquefied petroleum gas (LPG), oils, greases and hydraulic fluids, oxyacetylene, solvents for maintenance, and waste oil. Based on these the Proposal falls within the definition of a “potentially hazardous industry” or “potentially offensive industry” under the SEPP 33. A screening assessment to determine the need for a preliminary hazard analysis will be undertaken by the Applicant, the findings of which will be presented in the EIS.

In addition to the dangerous goods, there is the potential for a number of hazards and risks that are discussed below.

5.6.2 Summary of Issues

5.6.2.1 Construction

Hazards and risks associated with construction of the Proposal may include collisions, spills, disturbance of contamination and health impacts associated with dust. Hazards and risks will be managed in accordance with a Construction Environmental Management Plan (CEMP) which will be prepared prior to construction commencing. Work health and safety (WHS) risks will be identified with the CEMP and managed in accordance with the WHS Act 2011.

5.6.2.2 Operation

Hazards associated with operation of the Proposal may include collisions and spills. Hazards and risks will be managed as part of an Operational Environmental Management Plan (OEMP), which will be prepared prior to the commencement of operations.

5.6.3 Proposed Further Assessment

The EIS will confirm the types, quantities, storage locations and storage conditions of any dangerous goods proposed to be stored onsite. Where any exceedances to thresholds are identified, the EIS will be supported by a comprehensive Preliminary Hazard Analysis (PHA) to determine the cumulative risks associated with the Proposal.

6 OTHER ISSUES

While not a key issue, further assessment regarding socio-economic impacts and visual amenity impacts will be carried out as part of any future environmental assessment for the Proposal as presented in this section. Any environmental management and safeguard measures required to minimise and mitigate impacts will be documented as part of the EIS.

6.1 Socio-Economic

6.1.1 Existing Environment

The Proposal would be constructed and operated within the Suburb of St Marys within the Penrith LGA. During the 2016 census the St Marys-North St Marys statistical area was recorded as having a population of 16,533, an increase from the 15,160 people recorded during the 2011 Census. Population growth in the broader Penrith area is anticipated to continue to increase in the near future.

Employees working in manufacturing, retail and health care and social assistance collectively account for 35.7 per cent of employment within the Penrith area as of 2016.

6.1.2 Summary of Issues

6.1.2.1 Construction

Proposed construction activities would take approximately 12 months. Construction impacts are anticipated to be temporary and localised to the Proposal site and surrounding locality. As a result, it is anticipated that construction of the Proposal would not result in significant socio-economic impacts to the surrounding area.

The Proposal is anticipated to provide positive impacts in the form of employment of approximately 100 FTEs during construction, the payment of taxes and the purchasing of goods in the local area wherever practicable.

6.1.2.2 Operation

During operation of the Proposal it is expected that the Proposal would have a positive impact on the surrounding locality. This can be attributed to the creation of approximately 60 full-time equivalent jobs, contribution of taxes and the purchasing of goods in the local area wherever practicable.

6.1.3 Proposed Further Assessment

Further assessment of the potential for socio-economic impacts will be undertaken within an EIS and will include:

- An assessment of the negative and positive construction and operational socio-economic impacts in relation to the demographic profile of the surrounding areas
- The identification of feasible and reasonable measures to mitigate impacts.

6.2 Waste Management

6.2.1 Overview

The Proposal is not anticipated to generate a significant amount of waste through construction or operational activities.

Once operational, the Proposal would handle a number of waste streams as presented in Appendix A.

6.2.2 Summary of Issues

6.2.2.1 Construction

During the construction phase, the potential waste streams that could be generated by the construction process include:

- Excess landscaping materials
- Excess drainage and piping materials
- Asphalt and bitumen waste
- Excess road construction materials (road base, stone etc)
- Concrete
- Formwork – use and offcuts
- Steel and steel reinforcement offcuts
- Fixings
- Timber
- Adhesive/resins/paints/fixings
- Batteries
- Miscellaneous construction chemicals
- Tool and equipment consumables
- Fuels/oils/grease
- Packaging – cardboard, plastic, crates, pallets and drums
- Putrescible waste from lunchrooms
- Plant and equipment maintenance waste (e.g. oily rags, oil filters, tyres etc).

These waste streams would need to be managed appropriately to ensure minimisation of waste generation and avoid, where possible, transportation to landfill.

Additionally, the construction phase of the Proposal would require the storage and handling of various types of hazardous materials including:

- Hydrocarbon based (e.g. fuels and lubricants)
- Alkaline products (e.g. cement)
- Minor quantities of paints, solvents and glues.

6.2.2.2 Operation

The facility would be unlikely to generate substantial quantities of waste, other than in relation to the core processing services described. No potential operational impacts have been identified.

6.2.3 Proposed Further Assessment

A resource and waste management assessment will be undertaken as part of the EIS to determine the potential impacts of the Proposal, both during construction and operations. The assessment will:

- Identify waste streams generated during the construction stage of the Proposal
- Assess waste management impacts associated with construction activities
- Identify management and mitigation measures for resource use and waste across the Proposal including disposal sites and transport impacts.

6.3 Visual Amenity

6.3.1 Overview

The Proposal includes the construction of an enclosed processing, composting and maturation sheds and associated facilities, including hardstand areas, biofilters, a site office, carparking, weighbridge area. The Proposal site is located within a broader industrial precinct. The visual nature of surrounding development is typified by a mix of industrial developments including manufacturing and repair industries, automotive services industries, printing facilities, hardware and general supplies and warehouses. Views to and from sensitive receivers are generally shielded by surrounding developments and mature trees.

The Proposal is generally consistent with the existing character of the broader area however includes the construction of a 14-metre high enclosed processing shed, which will be in exceedance of the current height limit specified in the Penrith LEP 2010.

6.3.1.1 Construction

The construction of the Proposal would be likely to result in minor visual impacts associated with construction activities (sites/compounds, machinery, temporary structures etc.) on the visual amenity of adjacent properties (including the Dunheved Golf Club) and to users of Dunheved Circuit and Links Road (to the west). Sensitive receivers such as residents at Ropes Crossing would be separated from visual impacts during construction by significant distances (more than 1.3 km). Sensitive receivers would also be visually shielded from the site by the surrounding developments and as such these receivers are unlikely to be impacted.

6.3.1.2 Operation

The operational Proposal would be generally consistent with the existing character of the area however the final design would change the visual impacts of the current site (currently undeveloped), resulting in visual impacts to the surrounding roads and neighbouring developments.

The operation of the Proposal is unlikely to result in a high level of amenity impacts as views to and from sensitive receivers are generally shielded by surrounding developments and / or they are separated by large distances.

6.3.2 Proposed Further Assessment

Further assessment of the potential for visual and landscape character impacts will be undertaken within an EIS and will include:

- Identification of the visual qualities present, including the existing landscape character of the region, sensitive locations, catchments and key viewpoints
- A visual impact assessment of the Proposal in the whole and parts on the landscape and urban character of the area, views to and from the Proposal, magnitude of change to existing views and the visual sensitivity of the viewers
- Preparation of a Statement of Development Standards Exception
- The identification of feasible and reasonable measures to mitigate impacts. Identified mitigation measures will be incorporated in the Proposal design.

7 CONSULTATION

The Applicant is committed to consulting with the local community and other stakeholders, including government agencies, regarding this proposed development. This will ensure that interested parties have the opportunity to understand the nature of the proposed development and can provide informed feedback.

During the preparation of the EIS the Applicant will consult with the following:

- Penrith City Council
- Environment Protection Authority
- Department of Planning and Environment
- Department of Primary Industries
- Water NSW
- Roads and Maritime Services
- Nearby land owners and occupiers that may be affected by the Proposal.

The EIS will describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, adequate explanation will be required in the EIS.

8 CONCLUSION

The Applicant is seeking approval for the construction and operation of a Resource Recovery Facility (RRF) with a material handling limit of up to 200,000 tonnes per annum (tpa). The RRF would comprise an alternative waste technology plant, with an associated biofilter, office building and ancillary facilities. The facility would be fully enclosed, where practicable, and include appropriate engineering controls to reduce air quality and noise impacts on the surrounding environment.

The waste would comprise commercial and industrial waste and municipal solid waste to recover recyclable materials for sale into the recyclable commodity market and organic materials to be composted on-site. The remaining non-putrescible material would either be disposed of at landfill or would be processed into refuse derived fuel.

The key components of the Proposal would include:

- Completion of site preparation works including clearing, earthworks and grading
- Construction of pavement, roads, and hardstand; including provision of vehicle access and egress to / from Dunheved Circuit, and provision of onsite car parking
- Construction of the enclosed processing, composting and maturation sheds and associated facilities
- Installation of inbound and outbound weighbridges and wheel wash
- Installation of a designated hazardous and dangerous goods storage area
- Installation of landscaping and signage
- Construction of a sprinkler pump room and stormwater detention tanks
- Construction of a bunded undercover fuel storage area
- Construction of site office and associated facilities.

The key operational components of the Proposal would include:

- Operation of an RRF (including processing and waste delivery and collection) 24 hours per day, 7 days per week
- Processing of up to 200,000 tpa of C&I and MSW waste
- Waste storage of up to three days processing volume of C&I and MSW waste at any given time.
- A water management system including water tanks and a leachate re-use system.

The Proposal would be classified as State Significant Development under Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011,* as it would handle greater than 100,000 tonnes per year of waste for the purpose of resource recovery or recycling. The Proposal therefore requires the preparation of an Environmental Impact Statement to accompany a Development Application.

The potential environmental impacts of the Proposal have been identified and assessed as part of this SSD application report. The key environmental issues identified for the Proposal include:

- Traffic, access and parking
- Air quality and odour
- Noise and vibration
- Stormwater, flooding and contamination
- Hazards and dangerous goods.

The other environmental issues identified for the Proposal include:

- Socio-economic impacts
- Waste management
- Visual amenity.

The Environmental Impact Statement prepared for the Proposal would include the following, in accordance with the *Environmental Planning and Assessment Regulation 2000*:

- A detailed description of the Proposal including its components, construction activities and potential staging
- A comprehensive assessment of the potential impacts on the key issues including a description of the existing environment, assessment of potential construction and operation impacts
- Description of measures to be implemented to avoid, minimise, manage, mitigate, offset and/or monitor the potential impacts
- Identify and address issues raised by stakeholders.

9 REFERENCES

Bureau of Meteorology (BOM) (2017), Climate Data Online: Penrith Lakes AWS, accessed November 2017

Department of Environment and Climate Change (DECC) (2008), *Managing Urban Stormwater, Volume 1,* DECC NSW

NSW Environment Protection Authority (EPA) (2014), *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*, NSW EPA, Goulburn Street, NSW

NSW Environment Protection Authority (EPA) (2017), *Draft NSW Waste and Resource Recovery Infrastructure Strategy*, NSW EPA, Goulburn Street, NSW

Penrith City Council (2017), *Penrith Waste and Resource Strategy (2017-2026),* Penrith City Council

Wester Sydney Regional Organisation of Councils (WSROC) (2014), *Western Sydney Regional Waste Avoidance and Resource Recovery Strategy (2014-2017)*, WSROC

APPENDIX A PROPOSED WASTE STREAMS

Table A Proposed Municipal Solid Waste streams and percentages

Material	Percentage
Recyclable Aluminium	0.4%
Recyclable Steel	1.0%
Recyclable Glass	1.8%
Recyclable Paper	2.3%
Recyclable Plastics	1.3%
Glass Fines (<60mm)	0.4%
Food	25.3%
Vegetation	8.2%
Contaminated Paper and Cardboard	14.2%
Other Organic Material	13.1%
Other Cardboard - e.g. High Wet Strength, Waxed, LPB	0.6%
Plastic Film	5.7%
Other Metal	0.8%
Other Plastics	3.8%
Other Residual Materials	16.7%
Hazardous Materials	0.6%
Oversize and Stringy Items	3.8%

Table A Proposed Commercial & Industrial Waste streams and percentages

Material	Percentage
Cardboard	8.1%
Electrical	0.3%
Food organics	18.9%
Garden organics	4.9%
Glass	2.4%
Masonry materials	6.4%
Metal (ferrous)	2.2%
Metal (non-ferrous)	1.0%
Paper	14.5%
Plastic	18.2%
Rubber	0.5%
Textiles and leather	5.8%
Wood	13.1%
Other (including batteries, gas bottles, nappies and fines)	3.7%

APPENDIX B BIODIVERSITY DEVELOPMENT ASSESSMENT REGULATION EXEMPTION MEMO

MEMO

ARCADIS Design & Consultancy for natural and built assets

Date	28/03/2018
To	Bingo Recycling
From	Arcadis
Subject	Biodiversity Development Assessment Regulation Exemption Memo: 87 Dunheved Ct

Introduction

This memo has been prepared to provide advice regarding the significance of impacts to biodiversity values associated with the proposed Resource Recovery Facility (RRF) at 87 Dunheved Circuit, St Marys (Figure 1). The purpose is to demonstrate that impacts to biodiversity values would be minor and elements of the Biodiversity Conservation Act 2016 (BC Act) should not apply.

Background

Bingo Recycling proposes to design, build and operate a RRF (the Proposal) at 87 Dunheved Circuit, St Marys (the Proposal site) with a material handling limit of up to 200,000 tonnes per annum. Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* describes development which is considered to be State Significant Development and this includes any waste facility handling greater than 100,000 tonnes per year. Part 4, Division 4.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act) requires that an Environmental Impact Statement (EIS) be prepared to assess the potential impacts of the Proposal on the environment.

On 25 August 2016, the BC Act commenced and became mandatory for all development consents assessed under Part 4 of the EP&A Act, subject to the provisions outlined in Part 7 of the *Biodiversity Conservation (Savings and Transitional) Regulations 2017*. This proposal is not consistent with any of the definitions of pending or interim planning application, therefore the provisions of the BC Act do apply.

Section 7.9 of the BC Act states the following (elements are underlined to highlight their relevance):

(1) This section applies to:
- *(a) an application for development consent under Part 4 of the Environmental Planning and Assessment Act 1979 for State significant development, and*
- *(b) (b)an application for approval under Part 5.1 of the Environmental Planning and Assessment Act 1979 to carry out State significant infrastructure.*

(2) Any such application is to be accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.

This memo has been prepared to demonstrate that the proposed development is not likely to have any significant impact on biodiversity values, so that a determination to this effect can be made by the Planning Agency Head and the Environment Agency Head.

Figure 1: Proposal site and biodiversity values

Figure 1: Proposal site and biodiversity values

Impacts to biodiversity values

The proposal site has been historically cleared and is characterised by exotic grassland vegetation with few scattered native species that are typically disturbance tolerant (such as Black Wattle *Acacia decurrens*) (Figure 1). No vegetation that is consistent with a Plant Community Type (as described in the BioNet Vegetation Classification database) occurs within the proposal site. Similarly, no limiting fauna habitat features, such as hollow bearing trees or winter foraging resources occur within the proposal site.

Section 1.5 of the BC Act provides a description of biodiversity values, relevant to the Act. A description of additional biodiversity values is also provided in Section 1.4 of the *Biodiversity Conservation Regulation 2017* (BC Regulation). Table 1 provides an assessment of these defined biodiversity values, in relation to the proposal site.

Section 7.3 of the BC act provides a test for determining whether proposed development or activity likely to significantly affect threatened species or ecological communities, or their habitats. It is considered unlikely that any threatened species or communities occur within the proposal site, therefore it is unlikely that there would be a significant impact when considering the criteria in Section 7.3 of the Act.

Table 1: Significance of impacts to biodiversity values within the proposal site

Biodiversity value	Significance of impacts within the proposal site
***Biodiversity Conservation Act 2016*: Section 1.5**	
For the purposes of this Act, "biodiversity values" are the following biodiversity values: (a) vegetation integrity—being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state	Within the proposal site, the composition, structure and function of the vegetation has been highly modified and degraded from a near natural state. The proposal site contains no native canopy and very few native ground cover and shrub species. There is also a proliferation of high threat weeds such as Blackberry *Rubus fruticosus agg* Outside of the proposal site, large areas of more intact native (PCT) vegetation extend along Ropes Creek and South Creek, and to the north into Wianamatta Regional Park. No PCT vegetation would be directly impacted by the proposal. **The proposal is not likely to have a significant impact on vegetation integrity.**
(b) habitat suitability—being the degree to which the habitat needs of threatened species are present at a particular site	The proposal site provides very little habitat for threatened species in the context of the wider locality. *Grevillea juniperina* has been previously recorded to the south (outside) of the proposal site, in an area of regrowth native vegetation. Although this species is known to be relatively tolerant of disturbance, often occurring along roadside edges, it is considered unlikely to occur in the highly modified exotic grassland that occurs within the study area. There are no limiting habitat resources such as hollow bearing trees or seasonal or specific foraging resources for threatened species. The proposal site would provide potential foraging habitat for large range, mobile threatened species as a part of the mosaic of foraging habitat that occurs across the landscape. Such species would include

Biodiversity value	Significance of impacts within the proposal site
	threatened microbats and raptors. The loss of these potential resources would have negligible impact on availability of foraging habitat for these species. **The proposal is not likely to have a significant impact on suitability.**
(c) biodiversity values, or biodiversity-related values, prescribed by the regulations.	See below
***Biodiversity Conservation Regulation 2017*: Section 1.4**	
The following are prescribed as additional biodiversity values for the purposes of the Act: a) threatened species abundance—being the occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site	No threatened flora or fauna species have been previously recorded within the proposal site (OEH 2018a). *Grevillea juniperina* has been previously recorded to the south (outside) of the proposal site, in an area of regrowth native vegetation. Although this species is known to be relatively tolerant of disturbance, often occurring along roadside edges, it is considered unlikely to occur in the highly modified exotic grassland that occurs within the study area. Surrounding the proposal site, particularly to the south and west, intact PCTs do occur. All remanent native vegetation that occurs on the Cumberland Plain is consistent with one of a number of threatened ecological communities (TECs) listed under State (and often Commonwealth) legislation. No vegetation that is consistent with a TEC would not be directly impacted by the proposal. The proposal site would have likely once been vegetated with an assemblage of species that was consistent with *Cumberland Plain Woodland of the Sydney Basin Bioregion* TEC. The proposal site has been historically cleared of all native vegetation allowing proliferation of exotic species (including high threat weeds). The proposal site could not be returned to near natural state without significant human intervention. For this reason, the proposal site is not considered to provide habitat for Cumberland Plain Woodland TEC. **The proposal is not likely to have a significant impact on threatened species abundance.**
b) vegetation abundance—being the occurrence and abundance of vegetation at a particular site,	The proposal site is about 75 per cent vegetated, with the remaining 25 per cent comprising areas of hard stand and bare earth. The proposal site contains about 3.03 hectares of exotic vegetation and scattered and isolated native species. Outside of the proposal site, far larger areas of native vegetation extend to the south, along Ropes Creek and South Creek, and to the north into Wianamatta Regional Park. **The proposal is not likely to have a significant impact on vegetation abundance.**

Biodiversity value	Significance of impacts within the proposal site
c) habitat connectivity—being the degree to which a particular site connects different areas of habitat of threatened species to facilitate the movement of those species across their range,	The proposal site occurs in an already highly cleared and fragmented landscape. Native vegetation has been relatively well preserved along the riparian corridors of Ropes Creek and South Creek, albeit degraded from a near natural state. The linear nature of this riparian vegetation means that they provide wildlife connectivity corridors, in this instance in a north-south orientation. To the north, these corridors provide fauna connectivity to Wianamatta Regional Park. Connecting links to the south are more tenuous but do occur, particularly to the bushland in Defence Estate Orchard Hills. The vegetation within the Proposal site contributes no connectivity value to the wildlife corridors in the region. **The proposal is not likely to have a significant impact on habitat connectivity.**
d) threatened species movement—being the degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle,	Similar to habitat connectivity, the proposal site provides no foraging or dispersal habitat that contributes to the movement of any threatened species. **The proposal is not likely to have a significant impact on threatened species movement.**
e) flight path integrity—being the degree to which the flight paths of protected animals over a particular site are free from interference,	It is likely that threatened species would fly over the proposal site whilst moving within their home range. This is most likely the case for threatened microbats, raptors, woodland birds and potentially forest owls. The proposal site is located in an already modified landscape comprised of industrial units (to the immediate north and east). **The proposal is not likely to have a significant impact on flight path integrity.**
f) water sustainability—being the degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	The proposal site does not contain any natural or man-made waterbodies. The stormwater management system will be designed concurrent with the preparation of the EIS. It is anticipated that this system would be consistent with the generally agreed expectations of Penrith City Council. As such, it is not anticipated that alterations to the volume or quality of stormwater runoff would affect the surrounding, natural hydrological regimes. The vegetation within the proposal site is comprised predominantly of exotic annual and perennial species. This assemblage would not be reliant on groundwater to maintain its composition and it is unlikely that the proposal would affect groundwater such that it caused an alteration in the composition of surrounding TECs.

Biodiversity value	Significance of impacts within the proposal site
	The proposal is not likely to have a significant impact on water sustainability.

Biodiversity Values Map

The biodiversity values map (BV Map) has been produced by OEH and identifies land with high biodiversity value, as defined by the BC Regulation. It is used as one of the triggers for entry into the Biodiversity Offset Scheme (BOS) for proposals being assessed under Part 4 of the EP&A Act, Except Division 4.1 SSD proposals. The biodiversity values map is a compilation of datasets that have been identified in Section 7.3 of the BC Regulation as being of high biodiversity value.

Querying the map is not typically required for SSD proposals since Section 7.9 of the BC Act requires entry into the BOS for all SSI and SSD proposals. Since the purpose of this memo is to demonstrate that Section 7.9 of the BC Act should not apply to the proposal, the BV map has been queried to confirm that no part of the proposal site has been mapped as being of high biodiversity value. Figure 2 demonstrates that no biodiversity values have been mapped within the proposal site. The riparian corridor of South Creek (to the west) and Ropes Creek (to the north-east) are included on the map, however impacts to these values are not anticipated due to their distance from the proposal site.

Figure 2: Biodiversity values mapped near the proposal site (OEH 2018b)

Prescribed impacts

Section 6.1of the BC Regulation identifies several types of impacts that are prescribed as impacts to be assessed under the BOS but that do not involve the removal of PCTs or threatened species. An assessment of the relevance of these prescribed impacts to the proposal is provided in Table 2 below.

Table 2: The significance of prescribed impacts resulting from the proposal

Prescribed impact	Significance of impacts
(a) the impacts of development on the following habitat of threatened species or ecological communities: i. karst, caves, crevices, cliffs and other geological features of significance ii. rocks iii. human made structures iv. non-native vegetation	The proposal would not impact karst, caves, crevices, cliffs and other geological features of significance, rocks or human made structures. The proposal would remove about 3.03 hectares of exotic vegetation from the proposal site which provides negligible habitat for threatened species and ecological communities.
(b) the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range	The proposal is not likely to have a significant impact on habitat connectivity (see Table 1).
(c) the impacts of development on movement of threatened species that maintains their lifecycle	The proposal is not likely to have a significant impact on threatened species movement (see Table 1).
(d) the impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development),	The proposal is not likely to have a significant impact on water sustainability (see Table 1).
(e) the impacts of wind turbine strikes on protected animals,	Not applicable
(f) the impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community.	The proposal is not likely to increase the impact of vehicle strikes on threatened species and species that are part of a TEC.

Test for determining a significant affect

Conclusion

This memo has considered the potential impacts of the proposal on biodiversity values prescribed in Section 1.5 of the BC Act, Section 1.4 of the BC Regulation and the BV map. In most instances, the proposal would have nil impact on these biodiversity values. Where there is potential for an impact to a biodiversity value, these impacts would be minor.

The proposal site does not contain any land mapped as being of high biodiversity value in the BV Map. There are mapped biodiversity values in the surrounding are, however it is not anticipated that the proposal would have any impact on these.

Finally, the proposal would not result in any significant impacts that are prescribed under the BC Regulation.

It is requested that the Planning Agency Head and the Environment Agency Head consider whether the proposal is likely to have a significant impact on biodiversity values, in light of the information provided above. If concurrence is provided then it is requested that the proposal be considered exempt from satisfying Clause (2) of Section 7.9 of the BC Act meaning that the EIS need not be

accompanied by a Biodiversity Development Assessment Report, prepared in accordance with the *Biodiversity Assessment Method 2017*.

References

OEH 2018a. Bionet Atlas of NSW Wildlife (available at http://www.bionet.nsw.gov.au/)

OEH 2018b. Biodiversity Value Map (available at https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BVMap)