BARKER RYAN STEWART
TOTAL PROJECT SOLUTIONS

Autorecyclers Pty Ltd

Environmental Impact Statement

Metal Recovery & Recycling Facility

56-69 Tattersall Road, Kings Park, Blacktown

October 2019

ENGINEERING
PLANNING
PROJECT MANAGEMENT
SURVEYING
CERTIFICATION

brs.com.au

Project No.	CC160136
Author	D Fitzgerald
Checked	L Wrightson / B Miller
Approved	K Stamper

Rev No.	Status	Date	Comments
1	Final	21/10/2019	
2	Amended	31/10/2019	

SYDNEY
P (02) 9659 0005
E sydney@brs.com.au

CENTRAL COAST
P (02) 4325 5255
E coast@brs.com.au

HUNTER
P (02) 4966 8388
E hunter@brs.com.au

SOUTH EAST QUEENSLAND
P (07) 5582 6555
E seqld@brs.com.au

brs.com.au

Statement of Validity

Environmental Impact Statement prepared by

Name	Darryl Fitzgerald
Qualifications	Bachelor of Arts (hons) Postgraduate Diploma, Urban & Regional Planning Masters Environmental & Local Government Law
Name	Lisa Wrightson
Qualifications	Bachelor of Town Planning (Hons) Postgraduate Diploma Heritage Registered Planner – PIA
Address	Suite 603, Level 6, 12 Century Circuit Baulkham Hills NSW 2153
In respect of	State Significant Development for the operation of a metal recovery and recycling facility with a processing capacity of 130,000 tonnes per annum (tpa) of scrap metal. The application is declared to be State significant development pursuant to section 4.36 of the Environmental Planning and Assessment Act AS development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year.

Applicant and Land Details

Applicant	Autorecyclers Pty Ltd
Applicant Address	57-69 Tattersall Road, Kings Park
Land to be developed	Lot 100 DP 792731, known as 57-69 Tattersall Road, Kings Park

Declaration

This Environmental Impact Statement (EIS) has been prepared in accordance with the Environmental Planning and Assessment Act 1979, Environmental Planning and Assessment Regulation 2000 and Secretary's Environmental Assessment requirements.

We certify that the information contained in this Environmental Impact Statement is neither false nor misleading.

Darryl Fitzgerald
Senior Town Planner – Barker Ryan Stewart

Lisa Wrightson
Planning Manager – Barker Ryan Stewart

TABLE OF CONTENTS

Page numbers

Table of Contents (continued)

Page numbers

List of Figures

List of Tables

Table of Contents (continued)

Page numbers

List of Photographs

Appendices

1 Executive Summary

This Environmental Impact Statement (EIS) has been prepared on behalf of Autorecyclers Pty Ltd and is in accordance with the Environmental Planning and Assessment Act 1979, Environmental Planning and Assessment Regulation 2000 and the Secretary's Environmental Assessment Requirements (SEARs). The information included in this EIS is based on the supporting consultant documentation.

The site has been used for industrial purposes since 1958 and prior to this was generally used for agricultural purposes. The site was purchased by the applicant, Autorecyclers Pty Ltd, in 1996.

This EIS relates to a proposal for the operation of a metal recovery and recycling facility comprising:

1. a processing capacity of 130,000 tonnes of scrap metal per annum;
2. the processing and recycling of motor vehicles and heavy and light gauge metals ; and
3. changes to the site layout, including the location and size of storage areas for vehicle bodies and fragmented material.

The proposal is supported by a variety of supplementary studies and demonstrates rational, orderly, economic and sustainable use of the site and has been designed in accordance with the relevant planning and legislative requirements.

This Environmental Impact Statement (EIS) is submitted to the NSW Department of Planning and Environment (DP&E) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of a State Significant Development (SSD) application for the operation of a metal recovery and recycling facility with a processing capacity of 130,000 tonnes of scrap metal per annum at 57-69 Tattersall Road, Kings Park (Lot 100 DP 792731).

The application is declared to be State significant development pursuant to section 4.36 of the Environmental Planning and Assessment Act because development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes per year of waste is development specified in clause 23(3) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011.

In accordance with Section 4.12 (8) of the EP&A Act, the Secretary of DP&E issued the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of the EIS on 21st June 2017. This EIS has been prepared in accordance with the guidelines for the preparation of EIS's and also addresses issues raised in the SEAR's.

1.1 Proposed Development Description

The proposed development is for the operation of a metal recovery and recycling facility with a processing capacity of 130,000 tonnes per annum (tpa) of scrap metal. Includes approval for the processing of scrap metal from sources including motor vehicles, structural metals and white goods. It also involves changes to operating hours and site layout and the construction of structures to house machinery and stockpiles.

The development is to be located on Lot 100 DP 792731, known as 57-69 Tattersall Road, Kings Park, in the Blacktown local government area. Existing approved developments on the site include:

- Pick'N'Payless - car dismantling yard and the sale of motor vehicle parts and second-hand motor vehicles.
- Scrap metal recycling facility using a Thor 2121K mobile hammermill, a BRAVO Pre-shredder and Finesmaster downstream processing equipment to process up to 150 tonnes per day or 30,000 tonnes per annum of motor vehicles, light gauge metals and whitegoods.

1.2 Project Benefits

The proposal will have a range of economic, environment and social benefits including:

- At full capacity recovering approximately 107,120 tonnes of resources annually for re-use locally, regionally and overseas.
- Reduced greenhouse gas emissions relating to landfills.
- The significant extension of landfill life.
- The creation of 30 full-time jobs and up to 20 constructions jobs.
- Assessing the development within a single approval, providing greater transparency of operations on site.

The site is zoned appropriately, addresses logistical requirements, is well separated from sensitive receivers, and meets the requirements to service the existing and growing customer base.

1.3 Consultation

A range of stakeholders have been engaged during the preparation of this EIS. The purpose of the engagement is to provide information on the proposal as early as possible in the planning process to allow for the up-front identification, and where possible, resolution, of relevant issues or concerns.

Consultation has been undertaken with relevant Government agencies, Council, local residents, and businesses through meetings, letters and e-mail where appropriate.

Issues raised during the consultation process have been considered in the design of the proposed facility and addressed within the EIS.

1.4 Environmental Impacts

The EIS provides an assessment of the environmental impacts of the proposed development in accordance with the SEAR's and sets out the undertakings made by the proponent to manage and minimise potential impacts arising from the development. Key matters addressed in the EIS are summarised below:

1.5 Waste Management

The SEARs require a detailed assessment of the waste management requirements for the development. A Waste Management Plan (WMP) has been prepared detailing the source of waste streams, waste processing operations and proposed management measures.

1.6 Soil and Water

The SEARs require that the EIS contain a detailed assessment of the impacts of the development on soil and water resources, hydrology, drainage lines and Breakfast Creek. The investigations prepared in support of the proposed development identifies potential impacts on the soil and water environment and recommends measures to manage and mitigate these impacts during construction and site operation. The design of the facility prevents any adverse impacts on the soil and water environment, including Breakfast Creek

1.7 Air Quality and Odour

The SEARs require the EIS to contain a detailed assessment of the impacts of the development on air quality and odour in the locality. Air quality at the site and surrounding areas is influenced by dust and emissions from both industrial and non-industrial sources. An Air Quality Impact Assessment has been

prepared and concluded that the proposed facility will have no detrimental effect on air quality or emissions as the nature of the operation will not generate any significant odour emissions.

1.8 Noise and Vibration

The SEARs require the EIS to contain a detailed assessment of the noise and vibration impacts associated with the development. An Environmental Noise & Vibration Assessment has been prepared in accordance with the assessment procedures of the EPA's *Industrial Noise Policy* and the relevant Australian Standards.

The surrounding development is not of a nature that is particularly sensitive to noise and certainly not to lower noise levels anticipated from the proposed development. The site exists in an area that is largely related to the functioning of industrial activities.

The Environmental Noise & Vibration Assessment concludes that the proposed development will comply with the *Industrial Noise Policy*.

1.9 Traffic and Transport

The SEARs require the EIS to contain a detailed assessment of the impacts of the development on traffic and transport. The traffic impact assessment prepared in support of the proposed development concludes that from the site work undertaken and the review of the development proposal and associated plans against the requirements of the RMS *Guide to Traffic Generating Developments and Austroads Guide to Traffic Management*, the proposed development will have minimal impact on the surrounding road network. Parking for the proposed development exceeds the requirements of Blacktown DCP 2015 and access and circulation for the site is appropriate for the development, providing for the swept paths of heavy vehicles including B-Doubles.

1.10 Fire Management

The SEARs require details and an assessment of the fire control and management equipment to be installed, the location of fire hydrants, water flow rates at the hydrant, firewater containment capacity, smoke hazard management and sprinkler systems within buildings, details of the size and volume of stockpiles and separation to minimise fire spread and facilitate emergency vehicle access.

1.11 Hazards and Risk

The SEARs set out that a Preliminary Hazard Analysis (PHA) must be prepared in accordance with the Department of Planning and Environment (DP&E) Guidelines, identifying the likely hazards and risks associated with the proposed development. The PHA prepared in support of the proposed development concludes that the hazards and risks associated with the project can be managed using appropriate mitigation measures.

1.12 Incident Management

The SEARs requires detail of spill management equipment to be held on site and the processes to be implemented to manage the risk of explosions or other incidents associated with the handling, storing, dismantling and draining of fuel tanks, air bags and seatbelt pre-tensioners. An integrated Health, Safety and Environmental Management System (HSEMS) has been prepared for the site.

1.13 Visual

The SEARs require a detailed assessment of the visual impact of the proposed development. The scale of the development in the context of the scale of surrounding industry will ensure that likely landscape and visual impacts will be local. There will be no visual impacts when viewing the site from sensitive receivers further afield. The proposal represents an appropriate visual fit, and will contribute to and enhance the existing industrial visual character of the area.

1.14 Conclusion

The proposed development is consistent with the relevant local and State planning instruments.

The site is located within an industrial precinct and already accommodates an approved car dismantling and metal recycling facility. Further, the site's location with access to the M7 and approved heavy vehicles routes also minimises the impacts of additional traffic on the capacity of the local road network and exposure to traffic related noise.

A range of environmental issues have been identified and assessed with appropriate mitigation and management measures proposed to be carried through to the construction and operational phase. Emphasis has been applied to the management of potential hazards and risk associated with the development as well as traffic impacts. In particular, design and operational measures have been included to prevent LPG release into the soil or ground water table.

This EIS demonstrates that the proposal will not result in significant impacts to the environment through the implementation of management and mitigation strategies. Therefore the development is considered an appropriate use for the existing site, has positive economic benefits for the local area, and is in the best interest of the public, environment, and sustainability.

1.15 Acronyms and Units

AHD	Australian Height Datum
AHIMS	NSW Office of Environment and Heritage Aboriginal Heritage Information Management System
BCA	Building Code of Australia
CEMP	Construction and Environmental Management Plan
CIV	Capital Investment Value
DCP	Development Control Plan
DP&E	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
ESD	Ecologically Sustainable Development
FIA	Flood Impact Assessment
LEP	Local Environmental Plan
LGA	Local Government Area
OEH	Office of Environment and Heritage
PHA	Preliminary Hazard Analysis

QRA	Quantitative Risk Assessment
RL	Relative Level
RMS	NSW Roads and Maritime Services
SEARs	Secretary's Environmental Assessment Requirements
SSD	State Significant Development
WMP	Waste Management Plan

2 Introduction

2.1 Purpose of this Environmental Impact Statement

The proposed metal recovery and recycling facility is classified State Significant Development (SSD) pursuant to Schedule 1(Clause 23(3)) of State Environmental Planning Policy (State and Regional Development) 2011 because it is development for the purpose of resource recovery or recycling facility that handles more than 100,000 tonnes per year. This Environmental Impact Statement (EIS) has been prepared in accordance with the provisions of State Environmental Planning Policy (State and Regional Development) 2011, Schedule 2 of Environmental Planning and Assessment Regulation 2000 and the issues and matters for consideration outlined in the Secretary Environmental Assessment Requirements (ref: SSD 17 8375).

The proposed development has a capital investment value of $16.9 million.

2.2 Project Team

The project team is included in Table 1 below.

Table 1: Project Team

Applicant	Autorecyclers Pty Ltd
Town Planner	Barker Ryan Stewart
Surveyor	Barker Ryan Stewart
Quantity Surveyor	Coutts Cost Consulting
BCA Consultant	Philip Chen & Associates
Traffic Engineer	Barker Ryan Stewart
Fire Safety Engineer	Red Fire Engineering
Water Engineer	Barker Ryan Stewart
Hydraulic Engineer	Liquid Hydraulics
Risk Screening	Benbow Environmental
Flooding Consultant	Catchment Simulation Solutions
Air Quality	Todoroski Air Sciences
Contamination Consultant	Sullivan Environmental Consultants
Ecologist	Molino Stewart
Acoustic	Day Design Pty Ltd
HSE	Morassey
Waste	Barker Ryan Stewart

2.3 Structure of this Environmental Impact Statement

Table 2: Structure of Environmental Impact Statement

DOCUMENT SECTION		DESCRIPTION
Section 1	Executive Summary	Project summary
Section 2	Introduction	Purpose of the EIS and objectives of the proposed development
Section 3	Site Analysis	Overview, location and history of subject site
Section 4	Development Description	Overview of proposed concept development, CIV and analysis of alternatives
Section 5	Secretary Environmental Assessment Requirements	Overview of SEARs issued by Department of Planning & Environment on 21st June 2017
Section 6	Federal Legislative Framework	Consideration of relevant Federal legislation
Section 7	State and Regional Statutory Planning Framework	Consideration of relevant State and regional planning frameworks and strategies
Section 8	Non-Statutory Plans, Policies and Guidelines	Consideration of non-statutory plans, policies and guidelines
Section 9	Local Planning Framework	Consideration of local planning framework
Section 10	Environmental Impact Assessment	Response to SEARs
Section 11	Consultation	Details of consultation and responses
Section 12	Justification for Proposed Development	Project justification and considerations
Section 13	Environmental Risk Assessment and Mitigation Measures	Environmental risk matrix
Section 14	Conclusion	Summary of concept proposal and recommendations

2.4 Objectives of the Development

The key objectives for the project include:

- To create additional capacity to process waste metal;
- To improve the production efficiency of existing operations;
- To improve the environmental management of the site; and
- To create additional employment opportunities for the surrounding communities.

3 Site Analysis

3.1 Site

The site is located within the Blacktown local government area and is zoned IN1 General Industrial under Blacktown Local Environmental Plan 2015 (BLEP).

The real property description is Lot 100 DP 792731, located at 57-69 Tattersall Road, Kings Park (Figure 1). The lot has an irregular shape with a relatively narrow frontage to Tattersall Road. The total land area is approximately 6 ha.

The site is located on the southern side of Tattersall Road and has Breakfast Creek to the south and industrial development to the east and west. The site is generally flat but has a slight fall towards Breakfast Creek, which flows west/northwest to connect with Eastern Creek. The site is largely devoid of vegetation except for some trees adjacent to the front car park and scattered along the property boundaries. There is no significant vegetation on the site.

The site is serviced by water, sewer, telecommunication and power services.

The site currently contains a waste metal recycling facility and a car dismantling and auto recycling yard and includes the sale of second hand motor vehicle parts. The property includes a number of buildings associated with these uses including offices, sales area and sheds (refer to Figure 1 below).

Northern area:

- Building 1 2-storey office building
- Building 2 storage
- Building 3 workshop and storage
- Building 4 workshop and storage
- Building 5 demountable office and access to self-serve spare parts recycling yard

Buildings 3 and 4 comprise the main workshop area and include the end-of-life vehicle (ELV) facility and the storage of spare parts, batteries and tyres.

Central area:

- A stormwater detention basin
- B concrete slab for scrap metal recycling activities
- C weighbridges
- Storage of vehicles for the ELV facility
- Spare parts recycling yard (Pick n Payless)

Southern area:

- D stormwater detention basin
- E open sided shed and concrete slab previously used for shredding vehicles.

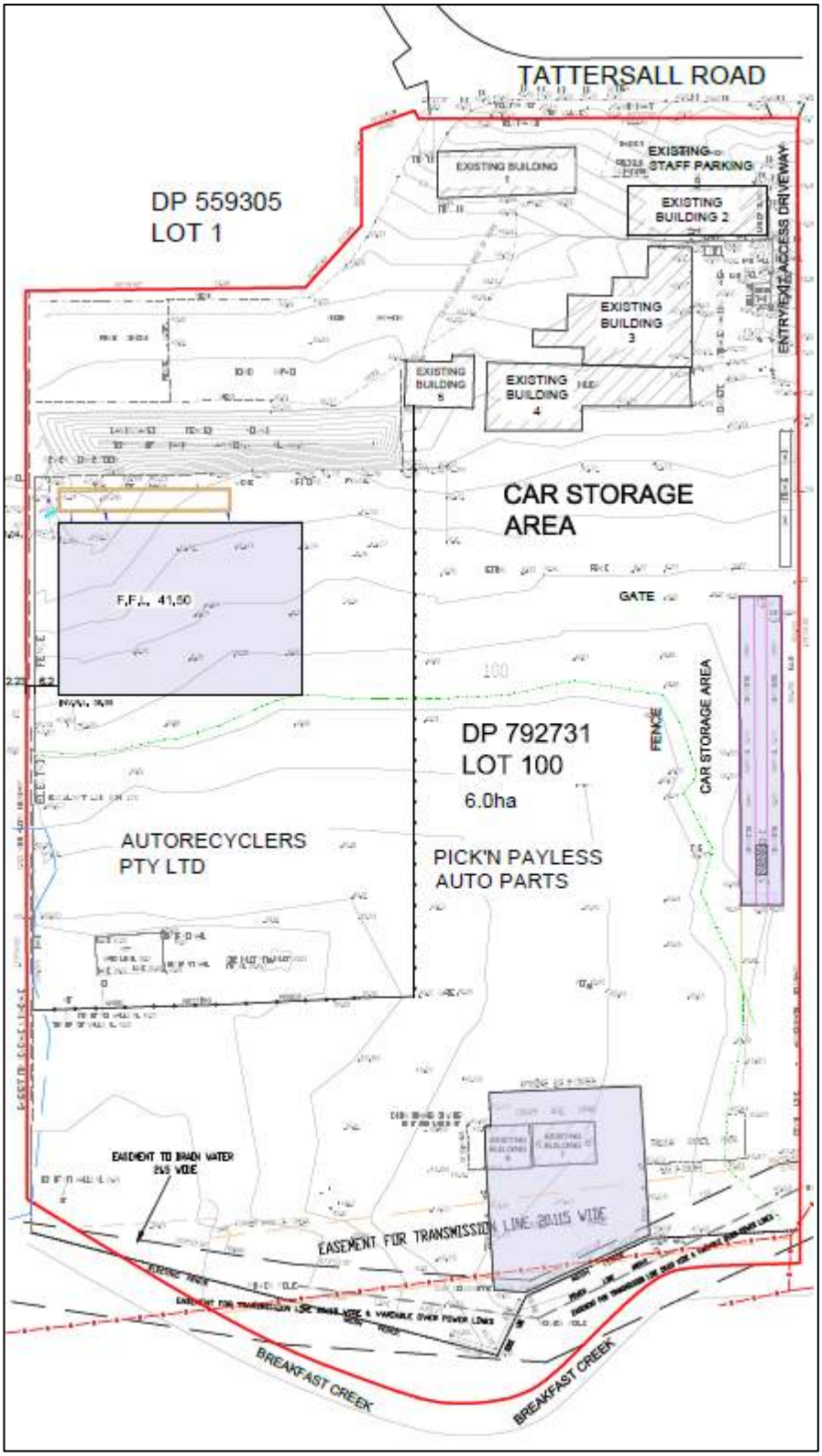


Figure 1: Existing Site Layout

3.1.1 Access, Car Parking and On-site Circulation

There are three existing driveways providing vehicular access to the site from Tattersall Road. Car parking for visitors and employees is at the front of the site.

A - western driveway
B – exit only driveway
C - eastern driveway
D - staff car park
E – customer car parking

The eastern access provides two-way access to the rear of the site and the western driveway provides two-way access to the "Pick n Payless" car park. A staff car park is located along the northern site boundary with entry provided by the eastern driveway and exit provided by an exit only driveway located between the eastern and western driveways.

The heavy vehicle access is via the eastern driveway. The entry/exit access ways are constructed and comply with AS/NZS 2890.1:2004 Parking facilities - Off-street car parking (AS/NZS 2890.1).

Figure 2: Aerial Photo of Site

3.1.2 Signage

Existing signage consists of two business identification signs. One sign is attached to the northern facade of the 2-storey office building and a pylon sign is located adjacent to the northern boundary and the eastern driveway access from Tattersall Road.

The business identification signage is consistent with the character of the IN1 General Industrial zone and the signage on surrounding industrial premises.

The pylon sign has an overall height of 5 metres and incorporates two panels, each 5 metres in length. It is proposed to relocate this approximately 1.5m to the west to accommodate the proposed widening of the western driveway.

3.2 Surrounding Development

Located within the western Sydney metropolitan area, Kings Park is considered to be urban. As such, the site is situated within an industrial area which is surrounded by a low density of residential properties. A scrap metal recycling facility is located immediately adjacent to the east, a plastic moulding and container manufacturing facility is adjacent to the north. To the immediate west is a tile warehouse facility with office and a logistics business. To the south is a place of worship approximately 50 m from the southern border across Breakfast Creek.

The surrounding area comprises a mix of industrial and warehouse development, with scattered vegetation, mostly along Breakfast Creek. The locality is shown in Figure 3 below. The site is bounded:

- North: Tattersall Road and other industrial development including a plastic moulding and container manufacturing facility;
- East: A metal recycling facility (Sell and Parker);
- South: Breakfast Creek and industrial development beyond, including a place of worship; and
- West: Industrial development, including a tile warehouse facility and a logistics business.

The nearest residences are located to the east on the far side of Sunnyholt Road, approximately 550 m from the site (Figure 3). To the west the nearest residences are approximately 660 metres from the site, with the residential and industrial zones being separated by the Richmond railway line.

Access to the site is off Tattersall Road, which connects to Sunnyholt Road, which is a regional road connecting to the M7 motorway.

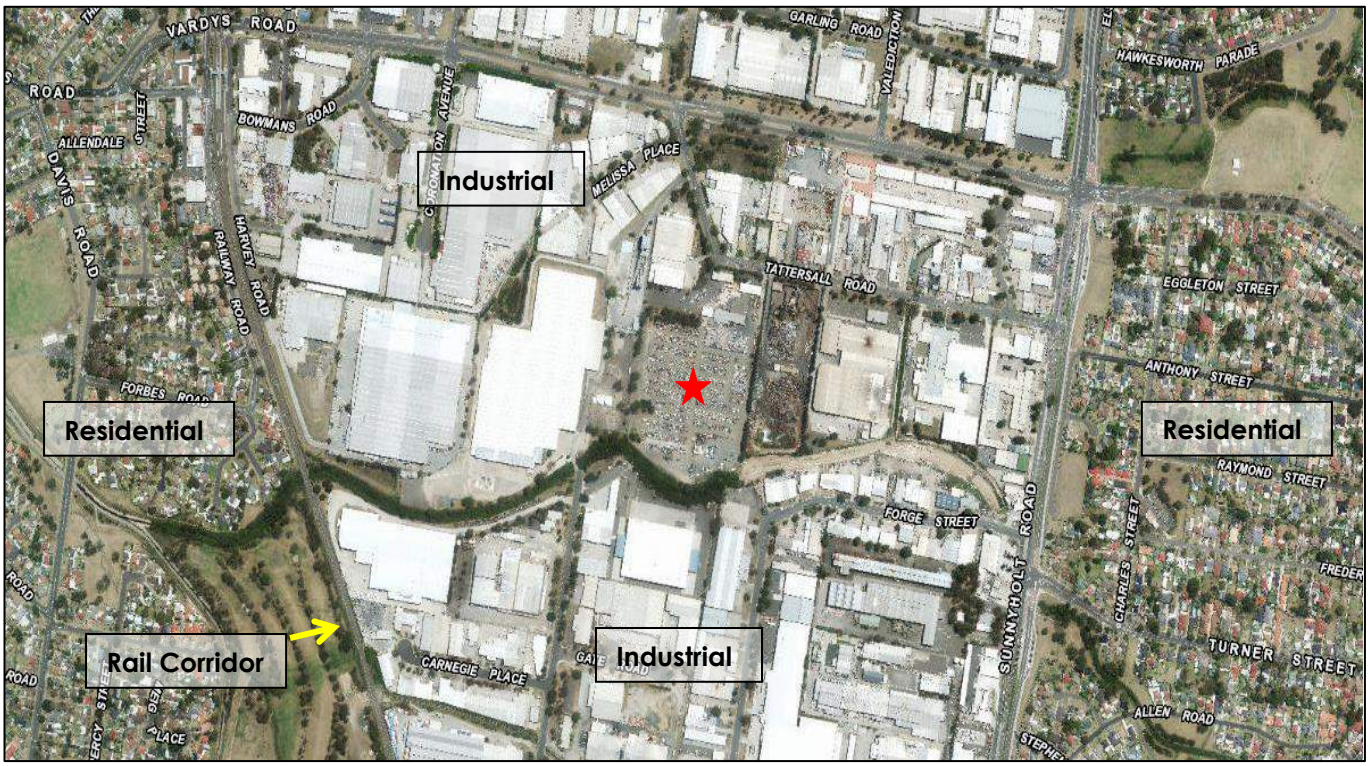


Figure 3: Aerial photo of locality ★ - subject land

3.3 Site History

Prior to 1958 the site was generally used for agricultural purposes.

From 1958 to 1973 the site was owned by CW Donney and Son Pty Limited, a building supplies business. The development of the northern part of the site had commenced by the early 1960's and by 1970 the northern portion of the site had been developed. The southern part of the site appeared to be used for the storage of building materials.

From 1973 to 1996 the site was owned by EPM Concrete Limited, which was a division of Boral Limited.

The site was purchased by Autorecyclers Pty Ltd in 1996.

3.4 Land Ownership

The site is owned by Auto-recyclers Pty Ltd

3.5 Past Approvals

3.5.1 DA 96-185

Notice of Determination No. 14314 (DA 96-185) was issued on 8th March 1996 for the existing "Car Dismantling Yard and Sale of Motor Vehicle Parts".

Under then Blacktown LEP 1988 the use of "Car Dismantling Yard and Sale of Motor Vehicle Parts" was encompassed by the definition "junk yard". A 'junk yard' meaning land used for the collection, storage, abandonment or sale of scrap metals, waste paper, rags, bottles or other scrap materials or goods used for the collecting, dismantling, storage, salvaging or abandonment of automobiles or other vehicles or machinery or for the sale of parts thereof.
Notice of Determination No. 14314 did not place a restriction on the volume of material that can be processed at the site however the processing of scrap metal on the site of more than 30,000 tonnes per annum (tpa) would have been classified as designated development and required a new consent. The development consent permits operation of the site between 8am and 5pm Monday to Sunday.

The process at the yard for recycling a car involved the following steps:

(a) Upon receipt of a car for recycling at the wrecking and dismantling yard, all oils and fuels are removed for safe storage and disposal.

(b) The car then remains at the wrecking and dismantling yard for around 90 days during which time, all spares suitable for resale are removed from the car.

(c) The car is then transferred to the recycling yard.

(d) The fuel tank is then removed by specialist equipment. The minimum time within which a fuel tank can be removed is 6 minutes, limiting the number of cars that can be processed to 10 cars per hour. Assuming that the site operates at its absolute maximum capacity, this bottleneck restricts the capacity of the site to 90 cars per day.

(e) The car is then placed in the shredder.

There have been five modifications of the development consent (NoD 14314).

- 12th July 1996
  Amended by the deletion of condition 6A and 6G.

  6A. The submission of a Building Application complying with the Local Government Act, 1993 with regard to the retaining walls.

6G. Any proposed fencing is not to exceed 1.8m high.

- 5th November 1996
  Amended by the inclusion of an additional building on the site for the purpose of a cashier's office.

- 25th September 1997
  Amended by the inclusion of the sale of second-hand motor vehicles in conjunction with the approved use of car dismantling and the sale of motor vehicle parts.

  Council supported the amendment to the development description because "motor showrooms" were a permissible use on land zoned 4(a) Industrial general under then Blacktown LEP 1988. A new condition number 21 was inserted limiting to 20 the number of second-hand vehicles that could be displayed for sale at any given time.

- 25th October 2017

  Amended by reconfiguration of the approved site comprising changes to the internal road layout, a reduction in the size of the vehicle storage area accessible to the general public to accommodate a permanent location for the hammermill shredder in the northwest corner of the site and, pending its relocation, the temporary location of the hammermill under an open-sided shed located on the southern section of the site adjacent to the electricity easement.

- 8th January 2019

  Modification of the approved site plan to reflect current and future operational requirements. The modifications included changes to the internal road layout, relocation of vehicle dismantling activities to the northwest sector of the site and a reduction in the size of the vehicle storage area accessible to the general public. Included approval for the use of two existing weighbridges. A s4.55(1) application was approved on 20th February 2019 to correct a typographical error pertaining to the plan revision number.

3.5.2 DA 14-01423

Deferred Development consent granted on 27th January 2015 for an open-sided metal awning on the southern portion of the site. The awning was an extension to an existing open-sided metal shed.

The consent was not acted upon and lapsed on 29th March 2015.

3.5.3 CDC 170379

Complying Development Certificate issued on 27th November 2017 for the construction of a 40m x 65m hardstand area and an associated 17m x 34m industrial shed.

A modification to the Complying Development Certificate for a larger concrete slab (46mx65m) was approved on 29th January 2018.

3.5.4 DA 17-01092

Development consent granted on 15th December 2017 for scrap metal recycling, processing up to 150 tonnes per day and 30,000 tonnes per year of motor vehicles, light gauge metals and whitegoods. The consent was time limited to a period of 24 months.

The Development Consent was voluntarily surrendered on 21st August 2019 in accordance with section 4.63 of the Environmental Planning and Assessment Act 1979 and clause 97 of the Environmental Planning and Assessment Regulation 2000.

3.5.5 CDC 180201

Complying Development Certificate issued on 5th July 2018 for the construction of a 46m x 65m hardstand area, 17m x 34m industrial shed, acoustic barriers and storm water detention basin.

3.5.6 DA 18-01273

Development consent granted on 29th March 2019 for the use of the north-western part of the site, and the use of a pre-shredder and mobile hammermill/shredder machine, to recycle general scrap metal, motor vehicles, light gauge metals and whitegoods only, having a total site processing capacity capped at 30,000 tonnes per annum.

3.5.7 DA 18-02214

Development consent granted on 18th February 2019 for the construction of a business identification sign incorporating 2 panels each 5m in length and 3m in height with an overall height of 5m.

3.6 Audit

The SEARs required an independent audit to be carried out of the operation of the existing facility against the conditions of the development consents and all Environmental Protection Licences in force.

There are no Environmental Protection Licences applying to the existing operations carried out on the site. The development consents 'in force' comprise:

- Development Application 96-185 (as amended)
- Development Application 18-01273
- Development Application 18-02214
- Complying Development Certificate 180201

The independent audit was carried out by Molino Stewart. The audit report is provided in Appendix C.

The audit found that the site was compliant with the majority of the consent conditions, identifying only five minor discrepancies. Autorecyclers Pty Ltd have implemented an Audit Action Plan to address the discrepancies. The nature of the discrepancy and the action taken to address it is summarised in Table 3 below, which demonstrates that all identified discrepancies have now been addressed or are in the process of being addressed.

Table 3: Summary of Audit Findings and Actions

DA -96-185 (Determination No. 14314) dated 23/5/96 (as amended)		
Issue	**Action**	**Status**
Condition No. 5 It was identified that landscaping shown in Dwg. No. NBT 0004 (dated 26/3/96) around the perimeter of the western car park not being present. The landscaping and layout of the western carpark as depicted in Plan NBT 0004 is inconsistent with the approved site plan, Plan No. CC161136 RevD dated 12/7/18.	A section 4.55(1) application to be lodged with Blacktown City Council to delete reference to Drawing No. NBT-0004.	Completed 30/10/19

Condition No. 13 No car bodies are to be stored outside the nominated fenced enclosure. Such car bodies are to be stored being at ground level and are not to be stacked at any time, During the audit inspections vehicles were observed being stored outside of the approved storage area	All vehicles stored outside of the approved storage area to be removed by 30/3/2020.	

CDC - 180201 Conditions of complying development certificate

Issue	Action	Status
Condition No. 2 A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out: (a) showing the name, address and telephone number of the principal certifier for the work; and (b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours; and (c) stating that unauthorised entry to the site is prohibited. The principal certifier sign was not in place.	Autorecyclers to contact the Principal Certifying Authority (PCA) to deliver and install a sign. Photo of sign to be taken and forwarded to auditor.	Completed 25/10/19
Condition No. 3 The sign required by Condition No. 2 is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed. The principal certifier sign was not in place.	Autorecyclers to contact the Principal Certifying Authority (PCA) to deliver and install a sign. Photo of sign to be taken and forwarded to auditor. Sign to be removed when the work has been completed.	Completed 25/10/19

Notice of Determination to DA-18-02214 18/02/2019 : pylon sign

Issue	Action	Status
Condition No. 2.2.1 No construction preparatory work (including tree or vegetation removal, ground clearing, excavation, filling, and the like) shall be undertaken on the land prior to a valid Construction Certificate being issued for the construction works.		
Clearing was undertaken under a separate tree removal approval granted by Council. Neither Autorecyclers or Council have a copy of the approval, but Council verbally confirmed that it was granted.	Replacement Murraya planted and photo forwarded to auditor.	Completed 30/10/19
The footings and framework for the sign constructed prior to a valid construction certificate being issued.	Civil Engineer to inspect and certify foundations. Copy to be forwarded to auditor. Application to be made to Blacktown City Council for a Building Information	Completed 30/10/19 Completed 1/11/19

	Certificate.	

3.7 Photographs of Site

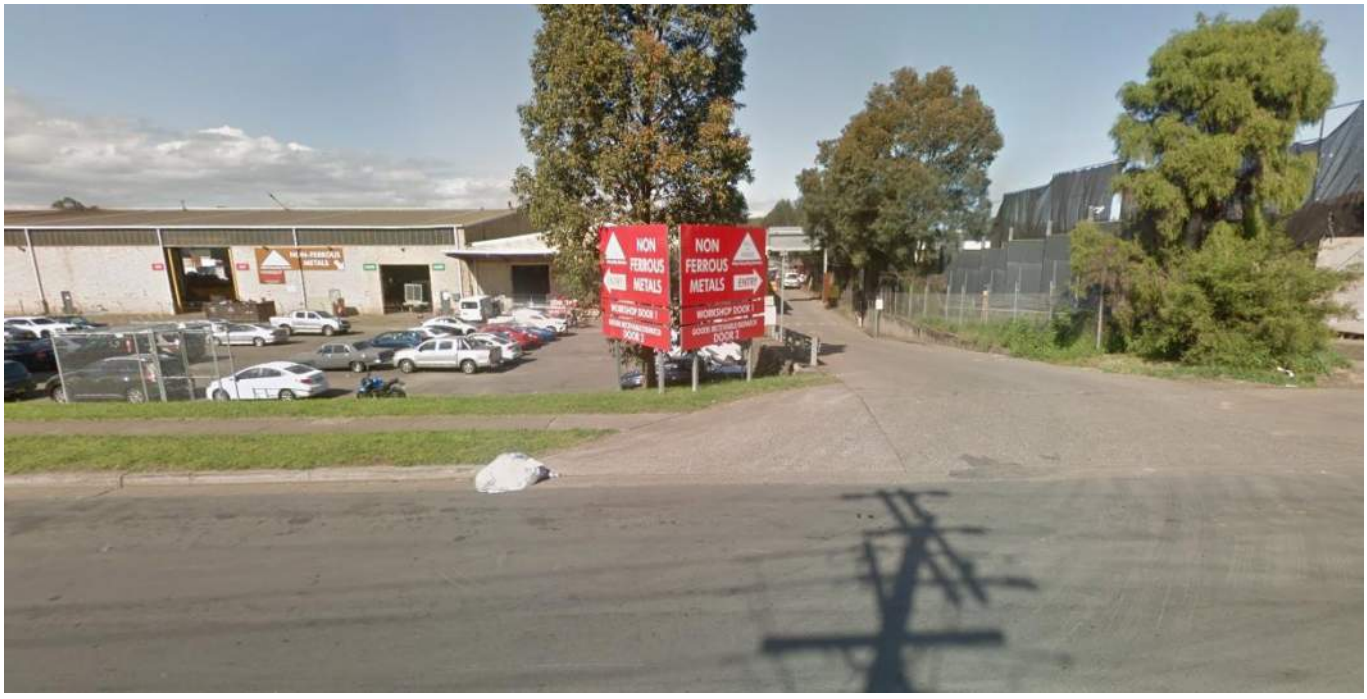
Photograph 1: Aerial view of the site looking south

Photograph 2: View of the Subject Site from Tattersall Road - looking south west

Photograph 3: View of the Subject Site from Tattersall Road - Looking South. Western driveway entrance on the far right.

Photograph 4 : Car parking for Pick n' Payless customers. View from the western driveway entrance looking south.

Photograph 5: Car parking for Pick n' Payless customers looking southwest.



Photograph 6: Tattersall Road - East of the Subject Site

Photograph 7: Tattersall Road - North of the Subject Site

4 Development Description

4.1 Overview

This application involves the following:

- Permission to process 130,000 tons of scrap metal per year;
- Operation of a pre-shredder, hammermill, and downstream processing equipment;
- Operation of a shear and construction of a concrete slab;
- Operation of a copper granulator
- Internal site layout and circulation amendments; and
- Consolidation of all existing approvals and current applications.

The Project would increase the capacity of the existing facility to a total of 130,000 tonnes per year , which represents an increase of 100,000 tonnes per year to the existing site operations.The supporting documents and assessments included in this EIS demonstrate clearly that the existing and proposed plant and equipment are capable of fully accommodating the increase in processing capacity in an effective and efficient manner

The existing site can adequately accommodate the increased processing capacity. The site is relatively isolated from residential receptors and the potential impacts on those have been considered in the supporting consultant reports.

During the development of the EIS, investigations have identified specific mitigation measures that would be implemented to manage potential environmental risks. These investigations have made clear the likely impacts, during both the construction and operation of the Project. This has reduced the uncertainty of the nature and scope of the risk of environmental, social and economic damage, as far as technically possible. Targeted mitigation and management measures have been developed to address the potential for adverse impacts.

It is the Applicant's intention to surrender the existing planning approvals for both the existing Pick n' Payless self-serve auto parts (DA96-185), the scrap metal recycling facility (DA 18-01273) and the pylon advertising sign (DA 18-02214), subject to the approval of this project (SSD -8375).

4.2 Proposed operations

The proposed development consists of the following components:

a. Pick 'n Payless self serve auto parts; and
b. a metal recovery and recycling facility with a maximum processing capacity of 130,000 tonnes per year.

Pick 'n Payless

The vehicle storage yard associated with the existing Pick 'n Payless business operations, and accessible to the general public, will be reduced in size and fenced off from the metal recycling area.

The public will continue to access Pick 'n Payless via the existing car park. The general public will be unable to access the metal recycling area.

The existing operational hours of the self-serve auto parts business is 8.00am – 5.00pm Monday to Friday and 9.00am to 3.00pm Sunday. The operational hours of the self-serve auto parts business is to be maintained.

Metal Recycling Facility

The scrap metal processing and shearing activities are to be conducted on concreted areas in the north-western corner of the site, away from the Breakfast Creek and the flood hazard. An indicative site layout is presented in Figure 4.

The shredder, shear, associated downstream processing equipment, loading/unloading areas and material stockpiles will all be located on a level 65m by 33.5m concrete slab with a finished surface level at RL 40.2. The remainder of the concrete slab has been graded to closely follow the natural terrain in order to minimise earthworks. The operational equipment, material stockpiles, processed material and residual waste stockpiles will be located within bunded areas.

The composition of materials to be processed is anticipated to comprise:

- 10% cars;
- 70% light gauge scrap metal; and
- 20% heavy gauge metal.

Trucks will enter the site via the eastern driveway, pass over the weighbridge and along the perimeter of the site to the north-western processing area. Trucks will drive in a clockwise direction around the processing area and exit the site via the weighbridge and eastern driveway.

The proposed operational hours, including maintenance, are 6am to 6pm, Monday to Sunday.

The copper granulator will be located in Building B in the north-eastern corner of the site. Medium rigid vehicles (MRV) delivering the copper wire will enter the eastern driveway to "weigh in" then u-turn and enter the western driveway via Tattersall Road to unload / load material. The delivery vehicles will then travel to the western driveway via Tattersall Road to "weigh out". Once "weighed out", trucks will then perform a u-turn to exit the site to Tattersall Road.

The end-of-life vehicle (ELV) treatment facility will be located within existing Building C located in the north eastern region of the site. The ELV treatment facility will remove all fuel, oil and the used lead acid batteries from the vehicles.

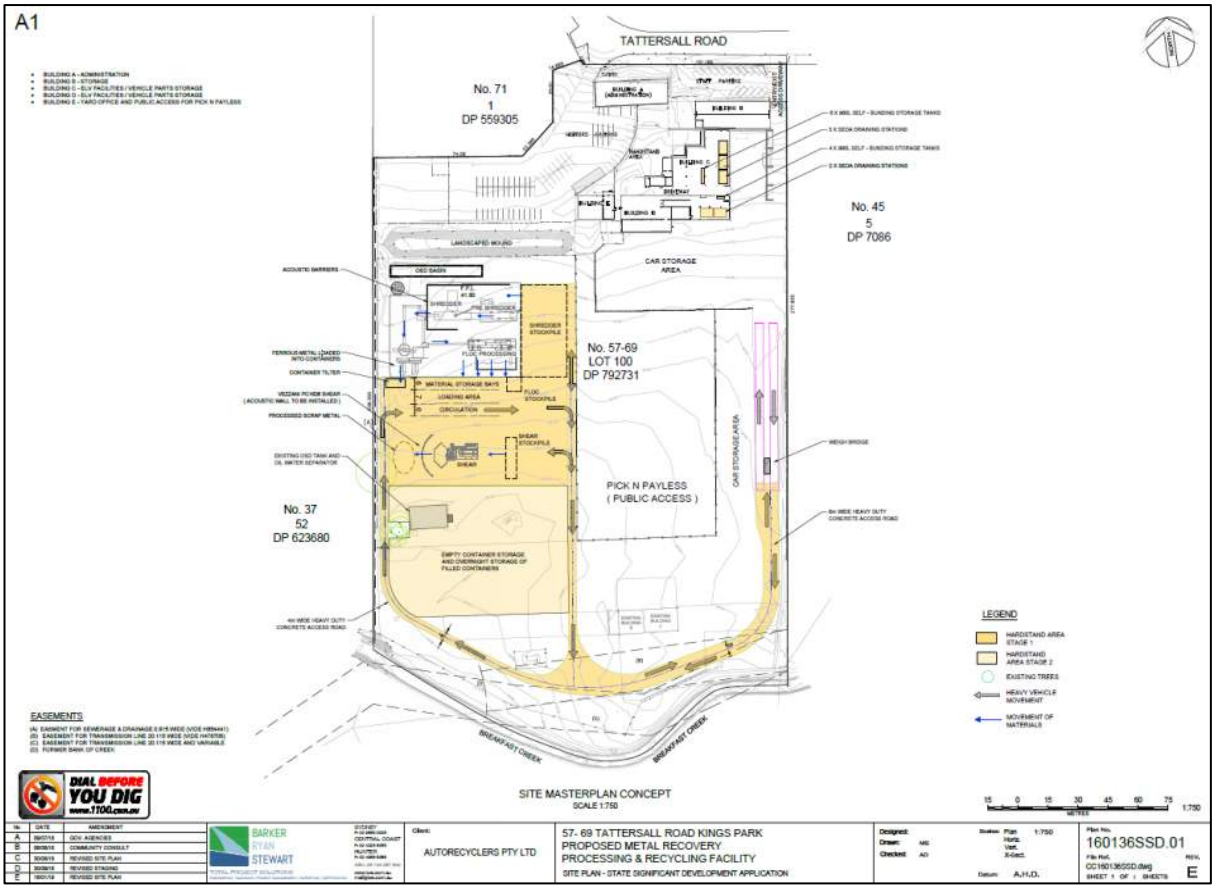


Figure 4: Proposed Site Layout

4.3 Site access, internal roads and parking

4.3.1 Site access

There are three existing driveways serving vehicle access to the site. The western driveway serves two-way access to the "Pick n Payless" car park, while the eastern access provides two-way access to the rear of the site.

An overflow light vehicle parking is located along the northern site boundary with entry provided by the eastern driveway and exit provided by an exit only driveway located between the eastern and western driveways.

There will be no proposed changes to the existing western access to the site, which provides access for "Pick n Payless" customer parking (light vehicles).

Heavy vehicle access for receiving and delivery of scrap metal will be provided via the eastern vehicle crossing. The swept path analysis attached at Appendix B indicates an 11m wide vehicle crossing is required at the property boundary, and a 6.5m wide carriageway width is required for two-way flow between the property boundary and the weighbridges. Currently, the driveway crossing width is approximately 8.5m wide, however it is expected that a separate application will be submitted to Council for the extension of the driveway width.

Sightline assessment at Appendix C confirms sightline requirement comply with AS2890.2 and pedestrian sightline requirement comply with Figure 3.4 of AS2890.2 (note there are no footpaths on either side of Tattersall Road for the length of the site frontage).

There is plenty of queuing area available (approximately 125m between the property boundary and weighbridges) for vehicles within the property boundary to ensure there is no queuing back into Tattersall Road.

4.3.2 Internal driveways

There is to be no change to the existing hardstand internal driveways. The eastern driveway satisfies the requirement for a 6.5m wide carriageway width for heavy vehicle two-way flow between the property boundary and the weighbridges. The weighbridges are located approximately 125 metres from the Tattersall Road boundary, providing sufficient queuing capacity for heavy vehicles.

In accordance with industry best practice the proposed new access driveway from the weighbridges to the shear and hammermill will be constructed from concrete with a kerb on the low side. The driveway has a variable width commencing at 11.3 metres at the weighbridges and reducing to 8 metre width along the southern boundary after the first corner. The one-way loop has a consistent width of 6 metres, commencing at the mid-point of the southern boundary and extending along the western boundary to the shear and hammermill stockpile locations.

The internal road system has been designed for a 19m semi-trailer to be able to enter, manoeurvre and leave the site in a forward direction.

In all cases, vehicle traffic will be restricted to using internal roads within the site.

4.3.3 Parking

There are currently 94 parking spaces available on-site, with 73 spaces accessed via the western driveway and 21 spaces accessed via the eastern driveway.

It is proposed to reduce onsite parking to a total of 88 spaces by removing four parking spaces from the western car park and two spaces from the eastern car park. A copy of the proposed parking plan is provided is Appendix A.

Vehicles may also be parked at other locations within the ancillary waste activities area during the day or overnight. There will be no cars parked on Tattersall Road as a result of the activities within the site.

4.4 Site Preparation

4.4.1 Demolition

The proposal does not involve any demolition work.

4.4.2 Tree Retention and Removal

To enable the construction of the slab for the shear and to accommodate the heavy vehicle traffic pathway, one tree adjacent to the western property will need to be removed. The tree proposed for removal is shown in Figure 5 below.

The site is mapped as containing Terrestrial Biodiversity under the provisions of Blacktown LEP 2015. The majority of the terrestrial biodiversity mapping overlays a sealed car park on the adjoining land to the west, with the subject site only marginally affected by the terrestrial biodiversity mapping.

Molino Stewart was engaged to conduct a biodiversity assessment (Appendix J) and it was found that:

- The removal of the vegetation onsite would not constitute a significant impact.

- The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor.

- The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.

Figure 5: Aerial Photo of the site showing trees to be removed

4.5 Plant and Equipment

4.5.1 Taurus Redline Pre-Shredder Bravo (Model B16H)

The Bravo Pre-shedder is designed and built by C. EG., an Italian company.

Installed in front of the hammermill shredder, the pre-shredder is a slower-speed, high-torque machine that is used to control the grading and quality of products being fed into the hammermill shredder. The pre-shredder design utilizes two large hydraulically operated rollers with teeth, being fed from a sloped chute. The rollers counter rotate at different speeds, which tends to pull apart materials that are introduced to them. A high speed rotor and low speed rotor are independently driven by low speed & high torque hydraulic motors mounted on the sides of each shaft.

A closed loop hydraulic system drives the hydraulic motors utilising axial post-poning pumps fitted with a constant power limiter. The pumps allow the pre-shredder to adjust the speed to the torque ratio, depending on the load detected by the electric motors. This improves the process rate and efficiency of the main shredder (Thor 2121K) and downstream system by eliminating the surges and gaps that typically occur when processing materials such as ELV's (end-of-life vehicles).

Operators can realize 20 to 30 percent more production with fewer peaks, thus reducing electrical costs. In addition to a 10 to 30 percent increased production shredding operations at the same level of electrical consumption, operators can also expect around 20 percent more anvil and wear parts life span and 20 percent more production with the same hammers in the shredder (Recycling Today, March/April 2016).

The safety and environmental benefits of using a pre-shredder include:

- The delivery of a homogenously graded, densified feedstock allows the hammermill shredder to operate in the most economical range of energy consumption, reducing operational noise levels and energy consumption;
- Increases the wear life of internal shredder castings, such as hammers, grates and side-liners.
- The detection of unshreddable material upstream from the shredder;
- A reduced risk of explosions, as the slowly turning rotors in the pre-shredder tear the materials apart instead of smashing them into pieces, the formation of sparks is avoided and the hazard of ignition is prevented; and
- Reduces vibrations and noise of the shredder.

4.5.2 THOR 2121K mobile hammermill shredder

The THOR 2121K mobile hammermill/shredder is designed and built by the ZB Group, a scrap and recycling specialist based in northern Spain. It is a fully mobile hammer mill shredder consisting of two parts, the hammer mill shredder and the power pack. Both can move by themselves powered by diesel engines.

Length 18.6 metres
Width 3.95 metres
Height 6.1 metres
Weight 115 tonne

Figure 6: Thor 2121K Mobile Hammer Mill

The THOR 2121K mobile hammer mill is designed to work in dusty and warm environments and therefore the engine is equipped with heavy duty air filters and an oversized radiator for 50°C ambient temperature.

The hammer mill is suitable for processing various ferrous scrap, whole car shells, other pieces of body work, engines and aluminium scrap. It can process between 30 and 40 tonnes of scrap metal per hour depending on the input material and its density. When operated in conjunction with a pre-shredder, it is capable of processing 50 tonnes of scrap metal per hour.

Material is fed in via the tilting sliding gutter or the internal steel plated conveyor. Outfeed is by means of a foldable conveyor belt. It also separates metallic from non-metallic scrap and moves it over conveyor belts to separate skips

The feeding ramp is equipped with a projection protection hood, up to the tilting metallic conveyor discharging section, with the objective of reducing the projections of material out from the hammermill shredder. The lower feeding roller is equipped with two hydraulic motors, to turn the feeding roller clockwise and anti-clockwise, and two hydraulic cylinders to lift and lower, that are activated from the remote control unit. The upper feeding roller is equipped with two hydraulic motors, to turn the rollers clockwise and anti-clockwise.

The machine is equipped with a rotor that is fitted with 14 hammers that swing on 6 hammer-hold shafts (hammer pins) allowing the hammers to pull back when they hit a non-crushable item or a piece that is too large.

The main working controls are centralised in a remote control unit which is equipped with the necessary emergency stops and safety devices to deliver a safe working environment.

The controls for the water spray system are placed in the control board in the mobile power unit. The water spray system consists of the water conduction pipes and spray nozzle set. The spray nozzles are fitted to the hammermill discharge to the main conveyor and are designed to make any originated dust fall. In addition, the Thor 2121K has been fitted with a Dust-Buster Spray System to control blue smoke emissions, dust and floc. This system is a control solution which injects foam and foaming chemical into the shredder to capture dust and floc before it escapes into the air, vastly reducing emissions and improving environmental working conditions.

The Dust-Buster system is low-maintenance and designed for continuous operation. The system includes an industrial-rated water pump and chemical pump, water and air flow meters, pressure gauges for air, water and chemicals and a prewired control panel with disconnect. This system also uses just a small fraction of the water needed when water is the only treatment. It is installed by removing a liner bolt on each side of a shredder's hood and replacing each with a foam nozzle.

The foam agents are designed to reduce the damage that dust can do to workers' respiratory systems and equipment. They also permeate the area where explosive gases can accumulate, preventing or reducing the intensity and velocity of shredder explosions. The US manufacturer, Midwest industrial Solutions, estimates that the Dust-Buster System reduces the frequency and velocity of explosions by 50% to 80%.

The foam is environmentally safe, biodegradable, non-hazardous, VOC-and solvent-free and is easily diluted. The environmental benefits of using the foam suppressant dust control solution are:

- Reduces dust emissions by up to 85%;
- Traps the floc removing the risk of dispersal;
- Decreases disposal costs by lightening residual waste by 60%-90%;
- Controls blue smoke emissions from the shredder;
- Does not release dust or other residues downstream at transfer points; and
- Reduces water consumption.

The following types of input material are considered unshreddable for the Thor 2121K:

- Steel wires with a diameter greater than 12mm or larger than 3 metres;
- Rods with a diameter greater than 37mm and larger than 1 metre;
- Steel pieces with a thickness greater than 9mm and larger than 3 metres;
- Billet;
- Cast iron with a thickness greater than 37mm;
- Scrap bales with a density greater than 1 MT/m^3; and
- Explosive elements such as gas tanks.

Operational detail:
- 8 hours per day,
- 5 days per week.

Production detail:
- 50 tonnes per hour with the pre-shredder,
- Average daily production = 400 tonnes,
- Average weekly production = 2,000 tonnes,
- Average annual production = 104,000 tonnes.

Stockpile feed:
- Maximum size of 28 m long × 10 m wide × 4 m high,
- Approximately 1,120 m3 of metal at 250 kg/m3.
- Less than 1 days' worth of stock (approximately 280 tonnes)

4.5.3 Steinert Finesmaster

The Steinert Finesmaster consists of two modules:

Module 1:
Is a two stage magnetic separator (MRB) which recovers small iron and also separates out ferrous dirt as semi-magnetic waste.

An upstream, weak-field magnetic drum initially extracts fine, clean iron from the shredded material flow. The removal of weakly magnetic impurities like ferrous dust, clumps and fluff reduces the volume to the downstream eddy current separator by up to 30%. The residual fraction from the first magnetic stage passes via a discharge directly onto a downstream, fast-running magnetic separator equipped with strong neodymium permanent magnets. The high supply speed significantly loosens the material flow and all weakly magnetic impurities can be removed by the magnetic head pulley. The two-stage magnetic separator combines an extracting magnetic drum with a traversing magnetic pulley. Whilst the former generates valuable scrap iron, the magnetic pulley in the second stage separates weakly magnetic components that represent impurities in downstream processes and can have a negative impact on process quality or the quality of the sorted product.

Module 2:
Contains the NES 6119 high-frequency eddy current separator for the recovery of fine non-ferrous metal. The non-ferrous metal separator consists of a short conveyor driven from the feed end. A rapidly rotating system of permanent magnets incorporated in the head drum generates high-frequency changing magnetic field. These fields create strong eddy currents in the non-ferrous metal parts, in which their own magnetic fields oppose the external fields. The eddy currents eject aluminium, brass and copper from the flow, but not stainless steel and wire, thus producing zorba, the first product stream to come off the plant.

Zorba is the collective term for shredded and pre-treated non-ferrous scrap metals, that is predominantly aluminium Other non-ferrous metals found in Zorba include copper, lead, brass, magnesium, nickel, tin and zinc in elemental or alloyed (solid) form.

4.5.4 Steinert KSS FLI

What isn't recovered by the eddy currents goes to the sensor unit. The Steinert KSS FLI combination sensor sorter uses a combination of colour detection, laser (3D detection) and inductive sensor to produce Zurik. Zurik is defined as nonferrous scrap that's predominantly stainless steel but can include a combination of shredded nonferrous metals such as insulated copper wire (ICW), aluminium, copper, lead, magnesium and other metals, accumulated from auto and appliance shredders and generated by downstream computer sensing equipment.

4.5.5 Vezzani Shear

The Vezzani PC 1626 AC is an Italian made heavy duty stationary inclined shear. The shear has a weight of 240 tonnes and dimensions of 18.2m (l) x 7.75m (h) x 5.2m (w). The loading platform has a height of 5.2m and the hopper box dimensions of 2.5m (w) x 7.35m (l).

The machine comprises a hopper into which product is loaded and fed in a controlled manner into the guillotine compartment. The guillotine compartment is a steep chute with hydraulically controlled sides and blade, and processed material exits at the base of this chute. The gravity feed is on a 30° incline allowing for continuous processing of bulky and long-dimension scrap. Side compression presses the material from the side increasing its density and forming a bale close to the shearing zone and top compression presses the material from the top, reducing its size and increasing its density.

The operator works from an elevated control cabin which can view material in the hopper and controlling the arm which feeds material into the guillotine chute. This control cabin is located on a metal tower at the rear of the machine. The shear is proposed to be located on a concrete slab which will be an extension of the existing concrete slab.

The Vezzani PC-AC shear has the capability to process all ferrous and non-ferrous applications, including large ferrous metal objects such as steel beams, plates and fabrications by cutting them into short lengths suitable for shipping direct to steel smelting plants.

The shear will be located to the south of the shredding operations.

Operational detail:

- Average of 2.5 hours per day
- 5 days per week production

Production detail:

- 40 tonnes per hour
- Average daily production = 100 tonnes
- Average weekly production = 500 tonnes
- Average annual production = 26,000 tonnes

Stockpile feed:

- Maximum size of 17m long x 10m wide x 4m high
- Approximately 680m3 of metal at 400kg/m3
- 2-3 days' worth of stock (approximately 272 tonnes)

4.5.6 Copper Granulator

Built by MG of Italy, the Matrix 380VZT is a compact system that has a maximum processing capacity between 800 - 1200kg of cable per hour to recycle copper from cables. The copper granulator will be located in Building B (refer Figure 4).

The plant consists of a shredder, zigzag separator, cutting mill, air classifier and an exhaust filter unit. It is cooled by a closed circuit water cooling unit and the feed and vibration of the separation table can be regulated. It is capable of achieving 98% separation of copper or aluminium from plastics, even on fine hair wires and car looms.

The process involves:

- Copper cabling being fed into the shredder to break the material up into granules.
- The material is carried into the separator by belt conveyor, to separate the iron scraps.
- The vibration table and air separator separate the copper granules from the plastic.

Figure 7: Matrix 380 VZT Copper Granulator

The copper wire storage area is located on the western side of Building B, with the cabling to be stored in 2 tonne metal skip bins or 1 m^3 bulk bags before it is shredded in granulator.

The processed copper granules will be stored in 1 m^3 bags within the building. A maximum of 20 bags of processed material will be stored in the building prior to being collected.

Operational detail:
- 1 - 2 hours per day,
- 5 days per week.

Production detail:
- Average daily production = 1 tonne,
- Average weekly production = 5 tonnes,
- Average annual production = 240 tonnes.

4.5.7 SEDA Draining Stations

The SEDA Easy Drain System uses a combination of suction and air pressure to remove 98 percent of all liquids. UL-listed, explosion-proof, double diaphragm compressed air pumps are used to create suction and the pumps create a vacuum that evacuates fuel and other liquids. There are no ignition sources because the system is air-powered.

Figure 8: SEDA Easy Drain System

The Easy Drain System drains all liquids including gas, diesel, engine, transmission, transfer case, oils, anti-freeze, coolant, brake fluid, power steering fluid and windshield washer liquid. The SEDA drainage station performs the following functions:

- Drains out all the engine oil and pumps it to storage tanks without any risk of a spill.
- Drains out all the transmission/gear oil and pumps it to storage tanks without any risk of a spill.
- Drains or drills fuel tanks to remove all fuel and pump it to storage tanks without any risk of a spill or vapour escaping.
- Pumps out all radiator coolant to storage tanks.
- Pumps out all brake fluid from brake lines to storage tanks.
- Pumps out all windscreen washer fluid to storage tanks.
- Cuts off and catches catalytic converters without jeopardising safety.
- Can remove oil from shock absorbers and pump it to storage.

The system includes a "heavy duty" tank drilling machine, with up to 4 vacuum pumps for petrol & diesel, waste oil, windscreen washer fluid & coolant and brake fluid by pump or vacuum chamber. The equipment is designed to drain a car within eight to ten minutes and each unit has the capacity to drain up to 30 cars per day.

Depending on the condition of the vehicle and user preference, there are typically two to three different ways to drain each liquid. To drain fuel users can drill into the gas tank or empty from the fuel filler with a secondary hose or from a fuel line using adapters. For brake fluid, users can empty from the bleeder nipples with a hose, or out of the brake hose/pipe after applying special pliers, or brake fluid can be emptied out of the main reservoir in the engine compartment. All devices operate only with compressed air which is filtered, dehumidified and, if required, is displaced by a compressed air oil. Each component of the machine is designed such that it forms a closed system. This applies both to the waste fluids and to vapours.

The proposed ELV de-pollution facility will be bunded but, as shown in Figures 8 and 9, each workstation also has grid areas beneath it to capture any spillage. This significantly reduces the potential for liquid waste contamination to occur on the site.

Figure 9: SEDA Easy Drain System - typical workstation with hydraulic hoist

4.5.8 Storage Tanks

The ARS storage tank system meets Australian and international standards for the storage of hazardous and flammable liquids. All connections are through the top of the tank and a double wall design makes them self-bunding, significantly reducing the risk of leakage to the environment. The tanks also have a unique outlet arrangement that draws from the floor of the inner liner preventing build-up of any type of sediment.

Each tank is fitted with a level sensor and an electric ball valve for level management. This both sends an alert when the tank is full and prevents overflow. Pumps manage the dispensing of fluids for removal.

It is proposed to use 3x900L tanks for unleaded petrol, 2x900L tanks for waste fuel, 3x900L tanks for oil, 1x900L tank for coolant and 1x900L tank for diesel.

Figure 10: ARS Tank Storage System

4.6 Materials and Products

The types of scrap metal to be processed will comprise the following:

- Motor vehicles
- Aluminium: cans, loose scrap, profiles, pipes, sumps, pressed scrap bales, scrap bales and engine blocks; and
- Metal Scrap: metal cans, pressed metal scrap bales, scrap bales, car parts, sheared cars, flattened cars, entire cars; and

Motor vehicles are expected to constitute approximately 20% of the total volume of scrap metal processed annually. Approximately 80% of all end-of-life vehicles (ELVs) will be sourced from the trade industry, with the other 20% supplied by individuals. ELV's would be complete cars or vans, with or without engines, with fuel tanks and any other enclosed containers which might contain flammable or explosive material. Upon receipt of vehicles and prior to shredding, fuel and oil filler caps are removed and hazardous materials drained or removed, including fuels, lubricating oils, transmission fluids, brake and steering fluids, coolant fluids, refrigerants, windshield washer fluid, lead acid batteries or other batteries, oil filters, mercury-containing parts, tires, lead battery cable connectors and tire weights.

The other 80% of scrap metal to be processed annually will be comprised of loose scrap, aluminium and structural metals. As shown in Table 2 below, it is proposed to process for shredding a variety of heavy and light gauge ferrous and non-ferrous metals. Heavy gauge metals are expected to comprise approximately twenty percent of annual production. The ferrous metals, scrap iron and steel, are magnetic and are generally heavier than most non-ferrous metals. The non-ferrous metals comprising aluminium, copper, brass and stainless steel, are non-magnetic and are generally lighter and more valuable than ferrous metals.

Table 4: Scrap Metal to be Processed

Ferrous Metals		
Heavy Gauge Steel	Greater than 5mm in thickness	Railway iron, plate steel, beam off-cuts, punchings
Light Gauge Steel	Generally steel less than 3mm in thickness	Roofing iron, ducting, drums, spouting
Ferrous Inorganic	Products consisting mostly of metals in mixed form	
Non-Ferrous Metals		
Aluminium	Cast, clip, domestic, extrusion, irony, swarf	Mag wheels, drain covers, flat sheet aluminium, corrugated roofing, window frames, guttering
Copper	Domestic and grade	Cylinders, spouting, piping sheet, offcuts, punchings, etc
Brass	Mixed and swarf	Fittings, taps, piping
Stainless Steel		Bench tops, sinks, etc

4.7 Operational Processes

A brief summary of the operational processes is provided as follows:

Step 1: Delivery

- Materials are delivered by truck to the site.
- All delivery vehicles enter via the eastern driveway and proceed via the weighbridge.
- Motor vehicles are deposited in the storage yard adjacent to building D.
- Copper cabling is deposited in the storage yard on the western side of building B.
- Heavy and light gauge scrap are deposited onto the feed stockpiles for the shear and the shredder.

Step 2: Assessment / Preparation

- Motor vehicles are transferred to the end-of-life vehicle (ELV) facility where all fluids and/or hazardous materials such as oils, coolant, petrol, diesel, airbags, batteries, gas tanks etc. are either drained or removed from the vehicle.
- Motor vehicles are then transferred to the Pick 'n Payless storage yard or directly to the shredder feed stockpile.
- Vehicles in the Pick 'n Payless storage yard are placed there for up to 6 weeks before being transferred to the shredder feed stockpile.

- Light gauge materials are sorted into shreddable and non-shreddable scrap by eliminating gas bottles, stones or other materials not suitable for shredding.
- Heavy gauge materials are sorted to eliminate materials that are not suitable for shearing.

Step 3: Processing

- Cars and light gauge scrap metal are processed by the Taurus Redline Bravo B16H pre-shredder to create a homogeneous feed.
- The pre-shredded material is then fed into the Thor 2121 K hammermill shredder, which has a capacity of 30-40 tonnes per hour or 50 tonnes per hour using the pre-shredder.
- Shredded material is sorted automatically into ferrous and non-ferrous material. Approximately 80% ferrous metal and 4% non-ferrous metal is anticipated with the remaining 16% as waste. Each stream is first presented to a magnet to pull out ferrous dirt and fuzz, thus preparing the metal for the eddy current.
- Non-ferrous metals and waste are sorted by the following plant equipment:
  - Steinert Finesmaster comprising a two stage magnetic separator and eddy current separators to produce zorba, a mix of shredded non-ferrous metals consisting primarily of aluminium;
  - Steinert KSS 200 FLI combination sensor sorter to produce zurik, a combination of shredded nonferrous metals predominantly comprising stainless steel, plus insulated copper wire (ICW)
- Heavy gauge scrap is put through the shear.
- Sorted materials are stockpiled before materials are loaded to trucks for off-site recycling.

Step 4: Transport

- Shredded metal is transported for off-site recycling.
- Shredder floc that is transported to landfill.

4.7.1 De-pollution

The ELV treatment facility will be located within existing Building C located in the north eastern region of the site. The ELV treatment facility will remove fuel, oil and the used lead acid batteries from the vehicles.

4.7.2 Pre-shredding

The pre-shredding process shreds materials that are difficult or considered too risky to process in the shredder due to the potential for explosion, fire or damage to the equipment in the shredding process, such as:

- Complete car bodies in "as received" condition, with or without engines or in flattened condition;
- Iron and steel scrap up to a thickness of 8 mm; and
- Hard packed bales of scrap metal.

4.7.3 Shredder Feed

Coarse metal pieces are loaded into the shredder. Pre-shredded car bodies and other waste steel pieces are placed onto the steel conveyor and transported to the top of the in-feed chute. The incline chute directs the waste items to the shredder via a set of double feed rollers (DFR). The DFR has triangular shaped spikes and horizontal ridges that render and flatten scrap to a thickness to allow entry into the shredder. The speed of the incoming feed is controlled by a programmed logic controller (PLC) software.

The maximum size of the stockpile is to be 28 m long × 10 m wide × 4 m high, equating to approximately 1,120 m3 of metal at 250 kg/m3.

4.7.4 Shredding

The shredder is the core part of the plant and is a THOR 2121K mobile hammer mill with a horizontal shaft, swing hammer machine and side feed design. The shredder accepts waste material up to 2.6 m in width. This is decomposed into even-sized scraps. Within the rotor are wear-resistant caps and hammers that continually grind, strike and compress the metal pieces.

When the metal pieces have broken down into small enough sizes, they fall through the grate opening at the bottom of the shredder and onto a vibratory conveyor beneath. The system allows the operator to manually eject pieces that are too hard to be ground preventing damage to the rotor. Other items that are unable to be shredded can pass around the rotor and are discharged from the shredder through the reject door at the rear of the shredder.

A dust suppression system removes and collects dust and other small particles during the shredding process. The cyclonic dust suppression system has two (2) air ducts:

- One air duct connected to the upper part of the shredder to remove larger particles and dust. The dust is removed by a high efficiency cyclonic wet scrubber unit and conveyed to the ASR (auto shredder residue) area.
- The second air duct connects to the Z-Box just before the separation system where it collects fine substances such as fibre, plastics and glass chips. These substances are also ejected onto the ASR conveyor.

Water is required for dust suppression in this system. Outgoing air is ducted into a wet scrubber where dust and fine particles are trapped in a water tank. Heavy ASR precipitates at the bottom of the tank. A scraper removes the ASR precipitate to the ASR conveyor and the remaining water is treated and then pumped back to the dust suppression system forming a loop. Clean air is discharged through a stack.

The Thor 2121K has also been fitted with a Dust-Buster Spray which injects foam and foaming chemical into the shredder to capture dust and floc before it escapes into the air, vastly reducing emissions and improving environmental working conditions. This system also uses just a small fraction of the water needed when water is the only treatment.

The flame proof design offers additional safety from potential fire and explosion risk of the system.

4.7.5 Separation

From the shredder, the fragment materials both metal and "floc" (scraps) are transferred to an electromagnetic drum via a rubber belt conveyor. Along the way, the scraps pass through a ZBox where any dust generated is removed by the dust suppression system. The magnetic unit then separates scraps into ferrous and non-ferrous material. More than 98% of the ferrous scrap can be recovered in this process. From here, the ferrous content is ready to be discharged. The non-ferrous scrap falls back onto a conveyor and an additional electromagnetic drum is used to recover the remaining 2% ferrous material. No more than 30 tonnes of material will be removed to landfill on a daily basis.

4.7.6 Discharging

This process removes any contaminants (non-ferrous matter) that may still be contained in the ferrous material from the separation process. Non-ferrous material is removed manually. This material then would have an ideal composition and density for refinement and would be ready for melting.

4.7.7 Sieving

Non-ferrous scraps are passed through a trommel screen where they are classified by size. The first section removes fine particles such as glass, sand and dust which would drop into the ASR bunker. The second section of the trommel screen removes medium sized scraps which would be sent to the Eddy Current Separator (ECS). The ECS classifies non-ferrous scraps by material type by separating scrap into copper, aluminium, lead, zinc, magnesium and waste.

The waste falls onto conveyors where it would be manually sorted to recover unclassified nonferrous material. Content too large to pass through the trommel screen would also be manually sorted.

4.7.8 Storage

Shredded and separated finished recyclable metals will be stored in stockpiles within the purpose built bunkers adjacent to the processing area.

4.8 Waste Streams

4.8.1 Background

The main recycling companies are OneSteel, SIMS Metal Management, Sell & Parker and Norstar. These companies operate 12 shredders in Australia. Most scrap metal is exported to China and South East Asia but some recycled steel is used in the Victorian and New South Wales steel mills operated by Arrium and Bluescope.

Essentially, all non-ferrous shredder material is exported for recycling through copper and aluminium smelters in China. While there has been a limited market in Australia for recycling aluminium at the Alcoa smelting and processing facility at Portland in Victoria, there has been no market for copper recycling since the closure of the Pasminco smelter in New South Wales, and all separated copper is exported.

There are approximately 800 – 1,000 scrap metal merchants operating across Australia. These are mainly independent operators that receive scrap metal from kerbside scavengers, contractors (to LGAs and retailers) and service technicians. These companies mainly sell their scrap metal to the recycling companies after some rudimentary separation to recover items of saleable value, such as compressors and copper.

There are no exports of shredder floc.

4.8.2 Waste Type

Materials accepted for shredding will comprise a variety of light gauge ferrous metals and non-ferrous metals. The types of waste to be received at the facility comprise:

- Car Bodies;
- Heavy Structural Steel;
- Heavy redundant machinery and equipment;
- Light steel eg. Roofing iron / sheet metal; and
- Non Ferrous metals eg. Copper and aluminium.

The proposed facility will not accept hazardous materials such as asbestos, gas bottles and pressurised containers.

4.8.3 Waste Source

Sources of the waste streams comprise:

- Scrap metal dealers and pedlars;
- General public;
- Waste contractors;
- Auto Dismantlers;
- Landfill operators;
- Demolition Contractors;
- Materials Recovery Facilities;
- Site clean-ups;
- Engineering Companies;

- Fabrication Companies;
- Transport Companies;
- Farms; and
- Construction Sites.

4.9 Waste Management

To ensure appropriate waste management measures are implemented all staff working at the site will be inducted and receive ongoing training in the Auto Recyclers & Rush Metals HSE Policy prepared by Morasey Consulting (Appendix N). This includes policies, procedures and safe work instructions:

- Waste Management Procedure
- Chemical and Fuel Management Procedure
- Minimum Environmental Standards
- Air Emissions Management Procedure
- Safe Work Instruction – Processing Vehicles

4.9.1 End-of Life Vehicles (ELVs)

An end-of-life vehicle is considered to be a motor vehicle that:

(a) is inoperable, and

(b) has no market value as a means of transportation, or, has a market value as a means of transportation that is less than the cost of repairs required to put it into operable condition.

Vehicle depollution involves the removal of hazardous materials prior to shredding, including:

- Fuels;
- lubricating oils including transmission fluids;
- brake and steering fluids;
- coolant fluids;
- refrigerants;
- windshield washer fluid;
- lead acid batteries or other batteries;
- oil filters;
- mercury-containing parts;
- tyres; and
- lead battery cable connectors, tire weights and any other lead containing parts.

There will be 10 x 980L ARS double walled self-bunded storage tanks to accommodate the separation of fuel, oil, coolant and brake fluid from ELV's. The unleaded petrol removed from the vehicles will be stored in five (5) of the storage tanks. Two (2) storage tanks will be used to store diesel fuel. Three (3) storage tanks will be used to store waste oil. A maximum quantity of 4,900 L of unleaded petrol will be stored on site and will be used as fuel for business vehicles and staff personal vehicles.

The LPG is removed from the ELVs and stored in LPG bottles of various sizes (88-500 L) and are removed offsite for reuse by a licenced contractor, and then returned empty to the site for further use. Used lead acid batteries (ULAB) are also removed from the ELVs and stored in wrapped pallets and removed by a licenced contractor for reuse.

The existing 15,000 L diesel bulk storage tank will continue to be used as fuel for mobile equipment and scrap metal processing machinery. This tank is fully bunded and located external to the buildings. A 1,500 L mobile tank is used to transfer diesel fuel from the 15,000 L bulk storage tank to the machinery.

Table 5 below details both existing and proposed procedures in relation to handling and storage of waste materials associated with the ELV depollution facility. This includes:

- Waste tyres;
- Battery storage;
- Fuel tank storage;
- Fuel;
- Coolant; and
- Waste oils & lubricants.

Table 5: ELV's - handling and storage of waste materials

Product	Dismantling Process	Storage Method	Storage Location	Disposal Method
Tyres	Removed by hydraulic equipment	Left on rims until determination of whether or not tyres are saleable. They are then stacked up behind processing shed awaiting removal by qualified contractor	Behind processing shed (Buildings C & D)	Removed by qualified contractor. Contractor - 7 Star Tyres Pty ltd
Batteries	Removed by hand before car is drained of fluids	On pallets in undercover bunded area	In existing car processing shed (Building C)	Sold to battery recycler monthly. Contractor - Watts Batteries
Fuel Tanks	Fuel caps removed			Shredded once drained
Fuel	SEDA Easy Drain System	ARS Tank Storage System	ELV Depollution facility (Building C)	Reused in company vehicles. Waste fuel removed by qualified contractor
Oils and Lubricants	SEDA Easy Drain System	ARS Tank Storage System In waste oil tank in bunded designated area	ELV Depollution facility (Building C)	Removed by qualified contractor. Contractor – CLEANAWAY
Coolant	SEDA Easy Drain System	ARS Tank Storage System	ELV Depollution facility (Building C)	Removed by qualified contractor– CLEANAWAY.

A Preliminary Risk Screening in accordance with SEPP 33 and *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (*NSW Department of Planning 2011) concluded that the storage and transportation of chemicals and fuels at the site does not trigger 'SEPP33 – Hazardous and Offensive Development' and that a Preliminary Hazard Analysis (PHA) is not required (see Appendix I).

4.9.2 Shredder floc

Shredder floc is a by-product of metal reprocessing, Shredder floc typically consists of a combination of plastics, rubber, textiles, metals and inert materials such as dirt and glass and is generally contaminated with heavy metals, mineral oils and hydrocarbons. The composition of shredder floc does not differ greatly between vehicles and white goods.

Shredder output is typically about 16% floc and the floc is composed of two distinct fractions based on size.

1. A finer 'heavy' fraction (particle size less than 25 mm), which is predominantly inert material with minor organic content. Anecdotal estimates indicate that the fine fraction accounts for approximately 30 per cent of the total shredder floc produced.
2. A coarser 'light' fraction (particle size varies, generally in excess of 50 mm), which is predominantly plastic, rubber and textiles. Anecdotal estimates indicate around 30 per cent of total shredder floc produced is around 50 mm in size, and 40 per cent exceeds 50 mm.

Table 6: Average shredder floc composition

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

There is no economic value in recycling shredder floc (e.g. into plastic types) and it is essentially all sent to landfill. China stopped accepting shredder floc with the introduction of the Green Fence program in 2012. The New South Wales Government's "Structural Adjustment Program to Assist New South Wales Metal Shredders" is aimed at addressing this market distortion. Sectors of the industry are also accessing funding from the Structural Adjustment Program to develop floc re-use and landfill diversion technologies

All floc is containerised and removed from the site daily.

The maximum size of the floc stockpile will be approximately 8 m long × 8 m wide ×4 m high. No more than 30 tonnes is to be stored on-site, as material will be removed to landfill on a daily basis.

4.9.3 Refuelling

The onsite refuelling of fixed plant mobile plant is undertaken using a mini tanker.

Mobile plant and vehicle diesel tanks will also be filled from a bowser located next to the existing external above ground diesel tank that has a capacity of 15,000 litres. The Preliminary Hazard Analysis (Appendix I) has been determined that the currently approved location of the tank is suitable in accordance with the relevant Australian Standards.

The following measures will be implemented to ensure the safe operation of the tank and to prevent diesel from entering the environment:

- the tank will be within a bund with a capacity of 10% more than the tank's capacity;
- the bund drain valve will be kept closed and locked except during supervised drainage, and a sign will be placed to display the need to keep the drain valve closed and locked;
- the tank and bund will be covered by a roof to prevent rain falling into the bund;
- any liquid inside the bunded areas, such as rain water or spills, will be removed as soon as practicable;
- overfilling of tanks will be prevented through gauging or monitoring of the tank's contents;
- tanks, vents and fittings will be inspected regularly and valves will be regularly overhauled (at periods not exceeding 10 years);
- hoses used for transfer of diesel, these will be regularly inspected;
- provision will be made to quickly shut off the flow of liquid from the storage tank to a consuming device in an emergency;

- diesel pumps will be designed such that the discharge pressure cannot exceed design limit of pump or piping in the case of dead heading (shut off at the pump discharge);
- an emergency shut off device will be provided on each pump;
- the filling area will also be bunded so that any fuel spilled during plant refuelling will be captured and will drain to an interceptor trap;
- there will be a diesel spill kit stored next to the bowser; and
- in the case of a spill, used absorbent material will be disposed at an appropriately licensed waste facility.

4.10 Environmental Management

The recycling facility will operate in accordance with the Health, Safety and Environmental Management System (HSEMS) that has been adopted and implemented by Auto Recyclers and Rush Metals. The HSEMS is included in Appendix N.

The recycling facility will also require an Environmental Protection Licence (EPL) as a scheduled activity under Schedule 1 of the Protection of the Environment Operations Act 1997, should the application be approved.

4.11 Construction Management

The proposed development will be constructed in accordance with a Construction Management Plan, a draft of which will accompany the application. The Construction Management Plan will seek to minimise disturbances to surrounding developments and the amenity of the area during the demolition, excavation and construction phases.

4.12 Workforce

The recycling facility is currently operated by 30 employees. The proposal will generate up to an additional 30 full-time employees.

4.13 Capital Investment Value

The SEARs for the project require the EIS to contain a report from a qualified quantity surveyor:

- Detailing the capital investment value (CIV), including details of all assumptions and components from which the CIV calculation is derived.
- A close estimate of jobs that will be created during the construction and operational phases of the development.
- Certification that the information provided is accurate at the date of preparation.

The estimated capital investment value ("CIV") of this project, as defined in the Environmental Planning & Assessment Regulation 2000, is $16.9 million. A detailed Quantity Survey report has been prepared by Coutts Cost Consulting and is included in Appendix O, with a summary provided in Table 7 below.

Table 7: Summary of QS Cost Assessment

Trade Description	% Trade	Cost
Demolition, Site Preparation & Excavation	0.22	37,775.00
External Works – Stage 1	15.95	2,695,510.00
External Works – Stage 2	5.94	1,033,860.00
Fire Hydrant Works	3.01	508,700.00

Equipment	67.89	11,474,000.00
Consultant Design Fees	1.48	250,000.00
Preliminaries	2.95	499,155.00
Margin	1.27	215,000.00
Total	**100**	**$16,900,000.00**

In relation to job creation it is estimated that:

- As many as 20 jobs will be created at the peak of the construction phase; and
- As many as 30 jobs will be created during the operational phase.

4.14 Analysis of Feasible Alternatives & Project Need

Schedule 2 Clause 7(c) of the Environmental Planning and Assessment Regulation 2000 requires that the EIS considers feasible alternatives and consequences of not carrying out the development.

4.14.1 Do nothing option

If the volume of materials processed at the recycling facility cannot be increased, an additional recycling facility may need to be developed elsewhere within the region. This would require substantial additional capital expenditure and would potentially have environmental and amenity impacts at an area currently unaffected by the operation of a recycling facility.

The 'do nothing' option would also avoid capitalising on the advantages of the proposal, being that it:

- maximises efficient use of the existing facilities and workforce;
- is ideally positioned, being in an industrial area well serviced by road infrastructure;
- can be accommodated without any significant modifications or upgrades to existing infrastructure, with associated cost savings; and
- as demonstrated in this EIS, will not have any significant adverse environmental impacts such as air quality, noise or traffic impacts.

Given that production can be increased at the existing recycling facility without any significant modifications to existing infrastructure or significant impact to the environment or amenity at surrounding areas, it is a logical, economical, efficient and environmentally sound solution.

4.14.2 Smaller production increase

An alternative to the proposal would be to increase production to a lesser amount. However, this would give rise to the same issues as not increasing production at all. That is, Autorecyclers Pty Ltd would not be able to process enough waste at the recycling facility to meet demand. Another recycling facility would need to be built within the region preferably at an alternative site nearby where this type of development is permissible. This is considered undesirable for efficiency, economic and environmental reasons.

4.14.3 Need for the project

The Project would increase the capacity of the existing facility to a total of 130,000 tonnes per year, which represents an increase of 100,000 tonnes per year to the existing site operations.

According to the Australian Bureau of Statistics there were 19.5 million registered motor vehicles in Australia as of 31 January 2019 and the fleet grew by an average of 2.1% or 374,349 vehicles per year between 31st January 2014 and 31 January 2019. Over the same time period, based on Australian Bureau of Statistics (ABS) estimates, an average of 812,000 vehicles per year reached the end of their use cycle and became an End of Life Vehicle (ELV). According to ABS figures the number of these "ELVs" has been steadily increasing each year since 2005.

Increasing the capacity of the Facility will not only assist in recycling the growing number of ELV's but it is consistent with the National Waste Policy (Less waste, More Resources, 2018) which recognises that an increase in the overall recycling rate and a return of resources to the economy can be achieved by increasing the capacity of the recycling and resource recovery sector. Furthermore, the National Waste Policy recognises that:

- Better management of waste can have a financial benefit for everyday Australians, for every 10,000 tonnes of waste that is recycled, 9.2 jobs are created compared with 2.8 jobs if the same amount of waste was sent to landfill; and

- Better waste management also helps reduce health and environmental problems and prevent pollution of the land and oceans.

5 Secretary Environmental Assessment Requirements

5.1 Secretary Environmental Assessment Requirements

In accordance with Section 4.39 of the Environmental Planning & Assessment Act 1979, the Department of Planning and Environment has issued the SEARs for consideration and preparation of this EIS. A copy of the SEARs is included in Appendix A.

Table 8 provides a detailed summary of the specific issues identified in the SEARs and where each of these requirements is addressed in this report and in accompanying consultant studies.

Table 8: Summary of SEARS requirements

SEARS	EIS REFERENCE
General Requirements	
A detailed description of the development, including: • Existing operations carried out on the site and how the site operates lawfully under the Environmental Planning and Assessment Act 1979 (EP&A Act) including any reliance on existing use rights and/or planning approvals and how these will be consolidated. • Accurate history of the site, including development consents. • Need for the proposed development. • Justification for the proposed development, including the proposed hours of operation. • Likely staging of the development – including demolition, construction and operational stage/s. • Likely interactions between the development and existing, approved and proposed operations in the vicinity of the site. • Plans of any proposed building works. • Contributions required to offset the proposal.	Section 3 Section 4
Demonstrate that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No 55- Remediation of Land.	Section 7.2.4
Consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments.	Section 6 Section 7 Section 8 Section 9
Consideration of issues discussed in public authority responses to key issues	Section 7 Section 8 Section 9 Section 11
Include an environmental risk assessment to identify the potential environmental impacts associated with the development, identifying the key issues for further assessment.	Section 10
Detailed assessment of the key issues specified and any other significant issues identified in the risk assessment, which includes: • A description of the existing environment, using sufficient baseline data. • An assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes. • A description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including	Section 11 Section 12

SEARS	EIS REFERENCE
proposals for adaptive management and/or contingency plans to manage any significant risks to the environment. • A consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.	
Provide a report from a qualified quantity surveyor: • Detailing the capital investment value (CIV), including details of all assumptions and components from which the CIV calculation is derived. • A close estimate of jobs that will be created during the construction and operational phases of the development. • Certification that the information provided is accurate at the date of preparation.	Section 4.13 Appendix O
Key Issues	
1. Suitability of the Site • Details of all development consents and approved plans for the existing facility, including for all structures, plant and equipment. • Results of an independent audit of the operation of the existing facility against the conditions of the development consents and all Environmental Protection Licenses in force in respect of the existing facility to ascertain the site baseline. • A detailed justification that the site can accommodate the proposed increase in processing capacity, having regard to the scope of the operations of the existing facility and its environmental impacts and relevant mitigation measures.	Section 3 Section 4
2. Waste Management • A description of the waste streams that would be accepted at the site including the maximum daily, weekly and annual throughputs and the maximum size and heights for stockpiles. • Details of the source of the waste streams to justify the need for the proposed processing capacity. • A description of waste processing operations, including a description of the technology to be installed, resource outputs, and the quality control measures that would be implemented. • Details of how waste, including waste oil and chemicals, would be stored and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with. • The measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery 2014-2021.	Section 4.9 Section 11.1
3. Soil and Water • An assessment of potential impacts to soil and water resources, topography, hydrology, drainage lines, watercourses and riparian lands on or nearby to the site. • A detailed site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise water use at the site. • Details of any groundwater extraction and any works with the potential to intercept the groundwater table. • Characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters).	Section 9 Section 11.2 Appendix F Appendix G Appendix P

SEARS	EIS REFERENCE
• Details of stormwater/wastewater/leachate/firewater management systems including the capacity of onsite detention systems, and measures to treat reuse or dispose of water. • An assessment of the integrity of any existing stormwater/wastewater/leachate infrastructure to be utilised by the proposed development. • The measures that would be implemented to ensure that stormwater drainage is in accordance with Blacktown City Council's Drainage Design Manual 2005. • A description of erosion and sediment controls. • Characterisation of the nature and extent of any contamination on the site and a description of proposed management measures.	
4. Air quality and Odour • A quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines. • The details of buildings, machinery and air handling systems and strong justification for any material handling, processing or stockpiling external to the building. • Details of the emission control system and a strong justification for its adequacy based on verified performance at similar facilities. • A greenhouse gas assessment. • Details of proposed mitigation, management and monitoring measures.	Section 11.3 Appendix E
5. Noise and Vibration • A quantitative assessment of potential demolition, construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority Guidelines. • An assessment of the predicted transport noise and vibration impacts and justification of proposed transport routes and times. • Details and justification of the proposed noise mitigation and monitoring measures	Section 11.4 Appendix H
6. Traffic and Transport • Details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes and details of the peak times for traffic movement to and from the site. • An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model. • Plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network. • Detailed plans of the proposed layout of the internal road network and parking on site, in accordance with the relevant parking codes and Australian standards. • Plan of any proposed road upgrades, infrastructure works or new roads required for the development. • Turning path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site. • Details of public transport, pedestrian, on-street parking and bicycle facilities.	Section 11.5 Appendix M
7. Fire Management • Technical details on the fire control and management equipment to be installed on the premises, including the location of fire hydrants, water flow rates at the hydrant, firewater containment capacity and smoke hazard	Section 11.6

SEARS	EIS REFERENCE
management and sprinkler systems within buildings. • Details of size and volume of stockpiles and their arrangement and separation to minimise fire spread and facilitate emergency vehicle access.	Appendix D Appendix K Appendix L
8. Hazards • A preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011)	Section 11.7 Appendix I
9. Incident Management • Details of spill management equipment to be held on site. • Details of processes to effectively manage the risk of explosions or other incidents associated with the handling, storing, dismantling and draining of fuel tanks, air bags and seatbelt pre-tensioners.	Section 11.8 Appendix N
10. Visual • An assessment of the potential visual impacts of the project on the amenity of the surrounding area, including light spill from 24 hour operations.	Section 11.9
Plans and Documents	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.	Appendix A
Consultation	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, school and other relevant community groups, special interest groups and affected landowners. In particular, you must consult with: • Blacktown City Council; • Environment Protection Authority • Department of Primary Industries • SafeWork NSW • Transport for NSW; • Roads and Maritime Services; • Fire and rescue NSW; and • Nearby land owners and occupiers that may be affected by the proposal. The EIS must 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, a short explanation should be provided.	Section 12

6 Federal Legislative Framework

The following section provides an overview of Federal legislative requirements applicable to the proposed development.

6.1 Federal

The only applicable Federal legislation is the Environment Protection and Biodiversity Conservation Act 1999 as detailed below.

6.1.1 Environment Protection and Biodiversity Conservation Act 1999

The Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) *"is the Australian Government's central piece of environmental legislation. The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places"*.

The EPBC Act requires concurrence with the Australian Government Environment Minister when a proposed development has the potential to significantly impact on a matter of national environmental significance (MNES). MNES include world heritage properties, wetlands of international importance, and listed threatened species and ecological communities. Approval from the minister is in additional to any relevant approvals sought under NSW legislation.

The EPBC Act identifies the following nine (9) matters of national environmental significance. A summary of impacts is provided below in Table 9 and the relevant sub-consultant appendices.

- World Heritage;
- National Heritage;
- Wetlands of International Importance;
- Listed Threatened Species and Communities;
- Listed Migratory Species;
- Protection of the Environment for Nuclear Actions;
- Marine Environment;
- Great Barrier Reef Marine Park; and
- Protection of water resources from coal seam gas development and large coal mining development.

A search for matters of national environmental significance or other matters protected by the EPBC Act Was undertaken using the Department of Environment and Energy's Protected Matters Search Tool. The matters of national environmental significance that may occur within a 10 kilometre radius of the site are summarised in Table 9.

Table 9: EPBC Act - Summary of Requirements and Impacts

EPBC ACT REQUIREMENTS	COMMENT
Subdivision A – World Heritage	Not Applicable. The subject site is not listed as, or located in proximity to a world heritage item.
Subdivision AA – National Heritage	Not Applicable. The subject site in not listed as, or located in proximity to a national heritage item.
Subdivision B – Wetlands of International Importance	Not Applicable. There are no RAMSAR listed wetlands located in proximity to the

EPBC ACT REQUIREMENTS	COMMENT
	site.
Subdivision C – Listed Threatened Species and Communities	7 listed threatened ecological communities and 51 listed threatened species are known to occur or have the potential to occur within 10 kilometres of the site
Subdivision D – Listed Migratory Species	16 listed migratory species are known to occur or have the potential to occur within 10 kilometres of the site
Subdivision E – Protection of the Environment for Nuclear Actions	Not Applicable. The proposed development will not involve any nuclear actions as defined under Clause 22 of the EPBC Act.
Subdivision F - Marine Environment	Not Applicable. The proposal development will not result in any impacts or interactions with a Commonwealth Marine Area as defined under Clause 24 of the EPBC Act.
Subdivision FA – Great Barrier Reef Marine Park	Not Applicable. The proposed development is not located within proximity to the Great Barrier Reef Marine Park.
Subdivision FB - Protection of water resources from coal seam gas development and large coal mining development.	Not Applicable. The proposed development is not for a coal seam gas or large coal mining development.
Subdivision G – Additional Matters of National Environmental Significance	No additional matters of national environmental significance as defined under Subdivision G are applicable.

The SEARs did not make any specifications with regards to biodiversity, with the Office of Environment and Heritage concluding that the site does not contain biodiversity, natural hazards or Aboriginal cultural heritage issues that required a formal response and that OEH had no further need to be involved in the assessment of the project.

The vegetation on the extreme south western side boundary of the site is partially mapped on the Blacktown LEP 2015 Terrestrial Biodiversity Layer (refer section 9.1.3). The objective of the Terrestrial Biodiversity provisions in the LEP is to maintain terrestrial biodiversity by:
(a) protecting native fauna and flora, and
(b) protecting the ecological processes necessary for their continued existence, and
(c) encouraging the conservation and recovery of native fauna and flora and their habitats.

Molino Stewart were engaged to undertake a biodiversity assessment (Appendix J) for the proposed development. A likelihood of occurrence was prepared for threatened species that occur within 10km of the site. There are no threatened fauna species or threatened flora species that have a high likelihood of occurrence on the site. Habitat searches were conducted for species or species habitat likely to occur on-site. Fauna present during the search included a group of *Trichoglossus moluccanus* (Rainbow Lorikeet) and *Acridotheres tristis* (Indian Mynah) but no threatened fauna were sighted. The only threatened flora species likely to occur on-site, Juniper Leaved Grevillea (*Grevillea juniperina*) was not present nor were any other threatened flora species found to be present onsite.

The Biodiversity Assessment concluded that there are no threatened flora species onsite and the site is unlikely to support viable populations of threatened flora species considering the highly modified nature of the site and surrounding land and the limited vegetation present onsite. While the six trees adjacent to the western boundary are in good condition, none are hollow bearing and thus unlikely to be important shelter habitat.

In relation to fauna, the Assessment concluded that threatened species are unlikely to occur onsite due to the poor quality of the habitat.

Given the findings of the Biodiversity Assessment and that the site is not located within an MNES protected area, the development is unlikely to impact on matter of national environmental significance (MNES) and, accordingly, a referral to the Commonwealth Minister for the Environment has not been made.

6.1.2 Ozone Depletion and Synthetic Greenhouse Gas Management Act 1989

The legislation supporting the Ozone Protection and Synthetic Greenhouse Gas (OPSGG) Program implements Australia's obligations under the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, and the United Nations Framework Convention on Climate Change and its Kyoto Protocol.

The *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* and related Acts (the Ozone Acts) protect the environment by reducing emissions of ozone depleting substances and synthetic greenhouse gases.

The Ozone Acts control the manufacture, import, export, use and disposal of ozone depleting substances and synthetic greenhouse gases and products containing these gases. These gases are commonly used as refrigerants in refrigeration and air conditioning equipment and also in other uses including fire protection, foam blowing and aerosols, and for medical and veterinary uses.

The *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* and the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (the Regulations) control the manufacture, import, export, use and disposal of fluorocarbon refrigerant.

The key objectives of the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* are to:

- control the manufacture, import, export, use and disposal of substances that deplete ozone in the stratosphere and contribute to climate change;
- achieve a faster and greater reduction in the levels of production and use of ozone depleting substances than are required under the Montreal Protocol; and
- promote responsible management and handling of ozone depleting substances and synthetic greenhouse gases to minimise their impact on the atmosphere.

Most air conditioning and refrigeration systems contain fluorocarbon refrigerant. This is an ozone depleting substance and synthetic greenhouse gas. If released into the atmosphere, fluorocarbon refrigerant can damage the ozone layer and contribute to global warming.

Discharging fluorocarbon refrigerant is illegal under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* and potential penalties may apply. The Australian Government empowers the Australian Refrigeration Council to administer a licensing and trading authorisation scheme for technicians and businesses involved in the handling and sale of synthetic refrigerant gases. Only ARC-licensed technicians can handle and trade fluorocarbon refrigerant in Australia.

The refrigeration and air conditioning industry in Australia also has a well established, industry funded, voluntary product stewardship scheme that manages a reverse supply chain for the recovery and disposal of refrigerant gas no longer fit or required for use. The scheme is operated by Refrigerant Reclaim Australia (RRA).

To comply with Commonwealth legislation to not emit refrigerant gases, refrigerant gases from motor vehicle air conditioning systems shall be handled and stored in accordance with Rush Metal Recyclers adopted HSE Waste Management Procedure, whereby;

> "Refrigerant gas shall be stored in suitable cylinders subsequent to removal from vehicles using degassing equipment. The Workshop Team shall monitor the number of cylinders stored and shall advise the Site Manager when there are sufficient number for a collection. The Site Manager shall ensure workers hold current licences for Automotive Refrigerant gas handling."

Employees will receive training in how to check and identify if vehicle air-conditioning systems have been de-commissioned and application will be made to the Australian Refrigeration Council (ARC) for a Restricted Refrigerant Recoverer licence (RRRL) for the purpose of decommissioning automotive air conditioning systems only.

7 State Statutory Planning Framework

The following section provides an overview of State legislative requirements applicable to the proposed development.

7.1 State Legislation

There are a number of applicable Acts relevant to the site and the proposed development which are outlined below.

7.1.1 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) and accompanying regulation provides the statutory framework for planning in New South Wales. The proposal is generally consistent with the objects of the Act and an assessment of the proposal against the objects is provided in Table 10 below.

Table 10: Assessment against Section 1.3 Objects of Act, EP&A Act 1979

OBJECT OF THE ACT	COMMENT
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	The proposed development will generate employment opportunities which promotes the economic wellbeing of the community. The proposal will not result in any adverse impacts to the State's natural or other resources.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	The proposed development has been designed in accordance with relevant ecologically sustainable development (ESD) principles and has regard for economic, environmental and social considerations. The proposal makes efficient use of existing facilities and equipment to enhance the recycling capacity of NSW. The site is ideally positioned, within an established industrial area and is well serviced by road infrastructure. The proposed site development includes significant improvement in environmental management and as demonstrated in this EIS, will not have any significant adverse environmental impacts in relation to air quality, noise, vibration, water or traffic impacts.
(c) to promote the orderly and economic use and development of land	The proposed development will result in significant local and regional economic benefits through the provision of additional employment opportunities during and after construction.
(d) to promote the delivery and maintenance of affordable housing	The development will not increase or decrease the supply of affordable housing.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	One tree adjacent to the western property is proposed to be removed to accommodate the widening of the internal driveway. The tree to be removed is located within an area mapped as containing Terrestrial Biodiversity

OBJECT OF THE ACT	COMMENT
	under the provisions of Blacktown LEP 2015. Molino Stewart were engaged to conduct a biodiversity assessment (Appendix J) and found that: • The removal of the vegetation onsite would not constitute a significant impact. • The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor. The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	The site has been considerably disturbed and it is unlikely there is any Aboriginal or non-Aboriginal heritage on the site. A heritage assessment has not been prepared.
(g) to promote good design and amenity of the built environment	The proposed development is appropriately located.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	The safety of employees will be enhanced through the construction of a fire hydrant system Servicing the whole of the site and the installation of a fire sprinkler system Buildings B, C & D.
(I) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State	Noted. This proposal is being assessed as State Significant Development. Blacktown City Council and relevant State agencies have been consulted as part of the EIS process and SEARs requirements.
(j) to provide increased opportunity for community participation in environmental planning and assessment	Community consultation was undertaken in accordance with the SEARs. Refer to Section 13 for details.

Section 4.36(2) of the EP&A Act enables State Environmental Planning Policies to declare certain developments to be State Significant Development (SSD). The proposed development is classified State Significant pursuant to Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 due to the proposed development being for the purpose of resource recovery or recycling facilities that will handle more than 100,000 tonnes per year of waste.

In accordance with Section 4.40 of the EP&A Act, the proposal has regard for the requirements of Section 4.15 which details the required evaluation criteria and satisfies all relevant planning legislative requirements. Refer to Table 11 below.

Table 11: Assessment against Section 4.15 (1) Matters for Consideration, EP&A Act 1979

SECTION 4.15 PROVISION	COMMENT

SECTION 4.15 PROVISION	COMMENT
(a) the provisions of:	
(I) any environmental planning instrument	Relevant environmental planning instruments are addressed in Section 7.2.
(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved)	Not Applicable. Confirm this prior to lodgement
(iii) any development control plan	Clause 11(a) of State Environmental Planning Policy (State and Regional Development) 2011 excludes the application of development control plans. However, the SEAR's requested consideration of the Blacktown DCP 2015 and a discussion is included in section 9.2.
(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4	Not Applicable.
(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph)	The Environmental Planning and Assessment Regulation 2000 and provisions of Schedule 2 are outlined in Section 7.1.2 and Table 12 below.
(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates	Not Applicable.
(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	The proposed development will have positive impacts on the environment in which it is located. It will provide employment and economic benefits both during and after construction. One tree is proposed to be removed for the development. A biodiversity assessment found that: • The removal of the vegetation onsite would not constitute a significant impact. • The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor. • The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could

SECTION 4.15 PROVISION	COMMENT
	be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.
(c) the suitability of the site for the development	The proposed development is consistent with the desired future character of the area and is consistent with surrounding developments.
(d) any submissions made in accordance with this Act or the regulations	Any submissions made in accordance with the Act or regulations will be addressed in the Response to Submissions following public exhibition.
(e) the public interest	The public interest is best served by promoting sustainable development that is rational, orderly and economic. The proposal will generate positive social, environmental and economic benefits.

7.1.2 Environmental Planning & Assessment Regulation 2000

Schedule 2 of the Environmental Planning and Assessment Regulation 2000 outlines requirements for preparing an environmental impact statement. This environmental impact statement has been prepared in accordance with the provisions outlined in Schedule 2 Section 7, and the requirements have been addressed in Table 12 below.

Table 12: Requirements for Environmental Impact Statements, Schedule 2, EP&A Regulation 2000

SCHEDULE 2 CLAUSE	COMMENT
(1) An environmental impact statement must include the following:	
(a) A summary of the environmental impact statement	Section 1 and Section 2.3
(b) a statement of the objectives of the development, activity or infrastructure	Section 2.4
(c) An analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure	Section 4.6
(d) An analysis of the development, activity or infrastructure, including: *(i) a full description of the development, activity or infrastructure, and* *(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and* *(iii) the likely impact on the environment of the development, activity or infrastructure, and* *(iv) a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and* *(v) a list of any approvals that must be obtained under any other Act or law before the development, activity or*	Section 4

SCHEDULE 2 CLAUSE	COMMENT
infrastructure may lawfully be carried out	
(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv),	Section 12
(f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in sub-clause (4).	Section 14

7.1.3 Protection of the Environment Operations (PoEO) Act 1997

The Protection of the Environment Operations Act 1997 is a key piece of environmental protection legislation that sets out explicit protection policies to manage, restore and enhance the quality of the NSW environment.

Section48 of the POEO Act requires an Environment Protection Licence (EPL) to undertake scheduled activities at a premise. Schedule 1 lists the activities that are scheduled activities for the purposes of this Act. In accordance with clause 26 of Schedule 1, scrap metal processing facilities with the 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) are a scheduled activity under the Act

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

An Environment Protection Licence (EPL) will be required. In accordance with the Environment Protection Authority's "Guide to Licensing" (2016), application for an EPL will be made following the determination of this proposal.

7.1.4 Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016, together with the Biodiversity Conservation Regulation 2017 establishes a framework to avoid, minimise and offset impacts on biodiversity from development through the implementation of the Biodiversity Offset Scheme.

The NSW Biodiversity Conservation Act (2016) states that a biodiversity assessment for SSD requires that an application is to be accompanied by a Biodiversity Development Assessment Report (BDAR) 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. It is also required that an EIS that accompanies any SSD application is to include the biodiversity assessment required by the SEARs. The SEARs issued on 21/7/17 did not make any specifications with regards to biodiversity.

The site has been significantly disturbed and cleared of vegetation, and the proposed increase in processing capacity does not result in any increase in the approved development footprint. There are only two groups of native trees located on and near the western boundary of the site. The vegetation on the western side boundary and on the adjacent lot to the west of the site is mapped as terrestrial biodiversity in Blacktown Local Environment Plan 2015. As shown in Figure 10 below, it is proposed that one tree (T1) be removed to accommodate widening of the internal access road.

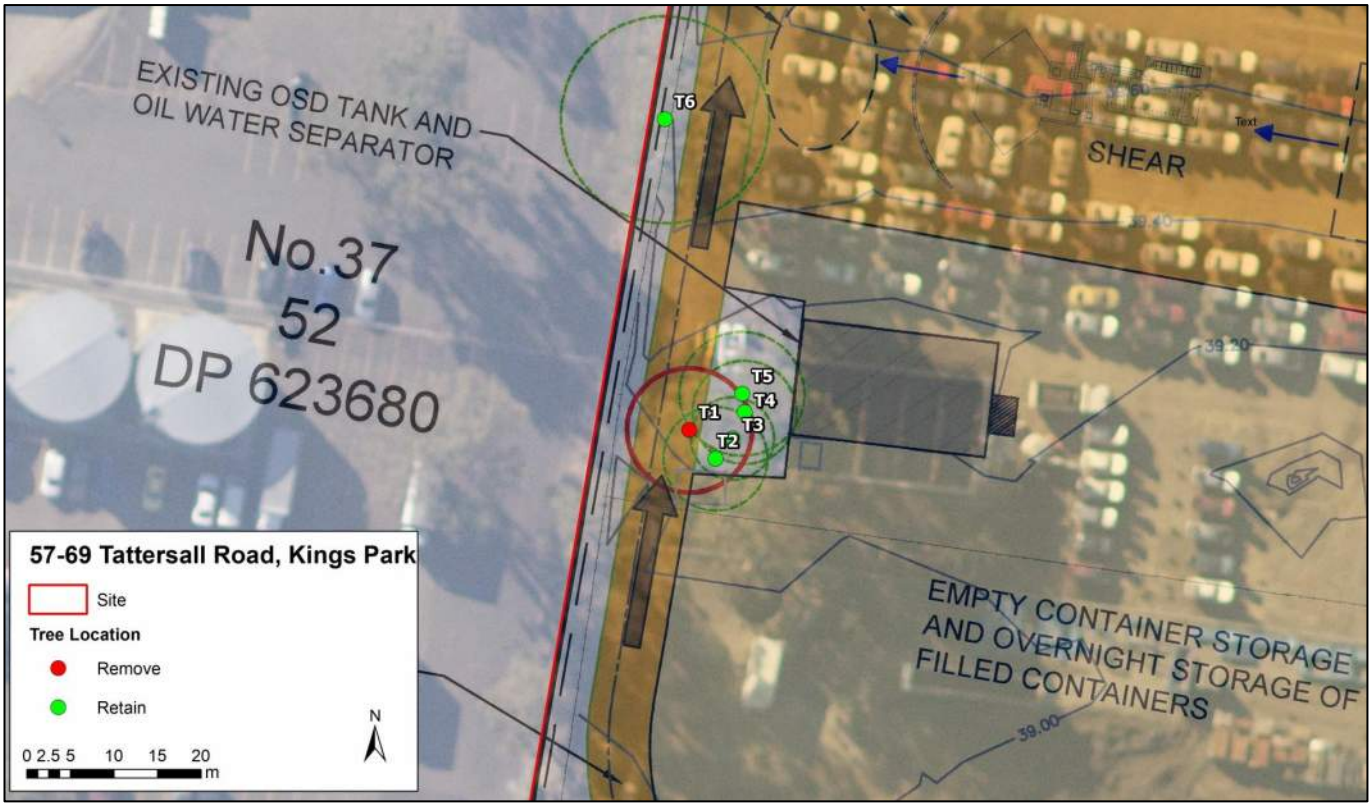


Figure 11: Trees marked for retention and removal onsite

Molino Stewart was engaged to undertake a biodiversity assessment (Appendix J). An assessment of the vegetation located on and near the western boundary of the site found that there are some established Forest Red Gum (*Eucalyptus tereticornis)* trees but there is no discernible understorey layer present. Both the subject site and the adjacent site have vegetation located outside their southern boundaries running parallel to Breakfast Creek which consists primarily of native riparian tree species such as Sheoak *(Allocasuarina)sp.,* Forest Red Gum, and Cabbage Gum (*Eucalyptus ampifolia)*. Understory species comprise a mixture of native shrubs such as *Acacia sp,* and some exotic grasses and weeds.

Blacktown City Council cleared the vegetation along the riparian corridor some years ago as a flood mitigation measure and the remaining vegetation is predominantly exotic grasses. Version 3 of the Biodiversity Values Map, published on 9th November 2018, has removed the previously mapped riparian vegetation associated with Breakfast Creek from the southern extremity of the land and shows no part of the site mapped as having biodiversity value.

The biodiversity assessment found that:

- The removal of the vegetation onsite would not constitute a significant impact.
- The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor.
- The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.

On the basis of the findings of the biodiversity assessment, a waiver from the need to prepare a BDAR for has been prepared in accordance with the provisions of the Biodiversity Conservation Act 2016 and the Biodiversity Conservation Regulation 2017. See section 3 of the Biodiversity Assessment (Appendix J).

To protect the remaining five mature native trees during construction works the following management measures are recommended:

- All trees marked for retention (T2-T6, Figure 11) to be protected by Tree Protection Zones (TPZ) as follows:

Tree	TPZ (metres)
T2	7.7
T3	2.9
T4	7.6
T5	8
T6	13

- installation of tree protection fencing in accordance with AS 4970-2009 Protection of Trees on Development Sites.
- retention of existing soil grades where there is encroachment into the Tree Protection Zones.
- avoidance of soil compaction through working from inside the footprint, protection of ground surfaces, within the TPZ, careful removal of sub base soils.
- Implementation of an erosion and sedimentation control plan during construction work.
- during works should any native fauna be located in the trees the contractor is to cease work on the tree and call WIRES if the fauna has not relocated of its own accord.
- remove items stored underneath trees to prevent further impact to the trees to be retained.

7.1.5 Rural Fires Act 1997

The objects of the Act are to provide:

(a) for the prevention, mitigation and suppression of bush and other fires in local government areas (or parts of areas) and other parts of the State constituted as rural fire districts, and
(b) for the co-ordination of bush firefighting and bush fire prevention throughout the State, and
(c) for the protection of persons from injury or death, and property from damage, arising from fires, and
(c1) for the protection of infrastructure and environmental, economic, cultural, agricultural and community assets from damage arising from fires, and
(d) for the protection of the environment by requiring certain activities referred to in paragraphs (a)–(c1) to be carried out having regard to the principles of ecologically sustainable development described in section 6 (2) of the Protection of the Environment Administration Act 1991.

The subject land is not identified as bush fire prone. Therefore, a bush fire safety authority from the Commissioner of the NSW Rural Fire Service under section 100B of the Act is not required.

7.1.6 Contaminated Land Management Act 1997

The general object of this Act is to establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation under Division 2 of Part 3.

A search of the EPA database of contaminated sites under Section 58 of the CLM Act revealed that the subject site is not listed.

Land contamination that is not deemed significant enough to be regulated by the EPA can be handled under the planning and development framework, including State Environmental Planning Policy No. 55 - Remediation of Land and the Managing Land Contamination - Planning Guidelines. See details under SEPP No 55 – section 7.2.4.

7.1.7 Waste Avoidance and Resource Recovery Act 2001 (NSW)

The objectives of the Waste Avoidance and Resource Recovery Act 2001 (WARR Act) are:

(a) to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development,

(b) to ensure that resource management options are considered against a hierarchy of the following order:
(i) avoidance of unnecessary resource consumption,
(ii) resource recovery (including reuse, reprocessing, recycling and energy recovery),
(iii) disposal,
(c) to provide for the continual reduction in waste generation,
(d) to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste,
(e) to ensure that industry shares with the community the responsibility for reducing and dealing with waste,
(f) to ensure the efficient funding of waste and resource management planning, programs and service delivery,
(g) to achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis,
(h) to assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.

The NSW Waste Avoidance and Resource Recovery Act 2001 aims to encourage efficient use of resources and reduce environmental harm, through the principles of ecologically sustainable development and consideration of resource management options against the hierarchy of avoid, reuse and dispose.

Australians collectively own approximately 45 million appliances, and through a combination of engineered redundancy and 'keeping up with the Joneses' around 2.5 million of those appliances end up in landfill each year. The rate of disposal of refrigerators and freezers is forecast to increase from around 775,000 units per year in 2014 to 930,000 in 2019 and to over 1.1 million units per annum in 2024 (Commonwealth Department of the Environment).

Metals are important raw materials for the industry and can be repeatedly returned to the recovered resource cycle with very little loss. The recycling of metals saves valuable raw materials and energy as opposed to the new processing of ores. Recycling whitegoods diverts large waste items from landfill and can help prevent toxic materials entering into the environment such as heavy metals and brominated flame retardants.

The proposal is consistent with these objects as it responsibly disposes of appliances like fridges, dishwashers and washing machines, and reduces the waste stream ending up in landfill.

The primary goal of the NSW Waste Avoidance and Resource Recovery Strategy 2014-21 is to improve the environment and community well-being of the NSW community by reducing the environmental impact of waste and using resources more efficiently. Using resources efficiently and keeping materials circulating in the productive economy can also help to create jobs and grow the NSW economy. The Strategy sets out key result areas and targets:

Table 13: Key result area and targets, WARR Strategy 2014-21

Key Result Area	2021-22 Target
Avoid and reduce waste generation	avoiding and reducing the amount of waste generated per person in NSW
Increase recycling	increasing recycling rates to o 70% for municipal solid waste o 70% for commercial and industrial waste o 80% for construction and demolition waste
Divert more waste from landfill	increasing waste diverted from landfill to 75%
Manage problem wastes better	managing household problem wastes better, establishing 86

	drop-off facilities and services across NSW
Reduce litter	reducing litter, with 40% fewer items (compared to 2012) by 2017
Reduce illegal dumping	combatting illegal dumping, with 30% fewer incidents (compared to 2011) by 2017

This proposed development directly supports two of the Key Result Areas of the Waste Avoidance and Resource Recovery Strategy:

- Key Result Area 2: Increase recycling.

The target in this key result area aims to increase the amount of material that is recycled and put back into the productive economy. Using recycled materials helps to reduce the waste going to landfill and can potentially save energy, water and other resources that would have otherwise been used to produce new materials. The production of competitively priced recycled materials can also help economic growth through the development of the recycling industry and the industries that use the recycled materials.

- Key Result Area 3: Divert more waste from landfill and

The proposal is consistent with the objective to increase landfill diversion, because it creates additional recycling capacity, further reducing the volume of waste currently going to landfill.

'Waste diversion' refers to the alternative pathways for materials entering the system that avoid disposal to landfill, such as recycling and energy recovery. Increasing the capacity of the resource recovery facility will assist in managing the increase in waste generated by the NSW population.

7.1.8 Water Management Act 2000

In New South Wales (NSW), the taking of water and its subsequent use has historically been managed through a licensing framework under the *Water Act 1912*. This licensing framework has been transitioning to a licensing and approval framework under the *Water Management Act 2000*, which occurs for a particular water source when a water sharing plan which applies to that water source commences. While the transition process is largely complete, the *Water Act 1912* still applies to:

- taking water from a water source outside water sharing plan areas;
- construction and use of water supply works outside water sharing plan areas;
- drainage works in all areas of NSW; and
- aquifer interference activities in all areas of NSW.

The Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011 applies to the land, therefore the Water Management Act 2000 is the relevant regulatory framework.

The objects of the Water Management Act 2000 are to provide for the sustainable and integrated management of the water sources of the state for the benefit of both present and future generations and, in particular:

- Ecologically sustainable development;
- Protect, enhance and restore water recourses;
- Recognise and foster social and economic benefits;
- Recognise the role of the community;
- Provide efficient and equitable sharing of water;
- Management of water sources with other aspects of the environment including native vegetation and native fauna;
- Encourage the sharing of responsibility and efficient use of water; and
- Encourage best practice management and use of water.

The proposed development does not involve works that require a water supply approval or a water use approval. However, the proposed development does involve the construction of an internal driveway for heavy vehicles within 40 metres of Breakfast Creek.

The Water Management Act defines waterfront land as the bed of any river, lake or estuary and any land within 40 metres of the river banks, lake shore or estuary mean high water mark. In accordance with section 91 of the Act an approval is required to carry out a specified controlled activity at a specified location in, on or under waterfront land. A controlled activity includes:

(a) the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or
(b) the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or
(c) the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or
(d) the carrying out of any other activity that affects the quantity or flow of water in a water source.

The proposal does not involve any instream works and subsequently the construction of the internal driveway within 40m of breakfast Creek does not necessarily require approval. It is noted that Water NSW provided advice in respect of the SEARs that "no water related authorisations (water access licence or approval) is required for the proposed development."

Under Section 4.41 of the EP&A Act, an activity approval (other than an aquifer interference approval) under Section 91 of the WM Act is not required for SSD that is authorised by a development consent. In New South Wales (NSW), the taking of water and its subsequent use has historically been managed through a licensing framework under the *Water Act 1912*. This licensing framework has been transitioning to a licensing and approval framework under the *Water Management Act 2000*, which occurs for a particular water source when a water sharing plan which applies to that water source commences. While the transition process is largely complete, the *Water Act 1912* still applies to:

- taking water from a water source outside water sharing plan areas
- construction and use of water supply works outside water sharing plan areas
- drainage works in all areas of NSW
- aquifer interference activities in all areas of NSW.

The Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011 applies to the land, therefore the Water Management Act 2000 is the relevant regulatory framework.

The objects of the Water Management Act 2000 are to provide for the sustainable and integrated management of the water sources of the state for the benefit of both present and future generations and, in particular:

- Ecologically sustainable development;
- Protect, enhance and restore water recourses;
- Recognise and foster social and economic benefits;
- Recognise the role of the community;
- Provide efficient and equitable sharing of water;
- Management of water sources with other aspects of the environment including native vegetation and native fauna;
- Encourage the sharing of responsibility and efficient use of water; and
- Encourage best practice management and use of water.

The proposed development does not involve works that require a water supply approval or a water use approval. However, the proposed development does involve the construction of an internal driveway for heavy vehicles within 40 metres of Breakfast Creek.

The Water Management Act defines waterfront land as the bed of any river, lake or estuary and any land within 40 metres of the river banks, lake shore or estuary mean high water mark. In accordance with section 91 of the Act an approval is required to carry out a specified controlled activity at a specified location in, on or under waterfront land. *A controlled activity* includes:

(a) *the erection of a building or the carrying out of a work (within the meaning of the Environmental Planning and Assessment Act 1979), or*
(b) *the removal of material (whether or not extractive material) or vegetation from land, whether by way of excavation or otherwise, or*
(c) *the deposition of material (whether or not extractive material) on land, whether by way of landfill operations or otherwise, or*
(d) *the carrying out of any other activity that affects the quantity or flow of water in a water source.*

The proposal does not involve any instream works and subsequently the construction of the internal driveway within 40m of breakfast Creek does not necessarily require approval. It is noted that Water NSW provided advice in respect of the SEARs that "no water related authorisations (water access licence or approval) is required for the proposed development."

Under Section 4.41 of the EP&A Act, an activity approval (other than an aquifer interference approval) under Section 91 of the WM Act is not required for SSD that is authorised by a development consent.

7.1.9 Heritage Act 1977

The subject land is not within the curtilage if or in the vicinity of any State Heritage Register items or any items of local heritage significance. It is noted that in respect of the SEARs:

- the Heritage Council of NSW provided advice that "there is no need for the Heritage Council to be involved in the assessment of this project"; and
- The Office of Environment of Environment and Heritage concluded that the site does not contain biodiversity, natural hazards or Aboriginal cultural heritage issues that require a formal OEH response [and] have no further need to be involved in the assessment of the project".

7.1.10 Roads Act 1993

The site does not front a main road and Blacktown City Council is the appropriate roads authority. Section 138 of the NSW Roads Act 1993 requires the consent of the appropriate roads authority for any works or activities in a public road reserve.

An application under the Roads Act will be required to be lodged with Blacktown City Council for the widening of the eastern driveway crossing. In accordance with section 4.42 of the EP&A Act, consent under section 138 of the Roads Act 1993 cannot be refused if it is necessary for carrying out State Significant Development that is authorised by a development consent.

7.2 State Environmental Planning Policies

The relevant State Environmental Planning Policies (SEPPs) are outlined below.

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

The SRD SEPP, amongst other matters, defines certain development as SSD. Clause 8 of the SRD SEPP states:

(1) *Development is declared to be State significant development for the purposes of the [EP&A] Act if:*
  (a) *the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
  (b) *the development is specified in Schedule 1 or 2.*

Schedule 1 of the SRD SEPP defines a range of general State significant developments, including waste and resource management facilities. Clause 23 relates to waste and resource management facilities, and includes:

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

The recycling facility is a development for the purposes of resource recovery and will handle up to 130,000 tpa of scrap metal and is therefore development specified in Schedule 1.

The proposal meets the requirements of clause 8 of the SRD SEPP and is therefore deemed to be SSD.

7.2.2 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

In accordance with clause 121 a resource recovery facility is permissible with consent in the IN1 General Industrial zone and is required to be referred to the RMS under Schedule 3 (Traffic Generating Development). Clause 104 of the Infrastructure SEPP requires the RMS to be notified of an application for traffic generating development, which includes waste or resource management facilities of any size or capacity.

Table 14: SEPP (Infrastructure) compliance

SEPP REQUIREMENT	COMMENT
PART 1 PRELIMINARY	
Clauses 1-12	Noted.
PART 2 GENERAL	
Division 1 Consultation and notification	Not applicable Applies to development carried out by a public authority, or a person acting on behalf of a public authority.
Division 2 Additional uses of State land	Not applicable
Division 3 Site compatibility certificates	Not applicable
Division 4 Exempt development	Not applicable
Division 5 Complying development	Not applicable
PART 3 DEVELOPMENT CONTROLS	
Division 17 Roads and Traffic Subdivision 2 - Development in or adjacent to road corridors and road reservations Clause 104 This clause applies to development specified in Column 1 of the Table to Schedule 3 that involves: (a) new premises of the relevant size or capacity, or (b) an enlargement or extension of existing premises, being an alteration or addition of the relevant size or capacity. Schedule 3 includes a waste or resource management facility of any size or capacity with	The RMS has been given written notice of the intention to carry out the development and the matters raised in the response from the RMS (and included in the SEAR's) have been addressed in the EIS (refer section 11.5) A traffic and transport report is included in Appendix M.

SEPP REQUIREMENT	COMMENT
access to a road (generally).	
Division 23 Waste or Resource Management Facilities	
Clause 120 Definition of "prescribed zone"	The site is zoned IN1 General Industrial, which is identified as a prescribed zone within the definition.
Clause 121 Development permitted with consent	Development for the purpose of waste or resource management facilities, may be carried out by any person with consent on land in a prescribed zone.
Clause 121AA Exempt Development	Not applicable.
Clause 121A Exempt Development – disposal of drug exhibit waste	Not applicable.
Clause 122 Additional permitted Uses – Castlereagh Liquid Waste Disposal depot	Not applicable.
Clause 123 Determination of development applications	Not applicable. Clause applies to development for the purpose of the construction, operation or maintenance of a landfill for the disposal of waste

7.2.3 State Environmental Planning Policy No 33 – Hazardous and Offensive Development

Under State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) a preliminary hazard analysis (PHA) must be submitted with a DA for potentially hazardous or offensive development. The guideline *Applying SEPP 33* (NSW Department of Planning 2011) includes a checklist and a risk screening procedure to determine whether a development is potentially hazardous or offensive.

Potentially hazardous or offensive development is defined by SEPP 33 as development which poses a significant risk to, or which would have a significant adverse impact on, human health, life, property or the biophysical environment, if it were to operate without employing any control measures. This includes developments for the handling, storing or processing of hazardous materials. A development is classified as a hazardous or offensive development if the thresholds in *Applying SEPP 33* — which compare the quantities of stored or used hazardous materials to the distance from publicly accessible areas — are exceeded. The hazardous materials classifications in *Australian Code for the Transport of Dangerous Goods by Road and Rail* (National Transport Commission 2007) (the Dangerous Goods Code) are used in *Applying SEPP 33*.

The chemicals that are proposed to be stored and used under the proposal are diesel, petrol, waste oils, coolant, liquid petroleum gas (LPG), used lead acid batteries and synthecol XL foamer. These materials will be stored in the main processing shed with the exception of the diesel stored in the 15,000 litre storage tank adjacent to the main processing shed.

The storages, quantities and hazardous properties of the chemicals to be stored onsite are provided in Table 15 below.

Table 15: Dangerous goods and other potentially hazardous materials

Chemical Name	DG Class	Onsite Maximum Quantity ()	Storage Conditions

Chemical Name	DG Class	Onsite Maximum Quantity ()	Storage Conditions
Unleaded Petrol	Class 3 PGII	4,900 litres	5 x 980 litre tanks
Oil / Coolant	C2 Combustible Liquid (Non-Dangerous Goods)	2,940 litres	3 x 980 litre tanks
LPG	Class 2.1	5,000 litres	Bottles / cylinders
Used Lead Acid Batteries	Class 8 PG III	5 tonnes	5 x 1 tonne pallets
Diesel	C1 combustible liquid / Class 9 PG III	16,940 litres	1 x 15,000 litre bulk storage tank 2 x 980 litre tanks
Synthecol XL Foamer	Non-dangerous goods	1,000 litres	IBC's

Applying SEPP 33 also sets threshold limits for the transportation of hazardous materials to and from a site. The number of weekly and annual deliveries and the approximate quantities per load to the site are below the SEPP 33 transport screening thresholds. The maximum quantity per load and delivery frequency for all dangerous goods is also below the transportation screening threshold. Therefore, the transport of dangerous goods for the proposed development will not trigger SEPP 33.

Benbow Environmental completed a Preliminary Hazard Analysis (see Appendix I) in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP33). The assessment was carried out in accordance with the DoPI guidelines and includes a quantitative analysis, in accordance with the Multi-Level Risk Assessment and Hazardous Industry Planning Advisory Paper (HIPAP) guidelines, that addresses the risks of fire or explosion presented by the use of the hammermill in motor vehicle recycling site operations, stockpile fires and diesel storage.

The PHA found that:

- The chemical storage on site does not exceed the State Environmental Planning Policy No. 33 screening thresholds.
- The transportation of chemicals does not exceed the State Environmental Planning Policy No. 33 screening thresholds.
- The quantitative analysis of the risks of fire or explosion presented by the use of the shredder/hammermill, the metal stockpiles and the diesel storage showed that the criteria stipulated within the HIPAP guidelines for the following scenarios have been met for all significant sources of hazard risks on site.

The PHA concluded that the operation of the proposed development meets the criteria outlined in the HIPAP No. 4 Risk Criteria for Land Use Safety Planning and would not cause any risk, significant or minor, to the community, with the recommended safeguards in place. Hence, the proposed development would not be considered an offensive or hazardous development under SEPP 33.

7.2.4 State Environmental Planning Policy No 55 – Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) provides for a state wide planning approach to the remediation of contaminated land. Under clause 7(1) of SEPP 55, prior to granting consent to the carrying out of any development on land a consent authority is required to give consideration as to whether land is contaminated and, if the land is contaminated, whether the land is suitable for the purpose of the development or whether remediation is required.

Clause 7 of State Environmental Planning Policy No.55 – Remediation of Land requires the consent authority to consider,

(a) it has considered whether the land is contaminated, and
(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Site contamination assessment and remediation work was previously undertaken in accordance with Notice of Determination No. 14314 dated 8th March 1996 (DA 96-185), confirming the sites suitability for ongoing industrial use.

A further investigation was undertaken by SGA Environmental in January 2014 to assess the potential presence of soil contamination at the site resulting from past and current activities on the site. The investigation found no evidence at that time that would limit the ongoing commercial/industrial use of the site from a contamination perspective.

Sullivan Environmental Sciences Pty Ltd were engaged to conduct a contamination investigation to establish baseline conditions for soil and groundwater quality to complement the findings of the SGA Environmental investigation and assess the suitability of the site for the proposed use. The full contamination assessment is included in Appendix F.

The scope of works included:

- Review of previous reports (SGA, Jan 2014 and INTEV, Dec 2017) and relevant background information supplied to Sullivan-ES.
- Detailed site inspection to document current site conditions and surrounding environments.
- A 'Dial Before You Dig' search and location of underground services using a Telstra accredited service locator to confirm proposed borehole drilling and sampling locations.
- Field sampling:
    - Stage 1 (May 2018) coring the hardstand concrete surface where required to access underlying soils for sampling, drilling and sampling 12 soil bores at locations supplementary to previous sampling locations (SGA 2014) drilling and installing 3 groundwater monitoring wells and securing with a bolted down steel cover plate, and collecting a sample of groundwater from each of the 3 groundwater monitoring wells.
    - Stage 2 (Sept/Oct 2018) sampling of surface soils at 10 locations in the southern portion of the site targeted at floc stockpiling areas and the car shredding operation, sampling of 2 stormwater discharge points into the adjoining Breakfast Creek.
- Geo-referencing of each sampling location with a hand-held GPS unit.
- Analysis of samples at a NATA accredited laboratory for the following contaminants:
    - TPH / TRH – total petroleum/recoverable hydrocarbons
    - BTEXN – benzene, toluene, ethylbenzene, xylenes and naphthalene
    - PAH - polycyclic aromatic hydrocarbons
    - Heavy metals
    - Phthalate esters
    - Asbestos (soil only)
- Contamination report in accordance with the Guidelines for Consultants reporting on Contaminated Sites, 2011 (OEH 2011), Schedule B2 of the National Environment protection (Assessment of Site Contamination) Measure 2013 (ASC NEPM 2013) and SEPP 55 – Remediation of Land.

The investigation found that the:

- Concentrations of contaminants in both the soil and ground water samples that were analysed meet the adopted investigation levels, indicating that generally onsite soils and groundwater are unlikely to pose an unacceptable health risk.
- Samples of oil-stained patches across the unsealed spare parts yard show elevated concentrations of hydrocarbons in small localised areas. Samples at SB10 and SS4 (within an oil-

stained patch) showed concentrations of hydrocarbons in excess of adopted investigation levels and are considered localised contamination hotspots. Previous results at BH21 and SS3 are also indicative of soils within oil-stained patches and also exceed adopted investigation levels. The oil-stained patches are approximately 1m x 1m by approximately 0.1-0.2m deep.

- Each oil-stained patch alone would be insignificant and not present a health risk. However, given the vast number of oil-stained patches and the large spatial area of the yard, in a collective sense, the oil staining is considered significant to warrant intervention and to protect potential short- and long-term receptors. The oil staining also causes an aesthetic issue that should be addressed.
- Oil-stained patches in the spare parts yard do not preclude the site from being suitable for existing uses or for proposed developments under a commercial/industrial land use, however, the surficial oil stains should be rectified as they pose a long-term contamination source.
- Phthalate esters were detected in previous analytical tests at BH02 (SGA, Jan 2014) and at an additional four locations during this investigation. All detections are clustered proximal to the car shredding area in the southeast corner. The probable source of these chemicals would be artefacts from processing non-metallic vehicle components within the car shredding and floc stockpiling areas. Concentrations in soils are below relevant screening criteria and therefore pose negligible risk. No phthalates were detected in stormwater samples.
- Surface water discharging into Breakfast Creek from the two stormwater outlets is impacted by heavy metals and total petroleum hydrocarbons (TPHs). Heavy metals, particularly zinc, are reported at concentrations of up to orders of magnitude greater than the adopted water quality criteria. Surface water discharging from the site may pose a health risk to the ecological system of Breakfast Creek, as such, abatement measures should be employed during future development of the site to address this issue.

The investigation concluded that the site is suitable for continued use as commercial/industrial land, and recommended the following actions to address contamination issues at the site:

1. Oil-stained patches

Each oil patch should be excavated and stockpiled within a designated area onsite. The stockpile of excavated soils to be sampled and analysed to classify the soils for offsite waste disposal. A waste classification certificate must be prepared for each waste stream being transported and removed offsite and a summary report should be prepared to document works. An oil absorbent should be placed beneath each vehicle stored on unsealed ground to absorb drips and leaks from engine parts as an interim measure until soils are excavated. This should also be conducted after excavation to prevent further soil contamination by leaking oils.

A programme of installing oil absorbent mats beneath vehicles stored on open ground has been implemented by Autorecyclers. The remediation of the oil-stained patches in accordance with the above recommendation was considered and approved by Blacktown City Council as condition number 5.12 on the consent for DA 18-01273.

2. Stormwater

Improvement in stormwater quality should be addressed during future development of the site. Viable options should include passive and active treatment systems.

Improvements to onsite stormwater management and treatment are addressed in Section 11.2.

7.2.5 State Environmental Planning Policy No.19 – Bushland in Urban Areas

The general aim of this Policy is to protect and preserve bushland within the urban areas referred to in Schedule 1 because of:

(a) Its value to the community as part of the natural heritage,
(b) its aesthetic value, and
(c) its value as a recreational, educational and scientific resource.

The Blacktown LGA is an urban area included in Schedule 1.

The specific aims of the Policy include:

(a) to protect the remnants of plant communities which were once characteristic of land now within an urban area,
(b) to retain bushland in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term,
(c) to protect rare and endangered flora and fauna species,
(d) to protect habitats for native flora and fauna,
(e) to protect wildlife corridors and vegetation links with other nearby bushland,
(f) to protect bushland as a natural stabiliser of the soil surface,
(g) to protect bushland for its scenic values, and to retain the unique visual identity of the landscape,
(h) to protect significant geological features,
(i) to protect existing landforms, such as natural drainage lines, watercourses and foreshores,
(j) to protect archaeological relics,
(k) to protect the recreational potential of bushland,
(l) to protect the educational potential of bushland,
(m) to maintain bushland in locations which are readily accessible to the community, and
(n) to promote the management of bushland in a manner which protects and enhances the quality of the bushland and facilitates public enjoyment of the bushland compatible with its conservation.

Section 9 of the SEPP includes a list of issues that must be taken into consideration before granting approval for development adjoining bushland zoned or reserved for public open space.

The site does not adjoin any bushland that is zoned or reserved for open space purposes. Therefore, this SEPP has not been considered further.

7.2.6 State Environmental Planning Policy No.64 – Advertising and Signage

Clause 8 of SEPP 64 states:

"A consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied:
(a) that the signage is consistent with the objectives of this Policy as set out in clause 3 (1) (a), and
(b) that the signage the subject of the application satisfies the assessment criteria specified in Schedule 1."

It is proposed to erect one pole sign on the western side of the eastern driveway at the entrance to the site. The sign will be a business identification sign.

The sign will have an overall height of 4m above ground level and an advertising area of 6m2, measuring 3m (w) x 2m (h) inside a steel frame.

Table 16 below, details the compliance of the signage with the assessment criteria specified in Schedule 1.

Table 16: Assessment Criteria, Schedule 1 SEPP No 64

SCHEDULE 1 ASSESSMENT CRITERIA	COMMENTS
1 Character of the area	
• *Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?*	The signage will assist clients and the general public with identifying the use of the development. The signage is considered to be consistent with the scale and style of existing signage in the locality.
• *Is the proposal consistent with a particular*	The signage will identify the occupant of the site

SCHEDULE 1 ASSESSMENT CRITERIA	COMMENTS
theme for outdoor advertising in the area or locality?	and will not include unrelated advertising. The advertising signage is considered to be consistent with the industrial nature of the area.
2 Special areas	
• *Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?*	The frontage of the site does not adjoin any sensitive areas, the existing signage is consistent with industrial signage in the locality and proposed design will not have an adverse impact on the amenity of the area.
3 Views and vistas	
• *Does the proposal obscure or compromise important views?*	The proposal will not obscure or compromise important views.
• *Does the proposal dominate the skyline and reduce the quality of vistas?*	The proposal will not impact on the skyline.
• *Does the proposal respect the viewing rights of other advertisers?*	The proposal will not detract, obscure or impact on the viewing rights of other advertisers.
4 Streetscape, setting or landscape	
• *Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?*	The signage is compatible with the building design and streetscape.
• *Does the proposal contribute to the visual interest of the streetscape, setting or landscape?*	The advertising signage is consistent with the established streetscape.
• *Does the proposal reduce clutter by rationalising and simplifying existing advertising?*	The signage is well spaced and not cluttered. The signage is easily intelligible and will identify the site without compromising road safety.
• *Does the proposal screen unsightliness?*	Not applicable.
• *Does the proposal protrude above buildings, structures or tree canopies in the area or locality?*	No.
5 Site and building	
• *Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?*	As stated above, the signage is compatible with the scale, proportion and design of the existing buildings.
• *Does the proposal respect important features of the site or building, or both?*	As above.
• *Does the proposal show innovation and imagination in its relationship to the site or building, or both?*	The signage is compatible with the industrial character of the locality.
6 Associated devices and logos with advertisements and advertising structures	
• *Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?*	The sign will not be back lit.
7 Illumination	

SCHEDULE 1 ASSESSMENT CRITERIA	COMMENTS
• *Would illumination result in unacceptable glare?*	Not applicable.
• *Would illumination affect safety for pedestrians, vehicles or aircraft?*	Not applicable.
• *Would illumination detract from the amenity of any residence or other form of accommodation?*	Not applicable.
• *Can the intensity of the illumination be adjusted, if necessary?*	Not applicable.
• *Is the illumination subject to a curfew?*	Not applicable.
8 Safety	
• *Would the proposal reduce the safety for any public road?*	Nil impact. The signage will not cause confusion, restricted sight lines or disruption for motorists.
• *Would the proposal reduce the safety for pedestrians or bicyclists?*	Nil impact. As above.
• *Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?*	Nil impact. As above.

7.2.7 Sydney Regional Environmental Plan No. 20 – Hawkesbury Nepean River

The aim of this plan is to protect the environment and natural processes of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context. The plan covers water quality and quantity, environmentally sensitive areas, riverine scenic quality, agriculture, and urban and rural residential development.

The table below provides an assessment of the proposal against relevant matters for consideration and confirms that the proposal is consistent with the specific planning policies and strategies relevant to this development application.

Table 17: SREP No 20 Assessment

CLAUSE / ASSESSMENT CRITERIA	COMMENTS
PART 2 – General Planning Considerations, Specific Planning policies & Recommended Strategies	
CLAUSE 6: SPECIFIC PLANNING POLICIES & STRATEGIES	
Policy: Total catchment management is to be integrated with environmental planning for the catchment. Relevant Strategies: (a) Refer the application or other proposal for comment to the councils of each adjacent or downstream local government area which is likely to suffer a significant adverse environmental effect from the proposal. (b) Consider the impact of the development concerned on the catchment. (c) Consider the cumulative environmental impact of development proposals on the catchment.	The Contamination Investigation (Appendix F) found that surface water discharging into Breakfast Creek from the two stormwater outlets contained heavy metals and total petroleum hydrocarbons (TPHs). Mitigation measures are proposed for both stormwater quantity and quality management to bring the proposed development into compliance with Blacktown City Council's current engineering standards and provide greater protection for the receiving catchment. New access driveways and all operational areas, including material storage and waste storage areas, will be constructed from concrete to

CLAUSE / ASSESSMENT CRITERIA	COMMENTS
	provide a barrier and prevent existing contaminants being collected by stormwater runoff. from the proposed metal recycling facility. A 2-staged water quality treatment train is proposed comprising a Gross Pollutant Trap (Jellyfish Filter) and a Hydrocarbon trap (StormFilter device). In addition, the open stormwater channel adjacent to the eastern boundary will be upgraded with stormwater to be routed through a SPEL Filter and Stormceptor to remove gross pollutants, total suspended solids, hydrocarbons, total phosphorous and total nitrogen prior to discharge into Breakfast Creek. A SPEL Stormceptor will also be installed on the existing stormwater drainage line that runs parallel with the western boundary of the site. This water quality device has the capacity to store contaminated fire-retardant water in the event of a fire. This contaminated water will be disposed of through the sewer trade waste system.
Policy: The environmental quality of environmentally sensitive areas must be protected and enhanced through careful control of future land use changes and through management and (where necessary) remediation of existing uses. Strategies: (b) Minimise adverse impacts on water quality, aquatic habitats, riverine vegetation and bank stability.	Breakfast Creek adjoins the southern boundary of the site and the proposed development is located in the northwest corner of the site. Blacktown City Council cleared the vegetation along the riparian corridor some years ago as a flood mitigation measure and the remaining vegetation is predominantly exotic grasses. Version 3 of the Biodiversity Values Map, published on 9th November 2018, has removed the previously mapped riparian vegetation associated with Breakfast Creek from the southern extremity of the land and shows no part of the site mapped as having biodiversity value. The quality of stormwater discharged to Breakfast Creek will be improved the 2-stage treatment train (jellyfish filter & Stormfilter) and the two Stormceptors (contaminant removal, including hydrocarbons). The proposal will not have any adverse impacts on water quality, aquatic habitats, riverine vegetation and bank stability.

CLAUSE / ASSESSMENT CRITERIA	COMMENTS
Policy: Future development must not prejudice the achievement of the goals of use of the river for primary contact recreation (being recreational activities involving direct water contact, such as swimming) and aquatic ecosystem protection in the river system. If the quality of the receiving waters does not currently allow these uses, the current water quality must be maintained, or improved, so as not to jeopardise the achievement of the goals in the future. When water quality goals are set by the Government these are to be the goals to be achieved under this policy.	The existing and proposed water quality treatment devices (OSD tank, jellyfish filter, Stormfilter and Stormceptor x 2) will improve the quality of stormwater being discharged from the site . A sump is located beneath the shredder to contain any runoff generated from the application of the dustbuster chemical and water overspray. 3 x 4,000L sumps have been installed in the floc stockpiling area on the southern boundary of the hardstand area, where floc and scrap metal are conveyed off the slab (8x65m), for the purpose of capturing any contaminants that may be contained in the runoff from the stockpiled floc. The sumps have been designed to prevent the capture of rainfall and runoff from other areas of the site by diverting clean water around the sumps. The wastewater transported off site for disposal at an appropriately licensed liquid waste treatment facility. In the event of a fire, fire water will be retained on site in accordance with the requirements of FRNSW and discharged to sewer. The proposed scrap metal processing activity will be located on a part of the site that is above the 1:100 year flood level. Scrap metal retrieved from the pre-shredder and shredder will be conveyed directly into a shipping container for transport offsite. The proposal will not jeopardise water quality in Breakfast Creek or receiving waters further downstream.
Policy: Aquatic ecosystems must not be adversely affected by development which changes the flow characteristics of surface or groundwater in the catchment. Strategies: (b) Ensure the amount of stormwater run-off from a site and the rate at which it leaves the site does not significantly increase as a result of development. Encourage on-site stormwater retention, infiltration and (if appropriate) reuse.	The site is serviced by an approved on-site detention tank/oil and water separator located in the southwest corner of the site which treats stormwater prior to discharge to Breakfast Creek. Drainage works associated with this application involve the provision of an on-site detention system to the administrative/workshop catchment areas which discharge to Breakfast Creek adjacent to the eastern site boundary. Stormwater will be discharged to Breakfast Creek via the OSD tank, and Stormceptor x 2 (contaminant removal, including hydrocarbons).

CLAUSE / ASSESSMENT CRITERIA	COMMENTS
	The detention systems restrict peak flows from the site in accordance with the Upper Parramatta Catchment Trust requirements. The existing and proposed water quality treatment devices will reduce discharge of pollution and contaminants from the site in accordance with Council requirements. The water treatment devices have also been designed to contain and treat potential fire-fighting foams and liquids in the event of a fire and divert these liquids to the sewerage system.
Policy: The importance of the river in contributing to the significance of items and places of cultural heritage significance should be recognised, and these items and places should be protected and sensitively managed and, if appropriate, enhanced. Strategies: (a) Encourage development which facilitates the conservation of heritage items if it does not detract from the significance of the items. (b) Protect Aboriginal sites and places of significance. (c) Consider an Aboriginal site survey where predictive models or current knowledge indicate the potential for Aboriginal sites and the development concerned would involve significant site disturbance	The subject site is not located within a heritage conservation area or near a heritage item, state or local. There are no known Aboriginal sites and places of significance. The site has a long history of industrial use and has been subject to a high level of ground disturbance and has a very low potential for Aboriginal sites and places of significance to be found there.
Policy: Manage flora and fauna communities so that the diversity of species and genetics within the catchment is conserved and enhanced. Strategies, generally: (a) Conserve and, where appropriate, enhance flora and fauna communities, particularly threatened species, populations and ecological communities, aquatic habitats, wetland flora, rare flora and fauna, riverine flora, flora with heritage value, habitats for indigenous and migratory species of fauna, and existing or potential fauna corridors. (b) Locate structures where possible in areas which are already cleared or disturbed instead of clearing or disturbing further land. (c) Minimise adverse environmental impacts, protect existing habitat and, where appropriate, restore habitat values by the use of management practices.	There are only two groups of native trees located on and near the western boundary of the site. The vegetation on the western side boundary and on the adjacent lot to the west of the site is mapped as terrestrial biodiversity in Blacktown Local Environment Plan 2015. It is proposed that one tree be removed to accommodate widening of the internal access road. The biodiversity assessment (Appendix J) concluded that: • The removal of the vegetation onsite would not constitute a significant impact. • The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor. • The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type

CLAUSE / ASSESSMENT CRITERIA	COMMENTS
	(PCT) can be nominated due to the lack of species present. Even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.
Policy: The scenic quality of the riverine corridor must be protected.	The proposal does not affect the scenic quality of the riverine corridor.
Policy: Agriculture must be planned and managed to minimise adverse environmental impacts and be protected from adverse impacts of other forms of development.	Not applicable to this application.
Policy: Rural residential development should not reduce agricultural sustainability, contribute to urban sprawl, or have adverse environmental impacts (particularly on the water cycle or on flora or fauna).	Not applicable to this application.
Policy: All potential adverse environmental impacts of urban development must be assessed and controlled	Not applicable to this application.
Policy: The value of the riverine corridor as a significant recreational and tourist asset must be protected.	The proposal does not affect the value of the riverine corridor as a significant recreational and tourist asset
Policy: Development should complement the vision, goal, key principles and action plan of the Metropolitan Strategy.	The proposed development is consistent with 'A Plan for Growing Sydney' and the Direction to "transform the productivity of Western Sydney through growth and investment".
PART 3 – DEVELOPMENT CONTROLS	
Clause 11: SPECIFIC PLANNING POLICIES & STRATEGIES	
Policy: Development should complement the vision, goal, key principles and action plan of the Metropolitan Strategy.	Scrap metal recycling is not a development specified under Part 3 of the SREP and there are no specific controls or matters for consideration to be taken into account.

Foreshores and Waterways Development Control Plan (DCP) is the associated non-statutory document in support of the SREP. Criteria in relation to landscape character, design guidelines for land-based development have been reviewed. It is considered that the proposal supports these criteria as it is not located on any cliff lines or shorelines, will not be visible from the water, has generally been cleared of remnant vegetation and is an appropriate scale, built form and design.

7.2.8 State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

The aims of this Policy are:

(a) to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and

(b) to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

The site has been significantly disturbed and cleared of vegetation. There are only two groups of native trees located on and near the western boundary of the site and it is proposed to remove one tree to accommodate the widening of the internal access road.

A biodiversity assessment (Appendix J) was undertaken by Molino Stewart and concluded that:

- The removal of the vegetation onsite would not constitute a significant impact.
- The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor.
- The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.

7.3 Regional Plans and Strategies

7.3.1 A Metropolis of Three Cities – the Greater Sydney Region Plan

The Greater Sydney Region Plan is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places – Western Parkland City, Central River City and Eastern Harbour City. This vision seeks to rebalance the economic and social opportunities and deliver a more equitable Greater Sydney and outlines how the 10 Directions established in *Directions for a Greater Sydney* are the starting point for delivering integrated planning. The Directions set out the aspirations for the region guide implementation, monitoring and reporting.

1 A collaborative City
2. A City supported by infrastructure
3. A City for people
4. Housing the City
5. A City of great places
6. A well connected City
7. Jobs and skills for the City
8. A City in its landscape
9. An efficient City
10. A resilient City

The proposed development is consistent with Direction 7 and Planning Priority C11:

Direction 7:	Jobs and skills for the city - creating the conditions for a stronger economy
Potential indicator:	Increased jobs in metropolitan and strategic centres
Planning Priority C11:	Maximising opportunities to attract advanced manufacturing and innovation in industrial and urban services land with a need to create 817,000 jobs over the 20 years to 2036.

The metal recycling facility is encompassed by the term 'urban services', which is used in the Greater Sydney Region Plan to describe a wide range of industries that locate in cities. Urban services include a collection of industries that enable the city to develop and its businesses and residents to operate. While they are not always high employers, on a square kilometre basis, their value is not held in how many jobs they directly provide, but in the operational role and function they play throughout the city.

Urban services tend to have particular land use, floor space, operational or accessibility characteristics that require them to locate in non-residential areas. Industrial zoned land and certain commercial zones provide for these uses. The property economics behind these zones are also a core attribute which allow urban services to locate close to markets in line with their operational needs and therefore supply the higher order economic activities of the city.

Urban services often serve local communities and businesses, therefore they locate close to their markets, including residential areas and commercial centres. The plan recognises that the number of jobs should not be the primary objective but rather a mix of economic outcomes that support the city and

population. The proposal not only generates additional employment, with a potential doubling of the number of jobs, but also supports the economic and sustainability demands for greater recycling capacity.

The provision of services and jobs close to business and where people live are considered critical to Greater Sydney's productivity. Future Transport 2056 also has a vision for a 30-minute city as Sydney transitions to a metropolis of three cities. Convenient and reliable access by public transport is seen as increasingly important for improving productivity by reducing the time people spend travelling, increasing people's access to jobs and business' access to workers. The proposal is consistent with this objective by creating additional jobs accessible to surrounding residential areas and accessible by public transport.

7.3.2 Central City District Plan (Greater Sydney Commission)

The Central City District covers the Blacktown, Cumberland, Parramatta and The Hills local government areas. The Central City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision of Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan, A Metropolis of Three Cities, at a district level and is a bridge between regional and local planning. The District Plan:

- informs local strategic planning statements and local environmental plans;
- informs the assessment of planning proposals as well as community strategic plans and policies;
- assists councils to plan for and support growth and change, and align their local planning strategies to place-based outcomes; and
- guides the decisions of State agencies and informs the private sector and the wider community of approaches to manage for growth and change.

The proposed development metal recycling facility is consistent with Planning priority C12 - Supporting growth of targeted industry sectors.

> "Existing industrial, manufacturing, warehousing and distribution facilities contribute to its role as Australia's manufacturing capital. These activities occur on industrial land that also accommodates urban services, freight and logistics services and advanced manufacturing. Urban services include activities such as motor vehicle services, printing, waste management, courier services and concrete batching plants. These activities serve local communities and businesses and require adequate access to industrial land across the District. Demand for this land will increase commensurate with population growth. Good local access to these services also reduces the need to travel to other areas, minimising congestion on the transport system."

The metal recycling facility is an 'urban service' and the subject site is in proximity to local centres and near public transport and the motorway. The proposal addresses the directions and planning priorities by delivering high quality infrastructure, employment opportunities and connectivity to public transport and educational facilities

8 Non-Statutory Policies, Plans and Guidelines

There are a number of State non-Statutory plans and guidelines that are considerations for any development in NSW. These policies and plans are detailed below.

8.1 Policies, Plans and Guidelines

8.1.1 NSW State Priorities

The Premier of NSW has 12 priorities for the State that are shown below:

1. *Creating jobs – 150,000 new jobs by 2019*
2. *Delivering Infrastructure – Key metropolitan, regional and local infrastructure projects to be delivered on time and on budget*
3. *Driving public sector diversity – Increase the number of women and Aboriginal and Torres Strait Islander people in senior leadership roles by 2025*
4. *Improving education results – Increase the proportion of NSW students in the top two NAPLAN bands by eight per cent by 2019*
5. *Improving government services – Improve customer satisfaction with key government services every year, this term of government to 2019*
6. *Improving service levels in hospitals – 81 per cent of patients through emergency departments within four hours by 2019*
7. *Keeping our environment clean – Reduce the volume of litter by 40 per cent, by 2020*
8. *Making housing more affordable – 61,000 housing completions on average per year to 2021*
9. *Protecting our kids – Decrease the percentage of children and young people re-reported at risk of significant harm by 15 per cent by 2020 (based on the 2019 cohort of children)*
10. *Reducing domestic violence reoffending – Reduce the proportion of domestic violence perpetrators reoffending by 25 per cent by 2021 (based on the 2019 cohort of perpetrators)*
11. *Reducing youth homelessness – Increase the proportion of young people who successfully move from Specialist Homelessness Services to long-term accommodation to more than 34 per cent by 2019*
12. *Tackling childhood obesity – Reduce overweight and obesity rates of children by five percentage points by 2025*

The proposal supports the objective of promoting economic growth and strengthening local environments and communities by generating positive environmental and economic benefits. The proposal is consistent with the strategies and objectives of the NSW State Plan.

The alterations and expansion of the existing scrap metal recycling facility will meet the relevant priorities by:

- Creating more jobs both during and after construction;
- Delivering improvements in onsite environmental management and protection of the ecology within Breakfast Creek; and
- Increasing recycling and reducing waste to landfill.

Further, the NSW Government have 18 State Priorities that include the following:

Strong Budget and Economy

1. Make NSW the easiest state to start a business
2. Be the leading Australian state in business confidence – encourage business investment
3. Increase the proportion of people completing apprenticeships and traineeships to 65% by 2019
4. Halve the time taken to assess planning applications for State Significant Developments
5. Maintaining the AAA credit rating
6. Deliver strong budgets – Expenditure growth to be less than revenue growth

Building Infrastructure

7. Improving road travel reliability – 90% of peak travel on key road routes is on time
8. Increase housing supply across NSW - Deliver more than 50,000 approvals every year

Protecting the Vulnerable

9. Transitioning to the National Disability Insurance Scheme – Successful transition of participants and resources to NDIS by 2018
10. Creating sustainable social housing – Increase the number of households successfully transitioning out of social housing by 5% over three years

Better Services

11. Improving Aboriginal education outcomes – Increase the proportion of Aboriginal and Torres Strait Islander students in the top two NAPLAN bands for reading and numeracy by 30%
12. Better government digital services – 70% of government transactions to be conducted via digital channels by 2019
13. Cutting wait times for planned surgeries
14. Increasing cultural participation – Increase attendance at cultural venues and events in NSW by 15% by 2019
15. Ensure on-time running for public transport – Maintain or improve reliability of public transport services over the next four years

Safer Communities

16. Reducing violent crime – LGAs to have stable or falling reported violent crime rates by 2019
17. Reducing adult re-offending by five per cent by 2019
18. Reduce road fatalities by at least 30 per cent from 2011 levels by 2021

As detailed above the proposed development will promote a stronger economy by increasing employment opportunities.

8.1.2 Future Transport Strategy 2056

Future Transport 2056 is an update of NSW's Long Term Transport Master Plan. It is a suite of strategies and plans for transport developed in concert with the Greater Sydney Commission's Sydney Region Plan, Infrastructure NSW's State Infrastructure Strategy, and the Department of Planning and Environment's regional plans, to provide an integrated vision for the state.

The vision is built on six outcomes:

- Customer Focused
- Successful Places
- A Strong Economy
- Safety and Performance
- Accessible Services
- Sustainability

This chapter sets out the long term vision for mobility and transport provision in NSW. Planning and investment for Greater Sydney will focus around the three cities concept - the Western Parkland City, the Central River City and the Eastern Harbour City. Customers will be able to travel to one of these cities or to their nearest strategic centre within 30 minutes of where they live by public or active transport. This will give people better access to access jobs, education and essential services.

The subject site is highly accessible and well serviced by public transport. The proposed expansion of the existing facility with the associated increase in fulltime employment from thirty (30) to sixty (60) will support the use of public transport infrastructure in proximity to the site.

9 Local Planning Framework

9.1 Blacktown Local Environment Plan 2015

9.1.1 Permissibility

As discussed above, the site is zoned IN1 General Industrial under Blacktown Local Environmental Plan (LEP) 2015 as shown in Figure 11. The proposal is considered to be consistent with the zone objectives which are:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- To minimise adverse impacts on the natural environment.

Figure 12: Blacktown LEP 2015, Land Zoning Map, Sheet LZM 013

'General Industries' are permitted with consent in the IN1 General Industrial zone.

General industry is defined to mean:

> "a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity".

Industrial activity means:

> "the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity".

Scrap metal recycling falls within the definition of 'general industry' and therefore the proposal is consistent with the zone objectives.

The proposal is considered to be consistent with the zone objectives for the following reasons:

- a 'resource recovery facility' is permissible with consent in the IN1 General Industrial zone under the provisions of State Environmental Planning Policy (Infrastructure) 2007.

9.1.2 Development Standards

The following LEP development standards are applicable to the application.

Clause 4.3 Height of Buildings

This clause and associated mapping outlines the maximum height of building for the site. The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map. The objectives of this clause are as follows:

(a) to minimise the visual impact, loss of privacy and loss of solar access to surrounding development and the adjoining public domain from buildings,
(b) to ensure that buildings are compatible with the height, bulk and scale of the surrounding residential localities and commercial centres within the City of Blacktown,
(c) to define focal points for denser development in locations that are well serviced by public transport, retail and commercial activities,
(d) to ensure that sufficient space is available for development for retail, commercial and residential uses,
(e) to establish an appropriate interface between centres, adjoining lower density residential zones and public spaces.

The application does not involve the erection of any new buildings.

Clause 4.4 Floor Space Ratio

This clause and associated mapping outlines the maximum floor space ratio for the subject site. The objectives of this clause are as follows:

(a) to establish maximum floor space ratios as a means of controlling the density, bulk and scale of buildings,
(b) to establish the maximum floor space available for development for commercial premises, taking into account the availability of infrastructure and the generation of vehicular and pedestrian traffic.

The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map identified in Figure 13.

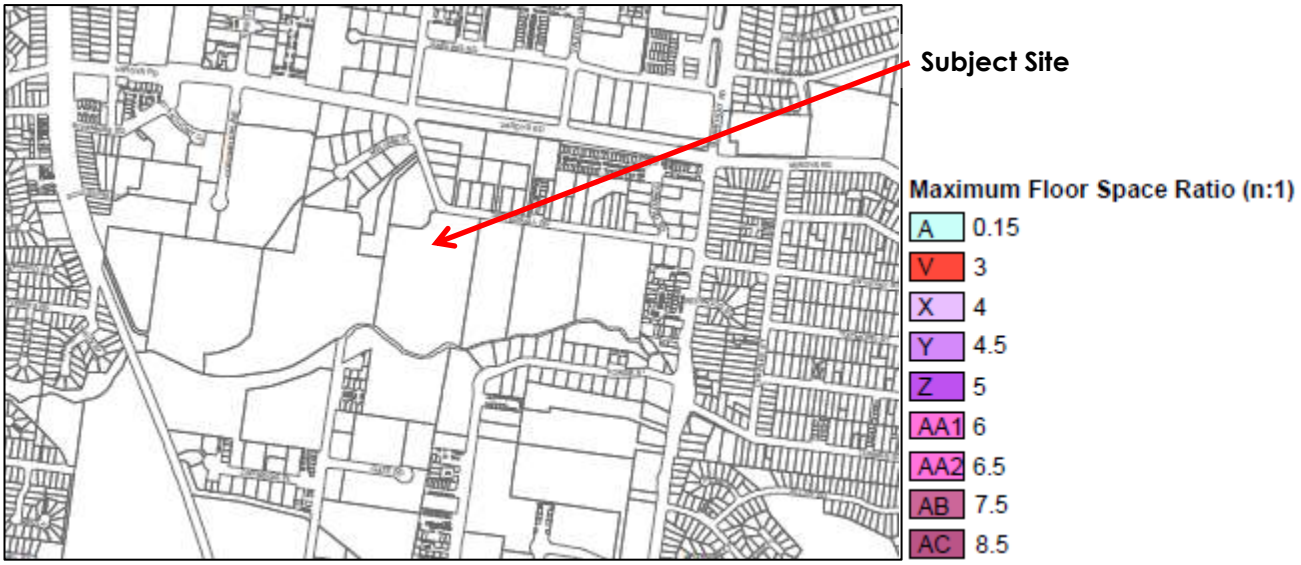


Figure 13: Blacktown LEP 2015, Floor Space Ratio Map, Sheet FSR 013

Not applicable to this application. The Floor Space Ratio Map does not establish a maximum floor space ratio for the site and no building work is proposed.

9.1.3 Other LEP Provisions

The following clauses are the other relevant provisions of the LEP that are applicable to the proposed development.

Clause 5.9 Preservation of Trees or Vegetation

The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation. The clause applies to species or kinds of trees or other vegetation that are prescribed for the purposes of this clause by a development control plan made by the Council.

See response to Clause 7.2.

Clause 7.1 Flood Planning

The objectives of this clause are:

(a) *to minimise the flood risk to life and property associated with the use of land,*
(b) *to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,*
(c) *to avoid significant adverse impacts on flood behaviour and the environment.*

The clause applies to land at or below the flood planning level or the highest historical flood level. Council must be satisfied that the proposed amendments to the approved development:

(a) *are compatible with the flood hazard of the land, and*
(b) *will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and*
(c) *incorporates appropriate measures to manage risk to life from flood, and*
(d) *will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and*
(e) *is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.*

Part of the subject land is identified as flood prone land.

Catchment Simulation Solutions were engaged to prepare a Flood Impact Assessment with the objective of:

- determining flood behaviour across the site for the 1% AEP flood based upon updated survey data;
- defining the 1% AEP flood levels across the existing site; and
- to confirm that no loss of flood storage would occur and that no adverse flood impacts would occur along Breakfast Creek or across adjoining properties.

Existing flood behaviour across the Eastern Creek catchment has been defined using an XP-RAFTS hydrologic model developed as part of the "Eastern Creek Catchment – Hydrologic Assessment" (WMA Water, 2013) and a TUFLOW hydraulic model that was developed as part of the "Eastern Creek Hydrologic Assessment" (Catchment Simulation Solutions, 2014). The TUFLOW model was subsequently refined and updated as part of the "Eastern Creek Development Scenario Hydraulic Assessment" (Catchment Simulation Solutions, 2016). Both the XP-RAFTS and TUFLOW models have been used to define existing flood behaviour for the site,

As shown in Figure 14 below, the northern sections of the site adjacent to Tattersalls Road are elevated above the peak of the 1% AEP flood. At the peak of a 1% AEP flood event, floodwaters are predicted to enter the site part way along the eastern site boundary and travel in a south-westerly direction before joining Breakfast Creek near the south-western of the site. The peak 1% AEP flood levels vary from 38.2m AHD to 41.1m AHD across the site. Consequently, it is not possible to define a single 1% AEP flood level / flood planning level for the entire site.

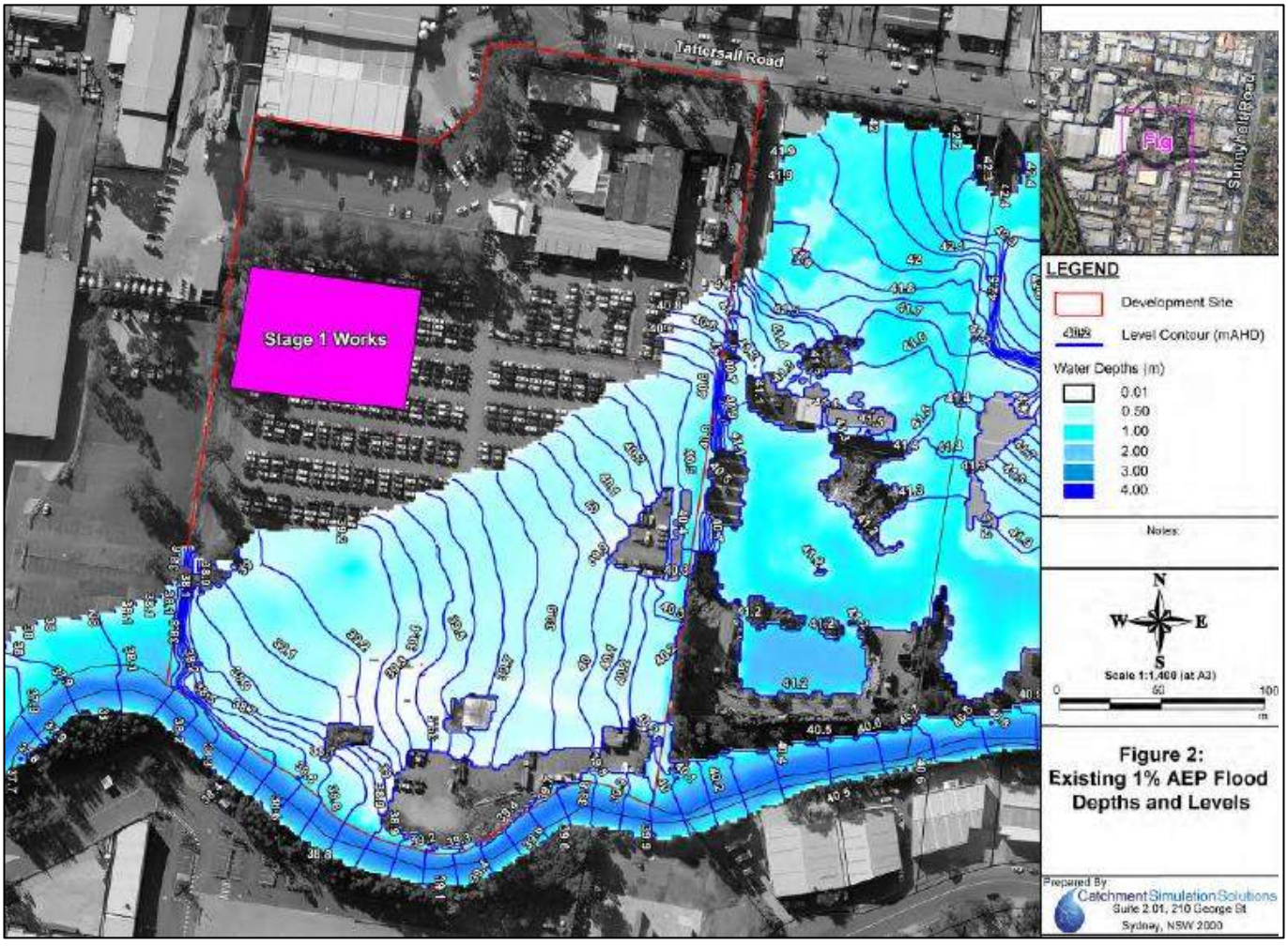


Figure 14: 1% AEP Flood Depths & Levels (Source: Catchment Stimulation Solutions)

As shown in Figure 15, the site of the existing scrap metal processing operations (DA18-01273) is located well outside of the existing 1% AEP extent and does not displace floodwaters or alter the distribution of floodwaters at the peak of the 1% AEP flood. The existing concrete slab (DA18-01273) has a finished floor level of 41.5m AHD, satisfying Council's flood planning level of 41.4m AHD, which is the peak level of the 1% AEP flood plus 0.5 metres freeboard. Catchment Simulation Solutions determined the required slab elevation by using the 1% AEP flood level contours in addition to the ground surface contours. This involved following the ground surface contour from the north-eastern corner of the slab until it intersected a 1% AEP flood level contour near the eastern site boundary. The flood level at this location was determined to be 40.9m AHD. Accordingly, the flood planning level was determined to be 41.4m AHD.

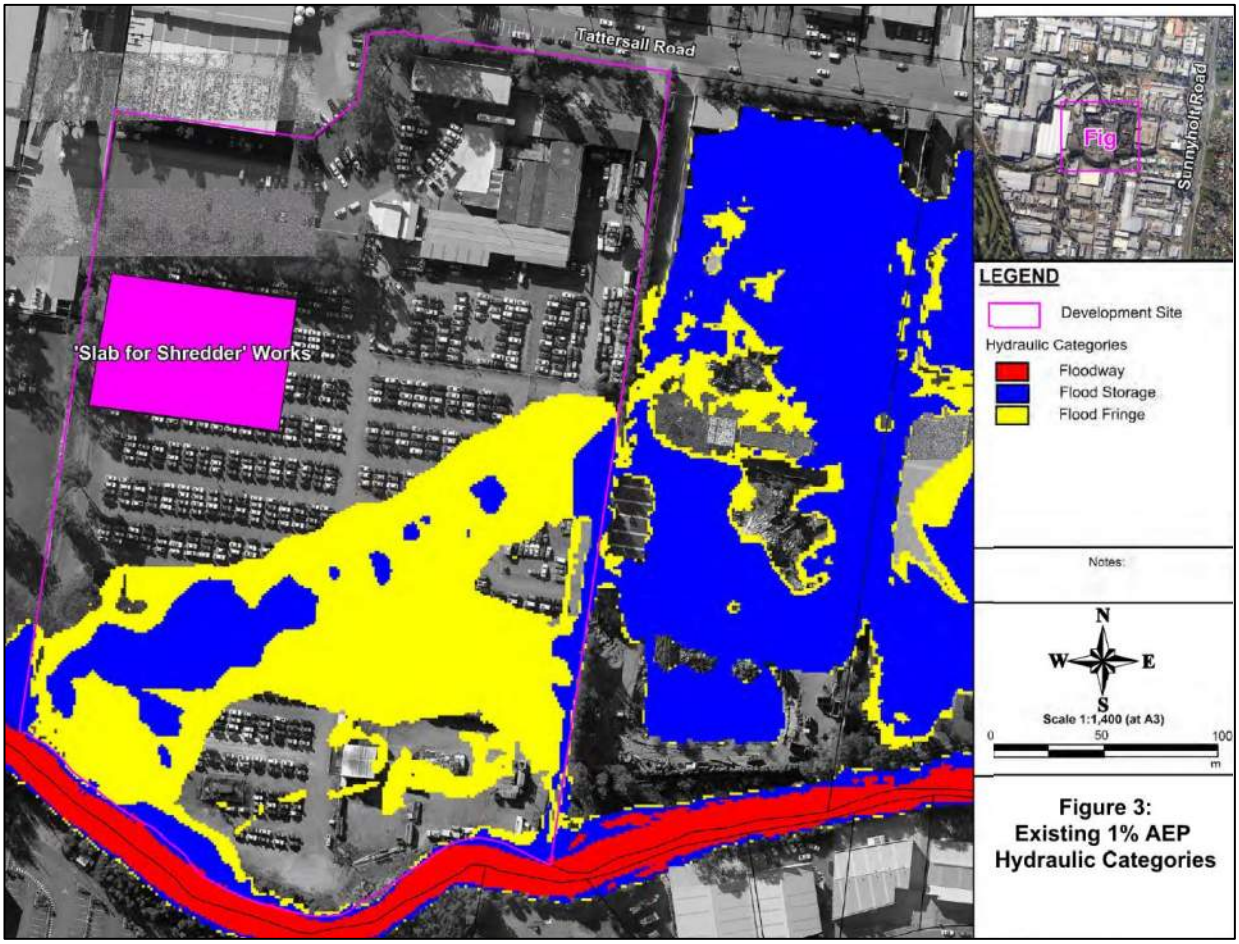


Figure 15: Existing 1% AEP Hydraulic Categories (Source: Catchment Stimulation Solutions)

Floodwater depths across most of the site at the peak of the 1% AEP flood do not exceed 0.5 metres and as shown in Figure 15 above, the majority of the flood affected part of the site would be classified as either flood fringe or flood storage, with flood fringe being the most extensive hydraulic category. A large area of flood storage occurs in the south-west corner of the site and also along the boundary with Breakfast Creek. The hydraulic categories demonstrate that the site does not serve as a major conveyance or 'floodway' at the peak of 1% AEP.

Proposed site alteration works that impact upon the existing 1% AEP extent are:

- construction of the concrete slab for the shear, involving filling of much of the southwest quadrant of the site; and
- construction of an access road around the south-eastern south-western and southern perimeters.

The TUFLOW hydraulic model was updated to include the proposed design topography for the above works and used to simulate the 1% AEP flood event. The modelling demonstrated that:

- those sections of the site where inundation is predicted at the peak of the 1% AEP flood event would be classified as either flood storage or flood fringe (see Figure 15), similar to the existing conditions
- The hydraulic categories confirm that the site will not serve as a major conveyance, 'floodway', at the peak of the 1% AEP flood under existing or post-development conditions;
- There is no net loss in storage due to compensatory storage areas being provided.

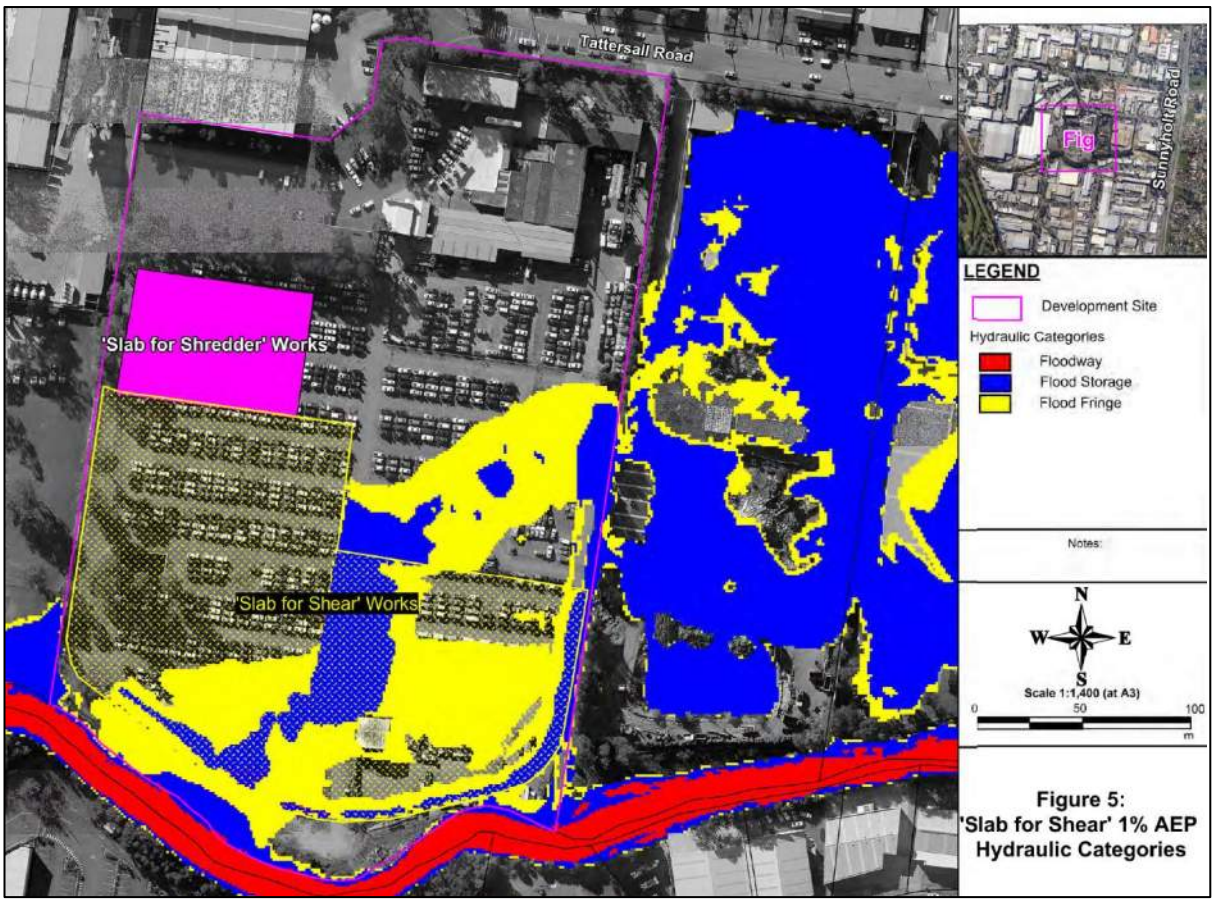


Figure 16: Proposed Works 1% AEP Flood Depths & Levels (Source: Catchment Stimulation Solutions)

The proposed terrain modifications are predicted to alter the direction and depth of flow through the site. The predicted flood level differences post-development are shown in Figure 17 below. The central and southern portions are predicted to experience increases in flood level and the eastern portion is predicted to experience a reduction in the flood level. However, all of the predicted flood level changes are fully contained within the site and are not predicted to adversely impact on existing flood levels and extents along Breakfast Creek or across adjoining properties.

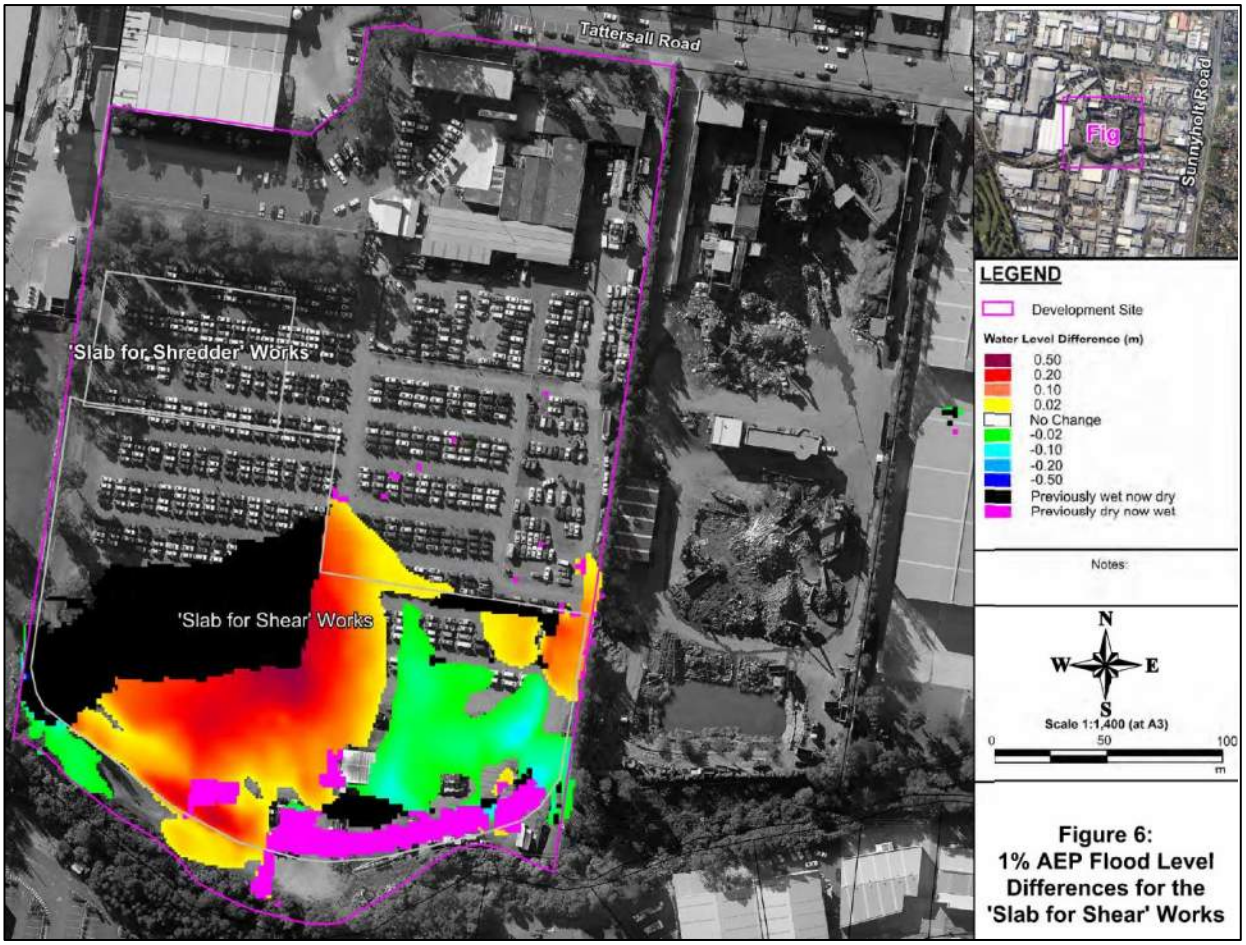


Figure 17: 1% AEP Flood Depths & Levels (Source: Catchment Stimulation Solutions)

Clause 7.2 Terrestrial Biodiversity

The site is mapped as containing Terrestrial Biodiversity (Sheet BIO 013) as shown in Figure 18. The objective of this clause is to maintain terrestrial biodiversity by:

(a) protecting native fauna and flora, and
(b) protecting the ecological processes necessary for their continued existence, and
(c) encouraging the conservation and recovery of native fauna and flora and their habitats.

In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider:

(a) whether the development is likely to have:
  (i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and
  (ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and
  (iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and
  (iv) any adverse impact on the habitat elements providing connectivity on the land, and
(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Council must be satisfied that:

(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or
(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact

Figure 18: Blacktown LEP 2015, Terrestrial Biodiversity Map, Sheet BIO 013

There are only two groups of native trees located on and near the western boundary of the site. The vegetation on the western side boundary and on the adjacent lot to the west of the site is mapped as terrestrial biodiversity in Blacktown Local Environment Plan 2015. The subject site is only marginally affected by the terrestrial biodiversity mapping and the majority of the terrestrial biodiversity mapping overlays a sealed car park on the adjoining land to the west.

It is proposed to remove one tree adjacent to the western boundary to accommodate the widening of the internal access road.

Molino Stewart was engaged to conduct a biodiversity assessment (Appendix J) and it was found that:

- The removal of the vegetation onsite would not constitute a significant impact.
- The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor.

The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.

Clause 7.5 Essential Services

Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required:

(a) the supply of water,
(b) the supply of electricity,
(c) the disposal and management of sewage,
(d) stormwater drainage or on-site conservation,
(e) suitable vehicular access.

All services are currently in place at the site.

The site can be serviced by water, electricity, sewage, communications, vehicular access and stormwater management. Each service will be appropriately extended and upgraded as necessary.

Sydney Water has advised that water supply from the water main located north on Tattersall Road provides a flow of more than 60 L/s with a pressure of 750 KPa (72 pressure head m). Refer to hydrant design and Sydney Water flow and pressure approval in Appendix L

Clause 7.8 Development of certain land in Zone IN1

This clause applies to any land within Zone IN1 General Industrial that is within 250 metres of land in a residential zone.

The clause is not applicable in this instance. The nearest residences are located to the east on the far side of Sunnyholt Road, approximately 550 m from the site. To the west the nearest residences are approximately 660 metres from the site, with the residential and industrial zones being separated by the Richmond railway line.

9.2 Blacktown Development Control Plan 2015

Clause 11(a) of State Environmental Planning Policy (State and Regional Development) 2011 excludes the application of development control plans.

In this regard, the DCP is not a matter for consideration under s3.42. However, for the purpose of assessing the impact of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality, it is reasonable to provide an assessment of the development's compliance with the DCP.

There are no specific controls relating to scrap metal recycling facilities in Blacktown Development Control Plan 2015. The relevant planning considerations outlined by the DCP are addressed in the table below (Table 18).

Part A Introduction & General Guidelines
- Section 4: Environmental Protection
- Section 5: Roads
- Section 6: Car parking
- Section 7: Services
- Section 8: Special Considerations
- Section 9: Development on Flood Prone Land
- Section 10: Local Overland Flooding

Part E Development in Industrial Areas

Table 18: Development Control Plan Matrix

DCP REQUIREMENT	COMMENT
PART A: INTRODUCTION and GENERAL GUIDELINES	

DCP REQUIREMENT	COMMENT
4 Environmental Protection	
4.1 Introduction	Noted
4.2 Areas Requiring Fill	Not Applicable
4.3 Tree Preservation *4.3.1 Provisions of Blacktown LEP 2015* *4.3.2 Siting & layout of Development* *4.3.3 Location plans of existing vegetation* *4.3.4 Ground levels & existing trees* *4.3.5 Lodgement of tree bond* *4.3.6 Register of significant trees*	Not Applicable – no trees are to be removed or will be affected by the proposed amendments
4.4 Heritage *4.4.1 Specified Heritage Items* *4.4.2 Development in the vicinity of a heritage item* *4.4.3 Archaeological sites & areas of significance*	Not Applicable
4.5 Pollution Control *4.5.1 Air Pollution* *4.5.2 Water Pollution* *4.5.3 Noise Pollution* *4.5.4 Waste storage & removal*	An Air Quality Impact Assessment undertaken by Todoroski Air Sciences (see Appendices) concluded that the proposed scrap metal recycling facility would not lead to any unacceptable level of environmental harm or impact. The assessment found that the Thor 2121K hammermill shredder and associated processing equipment constitute only a small source of emissions from the site and the majority of the potential emissions from the site are associated with vehicle movements. The key control measure being dust suppression through the watering of haul roads on the site. The Bravo pre-shedder assists in reducing noise and dust emissions and the Thor 2121K shredder has been fitted with a Dust-Buster Spray System to control blue smoke emissions, dust and floc. An Environmental Noise Assessment undertaken by Day Design Pty Ltd concluded that the proposed scrap metal recycling facility can satisfy all relevant noise and vibration criteria, subject to the construction of an acoustic barrier around the car shredder to reduce the noise emission to the adjacent industrial premises west and north of the site *(See comments under section 4.6 below)*. In relation to water quality, historically the site has been serviced by an approved on-site detention tank/oil and water separator located in the southwest corner of the site which treats stormwater prior to discharge to Breakfast Creek. This system was enhanced as part of the works associated with DA 18-01273 with the installation of an Ecoceptor (GPT) and Stormceptor (contaminant removal, including hydrocarbons). Drainage works associated with this application involve the provision of an on-site detention system to the administrative/workshop catchment areas which discharge to Breakfast Creek adjacent to the eastern

DCP REQUIREMENT	COMMENT
	site boundary. The detention systems restrict peak flows from the site in accordance with the Upper Parramatta Catchment Trust requirements. The existing and proposed water quality treatment devices will reduce discharge of pollution and contaminants from the site in accordance with Council requirements. A sump is located beneath the shredder to contain any runoff generated from the application of the dustbuster chemical and water overspray. 3 x 4,000L sumps have been installed in the floc stockpiling for the purpose of capturing any contaminants that may be contained in the runoff from the stockpiled floc. The sumps have been designed to prevent the capture of rainfall and runoff from other areas of the site by diverting clean water around the sumps. The wastewater is transported off site for disposal at an appropriately licensed liquid waste treatment facility. In the event of a fire, fire water will be retained on site in accordance with the requirements of FRNSW and discharged to sewer. Scrap metal retrieved from the pre-shredder and shredder will be conveyed directly into a shipping container for transport offsite. All ELV's are dismantled as they enter the site, with batteries, motors, gearboxes, fuel and general waste removed. Wastes and other materials that may present a hazard if left on the vehicles are separated. Fuel, oil and diesel are drained into tanks, batteries are stored on pallets under cover, tyres are removed and stockpiled, and air conditioning degassed. All dismantling work takes place on a sealed and bunded concrete area that drains to an oil and grease pit. From there it is pumped through an oil & grease separator, with the oily water and sump sludge collected by a licenced contractor. General waste from vehicles is placed in a 15m3 hook bin which is collected by a licensed waste contractor.
4.6 Noise Reduction	Site related noise emissions are generated from fixed and mobile plant and equipment and include: • Vehicle movements such as trucks and front end loaders; • Pre-shredder and hammermill shredder; • Reversing alarms on trucks, etc. The nearest residential receivers to the site are located approximately 550m to the east and will not be affected by noise from the site.

DCP REQUIREMENT	COMMENT
	The proposed hours of operation of the scrap metal facility are 6am-9pm Monday to Sunday. To ensure that the operation of the proposed development meets the Industrial Noise Policy's noise criteria, an Environmental Noise Assessment was undertaken by Day Design Pty Ltd (see Appendices. The following noise controls were recommended: <u>Pre-shredder and Shredder</u> • A 5 metre high acoustic barrier to be constructed to the north of the shredder at a distance of 2 metres from the machine. • A 6 metre high acoustic barrier to be constructed to the west of the shredder at a distance of 3 metres from the machine. An access hole through the barrier may be provided, for the output conveyor to pass through. • A 4 metre high acoustic barrier to be constructed to the south of the shredder at a distance of 2 metres from the machine. <u>Shear</u> • A 2.5 metre high acoustic barrier to be constructed to the north of the shear at a distance of no greater than 15 metres from the machine. • A 6 metre high acoustic barrier to be constructed to the west of the shredder at a distance of 3 metres from the machine. An access hole through the barrier may be provided, for the output conveyor to pass through. • The acoustic barriers may be constructed with 'Dunewall Custom Height Acoustic Wall. The acoustic barriers around the pre-shredder and shredder were approved under Complying Development Certificate 180201 and Development Application 18-01273. The barriers have been constructed using the Wallmark 'Dunewall' product, a composite combination of Fibre Cement sheeting surrounding an Expanded Polystyrene core. With a 75mm thickness, the product has an acoustic rating of Rw28 (Rw-Weighted *Sound* Reduction Index). The Environmental Noise Assessment Report concluded that subject to the recommendations being implemented, the level of noise emitted from the metal recycling facility will comply with noise level requirements.
4.7 Bush Fire Prone Land	Not Applicable
4.8 Development Adjoining Rail Corridors & High Volume Roads	Not Applicable
5 Roads	
5.1 Blacktown road Network *5.1.1 Arterial Roads*	Not Applicable The proposal does not alter the location of the existing

DCP REQUIREMENT	COMMENT
5.1.2 Sub-arterial Roads *5.1.3 Collector Roads* *5.1.4 Subdivisional Roads* *5.1.5 Cul-de-sac* *5.1.6 Access Streets* *5.1.7 Pedestrian Pathways*	access to and from Tattersalls Road. The eastern driveway crossing will be widened to accommodate 19.5m articulated vehicles
5.2 Road Hierarchy & Required Road Widths	Not Applicable
5.3 Cul-de-sac Heads & Intersections *5.3.1 Residential cul-de-sacs* *5.3.2 Industrial cul-de-sacs* *5.3.3 Intersections* *5.3.4 Access streets*	Not Applicable
5.4 Amendments to proposed road locations *5.4.1 Sub-arterial roads & major collector roads* *5.4.2 Minor residential roads* *5.4.3 Minor industrial roads* *5.4.4 Consideration of amendments* *5.4.5 Advice to adjoining owners*	Not Applicable
5.5 Land Adjoining Arterial & Sub-arterial Roads *5.5.1 Limited access to arterial and sub-arterial roads* *5.5.2 Legal prevention of direct vehicular access* *5.5.3 Temporary access to designated roads* *5.5.4 Existing rights of access*	Not Applicable
6 Car Parking	
6.1 Objectives	Noted
6.2 General principles	Noted
6.3 Specific Land Use Requirements	The proposal complies with onsite car parking requirements.
6.4 Design *6.4.1 Location of Parking Areas* *6.4.2 Access* *6.4.3 Manoeuvring* *6.4.4 Bay & aisle dimensions* *6.4.5 Service vehicle areas* *6.4.6 Pedestrians* *6.4.7 Bicycle parking and facilities* *6.4.8 Parking for persons with a disability* *6.4.9 Landscaping*	Not Applicable The existing approved car parking areas are not affected by the proposal.
6.5 Materials	Not Applicable. All internal roads and car parking areas are to be

DCP REQUIREMENT	COMMENT
	constructed of hard-stand, all-weather material.
6.6 Signs	Not Applicable. Car parking areas are not affected by the proposed amendments.
6.7 Monetary Contributions	Not Applicable.
7 Services	
7.1 Water	The existing approved development is serviced by a reticulated water supply.
7.2 Sewerage	The existing approved development is serviced by a reticulated sewerage service.
7.3 Electricity	The existing approved development is serviced by an electricity service.
7.4 Telephony	The existing approved development is serviced by a telephony service
7.5 Gas	The existing approved development is serviced by a reticulated gas supply.
7.6 Postal Services	The existing approved development has access to postal services.
8 Special Considerations	
8.1 Solar Access	Not Applicable
8.2 Downstream owner's consent	Not Required Stormwater is discharged directly to Breakfast Creek via an approved detention basin and discharge system.
8.3 Traffic Generating Development	In accordance with Schedule 3 (Traffic Generating Development) of SEPP (Infrastructure) 2007 the application is required to be referred to the RMS.
8.4 Crime Prevention Through Environmental Design *8.4.1 Introduction* *8.4.2 Siting & design of buildings* *8.4.3 Subdivision design* *8.4.4 Landscaping* *8.4.5 Lighting* *8.4.6 Access control & territorial reinforcement* *8.4.7 Bicycle parking and facilities* *8.4.8 Parking for persons with a disability*	Not Applicable.
8.5 Retaining Walls and Ground Reshaping	Proposed terrain modifications are associated with the construction of an access road around the south-eastern, south-western and filling of much of the southwest quadrant of the site for the construction of the concrete slab for the shear. The proposed terrain modifications are predicted to alter the direction and depth of flow through the site.

DCP REQUIREMENT	COMMENT
	However, all of the predicted flood level changes are fully contained to the site and are not predicted to adversely impact on existing flood levels and extents along Breakfast Creek or across adjoining properties.
9 Development on Flood Prone Land	
9.1 Introduction	Noted
9.2 Aims and Objectives	Noted
9.3 Definitions	Noted
9.4 Control of Development on Flood Prone Land *9.4.1 Heads of consideration* *9.4.2 Development within the floodway* *9.4.3 Development within the flood fringe*	The subject land is identified as flood prone land. Council has advised that the preliminary 100 year flood level for the site is 40.8m AHD. The Flood Impact Assessment carried out by Catchment Simulation Solutions found that the proposed site of the scrap metal processing facility is located well outside of the existing 1% AEP extent and will not displace floodwaters or alter the distribution of floodwaters at the peak of the 1% AEP flood. The hydraulic model was updated to include the proposed design topography for the above works and used to simulate the 1% AEP flood event. The modelling demonstrated that: • those sections of the site where inundation is predicted at the peak of the 1% AEP flood event would be classified as either flood storage or flood fringe (see Figure 17), similar to the existing conditions • The hydraulic categories confirm that the site will not serve as a major conveyance, 'floodway', at the peak of the 1% AEP flood under existing or post-development conditions; • There is no net loss in storage due to compensatory storage areas being provided.
9.5 Survey Plans	Survey plan attached.
9.6 Work as Executed Plans	Noted.
10 Local Overland Flooding – major drainage & local runoff	
10.1 The Issue	Not Applicable
10.2 Aims and Objectives	Not Applicable
10.3 Definitions	Not Applicable
10.4 Control of Development on Land Subject to Local Overland Flooding *10.4.1 Heads of consideration* *10.4.2 Planning & design criteria* *10.4.3 Development*	Not Applicable
PART E DEVELOPMENT IN INDUSTRIAL AREAS	
1 Introduction	
1.1 Land to which this Part applies	Noted
1.2 Objectives	Noted
1.3 The Industrial, B5 & B7 zones	Noted

DCP REQUIREMENT	COMMENT
1.4 Definition of Light Industry	Noted
1.5 Change of Use	Not Applicable
1.6 Factory units	Not Applicable
2 Ancillary Commercial Premises in the Industrial, B5 & B7 Zones	
2.1 Ancillary Retail Premises	Not Applicable
3 Subdivision of Industrial land	
3.1 Minimum Subdivision Lot Size	Not Applicable
3.2 Minimum Lot width	Not Applicable
3.3 Battle-axe Shaped Allotments	Not Applicable
3.4 Strata Subdivision	Not Applicable
4 Design Guidelines	
4.1 Setbacks	Existing building setbacks are not affected by the proposal.
4.2 Landscaping	The existing approved landscaping is not affected by the proposed amendments. Therefore, a landscaping plan is not required.
4.3 Consideration of Adjoining land	Not Applicable. The site is not located on a major traffic route or on land near to or adjoining a residential zone, a RE1 Public Recreation zone or a sensitive use such as a school.
4.4 Development in the IN1 General Industrial Zone adjoining residential land	Not Applicable The nearest residences are located approximately 550 m to the east on the far side of Sunnyholt Road.
4.5 Building Design and Construction	Not Applicable
4.6 Open Storage Areas	Material stockpiles are proposed to be located on hardstand areas and the size of stockpiles is in accordance with fire engineering recommendations. The open storage areas are screened from Tattersall Road by the existing buildings.
4.7 Vehicular Access and circulation	All internal roadways, circulation and parking areas are sealed with a hard-stand, all-weather material. The width of internal roadways and circulation pathways comply with minimum requirements.
4.8 Car Parking	The proposal complies with onsite car parking requirements.
5 Specific Controls for the Huntingwood Industrial Estate	
5.1 Aims *5.2 Appropriate types of light industry* *5.3 Multi-tenanted industrial development* *5.4 Design guidelines*	Not Applicable
6 Specific Controls for the B7 Business Park Zone	
6.1 Preliminary *6.2 Detailed design guidelines* *6.3 Landscaping guidelines*	Not Applicable
7 General	

DCP REQUIREMENT	COMMENT
7.1 Services	The site is serviced by reticulated water and sewerage, electricity, telephone and gas services.
7.2 Pollution Control	The proposed development will be subject to licensing under the Protection of the Environment Operations Act 1997. To control blue smoke emissions, dust and other particulates the Thor 2121K hammermill is fitted with a Dust-Buster Spray System. The foam is environmentally safe, biodegradable, non-hazardous, VOC and solvent-free, and reduces dust emissions by up to 85%. The BRAVO Pre-shredder, a slower-speed, high-torque machine, reduces the risk of explosions and air pollution, as the slowly turning rotors in the pre-shredder tear the materials apart instead of smashing them into pieces, the formation of sparks is avoided and the hazard of ignition is prevented. The Air Quality Impact Assessment undertaken by Todoroski Air Sciences concluded that the proposed scrap metal recycling facility would not lead to any unacceptable level of environmental harm or impact. The assessment found that the Thor 2121K hammermill shredder and associated processing equipment constitute only a small source of emissions from the site and the majority of the potential emissions from the site are associated with vehicle movements. The key control measure being dust suppression through the watering of haul roads on the site. All dismantling work of ELV's will be undertaken on a sealed and bunded concrete area that drains to an oil and grease pit. Mitigation measures are proposed for both stormwater quantity and quality management to bring the new development into compliance with Council's current engineering standards.
7.3 Areas requiring filling	Not Applicable
8 Sex Services in Industrial Areas	
8.1 Background *8.2 Aims of this section* *8.3 Location of sex services premises* *8.4 Lodging a development application* *8.5 Specific requirements* *8.6 Consents and matters for consideration by Council*	Not Applicable

9.3 Other Council Plans and Policies

9.3.1 Blacktown Local Planning Strategy

Our Blacktown 2036 is the long term Community Strategic Plan for the Blacktown LGA. The plan identifies the main priorities and aspirations for the LGA over the next two decades. There are six strategic directions:

- a vibrant and inclusive community
- a clean, sustainable and healthy environment
- a smart and prosperous economy
- a growing city supported by accessible infrastructure
- a sporting and active city
- a leading city.

The Draft Blacktown Local Strategic Planning Statement (LSPS) translates the vision and directions expressed in *Our Blacktown 2036*. It pprovides context and direction for land use decision making in Blacktown City for the next 20 years by outlining how future growth and change will be managed.

The LSPS does not contain any specific recommendations in relation to the Kings Park industrial precinct but the proposed development is consistent with the identified employment areas in the LSPS. The proposal is also consistent with local Planning Priority 9:

> "Maximising opportunities to attract advanced manufacturing to, and innovation in, industrial and urban services land."

The LSPS recognises that as the industrial sector adapts to new technologies and innovations, industrial land is evolving from traditional industrial and manufacturing lands, and freight and logistics hubs, into complex employment and urban services lands. The metal recycling facility is an urban service that serves the local communities and businesses and requires access to employment land.

10 Environmental Impact Assessment

10.1 Environmental Risk Assessment

To assist in identifying the key environmental and social impacts associated with the project and the likely severity, an Environmental Risk Assessment (ERA) was undertaken in accordance with Australian Standard AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines. The methodology used for the ERA process, and a summary of the results, are outlined below in the following sections.

10.2 Methodology

10.2.1 Key Environmental and Social Impacts

The key environmental and social impacts associated with the Project and requiring further assessment and reporting were identified through:

- The existing environmental context of the site and surrounding locality (**Section 3**);
- The outcomes of consultation undertaken to date with government agencies and other relevant stakeholders (**Section 13**);
- Project SEARs (**Section 5**);
- Legislative and statutory framework (**Section 7 & 8**); and
- Specialist studies undertaken as part of the preparation of this EIS (**Section 11**).

The key environmental and social impacts identified for the project were:

- Waste Management
- Soil and Water;
- Air quality and odour;
- Noise and vibration;
- Traffic and transport;
- Fire Management;
- Hazards and risk;
- Incident Management;
- Visual amenity
- Surface water;
- Groundwater; and
- Contamination.

10.2.2 Evaluating Likelihood

The likelihood of an impact occurring is based on its associated probability. Whilst best efforts are made in such assessments there is a level of uncertainty which must be considered. With this in mind a conservative approach has been undertaken with regard to attributing likelihood to the impacts identified.

The key environmental and social impacts for the Project were assigned a likelihood between remote and almost certain in accordance with Table 20 (column 1). Column 2 provides a description that elaborates on the possible likelihood categories and column 3 provides the frequency.

Table 19: Likelihood Table

Likelihood		Description	Frequency
1	Remote	Extremely rare / unprecedented	1
2	Unlikely	Not expected to occur in most circumstances / Occurs infrequently	2

Likelihood		Description	Frequency
3	Possible	Could happen at some time	3
4	Likely	Probably will occur or has happened in the past	4
5	Very likely	Expected to occur is most circumstances	5
6	Almost Certain	Common Occurrence	6

10.2.3 Evaluating Consequence

Consequence is the categorisation of the possible outcome of an impact occurring. As with the categorisation of likelihood, the assessment of consequence is a subjective process and so it is also a requirement that a conservative approach be adopted. In the event that a consequence is hard to categorise, the impact may be significantly higher than that foreseeable.

The key environmental and social impacts were assigned a consequence between catastrophic and negligible in accordance with Table 15 (column 1). Columns 2 to 7 provide a guide to the elements considered when evaluating a consequence and column 8 provides the severity level.

Table 20: Consequence Table

	Health & Safety	Natural Environment	Built Environment	Community & Social Relations	Legal
Catastrophic	Multiple fatality	Major widespread long-term (5 years or longer) environmental damage and loss. Significant and irreversible impact on threatened species	Irreparable damage to buildings and infrastructure	Entire communities or groups effected, and livelihood diminished. Undeniably justified Government condemnation for illegal / unacceptable behaviour	Major prosecutions and fines resulting in incarcerations for senior executives
Critical	Fatality	Severe loss of environmental amenity and a danger of continued environmental degradation. Very serious long term environmental harm/impacts	Irreparable damage to structures.	Extreme alarm among the community and widespread effect on the livelihoods of people that cannot be immediately remedied. Very serious widespread social impact. Prolonged condemnation by media/NGO's	Significant prosecutions and fines. Very serious litigation, including class actions.
High	Lost time injury	Serious medium term environmental harm/impacts	Significant but repairable damages to structures and infrastructure	Serious public and/or media outcry	Major breach of regulation. Major litigation
Moderate	Medical treatment of injury required	Isolated but significant environmental damage that may be reversed with significant effort. Moderate short term effects but not effecting overall ecosystem function	Minor permanent damage to items of cultural significance	Widespread and temporary or localised but permanent effect and/or displacement of people. Attention from media and/or heightened concern by local community	Moderate legal issues, non-compliances and breaches of regulation
Minor	First aid treatment required	Minor environmental damage that may be reversed (ie. impact limited to one species or location). Minor effects on biological	Repairable damage to items of cultural significance	Temporary or localised effect causing negligible harm. Minor adverse local public or media attention and complaints	Minor legal issues, non-compliances and breaches of regulation.

	Health & Safety	Natural Environment	Built Environment	Community & Social Relations	Legal
		or physical environment			
Minimal	No treatment required. Report only	No environmental harm Limited damage to minimal areas of low significance	Low level repairable damage to commonplace structures	People are largely unaffected nor are they concerned. Public concern restricted to local complaints	Low level legal issues

10.2.4 Risk Assessment Matrix

The combined risk assessment provides a basis for which the final rating can be determined for each relevant risk. The combined risk assessment assesses and combines both the likelihood and consequence of each risk.

The key environmental and social impacts were assigned a risk ranking between negligible and catastrophic in accordance with Table 21, based on the assessment of likelihood and consequence as described above.

Table 21: Risk Matrix Table

Likelihood	Consequence					
	Negligible	Minor	Moderate	High	Critical	Catastrophic
6 - Certain	6	12	18	24	30	36
5 – Very likely	5	10	15	20	25	30
4 – Likely	4	8	12	16	20	24
3 – Unlikely	3	6	9	12	15	18
2 - Possible	2	4	6	8	10	12
1 – Almost Impossible	1	2	3	4	5	6

Risk Scores: 1 - 3 = Low; 4 - 10 = Moderate; 12 - 16 = High; 18 - 24 = Very High; 25 - 36 = Extreme

10.2.5 View Impacts

Table 22 below provides a summary of the risk rankings for the environmental and social impacts considered as part of the ERA. The risk assessment did not identify any aspects of the project with a residual risk of catastrophic or critical.

Table 22: Summary of Risk Rankings

Category	Issue
Extreme	None
Very High	None
High	None
Moderate	Traffic & Transport Hazards and Risk Noise and Vibration Surface water Ground water Soils and contamination
Minor	Air quality and odour Visual Amenity Biodiversity

Where a knowledge gap was identified, specialist technical studies have been undertaken and additional mitigation measures and or management responses proposed. The following sections provide a detailed assessment of the key environmental and social impacts for the project as identified above.

11 Environmental Impact Assessment, Mitigation & Management

This chapter provides a preliminary risk assessment used to prioritise environmental impacts of the proposal, and an assessment of the potential environmental impacts of the proposal as required by Section 79C (1b) of the EP&A Act and the SEARs. Further details of the existing environment, assessment methods, assessment criteria, predicted impacts and proposed management measures are provided in:

Appendix E	Air Quality Impact Assessment
Appendix F	Contamination Investigation
Appendix G	Flood Impact Assessment
Appendix H	Environmental Noise and Vibration Assessment
Appendix I	Preliminary Hazard Analysis
Appendix J	Biodiversity Assessment,
Appendix K	Fire Engineering Brief
Appendix L	Hydrant Design
Appendix M	Traffic and Parking Impact Report
Appendix N	Integrated Health, Safety and Environment Management System
Appendix P	Soil & Water Management Plan,

11.1 Waste Management

The SEARs for the project require the EIS to contain details on waste streams and the measures and processes for the handling, storage and transportation of waste and chemicals, incorporating the items listed below:

- A description of the waste streams that would be accepted at the site including the maximum daily, weekly and annual throughputs and the maximum size and heights for stockpiles.
- Details of the source of the waste streams to justify the need for the proposed processing capacity.
- A description of waste processing operations, including a description of the technology to be installed, resource outputs, and the quality control measures that would be implemented.
- Details of how waste, including waste oil and chemicals, would be stored and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with.
- The measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery 2014-2021.

A Waste Management Plan (WMP) has been prepared to assess the potential waste streams generated from the project, likely volumes of waste produced during construction and operations, and propose management measures to reduce wastes. The Waste Management Plan (WMP) is provided in Appendix Q.

The receipt and handling of all waste metal will be undertaken in accordance with the requirements of the Protection of the Environment operations (POEO) Act 1997. This includes ensuring that waste materials are:

- classified appropriately and in accordance with relevant guidelines;
- disposed of at appropriate licenced facilities; and
- lawfully removed and transported to licenced facilities.

The POEO (Waste) Regulation 2014 establishes the framework for the storage, transportation and disposal of waste material. All waste received at the facility will be stored, transported and disposed of in accordance with the Regulation.

11.1.1 Methodology

11.1.1.1 Guidelines and Policies

The WMP has been prepared to satisfy the principles of the waste hierarchy as detailed in the Waste Avoidance and Resource Recovery Act 2001. The WMP focuses on the waste generated by the proposed development during the construction and operational phases.

The following guidelines and policy documents were utilised in the development of the WMS to ensure consistency with the EPA's waste avoidance and resource recovery aims and objectives:

- EPA's Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21;
- EPA's Waste Classification Guidelines (2014); and
- EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities (2012).

The specific aims and objectives of the WMS are to:

- Encourage the minimisation of waste production;
- Ensure maximisation of resource recovery;
- Minimise the amount of waste being disposed to landfill; and
- Reduce the amount of waste generated per capita.

The likely types and quantities of waste were identified for both the construction and operational phases of the project, followed by measures to increase the recycling and re-use of materials, and mitigation strategies.

11.1.1.2 Waste Hierarchy

Waste management for construction and operations will be undertaken consistent with the waste management hierarchy in the following order of priority from most desirable to least desirable:

- Avoid: Waste avoidance by reducing the quantity of waste being generated. This is the simplest and most cost-effective way to minimise waste. It is the most preferred option in the waste management hierarchy.
- Re-use: Reuse occurs when a product is used again for the same or similar use with no reprocessing. Reusing a product more than once in its original form reduces the waste generated and the energy consumed, which would have been required to recycle.
- Recycle: Recycling involves processing waste into a similar non-waste product consuming less energy than production from raw materials. Recycling spares the environment from further degradation, saves landfill space and saves resources.
- Dispose: Removing waste from worksites and dumping on a licensed landfill site, or other appropriately licensed facility.

The Operator will be responsible for handling, segregating and temporarily storing wastes on the site. Designated waste storage area(s) will be established and maintained to ensure wastes are appropriated managed.

11.1.1.3 Waste Streams

All wastes generated during project construction and operations will be classified in accordance with the NSW EPA *Waste Classification Guidelines* (2014). The Guidelines classify wastes into groups that pose similar risks and waste facilities must carefully follow the procedures in the Guidelines to ensure compliance with applicable laws in classifying their waste and safeguarding the protection of the environment and human health. To simplify the classification process, a number of commonly generated wastes have been pre-classified as either hazardous, restricted solid, general solid waste (putrescible) or general solid waste (non-putrescible) in the waste classification definition section of Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act).

Table 23: Pre-classified Waste Classifications (extract: Schedule 1, POEO Act 1997)

Waste Category	Description
general solid waste (non-putrescible).	means waste such as: • glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal, • paper or cardboard, • garden waste, • wood waste, • household waste from municipal clean-up that does not contain food waste, and • building and demolition waste.
general solid waste (putrescible)	means waste such as: • household waste containing putrescible organics, • waste from litter bins collected by or on behalf of local councils, • manure and nightsoil, and • food waste.
hazardous waste	means waste such as: • lead-acid or nickel-cadmium batteries (being waste generated or separately collected by activities carried out for business, commercial or community services purposes), • coal tar or coal tar pitch waste, • lead paint waste, and • anything that is classified as: (i) a substance of Class 1, 2, 5 or 8 within the meaning of the *Transport of Dangerous Goods Code*, or (ii) a substance to which Division 4.1, 4.2, 4.3 or 6.1 of the *Transport of Dangerous Goods Code* applies
liquid waste	means any waste (other than special waste) that : • has an angle of repose of less than 5 degrees above horizontal, or • becomes free-flowing at or below 60°C or when it is transported, or • is generally not capable of being picked up by a spade or shovel
restricted solid waste	means any waste (other than special waste, hazardous waste or liquid waste) that : • is classified as restricted solid waste pursuant to the Waste Classification Guidelines, or • is classified as restricted solid waste pursuant to an EPA Gazettal notice.
special waste	means waste such as: • clinical and related waste, • asbestos waste, and • waste tyres.

The materials accepted at the proposed facility, the 'receivables' such as steel, aluminium, cast iron, wrought iron, motor vehicles and whitegoods can be pre-classified under the Waste Classification Guidelines general solid waste (non-putrescible). In addition to the removal of fuel, oil and ULABs from vehicles generating a waste/recyclable product, the processing of waste metal generates residue waste called 'flock'.

The operational stage of the development will also generate waste from the office functions, site maintenance and general cleaning.

The construction stage will generate waste associated with the removal of construction material refuse, vegetation removal, site regrading and the construction of new buildings and infrastructure. The likely types and quantities of waste have been identified for both the construction and operational phases of the project.

Table 24: Waste by type and classification

Waste Type	Description	Waste Classification	Estimated Volume
Site Preparation Stage			
Vegetation	Removal of one tree – to be mulched	general solid waste (non-putrescible)	2.0 m^3
Excavated Soil	Bulk earthworks result in a net shortfall of fill material.	Excavated Natural Material If transported for use off site, sampling and testing to be undertaken in accordance with EPA Resource Recovery Order 2014.	372 m^3
Construction Stage			
Building & Construction Waste	Concrete, steel reinforcing, pipe & conduit, cabling, packaging materials, paint	general solid waste (non-putrescible	21.4 m^3
Operational Stage			
Office	Paper, cardboard, ink cartridges, glass, plastic, rubber	general solid waste (non-putrescible)	4.2 tonne per annum
	Food scraps	general solid waste (putrescible)	1.5 tonne per annum
Fuel	Drained from ELVs	Hazardous waste	26,000 litres per annum
Oil/Waste liquids	Drained from ELVs	Liquid waste	30,000 litres per annum
ULABs	Removed from ELVs	Hazardous waste	60 tonnes per annum
Floc	Shredder residue		19,000 tonne per annum

Waste management for construction and operations will be undertaken in accordance with the Waste Avoidance and Resource Recovery Act (WARR) waste management hierarchy in the following order of priority from most desirable to least desirable:

- Avoid: Waste avoidance by reducing the quantity of waste being generated. This is the simplest and most cost-effective way to minimise waste. It is the most preferred option in the waste management hierarchy.

- Re-use: Reuse occurs when a product is used again for the same or similar use with no reprocessing. Reusing a product more than once in its original form reduces the waste generated and the energy consumed, which would have been required to recycle.
- Recycle: Recycling involves processing waste into a similar non-waste product consuming less energy than production from raw materials. Recycling spares the environment from further degradation, saves landfill space and saves resources.
- Dispose: Removing waste from worksites and dumping on a licensed landfill site, or other appropriately licensed facility.

As detailed in Table 25 below, the proposed facility is consistent with the aims and objectives of the NSW Waste Avoidance and Resource Recovery 2014-2021 because the facility will divert waste from going to land fill and the waste metal collected will be recycled and reused.

Table 25: Application of the Waste Management Hierarchy

Waste Type	Waste hierarchy		
	Avoid	Re-use / recycle	Dispose
Site Preparation Stage			
Vegetation	Vegetation clearance will be minimised as much as is practicable and a VMP has been prepared to protect and restore vegetation being retained.	Organic material will be mulched and re-used onsite or recycled through a private contractor or Council's green waste program.	
Excavated Soil		Excavated material classified as ENM will be reused onsite for fill	Excavated material classified as ENM that cannot be reused onsite will either be transported for use off site with sampling and testing undertaken in accordance with EPA Resource Recovery Order 2014 or classified as general solid waste (non-putrescible) and disposed of at a licenced facility.
Construction Stage			
Building & Construction Waste	Material wastage to be minimised as much as is practicable	Where practicable metal waste, timber and concrete will be reused onsite or recycled at an approved facility	Any remaining construction waste will be classified as general solid waste (non-putrescible) and disposed of at a licenced facility.
Operational Stage			
Office	Paper, cardboard, ink cartridges, glass, plastic, rubber	Paper, cardboard, glass, plastic, ink cartridges and electronic equipment sorted and recycled by VEOLIA..	Any remaining office waste will be classified as general solid waste (non-putrescible). 10m^3 bin collected by VEOLIA monthly and non-recyclables disposed of at a licenced facility.
Fuel		Rush Metal Recyclers reuses fuel drained from vehicles in company vehicles and equipment	Waste fuel collected in a 980L self-bunded tanks and disposed of at a licenced facility.
Oil		Recycling options to be investigated	Waste fuel collected in a 980L self-bunded tanks and disposed of at a licenced

			facility
ULABs	Rush Metal Recyclers will not accept rechargeable batteries of any kind, including lithium-ion, nickel cadmium & nickel-metal hydride	ULABs stored undercover in bound and wrapped on spill trays. Removed by a licenced contractor for reuse.	
Floc			Disposed of at a licenced facility.

Waste generated during construction would be separated with the use of dedicated skips for timber, general waste, and recyclables. The frequency of waste removal would depend on volumes of material being generated. Skips would be checked every day and, if at or reaching capacity, removal would be organised within 24 hours.

The Operator will be responsible for handling, segregating and temporarily storing wastes on the site. Designated waste storage area(s) will be established and maintained to ensure wastes are appropriated managed.

11.1.2 Waste - Quality Control, Handling and Transport

11.1.2.1 Quality Control

In relation to quality control, Auto Recyclers and Rush Metal Recyclers have implemented an Integrated Health, Safety and Environment Management System (Appendix N) for ensuring appropriate methods for the management of waste and ensuring that wastes which are accepted at the facility meet work, health and safety (WHS) obligations. The methods include:

- Informing customers;
- Checking and inspection of incoming loads;
- Rejecting loads;
- Recording non-complying waste generators;
- Investigating non-compliant incidents; and
- Staff training

The initial inspection of all incoming waste material occurs at the weighbridge. This also includes the recording of the date, name and originating address of the waste material, as well as the weight and waste classification. The aim is to intercept any non-complying waste loads prior to stockpiling. Any non-compliant loads will be rejected and the details recorded.

The second inspection occurs when the load is tipped at the unloading area and prior to stockpiling. If prohibited/hazardous waste material is discovered after the load has been tipped, the load is either rejected and loaded back onto the vehicle or isolated until removal can be arranged.

The waste generator will be notified of any rejected loads and the details of the waste generator and transporter recorded in a register, to assist in identifying repeat offenders and maintaining an effective inspection regime.

All Auto Recyclers and Rush Metal Recyclers staff working at the facility will receive ongoing training in waste inspection, handling and management practices.

11.1.2.2 Handling

The facility is expected to receive approximately 130,000 tonnes of waste metal per annum equating to roughly 360 tonnes of material arriving at the facility each day it is open. Approximately 340 tonne of this

material is ferrous metals consisting of steel, stainless steel, wrought iron and cast iron. This material is sorted and deposited into the heavy gauge metal storage area or the light gauge metal storage. The maximum size of the scrap metal stockpile will be:
Shredder feed 28 metres (l) x 10 metres (w) x 4 metres (h); and
Shear feed 17 metres (l) x 10 metres (w) x 4 metres (h).

Staff working at the site will be inducted and receive ongoing training in the Auto Recyclers & Rush Metals HSE Policy, Including:

- Waste Management Procedure
- Chemical and Fuel Management Procedure
- Minimum Environmental Standards
- Safe Work Instruction – Processing Vehicles

11.1.2.3 Stockpile Management

The only external stockpiles containing significant amount of combustible material on the site are the shredder stockpile and the floc stockpile. The proposed size of both stockpiles is in accordance with the recommendations of the Fire Engineering report (Appendix K).

Shredder feed stockpile	28 metres (l) x 10 metres (w) x 4 metres (h); and
Floc stockpile	8 metres (l) × 8 metres (w) ×4 metres (h)

The shredder stockpile equates to approximately 280 tonnes at 250kg/m^3. This is significantly less than the forecast daily processing capacity of the shredder at 400 tonne. Consequently, the stockpile will be turned on a daily basis.

All stockpiles will be maintained with fire barriers and the open storage yard will be protected by a hydrant system compliant with AS 2419.1.

Management of the stockpiles will be carried out in accordance with the HSE Waste Management procedure.

11.1.3 Mitigation and Management Measures

The following mitigation and management measures will be applied during construction and operation of the development:

- Ordering will be limited to only the required amount of materials;
- Materials will be segregated to maximise reuse and recycling;
- Routine checks to be undertaken of waste sorting and storage areas for cleanliness, hygiene and OH&S issues, and contaminated waste materials;
- Separate skips and recycling bins will be provided for effective waste segregation and recycling purposes;
- Training and awareness will be undertaken for site staff and contractors;
- Contaminated waste will be managed, transported, and disposed of in accordance with EPA requirements;
- Off-site waste disposal will be transported and disposed of in accordance with licensing requirements;
- Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes will be undertaken; and
- Regular monitoring, inspection and reporting requirements will be undertaken.
- Implementation and compliance with Auto Recyclers and Rush Metal Recyclers policies, procedures and safe work instructions, including:
  - Documentation and Records Procedure;
  - Minimum Environmental standards;
  - Chemical and Fuel management Procedure;

- Waste Management procedure;
- Air Emissions Procedure; and
- Training Procedure.

11.1.4 Conclusions

Further to the above mitigation measures, a WMP has been prepared for the development which is attached in Appendix Q. The WMP details the type and volume of waste produced for each waste stream, its reuse or disposal, and the volume of waste reused or disposed.

11.2 Soil and Water

The SEARs for the project require the EIS to contain a detailed assessment of the impacts of the development on soil and water, incorporating the items listed below:

- An assessment of potential impacts to soil and water resources, topography, hydrology, drainage lines, watercourses and riparian lands on or nearby to the site.
- A detailed site water balance, including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise water use at the site.
- Details of any groundwater extraction and any works with the potential to intercept the groundwater table.
- Characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters).
- Details of stormwater/wastewater/leachate/firewater management systems including the capacity of onsite detention systems, and measures to treat reuse or dispose of water.
- An assessment of the integrity of any existing stormwater/wastewater/leachate infrastructure to be utilised by the proposed development.
- The measures that would be implemented to ensure that stormwater drainage is in accordance with Blacktown City Council's Drainage design Manual 2005.
- A description of erosion and sediment controls.
- Characterisation of the nature and extent of any contamination on the site and a description of proposed management measures.

Reports prepared in support of the proposed development include contamination , flooding and water management. The reports address existing conditions at the site together with recommended management measures.

11.2.1 Existing Environment

The site is relatively level with existing ground surface sloping gently to the southwest towards Breakfast Creek. The southern portion of the site is affected by local catchment flooding.

The surface of the site consists of concrete, asphalt and minor landscaped areas in the northern portion of the site and predominantly dolerite gravel, landscaped areas, and partial concreted areas in the central and southern portions.

11.2.1.1 Soils

The geology underlying the site, comprises the upper Triassic aged Bringelly Shale, a sub-group of the Wianamatta Group consisting of shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff (NSW Department of Minerals and Energy (1991, *Geological Survey of NSW Geological Series Sheet 9030)*.

The Australian Soil Resource Information System (ASRIS) describes the site soils as of the Sodosols order. Sodosols are defined as soils with strong texture contrast between A horizons and sodic B horizons which are not strongly acidic. ASRIS describes the site as being located in an area of extremely low probability of occurrence of acid sulphate soils (ASS). An acid sulphate soil management plan is not required for this development.

Based on the soil, geological and hydrogeological review, the site is expected to be located upon relatively impermeable brown clay soils, overlying moderate to deep shale units.

11.2.1.2 Ground Water

The elevation across the site is between approximately 45 meters Australian Height Datum (AHD) in the north and 38m AHD in the south along the boundary with Breakfast Creek. The inferred groundwater flow direction is to the south/southwest toward Breakfast Creek.

Groundwater sampling undertaken for the contamination investigation found that:

- Groundwater yield was relatively good with a flow rate of approximately 6 litres/minute during pumping;
- Groundwater showed no signs of contamination by hydrocarbons; and
- Groundwater is non-potable given relatively high electrical conductivity readings.

There is no extraction of ground water currently undertaken or proposed to be undertaken in the future.

11.2.1.3 Surface Water

Stormwater generally drains through a network of pipes within the sealed surfaces of the northern part of the site. The majority of the unsealed areas are governed by infiltration or overland surface towards an existing stormwater pit located approximately in the middle of the site. This pit is connected to a large open on-site detention and water quality tank which contains an oil and water separator. Stormwater is treated within this tank by a series of sand filled baffles before being discharged into Breakfast Creek via a single 600mm diameter pipe at the southwest corner of the property. A secondary discharge point located in the southeast corner captures a small amount of runoff in an open drain along the eastern site boundary. The stormwater in this open drain is not treated prior to discharge.

These components of the existing drainage system were installed prior to the occupation of the site by Auto Recyclers Pty Ltd in 1996.

Stormwater runoff from the concrete slab (CDC 180201) in the northwest corner of site is directed into a small on-site detention basin located adjacent to the concrete slab. Sediment and gross pollutant are captured in this basin by a trash screen and sediment sump before being further treated by a Spel Ecoceptor Gross Pollutant Trap to remove sediment, gross pollutants and hydrocarbons. The stormwater is then discharged into Breakfast Creek pipe at the southwest corner of the property.

11.2.2 Flooding

Catchment Simulation Solutions were engaged to prepare a Flood Impact Assessment with the objective of determining flood behaviour across the site for the 1% AEP flood and defining the 1% AEP flood levels across the existing site (see Appendix G). See flooding assessment in Section 9.1.3.

The flood simulation modelling showed that at the peak of a 1% AEP flood event, floodwaters are predicted to enter the existing site part way along the eastern site boundary and travel in a south-westerly direction before joining Breakfast Creek near the south-western of the site. Floodwater depths across most of the site at the peak of the 1% AEP flood do not exceed 0.5 metres.

As shown in Figure 19 below, the location of the existing slab for the pre-shredder, hammer-mill and downstream processing equipment is located well outside of the existing 1% AEP extent. These works had no impact on existing flood levels, did not displace floodwaters or alter the distribution of floodwaters at the peak of the 1% AEP flood.

The proposed slab for the shear and the perimeter access road extend into the existing 1% AEP extent. The flood simulation modelling showed that the associated terrain modifications will divert floodwaters entering the site along the eastern boundary in a more southerly direction, alter the direction and depth of overland flow through site and alter the extent of existing flood storage and flood fringe areas within the site.

However, flood level difference mapping confirmed that all predicted flood level changes are fully contained to the development site and is not predicted to adversely impact on existing flood levels and extents along Breakfast Creek or across adjoining properties.

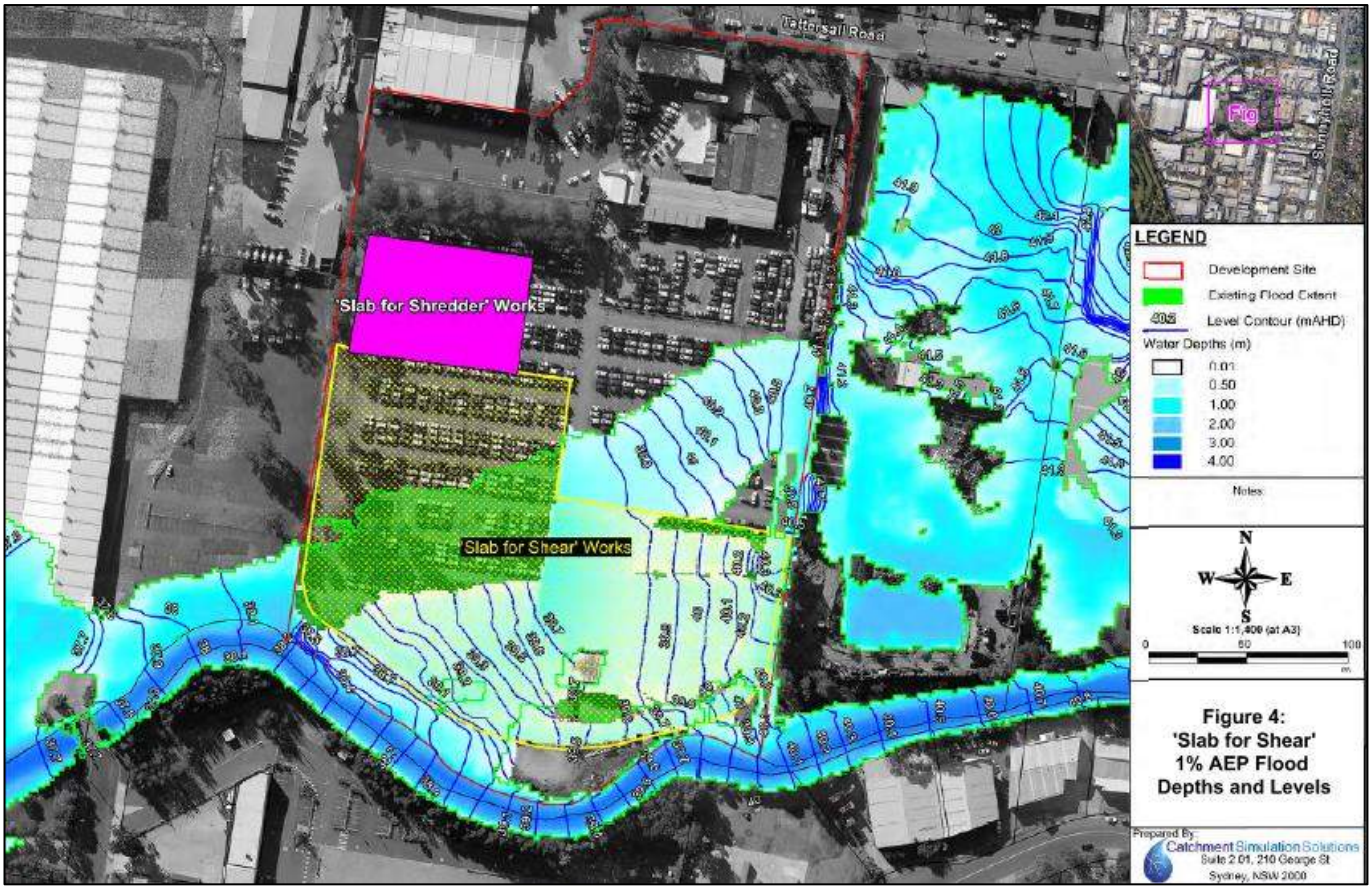


Figure 19: 1% AEP Flood Extent

11.2.3 Contamination Assessment

A Contamination Investigation was carried out by Sullivan Environmental Sciences (Appendix F). The purpose of the investigation was to establish baseline conditions for soil and groundwater quality and a contaminant profile of the site. The Contamination Investigation concluded that overall the site is considered suitable for the proposed use and found that:

- Concentrations of contaminants in both soil and groundwater samples met the adopted investigation levels indicating that generally onsite soils and groundwater are unlikely to pose an unacceptable health risk. Groundwater showed no signs of contamination by hydrocarbons or any other apparent adverse impacts from site activities, indicating that limited infiltration of surface water is occurring at the site.

- Oil-stained patches across the unsealed spare parts yard show elevated concentrations of hydrocarbons. The oil stained patches are approximately 1m x 1m and 0.1-0.2m deep and individually do not present a health risk. However, collectively the number of oil stained patches pose a long term contamination source and should be rectified.
- Phthalate esters were detected in proximity to the car shredding and floc stockpile on the southern part of the land. Concentrations in soils was below relevant screening criteria and pose negligible risk.
- Surface water discharging into Breakfast Creek from the two stormwater outlets is impacted by heavy metals and total petroleum hydrocarbons (TPHs).

To address site contamination issues it is recommended that:

- Each oil patch to be excavated and stockpiled within a designated area onsite. The stockpile of excavated soils to be sampled and analysed to classify the soils for offsite waste disposal. A waste classification certificate to be prepared for each waste stream being transported and removed offsite. A summary report be prepared to document works.

- An oil absorbent mat to be placed beneath each vehicle stored on unsealed ground to absorb drips and leaks from engine parts as an interim measure until soils are excavated and that the mats continue to be used after excavation to prevent further soil contamination by leaking oils.

  A programme of installing oil absorbent mats beneath vehicles stored on open ground has been implemented by Autorecyclers.

- Improvement is stormwater quality should be addressed during future development of the site. Viable options should include passive and active treatment systems.

  The proposed Improvements to onsite stormwater management and treatment are addressed in Section 11.2.4.

The primary environmental concern at scrap metal recycling facilities is the potential for groundwater and surface water contamination due to mishandling of vehicular fluids, including petrol, diesel fuel, oil, transmission fluid, power steering and brake fluids, gear oil and mineral spirits. Other waste products include mercury from light switch assemblies, HID head lamps, display screen back lighting, and ABS brake sensors; lead from lead-acid batteries, wheel weights and battery cable ends; chlorofluorocarbons (CFCs) and other refrigerants from air-conditioning units; sodium azide from air bags; asbestos from brake shoes and clutches; and waste tires.

Serious adverse impacts on environmental quality can result from mishandling any of these wastes. The possible impacts include:

- Petroleum Hydrocarbons:

Petrol, diesel fuels, and motor oil contain petroleum hydrocarbons. Petroleum hydrocarbons are toxic to aquatic life and some are suspected or known carcinogens. Those with a high affinity for sediments can persist over time in bottom sediments, where they can be toxic to benthic communities. They have the potential to move off site via stormwater and sediment runoff, either directly into surface waters or more commonly through storm sewers. In heavily impacted area, vertical migration of contaminants in groundwater can occur.

- Heavy metals (lead, cadmium, chromium, zinc, copper, nickel, aluminium, arsenic and mercury):

Heavy metals can be toxic to aquatic life and can bio-accumulate in fish and shellfish. At a motor vehicle recycling facility, heavy metals can migrate to surface waters through stormwater runoff and into nearby soils through corrosion of the body and parts, leakage of motor fluids, dismantling operations, and improper handling and storage of vehicle components that contain heavy metals.

- Acids:

Sources of acids include batteries, solvents, and degreasers. Acids can affect soil chemistry, which in turn can adversely affect plants and human health, and can create conditions toxic to soil organisms, and result in soil contamination.

- Suspended solids:

In high concentrations, suspended solids, such as heavy metals, can affect surface waters by reducing clarity and light penetration through the water column. This, in turn, can affect water temperature, plant growth and dissolved oxygen concentrations. Solids that settle to the river bed can smother plants and invertebrates and alter these benthic habitats that play important roles for fish and wildlife.

To minimise the risk of mishaps all employees will receive training in relation to the Health, Safety and Environmental Management System (HSEMS) that Auto Recyclers and Rush Metals have developed (Appendix N). The HSEMS includes the following policies, procedures and safe work instructions:

- Minimum Environmental Standards
- Waste Management Procedure
- Chemical and Fuel Management Procedure
- Air Emissions Management Procedure
- Safe Work Instruction – Processing Vehicles
- Plant and Equipment Procedure
- Spill Response Procedure
- Risk management Procedure
- Incident Reporting and Investigation Procedure

11.2.4 Stormwater Management

The proposed stormwater management system is detailed in the Soil and Water Report in Appendix P. A drainage analysis using DRAINS standard hydraulic analysis has been undertaken to design a new piped drainage system for the proposed works within the site in accordance with Council's DCP - Engineering Guide for Development.

The proposed concrete slab for the shear will extend over the top of the existing large open on-site detention and water quality tank, thereby converting it into a below-ground OSD tank. Stormwater runoff from the proposed development will be collected via a system of pits and pipes constructed along the new access driveways and by 900mm wide concrete dish drains on the downstream side of the new concrete slabs. An upright kerb along the southern edge of the new perimeter access driveway will capture and direct stormwater runoff from hardstand areas for detention.

Stormwater runoff will be directed to the below-ground OSD tank with a storage volume of 658.6m^3. Discharge from the on-site detention tank will be directed to Breakfast Creek at the south-west corner of the site via a new drainage line. All existing redundant stormwater infrastructure will be demolished and removed.

A MUSIC water quality model has been undertaken to ensure compliance with Council's WSUD pollutant reduction targets. The results of the MUSIC model (Figure 7 below) shows that Council's DCP Water Quality Targets will be achieved or exceeded for Total Suspended Solids (TSS), Total Phosphorus (TP), Total Nitrogen (TN) and Gross Pollutants.

Table 26: MUSIC Model – pollutant Reduction Results

	Sources	**Residual load**	**% Reduction**
Flow (ML/yr)	15.4	15.4	0.2
Total Suspended Solids (kg/yr)	4050	574	85.8
Total Phosphorus (kg/yr)	6.88	2.12	69.2

Total Nitrogen (kg/yr)	35.7	17.9	49.9
Gross Pollutants (kg/yr)	403	0.688	99.8

A 2-staged treatment train has been devised using the following proprietary water quality devices by Stormwater 360 and SPEL Environmental:

- Jellyfish Filter – Primary Treatment
  The Jellyfish Filter is a stormwater quality GPT device featuring high surface area and high flow rate membrane filtration at low driving head. By incorporating pre-treatment with light-weight membrane filtration, the Jellyfish Filter removes floatables, trash, oil, debris, TSS, fine silt-sized particles, and a high percentage of particulate-bound pollutants; including phosphorus and nitrogen, metals and hydrocarbons. The high surface area membrane cartridges, combined with up flow hydraulics, frequent backwashing, and rinseable/reusable cartridges ensures long-lasting performance. An appropriately sized Jellyfish Filter GPT will be provided directly upstream of the OSD tank and tertiary treatment system so that stormwater is treated prior to entering the OSD tank. See Appendix D for further product information.

- StormFilter – Secondary Treatment
  The final stage of the treatment train will be the StormFilter device which uses a variety of media to separate and remove target pollutants including total suspended solids (TSS), phosphorous (TP), nitrogen (TN), fine solids, soluble heavy metals, oil, and total nutrients. StormFilter cartridges will be installed in the OSD tank which will be converted into a below-ground tank with the construction of the concrete slab creating a roof. Grated pits will be provided for access and maintenance. Stormwater360's customised calculator spreadsheet was used to determine the number and configuration of StormFilter cartridges. The design requires 8 x 690mm Full Flow ZPG StormFilter cartridges to meet Council's DCP pollutant reduction targets. See Appendix E for further product information.

In addition, the open drainage channel adjacent to the eastern boundary will be upgraded, with the stormwater runoff from the main building and existing access driveway that enters it being collected by three new surface inlet pits and the stormwater being routed through a SPEL Filter and Stormceptor to remove gross pollutants, total suspended solids, hydrocarbons, total phosphorous and total nitrogen prior to being discharged into Breakfast Creek.

A SPEL Stormceptor will also be installed on the existing stormwater drainage line that runs parallel with the western boundary of the site. This water quality device has the capacity to store contaminated fire-retardant water in the event of a fire in accordance with the requirements of Fire & Rescue NSW (see Section 11.6). The contaminated fire water will be disposed of through the sewer trade waste system and ordinary stormwater will be treated and discharge into Breakfast Creek.

11.2.5 Water Conservation

In relation to non-potable water use the requirement is for 80% of the non-potable water use for the site to be met through rainwater. The proposed development does not involve the provision of any new toilets or wet areas and there is only a small amount of landscaped area. The primary non-potable use is for dust suppression and primarily through the warmer months.

Currently during the months of summer, the recycling plant uses 3,000 litres of water twice a week for dust suppression. By providing concrete pavement over 14,200m^2 of the existing site the demand for dust suppression during the summer months will be reduced to 3,000 litres once a week. This non-potable demand equates to 39kL/year. This demand has been modelled within the MUSIC program using a monthly distribution pattern to determine the rainwater tank volume and roof area required to capture and store rainwater (Appendix P). To provide 80% of the non-potable water use for the development a 10kL rainwater tank needs to be installed and connected to all the roof of Building B which has a catchment area of 237m^2.

11.2.6 Site Earthworks

Proposed earthworks are largely confined to the construction of the concrete slab for the shear, involving filling of much of the southwest quadrant of the site, and the construction of the access road around the south-eastern south-western and southern perimeters of the site.

The maximum depth of cut is 700 millimetres and the maximum depth of fill is 1 metre. Approximately 3,900 m^3 of fill is to be imported on to the site. Refer to site cut and fill plan (plan No. CC160136-1-504) in Appendix S.

As discussed in Section 7.1 the proposed earthworks impact upon the existing 1% AEP extent and are : predicted to alter the direction and depth of flow through the site. The central and southern portions are predicted to experience increases in flood level and the eastern portion is predicted to experience a reduction in the flood level. However, all of the predicted flood level changes are fully contained within the site and are not predicted to adversely impact on existing flood levels and extents along Breakfast Creek or across adjoining properties.

11.2.7 Proposed Erosion and Sediment Controls

A preliminary design of erosion and sediment controls for the proposed development is included in the engineering plans (Appendix A).

Controls will be provided on the site prior to and during all earthworks in accordance with Landcom's Managing Urban Stormwater: Soils and Construction, 4th Edition. Features of the construction phase erosion and sediment controls adopted for this site include:

- Prevention of sediment and polluted runoff water from entering the existing adjacent watercourse. This involves the provision of sediment fences, sediment traps and sausage barriers.
- Stabilised stockpile areas to prevent wind and water erosion. Any excess stockpiled material to be removed from the site is to be sampled and analysed in accordance with Wasted Classification Guidelines and upon receipt of the analysis results, disposed of at an appropriately licenced facility.
- Scour protection at discharge locations.
- Stabilised access to provide a firm base for vehicle entry/exit and to prevent the main access from becoming a source of sediment.

11.2.8 Mitigation Management and monitoring measures

The following mitigation and management measures (Table 26) are proposed in relation to limiting the impacts of the development on soil and water:

Table 26: Mitigation Measures

Activity	Measure
Oil stained patches	Each oil patch to be excavated and stockpiled within a designated area onsite. The stockpile of excavated soils to be sampled and analysed to classify the soils for offsite waste disposal. A waste classification certificate to be prepared for each waste stream being transported and removed offsite. A summary report is prepared to document works. Oil absorbent mats be placed beneath each vehicle stored on unsealed ground to absorb drips and leaks from engine parts as an interim measure until soils are excavated

	Use of oil absorbent mats to prevent further soil contamination.
Stormwater Management	Inspection and maintenance of the proposed water quality devices should be undertaken as per the manufacturer's directions for the life of the development and as detailed in Table 3 of the Soil and Water Report (Appendix P).
Fill	Excavated material classified as ENM that cannot be reused onsite to be transported for use off site with sampling and testing undertaken in accordance with EPA Resource Recovery Order 2014 or classified as general solid waste (non-putrescible) and disposed of at a licenced facility.
Erosion and Sediment Control	Erosion and Sediment Control details are to generally be in accordance with the submitted drawings (Sheets 801-811) provided at Appendix A.
Potential Impacts to Surface Water, Ground Water and Soils	The following design and operational measures for preventing accidental contamination of the soil or ground water table should include the following: • Inspection and maintenance program to ensure mechanical integrity of the plant and equipment to minimise accidental releases.

11.2.9 Conclusions

It is considered that the likely impacts on the local soils and water environment can be appropriately managed using the mitigation measures outlined in Table 26 above.

11.3 Air Quality and Odour

The SEARs for the project require the EIS to contain a detailed assessment of the impacts of the development on air quality and odour, incorporating the items listed below:

- A quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines.
- The details of buildings, machinery and air handling systems and strong justification for any material handling, processing or stockpiling external to the building.
- Details of the emission control system and a strong justification for its adequacy based on verified performance at similar facilities.
- A greenhouse gas assessment.
- Details of proposed mitigation, management and monitoring measures.

An Air Quality Impact Assessment has been prepared by Todoroski Air Sciences, in general accordance with the New South Wales (NSW) Environment Protection Authority (EPA) document *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (**NSW EPA, 2017a**).

11.3.1 Existing Environment

Air quality at the site and surrounding areas is influenced by dust and emissions from surrounding industrial and sources.

The nearest sensitive receptors to the Project are located along Sunnyholt Road, Blacktown (Receptors 3-5), approximately 550 metres (m) to the east from the Project boundary. The nearest residential receptor to the west of the site is located at a distance of approximately 600m on Chedley Place, Marayong (Receptor 13). The Blacktown North Public School (Receptor 1) is located approximately 750m southeast of the Project site.

11.3.2 Local Climatic Conditions

Long-term climatic data from the Bureau of Meteorology (BoM) weather station at Horsley Park Equestrian Centre Automatic Weather Station (AWS) (Site No. 067119) were used to characterise the

local climate in the proximity of the Project. The Horsley Park AWS is located approximately 12.5km southwest of the Project.

The data indicate that January is the hottest month with a mean maximum temperature of 29.8 degrees Celsius (°C) and July as the coldest month with a mean minimum temperature of 5.9°C.

Rainfall exhibits variability and seasonal fluctuations across the year. The data indicate that February is the wettest month with an average rainfall of 108.7 millimetres (mm) over 7.3 days and September is the driest month with an average rainfall of 35.8mm over 5.0 days.

Humidity levels exhibit variability and seasonal flux across the year. Mean 9am humidity levels range from 61 per cent (%) in October to 81% in March. Mean 3pm humidity levels range from 42% in August and September to 55% in June.

Mean 9am wind speeds range from 8.9 kilometres per hour (km/h) in March to 12.5km/h in October. Mean 3pm wind speeds range from 12.9km/h in June to 19.9km/h in December.

Analysis of the windroses showed that on an annual basis, winds are predominately from the southwest sector. During summer, winds from the south and east sectors are most frequent. The autumn and spring distributions are similar to the annual distribution, with prevailing winds from the southwest. During winter time the highest percentage of winds come from the southwest and west-southwest.

The windroses showed a wind distribution pattern that is generally typical of the expected patterns for this area.

11.3.3 Ambient air quality

The main sources of air pollutants in the area surrounding the Project include emissions from local anthropogenic activities (such as motor vehicle exhaust and domestic wood heaters), agricultural activities, and industrial and commercial activities.

Potential air pollutants associated with the Proposal comprise dust and particulate matter. Specifically, the following pollutants are identified:

- Total Suspended Particulates (TSP);
- Particulate Matter (PM10 and PM2.5); and,
- Deposited Dust.

Impact assessment criteria for TSP and particulate matter relate to potential health impacts associated with ambient air quality and therefore apply at locations where people spend significant time. Typically, these locations are where people live and work. Alternatively, impact assessment criteria for deposited dust are established to avoid loss of amenity through nuisance dust impacts. Such impacts generally occur at locations where people reasonably the highest levels of amenity, which is typically where they live. Therefore, criteria for TSP and particulate matter are applied at all sensitive receptor locations, and criteria for deposited dust are applied at residential receptors only.

Table 27: Impact Assessment Criteria - Dust and Particulate Matter

Pollutant	Averaging period	Impact	Criteria
Total suspended particulates (TSP)	Annual	Total	90 µg/m³
Particulate matter ≤10 µm (PM10)	Annual	Total	25 µg/m³
	24 hour	Total	50 µg/m³
Particulate matter ≤2.5 µm (PM2.5)	Annual	Total	8 µg/m³
	24 hour	Total	25 µg/m³

Deposited dust (DD)	Annual	Total	4 g/m²/month
	Annual	Incremental	2 g/m²/month

Air quality criteria relate to the total concentrations of dust and particulate matter in the air and not just that from the Proposal. Therefore, consideration of background levels needs to be made when using these criteria to assess impacts.

Available data from the nearest air quality monitors operated by the NSW Office of Environment and Heritage (OEH) were used to quantify the existing background level for assessed pollutants at the Project site. The NSW OEH air quality monitoring station at Prospect is located approximately 5km south of the Project site. Data from the Prospect monitoring site are considered the most representative of the background levels in the vicinity of the Project site. Data from this monitor have therefore been used to quantify the existing ambient levels of air pollutants in this study.

- the annual average PM10 concentrations at Prospect were below the relevant criterion of 25µg/m³. The maximum 24-hour average PM10 concentrations recorded at Prospect were found to exceed the relevant criterion of 50µg/m³ in 2013, 2015 and 2016. The monitoring data for PM10 concentrations recorded at the Prospect monitoring site from January 2012 to December 2016 reviewed indicate that the 24-hour average PM10 levels were at times above the NSW EPA 24-hour average goal of 50µg/m3 during the period reviewed. These exceedances can be attributed to local and regional events such as bushfires and dust storms.

The annual average PM2.5 concentrations at Prospect were above the relevant criterion of 8µg/m³. The maximum 24-hour average PM2.5 concentrations recorded at the Prospect monitor were on occasion above the relevant criterion of 25µg/m³. The monitoring data the daily 24-hour average for PM2.5 concentrations recorded at the Prospect NSW OEH monitoring sites from January 2015 to December 2016 reviewed indicate that the 24-hour average PM2.5 exceeded the NSW EPA 24-hour average goal of 25µg/m3 during the period reviewed. These exceedances can be attributed to local and regional events such as bushfires and dust storms.

In correlation with the meteorological data set used, the 2015 year data set was selected to represent background concentrations at the subject site and surrounding sensitive receptors. As there are no readily available site specific monitoring data for the site the background dust levels for the Project site were assumed to be similar to those at the NSW OEH monitoring site at Prospect.

The air emissions presented in Waste Metal Recovery Processing and Recycling Facility, 45 and 23-43 Tattersall Road, Kings Park, Blacktown prepared by **ERM (2015)** for that facility, were included in the modelling for this Project and applied when assessing the cumulative impacts for particles, odour and lead at the receptors.

11.3.4 Impact Assessment

The dust impact from a site is influenced by a variety of factors including:

- Existing ambient particulate levels;
- Prevailing wind direction;
- Potential magnitude of dust emissions from the site;
- Sensitivity of the surrounding area; and
- Distance of sensitive receivers to the site.

Operational activities that have the potential to generate dust emissions from various activities including loading/unloading of material, sorting activities, shredding, conveying materials, screening materials, and windblown dust from the site. Movements of vehicles on the site may also generate air emissions from the exhaust, brake wear and wheel generated dust when travelling on roads.

In terms of likely impacts, it is important to note that dust is kept to a minimum as all vehicles areas are paved with concrete and there is no burning of any product, timber, rubber etc. on site.

Overall, the modelling results show that the Project would have a minimal impact at nearby assessed receptors and it is unlikely that the Project would result in any discernible change to existing background air quality levels. The dispersion modelling demonstrated that:

- minimal incremental effects would arise at the sensitive receptor locations;
- as the incremental effect is small, the overall difference between the controlled and uncontrolled scenarios is minor;
- the Project would have a minimal impact at nearby assessed receptors; and
- it is unlikely that the Project would result in any discernible change to existing background air quality levels.

11.3.5 Mitigation and Management Measures

The proposed activities at the will generate dust, metal and odour emissions, therefore. it is prudent to take reasonable and practicable measures to prevent and minimise excessive generation of pollutant emissions to the surrounding environment. The following guidance has been reviewed with regard to Best Management Practice for the industry:

- Proposal for Minimum Environmental Standards in the Scrap Metal Industry: Consultation Paper (**NSW EPA, 2017b**);
- Best Practice Environmental Management Guideline for Scrap Metal Recycling Facilities Operating Fragmentisers (**QLD DEHP, 2016**); and,
- BREF style report – Metal fragmentising operations industrial emissions directive (**BMRA, 2013**).

The recommended operational and physical mitigation measures to be employed are summarised in Table 28 below.

Table 28: Mitigation and management options

Source	Mitigation and management
General	Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means).
	Yard to be wetted down at times to prevent fugitive dust from leaving site.
Hauling Activities	Haul routes are to be hardstand.
	Site speed limits are restricted and enforced.
	All vehicle loads are covered for transporting material off- site.
	On-site vehicle engines will be switched off when not in use.
Wind Erosion	Material stockpile size maintained appropriately.
	Hard site surfaces are regularly swept to reduce dust and debris accumulations and limit potential for dust to be tracked off-site by trucks.
	Removal of any fluids/hazardous materials will be undertaken on hardstand area to ensure that the potential for soil contamination would be minimised and thus minimise the potential for contaminated windblown dust to migrate off-site.
Processing	Staff are trained and competent in the identification of acceptable and unacceptable material to be processed. Unacceptable material such as fluids, oils, coolant, petrol, airbags, batteries, gas tanks etc. are removed prior to processing. An investigation would be conducted into the occurrence of any flame event.
	Material stockpile areas are located next to respective process equipment.
	The down-stream shredder processing equipment is covered.
	The 'dust buster' foaming agent dust suppressant is used to control emissions from the hammermill shredder.

Source	Mitigation and management
	To ensure maximum performance, plant is operated and maintained per the manufacturer's user manual.

11.3.6 Conclusions

The Air Quality Impact Assessment has assessed the potential air quality impacts associated with the proposed operation of a scrap metal recycling facility. The estimated air emissions applied in the air dispersion modelling include the cumulative emissions from similar adjacent operations and the background to provide a conservative assessment of the potential cumulative air quality effects which may arise due to the Project.

The operational activities would comprise approximately 60% of the total emissions from the site, with the majority of the Project emissions arising due to vehicle movements associated with incoming and outgoing material.

It is predicted that all of the assessed air emissions would either meet or not cause additional exceedances of the applicable assessment criteria at or beyond the Project boundary and at all assessed sensitive receptor locations.

Overall, it is concluded that the Project would not lead to any unacceptable level of environmental harm or impact subject to the implementation of the recommended air quality management measures to ensure that the potential for the occurrence of any excessive air emissions from the site is minimised.

11.4 Noise and Vibration

The SEARs for the project require the EIS to contain a detailed assessment of the impacts of the development on air quality and odour, incorporating the items listed below:

- A quantitative assessment of potential demolition, construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority Guidelines.
- An assessment of the predicted transport noise and vibration impacts and justification of proposed transport routes and times.
- Details and justification of the proposed noise mitigation and monitoring measures

An Operational Noise Impact Assessment has been prepared by Day Design Pty Ltd in support of the proposed development and is contained in Appendix H**.** The Operational Noise Impact Assessment has been prepared in accordance with the assessment procedures of the EPA's *Industrial Noise Policy* (INP) and relevant Australian Standards.

Noise emissions have been assessed against the site-specific noise criteria derived from the Environmental Protection Authority's (EPA) Noise Policy for Industry (NPfI). The NPfI provides a framework and process for deriving noise criteria and for determining noise trigger levels, assessing/measuring intrusive noise, guidelines for feasible and reasonable noise mitigation measures.

The project noise trigger level represents the level that, if exceeded, may indicate a potential noise impact upon a community. It is a benchmark or objective and is not intended for use as a mandatory requirement. The criteria are not mandatory, nor do they mark the point at which noise levels become unacceptable.

11.4.1 Existing Environment

Development nearby to the site is not of a nature that is particularly sensitive to noise. Surrounding development is largely related to industrial activities and some of which is of a scale much larger than the proposed development. The site is surrounded by:

- Sell & Parker scrap metal recycling on the eastern boundary;
- a plastic moulding and container manufacturing facility to the north (opposite side of Tattersall Rd);
- a tile warehouse facility with office and logistics business on the western boundary; and
- a place of worship on the southern side of Breakfast Creek.

The general ambient noise levels are dominated by road traffic along Tattersall Road, operational noise of the Sell and Parker scrap metal recycling business and surrounding industrial noise from existing factories/warehouses to the south, west and north of the subject property.

The closest residential receptors to the site are in excess of 500 metres distance to the east at 187 Sunnyholt Road and to the west at 5 Chedley Place. These residences have no line of sight to the subject site and the attenuation due to the intervening industrial buildings is significant.

Distances shown in Table 29 below are based on the assessment point at the receptor location to the hammermill/shredder location within the site.

Table 29: Noise Sensitive Receptor - Distance

Receptor Type	Address	Direction from Site	Distance
Industrial	71-77 Tattersall Road	North	75m
Industrial	45 Tattersall Road	East	150m
Industrial	24 Forge Street	South	225m
Industrial	37 Bessemer Street	West	40m
Residential	187 Sunnyholt Road	East	740m
Residential	5 Chedley Place	West	500m

11.4.2 Impact Assessment

11.4.2.1 Construction

Construction noise management levels are provided in the NSW EPA *Interim Construction Noise Guidelines* (ICNG). The recommended standard hours as per the ICNG are as follows:

- Monday to Friday - 7.00 am to 6.00 pm;
- Saturday - 8.00 am to 1.00 pm; and
- No work on Sundays or Public Holidays.

The proposed hours of construction of the facility will be inside the recommended hours and will not exceed the recommended levels.

Potential noise sources at the site during the construction activities are anticipated to include an excavator, crane and grader, trucks and light vehicles delivering materials and equipment.

11.4.2.2 Operation

Noise

The main source of noise associated with the metal recycling facility include the car shredding equipment, shear, excavators used to prepare the car bodies, downstream processing equipment and other mobile plant. Other noise-generating activities associated with the proposed scrap metal facility may include:

- Truck deliveries with reversing alarms;
- Trucks idling;
- Trucks engine starting and stopping;
- Truck air brakes;
- Loading and unloading of goods with forklifts or cranes;
- Cars entering and leaving the site;
- Air compressor;
- Air conditioner condenser units; and
- The use of plant and equipment within the storage area including pumps, motors, cleaning and the use of other general hand tools and power tools.

The NSW *Noise Policy for Industry* provides a schedule of recommended Leq industrial noise levels that under normal circumstances should not be exceeded. If successive developments occur near a residential area, each one allowing a criterion of background noise level plus 5 dB, the ambient noise level will gradually creep higher.

The Operational Noise Impact Assessment identifies Noise Criterion for the site (LAeq, period dBA which apply over the whole day, evening or night period), are as follows:

Table 30: Amenity Noise Criterion

Receiver	Noise Amenity Area	Time of Day	Leq, dBA, Recommended Amenity Noise Level
Residential	Urban	Day Evening Night	60 50 45
Industrial	All	When in use	70

The calculated noise levels include the following barrier assumptions and recommendations:

- R1 – approved (CDC 180201) 5 metre barrier to the north of the shredder and recommended 3.5 and 2.5 metre high barriers north of the shear, as shown in Appendix A;
- R2 – existing 9 metre high (approximate) barrier on eastern boundary of site;
- R3 – approved (CDC 180201) 4 metre barrier to the south of the shredder, as shown in Appendix A;
- R4 – approved (CDC 180201) 6 metre barrier to the west of the shredder and recommended 3.5 metre high barrier west of the shear, as shown in Appendix A;
- R5 – existing industrial buildings, 8 metres high; and
- R6 – existing industrial buildings, 8 metres high.

The calculated noise levels at each receptor are shown in table 31 below.

Table 31: Predicted Noise Levels at Industrial and Residential Receptors

Description	Predicted Noise Levels (dBA) at Receptor Location					
	R1	R2	R3	R4	R5	R6
Metal Recovery & Recycling Facility	68	56	67	69	<50	<46
Acceptable Noise Limit – Early Morning Leq, 15 minute (6.00 am to 7.00 am)	68				60	48

Complies	Yes	Yes	Yes	Yes[1]	Yes	Yes
Acceptable Noise Limit – Day Leq, 15 minute (7.00 am to 6.00 pm)	68				58	45
Complies	Yes	Yes	Yes	Yes[1]	Yes	Yes[1,2]

1 *An exceedance of ≤ 2 dB is considered negligible (see Table 4.1 & 4.2 of NPI), and is not perceivable to the human ear.*

2 *Due to the large distance, multiple noise sources (industrial sites) between the proposed development site and the nearest residences and the proximity of the residences to Sunnyholt Road, R5, the T1 North Shore, Northern and Western Line and Cumberland Line, R4, and other industrial sites, R5 and R6, (dominant noise in acoustic environments), respectively, the metal recovery and recycling facility would give rise to negligible noise impacts at the residential receptors.*

Table 11 shows that provided the abovementioned barriers are constructed, predicted noise levels at each receptor are within acceptable limits outlined in this Report and are therefore acceptable.

The Operational Noise Impact Assessment concludes that the nominated noise criteria will be achieved at all surrounding premises and will comply with the INP at all noise-sensitive receiver locations. The Assessment also found that the nature of the operations and facility to be constructed as per the architectural drawings will ensure that noise levels do not exceed the designated noise criterion.

11.4.2.3 Vibration

The NSW EPA published the *Assessing Vibration: a technical guideline* in February 2006. This guideline is based on the British Standard BS6472:1992 *"Evaluation of human exposure to vibration in buildings (1 Hz to 80 Hz)."* This guideline covers the appropriate methods and criteria for the assessment of the intrusive vibration on living and working space.

The guideline presents preferred and maximum vibration values for use in assessing human responses to vibration and provides recommendations for measurement and evaluation techniques. The guideline considers vibration from occasional loading and unloading activities as Impulsive Vibration.

The most relevant vibration management levels for this development are as follows:

- An RMS Acceleration Value between **0.10 – 0.20 m/s2** for human annoyance inside the nearby residence; and
- An RMS Acceleration Value between **0.64 – 1.28 m/s2** for human annoyance inside the nearby industrial premises.
- A Peak Particle Velocity no greater than **15 mm/s** for cosmetic damage at the residential buildings.
- A Peak Particle Velocity no greater than **50 mm/s** for cosmetic damage at the industrial buildings.

Peak Particle Velocity values for buried pipework, as measured on or within close proximity to the buried pipework for structural damage of:

- 50 mm/s for masonry or plastic pipes;
- 80 mm/s for concrete, clay or metal pipes; and
- 100 mm/s for steel pipes.

Given the relatively high guideline vibration values and the distance from the car shredding machines and shear, it is unlikely that any industrial, commercial or residential premises, services or buried pipework will be exposed to vibration levels approaching these values.

Ground vibration levels induced by the car shredder were measured approximately 25 metres to the south of the shredder's current location during standard operation, recording a maximum overall peak particle velocity of 0.76 mm/s.

The measured vibration levels 25 metres from the car shredder are within the vibration guideline levels and will therefore be acceptable at all receptor locations

The Assessment concluded that the proposed use of the site, which includes truck movements, car shredding machines and she hear, will not cause vibration at a level that may cause human discomfort or the dilapidation of the surrounding premises.

11.4.3 Mitigation and Management Measures

The mitigation measures suggested by the Environmental Noise and Vibration Assessment are:

Noise:
To ensure that the operation of the metal recovery and recycling facility meets the *Noise Policy for Industry's* noise criteria, it is recommended that the following noise controls be implemented into the design.

- An acoustic barrier should be constructed around the shear to reduce the noise emission to the adjacent industrial premises to the north and west of the site.
- A 2.5 metre high acoustic barrier should be constructed to the north of the shear at a distance of no greater than 15 metres from the machine as shown in Appendix A.
- A 3.5 metre high acoustic barrier should be constructed to the west of the shear at a distance of no greater than 30 metres from the machine as shown in Appendix A.
- The acoustic barriers may be constructed with 'DuneWall Custom Height Acoustic Wall', which will be acceptable. Details of the acoustic barrier can be seen in the attached Appendix B.
- Should the location of the recommended barriers be required to change due to conflicts with the functionality of the site / shear, further acoustic assessment is required.

Vibration:
In the unlikely event that complaints are received regarding vibration originating from the site, Day Design recommend that compliance with monitoring of ground borne vibration be carried out at the nearest receptor location.

11.4.4 Conclusions

Surrounding development is not of a nature that is particularly sensitive to noise and certainly not to lower noise levels anticipated from the proposed development. The site exists in an area of industrial development and includes development of a scale much larger than the proposed development.

The Environmental Noise & Vibration Assessment concludes that subject to the implementation of the recommended management and mitigation measures, the level of noise and vibration emitted from the pre-shredder, shredder, downstream processing equipment, traffic movements and general operations will meet the proposed development will comply with the INP.

11.5 Traffic and Transport

The SEARs for the project require the EIS to contain a detailed assessment of the impacts of the development on traffic and transport, incorporating the items listed below:

- Details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes and details of the peak times for traffic movement to and from the site.

- An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model.
- Plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network.
- Detailed plans of the proposed layout of the internal road network and parking on site, in accordance with the relevant parking codes and Australian standards.
- Plan of any proposed road upgrades, infrastructure works or new roads required for the development.
- Turning path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site.
- Details of public transport, pedestrian, on-street parking and bicycle facilities.

A Traffic Impact Assessment (TIA) has been prepared by Barker Ryan Stewart in support of the proposed development in accordance with Austroads Guidelines and Section 2.3 of the *RTA Guide to Traffic Generating Developments*, and is included at Appendix M.

11.5.1 Existing Environment

Tattersall Road is a two-lane, two-way local road under the management of Blacktown City Council. It has a default 50km/h speed zone with a sealed width of approximately 12m. There is kerb and gutter on both sides of the road and no paved pedestrian footpath.

Both ends of Tattersall Road terminate on arterial roads: Vardys Road to the north, and Sunnyholt Road to the east, which connects to the M7 north of the site. The intersection at Vardys Road is a seagull intersection and the intersection at Sunnyholt Road is signalised.

There are three existing driveways providing vehicle access to/from the site. The eastern driveway provides two-way access to the rear of the site and the western driveway provides two-way access to the "Pick n Payless" car park. An overflow light vehicle parking is located along the northern site boundary with entry provided by the eastern driveway and exit provided by an exit only driveway located between the eastern and western driveways.

The existing car parks meet the minimum requirements of AS/NZS 2890.1 and *AS/NZS 2890.6:2002 Off-street parking for People with disabilities* (AS/NZS 2890.6).

The entry/exit access ways are constructed and comply with AS/NZS 2890.1:2004 Parking facilities – Offstreet car parking (AS/NZS 2890.1). 'Entering sight distance' and 'sight distance to pedestrians' complies with AS/NZS 2890.1 Section 3 '3.2.4 Sight distance at access driveway exits'.

There is plenty of queuing area available for vehicles within the driveways to ensure there is no queuing back into Tattersall Road.

The site has been designed for a 19m semi-trailer to be able to enter and leave the site in a forward direction. The access and waste collection areas are designed to meet *AS/NZS 2890.2:2002 Parking facilities – Offstreet commercial vehicle facilities (AS/NZS 2890.2)*.

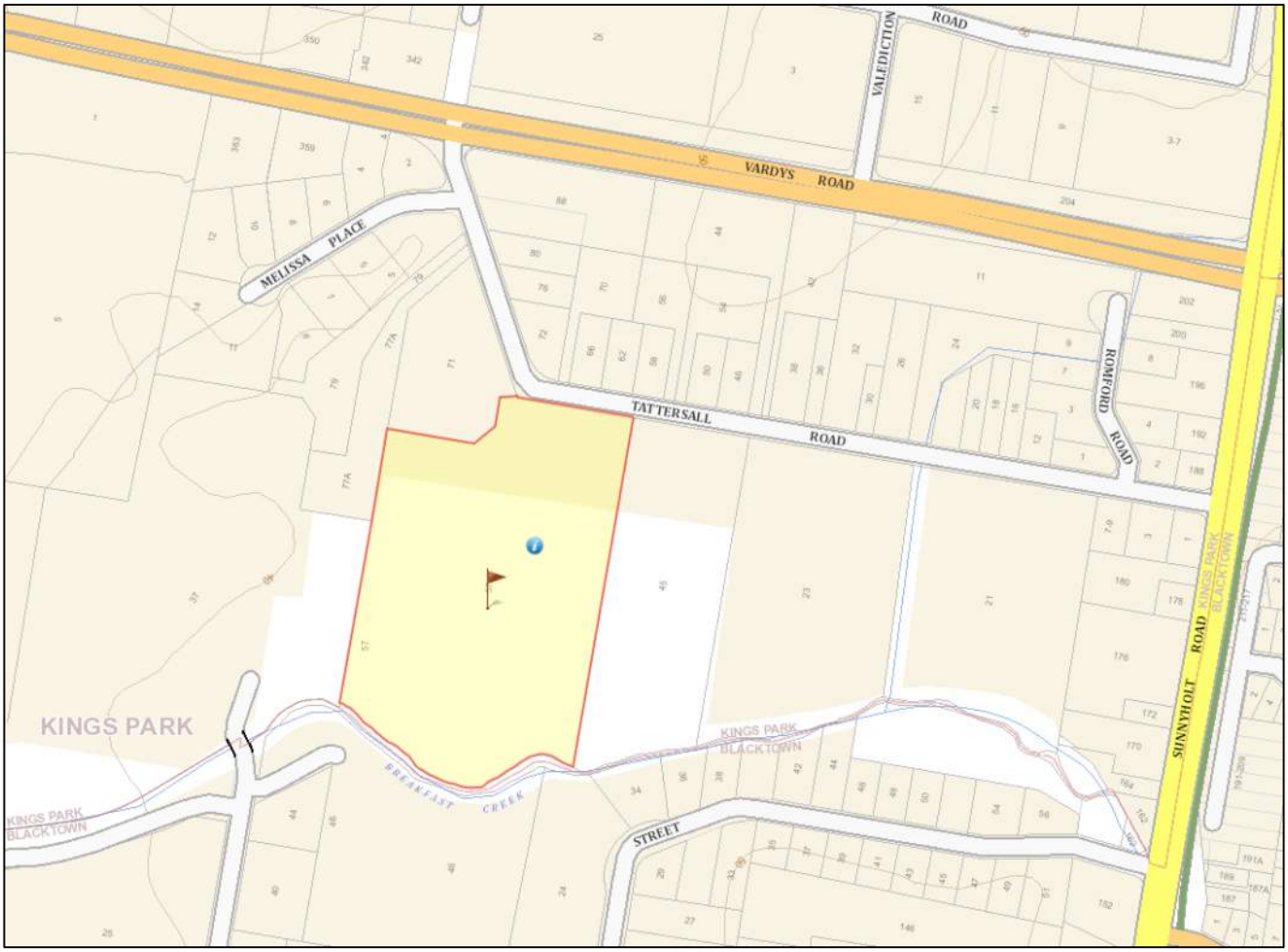


Figure 20: Site location (maps.six.nsw.gov.au)

The existing development processes approximately100 tonnes of scrap metal per day on average and generates approximately 100 heavy vehicle visits per day, comprising:

- 50 vehicles per day for trucks less than 15 tonnes Gross Vehicle Mass (GVM)
- 10 vehicles per day for trucks less than 25 tonnes GVM
- 10 vehicles per day for trucks less than 30 tonnes GVM
- 30 vehicles per day for trucks less than 43 tonnes GVM

It should be noted that under the existing operation trucks are not loaded to full capacity, and therefore there is capacity for trucks to load additional scrap metal in order to reduce heavy vehicle volumes. It is expected that heavy vehicle movements are distributed evenly throughout the day.

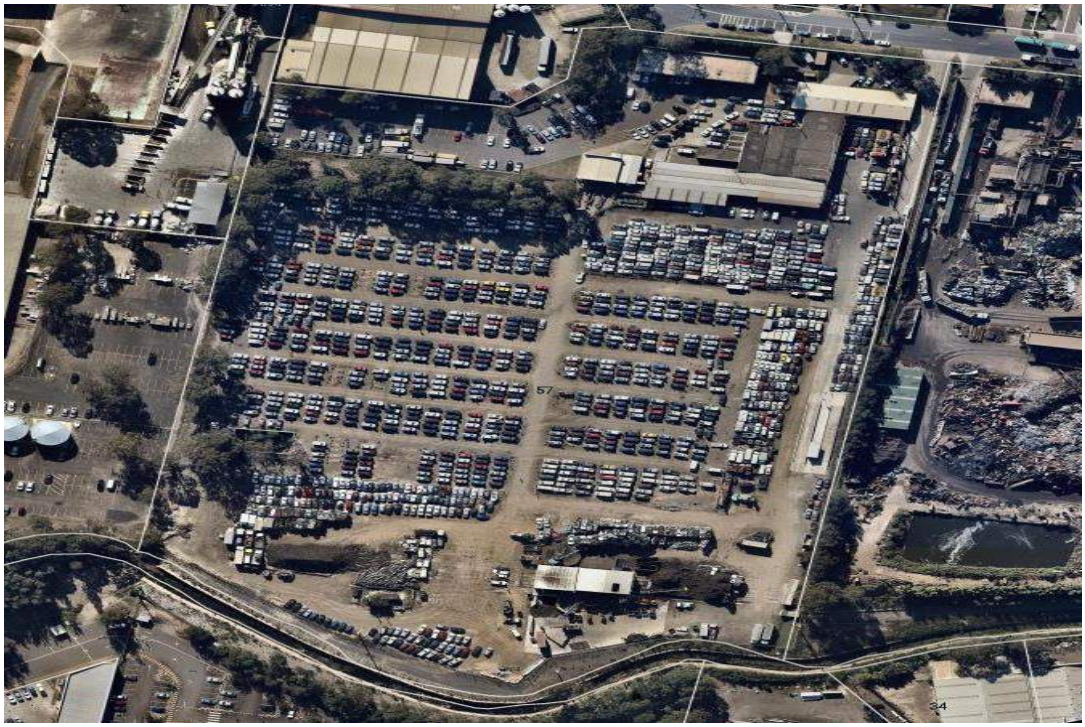


Figure 21: Aerial photo (nearmap.com, May 2017 imagery)

11.5.2 Proposed Development

Cable for processing by the copper wire granulator will be delivered by 8.8 metre medium rigid vehicles (MRV's). MRV's delivering the copper wire will enter the eastern driveway to "weigh-in" at the weighbridge, then u-turn and enter the western driveway via Tattersall Road to unload / load material. The vehicles will then travel to the western driveway via Tattersall Road to "weigh out" at the weighbridge, then u-turn to exit the site to Tattersall Road.

Trucks up to 19m articulated vehicles (AV's) are expected to deliver the materials that will be processed within the metal processing facility. Similarly, processed material will be transported to receiving facilities using trucks up to 19m AV's. Trucks are expected to arrive / depart the development at irregular intervals throughout the day.

All heavy vehicle access for receiving and delivery of scrap metal will be provided via the eastern vehicle crossing.

11.5.3 Impact Assessment

11.5.3.1 Traffic Generation

The proposed traffic generation has been determined based on first principals. Accordingly, to process 130,000 tonnes of scrap metal the development would be required to process 356 tonnes per day, compared to the existing 100 tonnes of scrap metal processed. This correlates to a proposed traffic generation of:

- AM peak hour 31 vehicles per hour (or 62 trips per hour)
- PM peak hour 32 vehicles per hour (or 64 trips per hour)

Given the even distribution of trips and 12-hour operating hours (6am-6pm), the proposed development is expected to generate approximately 378 vehicles per day (or 756 vehicle movements per day).

An assessment of the impact of the proposed development on the surrounding road network using SIDRA Intersection modelling software (see Appendix M) found that the proposed development traffic is expected to increase delays by less than 6 seconds at the Tattersall Rd/Sunnyholt Rd and Vardy

Rd/Sunnyholt Rd intersections during the AM peak hour and less than 1 second at both intersections during the PM peak hour. As such, the additional development traffic is expected to have only a minor impact on the delays experienced by motorists at these intersections in the existing scenarios.

In addition, it is important to note traffic networks only operate as well as the worst performing intersection.

Accordingly, the 10-year growth scenario shows that Sunnyholt Road / Vardy Road performs the worst during the AM peak hour and Sunnyholt Road / Tattersall Road performs the worst during the PM peak hour. The SIDRA movement summary shows that during the AM peak hour, the northern approach of Sunnyholt Road / Vardy Road intersection could have 600m queues and up to 360 second delays. In comparison, during the PM peak hour the southern approach of Sunnyholt Road / Tattersall Road intersection could have 750m queues and approximately 300 second delays. It is expected that Blacktown Council and RMS would intervene to prevent this level of congestion occurring on Sunnyholt Road network through infrastructure upgrades and / or travel demand management.

In summary, the development traffic will not have any significant impact on the delays currently experienced within the existing road network and any future background growth will be addressed through changes in travel patterns and transport modes and intervention by the road authorities to upgrade infrastructure and /or introduce travel demand measures. Consequently, the development can be supported based on traffic grounds

There is also the need for maintenance contractors to access the site on an as needs basis. This will be an infrequent occurrence, and as such, any associated vehicle movements will have negligible impact upon the local road network.

11.5.3.2 Access and Internal Driveways

The western driveway providing access to the Pick n Payless car park will remain unchanged.

The increased traffic volume and the swept path analysis in the Traffic and Parking Impact Assessment indicates that the eastern driveway requires an 11m wide vehicle crossing at the property boundary and a 6.5m wide carriageway width for two-way heavy vehicle flow between the property boundary and the weighbridges. The driveway meets the minimum width requirement and there is plenty of queuing area available (approximately 125m between the property boundary and weighbridges) for vehicles within the property boundary to ensure there is no queuing back into Tattersall Road.

Currently, the driveway width is approximately 8.5m. and a separate application will be submitted to Blacktown City Council for the widening of the eastern driveway crossing from 8.5m to 11m.

Sightline assessment confirms that both driveways comply with the requirements of AS2890.2. Pedestrian sightlines comply with the requirement of Figure 3.4 of AS2890.2, noting that there are no footpaths on either side of Tattersall Road for the length of the site frontage. As such, the entry/exit access ways generally comply with the Australian Standards.

The proposed new access driveway from the weighbridges to the shear and hammermill will be constructed from concrete with a kerb on the low side and is designed for a 19m semi-trailer to be able to enter, manoeurvre and leave the site in a forward direction. The driveway will have a variable width commencing at 11.3 metres at the weighbridges and reducing to 8 metre width along the southern boundary after the first corner. The one-way loop has a consistent width of 6 metres, commencing at the mid-point of the southern boundary and extending along the western boundary to the shear and hammermill stockpile locations.

The construction of the internal driveway along the western boundary requires the removal of one tree out of a group of six mature native trees. The removal of the tree is addressed in section 7.1.4 and the Biodiversity Assessment Report (Appendix J) which recommends the following management measures be implemented during construction work to protect the 5 trees being retained.

To protect the remaining five mature native trees during construction works the following management measures are recommended:

- All trees marked for retention (T2-T6, Figure 11) to be protected by Tree Protection Zones (TPZ) as follows:

Tree	TPZ (metres)
T2	7.7
T3	2.9
T4	7.6
T5	8
T6	13

- installation of tree protection fencing in accordance with AS 4970-2009 Protection of Trees on Development Sites.
- retention of existing soil grades where there is encroachment into the Tree Protection Zones.
- avoidance of soil compaction through working from inside the footprint, protection of ground surfaces, within the TPZ, careful removal of sub base soils.
- Implementation of an erosion and sedimentation control plan during construction work.
- during works should any native fauna be located in the trees the contractor is to cease work on the tree and call WIRES if the fauna has not relocated of its own accord.
- remove items stored underneath trees to prevent further impact to the trees to be retained.

11.5.3.3 Car Parking

The proposed car parking requirement has been assessed against Blacktown DCP (Part A, Section 6 – Car Parking).

Table 32: Extract from Blacktown DCP 2015

Specific land use	Car parking requirement
Light industry, general industry, heavy industry and warehouse or distribution centre	1 space per 75sq.m GFA Plus 1 space per 40sq.m for the office component

Application of the Blacktown DCP parking rate to the existing development yield of 1,645 m^2 GFA for the existing office (Buildings A & E) and 1,670 m^2 GFA for the existing operational/warehouse (buildings B, C & D) generates an onsite car parking requirement of 65 parking spaces.

There are currently 94 parking spaces available on-site, with 73 spaces accessed via the western driveway and 21 spaces accessed via the eastern driveway. It is proposed to reduce onsite parking to a total of 88 spaces by removing four parking spaces from the western car park and two spaces from the eastern car park.

The four spaces in the western car park are to be removed to facilitate medium rigid vehicles accessing the storage yard for the copper granulator. The two spaces being removed from the eastern car park is to accommodate the widening of the eastern driveway crossing. A copy of the proposed parking plan is provided in Appendix A.

The development consequently has a surplus of 23 parking spaces above the minimum requirement.

11.5.4 Proposed Mitigation Measures

- The eastern driveway access to be widened to 11m in order to permit two-way heavy vehicle flow at the access driveway from Tattersall Road.

- All trees marked for retention (T2-T6, Figure 11) to be protected by Tree Protection Zones (TPZ) as follows:

Tree	TPZ (metres)
T2	7.7
T3	2.9
T4	7.6
T5	8
T6	13

- installation of tree protection fencing in accordance with AS 4970-2009 Protection of Trees on Development Sites.
- retention of existing soil grades where there is encroachment into the Tree Protection Zones.
- avoidance of soil compaction through working from inside the footprint, protection of ground surfaces, within the TPZ, careful removal of sub base soils.
- Implementation of an erosion and sedimentation control plan during construction work.
- during works should any native fauna be located in the trees the contractor is to cease work on the tree and call WIRES if the fauna has not relocated of its own accord.
- remove items stored underneath trees to prevent further impact to the trees to be retained.

11.5.5 Conclusions

The traffic assessment indicates the increased truck volume generated by the proposal will not have detrimental effects to the nearby intersections. SIDRA intersection analysis indicates traffic generated by the development would cause minor increase to the existing delays (less than 6 seconds) at the signalised intersection of Sunnyholt Road / Vardy road and Sunnyholt Road / Tattersall Road. As such, the proposed development does not warrant infrastructure upgrade.

The TIA concludes that from the site work undertaken and the review of the development proposal and associated plans against the requirements of the RMS *Guide to Traffic Generating Developments and Austroads Guide to Traffic Management,* the proposed development will have minimal impact on the surrounding road network. Parking for the proposed development exceeds Blacktown DCP requirements, and access and circulation for the site is appropriate for the development, providing for the swept paths of heavy vehicles.

11.6 Fire Management

The SEARs for the project require the EIS to contain a detailed assessment of the impacts of the development on air quality and odour, incorporating the items listed below:

- Technical details on the fire control and management equipment to be installed on the premises, including the location of fire hydrants, water flow rates at the hydrant, firewater containment capacity and smoke hazard management and sprinkler systems within buildings.
- Details of size and volume of stockpiles and their arrangement and separation to minimise fire spread and facilitate emergency vehicle access.

Philip Chun & Associates were engaged to provide recommendations in respect to Building Code of Australia 2019 (BCA 2019) compliance for the proposed Metal Recovery Processing and Recycling Facility. The report is provided in Appendix D.

RED Fire Engineers Pty Ltd were engaged to undertake a fire engineering assessment for the proposed works and address BCA Deemed-to-Satisfy (DtS) departures identified in the BCA report by Philip Chun & Associates.

11.6.1 Existing Environment

The administration building (Building A) has a rise of two storeys and all other buildings (Buildings B, C, D and E) have a rise of 1 storey.

Building A: Administration and office building.
Building B: The building contains a copper granulator machine to recycle copper from cables
Building C, D: Workshop areas used for demolition of cars, drainage of fluids such as oil and fuel from the vehicles.
Building E: Reception used as an office for the Pick n' Payless yard.

Buildings C and D are interconnected and building B is less than 3m from building C. For the purposes of the BCA assessment, buildings B, C and D have been assessed as a 'united building', with a fire compartmentation of approximately 2,157 m2.

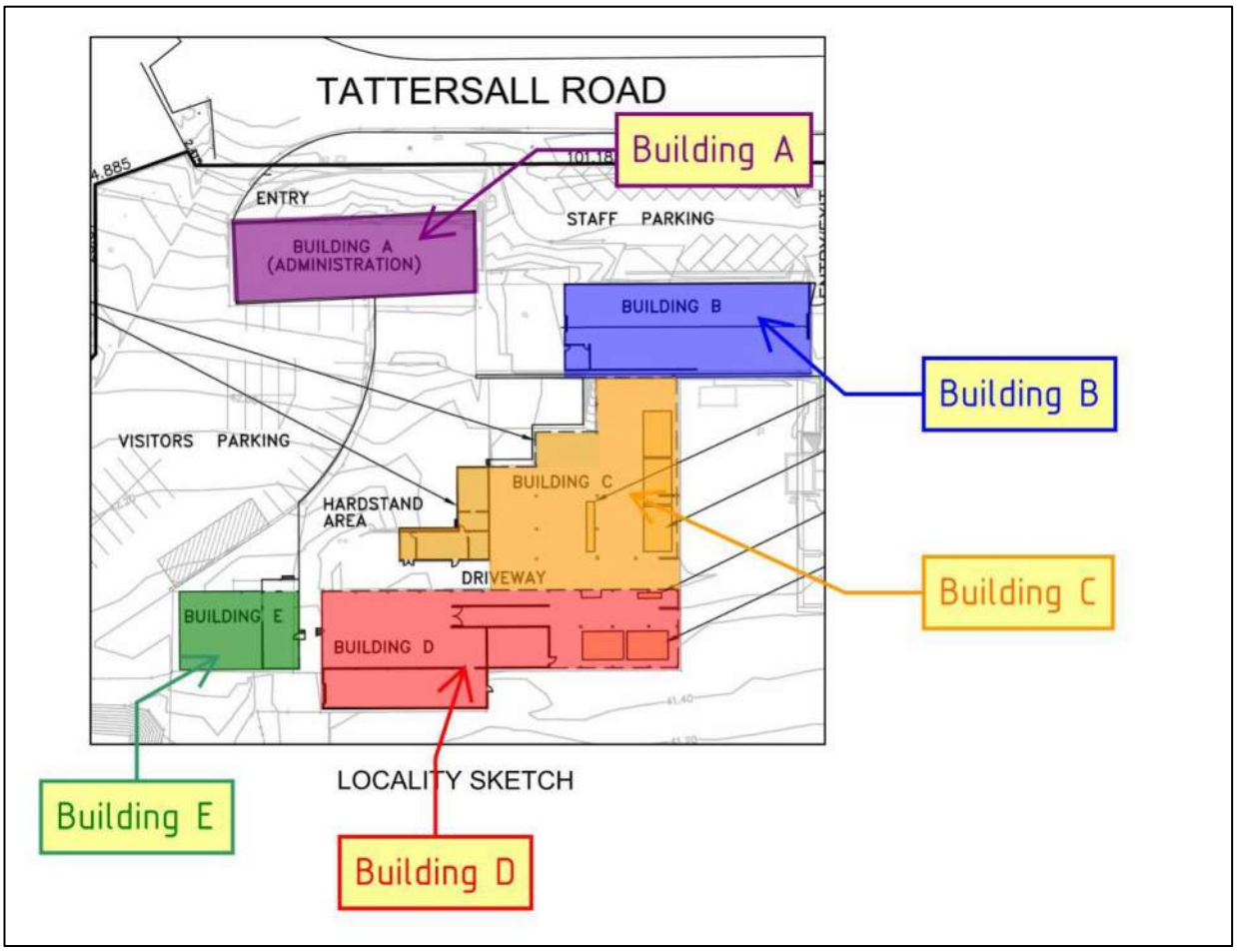


Figure 22: Location of existing buildings Proposed Development

The open yard will contain three material stockpiles consisting of the shredder feed, shear feed and the shredder flock. The maximum size and height of the stockpiles are:

Shredder feed: 28m long x 10m wide x 4m high
approximately 280 tonnes (1,120 m^3 of metal at 250kg/m3).

Shear feed: 5m high x 5m long x 20m wide
approximately 200 tonnes (500m3 of metal at 400kg/m3).

Shredder Flock: 2m high x 7m wide x 7m long (approximately 30 tonnes).

11.6.2 Fire Control Measures & Equipment

11.6.2.1 Performance Solutions

The BCA report by Philip Chun and Associates concluded that the design of the facility is generally capable of meeting a combination of the Deemed-to-Satisfy and Performance Requirements of the Building Code of Australia 2019. The following BCA Deemed-to-Satisfy (DtS) departures were identified and addressed by Red Fire Engineers:

1. The lack of perimeter vehicular access contrary to Clause C2.3 and C2.4 of the BCA. The departure is that FRNSW would not have full access around buildings B, C & D as access is restricted around the western side of Building D and between Building A & B.

Proposed Solution

Access is proposed to be provided at the perimeter of the site, around buildings and access roads between any external stockpiles in accordance with Figure 34 below outlines a proposed driveway to allow for emergency vehicular to access in the event of a fire brigade intervention. The proposed driveway with one entry and one exit must comply with the FRNSW guideline "*Access for emergency vehicles*" (FRNSW, 2010). The driveway is required to have a width of not less than 6 m for straight carriageways. Curved carriageway must have a minimum inner radius of 7.3 m and an outer radius of 14.6 m with a minimum distance between the inner and outer arcs not less than 7.3 m.

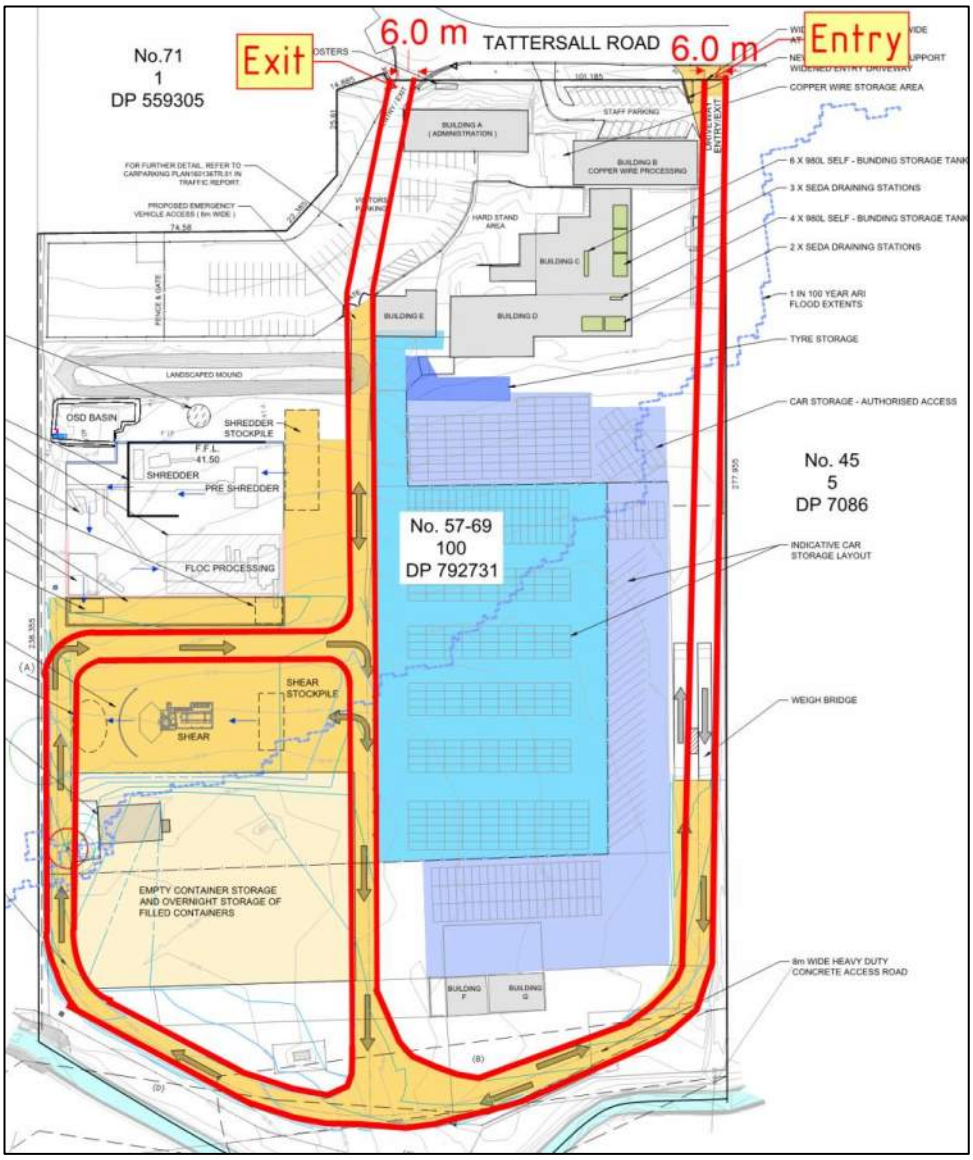


Figure 23: Emergency vehicle access

2. AS 2419.1-2005 which requires the fire hydrant booster and pumps to be located 10 metres from any building or to be protected by a 90 minute fire rated wall extending 2 metres either side of the booster and 3 metres above the hydrant outlet. The departure is that the fire hydrant and sprinkler booster will be located within 10m from the administration building (building A) and the protection will not comply with the minimum requirements.

Proposed Solution
The location of the fire hydrant booster and the sprinkler booster are within 10 m (approximately 7.5 m) of the external wall of Building A. The purpose of AS 2419.1:2005 in prescribing the location and size, and protective features to fire hydrant booster cabinets is so that the fire hydrant system can be safely used by the attending fire brigade without fire fighters being delayed in accessing the hydrant system due to being prevented by heat due to a fire adjacent to the fire hydrant booster.

The hydrant and sprinkler boosters are required to be protected by a non-combustible construction with an FRL of -/90/90 located directly behind the boosters. The dimensions of the non-combustible construction must be not less than 2.2 m high, extend 5 m from the boosters in the eastern direction and not less than 2 m on the western side of the boosters.

3. In accordance with the provision for special hazards in Clause E2.3 of the BCA, additional smoke hazard management measures may be necessary due to the special type or quantity of materials that are stored, displayed or used in a building. The departure is that no smoke exhaust system is proposed throughout building B, C and D.

Proposed Solution
Building B, C and D (refer to Figure 33) will not be provided with a smoke exhaust system and will be provided with a sprinkler system in accordance with AS 2118.1:2017. Storage height must be limited to 2.2 metres.

Building C and D will be naturally ventilated via the external walls which are substantially open to the outside and smoke is likely to be naturally discharged to the outside in the unlikely event of a fire inside building C and D. The open walls will allow smoke and heat to vent directly to the outside and the provision of a mechanical smoke exhaust system is not considered to provide any significant additional benefit given the large amount of natural ventilation provided. The proposed sprinkler system to this building in accordance with AS 2118.2017 will facilitate occupant egress and fire brigade intervention. Upon activation the sprinkler system is expected to control if not suppress the fire

Building B contains the copper granulator machine and has a relatively small floor area, a low occupancy and short travel distances of generally less than 20 m. Based on the limited fuel load in the building and the provision of a sprinkler system in accordance with AS 2118.2017, occupant egress and fire brigade intervention are considered to have been facilitated. Furthermore, due to the proposed material stockpiles on the site the hydrant system will have a capacity of 50 L/s and a ring main will be provided, exceeding the requirements for the building.

A summary of proposed and recommended fire protection measures are set out hereunder:

11.6.2.2 Fire Hydrants

A fire hydrant system is to be provided to serve the whole site of lot 100 in in DP792731 in accordance with AS 2419.1:2005 and AS 2419.1:2017, with the exception of the location of the booster. A ring main is to be provided to allow for water supply redundancy. The fire hydrant system also satisfies the following requirements:

- Buildings B, C and D are served with fire hydrants complying with the requirements of BCA Clause E1.3 and AS 2419.1-2005

- In relation to open yard protection (AS2419.1-2005, Clause 3.3), fire hydrants are located so that every part of all storage, equipment and plant in the protected area is within reach of a 10 m hose stream issuing from a nozzle at the end of a 60 m length of hose connected to a fire hydrant outlet.
- Australian Standard AS 2419.1:2005, regulates fire hydrant installations and requires that the hydrant system shall have a duration of not less than 4 hours and each hydrant shall deliver not less than 10 L/s. The water supply from the water main located north on Tattersall Road provides a flow of 50 L/s with a pressure of 72 pressure head m. The hydraulic engineer (Liquid Hydraulics) for the project has confirmed that the water main is capable of providing sufficient water supply for the hydrant system and the sprinkler system.

  Red Fire Engineer's assessment has demonstrated that 21 L/s is required to extinguish the shredded stockpile and that 50 L/s is expected to be sufficient to extinguish a credible worst-case scenario in the raw material stockpile

11.6.2.3 Sprinklers

Buildings B, C and D are a 'united building' and are deemed a large-isolated building requiring sprinkler protection as per Clause C2.3, C2.4 and E1.5 of the BCA. In addition, the building is considered 'occupancies of excessive hazard' with a fire compartment of more than 2,000m$^{2}_{2}$ and is therefore required to be provided with sprinkler system complying with Specification E1.5.

A sprinkler system is proposed to be provided to building B, C and D.

11.6.2.4 Fire Hose-reels

Buildings B, C and D are required to be provided with hose-reel coverage complying with the requirements of BCA Clause E1.4 and AS 2441-2005. Hose-reels are to be located within 4m of an exit or an internal fire hydrant. Details will be provided at the Construction certificate stage for assessment.

11.6.2.5 Extinguishers

To mitigate the risk of fire spread in the early stages of a fire, fire extinguishers will be provided to all locations which are deemed a potential risk to the occupants of the buildings and in locations where flammable liquids in excess of 50 litres are stored or used. A fire services consultant will provide details at CC stage for assessment.

Extinguishers that are located next to machinery with electronic equipment that is sensitive to water will be provided with type CO2 (carbon dioxide) to limit the risk of electric shock to the extinguisher operator or damage to devices. For other areas, AFFF (Aqueous Film Forming Foam) fire extinguisher AB is proposed. This will be confirmed by the fire contractor at CC stage.

11.6.2.6 Exit and Emergency lighting

Emergency lighting and exit signs will be installed in accordance with Part E4 of the BCA & AS2293.1-2005. Not required in an open area.

11.6.2.7 Fire Water Containment

The waste facility is to have effective and automatic means of containing fire water run-off, with primary containment having a net capacity of not less than 320,000 litres, which is the estimated total water

discharge for the hydrant system for the worst-case credible fire scenario. FRNSW have confirmed that the water run-off containment does not need to be designed for both the worst-case hydrant demand (for an outdoor stockpile) and the sprinkler system demand (based on a building fire) occurring at the same time.

The containment capacity of 320,000 litres has been calculated as follows:

- For the outdoor stockpile worst case scenario, the required flow rate of 50 L/s and HIPAP 2 requiring a minimum of 90 minutes storage for firefighting water supply. The required containment water tank volume is therefore 270,000 L (90 min x 60 sec x 50 L/s = 270,000 L).

- Building B, C and D are to be provided with an automatic sprinkler system and the water requirements for the building also include the water demand of two hydrants operating for 90 minutes together with the automatic sprinkler system. The water flow demand for the automatic sprinkler system to be installed to the workshop building together with two hydrants operating simultaneously will be (2265 L/min + 2 x 10L/ x 60s) x 90 minutes = 311,850 litres.

Therefore, a water run-off containment of 320,000 L will be considered sufficient for the site.

A shut-off valve to stop containment water reaching the stormwater will be provided in a location that is not impacted by a stockpile fire. This can be achieved by providing remote shut-off or by locating the main valve in a location away from buildings and stockpiles. All containment water will be discharged to sewer.

11.6.2.8 FRNSW Guideline for Waste Facilities

The FRNSW guideline (FRNSW, 2018) states that, when following the guideline, it should minimise the likelihood and severity of fire, assist safe and efficient fire brigade intervention, and the environment during fires.

The FRNSW guideline for waste facilities (FRNSW, 2018), requires the hydrant system to be designed for the worst-case credible scenario in terms of required water supply demand. FRNSW Guidelines recommend a minimum 4 hour water supply to be provided, resulting in a maximum water supply requirement of 720,000 L. This is based on a maximum stockpile of 50 m (length) x 20 m (width) x 4 m (height) with a slope that does not exceed of 45 °. The surface area of such pile is 1,000 m^2.

The water supply requirement of 720,000 L in the FRNSW guideline (FRNSW, 2018) for waste facilities is considered conservative as the stockpile sizes for the proposed development are significant smaller with a maximum stockpile size of 8 m (length) x 8m (width) x 4 m (height) and a surface area of only 64 m^2.

The proposal is consistent with the intent of the criteria in the FRNSW Guideline, as shown in Table 35 below.

Table 33: Response to FRNSW Guideline for Waste Facilities

FRNSW Guideline Criteria	Response	Compliance
Stockpile size and separation distances between stockpile and buildings	The largest stockpile proposed onsite is within the limitations of the FRNSW Guidelines	YES
Separation distance (based on stockpile length)	The proposed separating between stock piles complies with the guideline.	YES
Stockpile movement	The maximum duration of idle storage is not to exceed 6 months	YES
Fire brigade accessibility	The emergency vehicular access to the site is in	YES

FRNSW Guideline Criteria	Response	Compliance
	accordance with the FRNSW draft Guideline for emergency vehicles access.	
Fire hydrants water capacity	The fire hydrant system is designed to provide a flow of 50 L/s provided from the town water main.	YES
Water run-off	The water run-off will be designed to have the capacity to contain up to 320,000 litres.	YES
Fire Services and equipment	Fire extinguishers will be provided within buildings and around operating machinery.	YES
Automatic Fire sprinkler systems	Building B, C and D will be provided with a sprinkler system in accordance with AS 2118.1:2017.	YES
Fire detection and alarm systems	The sprinkler system in Buildings B, C and D to be connected to a building occupant warning system as per clause 8 of Specification E1.5.	YES
Smoke hazard management	Building B, C and D (refer to Figure 33) will not be provided with a smoke exhaust system and will be provided with a sprinkler system in accordance with AS 2118.1:2017. Storage height must be limited to 2.2 metres.	YES

11.6.3 Management & Mitigation Measures

The recommended operational and physical mitigation measures to be employed are summarised in Table 34 below.

Table 34: Mitigation and management options

Activity	Mitigation and Management
Operations Plan	An operations plan in accordance with clause 8.6 as per the FRNSW guideline (FRNSW, 2019) and an emergency plan (in accordance with AS 3745:2010) is required to be established. An operational plan must be developed outlining the final location of stockpiles and emergency vehicle access. The operational plan must define procedures that ensure stockpile limits are not exceeded by daily operations and contain all required information as per section 8.6 of the FRNSW guideline (FRNSW, 2019) and fire safety measures within this report.
Buildings B, C & D	• To be provided with a sprinkler system in accordance with AS 2118.1:2017 and Specification E1.5 of the BCA. • Storage height must be limited to 2.2 m. • The sprinkler system must be connected to a building occupant warning system as per clause 8 of Specification E1.5. • A maximum of 20 bags processed material is allowed in building B. Exact location to be included in Fire Engineering Report. The stockpiles must be maintained and the area be marked up with line marking on the floor, so that all building egress points and required paths of travel are not blocked or impeded.
Stockpile Management	• Stockpiles or combustible waste material are to be rotated to dissipate any generated heat and minimise the risk of auto-ignition. The maximum duration of idle storage should not exceed six months unless determined otherwise through a risk assessment.

Activity	Mitigation and Management
	• Stockpile boundary limits shall be permanently marked to clearly identify limits that maintain maximum stockpile size and minimum separation distances as required by Clause 8.2.7 of the FRNSW guideline. • The shredder feed stockpile shall have a maximum size of 28m (long) x 10m (wide) x 4m (high). • The shear stockpile must consist of metal material only and have a maximum size of 17m (long) x 10m (wide) x 4m (high). • The flock stockpile shall have a maximum size of 8m (long) x 8m (wide) x 4m (high). • Only storage of metal is allowed in the material storage bays and the Empty Container Storage and Overnight Storage of Filled Containers. • No storage is allowed within 15 m of the floc stockpile. • The tyres must be stored in accordance with FRNSW Guideline for bulk storage of rubber tyres (FRNSW, 2014) and the Tyre Stewardship Australia Best Practice Guidelines for Tyre Storage and Fire and Emergency, version 1, May 2017.
Fire Evacuation procedures	Staff shall practice fire evacuation procedures on a regular basis. Procedures to be undertaken (if safe to do so) include: (a) Keeping a constant record of occupants and visitors within the building. Where possible, these records shall be taken outside by a staff member during any evacuation. (b) Manual fire fighting, if properly trained. (c) An Emergency Management Plan complying with AS 3745:2010 is to be developed.
External car storage areas:	(a) The vehicles must not be stored on top of each other. (b) Hydrant coverage must be provided to all areas, including all external areas of the site considering two lengths of hoses (60 m) to be used as per AS 2419.1:2005 and AS 2419.1:2017. The layout of the car storage areas and any fences must be considered when determine that hydrant coverage is achieved throughout all areas. (c) Aisles must be provided between vehicles on the external storage areas to allow for fire brigade intervention.
Site management	Good housekeeping throughout the site and regular fire prevention practices are to be carried out by management of the site to minimise the risk of unnecessary sources of ignition.

11.6.4 Conclusions

Subject to the recommendations contained in the BCA report prepared by Philip Chun and Associates (Appendix D) and the Fire Engineering report prepared by Red Fire Engineers (Appendix K) the design of the facility is capable of meeting a combination of the Deemed-to-Satisfy and Performance Requirements of the Building Code of Australia 2019.

In addition, the facility will operate in accordance with the Health, Safety and Environmental Management System (HSE) Policy that has also been prepared and adopted for the site.

11.7 Hazards and Risks

The SEARs for the project requires the EIS to include an assessment of hazards and risk, incorporating the items listed below:

- A preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is

"potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011)

11.7.1 Introduction

Potentially hazardous or offensive development is defined by SEPP 33 as development which poses a significant risk to, or which would have a significant adverse impact on, human health, life, property or the biophysical environment, if it were to operate without employing any control measures. This includes developments for the handling, storing or processing of hazardous materials. A development is classified as a hazardous or offensive development if the thresholds in Applying SEPP 33 – which compares the quantities of stored or used hazardous materials to the distance from publicly accessible areas – are exceeded. The hazardous materials classifications in Australian Code for the Transport of Dangerous Goods by Road and Rail (national Transport Commission 2007) (the Dangerous Goods code) are used in Applying SEPP 33.
A Preliminary Hazards Analysis (PHA) and Quantitative Risk Assessment (QRA) has been prepared in support of the proposed development by Benbow Environmental and is contained in Appendix I. The PHA has been prepared in accordance with *Hazardous Industry Planning Advisory Paper* (HIPAP) *No 6*, "*Guidelines for Hazard Analysis*". The QRA has been prepared in accordance with Hazardous Industry Planning Advisory Paper (HIPAP) No 4, "Risk Criteria for Land Use Safety Planning."

The assessment has been carried out in accordance with the DoPI guidelines and has determined that the operation of the proposed development meets the criteria outlined in the HIPAP No. 4 *Risk Criteria for Land Use Safety Planning* and would not cause any risk, significant or minor, to the community, with the recommended safeguards in place.

The chemical storage on site does not exceed the State Environmental Planning Policy No. 33 screening thresholds. The assessment addresses the risks of fire or explosion presented by the use of the shredder/hammermill in site operations, the onsite metal stockpiles and the diesel storage.

11.7.2 Hazardous materials

Storage
The hazardous materials that are stored and used on the site are diesel, oils, grease and liquid petroleum gas (LPG). These materials are stored in the main processing sheds with the exception of diesel which is stored in an external purpose built 15,000 L tank.

The storages, quantities and hazardous properties of the materials required for the proposed processing of 130,000 T of scrap metal and the end of life vehicle treatment facility are provided in Table 35.

Table 35: Chemical Storage

Chemical Name	Dangerous Goods (DG) Class	Onsite Maximum Quantity	SEPP 33 Screening Threshold	Potentially hazardous
Unleaded petrol	Class 3 PG II	4,900 L *Storage:* *5 X 980L Tanks*	Assessed by reference to figures 8 & 9 of applying SEPP 33	No
Oil/Coolant	C2 Combustible Liquid (Non-Dangerous Goods)	2,940 L *Storage:* *3 x 980 L Tanks*	Not relevant	Not applicable
LPG	Class 2.1	5,000 L * *Storage:* *Bottles / cylinders*	10 tonne or 16 m^3 if stored above ground	No

Chemical Name	Dangerous Goods (DG) Class	Onsite Maximum Quantity	SEPP 33 Screening Threshold	Potentially hazardous
ULAB	Class 8 PG III	5 Tonnes *Storage:* *5 x 1 tonne pallets*	5 Tonnes	No
Diesel	C1 combustible liquid / Class 9 PG III	16,960 L *Storage:* *1 x 15,000 L tank* *2 x 980 L tanks*	Not relevant	Not applicable
Synthecol XL Foamer	Non- dangerous Good	1,000 L *Storage:* *IBCs*	Not applicable	Not applicable

*Notes: * Conversion used for LPG 1 L = 0.53 kg*

As seen in the table above the quantities of chemicals to be stored on site do not exceed the SEPP 33 threshold and therefore SEPP33 does not apply.

The Applying SEPP 33 Guidelines states the following in relation to Class C1 storage:

> *If combustible liquids of class C1 are present on site and are stored in a separate bund or within a storage area where there are no flammable materials stored they are not considered to be potentially hazardous. If, however, they are stored with other flammable liquids, that is, class 3PGI, II or III, then they are to be treated as class 3PGIII, because under these circumstances they may contribute fuel to a fire.*

The majority of the diesel stored at the site is within a separate 15,000 L self bunded tank and therefore is not considered to be potentially hazardous. The 980 L tanks of diesel to be located within the ELV facility was considered with the unleaded petrol as a Class 3PGIII, resulting in a total of 6,860 L of Class 3 PGII and PGIII flammable liquids stored on site at any one time. The distance of the storage location to the nearest boundary is less than 30 m, which is outside of the potentially hazardous region of the heat of radiation effects graph 9 (refer to Figure 3-1, Appendix I).

Transport

The proposal has been assessed against the transportation screening threshold stipulated in the SEPP 33 guidelines. The proposed load details and frequency of delivery for the proposed dangerous goods to be stored and used at the site is described in Table 36 below.

Table 36: Transportation of dangerous goods

Chemical Name	Dangerous Goods (DG) Class	Load Details		Delivery Frequency
		Quantity per load	Load Type	
Unleaded petrol	Class 3 PG II	100 L	Bulk	<5 per week
Oil/Coolant	C2 Combustible Liquid (Non-Dangerous Goods)	2,500 L	Bulk	1 per month
LPG	Class 2.1	5,000 L	Package	1 per month
ULAB	Class 8 PG III	5 tonnes	Package	1 per month
Diesel	C1 combustible liquid / Class 9 PG III	15,000 L	Bulk	2 deliveries per month

Synthecol XL Foamer	Non- dangerous Good	1,000 L	Package	1 delivery every 6 weeks

The relevant transportation screening thresholds from applying SEPP 33 are:

Table 37: Transportation screening thresholds

Dangerous Goods Class	Vehicle Movements		Minimum Quantity per load (tonne)	
	Cumulative Annual	Peak Weekly	Bulk	Packages
2.1	>500	>30	2	5
3 PGII	>750	>45	3	10
8	>500	>30	2	5
9	>1,000	>60	No limit	-

The maximum quantity per load and delivery frequency for all dangerous goods is well below the transportation screening threshold. Therefore, the transport of dangerous goods for the proposed development does not trigger SEPP33.

11.7.3 Other Risk Factors

Applying SEPP 33 requires an assessment of other hazards/risk factors outside the scope of the risk screening method.

The PHA identified that the hazardous events expected to occur on site have minimal risk, given that none of the hazardous scenarios identified indicated a high residual risk being present. The hazardous scenarios identified in the PHA include:

- LPG fuel tank explosion in pre-shredder/shredder/hammer mill;
- Petrol fuel tank explosion in pre-shredder/shredder/hammer mill;
- Fire in metal stockpiles;
- Fire in flock stockpile; and
- Pool fire from diesel storage tank.

The assessment of other types of hazards associated with the recycling facility is provided in the Table below.

Table 38: Hazard Analysis

Hazard	Prevention Measures & Controls	Consequence, Likelihood, Risk
Petrol or LPG fuel tank explosion in pre-shredder/hammermill-shredder	• Pre-shredder installed and maintained to ensure that all metal parts entering the hammermill would be sufficiently preshredded • The enclosure of the hammermill is capable of withstanding and containing the overpressure from the explosion of the LPG / petrol fuel tank • Visual inspection by staff to remove unfavourable materials in the hammermill before its	Significant Very Unlikely Low

Hazard	Prevention Measures & Controls	Consequence, Likelihood, Risk
	operation.	
Explosion/fire of airborne dust particles and contact with friction as a source of ignition with operation of hammermill	• Use of dust suppressant (Synthecol XL Foamer) sprayed over shredding area • Ignition control • Shredder designed to withstand dust explosion • Trained fire crew	Significant Very Unlikely Low
Metal stockpile fire	• Stockpile temperature monitoring (infrared camera/sensor cables) • Hydrant coverage of main stockpile from two directions (preferably monitor hydrants) • Material screening to remove batteries/flammable materials.	Severe Unlikely Low
Fire in flock stockpile	30 tonnes of material the total mass of material is on fire; □ A surface area of 49 m2 was assumed as the surface area (based on the stockpile area); and □ A substitute chemical, Gasoline, was used as input for the pool fire	
Structural failure of diesel storage tank	• Storage tank is painted in light colour to reflect heat • Storage tank is bunded to contain and isolate spills and leaks • Routine inspection by staff and management • Visual inspection by staff during operation of other equipment on site.	Severe Unlikely Low
Diesel Storage Tank/Mobile Diesel Storage Tank - equipment failure/spillage	• Training and awareness of staff, management and contractors on site in terms of filling and operation of equipment around the diesel storage tank • Operational procedures • Regular safety audits • Bollards in place to protect storage tank • Signage provided as reminders of procedures to driver and staff on site • Mobile diesel storage tank is self-bunded and vented to atmosphere • Tanker overfill protection (electronic and mechanical) • Procedures in place to control	Severe Very Unlikely Low

Hazard	Prevention Measures & Controls	Consequence, Likelihood, Risk
	ignition sources • Regular inspection, maintenance and reporting of hoses and its working condition status.	
ELV Facility – equipment failure/spillage	• Training and awareness of staff, management and contractors on site in terms of filling and operation of equipment associated with the ELV storage tanks • Operational procedures • Regular safety audits • Bollards in place to protect storage tank • Spill containment • Tank overfill protection (electronic and mechanical) • Procedures in place to control ignition sources • Regular inspection, maintenance and reporting of hoses and its working condition status.	Severe Very Unlikely Low
Stormwater Drainage - spillage	• Stormwater isolation • Safe procedures for transfer of materials to minimise spills • Stormwater drains have been appropriately designed – all waterproofed and location selection appropriate • Occasional routine checks and audits by site management to identify and rectify issues • Safety procedures and management system in place to minimise incidents • Procedures to stop operations if critical equipment is compromised, damaged or inoperable • Training, awareness and education of employees, visitors and contractors.	Minor Extremely Unlikely Low
High and Low Voltage Electrical Systems, Plant Control Systems - electrical fault, human error, arson, fire on transformer	• Routine maintenance checks of the high voltage electrical systems on site • Electrical cabinets in control rooms and plant equipment are installed, operated and maintained in accordance with the relevant Australian Standards • Fire services available to control fire from these systems	Minor Extremely Unlikely Low

Hazard	Prevention Measures & Controls	Consequence, Likelihood, Risk
	• Safety procedures in place to minimise incidents on site • Procedures to stop operations if critical equipment are compromised, damaged or inoperable • Training, awareness and education of employees, visitors and contractors.	
Natural Hazard Effects on Entire Site - destruction of buildings, destruction of diesel storage Tank, flood	• Stormwater design accounts for possible floods in the area, captures and retains flood water on site and preventing discharge to environment • Equipment, machinery and building structures are built in accordance with Australian Standards to be as structurally strong and solid as much as economically possible and practicable • Weather warnings accounted by site management to prevent operation during significantly disastrous climate conditions • Emergency procedures implemented for safe evacuation and termination of operations • Training, awareness and education of employees, visitors and contractors.	Serious Very Unlikely Low

11.7.4 Mitigation and Management Measures

1. A range of hazard control measures and safeguards will be implemented during construction and operation of the proposal. Each of these will be appropriate for the hazard they are designed to control and will generally follow the *Hierarchy of Hazard Controls* (Safe Work NSW):
   - Elimination – Get rid of the hazard
   - Substitution - Replace the hazard with something safer
   - Isolation - Limit access by workers
   - Mechanical Controls - Install engineering solutions to limit a worker's exposure to, or difficulty with, the hazard
   - Signage - Alert all workers and visitors to the danger of the hazard with appropriate signage
   - PPE - If the risk remains, use appropriate personal protective equipment (PPE) to minimise the potential for injury – eg ear muffs, face masks, gloves, hard hats.
   - engineering controls:
     - design — components will be designed and constructed to comply with relevant standards; and
     - enclosure — components will be enclosed as appropriate. For example, tanks will be bunded.
   - administrative controls:
     - operating procedures;
     - scheduled maintenance; and

- training and reinforcing correct work procedures.

2. The storage and use of hazardous materials will be in accordance with the following Australian Standards:
   - *Australian Standard 1940:2004 The Storage and Handling of Flammable and Combustible Liquids*; and
   - *Australian Standard 1596:2008 The Storage and Handling of LP Gas*.

The following recommendations arise from the PHA:

2. The following **plans and procedures** be prepared for the site:
   - Environmental Management Plan, including:
     - Spill procedure;
     - Storage and handling of dangerous goods procedure;
     - Environmental housekeeping procedure;
   - Screening procedure – minimise the hazardous material entering the hammermill;
   - Fire Safety Study;
   - Emergency plan;
   - Safe forklift operating procedure;
   - Maintenance schedule; and
   - Ignition control procedures.

3. The following **fire safety equipment** is recommended to minimise the likelihood and severity of a fire from the hazardous events considered.
   - Stockpile temperature monitor (infrared camera/sensor cables);
   - Hydrant coverage of main stockpile from two directions (preferably monitor hydrants);
   - Use of static earth straps wherever applicable;
   - Fire extinguishers (located as per AS 2419);
   - Declaration of smoking policy and clearly signposted;
   - Bunding and signage of dangerous goods; and
   - Use of dust suppressant (Synthecol XL Foamer) sprayed over shredding area.

4. The following **environment protection equipment** is recommended:
   - Stormwater Isolation system;
   - Spill kits; and
   - Use of dust suppressant (Synthecol XL Foamer) sprayed over shredding area.

5. The following **training** is recommended:
   - Emergency response training;
   - Environmental management training (in accordance with the site's environmental management plan);
   - Safety awareness training, including contractors and visitors;
   - Staff material screening training, to ensure staff minimised the hazardous material entering the hammermill;
   - Staff maintenance training to ensure the equipment on site is maintained in accordance with the maintenance schedule; and
   - Safe forklift driver training.
   - Establish a system wherein a Job Safety Analysis (JSA), Proposed Work Method Statements or other similar systems which achieves (but is not limited to) the following objectives:
     - Changes to the operations of the site – how these changes may affect the risk elements on site.
     - Works proposed to be conducted by contractors – similarly, how the scope of works of each contractor entering a site would affect the risk on site.
     - Promote a system that establishes a mindset or an attitude to all employees on site to prioritise safety.

The training recommendations are to be incorporated into Health, Safety and Environmental Management System (HSEMS).

Promote minor safety aspects such as providing dedicated pedestrian pathways, discouraging the use of mobile phones while in forklift traffic areas, providing appropriate signage for critical areas, and enforcing speed limits.

11.7.5 Conclusions

The preliminary hazard analysis addresses the risks of fire or explosion presented by the use of the shredder/hammermill in site operations, the onsite metal stockpiles and the diesel storage in accordance with the Multi-Level Risk Assessment and Hazardous Industry Planning Advisory Paper (HIPAP) guidelines.

Results from the detailed quantitative analysis provided in Section 4.6 of the PHA shows that the criteria stipulated within the HIPAP guidelines for the following scenarios have been met for all significant sources of hazard risks on site:

- Explosion overpressure for the adjacent commercial/industrial buildings and the nearest sensitive land uses; and
- Heat radiation flux levels for the adjacent commercial/industrial buildings and the nearest sensitive land uses.

The PHA concludes that the hazards and risks associated with the project can be appropriately managed using the identified safeguards and mitigation measures such that the operation of the proposed development would meet all of the safety requirements stipulated by the Department of Planning and Infrastructure. Hence, this facility would not be considered an offensive or hazardous development in accordance with the HIPAP guidelines and there would be minimal impact to the natural environment or nuisance caused to the amenity of adjacent occupiers of neighbouring premises.

11.8 Incident Management

The SEARs for the project require the EIS to contain an assessment of incident management procedures, incorporating the items listed below:

- Details of spill management equipment to be held on site.
- Details of processes to effectively manage the risk of explosions or other incidents associated with the handling, storing, dismantling and draining of fuel tanks, air bags and seatbelt pre-tensioners.

11.8.1 Existing Environment

A Health, Safety and Environmental Management System (HSE) has been prepared and adopted for the site. The full suite of documents is included in Appendix N and includes the following that are relevant to incident management:

- HSE Incident Reporting and Investigation
- HSE Incident and Reporting and Investigation Procedure
- HSE Risk Management Procedure
- HSE Legal and Other Requirements
- HSE Spill Response Procedure
- HSE Waste Management Procedure
- HSE Air Emissions Management Procedure
- HSE Chemical and Fuel management Procedure
- HSE Inspection and Testing
- HSE Training and Competency
- Safe Work Instruction – Processing vehicles
- Safe Work Instruction – Refuelling Equipment

Spill management kits are kept on the site.

11.8.2 Mitigation and Management Measures

Implementation and continual review of Auto Recyclers and Rush Metals Health, Safety and Environmental Management System (HSEMS).

11.8.3 Conclusions

The Health, Safety and Environmental Management System (HSEMS) establishes a framework for risk minimisation and the effective management and reporting of incidents.

11.9 Visual

The SEARs for the project require the EIS to contain an assessment of the visual impacts of the development, incorporating the items listed below:

- An assessment of the potential visual impacts of the project on the amenity of the surrounding area, including light spill from 24 hour operations.

Visual impacts are changes to the scenic attributes of the landscape brought about by the introduction of visual contrasts (e.g., development) and the associated changes in the human visual experience of the landscape. Visual impact assessment is the identification and analysis of the potential visual impacts to the landscape and landscape views resulting from the proposed development.

A landscape and visual impact assessment measures and assesses potential landscape and visual effects or impacts. The process ideally then uses this information to inform and influence the design or planning process, ultimately producing an outcome that has taken account of potential landscape and visual impacts and shaped the result to reduce negative impacts and enhance the existing landscape and visual environment.

The Landscape Institute and the Institute of Environmental Management and Assessment (2002) define these two effects as:

> "Landscape effects derive from changes to the physical landscape, which may give rise to changes in its character and how it is experienced. This may in turn affect the perceived value ascribed to the landscape."
>
> "Visual effects relate to the changes that arise from the composition of available views as a result of changes to the landscape, to people's response to the changes, and to the overall effects with respect to visual amenity."

11.9.1 Existing Environment

The site is substantially clear of vegetation other than a row of murraya along the northern boundary and some scattered trees. The site is situated in a locality which has a strong industrial related character with large scale industrial infrastructure in close proximity

Overall, the site is located well away from any residential areas, the closest being on the eastern side of Sunnyholt Road, approximately 550 m distant from the site. Figure 24 below shows the site context, including its proximity to surrounding industrial uses and residential areas. Photographs showing the site and surrounding visual context are also included in Section 3 of the EIS.

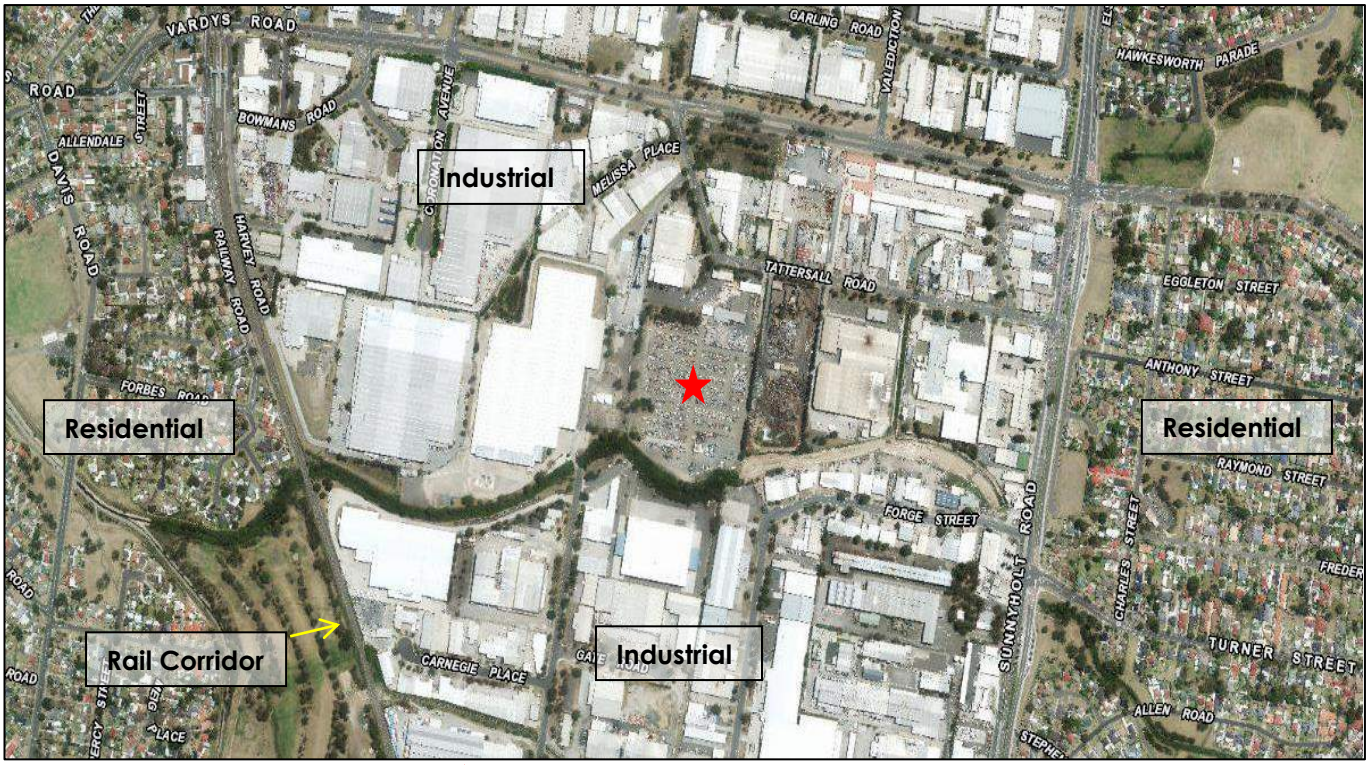


Figure 24: Aerial photo of locality ★ - subject land

11.9.2 Impact Assessment

The appearance of the site from Tattersall Road will not be altered by the proposed development. No buildings works are proposed along the Tattersall Road frontage and views from Tattersalls Road, the main thoroughfare, towards the development will be screened by the existing buildings due to the shape of the allotment, the location of the 2-storey administration building (Building A) and the topography of the land which slopes downwards from the Tattersall Road Frontage to the south-southwest.

A tall acoustic wall/barrier erected by Sell & Parker on the eastern boundary will substantially screen the development from properties located to the east.

The most direct visual impact on the locality will be from adjoining industrial properties to the west. The scale of the development represents an appropriate visual fit in the context of the scale of surrounding industry.

It is unlikely that there will any visual impacts when viewing the site from sensitive receivers further afield as there is no direct line-of-sight from residential receptors.

11.9.3 Mitigation & Management Measures

Management measures that will be implemented during construction and operations to minimise visual Impacts include:

- Rubbish from around the site boundaries will be removed.

11.9.4 Conclusions

The scale of the development in the context of the large scale surrounding industry will ensure that any landscape and visual impacts will be local. There will be no visual impacts when viewing the site from

sensitive receivers further afield. Overall, the proposal represents an appropriate visual fit, and will contribute to and enhance the existing industrial visual character of the area.

12 Mitigation Measures – Statement of Commitment

The collective measures required to mitigate the impacts associated with the Project are detailed in the sections below which form a draft Statement of Commitments. These measures have been derived from the detailed discussion in Sections 10 and 11 and those detailed in the appended consultants' reports. Common mitigation measures between key environmental issues have been amalgamated.

12.1 General

A site-specific Environmental Management Plan (EMP) will be prepared and implemented to ensure that the commitments made within the EIS are fully implemented and complied with. The EMP will establish the framework for managing and mitigating the potential environmental impacts of the development over the life of the operation.

12.2 Waste Management

- Ordering will be limited to only the required amount of materials;
- Materials will be segregated to maximise reuse and recycling;
- Routine checks would be undertaken of waste sorting and storage areas for cleanliness, hygiene and OH&S issues, and contaminated waste materials;
- Separate skips and recycling bins will be provided for effective waste segregation and recycling purposes;
- Training and awareness will be undertaken for site staff and contractors;
- Contaminated waste will be managed, transported, and disposed of in accordance with EPA requirements;
- Off-site waste disposal will be transported and disposed of in accordance with licensing requirements;
- Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes will be undertaken; and
- Regular monitoring, inspection and reporting requirements will be undertaken.
- Implementation and compliance with Auto Recyclers and Rush Metal Recyclers policies, Integrated Health, Safety and Environment Management System.

12.3 Soil & Water

- Each oil patch to be excavated and stockpiled within a designated area onsite. The stockpile of excavated soils to be sampled and analysed to classify the soils for offsite waste disposal. A waste classification certificate to be prepared for each waste stream being transported and removed offsite. A summary report is prepared to document works.
- Oil absorbent mats be placed beneath each vehicle stored on unsealed ground to absorb drips and leaks from engine parts as an interim measure until soils are excavated
- Use of oil absorbent mats to prevent further soil contamination.
- Inspection and maintenance program to ensure mechanical integrity of the plant and equipment to minimise accidental releases.
- Erosion and Sediment Control details are to generally be in accordance with the submitted drawings (Sheets 801-811) provided at Appendix A.
- Inspection and maintenance of the proposed water quality devices in accordance with the following Schedule:

Device/Structure	Inspection Items	Frequency of Maintenance	Action Required
Rainwater Tank	Roof Gutters	6 months	• Remove leaves and debris in gutters
Rainwater Tank	First Flush Device	1-3 months	• Inspect and clean first flush device from debris
Rainwater Tank	Contamination (Mosquito/vermin breeding or algae growth)	6 months	• Disinfection of tank
Rainwater Tank	Inlet/Outlet screen	6 months	• Remove leaves and debris on surface.
Rainwater Tank	Pump strainer	6 months	• Inspect and clean pump strainer from debris
Rainwater Tank	Tank Structure	2 years	• Check footings and fittings for signs of corrosion
Rainwater Tank	Depth of sediment within tank	5 years	• De-sludge tank by engaging a professional tank cleaner
OSD Basin	Outlet overflow pit & weir wall	Yearly	• Repair where cracking or spalling of concrete surfaces is identified.
OSD Tank	Trash Screens	6-12 months	• Inspect and clean out if necessary
OSD Tank	Sump below outlet	6-12 months	• Inspect and clean out sediment/debris build-up.
Jellyfish Filter (GPT)	Cartridge Lids, & Maintenance access wall	6 months	• Visual inspection of the unit, vault and filter. • Vacuum extraction of oil, floatable trash/debris, pollutants and sediment from manhole sump. External rinsing and re-installing filter cartridges. Replace filter cartridge tentacles as needed.
Stormfilter	Stormfilter Chamber & Cartridges	6 months	• Visual inspection of cartridges & chamber. Remove larger gross pollutants and perform rectification works if required

Stormfilter	Stormfilter Cartridges & Filter Media	Yearly	• Remove accumulated sediment. Wash-down stormfilter chamber. • Replace stormfilter cartridge media as required
SPELL Filter	Filter Chamber & Cartridges	6 months	• Visual inspection of cartridges & chamber. Remove larger gross pollutants and perform rectification works if required
SPELL Filter	Filter Chamber & Cartridges	Yearly	• Remove accumulated sediment. Wash-down stormfilter chamber. • Replace stormfilter cartridge media as required
SPELL Stormceptor	Depth of sediment & gross pollutants within tank	6 months	• Visual inspection of the unit. • Vacuum extraction of oil, floatable trash/debris, pollutants and sediment from manhole sump. External rinsing of unit.

12.4 Air Quality and Odour

- Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means).
- Yard to be wetted down at times to prevent fugitive dust from leaving site.
- Haul routes are to be hardstand.
- Site speed limits are restricted and enforced.
- All vehicle loads are covered for transporting material off- site.
- On-site vehicle engines will be switched off when not in use
- Material stockpile size maintained appropriately.
- Hard site surfaces are regularly swept to reduce dust and debris accumulations and limit potential for dust to be tracked off-site by trucks.
- Removal of any fluids/hazardous materials will be undertaken on hardstand area to ensure that the potential for soil contamination would be minimised and thus minimise the potential for contaminated windblown dust to migrate off-site.
- Staff are trained and competent in the identification of acceptable and unacceptable material to be processed. Unacceptable material such as fluids, oils, coolant, petrol, airbags, batteries, gas tanks etc. are removed prior to processing.
- An investigation to be conducted into the occurrence of any flame event.
- Material stockpile areas are located next to respective process equipment.
- The down-stream shredder processing equipment is covered.
- The 'dust buster' foaming agent dust suppressant is used to control emissions from the hammermill shredder.
- To ensure maximum performance, plant is operated and maintained per the manufacturer's user manual.

12.5 Noise and Vibration

- An acoustic barrier to be constructed around the shear to reduce the noise emission to the adjacent industrial premises to the north and west of the site.
- A 2.5 metre high acoustic barrier to be constructed to the north of the shear at a distance of no greater than 15 metres from the machine as shown in Appendix A.
- A 3.5 metre high acoustic barrier to be constructed to the west of the shear at a distance of no greater than 30 metres from the machine as shown in Appendix A.

- The acoustic barriers may be constructed with 'DuneWall Custom Height Acoustic Wall', which will be acceptable. Details of the acoustic barrier can be seen in the attached Appendix B.
- Should the location of the recommended barriers be required to change due to conflicts with the functionality of the site / shear, further acoustic assessment is required.
- In the event that complaints are received regarding vibration originating from the site, compliance monitoring of ground borne vibration be carried out at the nearest receptor location.

12.6 Traffic and Transport

- The eastern driveway access to be widened to 11m in order to permit two-way heavy vehicle flow at the access driveway from tattersall Road.

- Tree protection:
  - All trees marked for retention (T2-T6, Figure 11) to be protected by Tree Protection Zones (TPZ) as follows:

Tree	TPZ (metres)
T2	7.7
T3	2.9
T4	7.6
T5	8
T6	13

  - Installation of tree protection fencing in accordance with AS 4970-2009 Protection of Trees on Development Sites.
  - Retention of existing soil grades where there is encroachment into the Tree Protection Zones.
  - Avoidance of soil compaction through working from inside the footprint, protection of ground surfaces, within the TPZ, careful removal of sub base soils.
  - Implementation of an erosion and sedimentation control plan during construction work.
  - During works, should any native fauna be located in the trees the contractor is to cease work on the tree and call WIRES if the fauna has not relocated of its own accord.
  - Remove items stored underneath trees to prevent further impact to the trees to be retained.

12.7 Fire Management

- An operations plan in accordance with clause 8.6 as per the FRNSW guideline (FRNSW, 2019) and an emergency plan (in accordance with AS 3745:2010) is required to be established
- An operational plan must be developed outlining the final location of stockpiles and emergency vehicle access. The operational plan must define procedures that ensure stockpile limits are not exceeded by daily operations and contain all required information as per section 8.6 of the FRNSW guideline (FRNSW, 2019) and fire safety measures within this report.

12.7.1 Buildings B, C & D

- To be provided with a sprinkler system in accordance with AS 2118.1:2017 and Specification E1.5 of the BCA.
- Storage height must be limited to 2.2 m.
- The sprinkler system must be connected to a building occupant warning system as per clause 8 of Specification E1.5.

12.7.2 Building B

- A maximum of 20 bags processed material is allowed in building B. Exact location to be included in Fire Engineering Report.
- The stockpiles must be maintained and the area be marked up with line marking on the floor, so that all building egress points and required paths of travel are not blocked or impeded.

12.7.3 Stockpile Management

- Stockpiles or combustible waste material are to be rotated to dissipate any generated heat and minimise the risk of auto-ignition. The maximum duration of idle storage should not exceed six months unless determined otherwise through a risk assessment.
- Stockpile boundary limits shall be permanently marked to clearly identify limits that maintain maximum stockpile size and minimum separation distances as required by Clause 8.2.7 of the FRNSW guideline.
- The shredder feed stockpile shall have a maximum size of 28m (long) x 10m (wide) x 4m (high).
- The shear stockpile must consist of metal material only and have a maximum size of 17m (long) x 10m (wide) x 4m (high).
- The flock stockpile shall have a maximum size of 8m (long) x 8m (wide) x 4m (high).
- Only storage of metal is allowed in the material storage bays and the Empty Container Storage and Overnight Storage of Filled Containers.
- No storage is allowed within 15 m of the floc stockpile.
- The tyres must be stored in accordance with FRNSW Guideline for bulk storage of rubber tyres (FRNSW, 2014) and the Tyre Stewardship Australia Best Practice Guidelines for Tyre Storage and Fire and Emergency, version 1, May 2017.

12.7.4 Fire Evacuation procedures

- Staff shall practice fire evacuation procedures on a regular basis. Procedures to be undertaken (if safe to do so) include:
- Keeping a constant record of occupants and visitors within the building. Where possible, these records shall be taken outside by a staff member during any evacuation.
- Manual firefighting, if properly trained.
- An Emergency Management Plan complying with AS 3745:2010 is to be developed.

12.7.5 External car Storage

- The vehicles must not be stored on top of each other.
- Hydrant coverage must be provided to all areas, including all external areas of the site considering two lengths of hoses (60 m) to be used as per AS 2419.1:2005 and AS 2419.1:2017. The layout of the car storage areas and any fences must be considered when determine that hydrant coverage is achieved throughout all areas.
- Aisles must be provided between vehicles on the external storage areas to allow for fire brigade intervention.

12.7.6 Site management

- Good housekeeping throughout the site and regular fire prevention practices are to be carried out by management of the site to minimise the risk of unnecessary sources of ignition.

12.8 Hazards & Risks

- A range of hazard control measures and safeguards to be implemented during construction and operation of the proposal. Each of these will be appropriate for the hazard they are designed to control and will generally follow the Hierarchy of Hazard Controls (Safe Work NSW):
    - Elimination – Get rid of the hazard;
    - Substitution - Replace the hazard with something safer;

  - Isolation - Limit access by workers ;
  - Mechanical Controls - Install engineering solutions to limit a worker's exposure to, or difficulty with, the hazard;
  - Signage - Alert all workers and visitors to the danger of the hazard with appropriate signage;
  - PPE - If the risk remains, use appropriate personal protective equipment (PPE) to minimise the potential for injury – eg ear muffs, face masks, gloves, hard hats;
  - engineering controls:
  - design — components will be designed and constructed to comply with relevant standards; and
  - enclosure — components will be enclosed as appropriate. For example, tanks will be bunded.
  - administrative controls:
  - operating procedures;
  - scheduled maintenance; and
  - training and reinforcing correct work procedures
- The storage and use of hazardous materials will be in accordance with the following Australian Standards:
  - *Australian Standard 1940:2004 The Storage and Handling of Flammable and Combustible Liquids; and*
  - *Australian Standard 1596:2008 The Storage and Handling of LP Gas.*
- The following plans and procedures be prepared for the site:
  - Environmental Management Plan, including:
  - Spill procedure;
  - Storage and handling of dangerous goods procedure;
  - Environmental housekeeping procedure;
  - Screening procedure – minimise the hazardous material entering the hammermill;
  - Fire Safety Study;
  - Emergency plan;
  - Safe forklift operating procedure;
  - Maintenance schedule; and
  - Ignition control procedures.
- The following fire safety equipment is recommended to minimise the likelihood and severity of a fire from the hazardous events considered.
  - Stockpile temperature monitor (infrared camera/sensor cables);
  - Hydrant coverage of main stockpile from two directions (preferably monitor hydrants);
  - Use of static earth straps wherever applicable;
  - Fire extinguishers (located as per AS 2419);
  - Declaration of smoking policy and clearly signposted;
  - Bunding and signage of dangerous goods; and
  - Use of dust suppressant (Synthecol XL Foamer) sprayed over shredding area.
- The following environment protection equipment is recommended:
  - Stormwater Isolation system;
  - Spill kits; and
  - Use of dust suppressant (Synthecol XL Foamer) sprayed over shredding area
- The following training is recommended:
  - Emergency response training;
  - Environmental management training (in accordance with the site's environmental
  - management plan);
  - Safety awareness training, including contractors and visitors;
  - Staff material screening training, to ensure staff minimised the hazardous material entering
  - the hammermill;
  - Staff maintenance training to ensure the equipment on site is maintained in accordance with
  - the maintenance schedule; and
  - Safe forklift driver training.

  - Establish a system wherein a Job Safety Analysis (JSA), Proposed Work Method Statements or other similar systems which achieves (but is not limited to) the following objectives:
  - Changes to the operations of the site – how these changes may affect the risk elements on site.
  - Works proposed to be conducted by contractors – similarly, how the scope of works of each contractor entering a site would affect the risk on site.
  - Promote a system that establishes a mindset or an attitude to all employees on site to prioritise safety.
- To be incorporated into a Site Safety Management System.
  - Promote minor safety aspects such as providing dedicated pedestrian pathways,
  - discouraging the use of mobile phones while in forklift traffic areas,
  - providing appropriate signage for critical areas, and
  - enforcing speed limits.

12.9 Incident Management

- Implementation and compliance with the Health, Safety and Environmental Management System (HSE)

12.10 Visual

- Rubbish from around the site boundaries will be removed during the construction and operational stages.

13 Consultation

The SEARs for the proposal require consultation with relevant local, State or Commonwealth authorities, service providers, community groups and potentially affected landowners. In particular consultation was required with:

- Blacktown City Council (BCC);
- Environment Protection Authority (EPA);
- Department of Primary Industries (DPI);
- SafeWork NSW;
- Transport for NSW (TfNSW);
- Roads and Maritime Services (RMS);
- Fire & Rescue NSW; and
- Nearby landowners and occupiers that may be affected by the proposal.

13.1 Community Consultation

A community consultation 'drop-in session' was held at Pick'n'Payless on Tuesday 7th August 2018 from 2.00pm to 4.00pm. An extensive letter box drop was undertaken inviting neighbours to the consultation session. Community groups, stakeholders and local members were invited by email. The extent of the letterbox drop is shown in Figure 24 below.

A Sell & Parker representative was the only attendee at the community consultation 'drop-in session'. A formal response/ comment was not received.

One telephone call was received from 48 Forge Street on the southern side of Breakfast Creek. The basis of the comments received was around the need for another metal recycling facility given the impacts from the Sell & Parker operation. The following issues were raised:

Traffic

- Truck drivers entering and exiting Sell & Parker do not obey traffic rules.

Comment:
The additional vehicle trips to be generated by the proposed development and the impact upon the safety of the street network have been addressed in the Traffic & Parking Impact Assessment, that concluded that the increased truck volume generated by the proposal will not have a negligible effect on the operating outcome and the Level of Service of the surrounding transport network and no reliance is expected on the external road network

The eastern driveway has been designed for access for 19m articulated vehicles to be able to enter and leave the site in a forward direction and the widening driveway crossing to 11m in order to permit two-way truck flow at the access, will improve vehicle safety in Tattersall Road

Dust and odour

- Is asthmatic and has to leave the workplace when conditions are dusty or air quality poor
- When something is dropped in the Sell & Parker yard it kicks up so much dust - a hardstand area could fix this
- Machinery at Sell & Parker produces a lot of smoke

Comment:
Consideration of cumulative impact has been addressed in the Air Quality Impact Assessment with recommended dust mitigation measures. All material storage areas and the internal perimeter road network are to be hardstand. A water cart is retained onsite for dust suppression purposes and

management measures include wetting down the yard, restricting and enforcing internal speed limits and regularly sweeping hard site surfaces to reduce dust and debris accumulations.

The shredder is also fitted with a 'dust buster' unit which emits a foaming agent dust suppressant to control blue smoke emissions, dust and floc before it escapes into the air, vastly reducing emissions and improving environmental working conditions.

Noise

- The machinery operating at Sell & Parker is so noisy it gives him headaches
- Noise from the Sell & Parker operation affects communication within their premises.

Comment:
Consideration of cumulative impact has been addressed in the Environmental Noise and Vibration Assessment with recommended noise mitigation measures.

Figure 24: Extent of Community Letter Box Drop

To ensure that the metal recovery and recycling facility meets the NSW Noise Policy for Industry noise criteria, existing and proposed noise mitigation measures include a 4-6 metre high acoustic barrier around the hammermill/shredder and a 2.5-3.5 metre high acoustic barrier to be constructed around the shear.

Hammermill/Shredder

- A 5 metre high acoustic barrier to the north of the shredder at a distance of 2 metres from the machine.
- A 6 metre high acoustic barrier to the west of the shredder at a distance of 3 metres
- A 4 metre high acoustic barrier to the south of the shredder at a distance of 2 metres.

Shear

- A 2.5 metre high acoustic barrier to be constructed to the north of the shear at a distance of no greater than 15 metres from the machine.
- A 3.5 metre high acoustic barrier to be constructed to the west of the shear at a distance of no greater than 30 metres from the machine.

13.2 Authority Consultation

Table 39 below provides a summary of the issues raised by local and state authorities in the SEARS and where those issues have been addressed in the EIS.

Correspondence was forwarded to the relevant local and state authorities inviting further comment and/or discussion in relation to the preparation of the EIS for the proposed project. No further comment to that provided in the SEARs was received.

.

Table 39: Summary of agency comments attached to the SEARS

AUTHORITY	ISSUE	RESPONSE
Roads and Maritime Services (RMS)	Traffic impact assessment.	A traffic and parking impact assessment has been prepared with regard for the items raised by RMS. (Appendix M)
EPA	Air pollution – impact on neighbouring properties from smoke and odours	Air Quality Impact Assessment (Appendix E)
	Noise - impact on neighbouring properties	Environmental Noise and Vibration Assessment (Appendix H)
	Dust - impact on neighbouring properties	Air Quality Impact Assessment (Appendix E)
	Water – treatment, disposal and storage of contaminated waste water	Addressed in Fire Engineering Report (Appendix K)
	Vibration – impact on neighbouring properties	Environmental Noise and Vibration Assessment (Appendix H)
	Fire and explosion risk management and containment	Preliminary Hazard Analysis (Appendix I) Integrated Health, Safety and Environment Management System (Appendix N)
Blacktown City Council	Traffic impact assessment	A traffic and parking impact assessment has been prepared with regard for the items raised by BCC. (Appendix M)
	Details of processing volumes and tracking and recording procedures	Integrated Health, Safety and Environment Management System (Appendix N)
	Consideration of impacts from light spill	
	Justification for extended hours of operation	
	Assessment of impact on air quality	Air Quality Impact Assessment (Appendix E)
	Assessment of noise and vibration impacts	Environmental Noise and Vibration Assessment (Appendix H)

AUTHORITY	ISSUE	RESPONSE
	Waste management strategy to include storage and handling of chemicals and other waste products, disposal of residual wastes and stockpiling procedures	Waste management strategy
	Provision of onsite detention	
	Water quality systems (MUSIC)	
	Water conservation targets	
	Flooding – to be no net loss of flood storage and shall not increase flood levels outside of the development site by more than 20mm	Flood Impact Assessment (Appendix G)
FRNSW	Compliance with clauses E1.10 and E2.3 of Volume 1 of the National Construction Code	Preliminary BCA report (Appendix D) and Fire Engineering report(Appendix K)
DPI	An assessment of the impacts to water sources including water use, any water licensing requirements and impacts on water users, water quality and waterfront land.	
SafeWork NSW	Management of risks associated with the dismantling of fuel tanks and the handling, storage and disposal of residual autogas, petrol and diesel.	Integrated Health, Safety and Environment Management System (Appendix N)
	Handling of airbags and seatbelt pre-tensioners	Integrated Health, Safety and Environment Management System (Appendix N)
Transport for NSW	Traffic assessment	A traffic and parking impact assessment has been prepared with regard for the items raised by TfNSW. (Appendix M)

14 Justification for the Proposed Development

The public interest is best served by promoting sustainable development that is rational, orderly and economic. The proposal is permissible with consent under the zoning of the site and will generate positive social, environmental and economic benefits.

According to research conducted by the US Environmental Protection Agency, recycling scrap metals can be quite beneficial to the environment. Using recycled scrap metal in place of virgin iron ore can yield:

- 75% savings in energy.
- 90% savings in raw materials used.
- 86% reduction in air pollution.
- 40% reduction in water use.
- 76% reduction in water pollution.
- 97% reduction in mining wastes.

Every ton of new steel made from scrap steel saves:

- 1,115 kg of iron ore.
- 625 kg of coal.
- 53 kg of limestone.

Energy savings from other metals include:

- Aluminium savings of 95% energy.
- Copper savings of 85% energy.
- Lead savings of 65% energy.
- Zinc savings of 60% energy.

The metal recovery and recycling facility and ancillary activities have many benefits from an economic, social and environment perspective, as it:

- diverts recyclable and reusable wastes from landfill, including co-mingled waste for which there are few recycling alternatives;
- diverts these wastes from landfill will preserve space within landfills for general waste (putrescible) extending the life of these landfills;
- provides a commercial return and will contribute to the economy of NSW; and
- provides employment for a minimum of 30 additional people within the recycling facility.

The proposal to expand the existing facility will contribute to its long term economic viability.

14.1 Ecologically Sustainable Development

Ecologically Sustainable Development (ESD) is a primary objective of environmental protection in NSW. The objectives of the EP&A Act include the encouragement of the principles of ESD. Supplementary to the EP&A Act objectives, section 7 (1(f)) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 requires a proponent to include in an EIS the reasons justifying the development, including the principles of ESD. Section 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 defines the principles of ESD as follows:

(a) *The **precautionary principle,** namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*

  (i) Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) An assessment of the risk-weighted consequences of various options.

(b) ***Inter-generational equity****, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*

(c) ***Conservation of biological diversity and ecological integrity,*** *namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.*

(d) ***Improved valuation, pricing and incentive mechanisms,*** *namely, that environmental factors should be included in the valuation of assets and services, such as:*

(i) Polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) The users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

14.1.1 The Precautionary Principle

The Precautionary Principle states that if there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The Development has been assessed for impacts relating to hazards and risk, soil erosion, air quality and odour, noise, traffic and transport, visual amenity, flora and fauna, Aboriginal heritage, and non-indigenous heritage. This EIS, combined with the consultation undertaken with relevant government agencies, and local stakeholders, has provided an understanding of the potential implications of the development and subsequently confirm the mitigation measures required.

Through the adoption of an anticipatory approach, each potential issue arising from the Project has been identified, evaluated and mitigated through a series of design or management solutions. This EIS and specialist consultant reports recommend mitigation measures to avoid, minimise and offset potential impacts. This proposed redevelopment of the site will not result is any serious or irreversible environmental impacts.

14.1.2 Social and Inter-Generational Equity

Intergenerational Equity is centred on the concept that the present generation should ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. There is a moral obligation to ensure that today's economic progress, which would benefit current and future generations, is not offset by environmental deterioration.

Throughout the assessment, the type and extent of potential impacts caused by the Project have been analysed and mitigated. The assessment methodologies have adopted a risk-based and worst case scenario approach to ensure improved environmental, social and economic protection for current and future generations.

The proposal has been designed to ensure the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations. The management and mitigation measures proposed in Section 12 would assist in ensuring that the development does not pose any significant impact or risk to the surrounding environment and safeguards the environment for future generations.

14.1.3 Conservation of Biological Diversity and Ecological Integrity

The principle of Conservation of Biological Diversity and Ecological Integrity holds that the conservation of biological diversity and ecological integrity should be a fundamental consideration for development proposals.

The site is located in an established industrial precinct and is substantially clear of vegetation other than a few native trees located near or on the western boundary. This part of the site mapped as containing Terrestrial Biodiversity under the provisions of Blacktown LEP 2015. The majority of the terrestrial biodiversity mapping overlays a sealed car park on the adjoining land to the west, with the subject site only marginally affected by the terrestrial biodiversity mapping.

Molino Stewart was engaged to conduct a biodiversity assessment (Appendix J) and found that:

- The removal of the vegetation onsite would not constitute a significant impact.
- The vegetation has very low integrity with low site context and landscape features. Threatened species are unlikely as the habitat is poor.

- The vegetation clearance is insignificant, is a very small area with poor understorey and would not justify a BAM assessment nor BDAR as no Plant Community Type (PCT) can be nominated due to the lack of species present and even if a PCT could be identifiable, both the area of native vegetation to be cleared (one tree) and the score would be too low to qualify as a native vegetation patch.

Consequently, the tree is not identified as having any biodiversity value and the development does not pose any significant threat to local biological diversity or ecological integrity.

14.1.4 Improved Valuation and Pricing of Environmental Resources

The principle of Improved Valuation, Pricing and Incentive Mechanisms deems that environmental factors should be included in the valuation of assets and services. The cost associated with using or impacting upon an environmental resource is seen as a cost incurred to protect that resource.

The Project has placed an optimal valuation and pricing on natural resources by proposing significant improvements in the environmental management of the site. This includes improvements in waste management, stormwater management and treatment, remediation of site contamination and the adoption and implementation by Auto Recyclers and Rush Metals of a Health, Safety and Environmental Management System (HSE) establishing clear environmental objectives for the site.

Management and mitigation contained in the EIS and attached consultant reports will ensure that an appropriate level of site environmental performance is achieved.

14.2 Biophysical considerations

This environmental impact statement and the various sub-consultant reports have been prepared to address the likely impacts of the proposed development on the environment. A number of mitigation measures and recommendations have been adopted to ensure that the proposed development will not result in any unacceptance impacts to the biophysical environment.

14.3 Economic Considerations

The proposed development generates an economic benefit on both a local scale and a regional level. At the local scale the facility provides additional local employment opportunities and an expanded recycling service for local industry and residents, meeting an identified need for greater capacity waste recycling services. At the regional scale, the facility forms part of a larger recycling supply chain.

14.4 Social Considerations

The proposed development provides an urban service facility that meets the day to day needs of the community. The proposed development has been designed in accordance with existing and projected future needs of the community by providing an urban service facility that meets the day to day needs of the community. Social benefits of the proposal include:

- assisting NSW to meet growing demand in waste management and recycling; and
- The additional employment opportunities to be created, with up to 30 new fulltime positions being generated during the operational phase will have a positive social impact within western Sydney, provide jobs for the local community and surrounds.

15 Conclusion

The Environmental Impact Statement has been prepared in accordance with the Environmental Planning and Assessment Act 1979, Environmental Planning and Assessment Regulation 2000 and Secretary's Environmental Assessment Requirements.

Our assessment confirms that the proposal warrants approval for the following reasons:

- The subject site is suitable for the proposed development and will not result in any significant or adverse acoustic, vibration, water, air, privacy or amenity issues;
- The site's location in an established industrial precinct, and with access to heavy vehicle routes, minimises the impacts of additional traffic on the capacity of the local road network and exposure to traffic related noise.
- A range of environmental issues have been identified and assessed with appropriate mitigation and management measures proposed to be carried through to the construction and operational phase. Emphasis has been applied to the management of potential hazards and risk associated with the development as well as traffic impacts;
- Mitigation measures have been identified to manage potential environmental risks and construction impacts; and
- The development will facilitate additional employment opportunities both during and after construction, employing up to 60 staff during operation.

The proposed development has been shown to be consistent with the relevant local and State planning instruments and it has been demonstrated through this EIS that the proposal will not result in significant impacts to the environment through the implementation of management and mitigation strategies. Therefore, the development is considered an appropriate use for the existing site, represents rational, orderly, economic and sustainable use of the land and should therefore be supported.

Appendix A
Development Plan

Appendix B

SEARs

Appendix C
Compliance Audit

Appendix D
Building Code of Australia Report

Appendix E

Air Quality Impact Assessment

Appendix F
Contamination Investigation

Appendix G
Flood Impact Assessment

Appendix H
Environmental Noise and Vibration Assessment

Appendix I
Preliminary Hazard Analysis

Appendix J
Biodiversity Assessment

Appendix K
Fire Engineering Brief

Appendix L
Hydrant Design

Appendix M
Traffic and Parking Impact Assessment

Appendix N

Health, Safety and Environmental Management Systems

Appendix O
Quantity Surveyor's Report

Appendix P
Fire Engineering Report (DRAFT)

Appendix Q
Community Consultation Flyer

Appendix R
Government Agency Consultation:
Pro-forma Letter

Appendix S
Engineering Plans

Appendix T
Water and Soil Report

Appendix U
Waste Management Plan

Appendix V
Construction Management Plan

Appendix W

Construction Noise and Vibration Management Plan