ENVIRONMENTAL ASSESSMENTS TO SUPPORT AN ENVIRONMENTAL IMPACT STATEMENT FOR A PROPOSED METAL RECYCLING FACILITY 84 PERCIVAL ROAD, SMITHFIELD

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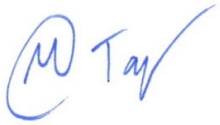
Matthew Taylor	Graduate Environmental Scientist		20 November 2019
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1. INTRODUCTION

Benbow Environmental has been engaged by Think Planners to prepare environmental assessments to support an Environmental Impact Assessments for establishment of a scrap metal waste transfer station to be located at 84 Percival Road, Smithfield. The business would be operated by Sydney Smithfield Metal Recyclers.

The proposed development includes construction of a weighbridge and a change in the existing land use to a scrap metal recycling facility that would accept scrap metal from consumers and store this either in the external rear yard or within the existing warehouse to be on-sold to a metal recycler.

Approximately 20,000 tonnes per year would be accepted. No crushing or screening will take place at the site. A compactor would be located in the rear yard that would be used. The maximum storage capacity would be 100 tonnes at any one time.

The proposed development is designated development as it is a waste management facilities or works located within 500 m of a residential zone and requires an Environmental Impact Statement to accompany the development application. The proposed activities are not scheduled under the Protection of the Environment Operations Act, 1997 and therefore do not require an Environment Protection Licence.

1.1 SCOPE OF WORKS

The scope of works included in this report is in accordance with SEAR 1327 and is shown in the following table:

Table 1-1: Scope of Environmental Assessments in accordance with SEAR 1327

Requirement	Section
Waste management - including: - Details of the type, quantity and classification of waste to be received at the site - Details of the resource outputs and any additional processes for residual waste - Details of waste handling including, transport, identification, receipt, stockpiling and quality control - The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.	Section 3
Traffic and transport- including: - A traffic and transport assessment prepared in accordance with Roads and Maritime Services and Transport for NSW Guidelines - Details of road transport routes and access to the site - An assessment of impacts to the safety and function of the road network and the details of any road upgrades required	Section 4

Table 1-1: Scope of Environmental Assessments in accordance with SEAR 1327

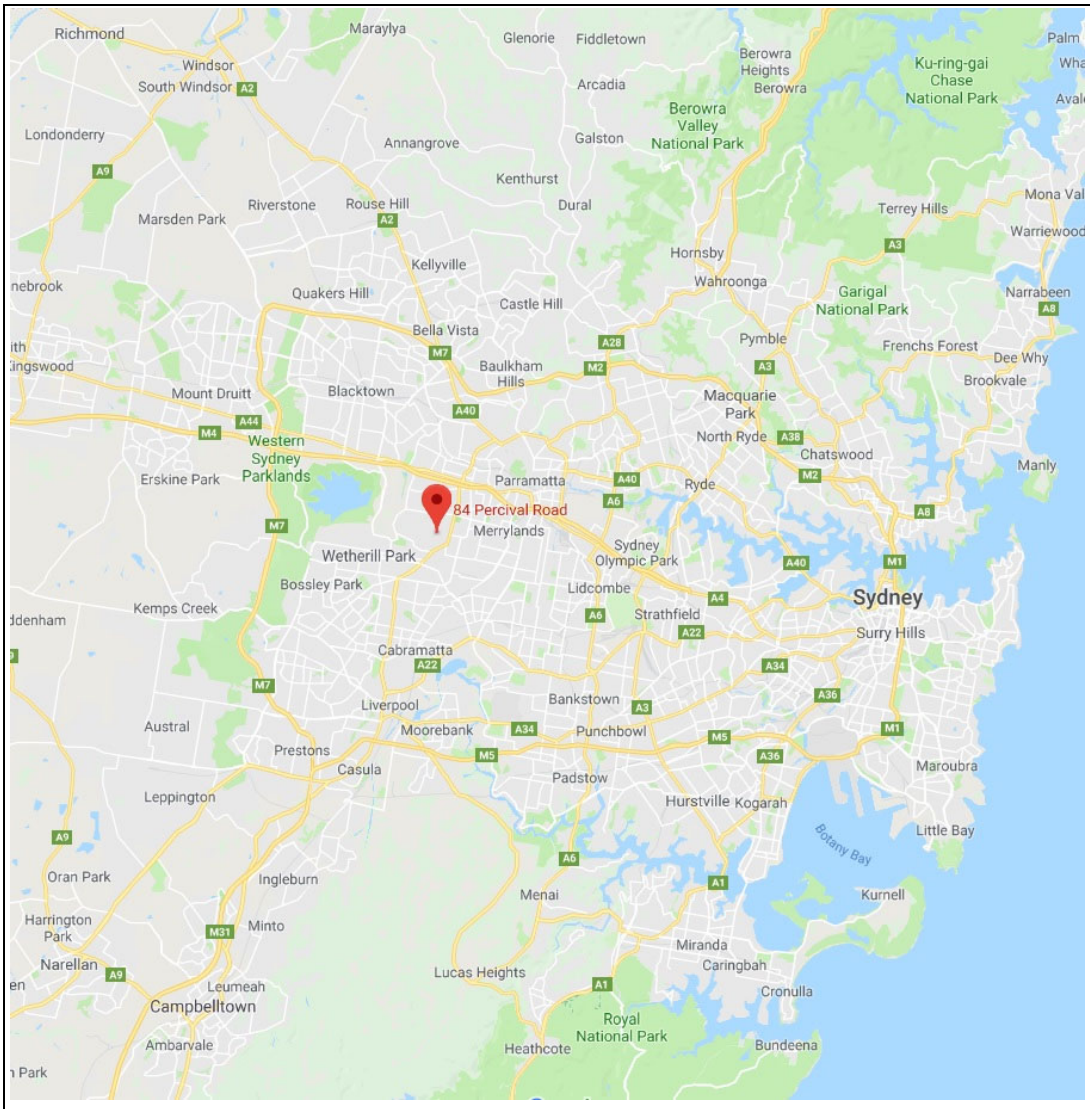
Requirement	Section
Soil and water- including: - An assessment in accordance with ASSMAC Guidelines for the presence and extent of acid sulfate soils (ASS) and potential acid sulfate soils (PASS) on the site and, where relevant, appropriate mitigation measures. - The details of stormwater, leachate, and waste management - The details of sediment and erosion controls - An assessment of flood risk on site - An assessment of impacts to surface and groundwater resources, flooding impacts, and impacts to groundwater dependent ecosystems - A description and appraisal of impact mitigation and monitoring measures.	Section 5
Air quality- including: - A description of all potential sources of air and odour emissions - An air quality impact assessment in accordance with relevant Environment Protection Authority guidelines - A description and appraisal of air quality impact mitigation and monitoring measures.	Section 6
Noise and vibration- including: - A description of all optional noise and vibration sources during construction and operation, including road traffic noise - A noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines - A description and appraisal of noise and vibration mitigation and monitoring measures	Section 7
Fire and incident management- including: - Technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean up equipment, fire management (including the location of fire hydrants and water flow rates at the hydrants) and containment measures. - Details of the size and volume of stockpiles and their arrangements to minimise fire spread and facilitate emergency vehicle access	Section 8
Hazards and risk- including: - A preliminary risk screening complete in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with 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 9
Biodiversity - including: - A description of any potential vegetation clearing needed to undertake the proposal and any impacts to flora and fauna.	Section 10
Visual - including: - An impact assessment at private receptor and public vantage points.	Section 11

2. SITE & PROJECT DESCRIPTION

2.1 SITE LOCATION

The site is located at 84 Percival Road, Smithfield NSW, also known as Lot 1 in DP555910 and is situated within the Cumberland local government area. The site location in a regional context is shown in Figure 2-1 and an aerial view of the site and surrounds is shown in Figure 2-2.

Figure 2-1: Site Location in a regional context



Source: Google Maps

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

Figure 2-2: Site Location – aerial view of site and surrounds

Source: Six Maps

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

2.2 DESCRIPTION OF THE SITE AND SURROUNDS

The site is located with an established industrial area in the suburb of Smithfield and is zoned IN1 – General Industrial under the Holroyd Local Environmental Plan (HLEP) 2013. The current land use of the site is a commercial and residential building supplies company (FAST STUD).

The site has an area of 6,195.7 square metres and is rectangular in shape, with a frontage of 26.56 metres to Percival Road and a length of 233.32 metres.

The site currently contains an existing industrial building with an approximate area of 1240 m^2 and adjoining offices, 190 m^2 in area. There is an existing car parking area at the frontage to Percival Road and access to the site is via a single driveway. The rear of the site can be accessed via the driveway along the north of the building which is partially hardstand area with the remaining area being unsealed.

The site is surrounded by existing commercial and industrial land uses. The following table provides a description of the surrounding land uses and photographs.

Table 2-1: Surrounding land uses

Surrounding Land Uses		Photos
NORTH	LYLAC HOMEWARE – Importer and wholesaler of homeware products	
SOUTH	ALL GM AUTO PARTS RECYCLERS – spare parts warehouse	

Surrounding Land Uses		Photos
EAST	Jumal Place and Commercial/industrial developments including a garden centre – BOSCLIP Aussie Products.	
WEST	At the rear of the site located on 216 Woodpark Road, Smithfield is a freight company, KBT Overnight Express.	

2.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development involves a change in use from a building supplies company to a scrap metal recycling facility. The proposed facility would use the existing buildings on site. A weighbridge would be constructed and a compactor would be located in the external yard at the rear of the site. 5 additional car parking spaces would be provided to provide a total of 9 car spaces at the site. An existing brick and metal outhouse would be demolished. No other changes to site infrastructure are proposed.

Approximately 20,000 tonnes per year would be accepted. No crushing or screening will take place at the site. The maximum storage capacity would be 100 tonnes at any one time.

2.3.1 Proposed Site Activities

The scrap metal recycling facility would allow for consumers to deliver unwanted metal scrap to the site. The facility would accept metals including scrap steel, aluminium, copper and brass. These would be separated at the site and on-sold to metal recyclers. No crushing or screening would take place. The following operations would take place:

Truck loads:

- Trucks would enter via the weighbridge and be required to weigh the vehicle load and unload in the receival bay external rear yard.

- Trucks would then be re-weighed once empty and leave via the weighbridge.

- An electric compactor would be located in the rear yard that would be used for compaction of aluminium.

- Scrap steel would be unloaded from the trucks into one stockpile and would be removed daily to be sold to a metal recycler such as Sims Metal, One Steel or Sell & Parker.

Private Vehicle loads:

- Private vehicles would enter via the roller door and use the public scales within the existing warehouse.

- Metals such as copper, brass and aluminium would be stored within one of 9 designated storage bays within the building.

- A copper granule machine that separates copper wire from the cable would be installed inside the building and used on an as needs basis. Cable from copper is sent overseas.

- Metals would be on-sold to metal recyclers such as Sims Metal, One Steel or Sell & Parker.

2.3.2 Storage

The site would store up to 100 tonnes at any one time. Inside the building there will be 9 storage bays that can store between 3 to 8 tonnes depending on the contents (Maximum of 72 tonnes). Externally, scrap metal would have a daily turnover and only 1-2 truckloads would be stored outside at any one time.

2.3.3 Equipment & On-Site Vehicles

Equipment and on-site vehicles required for the proposed development includes:

- 1 x Electric Compactor;
- 1 x Copper Granule Machine;
- 1 x 20 tonne diesel excavator;
- 1 x 8 tonne diesel excavator; and
- 3 x LPG forklifts

2.3.4 Hours of operation

The proposed hours of operation are:

Monday to Friday: 7:00am to 4:00pm
Saturday: 7:00am to 1:00pm

2.3.5 Employment

The facility would employ a total of 8 staff.

2.3.6 Environmental Standards

The NSW EPA have released a consultation paper on the proposed minimum environmental standards for scrap metal facilities (2017). Consultation closed in September 2017. Once the 2018 working groups are complete, the EPA will release a report detailing the next steps of the proposed reforms.

The standards will apply to "any site that stores, stockpiles, collects, dismantles, or processes scrap metal from end-of-life vehicles, white goods or other sources, regardless of the quantities they store or process."

It should be noted that the proposed development would not accept end-of-life vehicles and would not be dismantling white goods or undertaking shredding or separation of scrap steel. Processing would be limited to separation of copper cable inside the building and compaction of aluminium. Scrap steel would be stockpiled on the hardstand area of the yard and removed daily to a steel recycling facility for further processing. Essentially the site would be used as a transfer station for scrap steel.

The following table provides a summary of the new standards and how the proposed facility would comply with these:

Table 2-2: Proposed Minimum Environmental Standards for Scrap Metal Facilities

Requirement	Comment	Complies
1. All end-of-life vehicles, white goods, and other scrap metal must be stored and dismantled/processed on hardstands under covered areas with appropriate drainage infrastructure.	End-of life vehicles would not be accepted. Dismantling of white goods would not be undertaken. Separation of copper from cable would take place inside the building. The rear area would contain a compactor and incoming scrap steel stockpile both of which would be located on the hardstand area. Drainage infrastructure is addressed in Section 5.1.5.	Yes
2. Clean and dirty water systems and areas must be separated (including bunding to separate them), and all dirty water is to be contained and treated on site.	A first flush system is recommended to capture potentially contaminated stormwater from the hardstand area at the rear of the site.	Yes (with measures in place)
3. Liquids, spills and chemicals must be handled, stored and disposed of appropriately.	A spill procedure would be provided as part of the Environmental Management Plan.	Yes (with measures in place)
4. Battery handling and storage areas are to be bunded, covered and on a hardstand.	No batteries would be accepted.	Yes

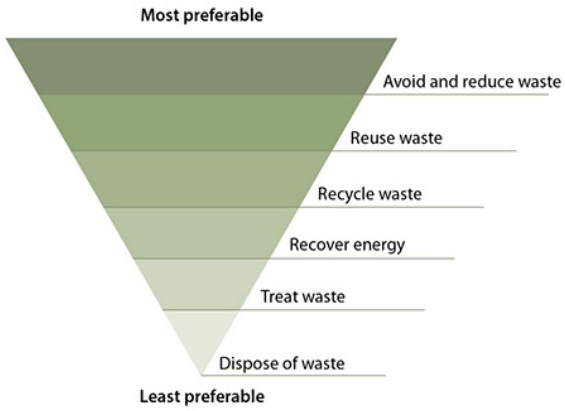
Table 2-2: Proposed Minimum Environmental Standards for Scrap Metal Facilities

Requirement	Comment	Complies
5. End-of-life vehicles, white goods, and other scrap metal sent to a hammermill and/or shredder or for other processing either on site or off site must be free of other waste (including waste tyres).	No end-of-life vehicles would be accepted. Tyres would not be accepted. Loads containing other wastes would not be accepted. An unexpected finds protocol would be implemented that includes inspection of all incoming loads. A sign would be erected at the site entrance stating metals that are accepted on site.	Yes
6. No burning of waste. Mattresses or any other waste that contains metals must not be burnt to make metal more readily accessible. All other types of waste must not be burnt.	Strictly no burning will take place.	Yes
7. Transporting, tipping, handling, processing and storing scrap metal at facilities must be carried out in a controlled and competent manner so noise and vibrations are minimised.	The noise impact assessment demonstrates noise from the proposed facility would comply with NSW EPA guidelines.	Yes
8. All bunds must be constructed as per the consultation paper guidelines.	The diesel tank would be self bunded.	Yes

3. WASTE MANAGEMENT

This Waste Management Report documents the waste types to be received, processed and stored at the proposed metal recycling facility. Procedures for managing the waste received, processed and stored are also described.

Waste management at the site would be in line with the principles of Ecologically Sustainable Development (ESD) demonstrated in the following diagram:



3.1.1 Waste Classification

In the NSW EPA's *Waste Classification Guidelines* (2014), waste is described as:

a) any substance whether solid, liquid or gaseous that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment; or
b) any discarded, rejected, unwanted, surplus or abandoned substance; or
c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification.

All waste materials generated or received on the subject site must be classified into one of six different categories described the *Waste Classification Guidelines* (see table below).

Table 3-1: Classes of Waste from Waste Classification Guidelines

Class	Definitions / Examples
Special waste	• Clinical and related wastes; • Asbestos waste; • Waste tyres.
Liquid waste	• Waste that has an angle of repose <5 degrees; • Waste that becomes free flowing at or below 60ºC; • Is not generally capable of being picked up by a spade or shovel.
Hazardous waste	• Waste with a pH ≤2 or ≥12.5; • Containers that have not been cleaned and contained dangerous goods within the meaning of the Transport of Dangerous Goods Code; • Lead-acid or nickel-cadmium batteries.
Restricted solid waste	• This type of waste is determined by chemical tests.
General solid waste (putrescible)	• Waste from litter bins collected by local councils; • Animal waste and food waste; • Grit or screenings from sewage treatment systems that have been dewatered so that the grit of screenings do not contain free liquids.
General solid waste (non-putrescible)	• Paper or cardboard; • Glass, plastic, rubber, plasterboard, ceramic, bricks, concrete or metal; • Grit, sediment, litter and gross pollutants collected in, and removed from, stormwater treatment devices and/or stormwater management systems, that has been dewatered so that they do not contain free liquids.

Waste associated with the proposed development is classified in the following section.

3.1.2 Waste Types

The facility would receive up to 20,000 tonnes per year of scrap metal that includes steel, aluminium, copper and brass. This may include whitegoods. Whitegoods if accepted would be removed to respective recycling facilities daily. All material would be classified as General solid waste (non-putrescible). No other waste would be accepted. A sign at the front of the site will detail accepted waste types.

There may from time to time be residual waste unloaded with the scrap metal such as pieces of timber and residual soil. This would be placed into a 3 m^3 skip bin and removed from site by a licensed waste contractor.

No contaminated waste such as hazardous waste and asbestos would be accepted.

Should contaminated waste be found within incoming loads, the Unexpected Procedure outlined in Section 3.4 must be followed.

3.1.2.1 Waste generation

Minor quantities of waste are expected to be generated from the operation of the facility.

There would also be waste generated in the office and amenities situated on site. This would be removed by licensed waste contractor.

The process does not involve the addition of water and no tradewaste is generated.

The following is a list of waste types accepted at the site and waste expected to be generated from site activities.

Table 3-2: Recovered Waste Types, Quantities and Management

Waste Type	Estimated Incoming Quantity	Estimated Waste Generation (tonnes)	EPA Waste Classification[1]	Management
Scrap metal	20,000 tonnes per year	0	General solid waste (Non-putrescible)	This waste is the incoming material to be accepted and sorted at the site. Main stockpile would be removed daily from site.
Copper cable insulation waste	N/A	150 tonnes per year	General solid waste (Non-putrescible)	Stored in storage bay within the building and removed by a licensed waste contractor for recycling overseas.
General waste (office)	N/A	12 tonnes per year	General solid waste (Putrescible)	Stored in 240L wheelie bin and removed weekly by a licensed waste contractor.
Recyclables (office)	N/A	12 tonnes per year	General solid waste (Non-putrescible)	Stored in 240L wheelie bin and removed weekly by a licensed waste contractor for recycling.
Residual waste	N/A	36 m^3 per year	General solid waste (Non-putrescible)	Stored within a 3m^3 skip bin and removed by a waste contractor monthly.

Notes:

1. EPA waste classification as per Table 3-1

Of the incoming scrap metal waste, the majority of this will be removed daily by a metal recycler such as Sims Metal, One Steel or Sell & Parker. Some of this material would be compacted or sorted for resale as described in Sections 2.3.1 and 2.3.2.

3.1.3 Transport of waste

Waste would be transported to site in either private vehicles (utes and vans) and 4-5 tonne trucks. A small 4 tonne truck and an 8 to 10 tonne hook truck would transport the scrap metal to a metal recycler.

3.1.4 Waste Storage

Designated waste areas would be established and include 9 x storage bays within the building. Each bay would store 3 to 8 tonnes of material including aluminium, copper or brass (Maximum of 72 tonnes).

There would be one scrap steel stockpile in the external rear yard. Daily turnover of material would be undertaken and only 1-2 truckloads would be stored outside at any one time.

Compacted aluminium cubes would also be stored in the rear yard prior to transport onto metal recyclers.

Based on the above, it is expected that the site would store up to 100 tonnes at any one time.

3.2 LEGAL AND OTHER REQUIREMENTS

3.2.1 Legislation

Legislation relevant to waste includes:

- Protection of the Environment Operations Act 1997;
- Protection of the Environment (Waste) Regulation 2014; and
- Waste Avoidance and Resource Recovery Act 2001.

The relevance of each piece of legislation and guideline is described in the following sections.

3.2.1.1 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is the principal environmental protection legislation for NSW. It defines 'waste' for regulatory purposes and establishes management and licensing requirements for waste. It defines offences relating to waste and sets penalties.

Part 1 in Schedule 1 of the POEO Act lists premise-based activities that are scheduled activities and, as such, that require an environment protection licence (EPL) under the Act. The following Clause is noted:

> ***26 Metallurgical activities***
> *"**scrap metal processing**", meaning the crushing, grinding, shredding or sorting (but not smelting) of scrap metal of any kind.*

The threshold for scrap metal processing is capacity to process more than 150 tonnes of scrap 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).

The proposed development is below the thresholds for scrap metal processing, therefore does not require an EPL for this activity.

The POEO Act also establishes the ability to set various waste management requirements via the *Protection of the Environment Operations (Waste) Regulation 2014*.

3.2.1.2 Protection of the Environment Operations (Waste) Regulation 2014

The *Protection of the Environment Operations (Waste) Regulation 2014*, referred to as the 'Waste Regulation', identifies provisions relating to waste management and disposal. Part 4 of the *Waste Regulation* details the requirements associated with tracking waste. Certain types of waste listed in Schedule 1 of the Waste Regulation have the potential to be harmful to the environment and are required to be tracked from the source to the waste disposal facility. The development would not generate, receive, handle or process waste types that require tracking under the Waste Regulation. A procedure outlined in Section 3.4 demonstrates how the facility deals with waste of this nature should it be found within loads of incoming material.

3.2.1.3 Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) promotes waste avoidance and resource recovery to achieve a continual reduction in waste generation. Among other miscellaneous provisions, the WARR Act sets out provisions for waste strategies and programs, and industry actions for waste reduction.

3.2.1.4 Waste Avoidance and Resource Recovery Strategy 2014-2021

Waste minimisation and resource recovery is the underlying basis of the facility. Resource recovery practices that would be implemented at the site are in accordance with the primary goal of the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*, which is "to enable all of the NSW community to improve environment and community well-being by reducing the environmental impact of waste and using resources more efficiently." Overall, the proposed development has an important positive impact on the waste management practices in the local region since it provides an important step in the recovery and recycling of scrap metal.

The company would also follow the NSW EPA's hierarchy of waste management for the management of wastes generated as a result of its ongoing operations.

3.3 Waste Management, Reuse, Recycling and Disposal

The facility would receive and sort scrap metal for the purposes of on-selling to metal recyclers. Any residual waste is separated from this material and sent to landfill.

3.3.1 Management of Waste

The way waste is managed on site is described as follows:

- Waste is inspected upon unloading. Unacceptable material is dealt with using an unexpected finds protocol as described in Section 3.4.
- All incoming waste loads are brought to site in covered trucks.
- Trucks unload within the receival bay in the rear yard.
- Aluminium is compacted into cubes. This is on-sold to metal recyclers.
- Scrap steel is removed on a daily basis and on-sold to metal recyclers.
- Any residual waste is placed within a 3 m^3 skip bin which is removed monthly.
- Small loads are unloaded inside the building and weighed using the public scales.
- This scrap is sorted into copper, aluminium and brass and stored within designated storage bays within the building.
- Copper is separated from the cable using a copper granule machine inside the building.
- Copper cable is sent overseas.
- Weighbridge records of all incoming and outgoing loads are maintained.

Overall, waste management practices that are currently in place at the facility are considered adequate and comply with S48 of the *Protection of the Environment Operations Regulation 1997*, which states the facility must store and manage waste in an environmentally safe manner.

Management of waste on site will also continue to be in line with the *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* (EPA December 2012) as it includes the following practices:

- Visually screening designated waste areas and receptacles from public places (in building and rear yard screened from public view);
- Ensuring waste is stored adequately and cannot escape receptacles and storage areas; and
- Ensuring easy access to each waste storage area for collection services.

Sydney Smithfield Metal Recyclers does not accept liquid wastes, hazardous wastes, special waste including asbestos and waste tyres nor restricted solid waste or putrescible waste.

3.3.2 Monitoring & Records

Monitoring of waste would be undertaken using the proposed weighbridge and public scales on site. All incoming and outgoing loads would be weighed and recorded. Records need to include the following information:

Incoming Loads:

- Date & time received;
- Name of customer;
- Address of facility received from/customer address;
- Weight of load;
- Vehicle registration number;
- Name of driver; and
- Details of any unauthorised waste found in load.

Outgoing Loads:

- Date & time dispatched;
- Name of destination;
- Address of destination;
- Weight of load;
- Vehicle registration number;
- Name of driver; and
- Contents of load.

Visual inspection of the designated waste areas would need to be undertaken daily and includes checking for litter and windblown waste in external areas.

3.4 UNEXPECTED FINDS

3.4.1 Purpose

The purpose of this procedure is to facilitate the process of dealing with unauthorised or non-conforming waste. The procedure enables the identity of waste types found within incoming loads to be confirmed and provides steps to deal with any unexpected or non-conforming wastes such as asbestos.

3.4.2 Definitions

For the purposes of the procedure, the following definitions of relevance:

Contaminated Material
Materials that contain substances that are of sufficient concentration to potentially cause harm to human health or the environment. (EPA Act).

Unexpected finds
Suspect materials identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash material, animal material etc.

Acceptable wastes
Acceptable wastes include scrap metal only – steel, aluminium, copper and brass.

Suspect material / Not accepted
Not accepted at the site is any material that is not scrap metal (as listed above).

3.4.3 Procedure

Loads are to be visually inspected during the unloading process.

Upon the finding of suspect or contaminated material the contents shall be rejected. If possible, instruct customer to remove suspect or contaminated material and accept the load.

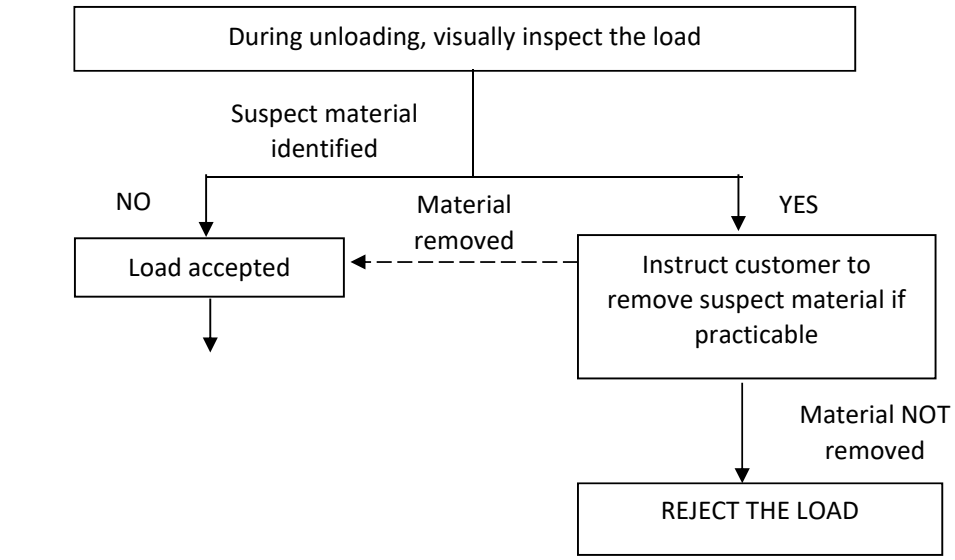
Upon the finding of suspect or contaminated material within the stockpile:

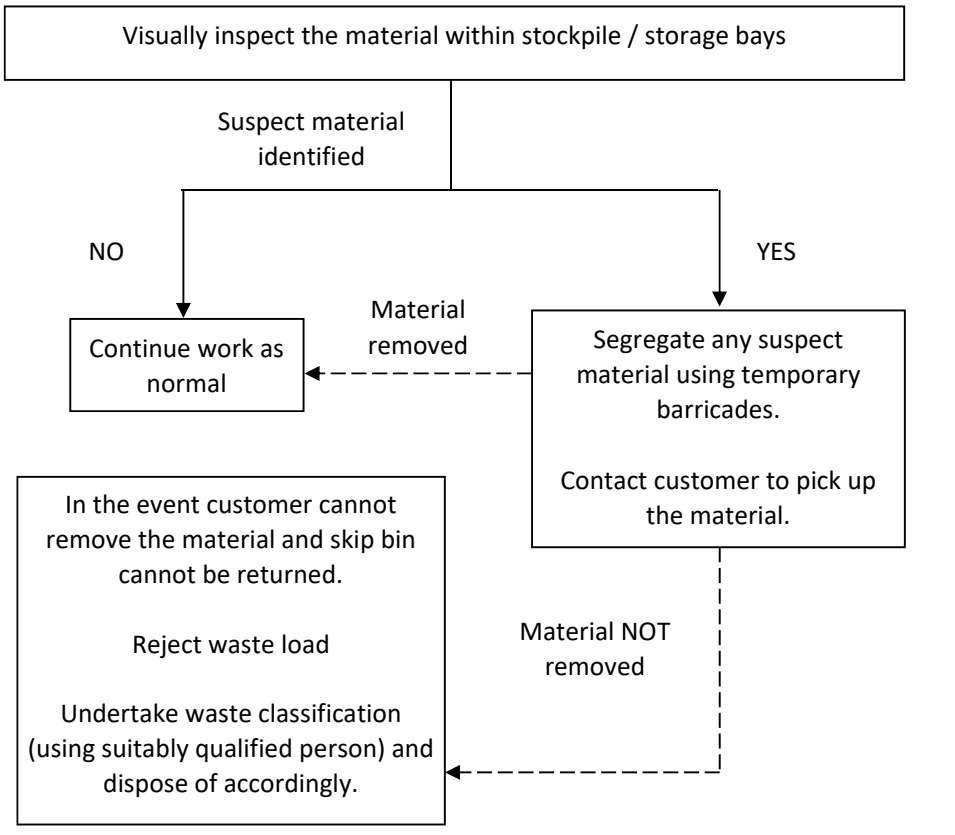
- Secure the material using temporary barricades;

- Contact the customer (if known) and direct them to pick up the material; or
- Contact a waste contractor or suitably qualified consultant to determine the appropriate waste classification. This may involve sampling and testing of the material in accordance with regulatory guidelines. Once the waste classification for the material is known, dispose of this lawfully using a licensed waste contractor.

The following figure presents the steps to be followed in the event of suspect or contaminated material being found:

Figure 3-1: Unexpected Finds Protocol





3.4.3.1 Inspection and Records

Any unexpected find or related non-conformances must be recorded with the waste records. Documentation for any sampling, testing and alternate disposal of the waste must also be maintained.

3.5 WASTE MANAGEMENT PLAN

A waste management plan as per Cumberland Council's Waste Management Plan Template is provided as Attachment 2. This plan provides waste details relating to the demolition, construction and operational phases of the development and provides marked up site plans showing the location of storage areas for waste.

Demolition is limited to the outbuilding at the rear of the site and construction is limited to installation of a weighbridge. This work is expected to take 1-2 weeks and would not generate large quantities of waste nor require significant storage and/or collection areas.

4. TRAFFIC IMPACT ASSESSMENT

A traffic and parking impact assessment has been prepared by ML Traffic Engineers and is provided as Appendix 1. The assessment concluded that:

- Sufficient on-site car and truck spaces are provided on site to meet parking demand;
- The Proposal would generate low trips in the weekday AM and PM peak hours;
- Additional trips from the proposal can be accommodated at nearby intersections without significantly affecting intersection performance, delays or queues; and
- There are no traffic engineering reasons why a planning permit for the proposal should be refused.

A summary of traffic generation, car parking and design recommendations associated with the proposal is provided in the sub-sections below.

4.1 TRAFFIC GENERATION

The proposed development is expected to result in the following traffic movements:

Incoming materials:

- Private vehicles (vans/utes): 10 to 12 per day
- Trucks (varying in size but mainly 4-5 tonne tipper truck): 10-15 trucks per day

Outgoing materials:

- Small truck (4 tonne): 5 pick ups per day
- Hook truck (8-10 tonnes): 2 to 3 times per day

Staff cars

There would be 8 car movements in the peak morning period and 8 in the peak evening period.

Expected traffic movements are summarised in the table below:

Table 4-1: Traffic Movements

Vehicle Type	Maximum Trips Per Day
Tipper Truck	15
Small truck	5
Hook Truck	3
Total Truck Trips	**23 per day**
Vans / Utes	12
Staff Cars	8
Total Light Vehicles	**20 per day**

The proposed hours of operation are 7am to 4pm (9 hours per day), therefore there would be an average of 2-3 truck trips per hour and 1-2 light vehicles (vans and utes) per hour. Due to the nature of the development, these trips are likely to be evenly spread over the day. Staff trips would be between the hours of 6am to 7am and 4pm to 5pm, coming and going to work.

The proposed development is therefore a low traffic generator.

4.2 CAR PARKING

Car parking requirements for different types of developments are stipulated in Part A Chapter 3 of the Holroyd Development Control Plan (DCP) 2014. Car parking rates for development types are shown in table 3.1 of the DCP. Industry is not listed in the table. However, Warehouses are listed and the requirement are provided in the table below.

Table 4-2: Car Parking Requirements for Warehouses under Clause 3.1 of Part A of the Holroyd DCP

Use	Standard	GFA (m^2)	Required Spaces	Complies
Warehouses (including amenities)	1 space per 300 m^2 of GFA,	1240 m^2	4.13	Yes
	Plus 1 space per 40 m^2 of GFA of offices	190 m^2	4.75	
Required number of car spaces			**9**	

The proposed site plan shows that 9 spaces would be provided. This satisfies the requirement under the Holroyd DCP.

This number of spaces can also be considered to be pragmatic given that the number of staff would be 8. This is a low employment generating activity and 9 spaces would be adequate for the proposed use.

4.3 DESIGN RECOMMENDATIONS

The following design recommendations for the site have been advised by the Traffic Engineer:

- The driveway width would be increased from the existing 4.1 metres to 5.5 metres to allow for two way traffic entering and exiting the site.
- Traffic lights need to be installed for weighbridge operation to enable safe one way travel into and out of the rear external operational area.

5. SOIL AND WATER

This section provides a qualitative assessment of potential impacts to water including details of stormwater, leachate and wastewater management, details of sediment and erosion controls and recommended mitigation and monitoring measures. Flood risk has been assessed by BMB Engineers.

Soil characteristics, existing soil contamination and a preliminary acid sulfate soil assessment is provided.

5.1 WATER

This section describes water use for the proposed development, potential water pollution and details how this will be managed.

5.1.1 Water Supply and Use

The site will use mains water for the office and amenities. The proposed site operations are limited to dry processes and no water would be required. There is no wheel wash, wash bay, hose down or sprinkler system proposed. No wastewater will be generated from the proposed facility and a tradewaste agreement is not needed.

The accepted waste is limited to metals including scrap steel, aluminium, copper and brass only. Liquid waste and sludges are not accepted. Mitigation measures installed at the site to protect soil and water are described in the following sections. Location of stormwater drains and proposed waste storage areas are shown on site plans.

5.1.2 Relevant Legislation

The definition of 'water pollution' in the Protection of the Environment Operations Act 1997 (POEO Act) sets out general and specific circumstances that constitute pollution. At its broadest, water pollution means introducing any matter into waters which changes the physical, chemical or biological condition of the water. It also includes placing any matter where it might fall, descend, be washed, be blown or percolates into any waters (e.g. soil which might washed into a waterway). It is an offence under section 120 of the POEO Act to pollute waters.

5.1.3 Potential Pollutants

Potential pollutants of concern are identified in Table 5-1.

Table 5-1: Potential Pollutants

Potential Source of Contamination	Release mechanism	Contaminants of Concern
Scrap metal waste	Debris generated during unloading, loading and stockpiling, and metal ions dissolved in water	Zinc, Chromium, Cadmium, Copper, Lead, Manganese, Iron, Aluminium, Molybdenum
Diesel Fuel and Oils	Leaks/spills from transport vehicles and diesel tank	TRH, BTEX, PAH

The risk of the potential pollutants identified in the table above being released is low. This is due to the nature of the proposed operations, mitigation measures and safeguards as demonstrated throughout this section.

5.1.4 Requirements of Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment

The Planning Control Table in Part 3, Clause 11 (22) of the Greater Metropolitan Regional Environmental Plan No 2—Georges River Catchment lists specific planning requirements for 'Waste Management Facility or Works'. These requirements are addressed with respect to the proposal in the table below.

Table 5-2: Specific Planning Requirements for 'Waste Management Facility or Works' under Greater Metropolitan Regional Environmental Plan No 2—Georges River Catchment

Reason For Refusal	Comment
A system is to be required to manage leachate surface controls on the land on which the waste management facility or works is or are proposed.	A first flush system is recommended to capture potentially contaminated surface water from the external hardstand area.
A site management plan is to be required for the land on which the waste management facility or works is or are proposed.	An Environmental Management Plan would be prepared as outlined in Section 12.
The likelihood of groundwater contamination	Groundwater contamination is unlikely as discussed in Section 5.1.6.
The adequacy of the proposed leachate management system and surface water controls.	See Section 5.1.5.1 and 5.1.9
The long-term stability of the final landform and the adequacy of the site management plan	The Environmental Management Plan would address all issues in the proposed environmental standards.
Where the proposed development involves extraction of material, whether an adverse impact on the Georges River or its tributaries will result.	The proposed development does not involve extraction of material.

5.1.5 Stormwater

There are currently no stormwater drains located within the current structure or rear yard. One stormwater drain is located in the front of the premises within the car park and this discharges to the street stormwater system parallel to Percival Road.

The rear portion of the site (approx. 62 m to the back boundary) is unsealed. An easement at the rear of the site has been designed by an architect. The site is currently not connected to this. It is recommended that a first flush system be installed to capture first flush potentially contaminated stormwater from the external hardstand area and treat this on site. A concrete kerb to separate

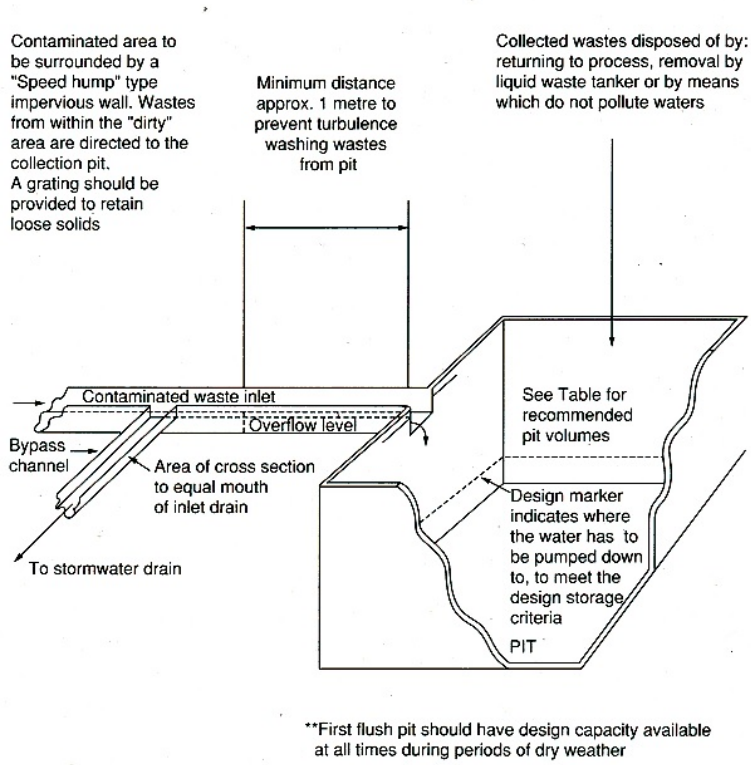
he hardstand area from the unsealed area may be needed. The site will be connected to the existing easement to allow stormwater to discharge to the street stormwater system. Clean water from the first flush system would be connected to this.

It is also recommended that the stormwater drain in the front car park is clearly marked by painting a border in blue with the words “Stormwater Only - Do not pollute”.

5.1.5.1 First Flush System

A first flush system is recommended to be installed to capture potentially contaminated stormwater from the external hardstand area. A rain gauge measures the first 10 mm of rainwater which is diverted to an on-site oil and grit (sediment) separator. Once the 10 mm of rainwater has been diverted, any additional rainwater is discharged to the stormwater system as the surface would be flushed of contaminants. The system would operate in a similar manner to FIGURE.

Figure 5-1: First Flush System



Source: NSW Office of Environment and Heritage

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

The proposed facility would not accept end-of-life vehicles and no dismantling or shredding of material would take place in the rear yard. Activities on the hardstand area would be limited to unloading and loading of scrap steel and aluminium, stockpiling of scrap steel and compacting. A small 1,000 Litre self bunded diesel tank would be located on the hardstand area. Therefore a first flush system that would capture the first 10 mm of potentially contaminated rainwater from the hardstand area is considered adequate to manage stormwater from the site.

5.1.6 Groundwater

The majority of the site is sealed, consisting of a building with concrete flooring and concrete hardstand areas and driveways. The rear 62 metres of the site is comprised of unsealed dirt bordering the fence line and rear of the property – approximately 1500 m^2. No activities or storage would be undertaken in this area.

A first flush system would be installed to capture and treat contaminated rainwater from the hardstand area.

The proposed operations are unlikely to result in groundwater contamination due to the following:

- The incoming materials are limited to metals including steel, brass, copper and aluminium;
- No hazardous materials, liquid wastes or sludges would be accepted;
- The diesel tank would be self bunded and spill kits provided;
- The majority of processing and storage would be undertaken within the building;
- The activities to be undertaken on the external hardstand area are limited to unloading, loading, stockpiling and compacting;
- No activities or storage would be undertaken on the unsealed rear area; and
- A first flush system would be installed to capture contaminated rainwater runoff from the external hardstand area.

5.1.7 Flood Assessment

The subject address is affected by the local overland flow flooding. Therefore a detailed flood study report has been prepared for the proposed development by BMB Engineers as per council requirements.

The flood study report assessed the impacts on flooding behaviour due to the proposed development. Hydraulic modelling and analysis of a worst case scenario found that as the footprint of the proposed development does not encroach the 1% AEP flood extent, there will be no changes in the existing 1% AEP flood behaviours in the post development scenario.

Only a small part of the subject site at the south-west corner is affected in 1% AEP flooding. The footprint of the existing building and most other areas of the site are located above the 1% AEP overland flooding. The proposed development will not cause any significant impacts on the existing 1% AEP flooding characteristics of the site and surroundings.

The full flood study report and flood risk management plan are provided as Appendix 2.

5.1.8 Water Sensitive Urban Design

Clause 7.5 of the Holroyd Development Control Plan 2013 details the development controls for water sensitive urban design. These development controls apply to new sites. The site is an existing industrial facility and existing stormwater infrastructure would not be altered. The following water quality controls would be implemented:

- First flush diversion system including oil and grit (sediment) separator;
- Connection to the existing easement at the rear of the site allowing clean stormwater to discharge to the street stormwater system; and
- Clearly marked stormwater drain in the front car park with the words “Stormwater drain – do not pollute”.

New developments would require a WSUD strategy to be prepared. However, as this site is already established and with the additional water quality controls to be implemented, a WSUD Strategy is not warranted.

5.1.9 Recommended Mitigation and Monitoring Measures

The mitigation and monitoring measures recommended are summarised below:

- The diesel tank would be self bunded;
- Hydrocarbon spill kit would be provided;
- First flush diversion system including oil and grit (sediment) separator;
- Connection to the existing easement at the rear of the site allowing clean stormwater to discharge to the street stormwater system; and
- Clearly marked stormwater drain in the front car park with the words “Stormwater drain – do not pollute”.

5.1.10 Statement of Potential Water Impacts

With recommended mitigation measures in place, the potential for pollution to waters is low.

5.2 SOIL

The proposed development involves the construction of a weighbridge on the northern perimeter adjacent to the existing building. This is to be constructed within the established site. The existing building and hardstand area would be used for the proposed operations. The rear unsealed portion of the site would not be used.

5.2.1 Soil Characteristics of the Site

Holroyd LEP states that the site has “moderate salinity potential”.

With the exception of the construction of the weighbridge, the proposed development would not require disturbance to soil.

The proposed weighbridge specifications are provided in Attachment 1. These drawings show that the foundations are to be 1.4 metres below ground level. Due to the moderate salinity potential of the soil in this location, the weighbridge construction should consider materials to be

used for concrete and reinforcement will be resistant to the impact of salt and reduce the potential for corrosion of the reinforcement.

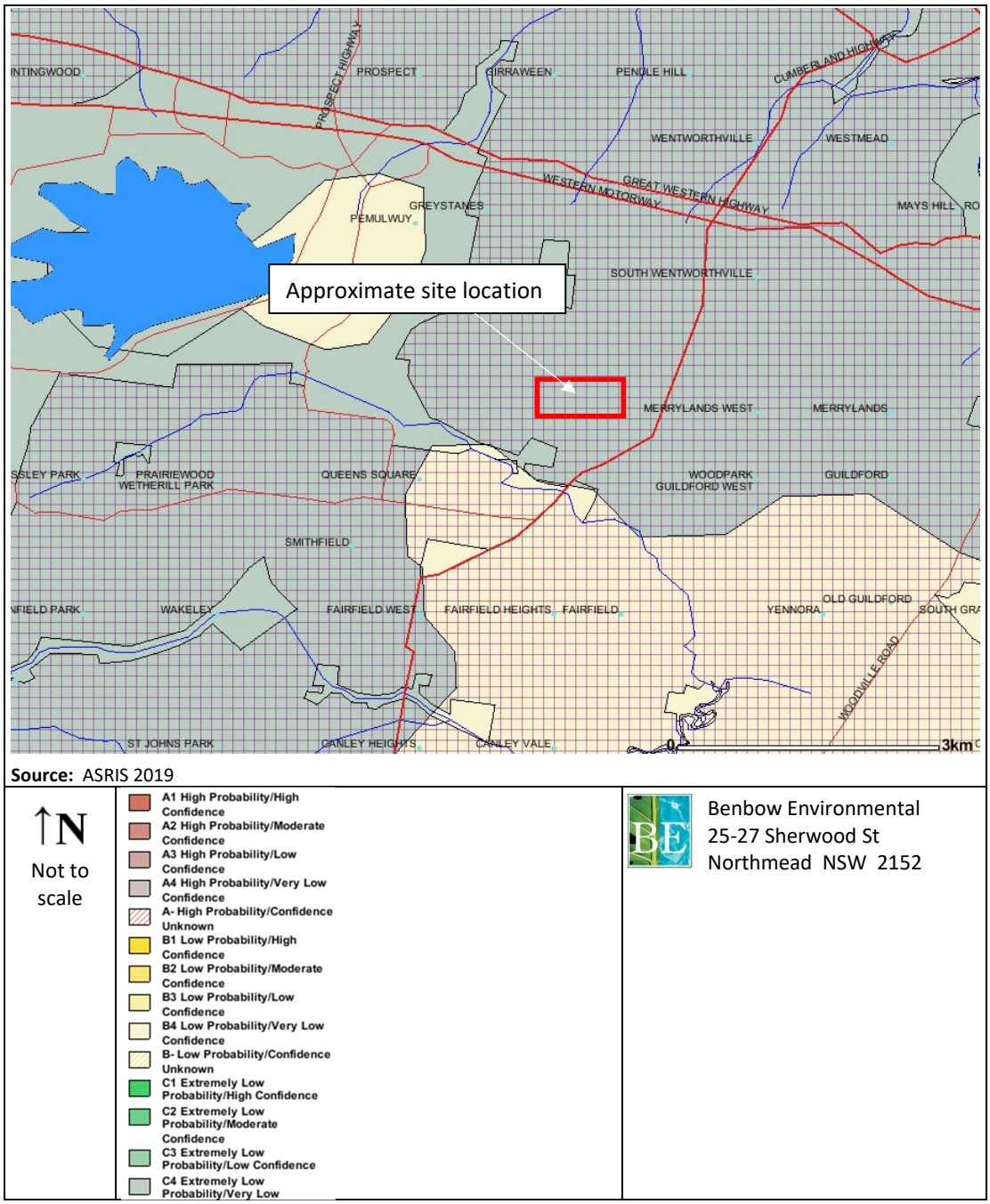
5.2.2 Preliminary Acid Sulfate Soil Assessment

Information on the SEED (Sharing and Enabling Environmental Data) Map Viewer of Acid Sulfate Soils Risk shows that there is low probability of occurrence on the subject site.

A search from the Australian Soil Resource Information System (ASRIS) of the Atlas of Australian Acid Sulfate Soils database developed by the CSIRO, shows that there is C4: Extremely low probability/Very Low Confidence of occurrence of acid sulfate soils (ASS) on the subject site or within close proximity to the site. A map is shown in Figure 5-2 to illustrate these findings.

Furthermore, Cumberland Council has further mapping available as part of the Holroyd LEP. Under this plan, the subject site is not identified as containing acid sulfate soils.

Figure 5-2: Probability of Acid Sulfate Soil Occurrence at the site.



Source: ASRIS 2019

The proposed weighbridge is the only element of the development that would disturb soil. The weighbridge would be 60 m^2 (20 m x 3 m) in area and would require excavation to a depth of approximately 1.4 metres below ground level.

According to the acid sulfate soil mapping sources, there is a low probability of acid sulfate soil at the site. The site is not shown within Class 1 to 5 on the Holroyd LEP Acid sulfate soils maps. Therefore an acid sulfate soil management plan is not required.

5.2.3 Potential Impacts to Soil and Land

Potential for impacts to soil are construction of the weighbridge and potential for contaminated runoff into easement at rear of site. These are deemed low risk due to the proposed material types to be received at the site, mitigation measures and the fact that the site is already sealed and established.

Construction

Construction is limited to the proposed weighbridge. Specifications are provided in Attachment 1. This would require disturbance to soil and therefore soil and erosion controls are recommended as detailed in Section 5.2.4.1.

Operation

The potential sources of contamination are the use of fuel and oils on site and the stockpile of scrap metal on the hardstand area. There would be one 1000L self bunded diesel tank stored outside. Operational risks to soil and land would include:

- Potential spillages of diesel during refuelling and equipment maintenance; the risk would be minimised through EMP procedures and training in appropriate work practices and provision of a hydrocarbon spill kit.

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

5.2.4 Recommended Mitigation and Monitoring Measures

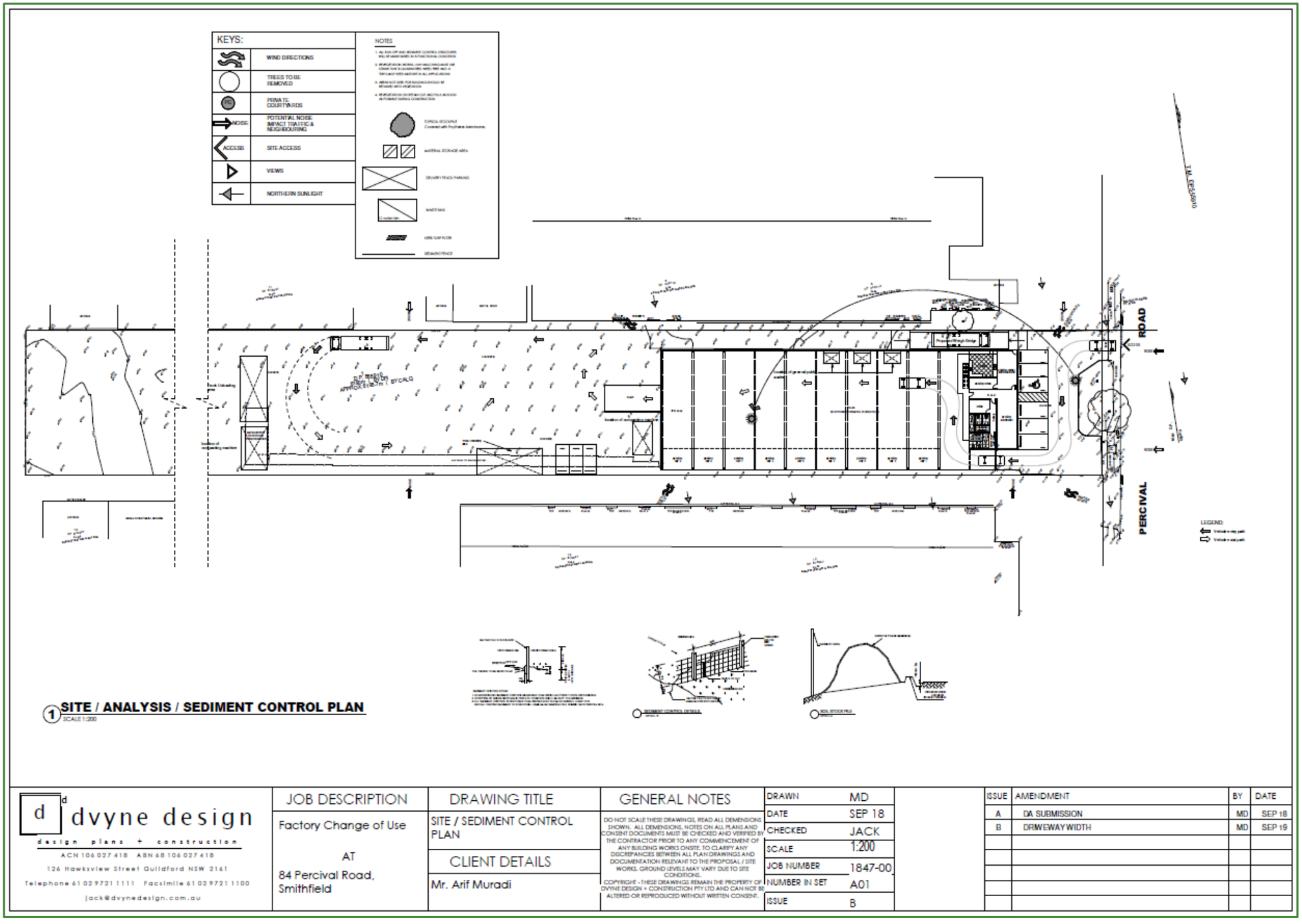
5.2.4.1 Erosion and Sediment Control Measures

Figure 5-3 shows the sediment control plan that would be put in place to mitigate erosion and sediment runoff while construction of the weighbridge is taking place. Sediment control measures (Sediment fence with geotextile fabric) will be installed prior to site disturbance on downstream side of disturbed area and/or stockpiles, with stripping of grass and vegetation kept to a minimum. All sediment control structures will be inspected after rainfall events to ensure they are clear and free of trapped sediments.

5.2.5 Statement of Potential Soil Impact

With control measures in place, the risk to soils is low.

Figure 5-3: Sediment control plan



6. AIR QUALITY IMPACT ASSESSMENT

A qualitative assessment of air impacts is provided in this section to demonstrate the site is suitable for the proposed use.

Due to the nature of the materials to be accepted at the site, a qualitative air assessment is considered appropriate. Dispersion modelling is not warranted.

6.1.1 Proposed Operations

The proposed operations are described in detail in Section 3. The proposed development includes construction of a weighbridge and a change in the existing land use to a scrap metal recycling facility that would accept scrap metal from consumers and store this either in the external rear yard or within the existing warehouse to be on-sold to a metal recycler.

Approximately 20,000 tonnes per year would be accepted. No crushing or screening will take place at the site. No hazardous or contaminated material would be accepted.

An electric compactor would be located in the rear yard that would be used. The maximum storage capacity would be 100 tonnes at any one time.

6.1.2 Sources of Air Pollutants

Incoming materials are limited to scrap metal including steel, aluminium, brass and copper. This would include white goods but not end-of-life vehicles. Therefore, the potential air pollutants associated with the proposed operations include:

- Dust from external loading and unloading operations; and
- Wheel generated dust.

Due to the nature of the operations, these would be considered ‘diffuse’ sources. There would be no stack ‘point’ source emissions.

6.1.2.1 Dust

Minor quantities of dust may be generated during the demolition of the existing brick outhouse and excavation and construction of the weighbridge. No other changes to site infrastructure are proposed and therefore dust potential during demolition and construction is low.

There is limited potential for dust to be generated during operations due to the nature of the incoming materials and the processes to be undertaken. There are no proposed operations that would create additional dust such as crushing or grinding.

It is recommended regular sweeping of the external areas be undertaken.

6.1.2.2 Odour

The only materials received and stored on site are metals including scrap steel, aluminium, copper and brass. None of these have sources of odour.

6.1.3 Site and Surrounding Area

The site is within an industrial area with immediate neighbours being industrial premises. The site is fully developed and consists of one large, open plan building. There is a large roller door entrance at the front and rear of the building for vehicle access and a sealed driveway running along the northern perimeter connecting the front and rear of the site.

6.1.4 Nearest Sensitive Receptors

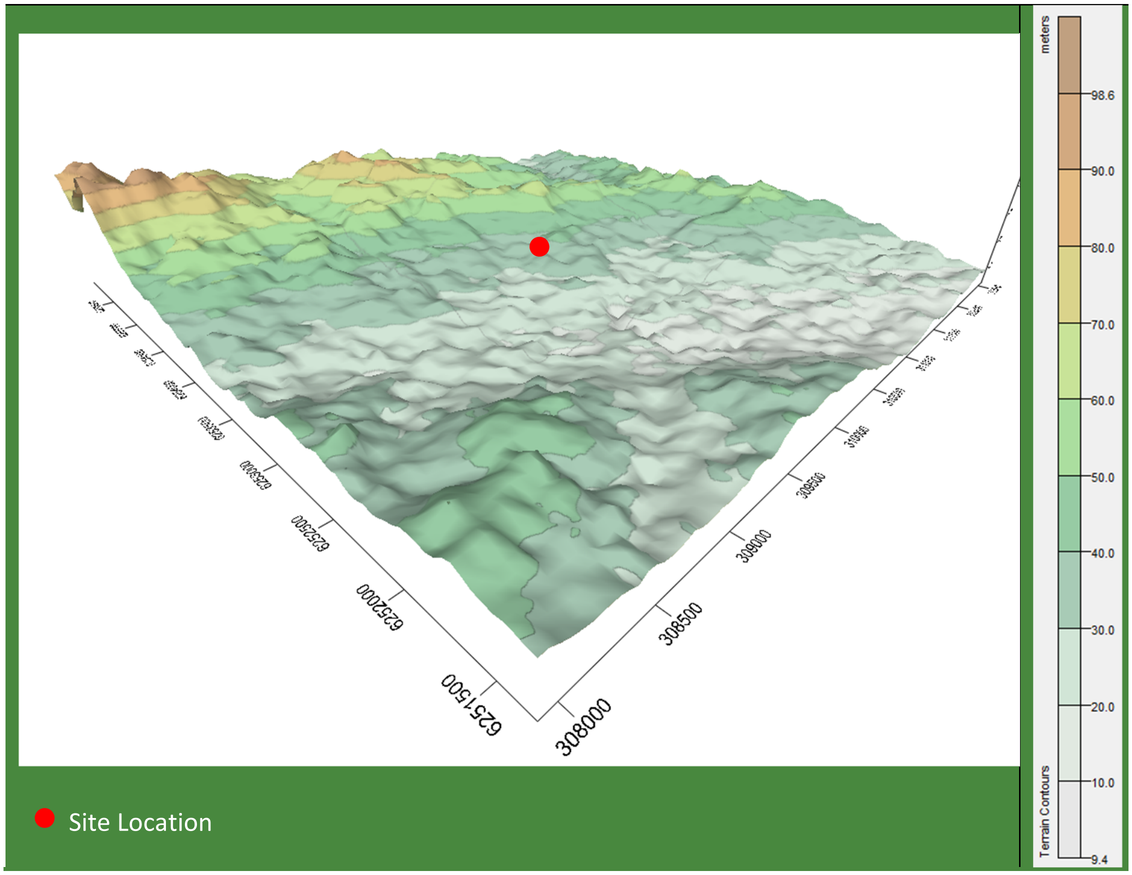
The nearest sensitive receivers are residential properties located to the north of the site approximately 400m north. There are also residential areas 750m to the east and 1.5 km to the south of the site.

6.1.5 Local Topography

The meteorological condition known as katabatic flow (or katabatic drift) is often identified as the condition under which maximum environmental impacts from primarily ground-based sources are likely to occur. Katabatic flow is simply the movement of cold air down a slope, generally under stable atmospheric conditions. Under such circumstances, dispersion of airborne pollutants is generally slow and the associated impacts can reach their peak.

Katabatic flow may affect emissions from the subject site in an easterly direction. Figure 6-1 shows the terrain with the z-axis (i.e. vertical axis) exaggerated by a factor of 10 (i.e. a given distance on the x-axis or y-axis appears three times as great on the z-axis) in order to provide a clearer description of the topography. A coloured scale bar shows elevations corresponding to the colours used in the figures. It should be noted that these figures are an approximation of the actual terrain, based on terrain information that have been digitised from local contour terrain maps.

Figure 6-1: Local terrain



6.1.6 Surrounding Vegetation

The site is surrounded to the north, east, south and west by industrial buildings. To the north lies the Lower Prospect Canal Reserve which consists of remnant Cumberland Plain Woodland vegetation. This vegetation is located approximately 500m to the north of the site.

6.1.7 Local Meteorology

6.1.7.1 Wind Rose Plots

Wind rose plots show the direction from which the wind is coming with triangles known as “petals”. The petals of the plots summarise wind direction data into 8 compass directions i.e. north, north-east, east, south-east, etc.

The length of the triangles, or “petals”, indicates the frequency that the wind blows from the direction presented. Longer petals for a given direction indicate a higher frequency of wind from that direction. Each petal is divided into segments, with each segment representing one of the six wind speed classes. Thus, the segments of a petal show what proportion of wind for a given direction falls into each class.

The proportion of time for which wind speed is equal to or less than 0.5 m/s, when speed is negligible, is referred to as calm hours or “calms”. Calms are not shown on a wind rose as they

have no direction, but the proportion of time that they make up for the period under consideration is noted under each wind rose.

The concentric circles in each wind rose are the axes that denote wind frequencies. In comparing the plots it should be noted that the axis varies between wind roses, although all wind roses are the same size. The frequencies shown in the first quadrant (top-left quarter) of each wind rose are stated beneath the wind rose.

6.1.7.2 Local Wind Trends

Seasonal wind rose plots for this site utilising Horsley Park AWS 2015 data have been included as Figure 6-2. A multi-year comparison for years 2015 - 2018 with of maximum and minimum temperature, and wind run demonstrated that the year 2015 Horsley Park data is suitably representative of long term trends.

Over the year of 2015 the wind direction varies but they mostly arrive at the site from the south between 16-20% of the time. Wind blows from the other directions than 12% of the time, with wind blowing from the east, north east and north-west less than 8% of time. 34.9% of the year wind blows at speeds between 0.5–2.1 m/s, followed by 2.10–3.60 m/s for 27.2% of the time. The average wind speed in 2015 was 1.97 m/s and there was a calms frequency of 18.97%.

The summer period had the highest wind speed of 2.15 m/s and the lowest calms frequency of 16.95%. Unlike the overall year trend, wind during summer came mostly from the east, south east and south, with frequencies of approximately 16%, 16%, and 12-16% respectively. Winds from the west and north-west were the lowest with frequencies below 4%.

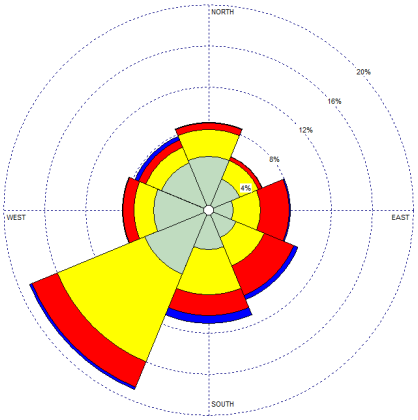
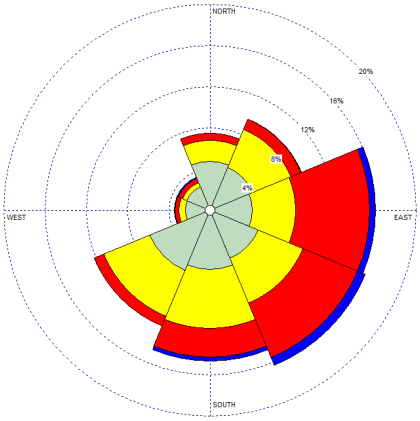
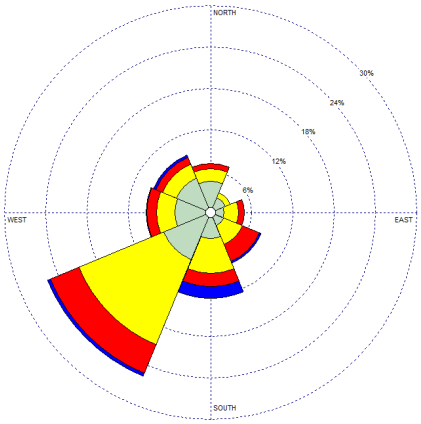
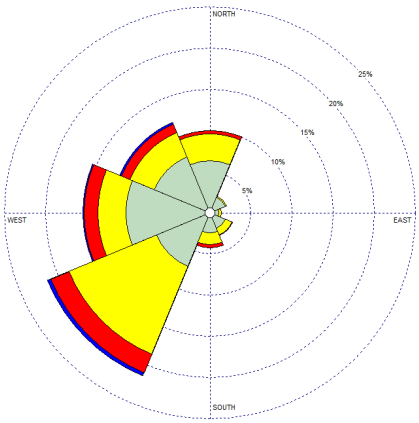
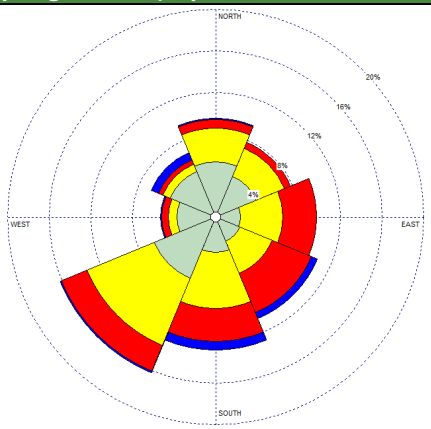
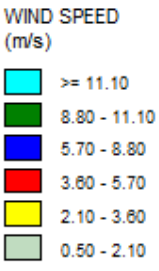
Autumn had an average speed of 2.02 m/s and dominant winds blew from the south-west at a frequency of 24-30%. Wind speed was 0.5-2.10 m/s for 32.7% of the time and 2.10-3.60 m/s for 30.8% of the time. Calms frequency was 20.19%.

Winter winds blew from predominately westerly directions, from the south west, west, and north-west at 20-25%, ~15%, and 10-15% frequency respectively. Wind from the north was at 10% frequency and below 5% for all other directions. Average wind speed was 1.67 m/s and calms frequency was 17.21% and winds blew at 0.5 – 2.10 m/s for 38.6% of the time.

The spring period saw winds blow from the south-west approximately 16% of the time, followed by south at ~12% of time, and south-east, east and north each 8-12% of the time. Spring has an average wind speed was 2.02 m/s and it had the highest calms frequency of 21.53%. Winds.

In 2015 the mean daily wind run was lowest in June at 117 km, 58 km below the average for that month, and the highest was in September at 199 km, 13 km below the average for that month. The daily wind run for 2015 mostly followed the average trend from all the years of data, where the wind run decreased from January heading into winter, to increase from June/July and reaching a higher plateau from November. All other years since 2015 have incomplete data for daily wind run.

Figure 6-2: Wind Rose Plots for the Referenced Meteorological Station – Bureau of Meteorology Horsley Park AWS

All Seasons	Summer Season (December – February)
	
Average Wind Speed: 1.97 m/s Calms Frequency: 18.97% Axis Frequencies: 4%, 8%, 12%, 16%, 20%	Average Wind Speed: 2.15 m/s Calms Frequency: 16.95% Axis Frequencies: 4%, 8%, 12%, 16% and 20%
Autumn Season (March – May)	**Winter Season (June – August)**
	
Average Wind Speed: 2.02 m/s Calms Frequency: 20.19% Axis Frequencies: 6%, 12%, 18%, 24%, 30%	Average Wind Speed: 1.67 m/s Calms Frequency: 17.21% Axis Frequencies: 5%, 10%, 15%, 20%, 25%
Spring Season (September – November)	**Legend**
	
Average Wind Speed: 2.02 m/s Calms Frequency: 21.53% Axis Frequency: 4%, 8%, 12%, 16%, 20%	

6.1.8 Relevant Legislation & Guidelines

The following clauses under the Protection of the Environment Operations Act 1997 are of relevance to the proposed development:

Clause 124 – Operation of Plant (other than domestic plant)

The occupier of any premises who operates any plant in or on those premises in such a manner as to cause air pollution from those premises is guilty of an offence if the air pollution so caused, or any part of the air pollution so caused, is caused by the occupier's failure:

(a) to maintain the plant in an efficient condition, or

(b) to operate the plant in a proper and efficient manner.

Clause 126 –Dealing with materials

The occupier of any premises who deals with materials in or on those premises in such a manner as to cause air pollution from those premises is guilty of an offence if the air pollution so caused, or any part of the air pollution so caused, is caused by the occupier's failure to deal with those materials in a proper and efficient manner.

In this section:

***deal** with materials means process, handle, move, store or dispose of the materials.*

***materials** includes raw materials, materials in the process of manufacture, manufactured materials, by-products or waste materials.*

6.1.8.1 Air Quality Assessment Criteria

Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2016) provides impact assessment criteria for PM2.5, PM10 and Total suspended particles (TSP) as shown in the following table:

Table 6-1: AMMAAP Assessment Criteria

Pollutant	Averaging period	Concentration (µg/m^3)	Source
PM2.5	24 hours	25	DoE (2016)
	Annual	8	
PM10	24 hours	50	DoE (2016)
	Annual	25	
Total suspended particles (TSP)	Annual	90	NHMRC (1996)

6.1.9 Air Quality Impact Mitigation Measures

Due to the nature of materials to be processed on site and that sorting and storage of materials will be undertaken within an enclosed building or within a screened yard, no mitigation measures are required.

6.1.10 Statement of Potential Air Impacts

The nature of the waste materials being received and handled at the site as well as the low risk site operations (no crushing, grinding or screening), any potential dust emissions are expected to be minor.

The nearest sensitive receptors are over 300 m from the site boundary and therefore highly unlikely to encounter dust emissions from the site.

7. NOISE IMPACT ASSESSMENT

A Noise Impact Assessment was prepared by Benbow Environmental and is provided as Appendix 3.

This noise impact assessment finds that predicted noise levels will be below the criteria set out in accordance with the NSW Noise Policy for Industry at all receivers.

The generation of additional road traffic associated with the site's activities has been assessed and was predicted to comply with the guidelines set out in the NSW Road Noise Policy.

Construction work would only involve the demolition of the outhouse building and the installation of the weighbridge. A full construction noise impact assessment is not considered warranted. Construction work is recommended to be restricted to standard construction hours.

8. FIRE AND INCIDENT MANAGEMENT

There is a fire risk associated with the stockpiling of general waste, as this waste may contain material that would provide fuel to a fire such as paper, cardboard, timber etc. The proposed development does not involve acceptance of such waste and is limited to scrap metal. Procedures would be put in place to minimise the general waste brought onto site within incoming loads.

8.1.1 Sources of Fire Event

Possible events that could initiate a fire event are as follows:

- Forklift accident;
- Spark generated from static, particularly during material sorting;
- Ignition source from machinery malfunction;
- Ignition source from unexpected flammable materials in waste such as aerosols or flammable liquids;
- Dust build-up on electrical equipment;
- External ignition source such as, adjoining warehouse fire, lightning, arson.
- Ignition source in combination with an LPG leak; and
- Ignition source in combination with a flammable/combustible liquid leak (eg: diesel).

8.1.2 Consequence of Fire Event

The possible consequences from the above events include:

- A small contained fire;
- Pool fire (due to diesel spill); and
- A fully developed warehouse fire.

A fully developed warehouse fire would have cause serious harm to people and property and the air quality of the surrounding area.

8.1.3 Prevention/Protection Measures

The following measures would be implemented at the site to reduce the likelihood and severity of a fire event.

- Strict control of ignition sources in storage and handling areas.
- Buildings and site entry are locked when unattended, with site security system in place.
- All employees trained in emergency response and evacuation procedures.
- Forklift drivers training.
- Fire services located in the vicinity of storage area.
- No smoking policy on site.
- Segregation of waste in isolated areas; assisting in preventing the spread of fire.
- Segregated Dangerous Goods Storage.
- The storage and handling of flammable and combustible liquid will be in compliance with AS 1940-2017.
- The storage and handling of gases in cylinders will be in compliance with AS 4332-2004 Amdt 1-2005. Storage rack for forklift gas cylinders is located away from combustible materials.
- Oil/diesel leakages promptly attended to.
- Fire services onsite comply the Building Code of Australia (BCA).

8.1.4 Assessment of Fire Threat

The major fire hazards associated with the proposed development have been identified based on the areas where flammable or combustible liquid is stored or handled and the quantities of the material in question. There are LPG cylinders stored in a locked cage outside and a 1000 L self bunded diesel tank stored outside.

A brief discussion on the fire hazards associated with each of the main process areas follows.

General Waste Storage and Handling

The general waste that will be received on site would include the following:

- Scrap Metal & Aluminium;
- Copper cable;
- Whitegoods; and
- Brass.

This material would be stored either within the building in designated storage bays as shown on the site plan or one stockpile of scrap steel and/or aluminium on the hardstand area of the yard. There would also be storage of compacted cubes of aluminium on the external hardstand area. There would be a high turnover rate of stockpiled materials and they would not be stored for more than one day.

A cleared pathway around the external stockpile would be maintained at all times to facilitate emergency vehicle access should this be required. Access into the building if required would be via the front or rear roller doors.

The main concerns regarding fire risk are the following combustible materials:

- Paper and Cardboard;
- Timber;
- Whitegoods;
- Copper cable insulation tubing;
- General rubbish that cannot be recycled; and
- Green waste (garden waste).

These materials would be segregated from incoming loads during the inspection and the majority of such wastes would not be permitted to be brought on site. Therefore there is an extremely low potential for fire to be caused by storage of such wastes.

Dangerous Goods Storage and Handling

Only minor quantities of dangerous goods such as Category 4 Flammable Liquids (Diesel) and Category 1 Flammable Gases (LPG) would be stored on site.

Each class of dangerous good should be segregated and stored in accordance with the relevant Australian Standard (AS 1940-2017 and AS 4332-2004). The diesel, LPG and any combustible materials (cardboard/paper/timber etc) should be all segregated to prevent the spread of fire.

8.1.4.1 Fire Prevention and Protection Strategy

The particular characteristics of the proposed development that have been considered in the assessment and management of potential fire threats associated with the proposed development include the storage of flammable and combustible liquids/gas.

8.1.4.1.1 Ignition Sources

There would be strict control of ignition sources on-site. A strict "no smoking" policy which should be continually implemented and enforced.

8.1.4.1.2 Security

The site is only operates during the day time. A security system should be implemented to prevent unauthorized access out of hours.

8.1.4.1.3 Provision for Escape

Provision for escape during the event of a fire where possible are in accordance with Part D1 of the BCA. Exit and travel distances needs to satisfy the requirements of Clause D1.4.

Section D1.4 of the BCA states that for Class 5-9 buildings:

i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m.

Section D1.5 of the BCA states:

Exits that are required as alternative means of egress must be -

distributed as uniformly as practicable within or around the storey served and in positions
a) where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and
b) not less than 9 m apart; and
c) not more than-
i) in a Class 2 or 3 building - 45 m apart; or
ii) in a Class 9a health-care building, if such required exit serves a patient care area - 45 m apart; or
iii) in all other cases - 60 m apart.

The existing building satisfies these requirements. The operational areas and storage bays do not conflict with the BCA requirements.

Emergency lighting and illuminated exit signage is needed, to identify exits and paths of travel to an exit during any evacuation. Emergency lighting would operate in the event of a power failure in the building, and would provide sufficient lighting to enable people to find exit routes and escape from the building in the case of emergency.

Dedicated line marking would need to be provided to provide guidance for paths of travel. This will ensure that all paths of travel will be free of obstruction allowing safe passage for occupants to safety.

8.1.4.1.4 Fire Detection

The buildings would need to have an addressable fire alarm system installed in accordance with Clause 4 of BCA The system installed would need to be fully complaint with AS 1670.1–2015.

A Sound Systems and Intercom Systems for Emergency Purposes (SSIEP) would be installed which would be incorporated in the site fire alarm system. This system will allow both a full site evacuation and Public Address (PA) communication.

The main system for fire detection would be supported by the staff's awareness on site as they would be able to quickly detect any leaks of materials or build-up of combustible solids, which may lead to an increased fire risk via visual recognition. Once such situations are detected appropriate *first response* action would be taken.

Adequately trained and experienced personnel would be located on-site at all times during operating hours. These personnel would be formed into emergency firefighting teams and would be the first firefighting response before the fire brigade arrived on-site.

In the event of a fire incident, the NSW Fire Brigade would be notified and would be called to the site to ensure the fire would be controlled and extinguished.

8.1.4.1.5 Fire Protection Equipment

The building is a Class 8 Building (*a laboratory, or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing, or cleaning of goods or produce is carried on for trade, sale, or gain.)*

In accordance with Clause E1.3 of the BCA, fire hydrants are required to serve any building with a floor area of greater than 500 m^2, therefore fire hydrants are required on-site which are in accordance with AS 2419.1.

In accordance with Clause E1.4 of the BCA, fire hose reels are required to serve any building with a floor area of greater than 500 m^2 where internal fire hydrants are provided in accordance with AS 2441.

A sprinkler system is required for occupancies of excessive fire hazard, this includes combustible goods with an aggregated volume exceeding 1000 m^3 and stored to a height greater than 4 m including the following:

(i) Aerosol packs with flammable contents.
(ii) Carpets and clothing.
(iii) Electrical appliances.
(iv) Combustible compressed fibreboards (low and high density) and plywoods.
(v) Combustible cartons, irrespective of content.
(vi) Esparto and other fibrous combustible material.

The volume will not exceed a 1000 m^3 of combustible material therefore a sprinkler system is not required.

Fire extinguishers are located around the site in accordance with AS 2444–1995.

9. HAZARD AND RISK

A preliminary risk screening in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011) has been prepared. The report includes:

- Class, quantity and location of all dangerous goods and hazardous materials; and
- SEPP 33 screening and determination of whether a Preliminary Hazard Analysis is required.

9.1 CHEMICAL STORAGE & USE

At the facility, diesel is to be stored in a self bunded tank in an external area. Eight LPG cylinders are kept in stock for operation of forklifts; these are stored outside adjacent to the ramp. The compactor and copper granule machine are electric thus no hazardous chemicals are required for their use.

The maximum quantities of dangerous goods stored on site at any one time are summarised in Table 9-1.

Table 9-1: Class, quantity and location of on-site chemicals

DG Class	Onsite Maximum Quantity (L)	Location
2.1	282	Outside adjacent to ramp
Combustible Liquid C1 – Non Dangerous Good	1000	In external area

9.2 SEPP 33 RISK SCREENING

9.2.1 Onsite Storage

A preliminary risk screening of the existing chemicals stored at the site in accordance with State Environment Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) has been undertaken, with results provided in Table 9-2.

Table 9-2: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored (L)	Triggers SEPP 33
Class 1.2	5 tonne	Explosives	None	None	No
Class 1.3	10 tonne	Explosives	None	None	No
Class 2.1	10 tonne or 16 m^3 if stored above ground 40 tonnes or 64 m^3 if stored underground or mounded	Flammable Gases	LPG	282	No
Class 2.2	Not relevant	Non-flammable, non-toxic gases	None	None	Not relevant

Table 9-2: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored (L)	Triggers SEPP 33
Combustible Liquid C1	Not relevant	Combustible liquid with flashpoint of 150°C or less	Diesel	1000	Not Applicable
Combustible Liquid C2	Not relevant	Combustible liquid with flashpoint exceeding 150°C	None	None	Not Applicable
Class 2.3	5 tonne	Anhydrous ammonia	None	None	No
	1 tonne	Chlorine and sulphur dioxide stored as liquefied gas in contains <100 kg	None	None	No
	2.5 tonne	Chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg	None	None	No
	100 kg	Liquefied gas kept in or on premises	None	None	No
	100 kg	Other toxic gases	None	None	No
Class 3	Assessed by reference to figures 8 & 9 of applying Sepp 33	Flammable liquids PG I, II and III	None	None	No
Class 4.1	5 tonne	Flammable Solids	None	None	No
Class 4.2	1 tonne	Substances liable to spontaneous combustion	None	None	No
Class 4.3	1 tonne	Substances which, in contact with water, emit flammable gases	None	None	No
Class 5.1	25 tonne	Ammonium nitrate – high density fertiliser grade	None	None	No
Class 5.1	5 tonne	Oxidising substances	None	None	No
Class 5.1	2.5 tonne	Dry pool chlorine – in containers <30 kg	None	None	No
Class 5.1	1 tonne	Dry pool chlorine – in containers >30 kg	None	None	No
Class 5.1	5 tonne	Any other Class 5.1	None	None	No
Class 5.2	10 tonne	Organic peroxides	None	None	No
Class 6.1 PGI	0.5 tonne	Toxic substances	None	None	No

Table 9-2: SEPP 33 Preliminary Risk Screening

Class	Screening Threshold	Description	Site Specific Description	Quantity to be stored (L)	Triggers SEPP 33
Class 6.1 PGII & III	2.5 tonne	Toxic substances	None	None	No
Class 6.2	0.5 tonne	Infectious substances	None	None	No
Class 7	All	Radioactive Material	None	None	No
Class 8 PGI	5 tonne	Corrosive substance	None	None	No
Class 8 PGII	25 tonne	Corrosive substance	None	None	No
Class 8 PGIII	50 tonne	Corrosive substance	None	None	No

The storage of dangerous goods for the proposed development will not exceed the SEPP33 preliminary risk screening thresholds. A preliminary hazard analysis is not warranted.

9.2.2 Transport Quantities

Table 9-3 is an excerpt of Table 2 – "Transportation Screening Thresholds" from *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33, NSW Government Department of Planning (2011)* and provides the transportation screening thresholds for dangerous goods classes of relevance to the site.

Table 9-3: 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

It is highly unlikely that the transport screening threshold for the dangerous goods class will be exceeded based on the quantity stored. Therefore, the transport of dangerous goods for the proposed development will not trigger SEPP33.

10. BIODIVERSITY

As the site is already developed for industrial use and no vegetation clearing is required, therefore the following has been addressed:

- A targeted search using data from the BioNet Atlas of NSW Wildlife website to identify any threatened species in the area surrounding the proposed development;
- A description of the proposed vegetation clearing and landscaping work to be undertaken;
- Assessment of potential impacts on flora and fauna.

10.1 THREATENED SPECIES

A search in the BioNet Atlas of NSW Wildlife returned records of 1357 species in a selected 10 km x 10 km area surrounding the subject site. The species with an endangered status are summarised in Table 10-1.

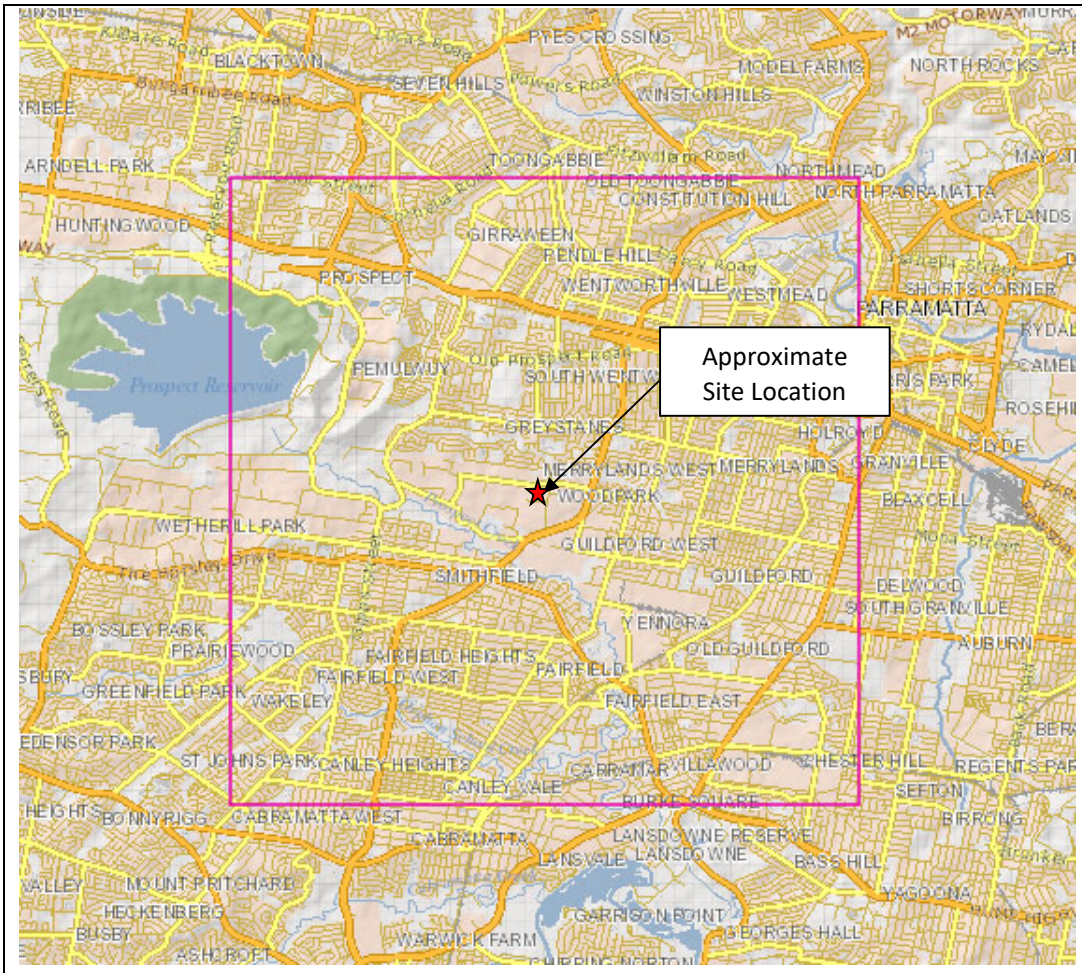
Table 10-1: Endangered species in site area

Common name	Scientific name	NSW status
Green and Golden Bell Frog	Litoria aurea	E1, P
Bush Stone-curlew	Burhinus grallarius	E1, P
Swift Parrot	Lathamus discolour	E1, P, 3
Regent Honeyeater	Anthochaera Phrygia	E4A, P
Cumberland Plain Land Snail	Meridolum corneovirens	E1
Marsdenia viridiflora R. Br. subsp. viridiflora (population in the Bankstown, Blacktown, Camden, Campbelltown, Fairfield, Holroyd, Liverpool and Penrith local government areas)	Marsdenia viridiflora subsp. viridiflora	E2
Pultenaea parviflora	Pultenaea parviflora	E1
Matted Bush-pea	Pultenaea pedunculata	E1
Wallangarra White Gum	Eucalyptus scoparia	E1
Magenta Lilly Pilly	Syzygium paniculatum	E1
Nodding Geebung	Persoonia nutans	E1, P
Spiked Rice-flower	Pimelea spicata	E1

Key:
- 3 Sensitivity Class 3 (Sensitive Species Data Policy)
- E1 Endangered (Threatened Species Conservation Act 1995)
- E2 Endangered Population (Threatened Species Conservation Act 1995)
- E4A Critically Endangered (Threatened Species Conservation Act 1995)
- P Protected (National Parks & Wildlife Act 1974)

The 100 km^2 area used in the Atlas search was defined by -33.79 North, 150.90 West, 151.00 East, and -33.89 South. This was centred approximately at the site and is presented in Figure 10-1.

Figure 10-1: Threatened species search area around subject site



Source: BioNet Atlas

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

The search found no records of flora and fauna on the site. The closest sighting of an endangered species was the swift parrot over 1 km to the north of the site.

10.2 Proposed Vegetation Clearing and Landscaping Work

No clearing of vegetation is required. A site inspection found that the following vegetation exists on or around the site:

- grass exists on the small unsealed area on the eastern site boundary;
- a grassed area with a small tree in between the eastern site boundary and Percival road;
- a small tree along the northern boundary in the neighbouring premise;
- grass tufts on the edges of the driveway along the north of the building; and
- patched areas of grass across the unsealed area at the rear.

Landscaped areas at the front of the car park area fronting Percival Road would be established as shown on the site plans. This will consist of a small garden area to improve the visual amenity of the site. Considering the developed nature of the site, this proposed landscaping is suitable for the proposed use.

10.3 POTENTIAL FLORA AND FAUNA IMPACTS

The site has been developed for industrial use and minor grassed areas and vegetation exists over the vicinity. Landscaping work would be undertaken at the front of the property. The species search of the BioNet Atlas showed no species of flora or fauna located at the site. Therefore, the proposed development is not expected to have any potential impacts on flora or fauna at the subject site.

11. VISUAL AMENITY

As the site is already developed for industrial use and there would be no alterations or additions to the existing building and only minor changes to the site layout including removal of an outhouse and installation of a weighbridge, a brief discussion on potential visual impacts including changes to views at private receptors and public vantage points is provided below.

The site is a rectangular shaped block with 26 metre frontage to Percival Road. The view of the site from Percival Road is of the gardens, car park area and industrial building. There would be minor changes to the site frontage including a landscaped garden area that would improve the site appearance from Percival Road. The rear area is not visible from Percival Road.

The land slopes downward towards the back of the site and there are factory buildings to the north, south and west of the site with existing walls that prevent views of the site from public vantage points in these directions.

The nearest residential areas are over 300 metres to the north of the site along Percival Road. The site is not visible from this location.

There would be no change to the views of the site at private receptors and public vantage points as the site is not visible from these locations.

12. RECOMMENDED MITIGATION MEASURES

This section provides a summary of the recommended mitigation measures required to ensure that the surrounding natural and built environment is safeguarded from potential impacts of the proposed development.

Table 12-1: Recommended mitigation measures

Aspect	Safeguards and Control Measures
Air	
Potential emissions of dust	• External operations limited to unloading, loading and stockpiling of scrap metal. • One external stockpile to be located at the centre of the external hardstand area • Regular sweeping of external hardstand area.
Noise	
	• Hours of operation limited to 7am to 4pm Monday to Friday and 7am to 1pm Saturdays. • Construction work is recommended to be restricted to standard construction hours.
Water & Soil	
	• First flush system including oil and grit (sediment) separator. • Connection of unsealed area to the existing easement at the rear of the site allowing clean stormwater to discharge to the street stormwater system. • Clearly marked stormwater drain in the front car park with the words “Stormwater drain – do not pollute”. • Erosion and sediment controls in accordance with the Sediment Control Plan.
Waste Management	
	• Segregated and designated storage bins and bays for appropriate storage of waste. • Licenced waste contractors for waste collection. • Records for all incoming and outgoing loads. • Unexpected Finds Protocol.
Hazards and Risk	
Diesel Storage Fire risk	• Diesel storage tank to be self bunded and stored in accordance with AS1940-2017; • Hydrocarbon spill kit located in accessible area close to self bunded diesel tank; • Control of ignition sources, including “no smoking” policy; • Adequate fire protection equipment including fire extinguishers, fire hose reels and fire hydrants; • Forklift driver training; • Emergency plan, Evacuation plan and emergency response training.

Table 12-1: Recommended mitigation measures

Aspect	Safeguards and Control Measures
Traffic and Car Parking	
	• The driveway width would be increased to 5.5 metres to allow two way traffic. • Traffic lights to be installed for weighbridge operation to enable safe one way travel into and out of the rear external operational area. • 9 car parking spaces would be provided.
Biodiversity	
	• No removal of existing vegetation. • Implement landscaping (gardens at site frontage) as shown on site plan.
Environmental Management	
	• Preparation of an Environmental Management Plan for the site that contains a spill procedure, incoming load inspection / unexpected finds procedure, stormwater management and weighbridge records. • Sign at front of site detailing accepted waste types.

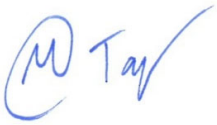
13. CONCLUDING REMARKS

Sydney Smithfield Metal Recycler's propose to establish a scrap metal waste transfer station at 84 Percival Road, Smithfield. The proposal includes demolition of an outbuilding, construction of a weighbridge and a change in the existing land use to a scrap metal recycling facility that would accept scrap metal from consumers and store this either in the external rear yard or within the existing warehouse to be on-sold to a metal recycler.

Approximately 20,000 tonnes per year would be accepted and the maximum stored would be 100 tonnes at any one time. No crushing or screening is proposed.

This report has addressed environmental issues noted in the SEAR 1327 and demonstrates that with the recommended safeguards in place, the facility would be a low risk operation.

This concludes the report.



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14. LIMITATIONS

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

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

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

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