Part One

INTRODUCTION

1.1 Statement of the Proposal

This Environmental Impact Statement has been prepared on behalf of ResourceCo RRF Pty Ltd (**ResourceCo**) in support of a State Significant Development (**SSD**) application.

ResourceCo seeks the approval of the Minister for Planning to establish a Waste and Resource Management Facility at Nos.35-37 Frank Street, Wetherill Park (**the Site**).

The objectives of the proposal are:

(a) To establish a commercially viable Waste and Resource Management Facility which is capable of recovering waste from the waste stream for reuse.

(b) To assist the NSW State government in achieving its objectives for the recovery and recycling of waste as detailed in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.

(c) To establish an environmentally responsible and sustainable industry which would create employment.

It is proposed to establish a Waste and Resource Management Facility on the Site which will process waste material to produce *Processed Engineering Fuel* (**PEF**) and other reusable commodities including aggregates, metal, timber and soil.

PEF is primarily a plastic-based material with high calorific value, derived from waste streams such as Commercial and Demolition (**C&D**) waste, Commercial and Industrial (**C&I**) waste and pre-processed Municipal Solid Waste (**MSW**). The proposed development would process dry, non-putrescible C&I and mixed C&D waste.

PEF is an alternative fuel used in energy intensive industries to replace fossil fuels, such as coal and pet coke, and is most commonly used in the cement manufacturing industry.

The recycling of combustible waste into PEF brings the following benefits:

- Diversion of waste from landfill
- Conservation of natural fossil fuel by replacing it with sustainable green fuel
- Achieving carbon emission reduction in the cement manufacturing process
- Cost saving for industry through replacement of fossil fuel with PEF.

The proposed facility has the capability to convert up to 250,000 tonnes of raw material

per annum into approximately 150,000 tonnes of PEF and over 75,000 tonnes of reusable commodities. All raw materials are separated during processing and over 90% of the material is recycled.

1.2 Description of the Site

The legal description of the Site is:

Lot 31, DP 589097
Nos.35-37 Frank Street
WETHERILL PARK

Figure 1-1 shows the regional location of the Site. **Figure 1-2** shows a more detailed Site location.

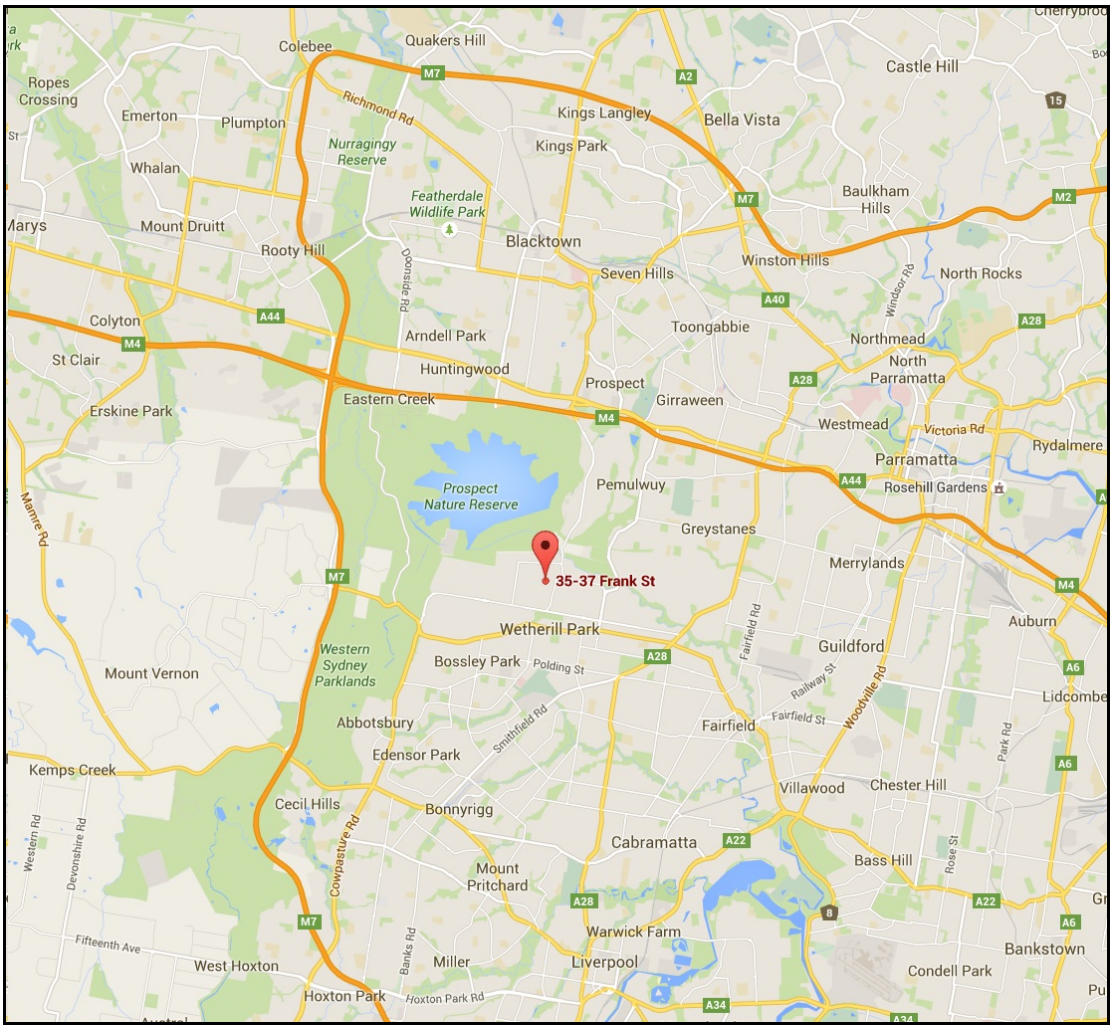


Figure 1-1: Regional location of the Site. (© GOOGLE Maps).

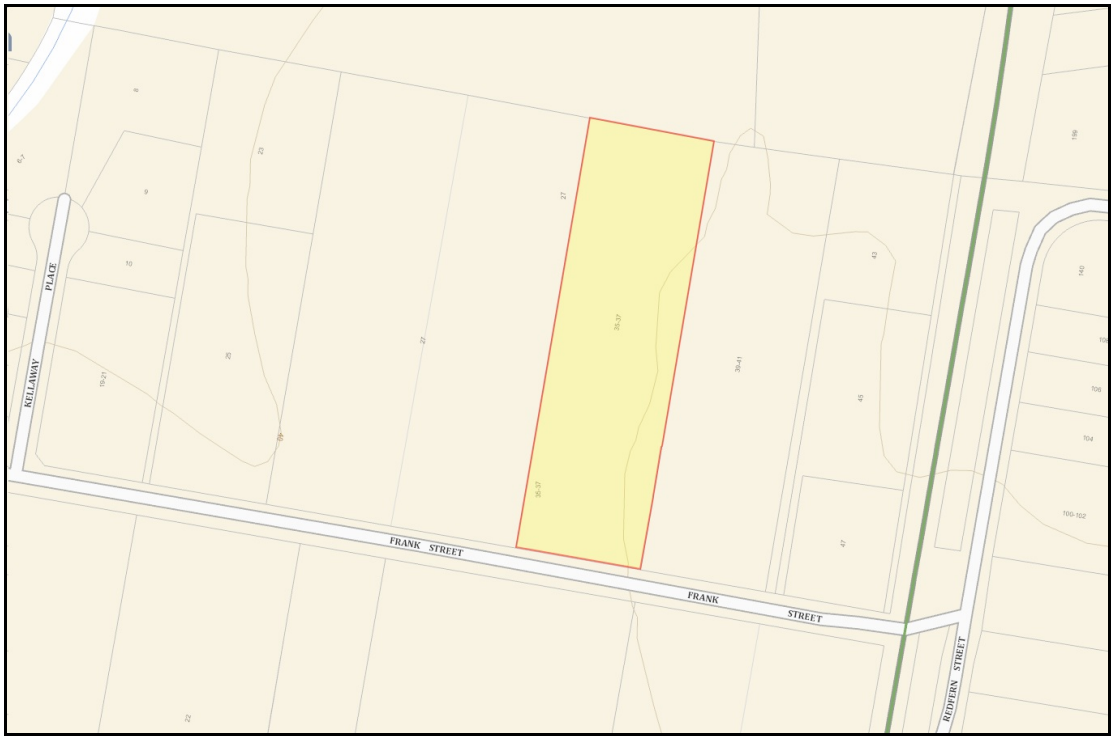


Figure 1-2: Site location map with the Site highlighted in yellow. (© NSW Department of Lands 2015)

The Site is located on the northern side of Frank Street to the west of the intersection of Redfern Street with Frank Street. An extract from an aerial photograph of the Site is at **Figure 1-3**.

Figure 1-3: Aerial photograph of the Site. (© NearMap)

Figure 1-4 shows the cadastral details of the Site and surrounding lands.

Figure 1-4: Cadastral details of the Site and surrounding land. (© NSW Department of Lands 2015)

The Site has:

- a northern boundary of 77.66m
- a western boundary of 268.46 m
- a southern boundary of 77.38 m
- an eastern boundary of 267.49 m.

The Site has an area of approximately 2.077 hectares.

An easement for transmission line 30.38 m wide is located in the southern section of the Site. An extract from DP 589097 which shows the location of the easement is at **Figure 1-5** with a copy of the Certificate of Title at **Appendix 1**.

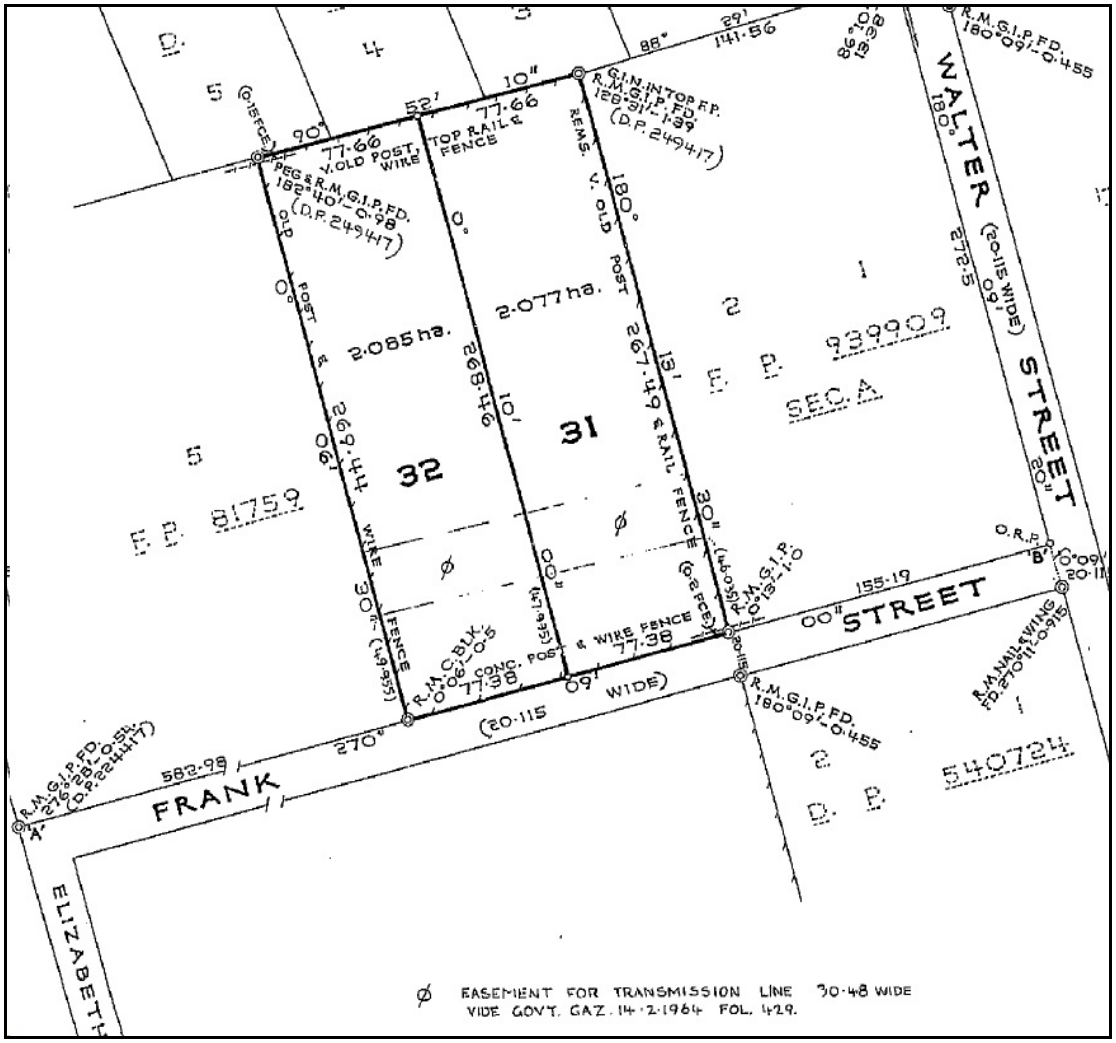


Figure 1-5: Extract from DP 589097.

The Site is in the ownership of Simsmetal Holdings Pty Limited. A 25 August 2015 letter from Sims Metal Management granting consent to the lodgement of the subject application is at **Appendix 2**.

The Site is currently vacant. As seen in **Figure 1-3**, there is a building located at the southern section of the Site, that building being associated with the previous use of the Site by Sims Metal.

There is no vegetation located on the main part of the Site, however, there is a stand of trees located at the Frank Street frontage of the Site.

A survey of the Site has been prepared by William L Backhouse Pty Limited, an extract from which showing the Frank Street frontage of the Site and the existing vegetation is at **Figure 1-6**. A number of trees are located on adjoining land to the north and west of the Site as shown on the extract from the survey of the Site at **Figure 1-7**.

A complete copy of the survey of the Site is at **Appendix 3**.

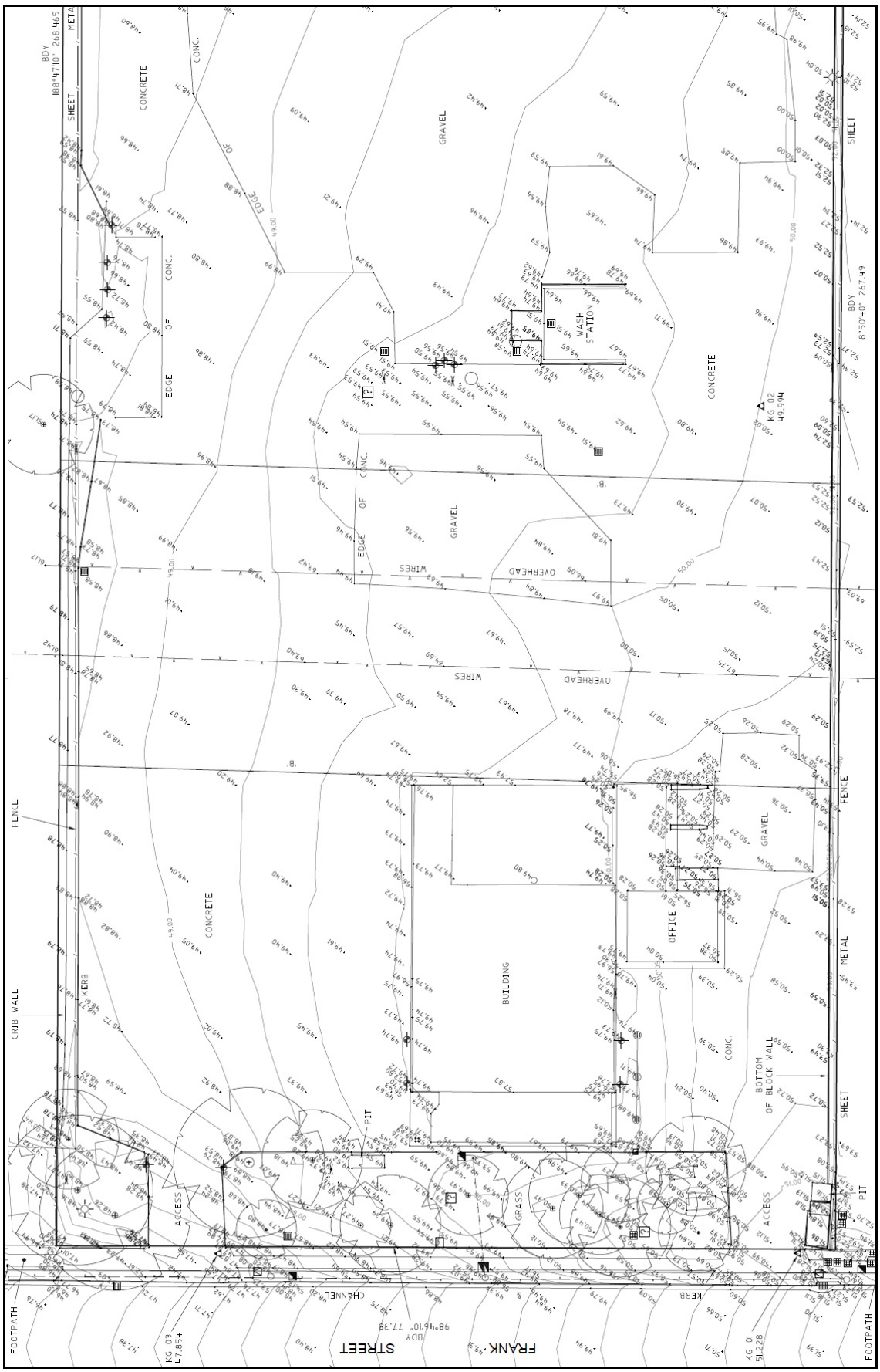


Figure 1-6: Extract from the survey of the Site.

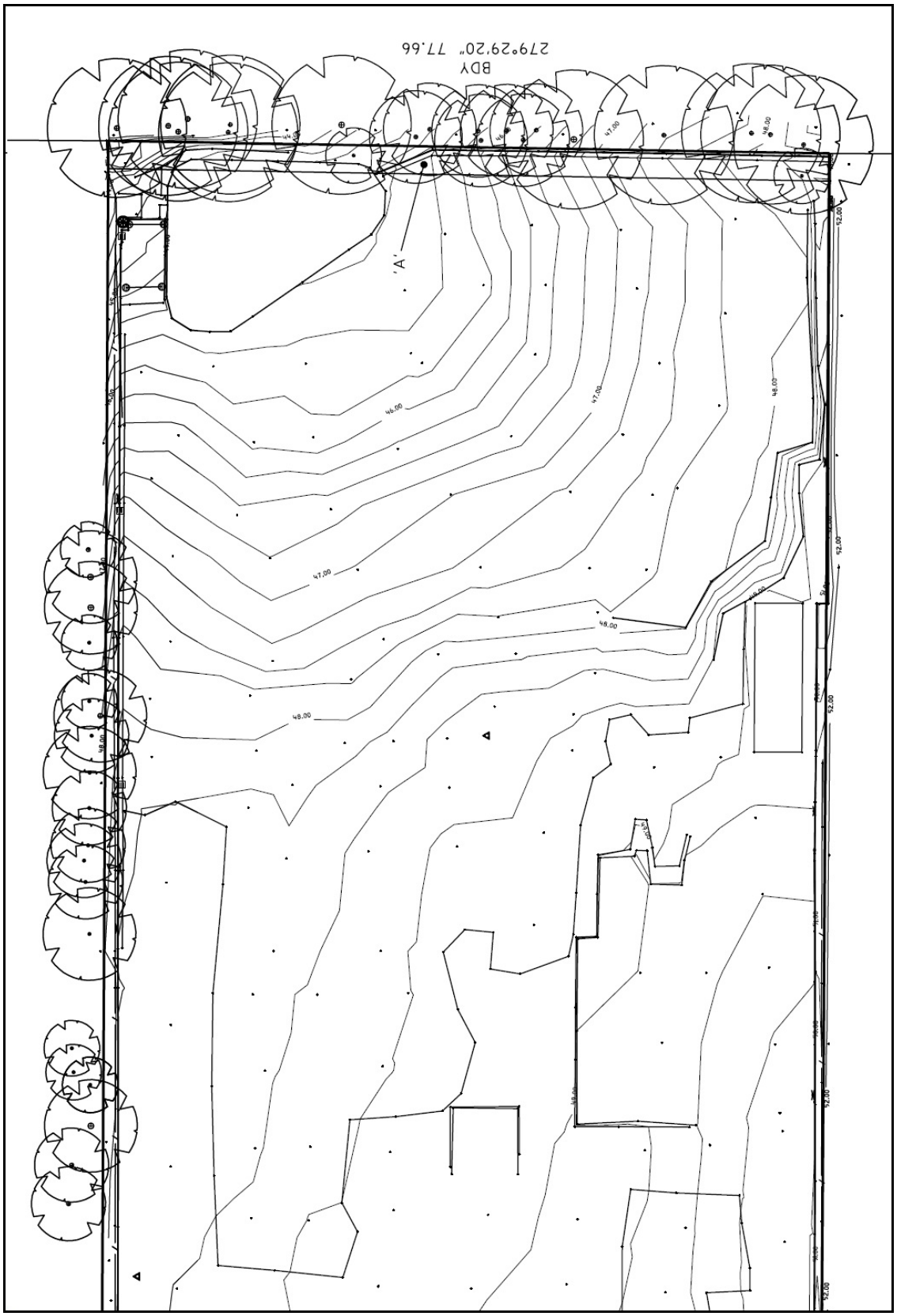


Figure 1-7: Extract from the survey of the Site showing the existing vegetation located on the properties to the north and west of the Site.

1.3 Operational History of the Site

Sims Metal purchased the Site from Wanless Waste Services in the early 1980s. The Site operated as a scrap metal facility with the operational layout generally unchanged until its closure as a scrap yard in December 2013.

At the time of purchase of the Site by Sims Metal, a shredder was located on the central, eastern section of the Site. Sims Metal replaced the shredder with a metal shear upon purchasing the Site. The metal shear remained in place until it was demolished in August 2014 following the closure of the Site.

The front section of the Site, and haul roads along the eastern and western boundaries were sealed between 1978 and 1986.

The front section of the Site had not been used for processing and stockpile of scrap metal with the exception of the large warehouse which was used for the storage of non-ferrous metals.

The centre and northern sections of the Site have been in a predominantly unsealed state and generally occupied by scrap metal stockpiles throughout the operational lifetime of the Site.

1.4 Need for an Environmental Assessment

Pursuant to **Schedule 3** of the *Environmental Planning and Assessment Regulation 2000* (**the Regulation**), the proposed development is Designated Development being *Waste management facilities or works*.

Clause 89C of the Environmental Planning and Assessment Act 1979 deals with State Significant Development and states:

> ***89C Development that is State significant development***
>
> *(1) For the purposes of this Act, State significant development is development that is declared under this section to be State significant development.*
>
> *(2) A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.*
>
> *(3) The Minister may, by order published in the Gazette, declare specified development on specified land that is not declared under subsection (2) to be State significant development, but only if the Minister has obtained and made publicly available advice from*

the Planning Assessment Commission about the State or regional planning significance of the development.

(4) A State environmental planning policy that declares State significant development may extend the provisions of the policy relating to that development to State significant development declared under subsection (3).

State Environmental Planning Policy (State and Regional Development) 2011 (**SEPP SRD)** has as its aims:

(a) to identify development that is State significant development,

(b) to identify development that is State significant infrastructure and critical State significant infrastructure,

(c) to confer functions on joint regional planning panels to determine development applications.

Clause 8 of SEPP SRD states:

8 Declaration of State significant development: section 89C

(1) Development is declared to be State significant development for the purposes of the 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.

(2) If a single proposed development the subject of one development application comprises development that is only partly State significant development declared under subclause (1), the remainder of the development is also declared to be State significant development (except so much of the remainder of the development as the Director-General determines is not sufficiently related to the State significant development).

(3) This clause does not apply to development that was the subject of a certificate in force under clause 6C of State Environmental Planning Policy (Major Development) 2005 immediately before the commencement of this Policy.

Schedule 1 of SEPP SRD contains the following definition:

Waste and resource management facilities

(1) Development for the purpose of regional putrescible landfills or an extension to a regional putrescible landfill that:

(a) has a capacity to receive more than 75,000 tonnes per year of putrescible waste, or

(b) has a capacity to receive more than 650,000 tonnes of putrescible waste over the life of the site, or

(c) is located in an environmentally sensitive area of State significance.

(2) Development for the purpose of waste transfer stations in metropolitan areas of the Sydney region that handle more than 100,000 tonnes per year of waste.

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

(4) Development for the purpose of waste incineration that handles more than 1,000 tonnes per year of waste.

(5) Development for the purpose of hazardous waste facilities that transfer, store or dispose of solid or liquid waste classified in the Australian Dangerous Goods Code or medical, cytotoxic or quarantine waste that handles more than 1,000 tonnes per year of waste.

(6) Development for the purpose of any other liquid waste depot that treats, stores or disposes of industrial liquid waste and:

(a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or

(b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.

The proposed development would recycle more than 100,000 tonnes per annum of commercial and industrial waste (approximately 250,000 tonnes per annum) and, as such, is a *State significant development* for the purposes of SEPP SRD. As such, an Environmental Impact Statement is required to accompany the application for the proposed development.

1.5 Secretary's Requirements

Pursuant to **Schedule 2** of the Environmental Planning and Assessment Regulation 2000, by letter dated 1 October 2015, the Secretary provided the requirements for the Environmental Impact Statement. A copy of the Secretary's Requirements is at

Appendix 4. A summary of the Secretary's Requirements is outlined in **Table 1-1** together with the relevant section of the Environmental Impact Statement which addresses those matters.

Table 1-1: Summary of Secretary's Requirements

Issue	Summary of matters to be addressed in EA	Reference in EA
Description of the Development	A detailed description of the project including: - need for the development - alternatives considered - likely staging of the development - likely interactions between the development and existing, approved and proposed operations in the vicinity of the site. - plans of the proposed building works	Parts 1 & 2
Justification of the Project	Include a detailed justification of the project.	Part 14
Environmental Planning Instruments	Consider any relevant statutory provisions.	Part 3
Capital Investment Value	- A detailed calculation of the capital investment value of the development. - Estimate of jobs to be created.	Part 11
Waste management	Including waste receival, classification and stockpiling.	Part 13
Risk assessment	A risk assessment of the potential environmental impacts of the development, identifying key issues for further assessment.	Part 14
Air quality	Assessment of air quality impacts, including odour, dust and green house gas emissions.	Part 6, Appendix 14
Traffic and transport	Details of the traffic volumes that are likely to be generated during construction and operation, and an assessment of the impact of this traffic on the safety and efficiency of the surrounding road network.	Part 10, Appendix 13
Noise	Assessment of noise during construction, operation and traffic.	Part 5, Appendix 15
Soil and water	- Identification of water and soil resources, drainage lines, watercourses and riparian lands. - Proposed erosion and sediment controls during construction. - A detailed site water balance. - Potential impacts on watercourses and groundwater. - The proposed stormwater, wastewater, leachate management systems including capacity of onsite detention and measure to treat, reuse and dispose of water. - Consideration of any potential salinity, soil contamination, flooding and acid sulfate soil impacts of the project.	Part 9, Appendix 19

Issue	Summary of matters to be addressed in EA	Reference in EA
Hazards and risks	Including handling of potential hazardous materials and fire management.	Part 14
Visual	Details of the visual impact of the project including an assessment of the potential visual impacts of the project on the amenity of the surrounding area.	Part 8
Socio-economic	Including and assessment of the economic and social impacts of the development, particularly any benefits to the community.	Part 11
A draft Statement of Commitments	Describe in detail how the environmental performance of the proposal would be monitored and managed over time.	Part 15
Plans and documents	Relevant plans, architectural drawings, diagrams and relevant documents required by Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included in the EIS rather than separate documents.	Appendices 7, 12 & 17
Consultation	Consultation with relevant local, State and Commonwealth authorities, service providers, community groups and affected landowners.	Part 4, Appendix5, Appendix11.

1.6 Local Government, Government and Statutory Authority Consultation

In the preparation of this EIS, consultation was undertaken with:

- Fairfield City Council.
- the Environment Protection Authority.
- the NSW Department of Primary Industries.
- the NSW Roads and Maritime Services.
- surrounding land owners and occupiers.

Copies of the responses received are at **Appendix 5**.

1.7 Structure of the Environmental Impact Statement

The Environmental Impact Statement continues as follows:

Part 2 A description of the proposed development.

Part 3 The statutory planning controls which apply.

Part 4 Consultation undertaken.

Part 5 Acoustic impact assessment.

Part 6 Air quality impact assessment.

Part 7 Greenhouse Gas Assessment.

Part 8 Visual impact assessment.

Part 9 Water Quality.

Part 10 Traffic impact assessment.

Part 11 Socio economic impact assessment.

Part 12 Hazard and risk assessment.

Part 13 Waste management plan.

Part 14 Justification of the proposed development and alternatives to that which is proposed.

Part 15 A draft statement of commitments.

Part 16 Conclusion to the Environmental Impact Statement.

1.8 Project Team

Nexus Environmental Planning	Town Planning and Project Management
Mike Haywood	Project Management
Lyle Marshall & Associates	Traffic and Access
Advisian	Water Management and Risk Assessment
Wilkinson Murray	Acoustics, Air Quality and Greenhouse
Hazchem	Site Contamination
Bell Architects	Architectural
Mott MacDonald	Engineering

Olsen Fire & Risk	Fire Engineering
Plateau Tree Services	Arboriculture
Tract Landscape Architects	Landscape
MBC Certifiers	BCA
WT Partnership	Quantity Surveyor

Part Two

THE PROPOSED DEVELOPMENT

2.1 Introduction

The NSW government and the NSW Environment Protection Authority has released the *NSW Waste Avoidance and Resource Recovery Strategy 2004-21* which states, among other things:

> *Effective waste management is a fundamental responsibility for the NSW community as well as the global community. Without it, we risk compromising our environment, our health and our economy.*
>
> *The NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014–21 is a key component of the Government's vision for the environmental, social and economic future of the state that will be supported financially by the Waste Less, Recycle More initiative.*
>
> *The primary goal of this strategy 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.*
>
> *Using resources efficiently and keeping materials circulating in the productive economy can also help to create jobs and grow the NSW economy.*
>
> *WARR Strategy 2014–21 objectives and targets*
>
> ***Avoid and reduce waste generation***
>
> - *By 2021-22, reduce the rate of waste generation per capita.*
>
> ***Increase recycling***
>
> - *By 2021-22, increase recycling rates for:*
>   - *municipal solid waste from 52% (in 2010-11) to 70%*
>   - *commercial and industrial waste from 57% (in 2010-11) to 70%*
>   - *construction and demolition waste from 75% (in 2010-11) to 80%.*
>
> ***Divert more waste from landfill***
>
> - *By 2021-22, increase the waste diverted from landfill from 63% (in 2010-11) to 75%.*

Manage problem wastes better

- *By 2021-22, establish or upgrade 86 drop-off facilities or services for managing household problem wastes statewide.*

Reduce litter

- *By 2016-17, reduce the number of litter items by 40% compared with 2011-12 levels and then continue to reduce litter items to 2021-22.*

Reduce illegal dumping

- *From 2013-14, implement the NSW Illegal Dumping Strategy 2014-16 to reduce the incidence of illegal dumping statewide.*

The proposed development would assist in achieving the above targets of the State government through the removal of Commercial and Industrial waste and pre-processed Municipal Solid Waste from the waste stream which might otherwise have been diverted to landfill.

2.2 Overview of Proposed Development

It is proposed to establish a Waste and Resource Management Facility on the Site which would process waste material to produce *Processed Engineering Fuel* (**PEF**) and other reusable commodities including aggregates, metal, timber and soil.

The objectives of the proposal are:

(a) To establish a commercially viable Waste and Resource Management Facility which is capable of recovering waste from the waste stream for reuse.

(b) To assist the NSW State government in achieving its objectives for the recovery and recycling of waste as detailed in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.

(c) To establish an environmentally responsible and sustainable industry which would create employment.

PEF is primarily a plastic-based material with high calorific value, derived from waste streams such as Commercial and Demolition (**C&D**) waste, Commercial and Industrial (**C&I**) waste and pre-processed Municipal Solid Waste (**MSW**). The proposed development would process dry, non-putrescible C&I and mixed C&D waste.

PEF is an alternative fuel used in energy intensive industries to replace fossil fuels, such as coal and pet coke, and is most commonly used in the cement manufacturing industry.

The recycling of combustible waste into PEF brings the following benefits:

- Diversion of waste from landfill.
- Conservation of natural fossil fuel by replacing it with sustainable green fuel.
- Achieving carbon emission reduction in the cement manufacturing process.
- Cost saving for industry through replacement of fossil fuel with PEF.

The proposed facility has the capability to convert up to 250,000 tonnes of raw material per annum into approximately 150,000 tonnes of PEF and over 75,000 tonnes of reusable commodities such as metal, wood, concrete, bricks, rubble and soil. All raw materials are separated during processing and over 90% of the material is recycled. The remaining 10% is waste and would be disposed of to landfill.

The source material is comprised of dry mixed light loads which usually contain a mix of timber, metals, plastics, cardboard and paper. The material stream may also include small amounts of concrete, bricks and rubble.

The source material is stockpiled within a purpose built industrial shed. Material is sorted such that ferrous and non-ferrous metals, inert fractions such as aggregates, soil, bricks and concrete, and non-recyclables are removed from the combustible portion of the material stream. The combustible material is then processed for manufacturing of PEF.

All salvaged metals are transported to approved recycling facilities. ResourceCo will transport the inert fractions such as aggregates and soil to approved recycling facilities to process for resupply to the civil construction market.

The manufacture of PEF is carried out using a fully automated process, although some manual picking is undertaken in the process. A similar facility to that which is proposed for the Site currently operates in Adelaide. A schematic diagram of that facility is provided as **Appendix 6**.

Material would arrive at the Site and would be taken over a weighbridge. Visual inspection of the load would take place at this time to determine the category of material. The driver would be issued with a docket and directed to the relevant section of the Site for placement of the material for processing.

No wet or putrescible waste would be processed at the facility. Only approved waste materials would be processed at the facility.

The proposed facility would operate in accordance with an Environment Protection Licence.

2.3 Project Design

The Waste and Resource Management Facility has been designed to accommodate the requirements of ResourceCo while at the same time minimising the potential impacts to the surrounding environment. This has been achieved through the following design objectives:

- Provide a site layout which is efficient in its operation and located wholly with purpose built industrial sheds.
- Provide safe and efficient vehicular access to and from the Site and also within the Site.
- Provide a system whereby stormwater is collected on the Site for reuse in the processing system, dust suppression and firefighting.
- Provide an appropriate stormwater management system which would collect and treat any water which might be discharged from the Site.
- Provide a site layout which would, where required, protect existing vegetation at the Frank Street frontage of the Site and on adjoining land.
- Provide multiple forms of dust mitigation to ensure the Site meets air quality requirements.
- Provide effective infrastructure, equipment and site practices to appropriately manage and mitigate potential issues related to air quality and noise generation.

2.4 Site Preparation and Construction

2.4.1 Earthworks

The earthworks to be undertaken would take approximately 3 months to complete and comprise:

- Cut and Fill as detailed in the Engineering Plans at **Appendix 17**.
- Filling of the Site where cut and fill does not provide sufficient material to establish the required finished levels.
- Clearing and grubbing of vegetation.

All stumps and roots will be grubbed out to a depth of 750mm below sub-grade or foundation level or to a depth as directed by the Works Superintendent. All grub-holes

will then be backfilled with suitable approved material and compacted to 100% standard maximum dry density in controlled layers.

All trees, shrubs and similar material cleared from the Site will typically be mulched and stockpiled on Site and later re-used within the Site for landscaping.

Trees to be retained will be protected by means of fencing the drip line with fluorescent high-visibility webbing on star pickets.

Approximately 9,000m^3 of fill will be required to build the Site up to the proposed levels. This material will need to be imported to Site. All fill imported to the Site will be classified as ENM or VENM. The source of the fill material will be approved by the Works Superintendent and will comply with the following:

- free from organic and perishable matter,
- maximum particle size 75mm,
- plasticity index - between 2% and 12% with a minimum CBR value when compacted of 15%.

As part of the importation process, all relevant test certificates of the fill will be provided for all material imported to Site.

Soils or other materials with greater than 5% content by volume of unsuitable materials (such as peat, ash, charcoal, wood, metal, or ceramic) will not be used as fill.

All fill material will be placed in maximum 200mm thick layers and compacted at optimum moisture content (+ or - 2%) to achieve a dry density determined in accordance with AS1289.5.1.1 - 2003 - methods of testing soils for engineering purposes of not less than the following standard minimum dry density:

Location	Standard Dry Density
Under building slabs	98%
Vehicle paved services	100%
Non-vehicle paved surfaces	98%
Landscaped areas	95%

The contractor will program the earthworks operation so that the working areas are adequately drained during the period of construction. The surface shall be graded and sealed off to remove depressions, roller marks and similar which would allow water to pond and penetrate the underlying material. Any damage resulting from the contractor not observing these requirements will be rectified by the contractor at their own expense.

With regard to backfilling at structures, including retaining walls, no filling will be placed against any concrete structure within fourteen days of placement of concrete.

Struts are to be provided to all walls as necessary to prevent movement during placing and compaction. Unless otherwise detailed, the backfilling at structures will be as follows:

- Laterally within 900mm of any concrete structure - fill and compact with 2% cement stabilised DGB 20 granular material.

- Vertically within 300mm of any concrete structure - fill and compact with DGB20 granular material.

All earthworks carried out will comply with the requirements of all current Australian and industry accepted Standards to the extent that they are relevant.

A Testing Authority will be employed to carry out all testing. Compaction control testing will be carried out to conform to Level 1 testing as defined in the current Australian Standard AS3798. The Authority will hold a current NATA (National Association of Testing Authorities) Registration for the relevant tests.

2.4.2 Soil and Water Management

Prior to any earthworks commencing on the Site, erosion and sediment control measures will be put in place generally in accordance with *Managing Urban Stormwater: Soils and Construction 4th Edition, March 2004*. These measures include:

- Installation of a 1.8m high chain wire fence covered with geo-textile filter fabric, to the perimeter of the work site area, where required.

- The use of sediment diverting methods to minimise sediment in Council's stormwater drainage using sandbags around kerb inlet pits and geo-textile filter fabric around drop inlet pits.

- The provision of a sediment basin towards the lower perimeter of the Site to which stormwater runoff will be channelled and treated during construction. It is possible that an existing pond in the northwest corner may be utilised and converted for this purpose depending on its current capacity.

- Construct temporary site entrance with shaker grid.

The proposed capacity of the sediment control basin is based on a 5 day 85th percentile rainfall event of 32.2 mm (Table 6.3a of Managing Urban Stormwater: Soils and Construction). In accordance with the management requirements, the basin will be emptied within 5 days of the end of a storm as long as sufficient settlement has occurred. If necessary, a flocculant may be used to accelerate the settlement process.

Erosion and sediment controls measures to be employed are detailed further in the Engineering plans of the proposed development at **Appendix 17**.

2.4.3 Access and Circulation

The existing access to the Site is from Frank Street.

Forty one (41) car parking spaces are to be provided in two (2) dedicated car parking areas.

Trucks delivering raw materials to the Site and delivering processed materials from the Site would be garaged off site.

An internal road would be constructed to facilitate the delivery of raw materials to the Site and the transport of processed materials from the Site. A perimeter road for access for firefighting purposes would also be provided.

2.5 Project Operation

The siting of the components of the proposed development have been designed to meet the operational requirements of ResourceCo. Site layout plans and engineering plans have been prepared by Bell Architecture and Mott MacDonald, reduced copies of which are at **Appendix 7** (Architectural Plans) and **Appendix 17** (Engineering Plans).

Extracts from the Architectural plans showing the general layout of the proposed facility are at **Figures 2-1 to 2-3** below.

It is estimated that approximately 8 months would be required to complete all construction work and landscaping on the Site.

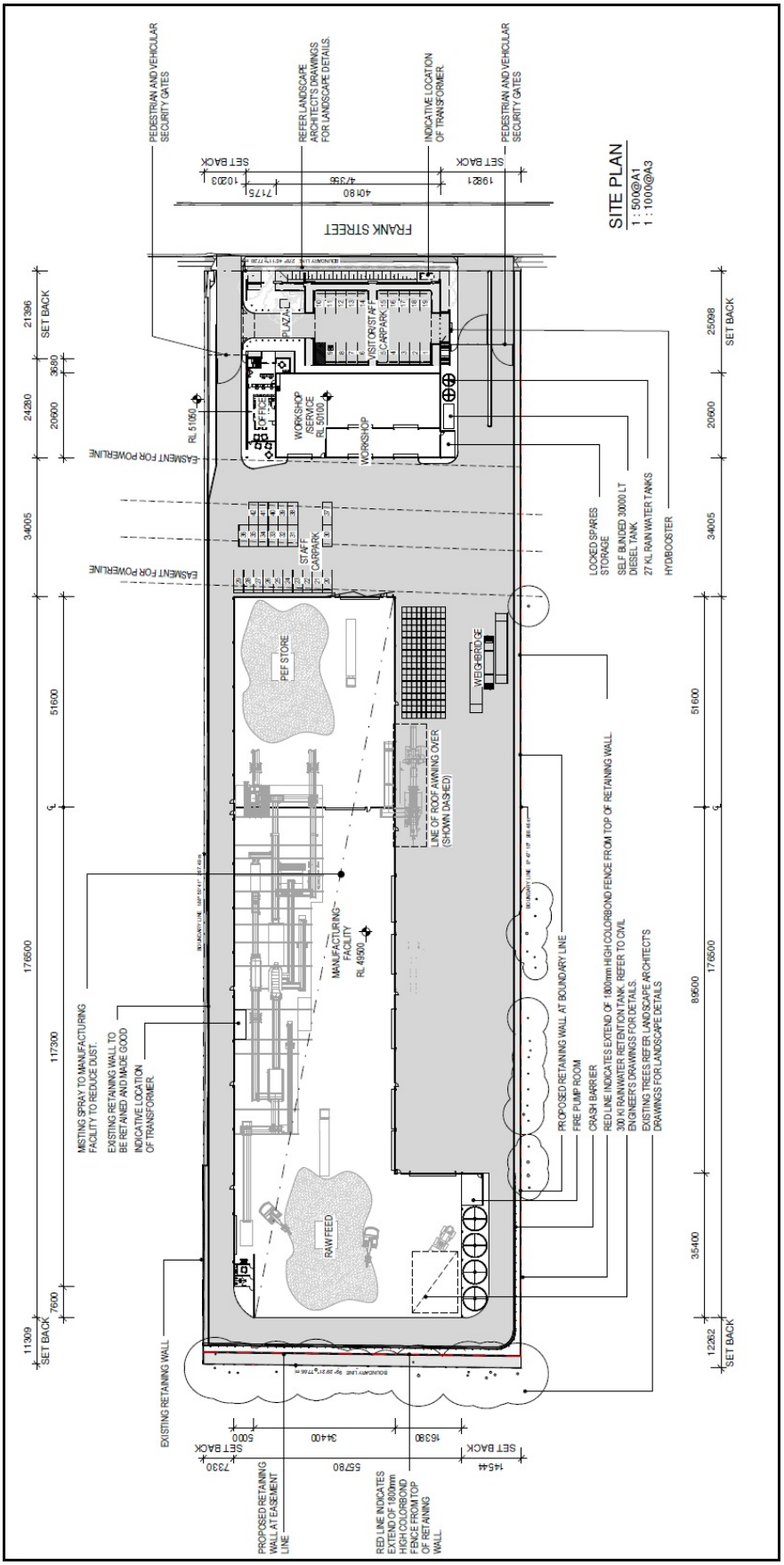


Figure 2-1: Overall site layout plan.

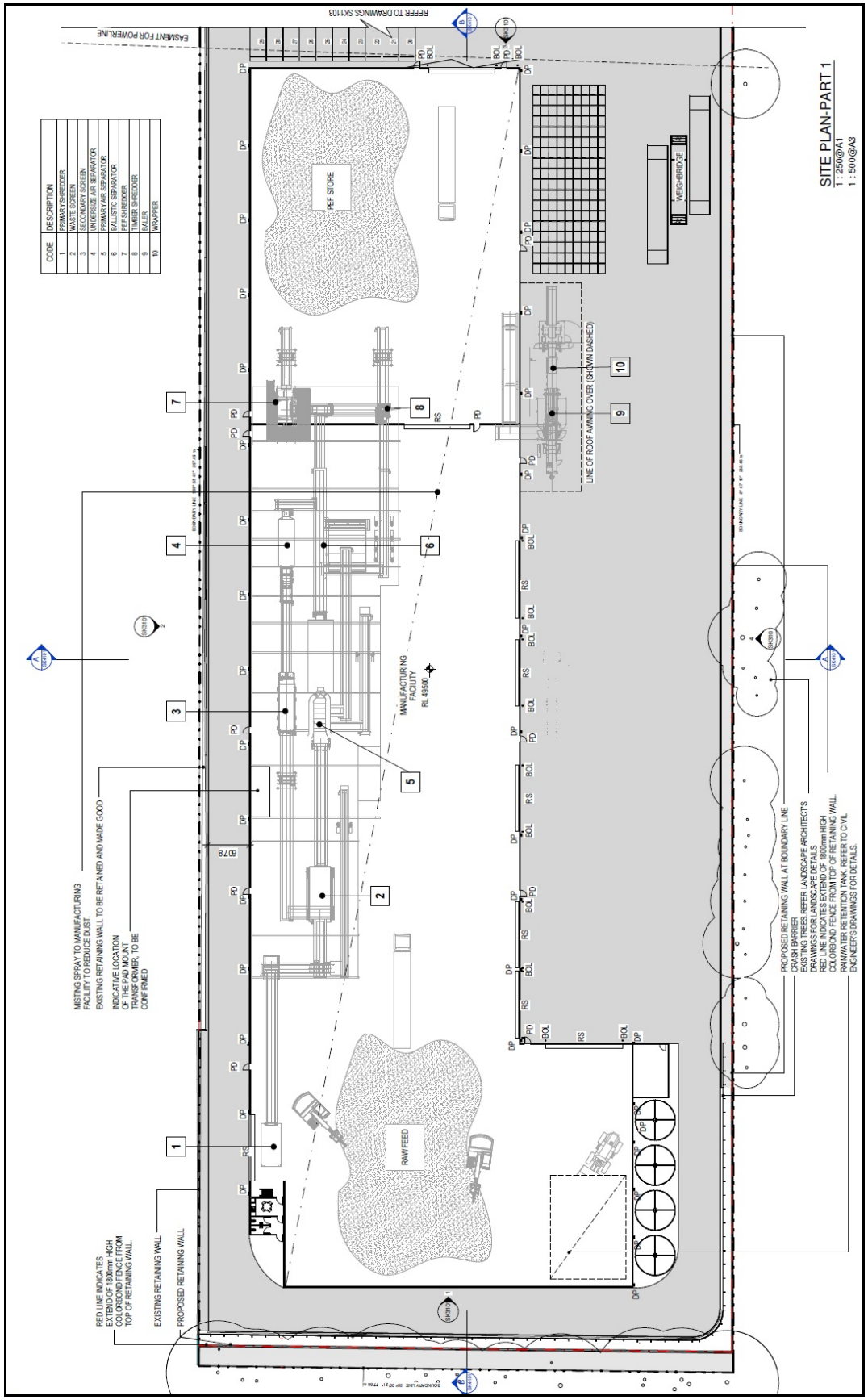


Figure 2-2: Plan showing the rear section of the proposed facility.

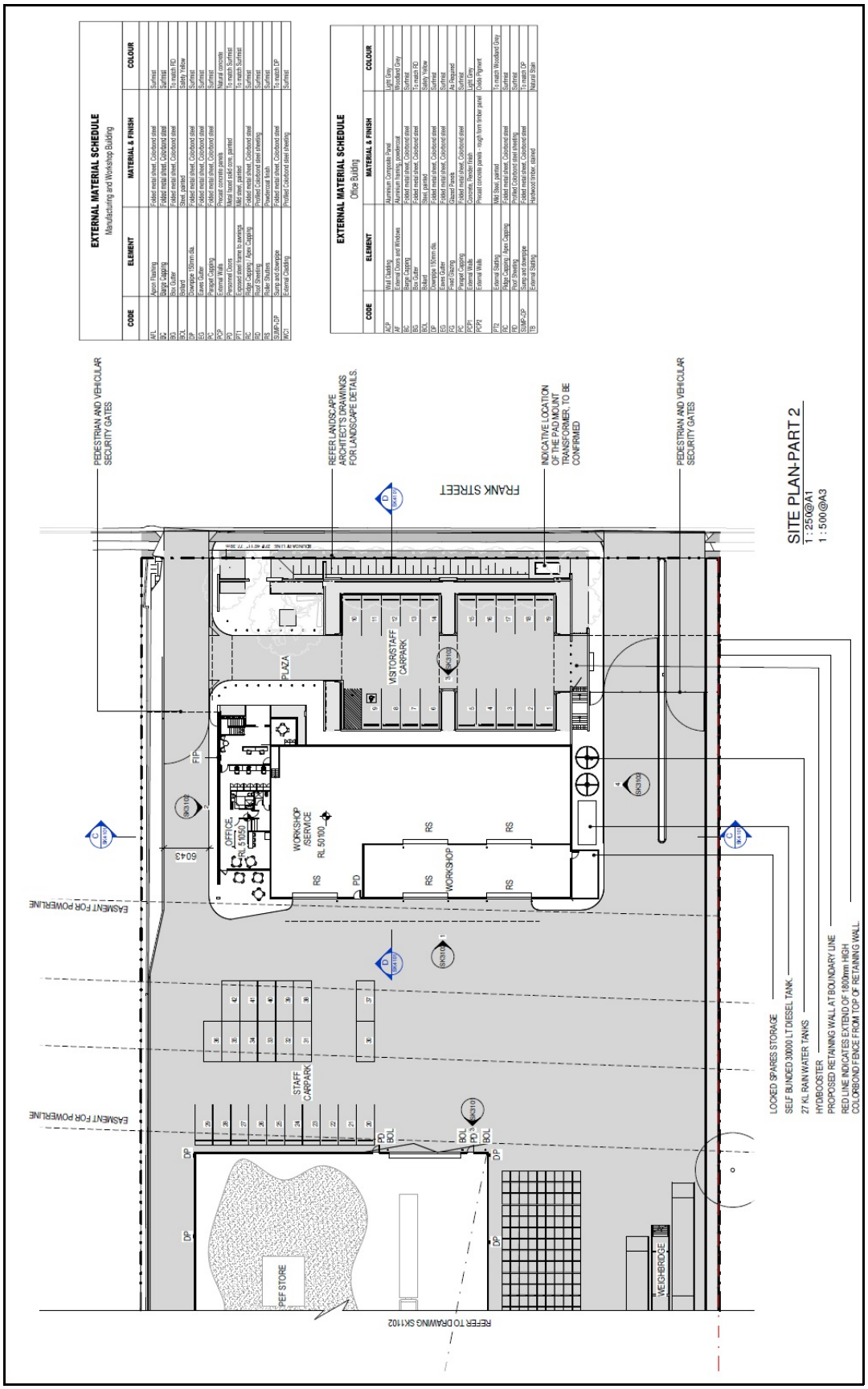


Figure 2-3: Plan showing the front section of the proposed facility.

Plant, equipment and structures which are required to operate the proposed Waste and Resource Management Facility are described below and should be referenced to the plans of the proposed development (**Appendix 7**), and in particular, **Figure 2-1** above which shows the location of all of the equipment described below. A schematic diagram of a similar facility in Adelaide is provided as **Appendix 6**.

2.5.1 Primary Shredder

The primary shredder cuts and sizes the raw material into an approximate 300mm size and drops the shredded material onto a collection conveyor situated below the machine. **Photograph 3-1** shows the cutting table of the primary shredder.

The primary shredder has an automatic reverse function if material which cannot be shredded enters the shredder.

A large hopper is fitted to the top of the shredder to receive the material taken from the raw material stockpile by either the front end loader or excavator.

Bi-directional shredding results in a consistent flow of shredded material onto downstream conveyors and ensures a homogenous and consistent product flow through to the rest of the plant.

The primary shredder is designed to allow fines to run through the cutting table with the minimal wear on the rotating parts and is extremely versatile on a wide range of materials.

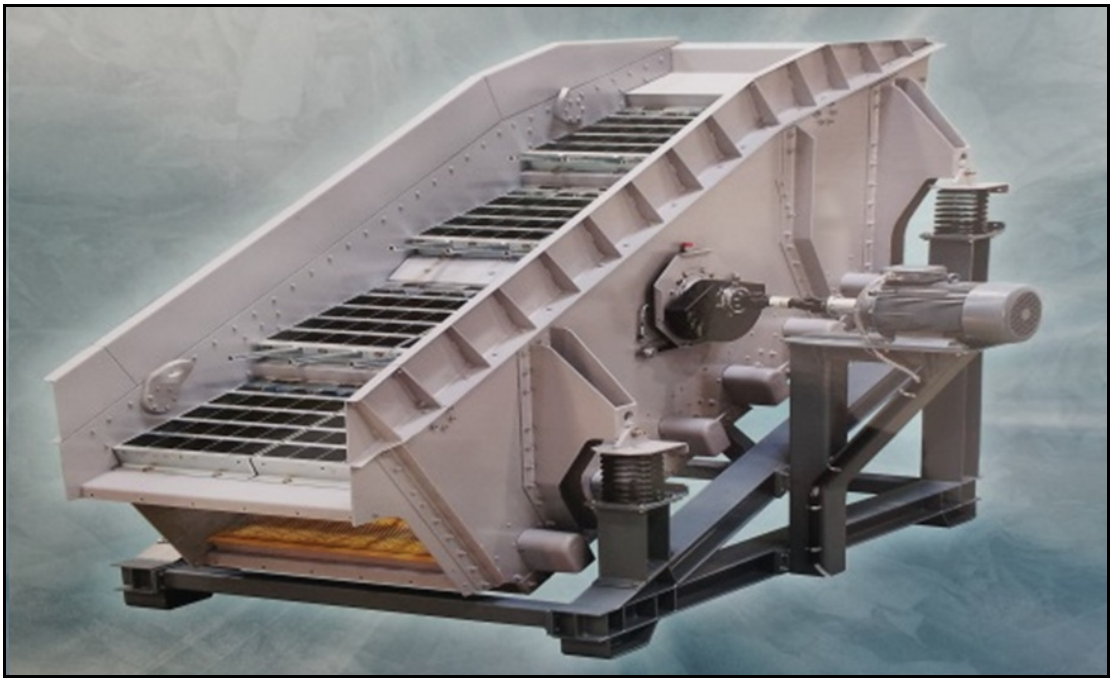
Photograph 2-1: Primary shredder cutting table.

2.5.2 Waste Screen

The waste screen (**Photograph 2-1**) is a vibrating screen with a circular motion which is driven by a three-phase AC motor.

The heavy sub-frame compensates the dynamic vibrations of the screen. Removable covers will be placed over the screen to reduce any dust emissions from the screen.

The primary shredded material vibrates over the waste screen which separates the smaller fraction (or "fines") from the material stream. The fines fraction is then processed on a different line in the plant to the larger size fraction.



Photograph 2-2: Waste Screen.

2.5.3 Flip Flop Screen

The flip flop screen (refer **Photograph 2-3**) is used to screen the fines into large and small sized fractions.

Widely used in the recycling industry, flip-flop screens are manufactured with polyurethane dynamic screening mats, which are contracted and expanded throughout the vibration screening process.

The small fraction is discharged into a designated holding bay for dispatching from the plant, while the larger fraction is conveyed into a single drum separator for further cleaning.

The removable covers are placed over the screen to prevent dust egress from the screen but allow for easy access during maintenance.

Photograph 2-3: Flip flop screen.

2.5.4 Single Drum Separator

The single drum separator (refer **Photograph 2-4**) separates the waste input into heavy and light fractions. The single drum separator is a very versatile separator which processes a large variety of waste streams.

The single drum separator has one splitter drum, at which the heavy material is separated from the light material.

The heavy fraction falls down in front of the splitter drum and is discharged by means of a conveyor, while the light fraction is transported over the splitter drum and will be separated from the air in the expansion room.

The air that is extracted from the expansion room is re-circulated through the fan and reused. 10% of this air is bled of and passed through a dust filter. The capacity to adjust the volume of air going to the dust filter allows the easy adjustment of the separation parameters.

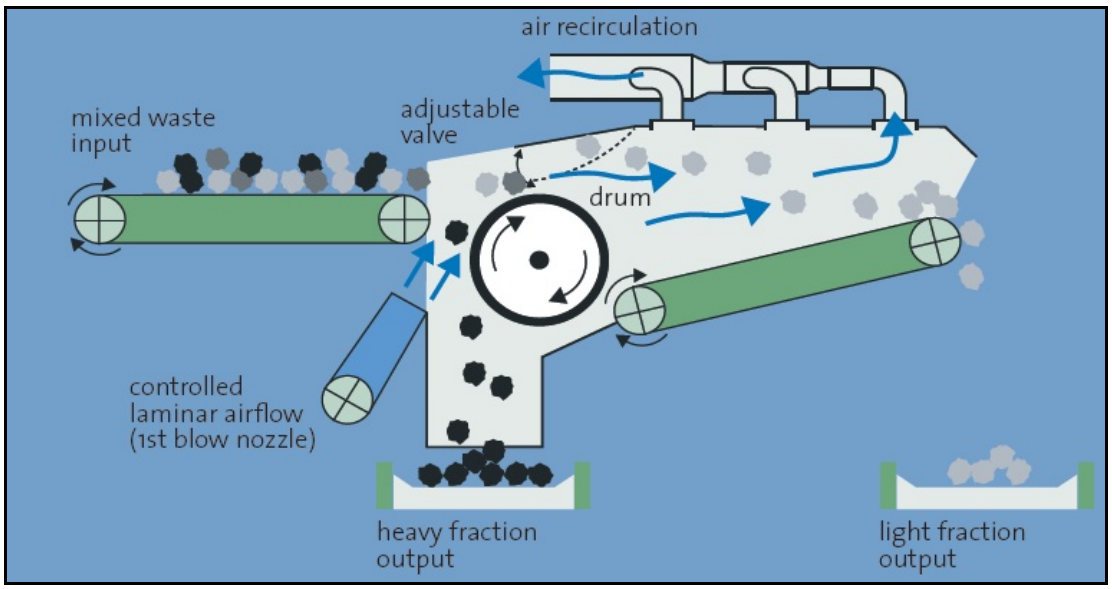
2.5.5 Double Drum Separator

The operating principles of the double drum separator (refer **Photograph 2-5**) are almost the same as the single drum separator but the machine goes one step further and separates

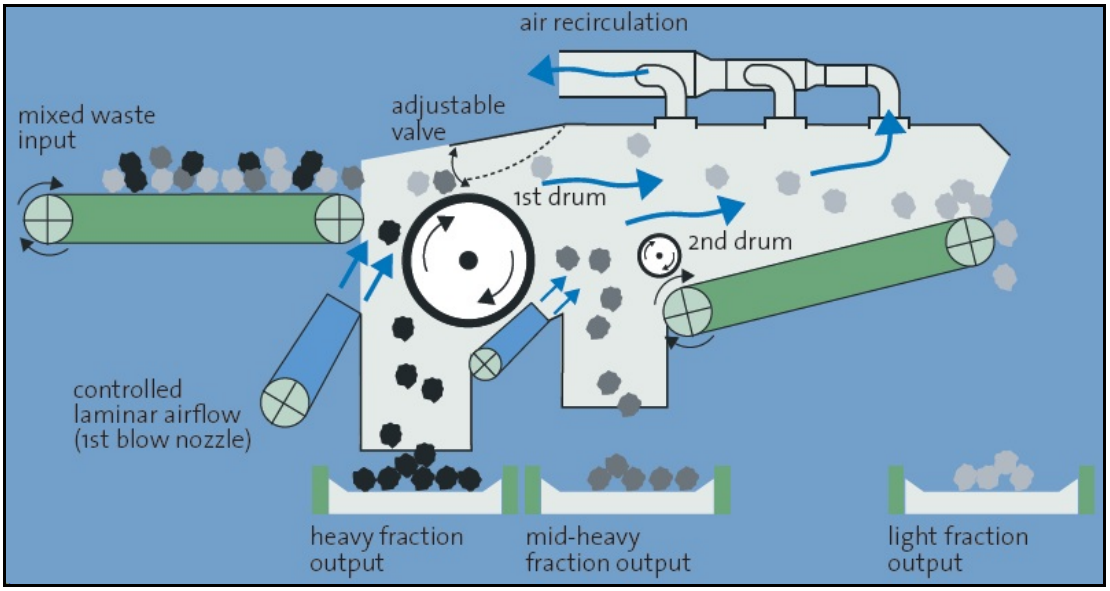
the material into heavy, mid heavy and light products. This is very useful in the case where the heavy fraction would consist mainly of aggregates, the mid heavy fraction consists of mainly timber, while the light fraction is the core feedstock for the high speed PEF secondary shredder.

Due to the sensitivity of the secondary shredders to damage from foreign parts such as tramp iron, the double drum separator also offers protection as any heavy parts which would damage the secondary shredder drops out in the heavy fraction.

The quality of separation can be adjusted by controlling the airflow to the dust filter on both blow nozzles. Dust is contained within the system through its inherent filtration design.



Photograph 2-4: Single drum separator.



Photograph 2-5: Double drum separator.

2.5.6 Ballistic Separator

The ballistic separator is used to improve the quality of the mid heavy fraction from the double drum separator. This fraction consists mainly of timber but it can be contaminated with textiles, footwear etc. The ballistic separator separates the 2 dimensional and fines fractions from the 3 dimensional fraction. It is important to target the fines in order to eliminate any additional wear on the timber shredder.

The 3D timber is refined in this process to reduce the workload on the labour employed to do the final quality control on the timber. The fines fall through the perforated paddles and are conveyed to the designated storage bay.

The screen is covered by a removable dust cover to prevent dust egress.

2.5.7 Secondary PEF Shredder

The secondary shredder cuts the PEF materials into the final size ready for baling. It is a high speed and precise cutting machine which, by its nature, contains the dust created through the cutting process.

2.5.8 Timber Shredder

The timber shredder is designed to cut to the final size tough to grind materials like cedar, Black Spruce and log ends. It is an enclosed hammer mill machine which, as per the PEF shredder, ensures that dust generated through this process is contained within the machine. It is more tolerant of rocks and metal and is, therefore, appropriate to do the final sizing of the more robust PEF fraction at the end of the process. This final sized material is then ready for baling.

2.5.9 Baler

The baler (refer **Photograph 2-6**) is a horizontal shear baler with a standard bale size of 1100 mm (H) x 1100 mm (W) x variable length, and is designed for bales to be loaded into containers.

The typical bale weight is approximately 1 tonne each depending on the bulk and density of the material.

The tying medium used to bind the bale is plastic twine which can also be recovered as fuel when the bales are unwrapped at their destination.

Photograph 2-6: Baler.

2.5.10 Wrapper

The wrapper (refer **Photograph 2-7**) encapsulates the baled PEF in a plastic film to ensure the bales are fully sealed and weather proof. The turntable manoeuvres the bale into position while the wrapper arms apply the film wrap to the bale.

Each bale takes approximately 30 seconds to 1 minute to wrap depending on the bale length.

When wrapped, the bales are ready for loading into containers for shipping to the customer.

Photograph 2-7: Wrapper.

2.5.11 Workshop

A workshop is to be erected at the front of the Site. A smaller workshop will also be incorporated in the workshop facility. The workshop will be utilised to service and maintain the mobile and fixed equipment used in the processing facility.

2.5.12 Office

The main office complex is located at the Frank Street frontage of the Site. The main office would be used by the administration staff of the facility. The office complex is larger than required to accommodate the staff required for initial operation of the facility, however, a larger office has been designed to accommodate any future relocation of staff to the Site from the ResourceCo head office.

A secondary office/amenities complex is located within the main processing building which would house the operating staff and provide for their amenities.

2.5.13 Staff Amenities

A kitchen, lunchroom and staff amenities would form part of the ground floor section of the main office complex.

Additional staff amenities would be located in the second office complex in the main processing building.

2.5.14 Weighbridge

Weighbridge facilities would be established at the truck entrance and exit of the Site as shown on the site layout plan. One (1) weighbridge would be used for incoming vehicles and the other would be used for outgoing vehicles.

2.5.15 Additional Facilities and Equipment

In addition to the components discussed above, the use of the Site as a Waste and Resource Management Facility would require the use of a number of related components. The key additional elements of the proposal are as follows:

- Bobcat x 1

- Excavators x 3
- Front end loaders x 2
- Sweeper x 1
- Forklift x 2
- 1 x 30,000 litre capacity diesel fuel tank. The fuel tank cluster would be self bunded and fully baffled in accordance with relevant Australian Standards. An example of the self bunded facility is provided as **Figure 2-4** below.
- Car park for 41 vehicles.
- A 300 k/L underground stormwater storage tank and 2 above ground tanks with combined capacity of 27 k/L for use in the process and staff amenities.

Figure 2-4: Example of a self bunded fuel tank similar to that which would be used on the Site.

2.6 Hours of Operation

The proposed development would operate 250 week days per annum and 52 Saturdays per annum as follows:

Component	Hours of Operation
Hours of operation (Plant production)	Plant will operate in 2 shifts from 5:00 am to 10:30 pm Monday to Friday 6:00 am to 5:00 pm Saturday 8:00 am to 6:00 pm Sunday as required
Hours of operation (waste received)	5:00 am to 5:00 pm Monday to Saturday 7:00 am to 4:00 pm Sunday
Plant maintenance	10:30 pm to 5:00 am Monday to Friday As required Saturday and Sunday
Public access for waste delivery	Saturday and Sunday only. Generally car and trailer.

2.7 Employees

There would be forty (40) employees comprising:

General Manager	1
Sales	1
Supervisor	2
Lead fitter	1
Mechanic	2
Plant operator day/night	2
Picker day/night	14
Loader operator day/night	4
Excavator operator day/night	4
Forklift operator day/night	4
Bobcat operator day/night	2
Cleaner day shift	1
Weighbridge operator	1
Administration	1
Total	**40**

Not all employees would be on the Site and any one time.

The plant has been designed to cater for the number of employees (40) needed to operate both the facility and the administration associated with that activity. ResourceCo has advised that, at some time in the future, additional administration staff may be required at the Site, however, that would only occur if ResourceCo chooses to relocate some or all of its headquarters staff to the Site. The assessment in this Environmental Impact Statement has been undertaken on the assumption that additional staff will be located to the Site in the future.

2.8 Traffic Generation

At full capacity, the estimated number of truck movements per day is 404 with 118 light vehicle movement per weekday between 4:30 am and 10:30 pm. Variations would occur depending on the day to day movements of trucks based upon an average load of 21.2 tonnes and 292 working days per annum.

Estimated daily weekday truck movements are as shown in **Table 2-1**.

Table 2-1: Daily estimated truck movements

Product	In	Out
Raw waste materials	146 loaded	146 empty
Processed PEF from site	25 empty	25 loaded
Other processed materials	25 empty	25 loaded
Residual waste to landfill	6 empty	6 loaded
Total	**202**	**202**

The estimated daily weekday car movements are show in **Table 2-2**.

Table 2-2: Daily estimated car movements

Staff	In	Out
Workshop	37	37
Office	5	5
Sub total	**42**	**42**
Future office staff	17	17
Total	**59**	**59**

Raw materials would be delivered to the Site by car and box trailer on Saturday and Sunday from 8:00 am to 4:00 pm and by tipper truck between 8:00 am and 4:00 pm on Saturdays.

The estimated weekend movement are show in **Table 2-3**.

Table 2-3: Daily estimated weekend movements

Product	In	Out
Raw materials (truck)	102 loaded	102 empty
Raw materials (car/trailer)	50 loaded	50 empty
Staff vehicles	11	11

2.8.1 Plant Output

Traffic generation from the proposed development has been established in consultation with ResourceCo Management.

Section 3.4 of the Marshall Report (**Appendix 13**) outlines the traffic movements expected from the proposed development. A copy of the data from the Marshall Report is presented below.

PRODUCT	OPERATION DAYS/YEAR	TONNES PER YEAR	TONNES PER DAY	AVERAGE LOAD
RAW MATERIALS IN	250 + 50 (SAT) x 7	250,000	877.2 (900)	6 TONNES

Truck Movements

		IN LOADED	OUT EMPTY	HOURS
TIPPERS	WEEKDAYS	146	146	6am – 5pm
	SAT	102	102	8am – 4pm

PRODUCT	OPERATION DAYS/YEAR	TONNES PER YEAR	TONNES PER DAY	AVERAGE LOAD
PROCESSED PEF				
LOCAL MARKET	250	45,000	160	32 TONNES
EXPORT	250	65,000	240	30 TONNES
	TOTAL	110,000	400	

Truck Movements

		IN LOADED	OUT EMPTY	HOURS
SEMIS & BD	WEEKDAYS	25	25	6am – 10pm

PRODUCT	OPERATION DAYS/YEAR	TONNES PER YEAR	TONNES PER DAY	AVERAGE LOAD
RESIDUAL WASTE TO LANDFILL	250	25,000	100	16 TONNES

Truck Movements

		IN LOADED	OUT EMPTY	HOURS
TIPPERS	WEEKDAYS	6	6	6am – 5pm

2.8.2 Travel Modes to the Site

The travel modes to Travel Zone 3503 have been processed from the 2011 Census by NSW Bureau of Transport Statistics and downloaded from the JTW Explorer website.

The percentage of car drivers was 87.36%. It is estimated that the car driver travel mode in the night shift will be 100%.

The 4922 vehicle driver employers to TZ 3503 have their origins in 17 suburbs/LGAs. The routes to and from work at the Site in Frank Street have been assessed based upon the most convenient and shortest route. Details are provided in Section 3.5 of the Marshall Report.

2.8.3 Distribution of Vehicles to Main Road System

The distribution of truck movements to and from the Site is an estimate based upon the likely origins of waste materials to the Site and the destinations of processed materials from the Site. The estimated daily movements on the road network within the Wetherill Park area are shown in Figure 4A of the Marshall Report, an extract from which is at **Figure 2-5**.

The distribution of employee car driver movements to the road network is based upon the 2011 JTW data as described in Section 3.5 of the Marshall report. The estimated daily movements are shown in Figure 4B of the Marshall Report, an extract from which is at **Figure 2-6**.

The daily movements on Saturday comprise trucks carrying raw waste materials to and from the Site, cars and car/tailers carrying raw waste materials to and from the Site and staff car drivers travelling to work to and from the Site. The increase in daily vehicle volumes and existing daily volumes are much lower on weekends. The increases in daily traffic volumes generated by the proposed development are shown in the Tables in Appendix A of the Marshall Report.

The existing commuter peak hours are 7:30 – 8:30 am and 4:00 – 5:00 pm. The estimated increase in car and truck volumes in the am and pm peak hours are shown in Figures 4C and 4D respectively of the Marshall report, extracts from which are at **Figure 2-7** and **Figure 2-8**. These are average volumes which will vary from day to day.

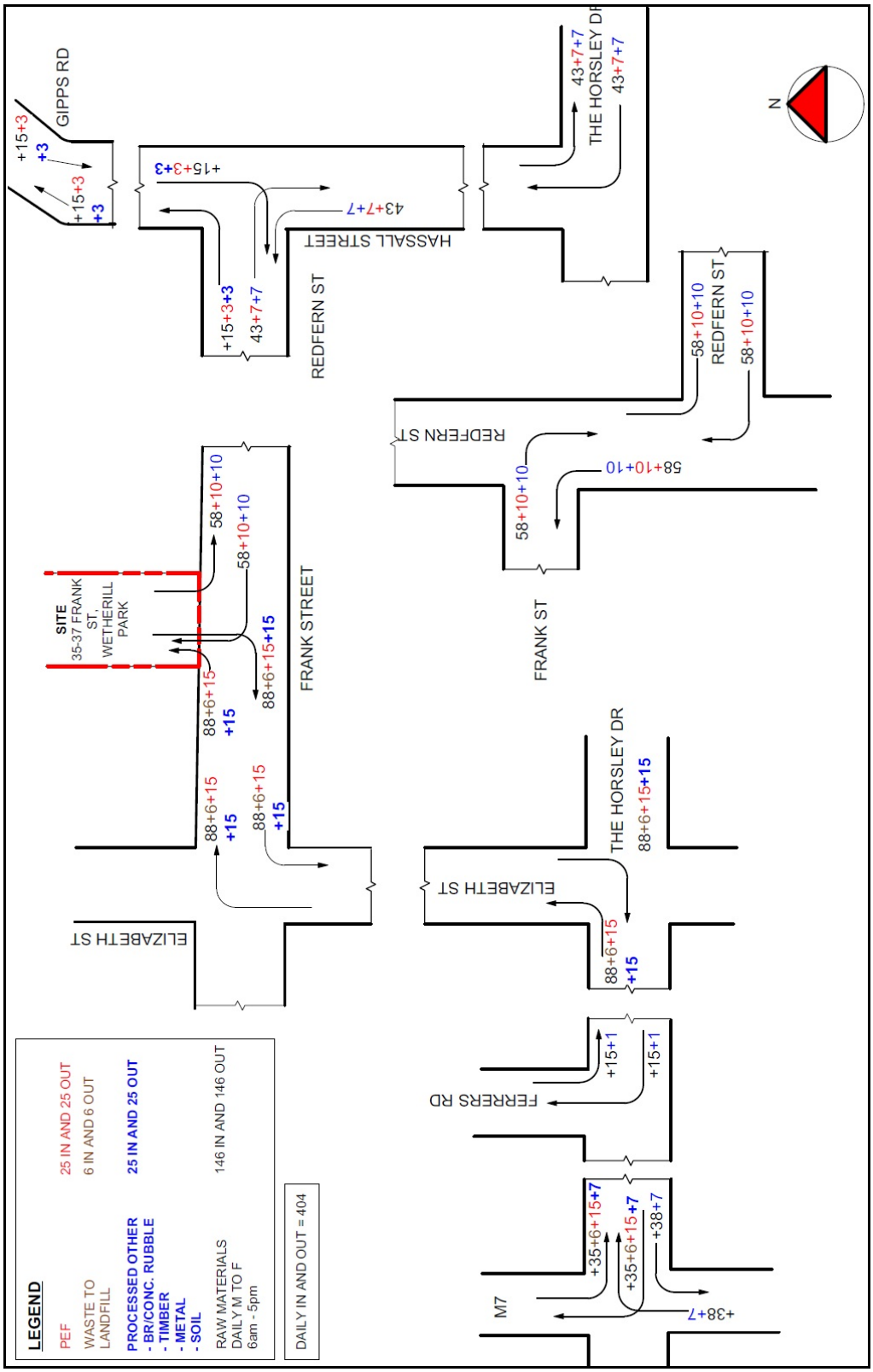


Figure 2-5: Daily increase in truck volumes - weekdays.

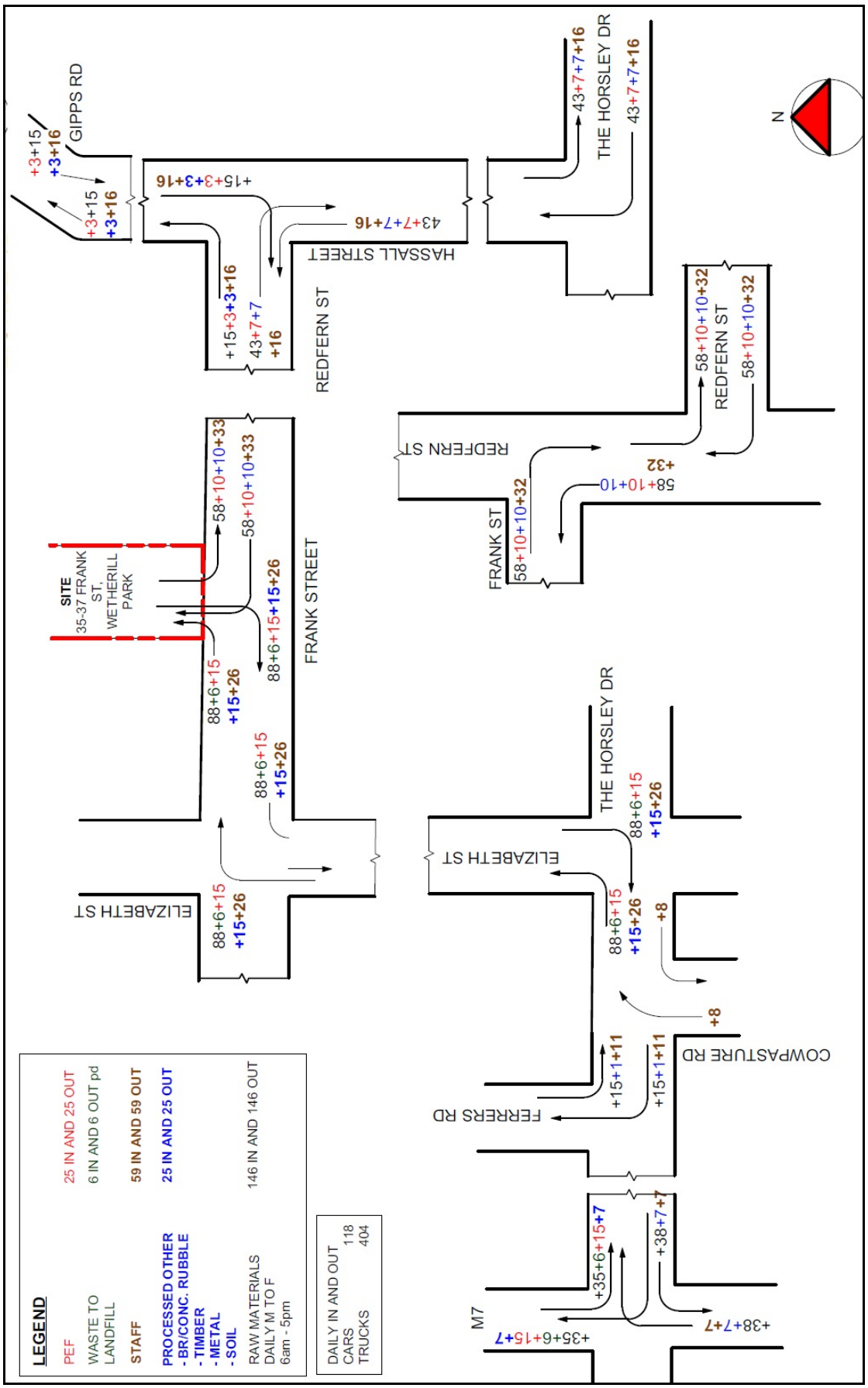


Figure 2-6: Daily increase in truck traffic volumes plus staff vehicles - weekdays.

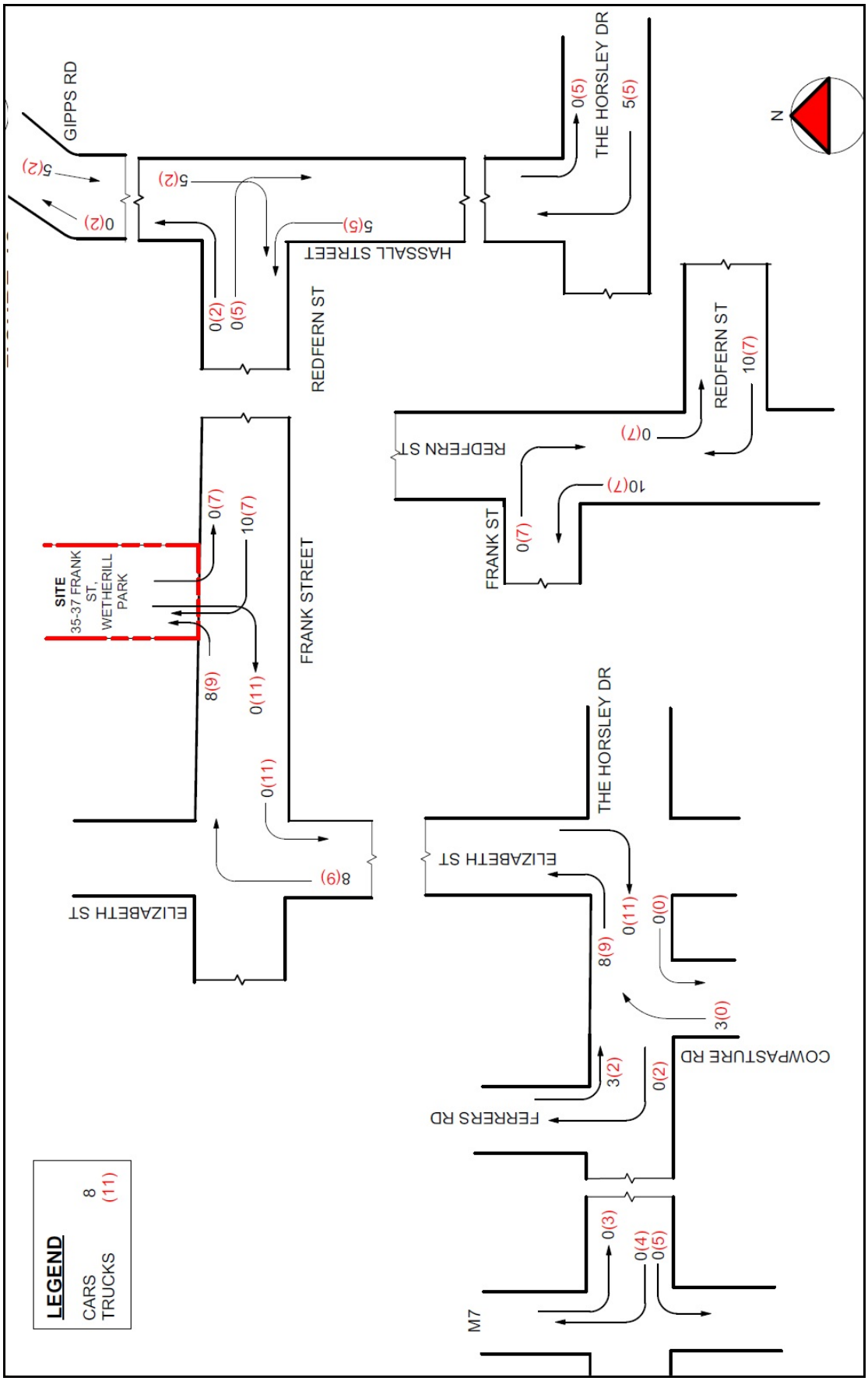


Figure 2-7: Increase in peak hour volumes 7:30 am - 8:30 am - weekdays

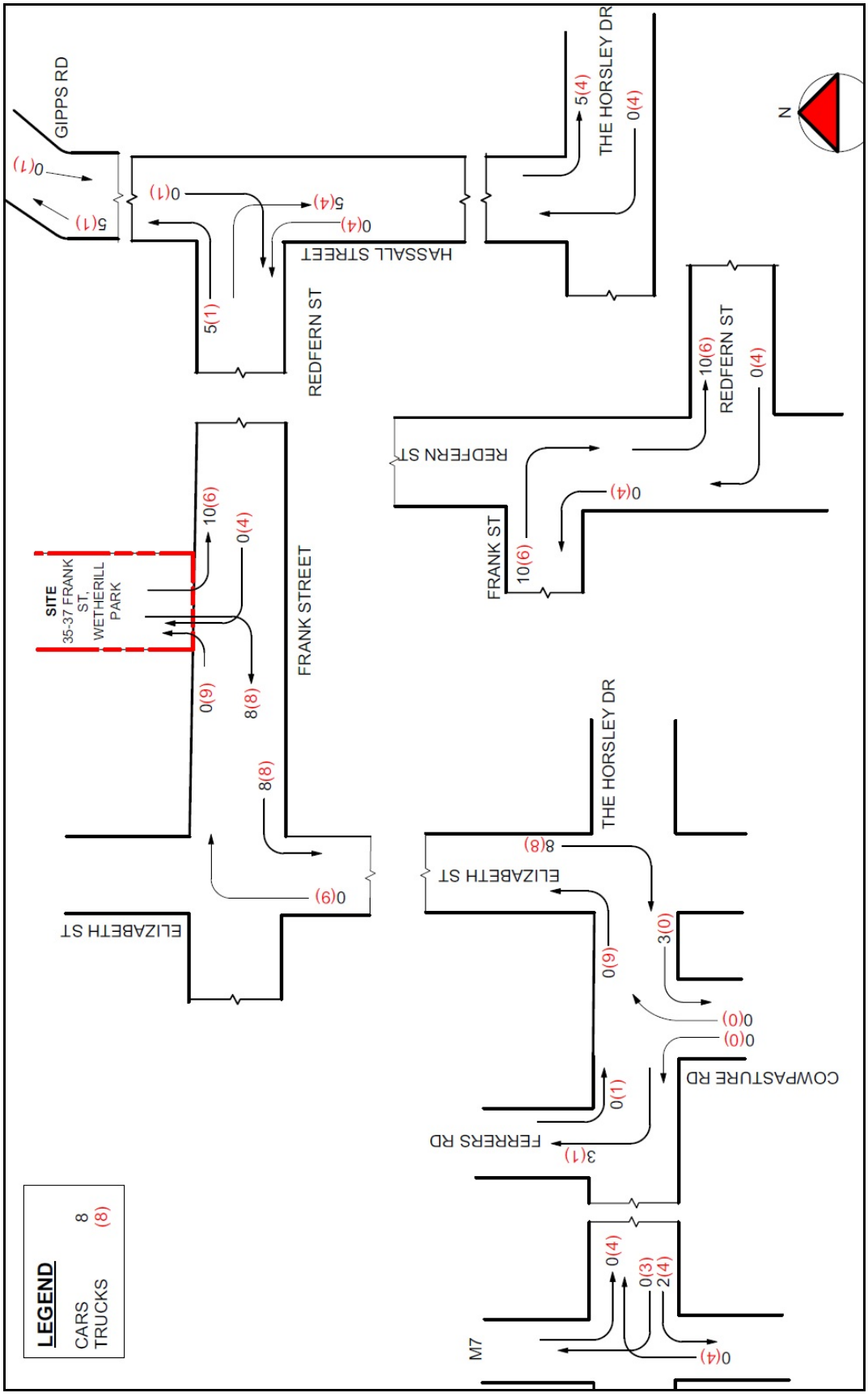


Figure 2-8 Increase in peak hour volumes 4:00 pm - 5:00 pm - weekdays

2.9 Vehicle Access to the Site

The existing vehicular crossings in Frank Street are to be retained. These crossings were constructed for the previous use of the site by Sims Metal and are shown on the Survey plan prepared by William L Backhouse Pty Ltd.

All trucks are proposed to enter and exit using the western vehicular crossing. This crossing will be widened to 13.5 metres.

The existing crossing on the eastern side of the Site is to be used by staff and visitor vehicles only for entry and exit.

Internal Circulation

A 6 metre wide carriageway is to be provided around the perimeter of the manufacturing building for emergency NSW Fire Brigade aerial appliances. These vehicles are to enter and exit via the western crossing and travel in a clockwise direction.

All vehicles delivering waste materials for recycling will enter from the western crossing, travel over the weighbridge, and unload at the northern raw feed stockpile and travel in a clockwise direction to the weighbridge and exit crossing.

Empty B Doubles and other trucks used to transport processed PEF from the Site enter from the western crossing, travel in an anti-clockwise direction to the PEF stockpile, load and travel to the weighbridge, and then the exit.

2.10 Fire Control

The Site is serviced by reticulated mains water supplies.

Fire control facilities on the Site would be provided to meet the requirements of the Building Code of Australia as detailed in **Part 12** and **Appendix 8** of this Environmental Impact Statement.

2.11 Water Requirements

2.11.1 Water Volume and Balance

The primary mechanism for stormwater pollution control would be by means of the capture and re-use of stormwater runoff from the Site. A water balance model (refer **Appendix 9** and **Part 9** of this Environmental Impact Statement) has been prepared to assess what portion of the Site water requirements can be met from onsite runoff and to

quantify the volume and frequency of overflow discharge.

2.12 Waste

Little waste is generated in the operation of the proposed development. The proposed development has been designed such that the vast majority of materials delivered to the Site are recycled. Approximately 10% of the material delivered to the Site is material which cannot be recycled and that waste will be transported to landfill.

2.13 Infrastructure Services

All services are currently available to the Site.

2.14 Approvals Required

Section 43 of the *Protection of the Environmental Operations Act 1997* (**POEO Act**) requires an Environment Protection Licence to be obtained for the carrying out of *scheduled development works* which would enable a *scheduled activity* to be carried out.

Schedule 1 of the POEO Act defines the following scheduled activities for which an Environment Protection Licence is required:

34 Resource recovery

(1) This clause applies to the following activities:

***recovery of general waste**, meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing, otherwise than for the recovery of energy.*

....

(2) However, this clause does not apply to any of the following:

(a) materials separation and sorting of less than 60 tonnes per year of waste lead acid batteries,

(b) the treatment of sewage within a sewage treatment system (whether or not that system is licensed),

(c) the recovery of stormwater.

(3) Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if:

(a) it meets the criteria set out in Column 2 of that Table, and

(b) either:

(i) less than 50% by weight of the waste received in any year requires disposal after processing, or

(ii) the regulations under section 286 exempt the person carrying out the activity from the requirements of section 48 (2) as they apply to waste disposal (application to land), waste disposal (thermal treatment), waste processing (non-thermal treatment) and waste storage.

Table

Column 1	***Column 2***
Activity	***Criteria***
Recovery of general waste	*involves having on site at any time more than 2,500 tonnes or 2,500 cubic metres, whichever is the lesser, of waste* *involves processing more than 120 tonnes of waste per day or 30,000 tonnes of waste per year*

The proposed project would fall within the above category of Resource Recovery and, as such, an Environment Protection Licence is required to operate the proposed activity.

Part Three

STATUTORY PLANNING CONTROLS

3.1 Commonwealth Legislation

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) came into force from 16 July 2000. The EPBC Act requires actions which are likely to have a significant impact on matters of National Environmental Significance, or which have a significant impact on Commonwealth land, to be referred to the Commonwealth Minister for the Environment for approval.

The Site is not listed as a national heritage place and the proposed development would not impact on any national heritage places.

The proposed development would not impact on any threatened species and communities.

No National Environmental Significance matters would be impacted by the proposed development. As such, the proposed development has not been referred to the Commonwealth Minister for the Environment and approval pursuant to the EPBC Act is not required.

3.2 NSW Protection of the Environment Operations Act 1997

Section 43 of the *Protection of the Environmental Operations Act 1997* (**POEO Act**) requires an Environment Protection Licence to be obtained for the carrying out of *scheduled development works* which would enable a *scheduled activity* to be carried out.

Schedule 1 of the POEO Act defines the following scheduled activities for which an Environment Protection Licence is required:

> ***34 Resource recovery***
>
> *(1) This clause applies to the following activities:*
>
> ***recovery of general waste**, meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste or special waste) from off site and its processing, otherwise than for the recovery of energy.*
>
> *....*
>
> *(2) However, this clause does not apply to any of the following:*

(a) materials separation and sorting of less than 60 tonnes per year of waste lead acid batteries,

(b) the treatment of sewage within a sewage treatment system (whether or not that system is licensed),

(c) the recovery of stormwater.

(3) Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if:

(a) it meets the criteria set out in Column 2 of that Table, and

(b) either:

(i) less than 50% by weight of the waste received in any year requires disposal after processing, or

(ii) the regulations under section 286 exempt the person carrying out the activity from the requirements of section 48 (2) as they apply to waste disposal (application to land), waste disposal (thermal treatment), waste processing (non-thermal treatment) and waste storage.

Table

Column 1	***Column 2***
Activity	***Criteria***
Recovery of general waste	*involves having on site at any time more than 2,500 tonnes or 2,500 cubic metres, whichever is the lesser, of waste*
	involves processing more than 120 tonnes of waste per day or 30,000 tonnes of waste per year
....	....

The proposed development would fall within the above category of Resource Recovery and, as such, an Environment Protection Licence is required to operate the proposed activity.

3.3 State Environmental Planning Legislation

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

Sub-section 8(1) of State Environmental Planning Policy (State and Regional Development) 2011 states:

> *(1) Development is declared to be State significant development for the purposes of the 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.*

As stated in **Part 1.4** of this Environmental Impact Statement, the proposed development is for the purpose of resource recovery or recycling facility which handles more than 100,000 tonnes per year of waste. As such, the proposed development is State Significant Development.

Sub-clause 11(1) of the Policy states:

> ***11 Exclusion of application of development control plans***
>
> *Development control plans (whether made before or after the commencement of this Policy) do not apply to:*
>
> *(a) State significant development, or*
>
> *(b) development for which a relevant council is the consent authority under section 89D (2) of the Act.*

3.3.2 State Environmental Planning Policy No.33 - Hazardous and Offensive Development.

State Environmental Planning Policy No.33 - Hazardous and Offensive Development (**SEPP 33**) aims, among other things:

> *(d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account; and*
>
> *(e) to ensure that in considering any application to carry out potentially*

hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.

The proposed development is not a *Hazardous Industry*, *Potentially Hazardous Industry* or *Hazardous Storage Establishment* as defined in SEPP 33 as it would not pose a significant risk in relation to the locality to human health, life or property, or to the biophysical environment.

The proposed development is, however, *Potentially Offensive Industry*.

When determining an application for Potentially Offensive Industry, the consent authority must, pursuant to clause 13 of SEPP 33, consider:

(a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development; and

(b) whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply; and

(c) ....., and

(d) any feasible alternatives to the carrying out of the development, and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location of the subject application); and

(e) any likely future use of the land surrounding the development.

With regard to current circulars and guidelines, the then Department of Planning has prepared Circular B27 and the 1994 publication *Applying SEPP 33 Hazardous and Offensive Development Application Guidelines*. A Consultation Draft of an amending set of Guidelines was prepared in 2008.

With regard to *Potentially Offensive Industry*, the 1994 Guidelines, at pages 13 & 14, give guidance with regard to the information which should be provided with a Development Application. Those requirements were reiterated in the draft 2008 Guidelines. This Environmental Impact Statement provides sufficient detail in this regard.

As indicated in the guidelines, if a licence is required by the Environment Protection Authority, then it is safe to assume that the proposed development is *Potentially Offensive Industry*. The proposed development would fall within the category of Resource Recovery of the Protection of the Environment Operation Act 1997 and, as such, an Environment Protection Licence is required to operate the proposed activity.

It is concluded that the proposed development is Potentially Offensive Industry.

Notwithstanding, as required by the Secretary's Environmental Assessment Requirements, a Hazard and Risk Assessment is contained in **Part 12** of this Environmental Impact Statement.

3.3.3 State Environmental Planning Policy No.55 - Remediation of Land

State Environmental Planning Policy No.55 - Remediation of Land (**SEPP 55**) aims:

> *.... to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.*

Clause 7 of SEPP 55 states:

> *7. (1) A consent authority must not consent to the carrying out of any development on land unless:*
>
> *(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.*
>
> *(2) Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.*
>
> *(3) The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation.*
>
> *(4) The land concerned is:*
>
> *(a) land that is within an investigation area,*

(b) land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines is being, or is known to have been, carried out,

(c) to the extent to which it is proposed to carry out development on it for residential, educational, recreational or child care purposes, or for the purposes of a hospital land:

(i) in relation to which there is no knowledge (or incomplete knowledge) as to whether development for a purpose referred to in Table 1 to the contaminated land planning guidelines has been carried out, and

(ii) on which it would have been lawful to carry out such development during any period in respect of which there is no knowledge (or incomplete knowledge).

In May 2015, the landowner commissioned a report addressing the potential contamination of the Site. A report titled *Validation Report Remediation of Former Sims Metals Scrap Yard 35 Frank St, Wetherill Park NSW* was prepared by HAZCHEM (**the Hazchem Report**), a summary copy of which is at **Appendix 9**.

The Hazchem Report states:

Hazchem Pty Ltd (Hazchem) was commissioned by Sims Metal Management (Sims) to provide services in relation to the remediation and validation of Sims former scrap metal processing facility at 35-37 Frank Street, Wetherill Park NSW (the Site).

Sims ceased operations at the Site in December 2013 consolidating operations at their scrap metal facility at St Marys with the intention to divest the Site.

Environmental site assessments (ESA) previously conducted at the Site identified contamination in fill material associated with unsealed operational areas at the centre and rear of the Site and a diesel above ground storage tank (AST) at the front of the Site. Investigations found concentrations of volatile and semi-volatile hydrocarbons present in soils above criteria provided in the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) made by the National Environment Protection Council and its schedules as amended in May 2013 and adopted by the NSW Environment Protection Authority (NSW EPA) Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd edition) (NSW EPA, 2006). Based on the outcomes of the investigations it was concluded that remedial action was required to render the Site suitable for ongoing commercial and industrial land use.

In August 2014, prior to remediation, Hazchem conducted an additional intrusive

soil investigation to address information data gaps identified as part of a review of previous site assessments and their associated data set. Investigation outcomes resulted in the remedial extent being further defined both laterally and vertically for certain Areas of Environmental Concern (AEC). Remediation was conducted between October 2014 and April 2015 in accordance with the Remedial Action Plan (RAP) prepared for the Site by Hazmat Services (2014).

This Validation Report (VR) outlines the methodology and outcomes of the pre-remediation investigation and subsequent remedial works and associated validation program undertaken and completed to ensure that the objectives stated in the RAP were achieved. This VR should be read in conjunction with the RAP developed for the Site.

The VR was prepared in general accordance with the NSW EPA Guidelines for Consultants Reporting on Contaminated Sites 1997 and other guideline documents endorsed by NSW EPA.

The purpose of the remediation was:

.... to render the Site suitable for commercial/industrial land use as defined in the ASC NEPM. The main objective of the validation was to assess whether the Site has been remediated in an acceptable manner, with minimal environmental impact, to a condition suitable for industrial land use.

The objectives of the validation were to:

- *Demonstrate that the remedial goals have been met at the Site;*
- *Demonstrate that the Site is suitable for the intended land-use; and*
- *Demonstrate that the remediated Site does not pose a potential risk of harm to the environment and human health.*

In order to close data gaps identified in previous ESAs, a pre-remediation investigation was required with the objective of further delineating the lateral and vertical extent of areas and contaminants of potential concern at the Site.

The scope of work undertaken to meet the project objectives was as follows:

- *Review of RAP and previous ESAs and preparation of gap analysis;*
- *Undertake a targeted intrusive soil investigation across select areas of the Site to address identified data gaps;*
- *Gain relevant regulatory approvals for remedial works;*
- *Onsite supervision of remediation contractor and environmental monitoring throughout remedial works;*

- *Waste classification assessment of soils requiring offsite disposal;*
- *Visual observation and collection of validation samples from residual soils;*
- *Assess results against Remediation Acceptance Criteria (RAC) as stated in the RAP; and*
- *Preparation of this validation report.*

A Remedial Action Plan (**RAP**) was prepared by Hazmat Services in January 2014 to facilitate remediation of the Site scheduled for the second half of 2014. The RAP included:

- a review of previous investigation,
- identification of areas of environmental concern (**AEC**) which required remediation or further investigation,
- selection of the preferred remedial strategy, and
- detailed validation requirements including setting remediation action criteria (**RAC**).

In August 2014, prior to remediation, Hazchem conducted an additional intrusive soil investigation to address information data gaps identified as part of a review of previous site assessments and their associated data set with the objective of further delineating the lateral and vertical extent of areas and contaminants of potential concern at the Site.

The following conclusions were made based on the findings of the pre-remediation investigation:

- *Two previously unidentified unsealed areas located within the sealed area to the north east of the former weighbridge required removal of contaminated fill and validation of residual soils.*
- *Two hotspots 18.8m in diameter and approximately 0.5m in depth required remediation in order to render soils surrounding the former shear suitable for commercial/industrial land use.*
- *Gross physical contamination consisting of scrap metal, plastic, concrete, etc. within the fill layer at unsealed areas was directly linked to scrap processing and storage, which were identified as the contaminating activity at the Site. Consequently, remediation was required of all fill above underlying natural clay in these areas.*
- *Lead concentrations from the current investigation consistently reported higher than the historical norm of 800-1,200mg/kg and the assessment criterion of 1,500mg/kg. This had potential impacts on the waste*

classification of soils destined for offsite disposal.

- *PCB was detected in fill with a direct link established between the presence of TRH and PCB. PCB should be considered a potential contaminant of concern for validation and waste classification purposes when TRH is present. The inclusion of PCBs as a potential contaminant of concern for the Site does not alter previous conclusions regarding the contamination status of the Site and specifically the areas deemed suitable for commercial/industrial land use without remediation.*

Based on information presented in the RAP and the findings of the pre-remediation investigation the final remedial extent required the removal off contaminated fill down to underlying clays at the following locations:

- *All unsealed areas of the Site north of the former weighbridge;*
- *Two hotpots in the area surrounding the former shear; and*
- *One hotspot associated with the former AST at the front of the Site.*

It was also recommended that soils be screened to recover recyclable materials such as scrap metal, concrete and bricks.

Remediation was conducted between October 2014 and April 2015 in accordance with the RAP with the validation report prepared in general accordance with the NSW EPA Guidelines for Consultants Reporting on Contaminated Sites 1997 and other guideline documents endorsed by NSW EPA. During remediation Hazchem maintained an onsite presence to ensure not only the scope of remediation as set out prior to commencing works was completed appropriately but also that any additional contamination encountered was appropriately assessed, and if required remediated and validated.

The purpose of the remediation was to render the Site suitable for commercial/industrial land use as defined in the ASC NEPM. The main objective of the validation was to assess whether the Site has been remediated in an acceptable manner, with minimal environmental impact, to a condition suitable for industrial land use.

The following outlines the general remediation methodology

- *Site establishment including inductions and WHS documentation, establish environmental and odour controls and monitors, wheel wash, amenities and mobilisation of equipment;*
- *Excavation of contaminated fill at each AEC until visually uncontaminated soils were encountered. Vertically this was when clays were encountered. Horizontally this was generally when physical contamination ceased and the fill type changed to a reddish brown steel stone or light brown crushed sandstone road base.*

- *Preliminary screening of fill to remove large pieces of ferrous scrap and non-ferrous scrap metal and concrete followed by screening of fill using a Trommel fitted with 20mm mesh into plus 20mm (scrap metal and concrete) and minus 20mm (soil) size fractions.*

- *Sampling of screened material to determine suitability to be reused onsite or waste classification for offsite disposal.*

- *Load and transport ferrous and non-ferrous oversize offsite for recycling at Sims' St Marys facility.*

- *Load and transport concrete recovered from fill and removed from surfaces to uncover contaminated fill at each AEC offsite for recycling.*

- *Load and transport contaminated soil off-site to an appropriately licensed landfill facility according to its waste classification.*

- *Visual observation and collection of validation samples from residual soil at each AEC to confirm the adopted criteria for industrial land use are met. Validation was undertaken progressively as sections were cleared of fill.*

- *Reinstate excavations with imported materials once validation results obtained. This included reinstatement of existing levels across the centre of the Site and contouring of the rear of the Site to slope towards the north-western corner.*

- *Remove and clean oily water, sediment and sludge from stormwater pond and oily water separator unit and dispose to appropriately licenced facility.*

Based on the outcomes of the validation program the following conclusions are made:

- *All analytical results for each AEC reported below the RAC adopted for the Site.*

- *The visual assessment of residual soils and fill was satisfactory with regard to the absence of signs of gross physical contamination.*

- *The imported fill used to backfill excavated areas was of appropriate quality and with certification provided from an independent environmental practitioner.*

The sampling program was conducted in accordance with relevant guidelines and the data quality assessment showed that the data set is considered to reflect the true condition of the AECs within the limitations of any soil investigation.

Based on the validation information obtained by Hazchem, and provided in this

validation report, the remediation is considered successful with all contaminated fill having been excavated and disposed offsite from the AECs as evidenced by visual and analytical assessments. The remediated areas, and consequently the Site as a whole, are considered suitable for commercial/industrial land use.

3.3.4 Contaminated Land Management Act

Sub-section 60(1) of the *NSW Contaminated Land Management Act* (**CLM Act**) states:

> *60 Duty to report contamination*
>
> *(1) A person whose activities have contaminated land must notify the EPA in writing in accordance with this section that the land has been so contaminated.*

Notification of the Site's contamination status was provided to NSW EPA in accordance with Section 60 on the 7 October 2014.

The Hazchem Report was to be forwarded to NSW EPA to assist in assessing the need for the Site to be regulated under the CLM Act by providing updated information on the Site's contamination status.

3.3.5 State Environmental Planning Policy No.44 - Koala Habitat Protection

State Environmental Planning Policy No.44 - Koala Habitat Protection (**SEPP 44**) applies in the Fairfield Local Government Area.

SEPP 44 aims to encourage the proper conservation and management of areas of natural vegetation which provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline. The aims and objectives of SEPP 44 are:

> *... to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:*
>
> *(a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and*
>
> *(b) by encouraging the identification of areas of core koala habitat, and*
>
> *(c) by encouraging the inclusion of areas of core koala habitat in environment protection zones.*

Clause 6 of SEPP 44 states:

This Part applies to land:

(a) that is land to which this Policy applies, and

(b) that is land in relation to which a development application has been made, and

(c) that:

(i) has an area of more than 1 hectare, or

(ii) has, together with any adjoining land in the same ownership, an area of more than 1 hectare,

whether or not the development application applies to the whole, or only part, of the land.

The Site has an area of greater than 1 hectare and, as such, an assessment pursuant to SEPP 44 has been undertaken. There are no habitat trees on the Site and, as such, no further assessment is required.

3.3.6 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (**SEPP Infrastructure**) has as its aim:

... to facilitate the effective delivery of infrastructure across the State by:

(a) improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and

(b) providing greater flexibility in the location of infrastructure and service facilities, and

(c) allowing for the efficient development, redevelopment or disposal of surplus government owned land, and

(d) identifying the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development), and

(e) identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and

(f) providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing.

Clause 104 of SEPP Infrastructure states:

104 Traffic-generating development

(1) 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.

(2) In this clause, relevant size or capacity means:

(a) in relation to development on a site that has direct vehicular or pedestrian access to any road—the size or capacity specified opposite that development in Column 2 of the Table to Schedule 3, or

(b) in relation to development on a site that has direct vehicular or pedestrian access to a classified road or to a road that connects to a classified road where the access (measured along the alignment of the connecting road) is within 90m of the connection—the size or capacity specified opposite that development in Column 3 of the Table to Schedule 3.

(3) Before determining a development application for development to which this clause applies, the consent authority must:

(a) give written notice of the application to the RTA within 7 days after the application is made, and

(b) take into consideration:

(i) any submission that the RTA provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, the RTA advises that it will not be making a submission), and

(ii) the accessibility of the site concerned, including:

(A) the efficiency of movement of people and freight to and from the site and the extent

of multi-purpose trips, and

(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and

(iii) any potential traffic safety, road congestion or parking implications of the development.

(4) The consent authority must give the RTA a copy of the determination of the application within 7 days after the determination is made.

Schedule 3 of SEPP Infrastructure includes *Landfill, recycling facilities, waste transfer station* of any capacity in both Column 2 and Column 3. As such, the NSW Roads and Maritime Services (**RMS**) must be consulted as part of the assessment of the proposed development.

3.4 Local Environmental Planning Instruments

3.4.1 Fairfield Local Environmental Plan 2013

The Site is zoned IN1 General Industrial pursuant to the Liverpool Local Environmental Plan 2013 (**LEP 2013**). An extract from the Map is at **Figure 3-1**.

The objectives of the IN1 General Industrial Zone 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 ensure development is not likely to detrimentally affect the viability of any nearby business centre.*

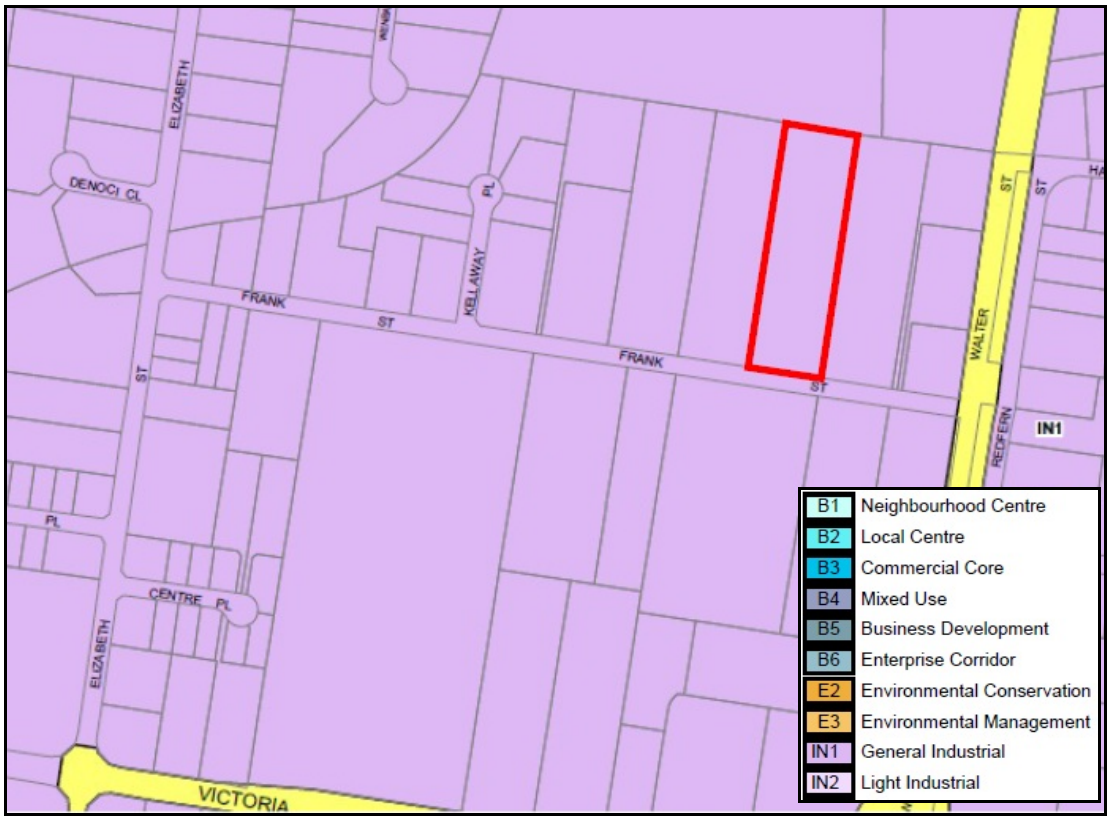


Figure 3-1: Extract from the Fairfield LEP 2013 Zone Map with the Site outlined in red.

The proposed development is consistent with the objectives of the IN1 General Industrial zone in that it would:

- Provide an industrial land use.
- Encourage employment opportunities.
- Minimise any adverse effect of development on other land uses.
- Support and protect industrial land for industrial uses.

Clause 5.9 of LEP 2013 relates to the preservation of trees and vegetation and states, among other things:

> ***5.9 Preservation of trees or vegetation***
>
> *(1) The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.*
>
> *(2) This 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.*

Note. A development control plan may prescribe the trees or other vegetation to which this clause applies by reference to species, size, location or other manner.

(3) A person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation to which any such development control plan applies without the authority conferred by:

(a) development consent, or

(b) a permit granted by the Council.

(4) The refusal by the Council to grant a permit to a person who has duly applied for the grant of the permit is taken for the purposes of the Act to be a refusal by the Council to grant consent for the carrying out of the activity for which a permit was sought.

Clause 5.9AA of LEP 2013 states:

5.9AA Trees or vegetation not prescribed by development control plan

(1) This clause applies to any tree or other vegetation that is not of a species or kind prescribed for the purposes of clause 5.9 by a development control plan made by the Council.

(2) The ringbarking, cutting down, topping, lopping, removal, injuring or destruction of any tree or other vegetation to which this clause applies is permitted without development consent.

The Site contains a number of trees at the Frank Street frontage of the Site. A number of trees are located on adjoining properties to the west and north of the Site.

Plateau Tree Service Pty Ltd has prepared a report titled *Arboricultural Impact Statement* (**the Arborist Report**), a copy of which is at **Appendix 10**. The purpose of the Arborist Report is to:

- Identify the trees within the Site which are likely to be affected by the proposed works.
- Assess the current overall health and condition of the subject trees.
- Evaluate the anticipated impacts the proposed development may have on the subject trees/vegetation and assess their suitability for retention.
- Provide details on tree protection measures, for trees identified as suitable for retention.

Visual Tree Inspection

The subject trees were assessed by the process of a stage one visual tree assessment as formulated by Mattheck & Breloer (1994), and practices consistent with modern arboriculture. The trees were inspected from ground level, without the use of any invasive or diagnostic tools and testing.

No aerial inspections or root mapping was undertaken. Tree heights, canopy spread, and diameter at breast height was estimated, unless otherwise stated. The trees are identified based on broad taxonomical features present and visible from ground level at the time of inspection.

Tree Significance

The significance of a tree is determined using a combination of environmental, heritage/cultural and physical/social value.

To promote a consistent approach to determining these values, guidelines, factors and selection criteria have been formulated into the tree valuation system developed by Phil Witten (the author).

Western Boundary

A variable height retaining wall will be constructed along the western boundary fence line. The reinforced concrete retaining wall will vary from 0.9m to 2.3m to accommodate varying level within the neighbouring property.

The pier and beam style footing of the proposed retaining wall (refer to Landscape Plans at **Appendix 12**) has been specifically designed to reduce impacts and encroachment on trees located on the neighbouring property. The concrete piers will be located at 3m to 4m intervals, with the ability to modify and relocate pier locations upon encountering large or significant roots extending below ground from the neighbouring property. The pier and beam style footing is an excellent design and is unlikely to significantly impact the adjacent trees.

Trees along the western boundary (on the neighbouring property) towards the northern end of the Site are unlikely to be impacted as the proposed works are located outside the protection zone. Trees located towards the southern end will not be impacted due to varied level within the adjacent property, and a retaining wall separating the proposed works from the trees.

Trees which may be impacted appear to be self-seeded and growing between the existing retaining wall (on the neighbouring property) and the boundary fence. These trees have been identified, and placed within a supervision zone. Any excavation within this zone will require the Project Arborist present on site.

Northern Boundary

A variable height retaining wall will also be constructed along the northern boundary. The retaining wall will vary from 1m to 5.2m in height and will be offset from the existing fence line by approximately 3m (0.5m offset from the 2.5m TPZ).

All hard scapes and construction activities will be located outside the designated TPZ, and, therefore, will have a minimal impact on the adjacent neighbouring trees.

There are no other provisions of LEP 2013 which are relevant to the proposed development.

3.4.2 Fairfield City Wide Development Control Plan 2013

The purpose of the Fairfield City Wide Development Control Plan 2013 (**the City Wide DCP**) is to illustrate the controls which apply to particular types of development.

The City Wide DCP fundamentally assists in the preparation of development applications. The City Wide DCP contains detailed development controls used by Council as benchmarks of what is acceptable development taking into consideration an environmental site analysis.

Notwithstanding, as detailed in **Part 3.3.1** of this Environmental Impact Statement, **sub-clause 11(1)** of State Environmental Planning Policy (State and Regional Development) 2011 states:

> ***11 Exclusion of application of development control plans***
>
> *Development control plans (whether made before or after the commencement of this Policy) do not apply to:*
>
> *(a) State significant development, or*
>
> *(b) development for which a relevant council is the consent authority under section 89D (2) of the Act.*

As such, the City Wide DCP 2013 has no work to do in the assessment of the proposed development.

Part Four
CONSULTATION

4.1 Local Government, Government and Statutory Authority Consultation

The Secretary's Environmental Assessment Requirements includes a requirement for consultation:

> *... with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.*

In the preparation of this Environmental Impact Statement, consultation was undertaken with:

- Fairfield City Council.
- the Environment Protection Authority.
- the Department of Primary Industries.
- NSW Roads and Maritime Services.
- Transgrid.

Copies of responses from the above authorities are provided in **Appendix 5**.

Fairfield City Council

All concerns raised by Fairfield City Council are canvassed in this Environmental Impact Statement as detailed in **Table 4-1** below.

Table 4-1: Issues Raised by Fairfield City Council.

Issue	Reference in EIS
Information on SEPP 33	Part 3, Part 12
Risk Assessment	Part 12
Compliance with relevant standards and guidelines of the NSW EPA	Total Document
Exact transport routes to be used	Part 10, Appendix 13
Assessment of the potential visual impact	Part 8

Department of Primary Industries

The Department of Primary Industries, by letter dated 23 September 2015, responded to

the request of the Secretary of the Department of Planning and Environment. All concerns raised by the Department are canvassed in this Environmental Impact Statement as detailed in **Table 4-2** below.

Table 4-2: Issues Raised by the Department of Primary Industries.

Issue	Reference in EIS
Annual volumes of surface water and groundwater proposed to be taken	Part 9, Appendix 19
Volumetric water licence requirements	Not applicable
Identify an adequate and secure water supply	Part 9, Appendix 19
Assessment of the impact on surface and ground water sources	Part 9, Appendix 19
Detail of the data of all surface and groundwater modelling	Part 9, Appendix 19
Proposed surface and groundwater monitoring	Not applicable
Cumulative impacts on water resources	Part 9, Appendix 19
Relevant policies and guidelines	Part 3, Part 9, Appendix 19

Environment Protection Authority

The Environment Protection Authority, by letter dated 18 September 2015, responded to the request of the Department of Planning and Environment indicating that the key information requirements for the project are:

1. Air Quality - including potential impacts and mitigation measures.

2. Noise Management - including potential impacts and mitigation measures.

3. Waste Management.

Table 4-3 below provides information on the issues raised by the Environment Protection Authority.

Table 4-3: Summary of issues raised by the Environment Protection Authority

Issue	Reference in EIS
Air Quality	Part 6, Part 7, Appendix 14, Appendix 15
Noise Management	Part 6, Appendix 15
Waste Management	Part 13

4.2 Community Consultation

Community consultation was undertaken as part of the preparation of the Environmental

Impact Statement.

The scope of consultation undertaken included:

- A consultation process undertaken in accordance with the Director-General's requirements and the then NSW Department of Planning Guidelines for Major Project Community Consultation October 2007.

- Demonstration that the applicant understands the issues already identified as well as any new issues which arise during consultations.

- Ensuring that relevant stakeholders are satisfied that their concerns have been adequately heard and, to the extent possible within the Environmental Assessment, addressed.

A document outlining the preliminary assessment information for the proposed development was prepared and distributed to all potentially affected landowners and/or occupiers in the locality of the Site. A copy of the consultation letter is at **Appendix 11**. The letter was distributed to all properties in the area shown in **Figure 4-1**.

Figure 4-1: Location of all properties provided with consultation letter shown highlighted in red.

No written responses have been received from the landowners/occupiers. One landowner responded by telephone to the consultation process, requesting more detail relating to the proposed site layout. The information requested was provided to the satisfaction of the respondent.