# Waste Metal Recovery, Processing and Recycling Facility Expansion, Tattersall Road, Kings Park, Blacktown

## Environmental Impact Statement

For Sell and Parker

July 2014

0226308

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# Waste Metal Recovery, Processing and Recycling Facility Expansion, Tattersall Road, Kings Park, Blacktown

*Environmental Impact Statement*

Sell and Parker

30 July 2014

| | |
|---|---|
| Approved by: | *Adam Coburn* |
| Position: | Project Manager |
| Signed: |  |
| Date: | *30 July 2014* |
| Approved by: | *Steve Laister* |
| Position: | Partner |
| Signed: |  |
| Date: | *30 July 2014* |

*Environmental Resources Management Australia Pty Ltd Quality System*

0226308_EIS_rp01 Final

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**FINAL REPORT**

Sell and Parker Pty Ltd

# Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

*Environmental Impact Statement*

July 2014

Reference: 0226308

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## *EXECUTIVE SUMMARY*

### *Introduction*

*Sell and Parker Pty Ltd (Sell and Parker) commissioned Environmental Resources Management Australia (ERM) to prepare an Environmental Impact Statement (EIS) to increase the approved capacity of the existing waste metal recovery, processing and recycling facility at 45 Tattersall Road (Lot 5 DP 7086), Kings Park, to 350,000 tpa. The increase in the processing capacity of the waste metal recovery and processing business requires the expansion of the facility to encompass the adjoining lot to the east (Lot 2 DP 550522 or 23-43 Tattersall Road). The site locality is illustrated on Figure ES1.1.*

*Blacktown City Council approved a metal recycling facility on the southern (rear) portion of 45 Tattersall Road in November 1996. The consent had no limits imposed as part of output, with the maximum output not able to exceed to 30,000 tonnes as required under the then provisions of Schedule 3 of the Environmental Planning and Assessment Regulations 1994. In 2001 the Land and Environment Court approved the establishment of a hammermill (also known as a fragmentiser or metal shredder) together with associated components with an approved handling capacity 60,000 tpa on the northern part of 45 Tattersall Road. The intention was that both the existing operations on the site prior to the 2001 consent, as well as the proposed 60,000 tpa operate concurrently.*

*The current EPL issued by the EPA for the site allows for production up to 100,000 tpa.*

### *Proposed Development*

*In order to meet projected future demands in waste metal recycling it is proposed to increase annual waste metal recovery, processing and recycling at Sell and Parker's Blacktown metal recycling facility from the currently operating 90,000 tpa to 350,000 tpa. To achieve this increased capacity it is proposed that the site be reconfigured and expanded on to the adjoining lot (23-43 Tattersall Road).*

*The proposed expansion would enable Sell and Parker to utilise the available plant capacity in order to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities.*

*The changes to the proposed development, compared to existing operations, mainly involve the reconfiguration and expansion of the waste metal recovery and recycling facility on to the adjoining allotment to improve site safety and environmental improvements by shifting some processing indoors, improving traffic flow and reducing off-site traffic.*

*The additional development has a capital investment value ("CIV"), as defined in State Environmental Planning Policy (State and Regional Development) 2011 of $1.1 million.*


| | | | |
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| Client: | Sell and Parker Pty Ltd | | |
| Drawing No: | 0226308_EIS_GIS01_V1.mxd | | |
| Date: | 13/03/2014 | Drawing Size: A4 | |
| Drawn By: | AA | Reviewed By: AC | |

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**Figure ES1.1 - Site Locality Plan**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

ERM

*In summary, the proposed development is as follows:*

- *the existing office at 45 Tattersall Road will be demolished and relocated to improve safety and improve access to the shredder. The office functions will be relocated to the existing office situated at the front of the expanded site (23-43 Tattersall Road) to isolate pedestrians and visitors from the operational activities on the site;*

- *car parking for staff and visitors will be increased and moved adjacent to the new office on the expanded site (on 23-43 Tattersall Road) and isolated from the processing area of the facility;*

- *the pre-shedder will be relocated away from the boundary to where the shear is currently located on 45 Tattersall Road and the shear will be relocated to 23-43 Tattersall Road;*

- *the existing post shredder non ferrous recovery processing will be enclosed under roof to improve efficiency and reduce noise and dust nuisance;*

- *parts of the existing building on 23-43 Tattersall Road will be demolished to allow for better circulation through the site;*

- *relocation of the floc material from adjacent to the site boundary to inside a building in the centre of the site;*

- *additional post shredder processing will be introduced to further extract remaining recyclables (metals and plastics) from floc material. This will involve conveying the floc via an enclosed conveyor after shredding to inside one of the existing buildings on the site (the Post Shredder Processing facility). The additional processing and storage of all floc will be located inside and hence reduce noise and dust nuisance;*

- *the non-ferrous shed and non-ferrous processing will be relocated from the building on the western site boundary to inside the remaining buildings on the expanded site to improve efficiency and reduce noise and dust nuisance;*

- *the existing maintenance shed will be demolished and relocated to inside the existing non ferrous shed. This will improve access to the shredder;*

- *the existing driveway entry at 23 -43 Tattersall Road will be used for retail non-ferrous customers so that they are isolated from the processing area of the facility;*

- *the current Sell and Parker entry driveway at 45 Tattersall Road will be widened so that two lanes of traffic can enter side by side at any time with two weighbridges installed so two customers can be served at the one time;*

- *the current exit driveway at 23-43 Tattersall Road will be widened and two weighbridges installed to handle truck movements;*

- *the current Sell and Parker exit driveway at No 45 Tattersall Road will be closed and excavated to provide additional finished goods storage;*

- *part of the existing sound barrier wall and some vegetation will be removed between the two lots, with the existing 4m boundary fence relocated to the eastern boundary of the site adjoining Breakfast Creek;*

- *a community education and development facility will be incorporated into the office premises which will highlight recycling and resource recovery processes and its environmental benefits and will be available to the public on an appointment basis; and*

- *a new truck wash facility will be installed within the existing building on the enlarged site.*

*The site layout of the expanded facility is presented on Figure ES1.2*

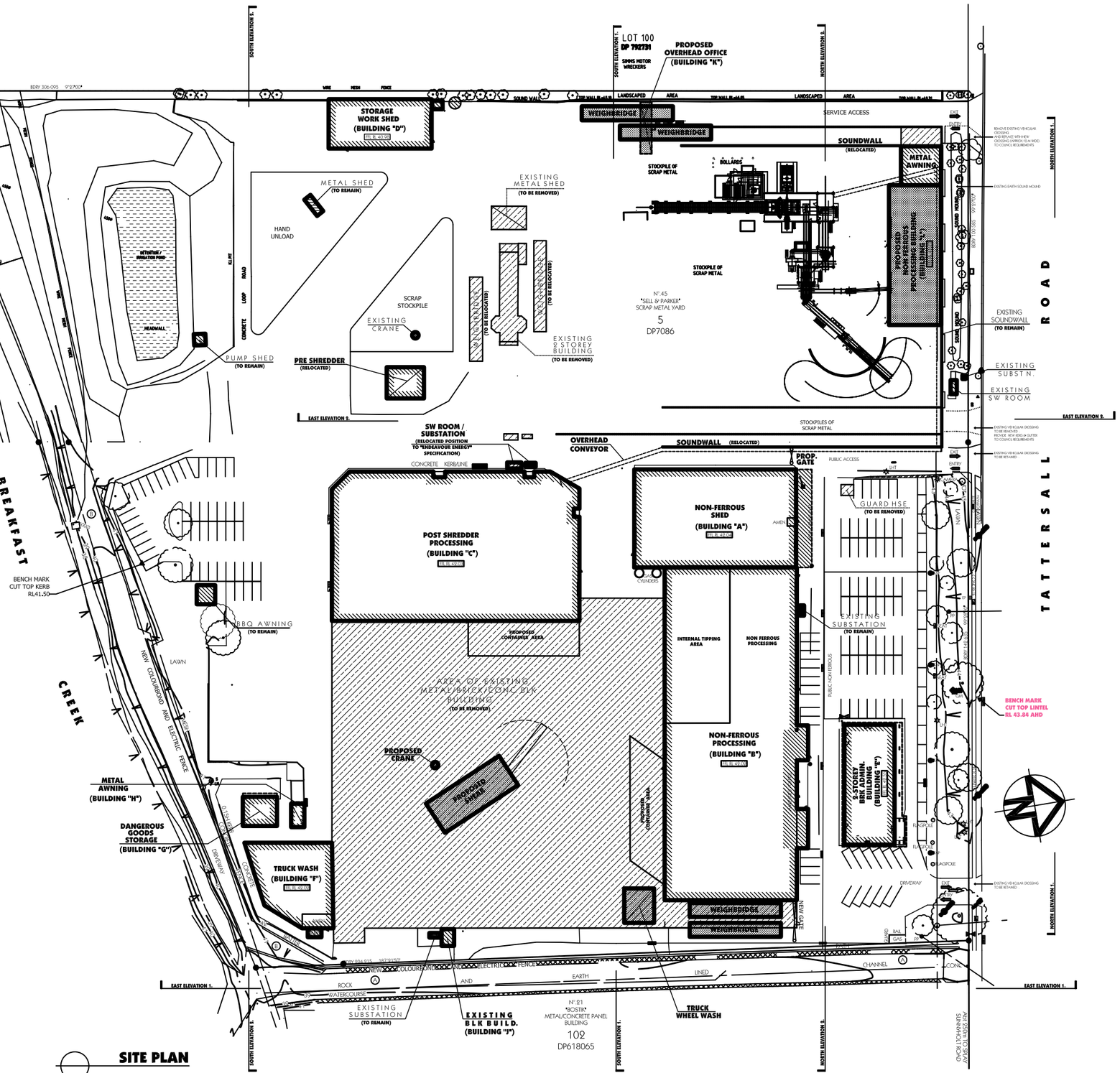
***Planning Approval Pathway***

*Section 8(1) of State Environmental Planning Policy (SEPP) (State and Regional Development) 2011 specifies that:*

> *(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.*

*Clause 23(3) of Schedule 1 in the SEPP describes development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes a year of waste. The proposed increase in waste metal recovery, processing and recycling from the existing 90,000 tpa to 350,000 tpa, is development of a kind specified in Schedule 1 of the SEPP, and is therefore a development which is declared to be SSD.*

*The proposal is permissible pursuant to the provisions of Blacktown Local Environmental Plan (LEP) 1988, which zones the site '4(a) General Industrial'. The Draft Blacktown LEP 2013 proposes a 'B7 Business Park' zone for the site, to which the proposed expansion would be prohibited development under the Draft LEP. Blacktown City Council held a meeting on 12 March 2014, to hear a motion regarding making further amendments to the Blacktown Draft LEP, prior to its referral to DP&I. The amendments which were adopted by Council have the effect of amending the proposed zoning of the subject site and surrounds from B7 (as proposed in the publicly exhibited Blacktown LEP) to an IN1 General Industrial zone. The motion passed by Council has the effect of making the proposed development permissible with consent under the IN 1 General Industrial zone, under draft Blacktown LEP.*




| DEVELOPMENT DATA | | |
|---|---|---|
| **SITE AREA** | **59 475 M2 approx.** | |
| | **FLOOR AREAS** | |
| | **W/HOUSE** | **OFFICE /AMEN** |
| **BUILD "A"** | 1278 M2 | 24 M2 |
| **BUILD "B"** | 3162 M2 | 438 M2 |
| **BUILD "C"** | 2981 M2 | ——— |
| **BUILD "D"** | 415 M2 | ——— |
| **BUILD "E"** | 984 M2 | ——— |
| **BUILD "F"** | 494 M2 | ——— |
| **BUILD "G"** | 81 M2 | ——— |
| **BUILD "H"** | 25 M2 | ——— |
| **BUILD "J"** | 17 M2 | ——— |
| **BUILD "K"** | 47 M2 | ——— |
| **BUILD "L"** | 593 M2 | ——— |
| **TOTAL** | **10 077 M2** | **462 M2** |

| | | | |
|---|---|---|---|
| **CARPARKING** | | | |
| **REQUIRED** | TOTAL GR FLR AREA / 75 | = | **10077 / 75** |
| | | = | **134** |
| | TOTAL OFFICE AREA / 40 | = | **462 / 40** |
| | | = | **11** |
| | TOTAL | = | **145** |
| **PROVDED** | | = | **145** |

**LEGEND**

- EXISTING STRUCTURE TO REMAIN
- EXISTING STRUCTURE TO BE REMOVED
- PROPOSED NEW STRUCTURE
- EXISTING STRUCTURE TO BE FOR REUSE OR TO BE RELOCATED

GENERAL NOTES

1) All dimensions and floor areas are to be verified by the Builder prior to the commencement of any building work. Any discrepancies are to be brought to the attention of the designer.
2) Levels shown are approximate unless accompanied by reduced levels.
3) Figured dimensions must be taken in preference to scaling.
4) All boundary clearances must be verified by the surveyor prior to the commencement of any building works.
5) Where engineering drawings are required such must take preference to this drawing.
6) Stormwater to be discharged to Councils' requirements and AS 3500.3-1990.
7) All services to be located and verified by the Builder with relevant authorities before any building work commences.



0 10 20 30m (approx.)

| | | | |
|---|---|---|---|
| Client: | Sell and Parker Pty Ltd | | |
| Drawing No: | 0226308pm_C001_R0.cdr | | |
| Date: | 04/03/2014 | Drawing size: A3 | |
| Drawn by: | AA | Reviewed by: AC | |

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**Figure No. ES1.2 - Site Layout**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

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***Project Aims and Objectives***

*The primary aim of the proposed development is to provide waste metal recovery, processing and recycling services to industries in the Sydney Metropolitan area and regional areas of NSW.*

*The objectives of the proposed development are to:*

- *better respond to increasing demands (and community expectations) for efficient and effective metal resource recovery and recycling facilities; and*
- *provide additional employment opportunities within the Blacktown City Council LGA.*

***Authority Consultation***

*The following public authorities were provided with a letter describing the proposed development and asked to provide feedback within 21 days of the date of each letter:*

- *NSW Environment Protection Authority (EPA);*
- *NSW Office of Water (NOW);*
- *Sydney Water;*
- *NSW Roads and Maritime Services (RMS); and*
- *NSW WorkCover.*

*A copy of the letter sent to NSW EPA is provided in Annex E as an example of the letters sent to relevant authorities. At the time of the preparation of this EIS, ERM had not received a response from any of the above authorities.*

*Separately, meetings were also held with NSW EPA, NSW Department of Planning and Infrastructure (DP&I) and Blacktown City Council (BCC).*

***Community Consultation***

*A community newsletter was developed and distributed to nearby affected businesses and residents A letterbox drop of 1,000 printed copies of the Newsletter were distributed within a 500m radius of the site. A copy of the Newsletter is provided as Annex E.*

*A community information session was also held at a Sell and Parker office, located at 46 Tattersall Road (opposite the existing facility at 45 Tattersall Road) on 18 February 2014 between 6pm and 7pm. The session provided an overview of the proposed expansion and an opportunity for interested members of the local community to provide comments of the proposal. The session was attended by two persons, who operate a business on Tattersall Road, Kings Park. They raised no objection to the proposal, but asked a number of questions.*

*A summary of all consultation undertaken is provided in Chapter 5 of the EIS.*

***Ecological Assessment***

*Given the already highly disturbed nature of the site, and the fact that only landscaped trees that exist between the two current separate sites, are proposed to be removed, it is considered highly unlikely that the proposed development will have any impacts on any threatened species, populations or ecological communities and their habitats as listed under the NSW TSC Act or the Commonwealth EPBC Act.*

***Heritage Assessment***

*Aboriginal Cultural Heritage Assessment*

*A search of the OEH Aboriginal Heritage Information Management System (AHIMS) database identified one object or place of Aboriginal heritage significance approximately 650m to the south of the expanded site. However, given both the existing site and expanded site area are already highly disturbed (i.e. the land at both sites has previously been extensively excavated and backfilled) it is considered highly unlikely that objects or places of Aboriginal heritage significance will be impacted as a result of the proposed development.*

*Historical Heritage Assessment*

*A desktop assessment of national, state and local legislation and registers showed that two items of local heritage significance have been identified within the locality, but not within the vicinity of the proposed expanded site. Both of these sites are located on private land, sufficiently distant from the proposed development and as such will not be disturbed by the proposed expansion of the site. Given this, coupled with the existing site and expanded site area are located on previously, extensively disturbed land, it is unlikely that the proposed activity will cause any potential impacts to historic heritage.*

***Acoustics Assessment***

*Renzo Tonin and Associates prepared the a noise and vibration report in regards to the proposal expansion – Kings Park Waste Metal Recovery, Processing and Recycling Facility Noise and Vibration Assessment for EIS (Renzo Tonin and Associates, 2012) (referred to hereafter the 'the acoustics assessment').*

*The acoustics assessment showed noise emissions to residential premises were predicted to comply with the project-specific noise levels without noise mitigation measures. Based on the vibration measurements undertaken, vibration levels from the proposed expanded site will not cause human discomfort to the occupants of the nearest adjoining buildings. Noise and vibration emissions from site operations to neighbouring existing and proposed new industrial premises comply with the project-specific noise levels once the noise and vibration mitigation measures proposed as part of the expansion are implemented. Potential traffic noise associated with the operation of the facility and impacting nearby residential receivers is assessed as being insignificant and would comply with the RNP. In summary, noise and vibration*

*emissions from the construction and operation of the proposed expansion will comply with the relevant requirements of Blacktown City Council and the NSW EPA.*

***Air Quality Assessment***

*An Air Quality Assessment was undertaken by ERM (2014) to determine the air emissions associated with the expanded operation, the potential impacts on sensitive receptors and identify any required mitigation.*

*A Level 2 impact assessment, as described by the Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales, (DEC, 2005) was carried out to determine potential impacts from the expansion of operations using worst case input data.*

*The number and type of sources of emission from the site were thoroughly investigated and appropriately assessed for inclusion in the air dispersion modelling. In summary, these results indicated that:*

- *the highest predicted annual average TSP concentrations at each of the receptors is below the assessment criteria;*
- *the highest annual average dust deposition at each of the receptors produced from 5 years of data is below the assessment criteria;*
- *the highest annual average PM10 concentration at the receptors at each of the receptors is below the assessment criteria;*
- *the maximum predicted 24-hour average PM10 concentration together with the maximum background concentration results in levels that exceed the assessment criteria at the sensitive receptors due to the elevated background ambient air quality concentration in this area;*
- *the peak odour concentration at the receptors is below the assessment criterion;*
- *the highest annual average and 1 hour average NO2 concentrations at the receptors are below the respective assessment criteria; and*
- *the toxic air pollutants (iron oxide fumes, manganese and compounds, copper dusts and mists) concentrations are found not to exceed the Work Safe 10-hour adjusted TWA at offsite locations within the industrial estate where the Site is located, and found not to exceed the human health assessment criteria at the nearest sensitive receptors.*

*Where existing ambient air pollutant concentrations exceed the impact assessment criteria, it must be demonstrated that no additional exceedances of the impact assessment criteria will occur as a result of the proposed activity:*

*A cumulative assessment of the maximum predicted 24-hour concentrations at the sensitive receptors together with the background concentration, that occurred on the date of the prediction, indicated that there would be no additional exceedance due to the Site activities.*

*A cumulative assessment of the periods of background concentration below the assessment criteria, together with the predicted concentrations as a result of site activities on those dates, indicated that there would be no additional exceedance due to the Site activities.*

***Greenhouse Gas Assessment***

*Total GHG emissions for the site are estimated to increase from 10,530 to CO2-e 31,589 t CO2-e post-upgrade.*

*This additional fuel and electricity usage estimated for the site post-upgrade has the potential to trip the NGERs reporting threshold. However, it is believed the growth factor of 3 is a conservative estimate of the increase in GHG emissions likely to occur from the site post-upgrade. It is advised that the site assess their GHG contributions post-upgrade for the assessment periods to ascertain if they are required to register and report their GHG emissions under the NGERs legislation.*

*Based on the above estimates, the annual GHG emissions associated with the upgrade would represent an increase of 0.02% and 0.006% of the NSW and on Australia's 2010/11 total. On the basis of the contribution of the emissions to the totals for NSW and the nation, the upgrade represents a negligible increase in GHG emissions.*

***Soil and Water Assessment***

*Stormwater Management*

*Stormwater runoff generated at the existing site currently reaches a stormwater basin in the southern portion of the site via overland flow and a network of inlets and underground pipes. This basin has a riser that acts as a discharge point that is not licensed. At the proposed expansion site (the predominant source of runoff is generated from the roof space occupying the majority of the site. This runoff is assumed to flow to the adjacent rock and earth lined stormwater drain to the east that links down gradient to Breakfast Creek. The carpark in the northern portion of the site drains to a series of inlet pits that discharge to the adjacent drainage line to the east. The carpark in the southern portion of the site is presumed to drain to Breakfast Creek in the south.*

*Two oil/water separators are proposed for the new drainage system within both the existing and expanded site area. Each oil/ grit separator would be a precast unit such as a Humesceptor or similar device. Based on the manufacturer's performance details removal rates of 80% for total suspended solids and 65-99% for hydrocarbons would be expected. The majority of metals would be removed with the suspended solids. Heavy metals in such run-off are generally associated with the suspended solids. Removal of a high proportion of the finer fraction of the suspended solids will also prevent heavy metals being exported from the site. The oil/grit separators will also provide for treatment of contaminated water generated during firefighting operations in the event of a fire occurring at the metal recycling facility.*

*To ensure that the pollutant removal performance is maintained regular cleaning of the units will be carried out. Each month a licensed contractor will remove the accumulated oils and sediment using an inductor truck. The performance of the unit will be monitored and the frequency of cleaning increased if required. The existing network of underground stormwater pipes, inlets and oil water separators will be cleaned and, if damaged, replaced during the site refurbishment activities.*

*A bioretention filter will be installed to receive runoff from overland flows and the underground pipe network on the expanded site area. The existing stormwater pond will be dredged and excavated to remove any contaminated sediments and lined with clay. Verification sampling will be required as will waste classification sampling to allow for the appropriate disposal of any dredged material.*

*Erosion Control*

*Erosion control will primarily be in the form of site stabilisation by sealing with concrete. Sediment control will be through the use of the existing sediment basin and additional network of inlet pits and underground pipework conveying water to a series of oil water separators and ultimately the existing stormwater basin or the bioretention filter.*

*Groundwater*

*A search of NSW Office of Water (NOW) registered groundwater bore licences identified 11 licensed bore within approximately 1km of the site. The logs for boreholes drilled to the east of the site reported a shallow water bearing zone of silty clay between 1.5 and 6.5m below ground level (BGL). The boreholes to the northwest of the site did not report any water bearing zones or aquifer geology, though the standing water level for these wells was uniform at seven metres.*

*The proposed development does not require any activities such as significant excavation that would cause direct disturbance to groundwater. Adjacent groundwater wells indicated that the shallowest aquifer would be approximately two metres BGL. The site of the proposed development is already sealed with associated drainage installed such that limited infiltration rainwater occurs on the site. The Natural Resource Atlas indicated that the groundwater identified in wells adjacent to the site is saline. There are not expected to be any significant effects on regional groundwater as a result of the expanded site operations.*

*Current and Future Site Water Use*

*The estimate of current water usage based on the current processing capacity of 90,000 tpa was assumed to be 68.24kL/day based on information provided in water consumption invoices. Production at 350,000tpa is a 3.89 times greater than the existing rate so this factor has been applied to the current estimated rate to estimate a predicted increased water usage rate of 265.4kL/day. Assuming an average number of site operational days of 304 days per year (by excluding Sundays and Public Holidays) this is a water requirement of approximately 80.68 Megalitres/year for the proposed increase production rate.*

*From the preliminary calculations provided in the Soil and Water report it assumed that between 15% and 35% of the total water requirement on-site could potentially be supplied by the stormwater basin in dry years (10%ile rain year) and wet years (90%ile rain year) respectively with an average rainfall year potentially supplying 26% of the site water requirements. Thus the reliance on mains supplied potable water is greatly reduced.*

*The stormwater basin has an estimated volume of 1,440m³, a size that if the basin was empty prior to receiving rainfall would be suitable to capture a rainfall event up to 64mm.*

*Water for operational purposes for the proposed expansion will be sourced from mains supplied potable water and continued use of the runoff collected in the stormwater basin. The increase in water use with the proposed expansion warrants on-going use of collected runoff in the stormwater basin for operation requirements, thus reducing the requirement on mains supplied potable water, as long as the water is of a quality such that impacts to site infrastructure, the surrounding environment and the health and safety of employees is avoided.*

*Rainwater tanks may also be installed to utilise the runoff from roof spaces and would likely be best suited to providing water for personal use such as toilet flushing, reducing the requirement for mains supplied potable water. The option is available to use a system of rainwater tanks to capture the predicted roof rainwater, however the large size of tanks required, the likely excavations/preparatory works required to install the tanks in the space constrained site and the network of piping to distribute the water to the shredder may not be viable (compared to the more viable option of a single pipe required to distribute captured water from the stormwater basin to the shredder).*

*Potential Acid Sulphate Soils (PASS)*

*Assessment of the Australian Soil Resource Information System (CSIRO, 2006) mapping layer identified that the site has no known occurrence of Acid Sulfate Soil (ASS). Typical site operations are not expected to encounter or disturb PASS, nor lower the water table on adjacent lands to expose acid sulphate soils to oxidation.*

*Riparian Corridor Management*

*Although exempt from controlled activity approvals under the Water Management Act 2000, due to the proposed development being State Significant Development (SSD), redevelopment of the site has been designed to meet as far as practicably possible, the new rules developed by NOW (2012) regarding controlled activities within riparian corridors. Landscaped areas along the south boundary will include a range of locally endemic species to enhance the portion of the riparian corridor inside the operational boundary of the redeveloped site.*

***Contaminated Land***

*ERM (2014) completed a Phase I Environmental Site Assessment (ESA) of the two adjoining properties, planned to be redeveloped by Sell and Parker. The Phase 1 ESA was prepared under the overarching objective for Sell and Parker was to assess the suitability of each property for ongoing industrial land use.*

*As part of the Phase I ESA, a Conceptual Site Model (CSM) was developed for both properties, which identified a number of potential contamination source areas, pathways and sensitive receptors. The CSM assessed the 'source-pathway-receptor' (SPR) linkages as either 'unlikely', 'potential' or 'complete'. Of 29 possible SPR linkages identified in the CSM, 17 were found to be unlikely due to incomplete linkages between source area and receptor. A further 11 were assessed as a potential SPR linkage, however, given the appropriate controls (such as Environment Protection Licence requirements or other management measures) in place, these were deemed to have an insignificant likelihood of a potentially complete SPR linkage;*

*Only one SPR linkage was initially identified as having the potential to form a complete SPR linkage. This was in regards to the wash down sump located towards the rear of 23-43 Tattersall Road, which poses the possibility of locally impacted soils and groundwater which may be disturbed and/or come in contact with future demolition / construction workers during future expansion works. Given the limited potential contaminants of concern and the fact that the sump is concrete lined and in sound condition, it is considered unlikely that signification contamination has occurred. Appropriate management controls during redevelopment works, will therefore be sufficient to reduce the likelihood of a potentially complete SPR linkage being established to an acceptable level.*

*Although some potential for residual contamination remains, based on the results of this Phase I ESA and in particular the absence of potentially complete SPR linkages as presented in the CSM, along with the planned continued industrial land use at both properties, it is considered that further investigation is not required at this stage in order to facilitate the proposed redevelopment. A contingency for the appropriate management of potential unexpected contamination finds during the planned redevelopment of both properties should be incorporated in the Construction Environmental Management Plan (CEMP).*

***Hazards and Risks***

*A Preliminary Hazard Analysis (PHA) was undertaken by Arriscar Pty Limited (Arriscar). The PHA includes a semi-quantitative analysis and assessment of off-site fatality, injury and property damage risk, in accordance with the NSW Hazardous Industry Planning Advisory Paper (HIPAP) guidelines. The PHA indicated that there was no significant offsite impact from the use of dangerous goods on site due to the small inventories involved.*

*The NSW criteria for injury were not reached at sensitive or residential land use zones. The potential for offsite fatality and property damage was limited to the scenario of a 45 kg LPG cylinder rupture in the dangerous goods store. The NSW criteria for offsite fatality and property damage are considered satisfied due to the rarity of LPG cylinder ruptures.*

*The assessment found that qualitative criteria for potentially hazardous development was satisfied, and the development is not considered a hazardous industry, as defined in State Environmental Planning Policy (SEPP) No. 33. A number of recommendations were made in regard to fire protection requirements as detailed in Section 6.8.*

***Fire and Incident***

*Floc material has been identified as a potential source of fire. This will be managed by keeping the stockpile small, so as not to consider the warehouse in which it is kept as a high hazard occupancy. Water cannons will also be provided for the various stockpiles.*

*Any uncontrolled leaks or spills have the potential to contaminate soils within unsealed sections of the site, or be entrained in stormwater flow to the detention basin at the rear of the site. Overflow of potentially contaminated water from the detention basin, has the potential to detrimentally impact on Breakfast Creek.*

*The recommendations made in regards to fire protection requirements as detailed in Section 6.8 will be implemented. Section 6.9 presents a number of measures to ensure incidents such as accidental spills and / or leakages from machinery are contained and managed appropriately. It is recommended that a Fire and Incident Response Management Plan be developed for the expanded site.*

***Transport Impact Assessment***

*A transport impact assessment (TIA) was undertaken by GTA Consultants (2014) to determine the impact of the additional volume of traffic generated by the proposed development on the surrounding road network and identify any required mitigation.*

*Vehicle Access and Circulation*

*As part of the amalgamation of the two sites, the physical barrier between the two sites will be largely removed, permitting the movement of operational vehicles between the two sites. The increase in operational area at the expanded site will permit heavy vehicles to layover on-site in between weighing events, removing the need for these vehicles to return to Tattersall Road between loading and unloading of metal. This change will significantly reduce the movement of heavy vehicles on Tattersall Road adjacent to the site, improving the movement of vehicles along Tattersall Road.*

*Pedestrian Access*

*The relocation of all administration functions to the existing administration building at 23-43 Tattersall Road will greatly improve pedestrian safety at the expanded site by separating pedestrians from the operational activities of the site. The proposed pedestrian access arrangements to the administration building will be unchanged from the existing arrangements to this building with pedestrians accessing the building from the on-site car park.*

*Car Parking Requirements*

*The proposed development is required to provide a minimum of 116 on-site car parking spaces. The proposed supply of 147 on-site car parking spaces for therefore meets the minimum car parking requirements outlined in DCP 2006 and is considered to be appropriate.*

*Traffic Generation*

*Compared to existing traffic volumes the proposed development is expected to generate an overall net decrease in daily traffic movements and could not be expected to compromise the safety or function of the surrounding road network. This includes the removal of the current requirement for double entry and exist movements of trucks. Given this, the proposed development in its own right would not warrant any upgrades to existing road infrastructure on the vicinity of the site.*

*Construction traffic*

*At this stage it is not possible to accurately quantify the traffic volumes likely to be generated during construction as a contractor is yet to be appointed. However, construction activities associated with the proposed development are anticipated to generate only a small proportion of the daily vehicle movements currently generated by the Dexion site. Given this, the construction activities would result in a net decrease in traffic generation when compared with the existing traffic generated by the operation of the two sites.*

*Once the contractor has been appointed, a site-specific construction traffic management plan (CTMP) should be prepared prior to works commencing on-site detailing construction traffic volumes, truck routes, access arrangements and construction worker parking arrangements.*

***Social and Economic Resources***

*In both the short and the long term, the potential impacts on social and economic resources are generally positive. The additional development has a capital investment value ("CIV") of $1.1 million. The proposed expansion of the site will provide for increase labour force, creating positive flow-on effects to the local economy. The proposed expansion of the site will also enable Sell and Parker to utilise the available plant capacity in order to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities.*

*The proposed education and training centre within the new office area at the expanded site will be used to promote recycling initiatives and to explain the nature of resource recovery. Where possible, the centre will provide support and seek to participate with the education programme in schools and tertiary education facilities, thus positively contributing to the local community.*

***Visual Impact Assessment***

*There are no sensitive receptors with views to the site. The closest residence is located approximately 470m to the east of the site on Sunnyholt Road. The closest park is Headingley Reserve located approximately 460m to the east, also on Sunnyholt Road. Due to the topography and other industrial developments adjacent to the site, the site cannot be seen from either of these locations. There are no schools, parks or recreation facilities in close proximity.*

*Views to the site from Tattersall Road are limited as there is an existing 4m fence along the front (northern end) of number 45 Tattersall Road as well as landscape plantings. This sound wall will prevent views of the proposed new non-ferrous processing building from Tattersall Road. Small modifications are proposed to the sound wall, including the extension of the dust screen on the western end of the wall, however these changes are only very minor. In addition, the second driveway on the western side of 45 Tattersall Road will be removed, providing an improvement to the Tattersall Road streetscape*

*It is therefore concluded that the proposed development will not result in significant visual impacts in the vicinity of the site or neighbouring areas. Notwithstanding a concept landscape plan has been developed (refer Annex M), which will provide for plantings of native tree, shrub and grass species along site boundaries, particularly the frontage with Tattersall Road, which will complement and enhance existing landscaped vegetation.*

***Waste Management***

*The construction and operational phases for the proposal will produce several specific waste streams that will require management. Opportunities for waste reduction and the beneficial reuse of materials will be identified in accordance with the proponent's obligations under the Waste Avoidance and Resource Recovery Act 2001. This will also include the appropriate segregation of materials for processing.*

*All wastes will be classified (where required), stored and disposed in accordance with the Waste Classification Guidelines, Part 1: Classifying Waste (OEH, 2008). The requirements of the Protection of the Environment Operations Act 1997 (POEO ACT) will also be met during the construction works and operation of the facility.*

***Cumulative Impacts***

*There is potential for short term minor adverse effects on properties close to the proposed development from the combination of construction noise, air quality, minor visual intrusion, traffic and general amenity effects arising from site activity, plant operation and traffic movements.*

*These effects are not predicted to be significant and will be limited to temporary periods during construction.*

*With the implementation of the proposed mitigation measures, the environmental impact assessment has identified no long term adverse impacts to nearby receptors as a result of expanded operation at the site. In addition, as the proposed development is within an existing industrial estate it will not result in reducing available land for beneficial community uses.*

*The expansion of the site is predicted to have a number of positive impacts including:*

- *capital investment value ("CIV") of $1.1 million;*
- *increased labour force, creating positive flow-on effects to the local economy, off setting the loss of jobs in response to the Dexion operations being closed and relocating offshore;*
- *ability to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities; and*
- *establishment of and education and training centre to promote recycling initiatives and to explain the nature of resource recovery to school groups and tertiary education facilities.*

*No significant cumulative effects with other project development proposals have been identified.*

***Environmental Risk Assessment***

*An Environmental Risk Assessment (ERA) was undertaken to provide an analysis of the environmental risks that have been identified as part of this EIS. The ERA categorised levels of risk for a given event based on the significant effects (consequences) and manageability of those effects (likelihood).*

*The ERA indicated that certain risk associated with potential to uncover residual contamination, risk of fire and increase in water demand remain on-site but risk to environment has been reduced through proposed mitigation measures. Impact assessment for a number of other environmental risks, including air quality, noise and traffic has shown risks to the environment to be negligible.*

*In addition to these risks, the proposed development will create a number of beneficial effects, including a number of positive social and economic benefits to the local area, including considerable capital investment, creation of additional jobs and associated flow on effects to the local economy and the establishment of an education and training facility. Post-upgrade the site will have additional capacity to recover ferrous and non-ferrous materials from the recycling processes, thus decreasing the need for end users to source raw materials from the extraction industries, reducing metal waste going to landfill and thus positively impacting on reducing greenhouse gas emissions.*

***Justification of the Development***

*This EIS has assessed the potential environmental impacts associated with the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility proposal. The proposal will enable an increase in the handling capacity of waste metal recycling which will assist in meeting the current and expected future demand, particularly that from landfill operators, which are beginning to mine their sites to extract metal for recycling. .*

*The EIS was prepared having regard to biophysical, economic and social considerations and the principles of ESD. There were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation measures and management strategies.*

*The environmental assessment process has been used to drive the development of the site and ensure operations will be sustainable and create minimal disruption to the local community. Metal recovery, processing and recycling operations have been designed to ensure sustainable water use and management, minimise traffic impact on local roads, ensure acceptable noise and dust emissions, effective management of waste and to minimise visibility of the operations. All mitigation measures and management practices identified in the EIS form part of the summary mitigation measure for the proposal and will be incorporated into the updated environmental management plans for construction and operations.*

*The expanded facility will provide a viable metal recycling service for the surrounding region. The proposal can be implemented with minimal adverse environmental impacts as demonstrated throughout this assessment and is justified in terms of the overall economic benefits to both the local, state and national economies. The waste metal recycling service at the Tattersall Road facility will better meet demand and assist in meeting community expectations for efficient and effective metal resource recovery and recycling facilities. The Tattersall Road facility is based in the Blacktown Industrial Estate therefore providing an important employment role, not only at the facility itself, but also in related industries such as suppliers of equipment, landfills and construction and demolition firms.*

*The proposed development involves the expansion of an existing metal recovery, processing and recycling facility which is already equipped with modern equipment able to meet the proposed increase in handling capacity. The development will allow important components for waste metal recycling to be undertaken at a site that is already highly disturbed. The service provided by the facility will help achieve the reduction of solid waste going to landfills in Sydney, while the recycled metal products provide an alternative to raw materials used to make metal products. The proposal will have positive flow on effects throughout the local economy through the creation of jobs in associated industries.*

*All of the potential environmental impacts of the proposed development have been considered and mitigation measures developed to minimise any impacts as detailed elsewhere in this EIS report.*

*As noise, soil and water, dust and waste are the main impacts associated with the metal recovery, processing and recycling facility, controls are placed on the facility operators in the Environmental Protection Licence (EPL) issued by the OEH.*

# 1 INTRODUCTION

*This Chapter describes the background to the proposed development, a description of the site and existing operations, the approach to the study and the Environmental Impact Statement (EIS) structure.*

## 1.1 BACKGROUND

Sell and Parker Pty Ltd (Sell and Parker) commissioned Environmental Resources Management Australia (ERM) to prepare an EIS to increase the approved capacity of the existing waste metal recovery, processing and recycling facility at 45 Tattersall Road (Lot 5 DP 7086), Kings Park,) to 350,000 tonnes per annum (tpa). The increase in the processing capacity of the waste metal recovery and processing business requires the expansion of the facility to encompass the adjoining lot to the east (Lot 2 DP 550522 or 23-43 Tattersall Road). Both Lot 5 DP 7086 and Lot 2 DP 550522 are collectively referred to as 'the site' within this EIS. The site locality is illustrated on *Figure 1.1.*

Blacktown City Council approved a metal recycling facility on the southern (rear) portion of 45 Tattersall Road in November 1996 (a copy of the consent is provided in *Annex B*). The consent had no limits imposed as part of output, with the maximum output not able to exceed to 30,000 tonnes as required under the then provisions of Schedule 3 of the *Environmental Planning and Assessment Regulations 1994*. In 2001 the Land and Environment Court approved the establishment of a hammermill (also known as a fragmentiser or metal shredder) together with associated components with an approved handling capacity 60,000 tpa on the northern part of 45 Tattersall Road (a copy of the consent is provided in *Annex B*). The intention was that both the existing operations on the site prior to the 2001 consent, as well as the proposed 60,000 tpa operate concurrently.

The current EPL issued by the EPA for the site allows for production up to 100,000 tpa.

Further discussion on the approval history of the facility is provided in *Section 1.2.*

45 Tattersall Road is currently used by Sell and Parker as a waste metal resource recovery, processing and recycling facility involving the shearing, fragmenting and shredding of industrial scrap metal, demolition material and car bodies. 23-43 Tattersall Road is currently owned by Sell and Parker and leased to Dexion, a manufacturer of pallet racking, industrial and office storage equipment. This site contains a factory warehouse building with associated office, parking and landscaping areas. Dexion have announced that they are closing down this facility at the end of 2014 and relocating their manufacturing facility to south east Asia.

In order to meet projected future demands, approval is now being sought to expand the waste metal recovery and processing facility on to 23-43 Tattersall Road and increase the handling capacity of the facility from the currently operating 90,000to 350,000 tpa and bring the operation under one modern consent, with the surrender of redundant or contradictory consents.

This EIS will accompany a development application (DA), which will be for a State significant development (SSD) pursuant to *State Environmental Planning Policy (State and Regional Development) 2011*.Section 8(1) of the SEPP specifies that:

> *(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.*

Clause 23(3) of Schedule 1 in the SEPP describes development for the purpose of resource recovery or recycling facilities that handle more than 100,000 tonnes a year of waste.

The proposed increase in waste metal recovery, processing and recycling from approved 90,000 tpa to 350,000 tpa, is development of a kind specified in Schedule 1 of the SEPP, and is therefore a development which is declared to be SSD.

The proposal is permissible pursuant to the provisions of *Blacktown Local Environmental Plan (LEP) 1988*, which zones the site *'4(a) General Industrial'*. The *Draft Blacktown LEP 2013* proposes a *'B7 Business Park'* zone for the site, to which the proposed expansion would be prohibited development under the Draft LEP. Blacktown City Council held a meeting on 12 March 2014, to hear a motion regarding making further amendments to the Blacktown Draft LEP, prior to its referral to DP&I. The amendments which were adopted by Council have the effect of amending the proposed zoning of the subject site and surrounds from B7 (as proposed in the publicly exhibited Blacktown LEP) to an IN1 General Industrial zone. The motion passed by Council has the effect of making the proposed development permissible with consent under the IN 1 General Industrial zone, under draft Blacktown LEP. An assessment of the proposal with reference to the legislative planning framework is provided in *Chapter 4*.

The development has a capital investment value ("CIV"), as defined in *State Environmental Planning Policy (State and Regional Development) 2011* of $1.1m. This amount does not include the relocation and installation of machinery which would see the investment closer to $10M. The existing plant and equipment used on the existing Sell and Parker site at 45 Tattersall Road, will be retained and used on part of the proposed expanded Project, with the most significant component of the CIV being the civil and building modification works.


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| Client: | Sell and Parker Pty Ltd | | |
| Drawing No: | 0226308_EIS_GIS01_V1.mxd | | |
| Date: | 13/03/2014 | Drawing Size: A4 | |
| Drawn By: | AA | Reviewed By: AC | |

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**Figure 1.1 - Site Locality Plan**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

ERM

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>
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> >
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## 1.2 APPROVAL HISTORY

It is understood that the existing waste metal recovery, processing and recycling facility currently operates within the bounds of dual consents, as presented in *Table 1.1*.

***Table 1.1 Summary of Existing Approvals***

| DA Reference | Approval Date | Consent Authority | Description of Development Approved |
|---|---|---|---|
| DA-96-305 (Determination No. 14664) | 27 November 1996 | Blacktown City Council | Metal recycling facility on the southern (rear) portion of 45 Tattersall Road. |
| 10204 of 2000 | 11 May 2001 | Land and Environment Court | Establishment of a hammermill) together with associated components and an approved handling capacity 60,000 tpa on the northern part of 45 Tattersall Road |

In regards to DA-69-305, approved by Blacktown City Council in 1996, the consent does not specifically refer to a processing quantity, but Condition 22 states the operation of the facility be undertaken generally in accordance with the Statement of Environmental Effects (SEE) prepared by Axis Environmental (1996). The 1996 SEE indicates that the facility would not exceed a processing capacity of 20,000 tpa, although refers to the upper threshold limit of 30,000 tpa, in accordance with Schedule 3 of the former provisions of the Environmental Planning and Assessment Regulations 1994.

The 2001 Land and Environment Court decision (10204 of 2000) approved the establishment of a hammermill (also known as a fragmentiser or metal shredder) together with associated components and an approved handling capacity of 60,000 tpa on the northern portion of 45 Tattersall Road. The designated development approved by the Land and Environment Court was the subject of an EIS prepared in December 1999 by ERM.

Both consents contain detailed conditions which govern the operation of the facility (refer to *Annex B* for a copy of each consent).

The intention of the 2001 Land and Environment Court decision was to cater for the operation of the hammermill (northern portion of the site), in addition to the existing operations in the southern portion of the site approved by BCC in 1996. As such Sell and Parker have been operating under the premise that they had approval for metal recycling activities of up to 30,000 tpa in the southern portion of the site, in addition to 60,000 tpa, processed through the hammermill in the northern portion of the site. The EPA licence no. 11555 (EPL) has a limitation of up to 100,000 tpa for scrap metal processing.

Sell and Parker now wish to increase the total processing capacity of the facility to 350,000 tpa. In doing this they would surrender all existing consents and bring operations under a single, modern development consent governing all operations at the expanded the facility.

## *1.3 SITE DESCRIPTION AND EXISTING OPERATIONS*

The existing waste metal recovery, processing and recycling facility is located at 45 Tattersall Road (Lot 5 DP 7086), Kings Park, within Blacktown Industrial Area, Blacktown, NSW. Number 23-43 Tattersall Road (Lot 2 DP 550522) immediately adjoins 45 Tattersall Road to the east (refer *Figure 1.1*). Access to both sites is gained from Tattersall Road, which is primarily serviced by Vardys Road to the north and Sunnyholt Road to the east.

### *1.3.1 45 Tattersall Road*

Sell and Parker currently operate a waste metal recovery, processing and recycling Facility at 45 Tattersall Road. Existing operations at the facility include shearing, fragmenting and shredding of industrial scrap metal, demolition material and car bodies.

45 Tattersall Road has a frontage of approximately 100 metres (m) to Tattersall Road, a depth of about 260m, with a rear boundary adjacent to Breakfast Creek to the south. It has an area of approximately 2.86 hectares.

45 Tattersall Road is cleared and developed. The key components of this site include:

- administration buildings;
- maintenance facilities;
- a stormwater detention dam;
- employee and visitor car parking;
- raw material stockpiles;
- metal recycling equipment (including a pre-shredder, shredder and shear);
- a waste enclosure;
- a product stockpile; and
- a rubber tyre loader.

A 4m high boundary wall surrounds the northern, eastern and western boundaries. The front wall is set back 8m from the front property boundary and provides a visual screen to the processing facility, whereby a landscaped mound has been planted.

### *1.3.2 23-43 Tattersall Road*

23-43 Tattersall Road is currently occupied by Dexion, a manufacturer of pallet racking, industrial and office storage equipment.

23-43 Tattersall Road has a frontage to Tattersall Road of approximately 146m and a variable depth ranging from 200m to 270m. The site has an area of approximately 3.24ha.

Development at this lot comprises a factory warehouse building with associated office, parking and landscaping areas and is currently occupied by Dexion, a manufacturer of pallet racking, industrial and office storage equipment.

### *1.3.3 Surrounding Environment*

*Figure 1.2* shows the site in the context of the surrounding environment, which is comprised of the following:

- North – Tattersall Road is located immediately adjacent to the north, with further industrial premises beyond. Residential properties are located approximately 650m to the north. To the immediate east is a formed stormwater drain with industrial development beyond. Sunnyholt Road is located approximately 260m east, with residential properties further east;
- South - Breakfast Creek is located immediately adjacent to the south, with recycling premises' further south.
- West – an auto parts industrial/recycling complex is located immediately adjacent to the west, with further industrial development further west. The Richmond railway line is located approximately 900m to the west with residential properties west of the railway line.

With the implementation of mitigation measures, it is not expected that the proposed development would result in any conflicts with existing development or land uses within the area.


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| Client: | Sell and Parker Pty Ltd | |
| Drawing No: | 0226308_EIS_GIS02_V1.mxd | |
| Date: | 10/03/2014 | Drawing Size: A4 |
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**Figure 1.2 - Site and Surrounding Environment**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

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## 1.4 APPROACH TO THE STUDY

### 1.4.1 Development Classification

The development is classified as SSD pursuant to State Environmental Planning Policy (SEPP) (State and Regional Development) 2011.

The proposal is permissible pursuant to the provisions of Blacktown Local Environmental Plan 1988, which zones the site "4(a) General Industrial". The Draft Blacktown Local Environmental Plan (LEP) proposes a B7 zone for the site, which would have the effect of prohibiting the expansion of the Project.

An assessment of the proposal with reference to the legislative planning framework is provided in *Chapter 4*.

### 1.4.2 EIS Structure

This EIS has been undertaken to assess the significance of the potential environmental impacts associated with the expansion and operation of the Blacktown Metal Recovery, Processing and Recycling Facility. The EIS has been undertaken in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the EP&A Regulations.

The format of this EIS has been based on the Director General's Requirements (DGRs) drafted by the Department of Planning and Infrastructure (DoPI) in conjunction with a range of other government agencies. DGRs for the project were issued on 23 December 2013, which were updated from previous DGR's granted in December 2011. *Table 1.2* below includes the DGRs and identifies where each requirement is addressed within this EIS report. A copy of the DGRs is provided as *Annex C*.

***Table 1.2 Director Generals Requirements***

| | Issue | Where addressed within the EIS report |
|---|---|---|
| General Requirements | The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* | Entire EIS |
| | In addition, the EIS must include a: | |
| | • detailed description of the development, including: | *Chapter 2* |
| | • need for the proposed development; | *Chapter 2* |
| | • justification for the proposed development; | *Chapter 2 and 11* |
| | • likely staging of the development - including construction, and operational stages; | *Chapter 2* |

| | Issue | Where addressed within the EIS report |
|---|---|---|
| | • likely interactions between the development and existing, approved and proposed operations in the vicinity of the site | *Chapter 1* |
| | • plans of any proposed building works; | *Chapter 4, Annex A* |
| | • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; | *Chapter 4* |
| | • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; | *Chapter 7* |
| | • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: | *Chapter 6* |
| | • a description of the existing environment, using sufficient baseline data; | *Chapter 6* |
| | • an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and | *Chapter 6* |
| | • a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment. | *Chapter 6 and 9* |
| | • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. | *Chapter 9* |
| | The EIS must also be accompanied by a report from a qualified quantity surveyor providing: | *Annex O* |
| | • a detailed calculation of the capital investment value (as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; | *Annex O* |
| | • a close estimate of the jobs that will be created by the development during the construction and operational phases of the development; and | *Annex O* |
| | • certification that the information provided is accurate at the date of preparation. | *Annex O* |
| Key Issues | **Waste Management**, including: | *Section 6.13* |
| | • a detailed description of the likely waste streams that would be handled/stored/disposed of at the facility; | |
| | • details of how this waste would be stored and handled on site, and transported to and from the site; | |
| | • details of the location and size of stockpiles of unprocessed and processed recycled waste on the site; | |
| | • the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste Avoidance and Resource Recovery Strategy 2007*; | |
| | • a description of the technology and timeframes for processing waste and the quality control measures that would be implemented; and | |

| | Issue | Where addressed within the EIS report |
|---|---|---|
| | • details of the potential impacts associated with treating, storing, using and disposing of this waste and waste products. | |
| | **Air Quality and Odour**, including:<br>• a quantitative assessment of the potential air quality and odour impacts of the development on surrounding landowners;<br>• a description of how the handling, transporting, production and storage of waste materials would be managed to control dust generation; and<br>• details of all proposed mitigation, management and monitoring measures. | *Section 6.4* |
| | **Noise and Vibration**, including:<br>• construction, operation and traffic noise;<br>• impacts from explosions; and<br>• details of all proposed mitigation, management and monitoring measures. | *Section 6.3* |
| | **Transport, Access and Parking**, including:<br>• predictions of the traffic volumes likely to be generated during construction and operation;<br>• an assessment of the impacts of this traffic on the safety, capacity and efficiency of the surrounding road network;<br>• modelling of key intersections (including any nearby existing or proposed developments) and details of truck routes;<br>• an assessment of the need for upgrading or road improvement works;<br>• details of the availability of non-car travel modes and measures to encourage greater use of these travel modes; and<br>• access and parking. | *Section 6.10* |
| | **Soil and Water**, including:<br>• a detailed water balance for the development, outlining the measures to minimise water use and any potential for a sustainable water supply;<br>• wastewater predictions, and the measures that would be implemented to treat, reuse and/or dispose of this water;<br>• the proposed erosion and sediment controls during construction of the post fragmentation processing structure and any other proposed structures;<br>• the proposed stormwater management system; and<br>• consideration of the potential salinity, contamination, flooding and acid sulfate soil impacts of the development. | *Section 6.6* |
| | **Hazards and Risks**, including an assessment of the hazards and risks on the site to people and the environment (and the potential for off-site impacts). | *Section 6.8* |
| | **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 and fire management and containment measures. | *Section 6.8 and Chapter 5* |
| | **Greenhouse Gas**, including:<br>• a quantitative assessment of the potential scope 1 and 2 greenhouse gas emissions of the development, and a | *Section 6.5* |

| | Issue | Where addressed within the EIS report |
|---|---|---|
| | qualitative assessment of the potential impacts of these emissions on the environment; and<br>• a detailed description of the measure that would be implemented on site to ensure that the development is energy efficient. | |
| | **Visual**, including:<br>• an assessment of the potential visual impacts of the development on the amenity of the surrounding area; and<br>• a detailed description of the measures that would be implemented to minimise the visual impacts of the development, including the design features, landscaping and measures to minimise the lighting and signage impacts of the development. | *Section 6.10* |
| | **Design,** including details of building design and fit-out for the post fragmentation processing structure and any other proposed structures to be used for the handling of chemicals (e.g. bunding and tanker loading/unloading areas). | *Section 6.6, Section 6.8, Section 6.13, Annex A* |
| Plans and Documents | The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents. | *Annex A* |
| Consultation | During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.<br>In particular you must consult with:<br>• Blacktown City Council;<br>• NSW Environment Protection Authority;<br>• NSW Office of Water;<br>• NSW Roads and Maritime Services;<br>• Sydney Water; and<br>• WorkCover NSW.<br>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided. | *Chapter 5* |
| Further consultation after 2 years | If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the requirements for lodgement. | *N/A.* |
| References | The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development | *Entire EIS Reference List* |

### *1.4.3 Technical Investigations*

The preparation of the EIS has involved input from a range of disciplines including acoustics, traffic, air quality, soil and water management, waste management, hazard and risks and greenhouse gas assessment.

A number of supporting technical reports are submitted as part of this EIS. These reports investigate the environmental implications of the project and provide mitigation and management measures and are provided as *Annexures* to the EIS. The reports are:

- *Noise and Vibration Impact Assessment (Annex H);*
- *Air Quality Impact Assessment (Annex I);*
- *Soil and Water Management Assessment (Annex J);*
- *Phase I Environmental Site Assessment (Annex K);*
- *Preliminary Hazard Analysis (Annex L); and*
- *Transport Impact Assessment (Annex M).*

# 2 THE PROPOSAL

*This Chapter describes all aspects of the proposed development for which the development approval is being sought.*

## 2.1 OUTLINE OF THE PROPOSAL

In order to meet projected future demands in waste metal recycling it is proposed to increase annual waste metal recovery, processing and recycling at Sell and Parkers Blacktown metal recycling facility to 350,000 tpa. To achieve the increased capacity it is proposed that the site be reconfigured and expanded on to the adjoining lot (23-43 Tattersall Road).

The proposed expansion would enable Sell and Parker to utilise the available plant capacity in order to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities.

The additional development has a capital investment value ("CIV"), as defined in *State Environmental Planning Policy (State and Regional Development) 2011* of $1.1 million.

### 2.1.1 Changes from Exiting Development

The changes to the proposed development, compared to existing operations, mainly involve the reconfiguration and expansion of the waste metal recovery and recycling facility on to the adjoining allotment to improve site safety and environmental improvements by shifting some processing indoors, improving traffic flow and reducing off-site traffic.

### 2.1.2 Proposed Development

In summary, the proposed development is as follows:

- the existing office at 45 Tattersall Road will be demolished and relocated to improve safety and improve access to the shredder. The office functions will be relocated to the existing office situated at the front of the expanded site (23-43 Tattersall Road) to isolate pedestrians and visitors from the operational activities on the site;

- car parking for staff and visitors will be increased and moved adjacent to the new office on the expanded site (on 23-43 Tattersall Road) and isolated from the processing area of the facility;

- the pre-shedder will be relocated away from the boundary to where the shear is currently located on 45 Tattersall Road and the shear will be relocated to 23-43 Tattersall Road;

- the existing post shredder non ferrous recovery processing will be enclosed under roof to improve efficiency and reduce noise and dust nuisance;

- parts of the existing building on 23-43 Tattersall Road will be demolished to allow for better circulation through the site;

- relocation of the floc material from adjacent to the site boundary to inside a building in the centre of the site;

- additional post shredder processing will be introduced to further extract remaining recyclables (metals and plastics) from floc material. This will involve conveying the floc via an enclosed conveyor after shredding to inside one of the existing buildings on the site (the Post Shredder Processing facility). The additional processing and storage of all floc will be located inside and hence reduce noise and dust nuisance;

- the non-ferrous shed and non-ferrous processing will be relocated from the building on the western site boundary to inside the remaining buildings on the expanded site to improve efficiency and reduce noise and dust nuisance;

- the existing maintenance shed will be demolished and relocated to inside the existing non ferrous shed. This will improve access to the shredder;

- the existing driveway entry at 23 -43 Tattersall Road will be used for retail non-ferrous customers so that they are isolated from the processing area of the facility;

- the current Sell and Parker entry driveway at 45 Tattersall Road will be widened so that two lanes of traffic can enter side by side at any time with two weighbridges installed so two customers can be served at the one time;

- the current exit driveway at 23-43 Tattersall Road will be widened and two weighbridges installed to handle truck movements;

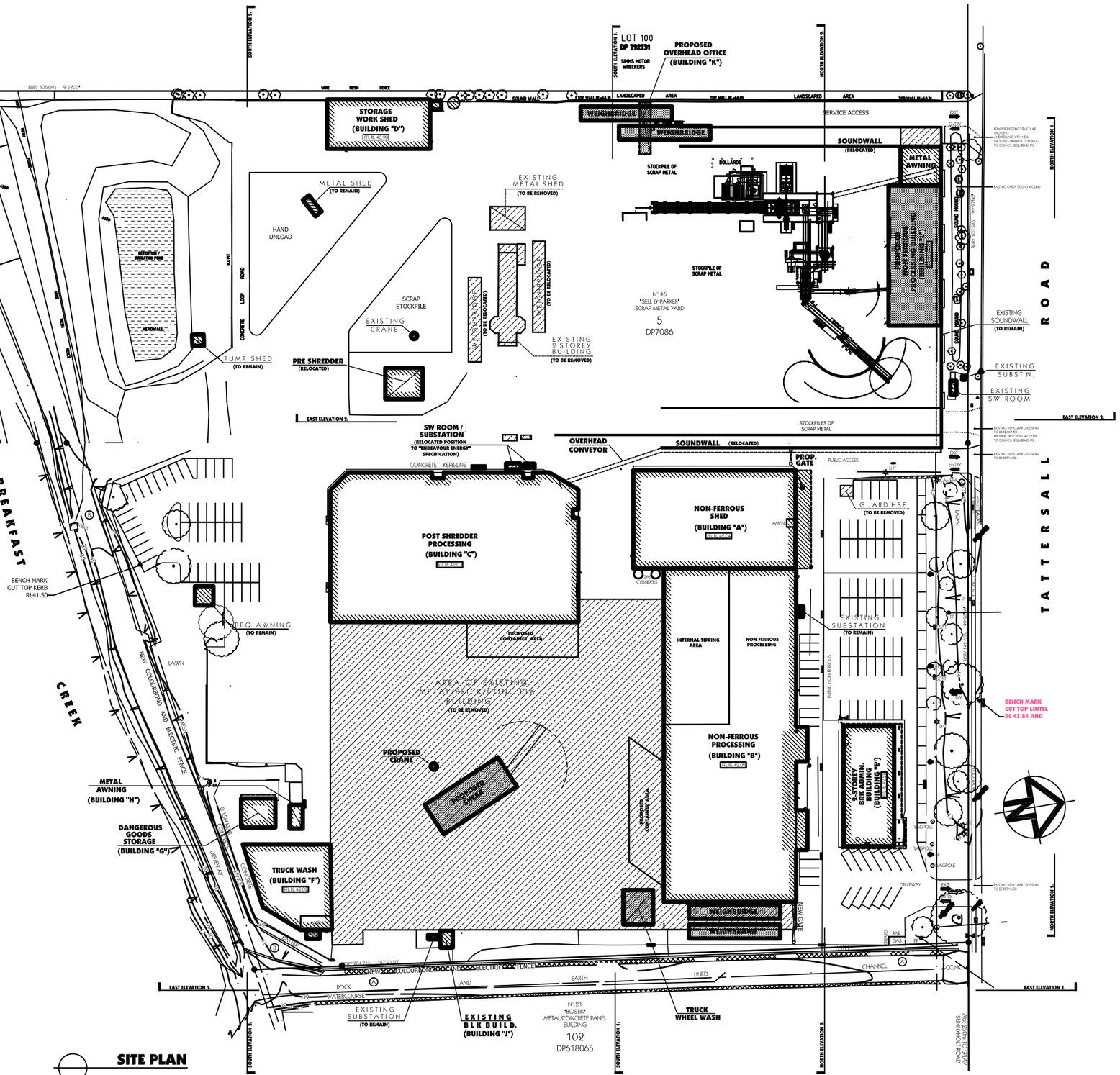
- the current Sell and Parker exit driveway at No 45 Tattersall Road will be closed and excavated to provide additional finished goods storage;

- part of the existing sound barrier wall and some vegetation will be removed between the two lots, with the existing 4m boundary fence relocated to the eastern boundary of the site adjoining Breakfast Creek;

- a community education and development facility will be incorporated into the office premises which will highlight recycling and resource recovery processes and its environmental benefits and will be available to the public on an appointment basis; and

- a new truck wash facility will be installed within the existing building on the enlarged site.

A site layout plan for the proposed development is shown in *Figure 2.1*. Additional plans accompanying this EIS are presented in *Annex A*.




| DEVELOPMENT DATA | | |
|---|---|---|
| **SITE AREA** | **59 475 M2 approx.** | |
| | **FLOOR AREAS** | |
| | **W/HOUSE** | **OFFICE /AMEN** |
| **BUILD "A"** | 1278 M2 | 24 M2 |
| **BUILD "B"** | 3162 M2 | 438 M2 |
| **BUILD "C"** | 2981 M2 | ——— |
| **BUILD "D"** | 415 M2 | ——— |
| **BUILD "E"** | 984 M2 | ——— |
| **BUILD "F"** | 494 M2 | ——— |
| **BUILD "G"** | 81 M2 | ——— |
| **BUILD "H"** | 25 M2 | ——— |
| **BUILD "J"** | 17 M2 | ——— |
| **BUILD "K"** | 47 M2 | ——— |
| **BUILD "L"** | 593 M2 | ——— |
| **TOTAL** | **10 077 M2** | **462 M2** |

| CARPARKING | | | |
|---|---|---|---|
| **REQUIRED** | TOTAL GR FLR AREA / 75 | = | **10077 / 75** |
| | | = | **134** |
| | TOTAL OFFICE AREA / 40 | = | **462 / 40** |
| | | = | **11** |
| | TOTAL | = | **145** |
| **PROVDED** | | = | **145** |

**LEGEND**

- EXISTING STRUCTURE TO REMAIN
- EXISTING STRUCTURE TO BE REMOVED
- PROPOSED NEW STRUCTURE
- EXISTING STRUCTURE TO BE FOR REUSE OR TO BE RELOCATED

GENERAL NOTES

1) All dimensions and floor areas are to be verified by the Builder prior to the commencement of any building work. Any discrepancies are to be brought to the attention of the designer.
2) Levels shown are approximate unless accompanied by reduced levels.
3) Figured dimensions must be taken in preference to scaling.
4) All boundary clearances must be verified by the surveyor prior to the commencement of any building works.
5) Where engineering drawings are required such must take preference to this drawing.
6) Stormwater to be discharged to Councils' requirements and AS 3500.3-1990.
7) All services to be located and verified by the Builder with relevant authorities before any building work commences.



| | | | |
|---|---|---|---|
| Client: | Sell and Parker Pty Ltd | | |
| Drawing No: | 0226308pm_C001_R0.cdr | | |
| Date: | 04/03/2014 | Drawing size: A3 | |
| Drawn by: | AA | Reviewed by: AC | |

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

**Figure No. 2.1 - Site Layout**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

ERM

## 2.2 LAND USE AND TENURE

### 2.2.1 45 Tattersall Road

This site is largely cleared and used for the existing waste metal recovery, processing and recycling facility. The site contains administration buildings, maintenance facilities, a stormwater detention dam, employee and visitor car parking, raw material stockpiles, metal recycling equipment (including a pre-shredder, shredder and shear), a waste enclosure, a product stockpile and a mobile material handling plant.

### 2.2.2 23-43 Tattersall Road

23-43 Tattersall Road is currently occupied by Dexion, a manufacturer of pallet racking, industrial and office storage equipment. Dexion has announced the closure of this site at the end of 2014 with manufacturing operations being relocated offshore.

### 2.2.3 Land Tenure

The existing facility at 45 Tattersall Road comprises Lot 5 in DP 7086 and is owned by Sell and Parker. Immediately adjacent and to the east of the existing facility, 23-43 Tattersall Road, comprises Lot 2 in DP 550522. This separate property is also owned by Sell and Parker, which was purchased in 2007 to cater for the future expansion requirements for the recycling operations.

## 2.3 PRODUCT DESCRIPTION

### 2.3.1 Materials and Products

It is proposed the facility will process 350,000 tonnes of raw material per year, sourced within NSW.

The re-saleable products from this process are ferrous metals, aluminium and small quantities of other metals such as copper.

### 2.3.2 Demand

At the time of Sell and Parker commencing the operation of the hammermill, there were three metal recycling plants in Sydney. One of these (One Steel) has subsequently relocated to Hexham, near Newcastle. This has increased the demand on the two remaining operators in Sydney (Sell and Parker at Kings Park and Simms Metal at St Marys) to process waste metal.

In February 2014, Alcoa announced the closure of their Yennora Aluminium recycling facility in Sydney. This site processed up to 55,000 tpa of aluminium, which now needs further processing and packaging prior to export. Sell & Parker will be able to handle such volumes in the expanded site.

Additionally, there is now a levy of $107.80 per tonne of waste to landfill. This is anticipated to increase to $150.00 per tonne in the near future. This levy increases the demand for recycling. Furthermore, landfill operators are mining their sites to extract metal for recycling at the two remaining plants in Sydney. Landfill operators are now one of the major suppliers of scrap metal to the metal recycling industry.

## *2.4 WASTE METAL RECOVERY, PROCESSING AND RECYCLING OPERATIONS*

### *2.4.1 The Process*

Pre-Shredding / Shredding Petrol tanks will be emptied and liquefied petroleum gas (LPG) cylinders will be removed from cars before they are fed through the facility. LPG cylinders will be stored in a quarantined area before being removed offsite for decommissioning and disposal. Petrol and oil will be drained from tanks and collected in above ground storage tanks and removed offsite for processing. Manual inspection of the items will confirm petrol and oil has been removed before proceeding to the next step.

Cars and scrap metal are lifted onto a heavy-duty feed conveyor (Cl) by an electric scrap handler. The operator of the mobile material handler will also check the feed material while loading it onto the conveyor. The materials will pass the control cabin, where an operator will also check incoming materials. The control cabin is an enclosed structure with sound proofing and air conditioning for operator comfort and health and safety requirements.

The feed conveyor transports raw material into the hammer mill which shreds the metal into fist-sized pieces.

The fragmented raw material is carried upwards by an incline conveyor and will then be dropped into a 'cascade' chute, hitting against its corners and therefore loosening any dirt and dust. Air from the cascade will be extracted by an induced draft fan and passed into the cascade cyclone, which will drop out particulates. Cleaned air will then pass through a wet scrubber to remove fine dust.

The cleaned fragmented material will then pass under drum magnets, which will pick up ferrous metals and drop them onto the picking conveyor (C2), where operators will remove remaining non-ferrous materials. The ferrous metals will continue up a conveyor (C3) which offloads the ferrous product into the product stockpile, that is contained in a designated area.

*Shear*

The shear is used to break up bulky items (ie large metals beams, bulk railway) into smaller pieces for on-selling. As such, this process is quite separate from the material recovery for all other items onsite, which go through the pre-shredding/shredding process outlined above and where relevant the non-ferrous collection process outlined below.

*Non-Ferrous Collection / Processing*

The non-ferrous materials will drop beneath the drum magnets to a conveyor which runs perpendicular to the ferrous product. This conveyor carries non-ferrous metals and wastes such as plastic and glass. The material is conveyed beneath another magnet, which picks up any small remaining quantities of ferrous metals and drops them into a skip for collection. Non-ferrous materials will continue through a pan feeder and trommel which will separate the materials into appropriate size streams for sorting.

The streams pass through an eddy-current separator, which collects aluminium, copper and brass into a skip. The streams then join and pass beneath a final eddy-current separator to win any remaining aluminium.

After passing through these stages, the remaining materials are waste products, which will be conveyed to an enclosed building.

The new post shredder processing will involve a confidential proprietary arrangement of sizing, screening, eddy currents and induction sorters.

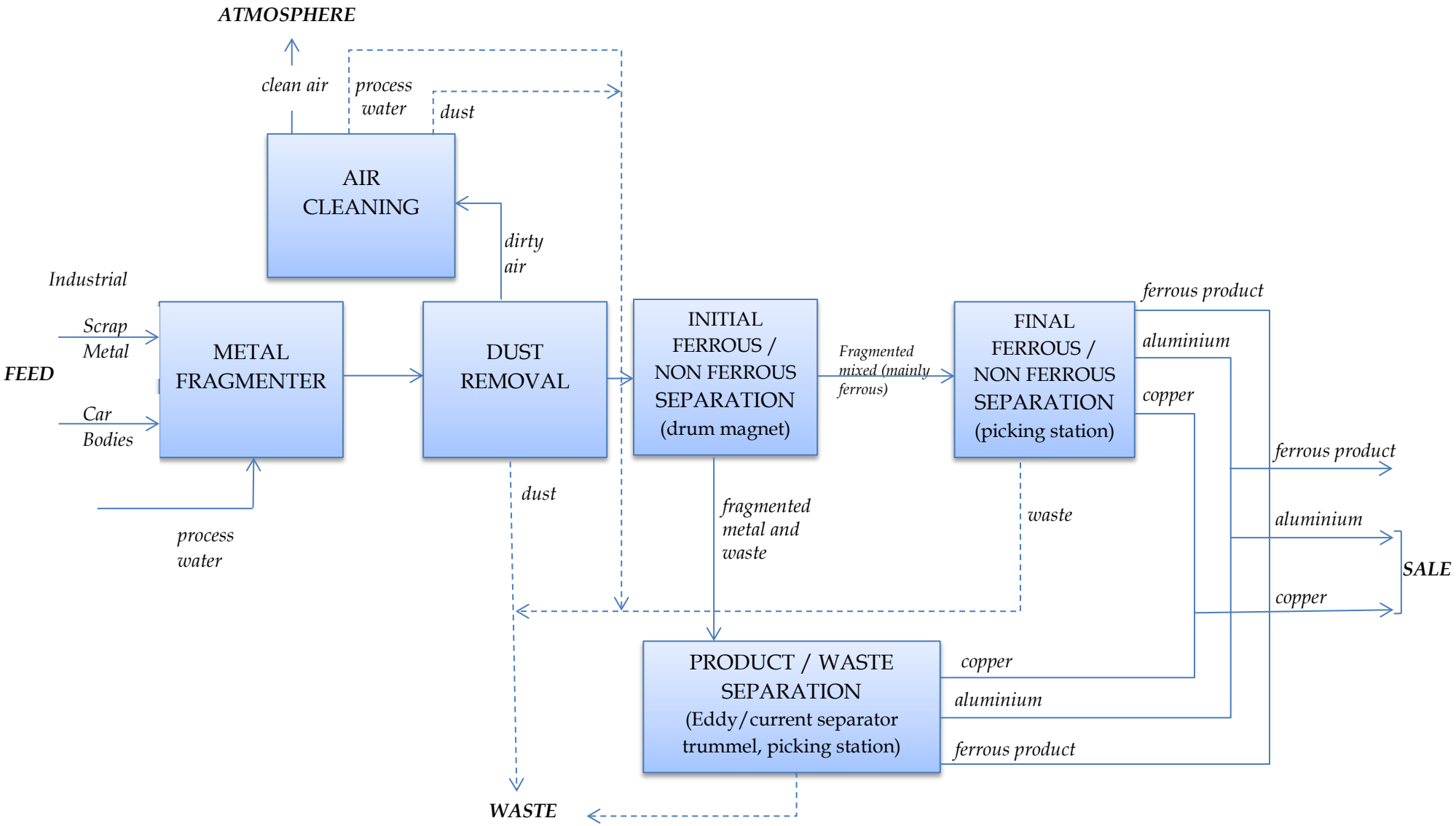
A simplified process diagram showing the proposed metal recycling process is provided in *Figure 2.2.*

### 2.4.2 *Waste Generation*

Waste from the process will consist of materials such as mixed plastics, particulates, glass and foam from car upholstery and building materials. Most waste will emerge from the end of the non-ferrous metals sorting conveyor, and will be conveyed to an enclosed building. Up to 6,000 tonnes of waste will be generated per month.

Additional solid waste will be generated from the air quality controls. This will consist of mud, which is added to the main waste stream at the end of the non-ferrous metals sorting conveyor, and thus joins other waste in the enclosed building.

*Figure 2.2 Process Diagram*



### *2.4.3 Product Handling and Transport*

The re-saleable products from this process are ferrous metals, aluminium and small quantities of other metals such as copper. The ferrous metal is by far the largest product stream and will be stored in a contained designated area. This area will be contained by the northern and eastern retaining walls, and a concrete wall four metres in height adjacent to the conveyor. Access to the product will be from the open sides. This area is expected to hold approximately 3,000 tonnes, being six metres high, 30 metres long and 15 metres wide.

A rubber tyred loader will lift the ferrous metal onto semi-trailers for transport to customers such as the One Steel mini mill at Rooty Hill and Newcastle and BHP at Port Kembla. The semi-trailers have a 25 tonne load capacity and approximately 32 are expected to leave the site each day. The peak number of semi-trailers leaving the site will be four per hour.

Aluminium product will be collected in skips next to the eddy-current Separators. Copper and other metals, will be collected in skips near the sorting areas. All nonferrous metals will then be loaded directly into closed 20 foot shipping containers and exported to end users in Asia. Twenty shipping containers will leave the site per week on average, with a peak of six per day.

### *2.4.4 Plant and Equipment*

General plant and equipment during the site establishment and construction works for the Project would include;

- excavators;
- levelling machinery;
- concrete trucks and boom pumps;
- cranes; and
- trucks.

### *2.4.5 Water Management*

Drainage from polluted catchments on the site is to be directed to the stormwater detention dam. The current landform of the main site (45 Tattersall Road) conveys runoff towards the dam in the southern portion of the site. The retention dam forms the primary means for controlling entrained sediment and contaminants during typical operations on the site.

Water Management is discussed is greater detail in *Section 6.6* and *Annex J* of this EIS.

### *2.4.6 Access, Road Haulage and Traffic*

Vehicle access to/from the expanded facility will be via upgraded, separate entry and exit driveways off Tattersall Road. The existing driveway entry at No 23 -43 Tattersall Road will be used for smaller retail non-ferrous customers so that they are kept isolated from the processing area of the facility. The current entry driveway at No. 45 Tattersall Road will be widened so that two lanes of traffic can enter side by side at any time with two weighbridges installed so two customers can be served at the one time. The current exit driveway at No 23-43 Tattersall Road will be widened and two weighbridges installed to handle increased traffic volume. The current exit driveway at No 45 Tattersall Road will be closed and excavated to provide additional finished goods storage.

### *2.4.7 Facilities and Services*

The site contains an existing office building with amenities. Reticulated water and sewer is supplied to the site. The site is connected to mains electricity and landline telephone and internet services.

### *2.4.8 Education and Training Centre*

Sell and Parker are proposing to include an education and training centre within the new office area at the expanded site. The objective of the centre will be to promote recycling initiatives and to explain the nature of resource recovery. Although available to the general public, the centre will be primarily aimed at school children to foster the need for recycling and resource recovery. Where possible, the centre will provide support and seek to participate with the education programmes in schools and tertiary education facilities.

Sell & Parker already hosts annual tours of their sites for school and community groups, and the new facility will allow them to expand this program.

### *2.4.9 Operating Hours and Work Force*

The approved operating hours for the existing facility are Monday to Friday, 7.00am to 5.00pm and Saturday, 7.00am to 3.00pm. No activities on-site are to be conducted on Sundays and public holidays.

The proposed hours of operation for the expanded facility (the Project) are Monday to Friday, 6.00am to 9.00pm and Saturday, 7.00am to 5.00pm. No activities are proposed on Sundays and public holidays.

Sell and Parker employs approximately 64 people within the main facility, including truck drivers. It is expected that this number will increase to over 80 at the expanded site.

## 2.5 *PROJECT TIMING*

Dexion have announced the closure of their manufacturing operation for 2014. The expansion of the Sell and Parker facility will commence immediately upon approval in order to ensure demands for waste metal recycling in the local area are met. The site works are expected to take six months, with the expanded site being operable from quarter 3 in 2015.

## 2.6 *ENVIRONMENTAL MANAGEMENT*

The main site operates under an existing Environmental Management Plan (EMP). The existing EMP:

- sets out the environmental management system for the site;
- identifies environmental management strategies for stormwater management, dust, noise, waste, fuels/oils/chemicals, etc; and
- establishes monitoring, performance evaluation and reporting procedures.

The existing EMP will be updated to include mitigation measures for the potential social and environmental impacts addressed throughout this EIS. The strategy will detail the following:

- environmental issues;
- management objectives;
- performance indicators;
- mitigation measures;
- monitoring requirements;
- responsibilities and timing;
- incident management; and
- reviewing and reporting.

## 2.7 *REHABILITATION AND FINAL LAND USE*

It is intended the site will continue operations as a waste metal recovery, processing and recycling facility for the foreseeable future. The expanded site proposal will utilise existing buildings where appropriate and if the site was to close, it is likely it would be utilised for another industrial purpose and redeveloped accordingly. The proposed project does not hinder future use of the land, or result in any ongoing environmental liability.

# 3 AIMS, OBJECTIVES AND CONSIDERATIONS OF ALTERNATIVES

*This chapter outlines the aims and objectives of the proposal as well as alternatives reviewed and assessed in relation to the expansion of the site.*

## 3.1 AIM

The primary aim of the proposed development is to provide waste metal recovery, processing and recycling services to industries in the Sydney Metropolitan area and regional areas of NSW.

## 3.2 OBJECTIVES

The objectives of the proposed development are to:

- better respond to increasing demands (and community expectations) for efficient and effective metal resource recovery and recycling facilities; and
- provide additional employment opportunities within the Blacktown City Council LGA.

## 3.3 CONSIDERATIONS OF ALTERNATIVES

### 3.3.1 Option 1 – Undertaking the Proposal

Undertaking the proposed expansion will allow for increased handling capacity for waste metal recovery, processing and recycling, to better service both existing demand and project future demand, particular that from landfill operators, which are beginning to mine their sites to extract metal for recycling. The existing site, being one of two facilities in Sydney, is strategically positioned within the Blacktown Industrial Area, being in close proximity to existing industries, key transport corridors such as the M7 and M4 motorways and landfill operations. The existing site is commercially successful. Expansion of the existing facility into the site adjacent will mean that much of the existing infrastructure can remain on-site and will not require mobilisation to an alternative site, resulting in relatively minor disturbance to the existing neighbouring industrial lots and reduced demand on additional infrastructure. This option is therefore the preferred option.

### 3.3.2 Option 2 – Expansion to 58 Tattersall Road

An alternative option considered was expansion of the existing facility to 58 Tattersall Road, to be primarily used for equipment storage and employee parking associated with the main facility. 58 Tattersall Road is located opposite the existing facility (ie on the other side of Tattersall Road).

While this site could be used for related equipment storage and employee parking, the site was considered too small to undertake the proposed expansion as described. The location on the opposite side of Tattersall Road poses operational constraints and health and safety risks, as it would mean that employees and visitors would have to cross this road to get to the main site, posing traffic conflicts, pedestrian safety issues and less efficiencies from an operational perspective. This option was therefore not considered further.

### *3.3.3 Option 3 – Relocation of Expanded Facility to New Site*

A further alternative considered was to relocate this facility to a new site, possibly outside of Sydney. While this option is possible it is not considered viable due to the considerable cost of mining scrap metal from its source (population in Sydney) to a processor and back again to the users of the scrap. It would also require considerable time and resources to acquire and gain approval to operate such a facility at a new site. This option would also see the loss of positive flow on effects to jobs and local support industries in Blacktown and further detrimentally impact on the capacity of the Sydney Metropolitan area to cater for the increasing demand for metal recycling. This option was therefore not considered further.

### *3.3.4 Option 4 – No Expansion*

One alternative considered was to not undertake an expansion. This option would result in no additional adverse environmental impacts, however, the potential for increase in handling capacity and subsequent positive flow on effects to jobs and local support industries would be lost. This option would likely require an alternative site being chosen to service projected demands in the Sydney Metropolitan area, as described above. This would require a duplicate site being established to take advantage of growth opportunities, and would be financially and environmentally inefficient and as such has not been considered further.

# 4 PLANNING CONSIDERATIONS

## 4.1 COMMONWEALTH LEGISLATION

## 4.2 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) relates to the protection of the environment and the conservation of biodiversity. The EPBC Act incorporates an assessment and approvals system for:

- actions that have a significant impact on matters of national environmental significance (NES);
- actions that have a significant impact on the environment of Commonwealth land; and
- actions carried out by the Commonwealth Government.

*Matters of National Environmental Significance*

A search using the Department of the Environment Protected Matters Search Tool was undertaken on 15 January 2014. The results of the search are summarised in *Table 4.1* below.

***Table 4.1 Relationship of the Project to Matters of National Environmental Significance***

| Matter of National Environmental Significance | Application to the Project | Relevant Section |
|---|---|---|
| World Heritage Areas | Not relevant to this project | - |
| Wetlands protected by international treaty (the Ramsar Convention) | Not relevant to this project | - |
| Nationally listed threatened species and ecological communities | Yes – four threatened ecological communities and 45 threatened species have the potential to occur at the site. | See *Section 6.1* and *Annex F* of this report. |
| Nationally listed migratory species | Yes – 12 nationally listed migratory species have the potential to occur at the site. | See *Section 6.1* and *Annex F* of this report. |
| All nuclear actions | Not relevant to this project | Not Applicable |
| The environment of Commonwealth Marine Areas | There are no Commonwealth Marine areas in close proximity to the site. | Not Applicable |

*Implications for the Project*

Given the site does not lie within MNES specified protected areas, does not contain ecological habitat for nationally listed threatened species, habitats or migratory species, and that the project does not involve nuclear actions, it is not expected to impact on any matter of NES and therefore does not require Commonwealth approval under the provisions of the EPBC Act.

## *4.3 STATE LEGISLATION*

### *4.3.1 Environmental Planning and Assessment Act 1979*

The relevant State planning legislation is the *Environmental Planning and Assessment Act 1979* (EP&A Act). The EP&A Act institutes a system of environmental planning and assessment within New South Wales and is administered by the Department of Planning and Infrastructure (DP&I).

The proposed increase in the handling capacity of the metal recycling facility is classified as a State Significant Development (SSD) (refer to *Section 1.1*) and is therefore assessed under *Part 4* of the EP&A Act.

The EP&A Act is supplemented by the *Environmental Planning and Assessment Regulation 2000* (EP&A Regs), as well as a suite of environmental planning instruments (EPI's), namely Local Environmental Plans (LEP's) and State Environmental Planning Policies (SEPP's) {Regional Environmental Plans (REP's) are now deemed SEPP's}. The EPI's implemented under the EP&A Act that are considered relevant to the proposal are:

- *State Environmental Planning Policy 33 – Hazardous and Offensive Development;*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure);*
- *State Environmental Planning Policy 55 – Remediation of land; and*
- *Blacktown Local Environmental Plan 1988.*

*EP&A Act (other approvals)*

Section 89J of the EP&A Act identifies approval requirements under other Acts and/or relevant sections of those Acts (other than EP&A Act) which do not apply to SSD projects. Essentially SSD turns off these 'other' approval requirements for SSD approved projects, which comprise the following:

- water use approval under section 89, a water management work approval under section 90 or an activity approval (except for aquifer interference) under Section 91 of the *Water Management Act 2000*;

- concurrence under Part 3 of the *Coastal Protection Act 1979*;
- an approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*;
- an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974;*
- a bush fire safety authority under section 100B of the *Rural Fires Act 1997*; and
- a permit under section 201, 205 or 219 of the *Fisheries Management Act 1994.*

Section 89K of the EP&A Act states that approvals under the following Acts or relevant section of those Acts must be applied consistently and cannot be refused when undertaking SSD project. In other words, the relevant agency responsible for administering the approval under another Act, must have regard to the terms of the consent issued for a SSD and any 'other' approval requirements should be consistent with the purpose and intent of the original consent. Relevant Acts or sections of Acts referred to in section 89K of the EP&A Act, which are relevant to this Project, comprise the following:

- an environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997*
- a consent under 138 of the *Roads Act 1993*; and
- a licence under the *Pipelines Act 1967*.

The requirements of other legislation which are applicable to the Project are discussed in further details below.

### *4.3.2 Protection of the Environment Operations Act 1997*

The *Protection of the Environment Operations Act 1997* (POEO Act) establishes the NSW environmental regulatory framework and includes a licensing requirement for certain activities identified in *Schedule 1* of the Act. Scrap metal processing facilities with the capacity to process more than 150 tonnes of scrap metal per day or 30,000 tonnes per year (if not carried out wholly indoors) or 50,000 tonnes per year (if carried out wholly indoors) are a scheduled activity under the Act.

Environment Protection Licence (EPL) 11555 applies to existing operations at the site; The EPL will require updating for the expanded site.

Section 89K of the EP&A Act outlines approvals that are still required in relation to SSD Projects, it states:

> *An authorisation of the following kind cannot be refused if it is necessary for carrying out an approved project and is to be substantially consistent with the approval under Division 4.1 (SSD):*

- *Protection of the Environment Operations Act 1997* - an environment protection licence under Chapter 3 of the Act; and

- *Roads Act 1993* - a permit under s138 to impact on public roads.

Therefore despite a number of the integrated development provisions and post licencing requirements not being required for SSD project, this development will require an amendment to the existing EPL for the site.

### *4.3.3 Waste Avoidance and Resource Recovery Act 2001*

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) provides a waste hierarchy and ensures that resource management options are considered against the following priorities:

- avoidance - including action to reduce the amount of waste generated by households, industry and all levels of government;

- resource recovery - including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources; and

- disposal - including management of all disposal options in the most environmentally responsible manner.

The WARR Act aims to achieve a reduction in waste generation and encourages turning waste into recoverable resources. The *NSW Waste Avoidance and Resource Recovery Strategy* (the 'Waste Strategy') was introduced in 2003 (updated in 2007) to provide a framework for reducing waste and making better use of resources.

The proposed development is in accordance with the aims and intent of the WARR Act as it provides a vital resource recovery facility. The facility is one of only two such facilities in the Sydney metropolitan area. The proposed development will allow better and more efficient management of waste metal within the site and will also ensure the facility can continue to manage with the predicted increase in demand for metal resource recovery services into the future.

### *4.3.4 Water Management Act 2000*

The *Water Management Act 2000* (WM Act) incorporates the provisions of various Acts relating to the management of surface and groundwater in NSW, and provides a single statute for the regulation of water use and works that affect surface and groundwater, both marine and fresh. The WM Act is administered by the NSW Office of Water (NOW).

Areas of the State where water sharing plans have commenced and apply are subject to the WM Act. Where water sharing plans have not commenced or do not specifically apply, the provisions of the *Water Act 1912* continue to apply.

The *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011* applies to the site and therefore the provisions of the WM Act apply. The proposed development does not involve works that require a water supply work approval, water use approval or controlled activity approval and therefore no further consideration of the WM Act is necessary.

### *4.3.5 Threatened Species Conservation Act 1995*

The *Threatened Species Conservation Act 1995* (TSC Act) lists threatened species, populations and ecological communities under Schedules 1 and 2 of the Act, that are priorities for conservation within NSW. Projects determined by a statutory authority of the NSW Government are required to be assessed in accordance with the EP&A Act, as amended by the TSC Act.

The site is already significantly disturbed and the proposed increase in the handling capacity of the site will not result in any changes to the current approved development footprint. Therefore it is unlikely the proposed development will impact on any threatened species, ecological communities or their habitats.

### *4.3.6 National Parks and Wildlife Act 1994*

The *National Parks and Wildlife Act 1974* (NPW Act) guides the management of conservation areas as well as the protection of native vegetation, native fauna and Aboriginal objects across the State. Under the NP&W Act it is illegal to move, damage, deface or destroy a relic without written permission from the Office of Environment and Heritage (OEH).

There are no National Parks or Nature Reserves in the vicinity of the site. Further, given the site is highly disturbed it is unlikely the proposal will result in disturbance to any items of Aboriginal heritage significance. Therefore no further consideration of the NPW Act is necessary.

### *4.3.7 Rural Fires Act 1997*

The main objectives of the *Rural Fires Act 1997* are to:

- prevent, mitigate and suppress bush and other fires in NSW;
- co-ordinate bushfire fighting and bushfire prevention throughout the State;
- protect people from injury or death and property from damage and as a result of bushfires; and
- protect the environment.

The proposed development would not impede the protection of any nearby buildings or infrastructure from bushfire. No subdivision is proposed and therefore there is no requirement for a bush fire safety authorisation from the Commissioner of the NSW Rural Fire Service in accordance with Section 100B(1) of the *Rural Fires Act 1997*.

### *4.3.8 Building Code of Australia (BCA)*

A preliminary BCA assessment (refer *Annex N*) has been undertaken by M.J. Harvey to determine the level of fire safety required to meet current building standards. The M.J. Harvey report recommends that a performance based approach to meeting the deemed to satisfy provisions of the BCA will be required for the project, based primarily on the size/volume of the buildings on the site. Furthermore, the report recommends that fire safety measures on the site will be required to be upgraded as part of the Project.

If the Project is approved by the DP&I, compliance with the BCA would be verified by an independent Accredited Certifier who would check all the drawings as part of the approval process, undertake further consultation with the NSW Fire Service, prior to construction and operation of the facility. Given that a 'performance based' approach to complying with the BCA is proposed, Sell and Parker will be required to engage a level one Accredited Certifier. Prior to construction works commencing a Construction Certificate will be required to be issued by the Accredited Certifier, a copy of which will be provided to Blacktown City Council and DP&I.

## *4.4 STATE ENVIRONMENTAL PLANNING POLICIES*

### *4.4.1 State Environmental Planning Policy (State and Regional Development) 2011*

Clause 8 of *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP State and Regional Development) relates to the identification of State Significant Development (SSD), it 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.*

Clause 23, Schedule 1 of SEPP State and Regional Development identifies types and capacities of waste and resource management developments that are considered to be SSD. Clause 23(3) states:

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

As it is proposed that the handling capacity of the metal recycling facility be increased to 350,000 tonnes of waste per year, the proposal is SSD.

### *4.4.2 State Environmental Planning Policy 33 – Hazardous and Offensive Development*

The primary aims of *State Environmental Planning Policy 33 – Hazardous and Offensive Development* (SEPP 33) relate to:

- the provision of standard definitions of offensive and hazardous industries for inclusion in environmental planning instruments;
- ensuring 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 minimize any adverse impacts; and
- ensuring that in deciding 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.

*Potentially Hazardous Industry*

Part 1 Section 3 of SEPP 33 defines a 'potentially hazardous industry', it states:

*'Potentially hazardous industry' means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:*

*(a) to human health, life or property, or*

*(b) to the biophysical environment,*

*and includes a hazardous industry and a hazardous storage establishment.*

The metal recycling facility is considered to be a 'potentially hazardous industry' and therefore a Preliminary Hazard Analysis (PHA) was undertaken by Arriscar Pty Limited (refer to *Section 6.8* and Annex K). The PHA includes a semi-quantitative analysis and assessment of off-site fatality, injury and property damage risk, in accordance with the NSW Hazardous Industry Planning Advisory Paper (HIPAP) guidelines. The assessment found that qualitative criteria for potentially hazardous development was satisfied, and the development is not considered a hazardous industry, as defined in SEPP 33. This finding is consistent with previous ruling in the Land& Environment Court case held in 2000 between Blacktown City Council and Sell & Parker Pty Ltd.

*Potentially offensive Industry*

Part 1 Section 3 of SEPP 33 defines a 'potentially offensive industry', it states:

> *'Potentially offensive industry' means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.*

An Environment Protection Licence (EPL) No. 11555, issued under the *Protection of Environment and Operations Act 1997,* applies to the current operations at the site. The EPL is for a *Scheduled Activity* (scrap metal processing facility) with the capacity to process more than 150 tonnes of scrap metal per day or 30,000 tonnes per year. In most cases, compliance with the NSW OEH licence requirements should be sufficient to demonstrate that an industry is not offensive (NSW DoPI, 2011).

It is likely that the proponent will be required to apply for a variation to their EPL to take into account the proposed expansion and increase in processing capacity. However, given there will be no significant changes to the types of emissions to air, water, waste or noise resulting from the proposed development, it is considered that site operations can be undertaken within the requirements of a revised EPL and therefore not likely to be considered an offensive development.

### *4.4.3 SEPP (Infrastructure) 2007*

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

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

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

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

*(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),*

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

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

Specifically the ISEPP required new or expansion to existing development to be referred to the Roads and Maritime Services (RMS) if it involves "Landfill, recycling facilities, waste transfer station". On the basis of the development including recycling and waste transfer components, then a referral to Regional Traffic Development Committee of RMS will be required in accordance with the ISEPP.

The remaining provisions of the ISEPP are of limited relevance.

### *4.4.4 State Environmental Planning Policy 55 – Remediation of land*

SEPP 55 aims to provide a state wide planning approach to the remediation of contaminated land and in particular promotes the remediation of contaminated land for the purpose of reducing risk of harm to human health and any other aspect of the environment.

Clause 7 of SEPP 55 requires a consent authority to consider whether the land to which a development application relates is contaminated and if the land is contaminated to be satisfied that the land is suitable in its contaminated state, or will be suitable after remediation, prior to granting consent.

The proposed expansion of the Project onto the adjoining site does not result in a change in the classification or land use of the site. There are no known contamination risks identified by the expanded site.

The building works are largely contained to retention and making good existing buildings and the sealing of any exposed areas of the site (except for proposed landscape areas), therefore minimising contamination risks.

On this basis the project is consistent with the provisions of SEPP 55.

## *4.5 LOCAL PLANNING PROVISIONS*

### *4.5.1 Blacktown Local Environmental Plan 1988*

The site is zoned 4(a) Industrial - General under the Blacktown Local Environmental Plan 1988 (Blacktown LEP). *Figure 4.1* includes a zoning extract from Blacktown LEP 1988.

The zone of objective of the 4(a) Industrial Zone – General, include:

"*(a) to provide areas for accommodating both traditional and modern forms of industrial, warehousing and like development outside areas used or zoned for residential or business purposes and so encourage economic and employment growth in Blacktown,*

*(b) to encourage the establishment of new industry and other compatible, large-scale activity in appropriate locations,*

*(c) to accommodate large industrial, warehousing and like developments such as auction rooms, plant and equipment hire establishments, timber yards and the like, but to prohibit offensive or hazardous industries,*

*(d) to enable development for the purposes of retailing only where it is associated with, and ancillary to, manufacturing purposes on the same land or where it serves the daily convenience needs of the local workforce,*

*(e) to enable development for the purposes of commercial offices only where it is associated with, and ancillary to, industrial, warehousing or like purposes on the same land or where it serves the daily convenience needs of the local workforce,*

*(f) to ensure permitted development creates areas which are pleasant to work in and are safe and efficient in terms of transportation and land utilisation,*

*(g) to enhance and improve the physical environment of the City of Blacktown by minimising disturbances caused by air pollutants, water pollutants, other pollutants and noise pollution, and*

*(h) to enable development for the purposes of community facilities such as child care facilities either in association with or independent of other permitted development to serve the needs of the workforce of the area."*

Having regard to the above aims of the 4(a) Industrial – General zone, which generally relate to locating industrial development, and development associated with industrial development (such as offices, car parking), in appropriate locations away from residential and business areas, and also to minimise environmental pollution.

Blacktown Local Environmental Plan 1988

- Land Zone 1(a) Rural
- Land Zone 2(a) Residential
- Land Zone 2(b) Residential
- Land Zone 2(c) Residential
- Land Zone 3(a) General Business
- Land Zone 3(b) Special Business
- Land Zone 4(a) General Industrial
- Land Zone 4(b) Light Industrial
- Land Zone 4(c) Special Industrial
- Land Zone 4(d) Huntingwood Industrial
- Land Zone 5(a) General Special Uses
- Land Zone 5(b) Arterial Road
- Land Zone 5(c) Local Road
- Land Zone 6(a) Public Recreation
- Land Zone 6(b) Private Recreation
- Land Zone 6(c) County Open Space

**Study Area**

4(a)

4(b)

6(a)

5(b)

5(a)

TATTERSALL ROAD

ROMFORD ROAD

WARDYS ROAD

ANTHONY STREET

REDWOOD ST

CHARLES STREET

FORGE STREET

GATE ROAD

CARNEGIE PLACE

HOLT ROAD

| | | | |
|---|---|---|---|
| Client: | Sell and Parker Pty Ltd | | |
| Drawing No: | 0226308pm_C002_LEP_R0.cdr | | |
| Date: | 04/03/2014 | Drawing size: | A3 |
| Drawn by: | TH | Reviewed by: | AC |

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

**Figure No. 4.1 - Land Use Zoning**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park,

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

ERM

The land use is permitted within the 4(a) Industrial – General zone and the site is located within an existing industrial area, on an already developed site where waste recycling operations already occur. Environmental controls will be adhered with to minimise the likelihood of environmental impacts resulting from the operations at the site. It is therefore considered the proposal meets the aims of the 4(a) Industrial – General zone.

The LEP and zoning table for the 4(A) General Industrial zone is structured so that any item not identified as being prohibited development is permissible with consent.

The prohibited land uses under the 4(a) General Industrial zone are:

*"Amusement centres; boarding houses; bulky goods retail establishments; caravan parks; commercial premises (other than those ancillary to and used in conjunction with a purpose permissible in this zone or which serve the daily convenience needs of the workforce of the industrial area); dual occupancy or dwelling-houses (other than those ancillary to and used in conjunction with a purpose permissible in the zone); exhibition homes; exhibition villages; group homes; hardware stores; hazardous industries; hazardous storage establishments; home activities; hospitals, housing for aged or disabled persons; institutions; integrated housing; intensive lot feeding of livestock; manufactured home estates; medium density housing; methadone dispensaries; mineral sand mines; mines; mixed businesses; motels; offensive industries; offensive storage establishments; professional consulting rooms; professional offices; recreation establishments; residential flat buildings; roadside stalls; rural industries; rural workers' dwellings; shops (other than those ancillary to and used in conjunction with manufacturing purposes permissible in this zone or which serve the daily convenience needs of the workforce of the industrial area); tourist facilities."*

The proposed use of the site for waste metal recovery, processing and recycling facility falls within the definition of '*industry*' under Blacktown LEP 1988. The Blacktown LEP relies upon the land use definitions within the 'Model Provisions', which in the case for 'Industry' includes:

***"Industry** means:*

*(a) any manufacturing process within the meaning of the Factories, Shops and Industries Act 1962, or*

*(b) the breaking up or dismantling of any goods or any article for trade or sale or gain or as ancillary to any business,*

*but does not include an extractive industry. "*

Elements of the waste metal recovery, processing and recycling facility also meet the 'junkyard' definition contained within the Model Provisions, which relevantly includes:

***"Junk yard** means land used for the collection, storage, abandonment or sale of scrap metals, waste paper, rags, bottles or other scrap materials or goods used for the collecting, dismantling, storage, salvaging or abandonment of automobiles or other vehicles or machinery or for the sale of parts thereof."*

Irrespective both '*industry*' and '*junkyard*' activities are permissible with consent within the 4(a) General Industrial zone.

*Flooding*

Breakfast Creek flows along the southern boundary of the site. As a result, the site is partially affected by flooding. Clause 20 of the Blacktown LEP relates to development in areas affected by the 1 in 100 year flood level, it states:

> *(2) Despite any other provision of this plan, the council may refuse consent to the carrying out of any development on land affected by the 1% annual exceedance probability flood where, in its opinion, the development may:*
>
> > *(a) adversely affect the efficiency, or unduly restrict the capacity, of the floodway or where the safety of the development would be affected in time of flood,*
> >
> > *(b) affect the flood peak at any point upstream or downstream of the development,*
> >
> > *(c) affect, to a substantial degree, the flow of floodwater on adjoining lands,*
> >
> > *(d) cause avoidable erosion, siltation or unnecessary destruction of riverbank vegetation in the area,*
> >
> > *(e) affect the water table on any adjoining land,*
> >
> > *(f) adversely affect riverbank stability, or*
> >
> > *(g) create a hazard to life or property in time of flood.*

The proposal does not include the construction of any buildings or installation of any equipment or machinery on land affected by the 1% annual exceedance probability flood level. The proposed expansion will result in the removal of buildings from within the 1 in 100 year flood zone. The only new building proposed is located at the northern end of the site, outside the flood prone section of the site. Blacktown City Council have also carried out remediation works on Breakfast Creek, which have the potential to reduce flooding impacts. As such, it is considered unlikely that the proposed development will impact on flood levels or flood flow at the site.

### *4.5.2 Blacktown Development Control Plan 2006*

*Tree Preservation*

Section 3.3 of the *Blacktown Development Control Plan 2006* (Blacktown DCP) relates to the preservation of trees. The DCP requires that development be designed to retain existing vegetation where possible, in particular significant trees.

As a result of the proposed development the trees that are currently along the boundary between Lot 5 DP 7086 and Lot 2 DP 550522 will be removed to allow for the movement of vehicles, plant and waste between the two sections of the site (refer Site Plans, *Annex A and* Concept Landscape Plan, *Annex M*). The existing trees are sparse and immature and therefore their removal will not result in ecological impacts or impacts to the scenic character of the locality. Notwithstanding that, replacement tree planting utilising endemic species will be undertaken throughout the site, mainly on the eastern side of the site, within the rear area adjoining Breakfast Creek and supplementary planting within the front landscaped setback.

*Pollution Control*

Potential pollution at the site will be managed in accordance with the requirements of the POEO Act and EPL 11555 for the site.

*Noise Reduction*

A noise and vibration impact assessment was undertaken by Renzo Tonin & Associates (2014) for the proposed expansion of the Tattersall Road Waste Metal Recovery, Processing, and Recycling Facility. A summary of this report is provided in *Section 6.3* with the complete report provided as *Annex H*.

In summary, noise and vibration emissions from the construction and operation of the proposed expansion will comply with the relevant requirements of Blacktown City Council and the NSW EPA.

*Vehicle Access and Car Parking*

Section 5 of the Blacktown DCP outlines Council requirements in relation to car parking to be provided on site. In regards to Industrial development, Table 5.1 of the Blacktown DCP states the following is required for Factory, Warehouse and Bulk Storage developments:

> *Buildings 7500m$^2$ or less – 1 space per 75m$^2$ GFA.*
>
> *Buildings greater than 7500m$^2$ GFA – 1 space per 200m$^2$ of GFA only for the area in excess of 7500m$^2$ where there is a specific end user which would not demand a higher rate and where employee parking is adequately catered for.*
>
> *Commercial/ Office Component – 1 space per 40m$^2$ GFA*

GFA (Gross Floor Area) is defined with the Blacktown DCP as:

*The sum pf the areas of each floor of a building where the area of each floor is taken to be the area within the outer face of the external enclosing walls as measured at a height of 1400 millimetres above each floor level excluding:*

1. *columns, fin walls, sun control devices and any elements, projections or works outside the general lines of the outer face of the external wall;*

2. *lift towers, cooling towers, machinery and plant rooms, ancillary storage space and vertical air conditioning ducts;*

3. *car parking needed to meet any requirements of Council and any internal access thereto; and*

4. *space for the loading and unloading of goods.*

***Table 4.2 Car Parking Requirements***

| Development Area | DCP 2006 Car Parking Rate | DCP 2006 Car Parking Requirements |
|---|---|---|
| 10,539m² | Once space per 75m² GFA for area< 7,500m² | 100 |
| | One space per 200m² GFA only for the area in excess of 7,500m² | 16 |
| | **Total** | **116** |

The proposed development is required to provide a minimum of 116 on-site car parking spaces. The proposed supply of 147 on-site car parking spaces for therefore meets the minimum car parking requirements outlined in DCP 2006 and is considered to be appropriate.

The layout and dimensions of all car parking spaces, manoeuvring areas and aisles complies with the Blacktown DCP. Three disabled spaces will be provided which also complies with the DCP

Services

All required services including water, sewerage, electricity, telephone, gas and postal services are provided to the site. No additional services will be required as a result of the proposed increase in production.

*Building Height*

The site is not in close proximity to Schofields Aerodrome and therefore no specific height limitations are provided in the Blacktown DCP.

*Traffic Generating Development*

A transport impact assessment was undertaken by GTA Consultants (2014) to determine the impact of the additional volume of traffic generated by the proposed development on the surrounding road network and identify any required mitigation. The transport impact assessment is summarised in *Section 6.10* and provided in full in *Annex L*.

The traffic assessment has been prepared in accordance with the Roads and Maritime Services (RMS) *Guide to Traffic Generating Developments (RTA 2002)* and makes reference to appropriate Council's Codes and relevant Australian Standards.

Compared against the existing traffic volumes in the vicinity of the site, the additional traffic generated by the proposed development is negligible and could not be expected to compromise the safety or function of the surrounding road network. Given this, the proposed development in its own right would not warrant any upgrades to existing road infrastructure on the vicinity of the site.

Once the contractor has been appointed, a site-specific construction traffic management plan (CTMP) should be prepared prior to works commencing on-site detailing construction traffic volumes, truck routes, access arrangements and construction worker parking arrangements.

*Development on Flood Prone Land*

Chapter 8 of the Blacktown DCP provides controls and requirements for development on flood prone land.

The southern section of the site is bound by Breakfast Creek and as a result is partially flood prone. The proposed development includes the removal of some structures within the 1 in 100 year flood prone sections of the site which will not negatively affect flood flows in the locality. A building is proposed in the northern section of Lot 5 DP 7086 however, this part of the site is outside the 1 in 100 year flood level.

*Development in the Industrial Zones*

Part E of the Blacktown DCP relates to development within the industrial zones in the LGA. Specific development controls relevant to the proposal are outlined below.

<u>Setbacks</u>

The Blacktown DCP requires that buildings in this area of the industrial zone be setback 7.5m from the street alignment.

A new non-ferrous processing building is proposed in the north western portion of the site (on Lot 5 DP 7086) (refer to Plan A101 in *Annex A*). This building is setback approximately 8m from the street alignment and is compliant with the DCP. The proposed location of the non-ferrous processing building within the site will assist in the efficient processing and management of deliveries of metal waste to the facility.

Landscaping

Council's DCP requires that every effort should be made to retain existing vegetation on site. As stated above, much of the landscaping at the site will not be impacted as a result of the proposal. Existing trees along the boundary between Lot 2 DP 550522 and Lot 2 DP 7086 will have to be removed to allow movement between the two lots, however, these trees are sparse and immature and their removal will not result in negative environmental or visual impacts.

The Blacktown DCP also requires landscaping to be provided within the setback area of industrial sites. There is existing landscaping within the setback area along Tattersall Road, which is proposed to be enhanced as part of the Project. A Landscape concept plan has been prepared as part of the DA and will provide additional replacement tree planting for any removal of trees, as well as providing an overall improvement to the streetscape.

Building Design and Construction

The proposed building will be constructed of painted concrete panels with a colorbond roof, which is consistent with existing form of development on the site. The building has been designed to fit in with the industrial area and other existing buildings on the site. The building has been designed to comply with the *Building Code of Australia*.

Open Storage Areas

The proposed development includes four open scrap metal storage areas located on Lot 5 DP 7086 that already exist as well as one proposed additional metal storage area on Lot 2 DP 550522 (immediately to the west of the truck wash). These are identified on Plan A101 in *Annex A*.

None of the material stored in these storage areas will be visible from any streets, open space area or residential area. All material will be stored in a manner which will minimise dust generation.

## *4.6 DRAFT PLANNING INSTRUMENTS*

### *4.6.1 Draft Blacktown Local Environmental Plan 2013*

*Updated Council motion on Draft Blacktown LEP - March 2014*

Blacktown City Council held a meeting on 12 March 2014, to hear a motion regarding making further amendments to the Blacktown Draft LEP, prior to its referral to DP&I. The amendments which were adopted by Council have the effect of amending the originally proposed zoning of the subject site and surrounds from B7 (as proposed in the publicly exhibited Blacktown LEP) to an IN1 General Industrial zone. Specifically the proposed amendments include the land bounded by Sunnyholt Road to the east, Vardys Road to the north, Breakfast Creek to the south and Harvey Road (adjoining the railway line) to the west. The motion passed by Council has the effect of making the proposed development permissible with consent under the IN 1 General Industrial zone, under draft Blacktown LEP.

The next stage is for the draft LEP, supporting maps and other documentation to be forwarded to DP&I for gazettal. Sell and Parker maintain their position that the site and surrounds should maintain a general industrial zoning, noting that the Council resolution of 12 March 2014 achieves this objective and would allow a waste and resource recovery facility to be permitted with consent under the relevant Environmental Planning Instrument.

The following section identifies Sell and Parker's response to the Draft Blacktown LEP, as publicly exhibited.

*Originally drafted Blacktown LEP*

Blacktown City Council has prepared a new Draft Local Environmental Plan 2013 ('Draft LEP 2013'). The Draft LEP 2013 was publicly exhibited in March and April 2013. Urbis Pty Ltd (Urbis) prepared a submission to Blacktown Council on behalf of Sell and Parker in regards to the proposed rezoning of the Sell and Parker owned sites on Tattersall Road at Kings Park. A copy of the Urbis submission is provided as *Annex D*.

The publicly exhibited Draft LEP 2013 for the Blacktown Industrial Area (within which the site is located) proposed to change the zoning from general industrial to a 'business park'. As a result, the proposed zoning as publicly exhibited for the site, and almost all of the existing 181ha industrial area, is 'B7 Business Park' in Draft LEP 2013. Industrial land uses are prohibited within the proposed 'B7 Business Park' zone. As a result, if the Draft LEP 2013 as publicly exhibited is adopted, the majority of existing land uses/businesses within the industrial area will immediately be prohibited, and while protected by existing use rights, would be severely constrained in terms of potential for business expansion and growth.

The Blacktown Draft LEP, which is based on the Standard Instrument LEP template, the proposed waste metal recovery, processing and recycling facility would most appropriately be defined as a "waste or resource management facilities", which is proposed to be a prohibited land use within the B7 zone under the draft LEP. A waste management facility is defined as

*Waste or resource management facility means any of the following:*

5. *A resource recovery facility,*
6. *A waste disposal facility,*
7. *A waste or resource transfer station,*
8. *A building or place that is a combination of any of the things referred to in paragraphs (a) – (c).*

The proposed waste metal recovery, processing and recycling facility falls within the resource recovery facility definition, which is further defined in the draft Blacktown LEP as follows:

***resource recovery facility*** *means a building or place used for the recovery of resources from waste, including works or activities such as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration.*

The proposed development also partly meets the definition of a waste or resource transfer station, given that some material are brought, stored, sorted, compacted, etc. prior to transfer elsewhere for further processing. The definition under draft Blacktown LEP of a waste or resource transfer station comprises:

***waste or resource transfer station*** means a building or place used for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.

In summary under draft Blacktown LEP, the proposed development falls within the group definition of waste or resource management facility, specifically item (d) of the group definition where the activity includes a combination of land use activities under the definition, being both resource recovery and waste/resource transfer.

*Merits of the exhibited draft Blacktown LEP*

The Sell and Parker waste metal recovery and recycling facility on Tattersall Road is one of only two such facilities with a hammermill/ metal shredder in the Sydney Metropolitan area.

The demand for these types of facilities is anticipated to significantly increase in the future as a result of Federal and State governments introduction of mechanisms to encourage a reduction in materials going to landfill. This is demonstrated in NSW through the introduction of the *Waste Avoidance and Resource Recovery Act 2001* and the associated *NSW Waste Avoidance and Resource Recovery Strategy 2007*.

The proposal is for the expansion of an existing metal recovery and recycling facility onto an adjacent site to allow for the projected increase in demand for waste metal recycling in the Sydney area into the future. The site already exists and is located within an existing industrial area and therefore the proposed expansion will result in relatively limited environmental impacts (refer to *Chapter 6*). The majority of the plant, equipment and infrastructure for this type of facility are already in place at the Tattersall Road site.

If the proposed expansion was refused due to changes in planning controls, in the medium to long term, it may result in the relocation of the facility outside of the Blacktown LGA or the closure of the facility as no alternative industrial areas are proposed within Draft LEP 2013. It is estimated that the relocation of the entire facility to another location would cost in excess of $60 million, and would therefore be financially prohibitive (Urbis, 2013). The closure of the facility would result in the loss of up to 64 direct jobs on-site as well as another 150 associated supply chain positions (Urbis, 2013).

The intention of Sell and Parker to expand the current site operations are evident in that they have owned the adjoining Dexion site (23-43 Tattersall Road) for in excess of 8 years, whilst originally DGRs were issued for an expanded facility at Tattersall Road in 2011. They have continued to communicate their strategic business approach to meeting the Sydney resource recovery market to both Blacktown City Council and the Department of Planning and Infrastructure. The benefits of this Project and the continued operation of this important waste and resource recovery facility within an already established industrial area, is of strategic and regional importance to Sydney.

As a result, Sell and Parker do not support the intent of Draft LEP 2013, as publicly exhibited to rezone the Tattersall Road site from its existing '*4(a) General Industrial' zone to the proposed 'B7 Business Park zone*'.

# 5 CONSULTATION

*This chapter describes the development approval process used to involve the community and relevant government authorities in the proposed production increase.*

## 5.1 GOVERNMENT AUTHORITY CONSULTATION

The following public authorities were provided with a letter describing the proposed development and asked to provide feedback within 21 days of the date of each letter:

- NSW Environment Protection Authority (EPA);
- NSW Office of Water (NOW);
- Sydney Water;
- NSW Roads and Maritime Services (RMS); and
- NSW WorkCover.

A copy of the letter sent to NSW EPA is provided in *Annex E* as an example of the letters sent to relevant authorities.

At the time of the preparation of this EIS, ERM had not received a response from any of the above authorities.

Separately, meetings were also held with NSW EPA, NSW Department of Planning and Infrastructure (DP&I) and Blacktown City Council (BCC). The key issues raised in these meetings are provided in *Table 5.1*.

## 5.2 COMMUNITY CONSULTATION

### 5.2.1 Newsletter

A community newsletter was developed and distributed to nearby affected businesses and residents A letterbox drop of 1,000 printed copies of the Newsletter were distributed within a 500m radius of the site. A copy of the Newsletter is provided as *Annex E*. Surrounding businesses and residents will also be advised of the availability of the EIS for public comment during the exhibition period via the local newsprint media.

### 5.2.2 Community Information Session

A community information session was held at a Sell and Parker office, located at 46 Tattersall Road (opposite the existing facility at 45 Tattersall Road) on 18 February 2014 between 6pm and 7pm.

The session provided an overview of the proposed expansion and an opportunity for interested members of the local community to provide comments of the proposal. The session was attended by two persons, who operate a business on Tattersall Road, Kings Park. They raised no objection to the proposal, but asked a number of questions, as summarised in *Table 5.1*. below.

## *5.3 SUMMARY OF CONSULTATION*

A summary of all consultation undertaken, including responses received and the relevant section of the EIS in which the comments are addressed is provided in *Table 5.1.*

*Table 5.1 Summary of Consultation Undertaken*

| Audience Consulted | Method of Consultation | Date of Consultation | Summary of Response | Method of Response | Date of Response | Response Provided or Section in EIS Addressed |
|---|---|---|---|---|---|---|
| BCC | Face to face meeting | 18 February 2014 | • street elevation – no concern with processing shed located behind the shredder within the front building set (on the basis that it could not be viewed from the street). Additional landscaping to be provided where applicable in front setback and other areas within the site;<br>• noise – acoustic report needs to address sleep disturbance criteria. Council had advised that residences adjoining Sunnyholt Road had raised general noise concerns previously (not necessarily Sell and Parker);<br>• drainage plan – will be required to concept plan level and will need to address run-off and pollution protection, with shut off valve or similar devices;<br>• traffic - positive feedback was provide in respect to the removal of the need for trucks to have to enter the site twice. Need to identify impact of project on intersection performance and RMS guide to Traffic Generating Developments;<br>• building - detail compliance with BCA and fire safety; and<br>• planning – draft Blacktown LEP 2013 would prohibit the proposed activities, therefore project justification needs to be provided. | Verbal feedback at meeting | 18 February 2014 | Street elevation – refer *Section 6.12*<br>Noise – refer *Section 6.3.*<br>Drainage – refer *Section 6.6.*<br>Traffic – refer *Section 6.10*<br>Building – refer *Sections 4.3.8 and 4.5.2* and *Annex N*<br>Planning – refer *Chapter 4.*<br>Justification – refer Chapter 11 |
| DP&I | Face to face meeting | 4 February 2014. | • demonstrate improvements to traffic and reducing number of driveways<br>• demonstrate improved environmental performance of the site through sealing of hard stand areas and containment of post shredding activity within industrial building;<br>• provide strategic justification for the project and need for expanded facility, particularly in light of the Draft Blacktown LEP;<br>• DP&I advised that Sell and Parker, (with DP&I) will need to address surrender of development consents as part of the Response to Submissions Report; and<br>• provide details on approach to community consultation, including the proposed newsletter and information meeting. | Verbal feedback at meeting | 4 February 2014 | Traffic – refer *Section 6.10*<br>Environmental Performance – *Chapter 6 and 7.*<br>Justification – refer *Chapters 3, 4 and 11.*<br>Consultation – refer *Chapter 5.* |

| Audience Consulted | Method of Consultation | Date of Consultation | Summary of Response | Method of Response | Date of Response | Response Provided or Section in EIS Addressed |
|---|---|---|---|---|---|---|
| EPA | On-site meeting and letter outlining proposed activity. | 8 January 2014 (Site meeting) | Sell and Parker and ERM outlined to the EPA the proposed expansion of the existing facility and the proposed improvements to the site, via increasing hardstand areas, moving pre-shredder, improve traffic circulation, containment of post shredder activities within enclosed areas and larger site area to accommodate activities.<br>EPA inspected the site and were shown the areas where expansion were generally occurring. The EPA advised that they were generally supportive of the approach put forward by Sell and Parker and the proposed environmental controls | Verbal feedback at meeting | 8 January 2014. | Refer *Chapters 6, 7 and 8* |
| NOW | Letter outlining proposed activity | | No response received as yet. | | | |
| RMS | Letter outlining proposed activity | | No response received as yet. | | | |
| Sydney Water | Letter outlining proposed activity | | No response received as yet. | | | |
| Workcover | Letter outlining proposed activity | | No response received as yet. | | | |

| Audience Consulted | Method of Consultation | Date of Consultation | Summary of Response | Method of Response | Date of Response | Response Provided or Section in EIS Addressed |
|---|---|---|---|---|---|---|
| Community | Letterbox drop and information session | 11 February (letterbox drop)<br>18 February 2014 (information session | • traffic - will there be additional traffic movements with the expanded site?<br>• Driveways - will there be an addition or reduction in driveways on the site?<br>• Parking - where will employee car parking be provided? | Verbally at information session | 18 February 2014 | A Traffic Impact Assessment will model traffic impacts, however the information to date suggests that there will be a net decrease in traffic by 92 vehicle movements per day which incorporates the reduction of the current requirement for trucks that are required to enter and exit the site twice. The proposed traffic arrangements allow for safer truck movements and avoids double trips.<br>The current number of driveways on the overall project area would be reduced from four to three, given that the existing exit driveway on the Sell and Parker site would be removed.<br>There will be additional on-site parking to be provided within the Dexion part of the proposed site operations, which is an improvement to the current arrangement where the majority of employees park on the street.<br>Refer *Sections 4.5.2 and 6.10.* |

# 6 ENVIRONMENTAL IMPACT ASSESSMENT

## 6.1 ECOLOGICAL ASSESSMENT

### 6.1.1 Background

ERM undertook a desktop ecological assessment to determine whether the proposed development was likely to impact on any threatened species, populations or ecological communities and their habitats as listed under the *Threatened Species Conservation Act 1995* (NSW) (TSC Act) or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

A search for matters of National Environmental Significance (NES) listed under the EPBC Act occurring (or with potential to occur) within the locality (within a 10km radius of the site) was undertaken using the EPBC Protected Matters Search Tool on 3 March 2013.

A search of the NSW National Parks and Wildlife Service Atlas of NSW Wildlife was undertaken on 23 January 2013. Threatened species records were provided by the Wildlife Data Unit which were then incorporated into ERM's GIS program and presented as *Figure 6.1* and *Figure 6.2*.

### 6.1.2 Existing Environment

*Matters of National Environmental Significance*

The EPBC Protected Matters Search reported that four threatened ecological communities, 45 threatened species and 12 migratory species listed under the EPBC Act are known to occur or have the potential to occur within 10km of the site (refer *Annex F*). There are no World Heritage Properties, National Heritage Places, Wetlands of International Significance or Commonwealth Marine Areas in the vicinity of the site.

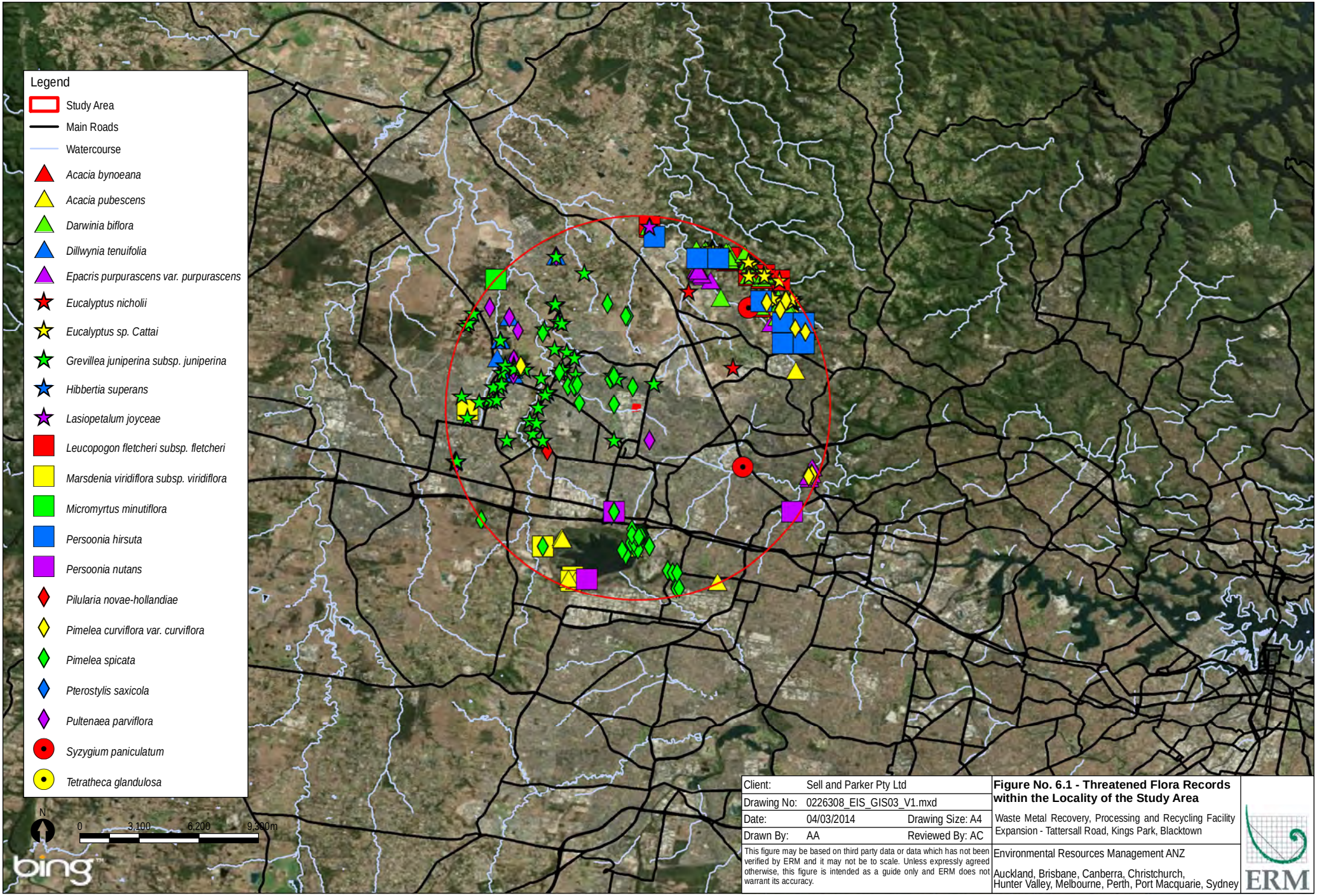



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**Figure No. 6.1 - Threatened Flora Records within the Locality of the Study Area**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

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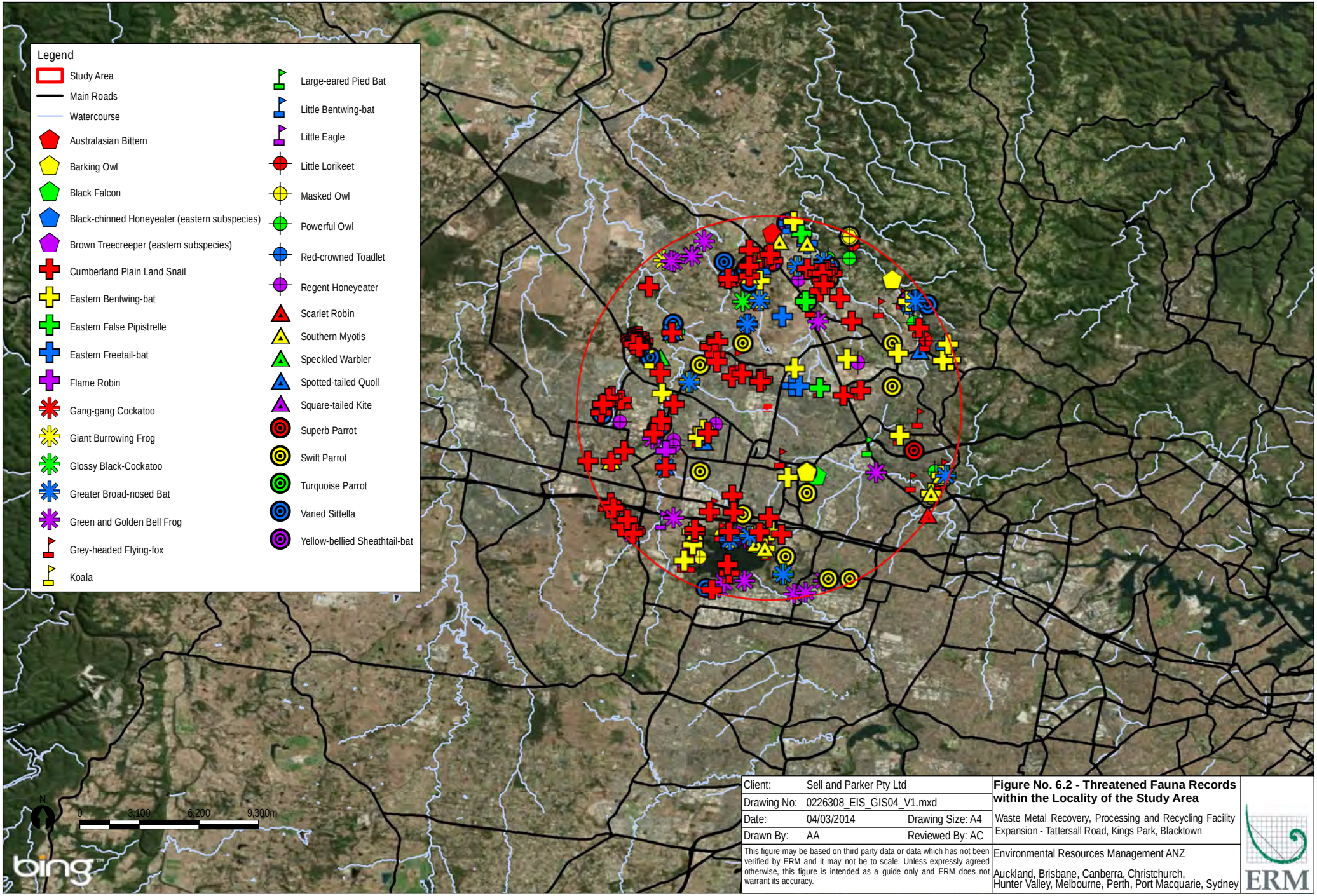


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**Figure No. 6.2 - Threatened Fauna Records within the Locality of the Study Area**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

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*Matters of State Significance*

The NSW Atlas of Wildlife search reported that 22 threatened flora species and 35 threatened fauna species listed under the NSW TSC Act have been recorded within 10km of the site (refer *Annex F*).

*Threatened Ecological Communities*

The EPBC Protected Matters Search reported that the following threatened ecological communities are known, or have the potential, to occur within 10km of the site:

- *Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest* (also listed as Endangered under the TSC Act as *Cumberland Plain Woodland in the Sydney Basin Bioregion* and *Shale Gravel Transition Forest in the Sydney Basin Bioregion*);

- *Shale/Sandstone Transition Forest* (also listed as Endangered under the TSC Act);

- *Turpentine-Ironbark Forest in the Sydney Basin Bioregion* (also listed as Endangered under the TSC Act as *Sydney Turpentine-Ironbark Forest* and *Blue Mountains Shale Cap Forest*; and

- *Western Sydney Dry Rainforest and Moist Woodland on Shale* (also listed as Endangered under the TSC Act as *Moist Shale Woodland in the Sydney Basin Bioregion* and *Western Sydney Dry Rainforest in the Sydney Basin Bioregion*).

According to vegetation mapping for the Cumberland Plain (NSW NPWS 2002) these communities do not occur within the site.

*Threatened Species*

Threatened flora and fauna species identified during database searches as known or having the potential to occur within 10km of the site are listed in *Annex F*.

*Migratory Species*

The EPBC Protected Matters Search reported a number of migratory species as known, or with the potential, to occur within 10km of the site (refer *Annex F*).

*On-site Vegetation*

A number of mixed *Eucalypt species* are present in landscape areas along the northern boundary of both properties with Tattersall Road.

A row of mature *Casuarina species*, are present along the boundary of 45 Tattersall Road and the auto parts industrial/recycling complex to the west and the current shared boundary between 45 and 23-43 Tattersall Road. These trees were planted as a landscape screen between properties.

Isolated, mature and possibly remnant *Eucalypt species* remain in the south western corner of 45 Tattersall Road (inside the current rear fence line). A number of mixed *Eucalypt species* exist in a landscaped area in the south western corner of 23-43 Tattersall Road, with some immature *Casuarina species* also present along the rear fence line. The riparian zone beyond the rear fence line of both properties adjoining Breakfast Creek is highly disturbed and dominated by weed species. Breakfast Creek is currently subject to reformation (channel realignment and bank reinforcement) works being undertaken by BCC.

### *6.1.3 Impact Assessment*

The proposed development of the site will not result in the removal the mature Eucalypt species along the front and rear fence lines. The proposed redevelopment works will not extend beyond the current rear fence line and so will not impact on future riparian vegetation adjoining Breakfast Creek outside the operational boundary. Further discussion of the riparian corridor and its management is provided in *Section 6.6*.

Given the already highly disturbed nature of the site, and the fact that only landscaped trees, that exist between the two current separate sites, are proposed to be removed, it is considered highly unlikely that the proposed development will have any impacts on any threatened species, populations or ecological communities and their habitats as listed under the TSC Act or the EPBC Act.

### *6.1.4 Mitigation Measures*

The ecological assessment determined that the proposal is unlikely to impact on threatened species, populations or ecological communities and their habitats. The following recommendations aim to minimise the impacts of the proposed works:

- sediment control barriers should be installed at the site during construction and while earthworks are undertaken to reduce the likelihood of silted runoff into adjacent Breakfast Creek in the event of high rainfall;
- all vehicles are to keep to the existing and proposed access roads on-site at all times; and
- all work should be undertaken to prevent the spread of pests and noxious weeds in accordance with the *Noxious Weeds Act 1993* and the *Noxious and environmental weed control handbook - A guide to weed control in non-crop, aquatic and bushland situations* (NSW Government, 2011).

## 6.2 HERITAGE ASSESSMENT

### 6.2.1 Aboriginal Heritage Assessment

*Background*

A desktop Aboriginal heritage assessment was undertaken in regards to the proposed development in accordance with:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010); and
- *Aboriginal cultural heritage consultation requirements for proponents 2010 (*DECCW, 2010*).*

As the proposed development will disturb the ground surface a basic search of the NSW OEH Aboriginal Heritage Information Management System (AHIMS) database was undertaken.

*Existing Environment*

The AHMIS basic search did not identify any objects or places of Aboriginal heritage significance within the proposed expanded site, however, one object or place of Aboriginal heritage significance was identified approximately 650m to the south (refer *Figure 6.3*).

As such, an AHIMS extensive search was undertaken. *Table 6.1* presents a summary of the AHIMS extensive search results, while a full copy of all AHIMS search results are provided in *Annex G.*

***Table 6.1 Summary AHIMS Extensive Search Results***

| Site ID | Site Name | Context | Site Status | Site Features |
|---|---|---|---|---|
| 45-5-4111 | ASHLAR 2 | Open site | Valid | Artefact : 1 |

*Potential Impacts*

One object or place of Aboriginal heritage significance was identified approximately 650m to the south of the expanded site. However, given both the existing site and expanded site area already highly disturbed (i.e. the land at both sites has previously been extensively excavated and backfilled) it is considered highly unlikely that objects or places of Aboriginal heritage significance will be impacted as a result of the proposed development. Notwithstanding the following mitigation measures will be implemented to ensure any potential Aboriginal heritage impacts are minimised and managed appropriately.

*Mitigation Measures*

In accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW NSW, 2010) a conservative approach will be adopted at the site. The following mitigation measures will be implemented:

- all staff, contractors and others involved in the construction works would be made aware of the statutory legislation protecting sites and places of heritage significance; and

- all works would cease in the immediate area should any indigenous artefacts or relics be uncovered and the Cultural Heritage Division of the NSW National Parks and Wildlife Service (OEH) contacted.


Notes: The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.

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**Figure No. 6.3 - Aboriginal Site Records within the Locality of the Study Area**

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### *6.2.2 Historical Heritage Assessment*

*Background*

ERM undertook a desktop historical heritage assessment in regards to the proposed development. The desktop assessment involved:

- a search using the EPBC Protected Matters Search Tool for heritage items or places of National significance listed under the EPBC Act (Commonwealth heritage);
- a search of the NSW State Heritage Inventory; and
- review of the *Blacktown LEP 1988* and *Draft Blacktown LEP 2013* for locally listed heritage items.

*Existing environment*

The EPBC Protected Matters Search Tool indicated that there are no World Heritage Properties or National Heritage Places within 2km on the site. There are no items in close proximity to the site listed on the NSW Heritage Inventory. A search of the *Blacktown LEP 1988* indicated one item of local heritage significance within the vicinity of the site, St Anthony's, Church, located approximately 800m to the north west of the expanded site on Bowmans Road. A search of the *Draft Blacktown LEP 2013* indicated an additional item of local heritage significance, "Headingly", a remaining building from the original Sunnyholt estate, located approximately 365m to the east of the expanded site in a residential area.

Further information on each historical heritage site is outlined in *Table 6.2*, while their location relative to the expanded site is displayed visually in *Figure 6.4*.

***Table 6.2 Historical Heritage Items in the Locality of the Study Area***

| Suburb | Item Name | Address | Property Description | Significance | Item No. |
|---|---|---|---|---|---|
| Kings Park | Church – St Anthony's | 14 Bowmans Road[1,2] | Lot 120, DP 1039119 | Local | I31 |
| Blacktown | "Headingly" | 7 Redwood Place[2] | Lot 24, DP 204269 | Local | I12 |

1. Listed on Blacktown LEP 1988
2. Listed on Draft Blacktown LEP 2013

*Potential Impacts*

Two items of local heritage significance have been identified within the locality, but not within the vicinity of the proposed expanded site. Both of these sites are located on private land, sufficiently distant from the proposed development and as such will not be disturbed by the proposed expansion of the site. Given this, coupled with the fact the existing site at 45 Tattersall Road and adjoining site at 23-43 Tattersall Road are located on previously, extensively disturbed land, it is unlikely that the proposed activity will cause any potential impacts to historic heritage. Notwithstanding the following mitigation measures will be implemented to ensure any potential Aboriginal heritage impacts are minimised and managed appropriately.

*Mitigation Measures*

Although no items of historical heritage significance were identified within the expanded site, the following mitigation measures are recommended to ensure that if any historical heritage artefacts are encountered appropriate measures are implemented:

- all staff, contractors and others involved in the works would be made aware of the statutory legislation protecting sites and places of heritage significance prior to works commencing; and

- in the event that a site or artefact (as defined by the *National Parks and Wildlife Act 1974* or *Heritage Act 1977*) is identified during construction works, works shall cease at the location. The find shall be immediately reported to the regulator in accordance with legislation. No work shall commence in the vicinity of the find until any required approvals have been given by the regulator.


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**Figure No. 6.4 - Historical Heritage Site Records within the Locality of the Study**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

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## 6.3 ACOUSTICS ASSESSMENT

### 6.3.1 Background

A noise and vibration impact assessment was undertaken by Renzo Tonin & Associates (2014) for the proposed expansion of the Tattersall Road Waste Metal Recovery, Processing, and Recycling Facility. The purpose of the assessment is to provide and environmental noise and vibration impact assessment of the expanded development affecting neighbouring residential and industrial premises. The noise and vibration impact assessment is summarised in this section and provided in full in *Annex H.*

The noise and vibration assessment was prepared with due regard to and in accordance with the following guidelines:

- NSW Environment Protection Authority – NSW *Environmental Noise Management – Industrial Noise Policy* (INP), January 2000 and relevant application notes; and
- NSW Department of Environment, Climate Change and Water – NSW *Road Noise Policy* (RNP), March 2011.

Criteria for the assessment of operational noise are usually derived from the existing noise environment of an area, excluding noise from the subject development. The INP outlines two methods for determining the background noise level of an area, being 'B1 – Long-term background noise method' and 'B2 – Shortterm background noise method'. This assessment has used a combination of long-term and short-term noise monitoring.

As the noise environment of an area almost always varies over time, background and ambient noise levels need to be determined for the operational times of the proposed development. For example, in a suburban or urban area the noise environment is typically at its minimum at 3am in the morning and at its maximum during the morning and afternoon traffic peak hours. The INP outlines the following standard time periods over which the background and ambient noise levels are to be determined:

- day: 07:00-18:00 Monday to Saturday and 08:00-18:00 Sundays & Public Holidays
- evening: 18:00-22:00 Monday to Sunday & Public Holidays
- night: 22:00-07:00 Monday to Saturday and 22:00-08:00 Sundays & Public Holidays

### 6.3.2 *Existing Environment*

*Noise Sensitive Receivers (NSR)*

An inspection of the site and the surrounding area identified the closest and/or potentially most affected nose sensitive receivers (NSR) (refer *Table 6.3*). These receiver locations include a number of residential and commercial /industrial receivers in the vicinity of the site.

***Table 6.3 Noise Sensitive Receivers***

| NSR | Type | Site / Description | Estimated Distance and Direction from Site |
|---|---|---|---|
| R1 | Residential | *189 Sunnyholt Road* Considered representative of the nearest affected receivers along Sunnyholt Road. | 315m east |
| R2 | Residential | *17 Camorta Close* Considered representative of the nearest affected receivers along Camorta Close. | 650m north |
| R3 | Residential | *3 Railway Road* Considered representative of the nearest affected receivers along Railway Road. | 830m west |
| R4 | Commercial / Industrial | *38 Tattersall Road* Receiver to the north of the expanded facility across from Tattersall Road. | Immediately adjacent to north of Tattersall Road |
| R5 | Commercial / Industrial | *57-69 Tattersall Road* Receiver to the west of the expanded facility sharing a common site boundary. | Immediately adjacent to west |
| R6 | Commercial / Industrial | *21 Tattersall Road* Receiver to the east of the expanded facility sharing a common site boundary. | Immediately adjacent to east |
| R7 | Commercial / Industrial | *38 Forge Street* Receiver to the south of the expanded facility across from the Breakfast Creek. | Immediately adjacent to north of Breakfast Creek |

*Ambient and Background Noise*

A key element in assessing environmental noise impacts is to understand the existing ambient and background noise levels in the vicinity of the closest and/or potentially most affected receivers in proximity to the site.

To quantify representative daily and overall ambient and background noise level values (in accordance with the INP) short-term operator attended noise measurements and long-term unattended noise logging was conducted in the area.


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**Figure No. 6.5 - Noise Sensitive Receptors and Monitoring Locations**

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*Noise Measurement Locations*

The long-term and short-term measurement locations are outlined in *Table 6.4* and shown in *Figure 6.5.*

***Table 6.4 Noise Monitoring Locations***

| ID | Location | Description |
|---|---|---|
| **Long-term noise monitoring locations** | | |
| L1 | 1/50 Charles Street | The noise monitor was located in the 'free-field'. The noise monitoring location is considered representative of residential receiver locations along Sunnyholt Road. |
| L2 | 2 Anthony Street | The noise monitor was located in the 'free-field'. The noise monitoring location was supplementary for residential receiver locations along Sunnyholt Road. |
| **Short-term noise monitoring locations** | | |
| S1 | 50 Charles Street - Kerb side | Short term attended noise measurements were conducted in the 'free field'. The noise monitoring location was selected to provide a correlation with the long term noise monitoring at Location L1. |
| S2 | 6 Railway Road - Kerb side | Short term attended noise measurements were conducted in the 'free field'. The noise monitoring location was selected to provide a correlation between the long term noise monitoring at Location L1 to the residential receivers along Railway Road. |
| S3 | 17 Camorta Close (southern side of southern site boundary) | Short term attended noise measurements were conducted in the 'free field'. The noise monitoring location was selected to provide a correlation between the long term noise monitoring at Location L1 to residential receivers along Camorta Close. |

*Noise Measurement Results*

Long-term unattended noise monitoring was previously carried out from Tuesday 17 December 2013 to Tuesday 24 December 2013. The results of the long term monitoring were analysed and noise level-vs-time graphs of the data were developed and are included in the Noise and Vibration Impact Assessment (*Annex H*).

*Table 6.5* presents the overall single Rating Background Levels (RBL) and representative ambient $L_{eq}$ noise levels for each assessment period, determined in accordance with the INP.

***Table 6.5 Long Term Noise Monitoring Results, dB(A)***

| Monitoring Location | $L_{A90}$ Rating Background Noise Level (RBL) | | | | $L_{Aeq}$ Ambient Noise Levels | | | |
|---|---|---|---|---|---|---|---|---|
| | Shoulder[1] | Day[2] | Evening[3] | Night[4] | Shoulder[1] | Day[2] | Evening[3] | Night[4] |
| L1 - 1/50 Charles Street | 43 | 41 | 45 | 40 | 49 | 58 | 55 | 48 |
| L2 - 2 Anthony Street | 45 | 44 | 44 | 35 | 52 | 52 | 50 | 48 |

1. Shoulder 06:00-07:00 Monday to Saturday
2. Day: 07:00-18:00 Monday to Saturday and 08:00-18:00 Sundays & Public Holidays
3. Evening: 18:00-22:00 Monday to Sunday & Public Holidays
4. Night: 22:00-07:00 Monday to Saturday and 22:00-08:00 Sundays & Public Holidays
5. The external ambient noise levels presented are free-field noise levels (ie. no façade reflection)

Short-term noise measurements were undertaken during the daytime of 6 February 2014, in order to supplement the long-term noise monitoring and provide greater detail of the surrounding noise environment.

A summary of the short-term measurement results are presented in *Table 6.6.*

***Table 6.6 Short-Term Noise Monitoring Results***

| Location | Time | Measured Noise Level, dB(A) | | Comments on Measured Noise Levels |
|---|---|---|---|---|
| | | $L_{Aeq}$ | $L_{A90}$ | |
| S1 – 50 Charles Street | 2:34pm - 2:49pm | 57 | 43 | Dominant noise source at this location was traffic noise from Sunnyholt Road. |
| S2 – 6 Railway Road | | 60 | 46 | Dominant noise source at this location was traffic noise along Railway Road, rail movements along adjacent railway line and some industrial noise from the Blacktown industrial area. |
| S1 – 50 Charles Street | 2:59pm - 3:14pm | 57 | 42 | Dominant noise source at this location was traffic noise from Sunnyholt Road. |
| S3 – 17 Carmota Close | | 47 | 45 | Dominant noise source at this location was distant traffic noise and some industrial noise from the Blacktown industrial area. |

The correlated Rating Background Noise Level results for Railway Road and Camorta Close are presented in *Table 6.7.*

***Table 6.7 Correlated Noise Monitoring Results***

| Monitoring Location | LA90 Rating Background Noise Level (RBL) | | | |
|---|---|---|---|---|
| | Shoulder[1] | Day[2] | Evening[3] | Night[4] |
| S2 – 6 Railway Road | 46 | 44 | 48 | 43 |
| S3 – 17 Carmota Close | 46 | 44 | 48 | 43 |

1. Shoulder 06:00-07:00 Monday to Saturday
2. Day: 07:00-18:00 Monday to Saturday and 08:00-18:00 Sundays & Public Holidays
3. Evening: 18:00-22:00 Monday to Sunday & Public Holidays
4. Night: 22:00-07:00 Monday to Saturday and 22:00-08:00 Sundays & Public Holidays
5. As required by the INP, the external ambient noise levels presented are free-field noise levels. [ie. no façade reflection]

### *6.3.3 Assessment Criteria and Noise Goals*

The operation of the proposed expansion of the site is assessed against the INP. The INP has two components:

- controlling intrusive noise impacts in the short term for residences; and

- maintaining noise level amenity for particular land uses for residences and other land uses.

*Intrusive Noise Impacts*

According to the INP, the intrusiveness of a noise source may generally be considered acceptable if the equivalent continuous (energy-average) A-weighted level of noise from the source (represented by the $L_{Aeq}$ descriptor) does not exceed the background noise level measured in the absence of the source by more than 5dB(A). The intrusiveness criterion is summarised as follows:

- $L_{Aeq,15minute} \leq$ Rating Background Level (RBL) plus 5dB(A).

*Protecting Noise Amenity*

The Amenity Criteria are determined in accordance with Chapter 2 of the NSW INP. The INP recommends base acceptable noise levels for various receivers, including residential, commercial, industrial receivers and sensitive receivers such as schools, hospitals, churches and parks. These base noise criteria are then lowered by up to 10dB depending on the extent of existing industrial noise impact upon the receiver. Higher levels of existing industrial noise therefore result in stricter Amenity Criteria applied to any new industrial development. In this way the cumulative impacts of existing and known future industrial noise sources are minimised.

*Project Noise Goals*

In accordance with the INP, noise impact should be assessed in terms of both intrusiveness and amenity. Based on the background and ambient noise monitoring carried out at the nearest affected residential locations, the applicable noise criteria is presented in *Table 6.8*.

***Table 6.8 INP Criteria for the Proposed Development***

| Receiver Location | Intrusiveness Criteria, $L_{Aeq,15min}$, dB(A) | | | Amenity Criteria, $L_{Aeq,period}$, dB(A) | | |
|---|---|---|---|---|---|---|
| | Shoulder | Day | Evening | Shoulder | Day | Evening |
| R1 – Sunnyholt Road | 46 | 46 | 46 | 55 | 55 | 45 |
| R2 – Camorta Close[1] | 49 | 49 | 49 | 55 | 55 | 45 |
| R3 - Railway Road[1] | 49 | 49 | 49 | 55 | 55 | 45 |
| R4 - 38 Tattersalls Rd[2] | - | - | - | 65 | 65 | 65 |
| R5 - 57-69 Tattersalls Rd[2] | - | - | - | 65 | 65 | 65 |
| R6 - 21 Tattersalls Rd[2] | - | - | - | 65 | 65 | 65 |
| R7 - 38 Forge St[2] | - | - | - | 65 | 65 | 65 |

1. Intrusiveness criteria determined based on correlation of short term measurements at receiver Locations R2 and R3 with short term measurements at receiver Location R1.
2. As there is a mix of commercial and/or industrial premises in the Blacktown industrial area, the more stringent commercial criteria has been adopted for adjacent non-residential receivers.

*Road Traffic Noise Criteria*

The Road Noise Policy (RNP) is used to assess the potential traffic noise impact generated from the site's operations. Table 3 – 'Road traffic noise assessment criteria for residential land uses' divides land use developments into different categories and lists the respective criteria for each case.

Based on functionality, Sunnyholt Road is categorised as an 'arterial' road. The potentially affected residential premises are located in the vicinity of Sunnyholt Road, and all have an acoustic environment which is dominated by traffic noise from Sunnyholt Road. Therefore, the appropriate traffic noise criterion for these residences is the 'arterial' road noise criteria presented in *Table 6.9*.

***Table 6.9 RNP Criteria, dB(A)***

| Road Category | Type of project/land use | Assessment Criteria, dB(A) | |
|---|---|---|---|
| | | Day 7am – 10pm | Night 10pm – 7am |
| Freeway / arterial / Sub-arterial roads | 3. Existing residences affected by additional traffic on existing freeways / arterial / sub-arterial roads generated by land use developments | $L_{Aeq(15hr)}$ 60 (external) | $L_{Aeq(9hr)}$ 55 (external) |

According to the guidelines, for existing residences affected by additional traffic on existing roads generated by land use developments, any increase in the total traffic noise level should be limited to 2dB above that of the corresponding 'no build option'. In all cases, traffic arising from the development should not lead to an increase in existing noise levels of more than 2dB(A).

*Vibration Criteria*

Vibration levels during the operation of the site will be insignificant at each residential receiver due to the large separation distances between plant and receivers. As such, this report only assesses vibration levels to adjacent industrial premises.

The effects of ground vibration on buildings resulting from construction may be segregated into the following three categories:

- disturbance to building occupants - vibration in which the occupants or users of the building are inconvenienced or possibly disturbed;
- effects on building contents - vibration where the building contents may be affected; and
- effects on building structures - vibration in which the integrity of the building or structure itself may be prejudiced.

In general, vibration criteria for human disturbance (1) are more stringent than vibration criteria for effects on building contents (2) and building structural damage (3). Hence, compliance with the more stringent limits dictated by Category 1, would ensure that compliance is also achieved for the other two categories.

Assessment of potential disturbance from vibration on human occupants of buildings is in accordance with '*Assessing Vibration; a technical guideline'* (EPA, 2006). The guideline provides criteria which are based on the *British Standard BS 6472-1992 'Evaluation of human exposure to vibration in buildings (1-80Hz)'*. Sources of vibration are defined as either 'Continuous', 'Impulsive' or 'Intermittent' (refer *Annex H* for further information)

The preferred and maximum values for continuous and impulsive vibration impacting on the adjacent industrial premises are shown in *Table 6.10*.

***Table 6.10 Preferred and Maximum Levels for Human Comfort***

| Location | Assessment period[1] | Preferred values | | Maximum values | |
|---|---|---|---|---|---|
| | | z-axis | x- and y-axis | z-axis | x- and y-axis |
| **Continuous vibration (Weighted RMS Acceleration, m/s², 1-80Hz)** | | | | | |
| Workshops | Day- or night-time | 0.04 | 0.029 | 0.08 | 0.058 |
| **Impulsive vibration (Weighted RMS Acceleration, m/s², 1-80Hz)** | | | | | |
| Workshops | Day- or night-time | 0.64 | 0.46 | 1.28 | 0.92 |
| **Intermittent vibration (Vibration Dose Values, VDV, m/s1.75, 1-80Hz)** | | | | | |
| Workshops | Day- or night-time | 0.8 | | 1.60 | |

1. Daytime is 7:00am to 10:00pm and night-time is 10:00pm to 7:00am

### *6.3.4 Potential Impacts*

*Predicted Noise Levels*

Noise emissions were predicted by modelling the noise sources, receiver locations, topographical features of the intervening area, and possible noise control treatments using CadnaA (version 4.2) noise modelling computer program. The program calculates the contribution of each noise source at each specified receptor point and allows for the prediction of the total noise from a site.

The noise prediction models takes into account:

- location of noise sources and receiver locations;
- height of sources and receivers;
- separation distances between sources and receivers;
- ground type between sources and receivers (soft); and
- attenuation from barriers (natural and purpose built).

The predicted noise levels for the proposed development are summarised in *Table 6.11* below.

***Table 6.11 Predicted Noise Level Emission from Site Operations, dB(A)***

| Source | Intrusive Assessment, $L_{eq,15min}$ | | | Amenity Assessment, $L_{eq,period}$ | | |
|---|---|---|---|---|---|---|
| | Shoulder | Day | Evening | Shoulder | Day | Evening |
| **Receiver R1 – Residential Premises to the east - Sunnyholt Road** | | | | | | |
| Criteria | 46 | 46 | 46 | 55 | 55 | 45 |
| Cumulative (neutral condition) | 41 | 41 | 41 | 41 | 41 | 41 |
| Cumulative (prevailing wind condition) | 44 | 44 | 44 | 44 | 44 | 44 |
| **Receiver R2 – Residential Premises to the north - Camorta Close** | | | | | | |
| Criteria | 49 | 49 | 49 | 55 | 55 | 45 |
| Cumulative (neutral condition) | 31 | 31 | 31 | 31 | 31 | 31 |
| Cumulative (prevailing wind condition) | 34 | 34 | 34 | 34 | 34 | 34 |
| **Receiver R3 – Residential Premises to the north - Railway Road** | | | | | | |
| Criteria | 49 | 49 | 49 | 55 | 55 | 45 |
| Cumulative (neutral condition) | 27 | 27 | 27 | 27 | 27 | 27 |
| Cumulative (prevailing wind condition) | 30 | 30 | 30 | 30 | 30 | 30 |
| **Receiver R4 – Neighbouring Commercial/Industrial Premises to the north - 38 Tattersall Road** | | | | | | |
| Criteria | | | | 65 | 65 | 65 |
| Cumulative (neutral condition) | | | | 60 | 60 | 60 |
| Cumulative (prevailing wind condition) | | | | 60 | 60 | 60 |
| **Receiver R5 – Neighbouring Commercial/Industrial Premises to the west - 57-69 Tattersall Road** | | | | | | |
| Criteria | | | | 65 | 65 | 65 |
| Cumulative (neutral condition) | | | | 61 | 61 | 61 |
| Cumulative (prevailing wind condition) | | | | 61 | 61 | 61 |
| **Receiver R6 – Neighbouring Commercial/Industrial Premises to the east- 21 Tattersall Road** | | | | | | |
| Criteria | | | | 65 | 65 | 65 |
| Cumulative (neutral condition) | | | | 63 | 63 | 63 |
| Cumulative (prevailing wind condition) | | | | 63 | 63 | 63 |
| **Receiver R7 – Neighbouring Commercial/Industrial Premises to the south - 38 Forge Street** | | | | | | |
| Criteria | | | | 65 | 65 | 65 |
| Cumulative (neutral condition) | | | | 64 | 64 | 64 |
| Cumulative (prevailing wind condition) | | | | 65 | 65 | 65 |

Renzo Tonin & Associates noted that based on recent noise measurements undertaken at the site and other previously similar metal recycling facilities, and after accounting for acoustic shielding provided by intervening structures between the site and both residential and industrial receptors, noise emission from the site is not anticipated to be tonal, impulsive or of low frequency character at the nominated receiver locations. Therefore, modifying factors are not applied to correct for the character of the noise emanating from the site.

The results provided in *Table 6.11* indicate that noise emission levels to the residential receivers (Receivers R1, R2 and R3) comply with the project-specific noise levels without any additional noise mitigation measures. Furthermore, noise emission levels to the neighbouring existing and proposed new industrial receivers (Receivers R4, R5, R6 and R7) comply with the project-specific noise levels.

*Road Traffic Noise Assessment*

Exiting annual average daily traffic (AADT) volumes along Sunnyholt Road have been obtained from traffic counting undertaken by the Roads and Maritime Services' (RMS) at a permanent traffic counting station (station no. 69.046) located on Sunnyholt Road at Kings Park, north of Forge Street. The AADT volume is reported to be 40,257 vehicles at the traffic counting station. It is noted that vehicle movements from the subject site would be insignificant in comparison to the AADT along Sunnyholt Road and therefore, the increase in road traffic noise due to traffic generated by the subject site would be insignificant for residential properties currently experiencing noise from Sunnyholt Road.

Furthermore, the additional traffic on Sunnyholt Road as a result of the subject site would not contribute to the existing traffic noise levels from Sunnyholt Road to the affected residences and would be significantly less than the allowable 2dB(A) increase to existing traffic noise levels.

*Vibration Assessment*

In order to quantify the vibration levels from the highest vibration producing plant, Renzo Tonin & Associates (2014) undertook attended vibration measurements for the following plant items:

- hammer mill – vibration measurements conducted on Friday 9th May 2014, between 10.30am and 11.30am. The measurement location was approximately 10m from the plant item; and

- metal shear – vibration measurements conducted on Tuesday 3rd June 2014, between 2.00pm and 3.00pm. The measurement location was approximately 10m from the plant item.

Each plant item was operating under normal conditions during the vibration measurements.

Vibration levels were measured in three orthogonal axes (x, y and z) using a Soundbook precision sound and vibration analyser, incorporating three PCB Type 393B12 Accelerometers. The PCB Type 393B12 accelerometers were calibrated before and after the measurements using a Bruel & Kjaer Type 4294 calibration exciter. No significant drift in calibration was observed

The results of the measurements are provided in *Table 6.12* below.

*Table 6.12 Measured Vibration Levels for Hammer Mill and Metal Shear*

| Measurement No. | Measured weighted rms acceleration, m/s² | | |
|---|---|---|---|
| | x-axis | y-axis | z-axis |
| **Hammer Mill (9 May 2014)** | | | |
| 1 | 0.019 | 0.014 | 0.042 |
| 2 | 0.022 | 0.020 | 0.041 |
| 3 | 0.016 | 0.011 | 0.035 |
| 4 | 0.019 | 0.014 | 0.033 |
| 5 | 0.015 | 0.011 | 0.030 |
| 6 | 0.012 | 0.010 | 0.019 |
| **Metal Shear 3 June 2014** | | | |
| 1 | 0.006 | 0.002 | 0.013 |
| 2 | 0.006 | 0.002 | 0.009 |
| 3 | 0.007 | 0.003 | 0.012 |
| 4 | 0.006 | 0.002 | 0.009 |
| 5 | 0.006 | 0.002 | 0.009 |
| 6 | 0.007 | 0.003 | 0.009 |

From the above table, it is shown that vibration levels from the hammer mill in the x and y axes are up to 0.022m/s2 and in the z axis up to 0.042m/s2 when at 10m from the plant. When assessed against the established vibration criteria presented in *Table 6.10* above, the measured vibration levels comply with the preferred limits for the assessment of impulsive vibration in all axes and comply with the preferred limits for continuous vibration in the x and y axis.

The measured vibration levels in the z axis marginally exceeded the preferred limits but are well within the maximum limits for continuous vibration. Given that the measured vibration levels were measured at approximately 10m from the hammer mill and the nearest industrial receiver is in excess of 30m from the hammer mill, it is not expected that vibration levels in the z axis will exceed the preferred and/or maximum limits for continuous vibration at the nearest receivers. Therefore, vibration levels from the operation of the hammer mill will comply with the applicable vibration criteria at nearby receivers.

For the metal shear it can be seen from the above table that vibration levels in the x and y axes are up to 0.007m/s2 and in the z axis up to 0.013m/s2 when at 10m from the plant. When assessed against the established vibration criteria presented in *Table 8.2*, the measured vibration levels comply with the preferred limits for the assessment of both impulsive vibration and continuous vibration in all axes.

It is noted that the relocation of the metal shear within the proposed expanded site will be constructed to the same specifications as that currently operating at the existing site and will be in excess of 50m from the nearest adjoining premises. Therefore, vibration levels from the operation of the metal shear will comply with the applicable vibration criteria at future nearby receivers.

Based on the vibration measurements undertaken, vibration levels from the proposed expanded site will not cause human discomfort to the occupants of the nearest adjoining buildings.

*Summary of Noise and Vibration Impacts*

Noise emissions to residential premises were predicted to comply with the project-specific noise levels without noise mitigation measures.

Noise and vibration emissions from site operations to neighbouring existing and proposed new industrial premises also comply with the project-specific noise levels once the noise and vibration mitigation measures proposed as part of the expansion are implemented (refer *Section 6.3.5*).

Potential traffic noise associated with the operation of the facility and impacting nearby residential receivers is assessed as being insignificant and would comply with the RNP.

In summary, noise and vibration emissions from the construction and operation of the proposed expansion will comply with the relevant requirements of Blacktown City Council and the NSW EPA.

### *6.3.5 Mitigation Measures*

The following acoustic screen fencing is proposed to mitigate noise emissions from site operations to neighbouring existing and proposed new industrial premises:

- retain the existing acoustic screen fencing at a height of 4m, which is currently erected around the existing site northern and western boundary and along existing driveways as shown on the site drawings; and
- proposed new metal/colorbond and electric fence along the new eastern boundary shall be an acoustic screen fencing of 4m height

The construction of acoustic screens will be from any durable material with sufficient mass to prevent direct noise transmission, such as, masonry, concrete, steel, aluminium, fibrous-cement, timber, or any combination of such materials, provided they withstand the weather elements. A natural barrier of trees or shrubs is not an effective noise screen.

In addition to the above, the noise screen will be designed with regard to the following:

- the extent of noise reduction required of the noise screen as a whole as perceived from any potentially affected receiver sites;
- any penetrations through the fabric of the noise screen will be sealed air tight;

- all joints between noise screen panels will be sealed air tight; and
- noise screens will have no clearance gaps underneath them.

## *6.4 AIR QUALITY ASSESSMENT*

### *6.4.1 Background*

An Air Quality Impact Assessment (AQIA), including an odour nuisance assessment was undertaken by ERM (2014a) to determine the air and odour emissions associated with the expansion of site operations, the potential impacts on sensitive receptors and identify any required mitigation. The AQIA is summarized in this section and provided in full in *Annex I*.

### *6.4.2 Existing Environment*

This section provides a description of the environmental setting of the Site in the context of air quality.

*Climate*

The Site is located in a temperate environment, with the local climate generally mild. Overall, the local area is characterised by:

- annual average rainfall of 760.6 mm;
- average maximum daytime temperature of 29.8°C in January;
- average minimum daytime temperature of 5.9°C in July;
- average maximum humidity of 81% in March; and
- average minimum humidity of 42% in both August and September.

Typical Wind Conditions

Wind roses showing the frequency of strength and direction of winds for the past five years (2008-2012 inclusive) at Horsley Park, NSW indicate that:

- strong (5.4 – 8.5 m/s) south-easterly winds predominant in the summer and spring months
- south-westerly winds predominant (15%) in autumn and winter
- annually, south-west is the predominant wind direction however the strongest winds originate from the south-east.

Atmospheric Stability

Atmospheric stability is one of the key parameters that effects dispersion and dilution of emissions away from source. In essence it describes the degree of thermal and mechanical mixing of the atmosphere that occurs due to wind and thermal heating.

Higher stability of the atmosphere typically results in poor dispersion conditions and higher ground level concentrations, whilst unstable atmospheres typically have the opposite impact.

Atmospheric stability is described by the Pasquil-Gifford classification which is described further in *Annex I*. Predicted frequency of stability categories at the Site indicate a prevalence of relative neutral day time conditions followed by clear and calm (stable) night time conditions.

Further details of the climatic extremes as recorded by the Bureau of Meteorology between the years 1965 – 2014 is provided in the AQIA in *Annex I.*

*Existing Ambient Air Quality*

Existing ambient air quality provides the basis on to which emissions from the project are projected. It is the cumulative concentration, resulting from existing air quality plus project contribution, which forms the prediction that is tested against the adopted assessment criteria.

$PM_{10}$ Background

The nearest measurements of ambient air quality are undertaken by the NSW OEH at William Lawson Park, Myrtle Street, Prospect, 5 km south to south-east of the Site. The maximum 24-hour average and the annual average per year for $PM_{10}$ are presented in *Table 6.13*.

***Table 6.13 Ambient Background Air Quality $PM_{10}$ Concentrations***

| Ambient Background Air Quality Concentration ($\mu g/m^3$) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| 24-hour average | 41.8 | 1680.3 | 40.1 | 41.5 | 38.7 |
| Annual Average | 17.8 | 25.9 | 15.4 | 15.8 | 17.2 |

TSP Background

Ambient air quality monitoring does not exist for TSP in the local environment, however it is commonly found in the ambient atmosphere. No measurements of existing ambient air quality exist for TSP within the surrounding area. This assessment has taken an average of the 5 years of annual average $PM_{10}$ background concentrations of 18.4 $\mu g/m^3$ and multiplied

by two (2). It is commonly assumed that the particle size distribution ratio between $PM_{10}$ and TSP is 0.5. This provides a typical annual average background concentration for TSP of 36.8 µg/m$^3$.

$PM_{2.5}$ Background

$PM_{2.5}$ concentrations are not measured at the Prospect monitoring station. The closest monitoring station to the Site that measures $PM_{2.5}$ is located at the University of Western Sydney in Richmond. Richmond is approximately 26 km north-west of Blacktown and provides and indicative background concentrations for the local area. *Table 6.14* shows the background concentrations for this measurement location

***Table 6.14 Ambient Background Air Quality $PM_{2.5}$ Concentrations***

| Ambient Background Air Quality Concentration (µg/m$^3$) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| 24-hour average | 17.7 | 148.9 | 20.8 | 42.9 | 116.7 |
| Annual Average | 7.3 | 5.7 | 4.2 | 4.7 | 5.3 |

### *6.4.3 Nitrogen Dioxide ($NO_2$) Background*

The nearest measurements of $NO_2$ are undertaken at the Prospect monitoring site by the OEH, 5 km south to south-east of the site. The maximum annual average per year for $NO_2$ are presented in *Table 6.15*. Hourly averages are not available on the DEH website; as a result, daily averages were converted to an hourly average using the conversion factor of 1/0.59 (Environment Agency of England and Wales, 2011).

***Table 6.15 Ambient Background Air Quality $NO_2$ Concentrations***

| Ambient Background Air Quality Concentration (µg/m$^3$) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| 1-hour average | 35.6 | 39.4 | 40.4 | 36.3 | 36.1 |
| Annual Average | - | 22.7 | 24.5 | 20.7 | 20.7 |

*Additional Source of Emissions*

Additional sources of emitted species within the modelled area include emissions from vehicular traffic and possible sources from other industry in the immediate vicinity of the site. These sources are implicitly included through the use of ambient monitoring to supply background air quality concentrations.

*Sensitive Receptors*

Sensitive receptors are locations where the general population is likely to be exposed to the resultant ground level concentrations from the atmospheric emissions.

A review of the modelled area identified the sensitive receptors identified in *Figure 6.6*. It should be noted that the ten (10) selected sensitive receptors are in residential areas and have been selected on the basis of proximity to site. These sensitive receptors are intended to be representative of the general residential area. The modelled grid will provide assessment for all other residential addresses not specifically included in the dispersion model.


| | | |
|---|---|---|
| Client: | Sell and Parker Pty Ltd | |
| Drawing No: | 0226308_EIS_GIS08_V1.mxd | |
| Date: | 10/03/2014 | Drawing Size: A4 |
| Drawn By: | AA | Reviewed By: AC |

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

**Figure No. 6.6 - Air Quality Sensitive Receptors**

Waste Metal Recovery, Processing and Recycling Facility Expansion - Tattersall Road, Kings Park, Blacktown

Environmental Resources Management ANZ

Auckland, Brisbane, Canberra, Christchurch, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney

ERM

### *6.4.4 Assessment Criteria and Methodology*

*Criteria*

Part 4: Emission of Air Impurities from Activities and Plant in the Regulation refers to the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW* ('Approved Methods') (Department of Environment and Conservation, 2005). The Approved Methods lists the statutory methods for modelling and assessing emissions of air pollutants from stationary sources in the state. Industry has an obligation to ensure compliance with the requirements specified in the Regulation.

The NSW EPA prescribes impact assessment criteria, which are outlined in the Approved Methods (Department of Environment and Conservation, 2005). The impact assessment criteria refer to the total pollutant load in the environment and impacts from new sources of these pollutants must be added to existing background levels for assessment of compliance. In accordance with the guidance document, ERM has adopted the assessment criteria shown in *Table 6.16* for particulate matter, nitrogen dioxide (NO2) and individual toxic air pollutants (metals).

In addition to health impacts, airborne dust also has the potential to cause nuisance impacts by depositing on surfaces. *Table 6.16* also shows the maximum acceptable increase in dust deposition over the existing dust levels (2 g/m$^2$/month) and the maximum total deposited dust level (4 g/m$^2$/month). Given that there are no ambient dust deposition levels for the local area, this assessment will be compared to the maximum increase in deposited dust level. These criteria for dust deposition levels are set to protect against nuisance impacts.

Odour nuisance impact has been included in the impact assessment. The impact assessment criteria for complex mixtures of odours have been designed to take into account the range of sensitivity to odours within the community and to provide additional protection for individuals with a heightened response to odours. This is achieved by using a statistical approach, dependent upon population size.

The assessment criteria for particulate matter and $NO_2$ were applied, in accordance with the requirements of the Approved Methods, as follows:

- At the nearest existing or likely future off-site sensitive receptor;
- The incremental impact (predicted impacts from the site alone) for each pollutant must be reported;
- Background concentrations must be included; and
- Total impact (incremental impact plus background) must be reported as the 100$^{th}$ percentile and compared with the relevant impact assessment criteria.

The assessment criteria for individual toxic air pollutants were applied, in accordance with the requirements of the Approved Methods, as follows:

- at and beyond the boundary of the facility;
- the incremental impact (predicted impacts from the site alone) for each pollutant must be reported in concentration units consistent with the criteria (mg/$m^3$ or ppm), for an averaging period of 1 hour and as the:
  - 100$^{th}$ percentile of dispersion model predictions for Level 1 (screening-level dispersion modelling technique using worst-case input data) impact assessments; and
  - 99.9$^{th}$ percentile of dispersion model predictions for Level 2 (refined dispersion modelling technique using site-specific input data) impact assessments.

However, the assessment criteria for toxic air pollutants within the Approved Methods are taken from the Victorian State Environment Protection Policy for Air Quality Management (SEPP (AQM)) (Government of Victoria, 2001). In developing the design criteria contained within the SEPP (AQM), exposure was considered to occur to sensitive populations 24 hours a day, 365 days a year for an entire life time. The Site is, however, located within an industrial estate; thus the working population surrounding the site are not exposed 24 hours a day, 365 days a year for an entire lifetime, typically they will be exposed eight to ten hours a day, five to six days a week for a working life time. It is therefore considered that the application of the toxic air pollutant criterion in an industrial setting is unduly restrictive. Rather, it is considered that a more appropriate criteria within the industrial setting is the Safe Work Australia Time-Weighted Average[1] should apply at or beyond the site boundary rather than the human health impact assessment criterion in *Table 6.16*.

Consequently, the human health criterion for individual toxic air pollutants (as shown in *Table 6.16*) applies where there are sensitive receptors (residential) with potential to be exposed to such pollutants from metals cutting on a long-term basis, although it is noted that these pollutants are only emitted up to 8 – 10 hours when metals cutting at the Site takes place. The Safe Work Australia Time-Weighted Average (adjusted to 10 hours to account for maximum metals cutting duration and for 100$^{th}$ percentile) has been used for assessment within the industrial area, and is presented in *Table 6.16*.

[1] Time weighted average can be found on http://hsis.safeworkaustralia.gov.au

The assessment criteria for complex mixtures of odorous air pollutants were applied, in accordance with the requirements of the Approved Methods, as follows:

- At the nearest existing or likely future off-site sensitive receptor;
- The incremental impact (predicted impacts from the site alone) must be reported in units consistent with the impact assessment criteria (odour unit (OU)), as peak concentrations (i.e. approximately 1 second average) in accordance with the requirements of Section 6 of the Approved Methods and as the:
  - 100th percentile of dispersion model predictions for Level 1 impact assessments; and
  - 99th percentile of dispersion model predictions for Level 2 impact assessments.

***Table 6.16 Adopted Assessment Criteria***

| Species | Averaging Period | Criteria | Units |
|---|---|---|---|
| *Particulate matter and nitrogen dioxide* | | | |
| Total suspended particulate matter (TSP) | Annual mean[1,4] | 90 | µg/m$^3$ |
| Particulate matter <10 µg in diameter ($PM_{10}$) | Annual mean[2,4] | 30 | µg/m$^3$ |
| | 24-hour maximum[3,4] | 50 | µg/m$^3$ |
| Nitrogen dioxide ($NO_2$) | 1 hour[3,4] | 246 | µg/m$^3$ |
| | Annual mean[3,4] | 62 | µg/m$^3$ |
| *Individual toxic air pollutants* | | | |
| Iron oxide fumes | 1 hour[5] | 0.09 | mg/m$^3$ |
| Manganese and compounds | 1 hour[5] | 0.018 | mg/m$^3$ |
| Copper dusts and mists | 1 hour[5] | 0.018 | mg/m$^3$ |
| *Safe Work Australia TWA (adjusted to 10 hours)* | | | |
| Iron oxide fumes | 10 hours | 4 | mg/m$^3$ |
| Manganese and compounds | 10 hours | 0.8 | mg/m$^3$ |
| Copper dusts and mists | 10 hours | 0.8 | mg/m$^3$ |
| *Dust deposition* | | | |
| Maximum increase in deposited dust level | Annual[4] | 2 | g/m$^2$/month |
| Maximum total deposited dust level | Annual[4] | 4 | g/m$^2$/month |

| Species | Averaging Period | Criteria | Units |
|---|---|---|---|
| *Odorous air pollutants (complex mixtures)*[4,6] | | | |
| **Population of affected community** | | **Impact assessment criteria for complex mixtures of odorous air pollutants (OU) (nose-response-time average, 99th percentile)** | |
| Urban (≥~2000) and/or schools and hospitals | | 2.0 | |
| ~500 | | 3.0 | |
| ~125 | | 4.0 | |
| ~30 | | 5.0 | |
| ~10 | | 6.0 | |
| Single rural residence (≤~2) | | 7.0 | |

1. National Health and Medical Research Council (National Health and Medical Research Council, 1996)
2. Environment Protection Authority (NSW Environment Protection Authority, 1998)
3. National Environment Protection Council (National Environment Protection Council, 1998)
4. Department of Environment and Conservation (Department of Environment and Conservation, 2005)
5. State Environment Protection Policy (Air Quality Management) (Government of Victoria, 2001)
6. Environment Protection Authority ( (NSW Environment Protection Authority, 2001)

*Methodology*

In order to determine the predicted ground level concentrations that result from the project, the following approach was adopted:

- dispersion model selection;
- emission estimation;
- meteorological modelling;
- dispersion modelling;
- post processing; and
- assessment.

Further details on the assessment methodology adopted for this project is provided in the AQIA (*Annex I)*.

### *6.4.5 Impact Assessment*

The assessment of impacts has considered the predicted concentrations of TSP, deposited dust, $PM_{2.5}$ and $PM_{10}$ at the sensitive receptors, with and without background air quality concentrations.

*Total Suspended Particulate Matter*

The predicted annual average TSP concentrations at the receptors were produced from the model. The highest annual average TSP concentrations at each receptor over a 5 year period are presented in *Table 6.17*. Whilst ambient TSP is not measured at Prospect, typically $PM_{10}$ is considered to be half of the

ambient TSP value. Taking the annual average $PM_{10}$ value of 18.4 μg/m$^3$ this indicates and annual average background TSP value of 36.8 μg/m$^3$.

When this indicative background is added to the maximum modelled annual mean TSP concentration at a sensitive receptor (0.89 μg/m$^{3)}$ this provides a cumulative concentration of approximately 37.7 μg/m$^3$. When compared to the assessment criteria of 90 μg/m$^3$, the highest annual average TSP concentrations at each of the receptors is therefore below the assessment criteria.

***Table 6.17 Highest Annual Average TSP Concentrations at Receptors over 5 years***

| Sensitive Receptor | X | Y | Annual Average TSP Concentration (Increment) [1] (μg/m$^3$) | Impact Assessment Criteria (μg/m$^3$) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 0.89 | 90 |
| 2 | 306975 | 6263528 | 0.75 | |
| 3 | 306963 | 6263414 | 0.53 | |
| 4 | 305627 | 6263452 | 0.34 | |
| 5 | 305527 | 6263624 | 0.26 | |
| 6 | 305475 | 6263762 | 0.23 | |
| 7 | 305584 | 6264114 | 0.20 | |
| 8 | 306081 | 6264458 | 0.30 | |
| 9 | 306603 | 6264395 | 0.28 | |
| 10 | 307080 | 6264227 | 0.22 | |

1. Maximum at each of the receptors over 5 years.

*Dust Deposition*

With an unknown background, the maximum allowable increase in deposited dust is 2 g/m$^2$/month. When compared against the highest annual average dust deposition at each of the receptors produced from 5 years of data (refer *Table 6.18*), the predicted concentrations at each of the sensitive receptors are below the assessment criteria.

***Table 6.18 Highest Annual Average Dust Deposition at Receptors over 5 years***

| Sensitive Receptor | X | Y | Annual Average Dust Deposition (Increment) [1] (g/m$^2$/month) | Impact Assessment Criteria (g/m$^2$/month) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 0.11 | 2 |
| 2 | 306975 | 6263528 | 0.09 | |
| 3 | 306963 | 6263414 | 0.06 | |
| 4 | 305627 | 6263452 | 0.03 | |
| 5 | 305527 | 6263624 | 0.03 | |
| 6 | 305475 | 6263762 | 0.02 | |
| 7 | 305584 | 6264114 | 0.02 | |

| Sensitive Receptor | X | Y | Annual Average Dust Deposition (Increment) [1] ($g/m^2$/month) | Impact Assessment Criteria ($g/m^2$/month) |
|---|---|---|---|---|
| 8 | 306081 | 6264458 | 0.04 | |
| 9 | 306603 | 6264395 | 0.04 | |
| 10 | 307080 | 6264227 | 0.03 | |

1. Maximum at each of the receptors over 5 years.

*$PM_{2.5}$*

While there is no appropriate assessment criterion for $PM_{2.5}$ concentrations, the highest maximum 24-hour average concentrations at each of the receptors over a 5 year time period are provided at *Table 6.19*.

***Table 6.19 Maximum predicted contribution to 24-hour Average $PM_{2.5}$ concentrations at Receptors over 5 years***

| Sensitive Receptor | X | Y | Year | Maximum $PM_{2.5}$ background[1] concentration ($\mu g/m^3$) | Maximum $PM_{2.5}$ Concentration (Increment) [2] ($\mu g/m^3$) | Increment plus background ($\mu g/m^3$) |
|---|---|---|---|---|---|---|
| 1 | 306993 | 6263656 | 2010 | 20.8 | 4.15 | 25.0 |
| 2 | 306975 | 6263528 | 2010 | 20.8 | 4.05 | 24.9 |
| 3 | 306963 | 6263414 | 2010 | 20.8 | 2.79 | 23.6 |
| 4 | 305627 | 6263452 | 2009 | 148.9 | 1.88 | 150.8 |
| 5 | 305527 | 6263624 | 2009 | 148.9 | 1.62 | 150.5 |
| 6 | 305475 | 6263762 | 2009 | 148.9 | 1.04 | 149.9 |
| 7 | 305584 | 6264114 | 2009 | 148.9 | 1.04 | 149.9 |
| 8 | 306081 | 6264458 | 2009 | 148.9 | 1.54 | 150.4 |
| 9 | 306603 | 6264395 | 2008 | 17.7 | 1.24 | 18.9 |
| 10 | 307080 | 6264227 | 2010 | 20.8 | 0.87 | 21.7 |

1. Data from Richmond
2. Maximum at each of the receptors over 5 years.

*$PM_{10}$ Annual Mean*

The highest annual average $PM_{10}$ concentrations at each receptor are presented in *Table 6.20*. The corresponding background concentration for the year in which the maximum concentration was predicted is also presented. The addition of the background concentration and the maximum increment results concentrations below the annual mean criteria for $PM_{10}$ (*Table 6.20*).

*Table 6.20 Maximum Annual Average $PM_{10}$ Concentrations at Receptors over 5 years*

| Sensitive Receptor | X | Y | Annual Average $PM_{10}$ Concentration (Increment) [1] ($\mu g/m^3$) | Year Maximum Concentration Occurred | Background Air Quality ($\mu g/m^3$) | Increment plus Background ($\mu g/m^3$) | Impact Assessment Criteria ($\mu g/m^3$) |
|---|---|---|---|---|---|---|---|
| 1 | 306993 | 6263656 | 0.57 | 2009 | 25.9 | 26.5 | 30 |
| 2 | 306975 | 6263528 | 0.49 | 2009 | 25.9 | 26.4 | |
| 3 | 306963 | 6263414 | 0.36 | 2009 | 25.9 | 26.3 | |
| 4 | 305627 | 6263452 | 0.22 | 2012 | 17.2 | 17.4 | |
| 5 | 305527 | 6263624 | 0.18 | 2012 | 17.2 | 17.4 | |
| 6 | 305475 | 6263762 | 0.15 | 2012 | 17.2 | 17.4 | |
| 7 | 305584 | 6264114 | 0.14 | 2012 | 17.2 | 17.3 | |
| 8 | 306081 | 6264458 | 0.2 | 2011 | 15.8 | 16.0 | |
| 9 | 306603 | 6264395 | 0.19 | 2012 | 17.2 | 17.4 | |
| 10 | 307080 | 6264227 | 0.15 | 2012 | 17.2 | 17.4 | |

*PM10 24-Hour Mean*

As shown in *Table 6.13*, the maximum 24-hour average $PM_{10}$ concentration for 2009 exceeds the respective assessment criteria. The highest 24-hour average $PM_{10}$ concentrations at each receptor are presented in *Table 6.21*, together with the maximum 24-hour average background concentration for the relevant year in which the prediction occurred.

While the highest maximum 24-hour average $PM_{10}$ concentrations at each of the receptors (i.e. the increment) over 5 years are below the assessment criteria, the increment plus background exceeds the assessment criteria at receptors 1, 2, 4, 5, 6, 7 and 8 (*Table 6.21*). The exceedances of the background are the result of elevated backgrounds that are either close to or above the assessment criteria.

Level 2 Contemporaneous Assessment

The guidance document for the modelling and assessment of air pollutants in NSW (Department of Environment and Conservation, 2005) states that, where existing ambient air pollutant concentrations exceed the impact assessment criteria, it must be demonstrated that no additional exceedances of the impact assessment criteria will occur as a result of the proposed activity.

The guidance indicates that the maximum predicted concentrations at the receptors as a result of site activities must be matched with the corresponding 24-hour average in the background ambient air quality data. This approach also needs to be applied vice versa, in that the maximum concentrations in the ambient air quality data, with the corresponding predicted 24-hour average at the receptors.

To facilitate this analysis, the highest maximum 24-hour average $PM_{10}$ concentrations at each of the receptors for 5 years were extracted from the model data. These maximum concentrations at the receptors were matched with the corresponding 24-hour background concentration and added together to provide the increment plus background, when the concentrations at the receptors are at their highest over 5 years (*Table 6.22*).

The maximum Site contribution was determined to be 12.4 $\mu g/m^3$ at receptor 1. To determine whether there is potential for the site to result in additional exceedances of the criteria, the maximum 24-hour background concentrations below the criteria were extracted from the EPA measurements to a level equal to or below 37.6 $\mu g/m^3$. *Table 6.23* shows the maximum, non-exceedance background concentrations, together with the date on which they occurred, the predicted site contribution at the sensitive receptors and the cumulative impact of background plus site contribution.

*Table 6.21 Maximum 24-hour Average $PM_{10}$ Concentrations at Receptors over 5 years*

| Sensitive Receptor | X | Y | Maximum 24-hour Average $PM_{10}$ Concentration (Increment) [1] ($\mu g/m^3$) | Year Maximum Concentration Occurred | Background Air Quality ($\mu g/m^3$) | Increment plus Background ($\mu g/m^3$) | Impact Assessment Criteria ($\mu g/m^3$) |
|---|---|---|---|---|---|---|---|
| 1 | 306993 | 6263656 | 12.35 | 2010 | 40.1 | 52.5 | 50 |
| 2 | 306975 | 6263528 | 11.91 | 2010 | 40.1 | 52.0 | |
| 3 | 306963 | 6263414 | 8.05 | 2010 | 40.1 | 48.2 | |
| 4 | 305627 | 6263452 | 4.37 | 2009 | 1,680.3 | 1,684.4 | |
| 5 | 305527 | 6263624 | 3.72 | 2009 | 1,680.3 | 1,684.0 | |
| 6 | 305475 | 6263762 | 2.84 | 2009 | 1,680.3 | 1,683.1 | |
| 7 | 305584 | 6264114 | 2.84 | 2009 | 1,680.3 | 1,683.1 | |
| 8 | 306081 | 6264458 | 3.98 | 2009 | 1,680.3 | 1,684.3 | |
| 9 | 306603 | 6264395 | 3.84 | 2008 | 41.8 | 45.6 | |
| 10 | 307080 | 6264227 | 2.59 | 2010 | 41.5 | 44.1 | |

1. Maximum at each of the receptors over 5 years.

The results presented in *Table 6.22* and *Table 6.23* indicate that there would be no additional exceedances as a result of the site activities. This takes into consideration situations when dust is transported from Site to receptor and the background concentrations are low, and when background concentrations are elevated, but below criteria.

*Table 6.22 Maximum 24-hour average Site contribution to $PM_{10}$ Concentrations at the Receptors plus background*

| Date | Background[1] (µg/m³) | $PM_{10}$ Maximum Predicted 24-hour average Site contribution (µg/m³) | | | | | | | | | | Increment plus Background (µg/m3) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sensitive Receptors | | | | | | | | | | Sensitive Receptors | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 05/02/2008 | 6.3 | | | | | | | | | 3.84 | | | | | | | | | | 10 | |
| 03/06/2009 | 21.3 | | | | 4.37 | 3.72 | | | | | | | | | 26 | 25 | | | | | |
| 21/06/2009 | 11.6 | | | | | | 2.84 | 2.84 | 3.98 | | | | | | | | 14 | 14 | 16 | | |
| 17/07/2010 | 18.1 | | | | | | | | | | 2.59 | | | | | | | | | | 21 |
| 13/11/2010 | 18.4 | 12.35 | 11.91 | 8.05 | | | | | | | | 30 | 31 | 26 | | | | | | | |

1. Sourced from the Prospect ambient monitoring station

*Table 6.23 24-hour average Site contribution to $PM_{10}$ concentrations at the sensitive receptors at the time of the highest non-exceeding background concentrations*

| Date | Background[1] $PM_{10}$ 24-hour average ($ug/m^3$) | 24 -hour average at the Sensitive Receptors ($ug/m^3$) | | | | | | | | | | Increment plus background | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 27/11/2009 | 48.5 | 0.0 | 0.1 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.5 | 48.6 | 49.2 | 48.5 | 48.5 | 48.5 | 48.5 | 48.5 | 48.5 | 48.5 |
| 20/11/2009 | 48.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 48.1 | 48.1 | 48.1 | 48.2 | 48.2 | 48.2 | 48.4 | 48.2 | 48.3 | 48.2 |
| 25/02/2009 | 44.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.5 | 0.0 | 0.0 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.9 | 45.2 | 44.7 | 44.7 |
| 02/10/2009 | 42.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 42.6 | 42.6 | 42.6 | 42.6 | 42.6 | 42.6 | 42.6 | 42.6 | 43.4 | 42.6 |
| 06/12/2008 | 41.8 | 0.8 | 0.8 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.1 | 42.6 | 42.6 | 42.3 | 41.8 | 41.8 | 41.8 | 41.8 | 41.8 | 42.3 | 41.9 |
| 16/09/2008 | 41.5 | 0.9 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.7 | 42.4 | 41.8 | 41.6 | 41.5 | 41.5 | 41.5 | 41.5 | 41.5 | 41.6 | 42.2 |
| 20/09/2011 | 41.5 | 0.4 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 41.9 | 41.8 | 41.7 | 41.5 | 41.5 | 41.5 | 41.8 | 41.5 | 41.5 | 41.5 |
| 25/08/2009 | 40.9 | 1.6 | 1.7 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 42.5 | 42.6 | 42.0 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 | 40.9 |
| 01/07/2008 | 40.1 | 1.6 | 2.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.7 | 42.1 | 40.4 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 |
| 27/03/2010 | 40.1 | 0.2 | 1.6 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.3 | 41.7 | 41.9 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 | 40.1 |
| 26/03/2009 | 39.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.0 | 39.7 | 39.7 | 39.7 | 39.7 | 39.7 | 39.8 | 40.0 | 39.9 | 39.9 | 39.7 |
| 15/09/2008 | 39.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 39.2 | 39.2 | 39.3 | 39.2 | 39.2 | 39.2 | 39.2 | 39.2 | 39.2 | 39.2 |
| 14/10/2009 | 38.8 | 2.5 | 0.9 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 41.3 | 39.7 | 39.0 | 38.8 | 38.8 | 38.8 | 38.8 | 38.8 | 38.8 | 38.8 |
| 23/09/2011 | 38.7 | 0.0 | 0.0 | 0.0 | 0.3 | 1.1 | 1.0 | 0.5 | 0.1 | 0.3 | 0.0 | 38.7 | 38.7 | 38.7 | 39.0 | 39.8 | 39.7 | 39.2 | 38.8 | 39.0 | 38.7 |
| 26/10/2012 | 38.7 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.7 | 38.7 | 38.7 | 38.8 | 38.7 | 38.7 | 38.7 | 38.7 | 38.7 | 38.7 |
| 12/09/2009 | 38.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38.1 | 38.1 | 38.2 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.1 |
| 25/01/2011 | 37.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.2 | 0.2 | 0.0 | 37.5 | 37.5 | 37.5 | 37.5 | 37.5 | 37.5 | 37.8 | 37.7 | 37.7 | 37.5 |

1- Sourced from Prospect monitoring station

*Odour*

The evaluation of odour impacts requires the estimation of short or peak concentrations on the time scale of less than one second. The peak odour impacts are estimated from the 1-hour odour modelling results by multiplying with the appropriate factor from Table 6.1 of the Approved Methods. The selection of the appropriate factor is based on the wet scrubber vent of the hammer mill, which is the biggest source of odour (refer *Annex I*) .i.e. the value of 2.3 for a wake-affected point (the 3 m height of the wet scrubber is within the building wake zone).

In *Table 6.24*, the incremental odour results are reported for the nearest sensitive receptors (99$^{th}$ percentile for mixed odorants for a Level 2 assessment), as required by the Approved Methods. In addition, the maximum incremental offsite odour impact (99$^{th}$ percentile) has also been reported, as requested by the EPA. No odour background concentrations are available for this assessment.

***Table 6.24 Maximum predicted peak odour concentrations at Receptors and maximum offsite odour concentrations over 5 years***

| Sensitive Receptor | X | Y | Year | Maximum peak odour concentration[1] (OU) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 2010 | 0.23 |
| 2 | 306975 | 6263528 | 2010 | 0.17 |
| 3 | 306963 | 6263414 | 2010 | 0.16 |
| 4 | 305627 | 6263452 | 2009 | 0.07 |
| 5 | 305527 | 6263624 | 2009 | 0.05 |
| 6 | 305475 | 6263762 | 2009 | 0.04 |
| 7 | 305584 | 6264114 | 2009 | 0.05 |
| 8 | 306081 | 6264458 | 2009 | 0.06 |
| 9 | 306603 | 6264395 | 2008 | 0.08 |
| 10 | 307080 | 6264227 | 2010 | 0.07 |
| Maximum offsite location | | | | 1.03 |

1. Maximum at each of the receptors over 5 years.

Based on an impact assessment criterion of 2 OU (for urban population of >2000 people) as presented in *Table 6.16*, it can be seen that odour impacts from the Site at the sensitive receptors are below the assessment criterion.

*NO2 Annual Mean*

Nitrogen oxide ($NO_X$) is emitted by the metals cutting process (refer *Annex I*); however, it is $NO_2$ that pertains to human health impact. $NO_X$ consists of nitrogen oxide (NO) and $NO_2$, but NO will undergo oxidation in the atmosphere to become $NO_2$. The Approved Methods recommend that 100% conversion of NO to $NO_2$, as a worst-case assessment, and this has been adopted in this impact assessment for conservative purposes. The results of

mean $NO_2$ concentrations for an annual averaging period is reported for the nearest sensitive receptors.

With an annual mean assessment criterion of 62 µg/m$^3$, it can be seen from the results in *Table 6.25* that the $NO_2$ impacts at the sensitive receptors on an annual basis are below the assessment criterion.

*Table 6.25 Maximum Hourly Average $NO_2$ Concentrations at Receptors over 5 years*

| Sensitive Receptor | X | Y | 99.9th Percentile Hourly Average $NO_2$ Concentration (Increment) [1] ($\mu g/m^3$) | Year Maximum Concentration Occurred | Maximum Measured Background Air Quality ($\mu g/m^3$) | Increment plus Background ($\mu g/m^3$) | Impact Assessment Criteria ($\mu g/m^3$) |
|---|---|---|---|---|---|---|---|
| 1 | 306993 | 6263656 | 52 | 2010 | 40.4 | 92.0 | 246 |
| 2 | 306975 | 6263528 | 67 | 2010 | 40.4 | 107.4 | |
| 3 | 306963 | 6263414 | 79 | 2011 | 36.3 | 115.0 | |
| 4 | 305627 | 6263452 | 33 | 2009 | 39.4 | 72.1 | |
| 5 | 305527 | 6263624 | 34 | 2009 | 39.4 | 73.2 | |
| 6 | 305475 | 6263762 | 18 | 2012 | 36.1 | 54.5 | |
| 7 | 305584 | 6264114 | 14 | 2011 | 36.3 | 50.3 | |
| 8 | 306081 | 6264458 | 36 | 2009 | 39.4 | 75.6 | |
| 9 | 306603 | 6264395 | 30 | 2009 | 39.4 | 69.4 | |
| 10 | 307080 | 6264227 | 16 | 2011 | 36.3 | 52.5 | |

1. Maximum at each of the receptors over 5 years.

*Iron Oxide Fumes 1-Hour Mean*

*Table 6.26* presents the 99.9th percentile hourly iron oxide fume concentrations predicted by the modelling at the sensitive receptors. *Table 6.26* presents the 99.9th percentile predicted 1-hour mean iron oxide fume concentrations at Receptors and for the 10-hour adjusted maximum concentration (100th percentile) at any offsite location within the industrial estate.

***Table 6.26 99.9th percentile predicted 1-hour mean iron oxide fume concentrations at Receptors and 10-hour maximum offsite iron oxide fume concentrations over 5 years***

| Sensitive Receptor | X | Y | Year | Hourly average incremental iron oxide fumes concentration[1] (mg/m³) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 2010 | 0.078 |
| 2 | 306975 | 6263528 | 2010 | 0.085 |
| 3 | 306963 | 6263414 | 2010 | 0.077 |
| 4 | 305627 | 6263452 | 2009 | 0.048 |
| 5 | 305527 | 6263624 | 2009 | 0.039 |
| 6 | 305475 | 6263762 | 2009 | 0.028 |
| 7 | 305584 | 6264114 | 2009 | 0.027 |
| 8 | 306081 | 6264458 | 2009 | 0.026 |
| 9 | 306603 | 6264395 | 2008 | 0.027 |
| 10 | 307080 | 6264227 | 2010 | 0.024 |
| Maximum offsite location (10 hours) | | | | 2.01 |

1. Maximum at each of the receptors over 5 years.

Based on the toxic air pollutants criterion of 0.09 mg/m³, it can be seen that at the sensitive receptors where this criterion applies, the predicted 1 hour concentrations at 99.9th percentile are below the assessment criterion.

At the maximum offsite location, using 10 hours of metals cutting and the adjusted TWA of 4 mg/m³, the predicted iron oxide fume concentration of 2.01 mg/m³ does not exceed the Safe Work Australia criterion.

*Manganese and Compounds 1-Hour Mean*

In keeping with the iron oxide fume impact assessment, the Approved Methods toxic air pollutant criterion does not apply at the industrial estate where the site is located.

Consequently, the sensitive receptors have been assessed against a 1-hour criterion of 0.018 mg/m³ as per *Table 6.16*, whilst the 10-hour TWA for manganese and compounds of 0.8 mg/m³has been used within the industrial area as per *Table 6.16*.

*Table 6.27* shows that ambient manganese concentrations are below the adopted assessment criteria in the relevant locations.

***Table 6.27*** ***99.9th percentile predicted 1-hour mean manganese and compounds concentrations at Receptors and 10-hour maximum offsite manganese and compounds concentrations over 5 years***

| Sensitive Receptor | X | Y | Year | Hourly average incremental manganese and compounds concentration[1] (mg/m³) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 2010 | 0.0082 |
| 2 | 306975 | 6263528 | 2010 | 0.0089 |
| 3 | 306963 | 6263414 | 2010 | 0.0080 |
| 4 | 305627 | 6263452 | 2009 | 0.0050 |
| 5 | 305527 | 6263624 | 2009 | 0.0041 |
| 6 | 305475 | 6263762 | 2009 | 0.0029 |
| 7 | 305584 | 6264114 | 2009 | 0.0028 |
| 8 | 306081 | 6264458 | 2009 | 0.0028 |
| 9 | 306603 | 6264395 | 2008 | 0.0028 |
| 10 | 307080 | 6264227 | 2010 | 0.0025 |
| Maximum offsite location (10 hours) | | | | 0.21 |

1. Maximum at each of the receptors over 5 years.

*Copper Dusts and Mists 1-Hour Mean*

In keeping with the iron oxide fume impact assessment, the Approved Methods toxic air pollutant criterion does not apply at the industrial estate where the Site is located.

Consequently, the sensitive receptors have been assigned a 1-hour assessment criterion for copper dusts and mists of 0.018 mg/m³ as per *Table 6.26*, whilst the 10-hour TWA for copper dusts and mists of 0.8 mg/m³ has been used within the industrial area as per *Table 6.16*. *Table 6.28* shows that ambient concentrations of copper dusts and mists are below the adopted assessment criteria in the relevant locations.

*Table 6.28* ***99.9th percentile predicted 1-hour mean copper dusts and mists concentrations at Receptors and 10-hour maximum offsite copper dusts and mist concentrations over 5 years***

| Sensitive Receptor | X | Y | Year | Hourly average incremental copper dusts and mists concentration[1] (mg/m³) |
|---|---|---|---|---|
| 1 | 306993 | 6263656 | 2010 | 0.0011 |
| 2 | 306975 | 6263528 | 2010 | 0.0012 |
| 3 | 306963 | 6263414 | 2010 | 0.0011 |
| 4 | 305627 | 6263452 | 2009 | 0.0007 |
| 5 | 305527 | 6263624 | 2009 | 0.0005 |
| 6 | 305475 | 6263762 | 2009 | 0.0004 |
| 7 | 305584 | 6264114 | 2009 | 0.0004 |
| 8 | 306081 | 6264458 | 2009 | 0.0004 |
| 9 | 306603 | 6264395 | 2008 | 0.0004 |
| 10 | 307080 | 6264227 | 2010 | 0.0003 |
| Maximum offsite location (10 hours) | | | | 0.0081 |

1. Maximum at each of the receptors over 5 years.

*Impact Summary*

The number and type of sources of emission from the site were thoroughly investigated and appropriately assessed for inclusion in the air dispersion modelling. A comprehensive explanation of the air dispersion modelling results is provided at *Annex I.* In summary, these results indicated that:

- the highest predicted annual average TSP concentrations at each of the receptors is below the assessment criteria;
- the highest annual average dust deposition at each of the receptors produced from 5 years of data is below the assessment criteria;
- the highest annual average $PM_{10}$ concentration at the receptors at each of the receptors is below the assessment criteria;
- the maximum predicted 24-hour average $PM_{10}$ concentration together with the maximum background concentration results in levels that exceed the assessment criteria at the sensitive receptors due to the elevated background ambient air quality concentration in this area;
- the peak odour concentration at the receptors is below the assessment criterion;
- the highest annual average and 1 hour average NO2 concentrations at the receptors are below the respective assessment criteria; and

- the toxic air pollutants (iron oxide fumes, manganese and compounds, copper dusts and mists) concentrations are found not to exceed the Work Safe 10-hour adjusted TWA at offsite locations within the industrial estate where the Site is located, and found not to exceed the human health assessment criteria at the nearest sensitive receptors.

Where existing ambient air pollutant concentrations exceed the impact assessment criteria, it must be demonstrated that no additional exceedances of the impact assessment criteria will occur as a result of the proposed activity:

A cumulative assessment of the maximum predicted 24-hour concentrations at the sensitive receptors together with the background concentration, that occurred on the date of the prediction, indicated that there would be no additional exceedance due to the Site activities.

A cumulative assessment of the periods of background concentration below the assessment criteria, together with the predicted concentrations as a result of site activities on those dates, indicated that there would be no additional exceedance due to the Site activities.

### *6.4.6 Mitigation Measures*

Notwithstanding the above, the following mitigation measures will be employed to minimise impacts to local air quality:

- vehicles and equipment shall be maintained in accordance with the manufacturer's specifications;
- additional site fencing located on the eastern boundary of the site, should include appropriate dust screen to minimise airborne dust movements; and
- all surplus soils from excavations during construction, not reused on-site, shall be removed from site by covered trucks and disposed of at an appropriately licensed facility.

## *6.5 GREENHOUSE GAS ASSESSMENT*

### *6.5.1 Background*

This section quantifies greenhouse gas (GHG) emissions estimations from the Project in accordance with the requirements of the Director General. Where appropriate, management and mitigation measures have been identified. In addition, this section considers the Project in the context of the existing legislative framework under the national greenhouse and energy reporting system, namely, the *National Greenhouse and Energy Reporting Act 2007*.

### 6.5.2 *Introduction*

A GHG is defined as a gas in the atmosphere that absorbs and emits radiation within the thermal infrared range. These gases trap heat re-radiated from the earth keeping the surface of the planet warmer than it would otherwise be. An excess of GHG is the atmosphere results in additional warming of the surface. Six main GHGs are covered under the Kyoto Protocol's reporting, namely:

- Carbon dioxide ($CO_2$);
- Methane ($CH_4$);
- Nitrous oxide ($N_2O$);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs) and
- Sulphur hexafluoride ($SF_6$).

The Project's GHG emissions, pertaining to CO2, CH4 and N2O, have been quantified and the impact on the national GHG inventory has been assessed. No emissions of HFCs, PFCs or SF6 are likely from activities on site, and no quantities of these chemicals have currently been identified as in use on site or are proposed to be used on site following the upgrade.

The following sections provide an overview of:

- GHG policy;
- Methodology for the development of the GHG inventory;
- GHG inventory.

### 6.5.3 *GHG Policy Framework*

The federally legislated *National Greenhouse and Energy Reporting Act 2007* (the Act), the *National Greenhouse and Energy Reporting Regulations 2008* (the Regulations) under that Act and the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (NGERs) establish the legislative framework for a national greenhouse and energy reporting system.

NGERs has two objectives which are set out in the Act:

- the first set of objectives comprises of:
  - informing government policy formulation and the Australian public;
  - meeting Australia's international reporting obligations;

- assisting Commonwealth, State and Territory government programs and activities; and

- avoiding the duplication of similar reporting requirements in the States and Territories.

- the second objective of the NGERS is to underpin the *Clean Energy Act 2011* by imposing various registration, reporting and record keeping requirements.

The Act provides methods, and criteria for methods, for the measurement of the following:

- greenhouse gas emissions arising from the operation of facilities;

- the production of energy arising from the operation of facilities;

- the consumption of energy arising from the operation of facilities; and

- potential greenhouse gas emissions embodied in an amount of natural gas.

NGERS was designed to facilitate the integration of corporate and facility level data with international data standards on greenhouse emissions estimates.

### *6.5.4 Director General's Requirements for Assessment*

The Department of Planning and Infrastructure have reviewed and re-issued the Director-General's requirements for the site on the basis of the proposed upgrades.

The Director General has stipulated that the greenhouse gas assessment must include:

- a quantitative assessment of the potential scope 1 and 2 greenhouse gas emissions of the development, and a qualitative assessment of the potential impacts of these emissions on the environment; and

- a detailed description of the measures that would be implemented on site to ensure that the development is energy efficient.

### *6.5.5 Methodology*

The overall methodology used to develop the GHG inventory for the Project was based on the following:

- development of the Project's site activities – assigning elements of the Project to be assessed for GHG emissions;

- identification of emission sources, fuel types and conditions for combustion or release, including separation of emission sources into Scope 1 and Scope 2 where:
    - scope 1 is the release of GHG into the atmosphere as a direct result of an activity or series of activities (including ancillary activities) that constitute the facility;
    - scope 2 is the release of GHG as a result of one or more activities that generate electricity, heating, cooling or steam that is consumed by a facility but do not form part of that facility;
- use of nationally published emission factors from NGERs; and
- data collection and calculation of potential emissions from key project activities during operation.

Only scope 1 and scope 2 emissions have been taken into consideration when undertaking the GHG assessment. Scope 3 emissions (all other indirect emissions not covered by Scope 2 and not within the control of the Project) were outside the Director General's requirements of this assessment and were therefore not estimated.

This assessment presents emissions of GHG from on-site sources and as a result of the Project's activities. *Table 6.29* provides a list of the main GHG producing activities for the Project together with the relevant Scope 1 and 2 emission sources.

***Table 6.29 GHG Producing Activities***

| Site Activity | Emission Sources | Fuel Use | Scope |
|---|---|---|---|
| Front end loaders and mobile material handling equipment activity on-site | Vehicle movements including:<br>- Front end loaders<br>- Mobile material handling vehicles<br>- Trucks transporting raw material on-site and transporting waste and product off-site | Diesel | Scope 1 emissions |
| Electricity consumption on-site | All sources of equipment/ lights/ heating etc. powered by electricity, including the shear. | NA | Scope 2 emissions |

The on-site vehicle operation involves the use of front end loaders (FEL) and mobile material handlers to move raw material and processed product around the site. The operators of the site also receive raw material and transport product and waste off-site in trucks. Both the operation of FELs and mobile material handlers, and truck movement are considered to contribute to scope 1 emissions of greenhouse gases (GHG).

The consumption of electricity from on-site activities is allocated to scope 2 emissions of GHG according to the NGERS guidelines.

The existing facility currently operates at a level of 90,000 tonnes per annum, the expansion would see this level increase to 350,000 tonnes per annum. This relates to a 3.89 fold increase in production levels at the approved maximum. It is anticipated however that fuel and electricity use will not increase by the same degree as the production levels due to efficiencies to be gained from the new site layout. A conservative growth factor of three has therefore been used from current fuel and electricity use to estimate future GHG emissions.

*Scope 1 Emissions*

As discussed, Scope 1 relates to the direct emissions of GHG from on-site activities.

*Method Selection*

Four methods are described in the NGERs Technical Guidelines to estimate scope 1 emissions:

- Method 1: the National Greenhouse Accounts default method;
- Method 2: generally a facility-specific method using industry sampling and Australian or international standards or equivalent for analysis of fuels and raw materials to provide more accurate estimates of emissions at facility level;
- Method 3: generally a facility-specific method using Australian or international standards or equivalent standards for both sampling and analysis of fuels and raw materials; and
- Method 4: direct monitoring of emission systems, either on a continuous or periodic basis.

For emissions from the Project, scope 1 emissions were determined using Method 1. Method 1 details estimation procedures derived directly from the methodologies used by the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education for the preparation of the National Greenhouse Accounts. The use of methodologies from the National Greenhouse Accounts also anchors Method 1 within the international guidelines adopted by the UNFCCC for the estimation of greenhouse emissions.

As shown in Table 6.23, on-site activities associated with scope 1 GHG emissions are directly related to fuel use in transport sources. In accordance with method 1 of the NGERs Technical Guidelines (Section 2.41), scope 1 emissions from these sources were estimated using *Equation 6.1.*

***Equation 6.1 Method 1 for Scope 1 emissions of $CO_2$, $CH_4$ and $N_2O$***

$$Eij = \frac{(Qi\ x\ ECi\ x\ EFijoxec)}{1000}$$

Where:

Eij is the emissions of gas type (j), CO, CH4 or N2O;

Qi is the quantity of fuel type (i) (kilolitres or gigajoules) combusted for transport energy purposes;

ECi is the energy content factor of fuel type (i) (gigajoules per kilometre or per cubic metre) used for transport energy purposes;

EFijoxec is the emission factor for each gas type (j) (which includes the effect of an oxidation factor) for fuel type (i) (kilograms CO2-e per gigajoule) used for transport energy purposes.

The emission factor and energy content of the fuel type (diesel oil) used for the mobile sources of GHG emissions (i.e. FELs, trucks) is shown in *Table 6.30*

***Table 6.30 Emission Factor and Energy Content (adapted from NGERS Technical Guidelines Table 2.4.2B)***

| Fuel | Energy Content (GJ/kL) | Emission Factors (kg $CO_2$-e/GJ) | | | Source[1] |
|---|---|---|---|---|---|
| | | $CO_2$ | $CH_4$ | $N_2O$ | |
| Diesel Oil – Transport sources | 38.6 | 69.2 | 0.2 | 0.5 | Table 2.4.2B, NGERS Technical Guidelines |

1. (Department of Industry, Innovation, Climate Change, Science Research and Tertiary Education, 2013)

The total current fuel consumption for all on-site vehicles involved in materials handling activities is listed in *Table 6.31*. The maximum anticipated diesel volume consumed by the proposed activities occurring on site post-upgrade is expected to increase in accordance with an increase in activity on site. A conservative growth factor of 3 (*Section 6.5.5*) has been applied to the current volumes to account for the increase in diesel consumption.

*Table 6.31 Fuel Use for On-Site Vehicles*

| All On-site Vehicles | Diesel Cost[1] ($) | Current Diesel Volume[2] (L) | Anticipated Diesel Volume[3] (L) |
|---|---|---|---|
| - FELs<br>- mobile material handlers | 662,666 | 430,023.4 | 1,290,070 |

1. For the time period Jan2013-Dec2013
2. Diesel volume has been calculated from the average diesel price in NSW of 154.10c/L during the 2013 calendar year (Australian Institute of Petroleum, 2014)
3. Anticipated diesel volume has been calculated by applying a conservative growth factor of 3 (Section *6.5.5*) to diesel volumes estimated for Jan-Dec2013.

*Table 6.32* lists the diesel volume used by the different types of trucks used to transport raw material to the site and to transport end product and waste off-site.

*Table 6.32 Fuel Use for Transport Vehicles*

| Vehicle | Activity | Km/annum | Current Diesel Volume (L) | Anticipated Diesel Volume[4] (L) |
|---|---|---|---|---|
| Iveco semi (BN05GC)[1] | Transport 50/60 $m^3$ bins | 90,000 | 47,368 | 142,105 |
| International semi (BH97BH) [1] | Transport 50/60 $m^3$ bins | 90,000 | 47,368 | 142,105 |
| Mitsubishi 8x4 hook lift (AL86EZ)[2] | Transport 15/25 $m^3$ bins | 78,000 | 37,143 | 111,429 |
| Volvo 8x4 hook lift (BV86FL) [2] | Transport 15/25 $m^3$ bins | 88,400 | 185,640 | 556,920 |
| Mack 8x4 hook lift (BW68WL)[2] | Transport 15/25 $m^3$ bins | 75,000 | 35,714 | 107,143 |
| Mitsubishi MWB 6X4 (BJ21VO)[3] | Transport 9/12 $m^3$ skip bins | 80,100 | 34,826 | 104,478 |
| Mitsubishi MWB 6X4 (BL80RT) [3] | Transport 9/12 $m^3$ skip bins | 86,400 | 37,565 | 112,696 |
| International semi (SP696) [1] | Transport flock to landfill | 70,584 | 37,149 | 111,448 |
| Total Diesel | | | 462,775 | 1,388,324 |

1. Truck designated as large, to which a fuel consumption rate of 1.9 km/L per comms Phillip Baxter (21/02/2014)
2. Truck designated as medium, to which a fuel consumption rate of 2.1 km/L was calculated as the average between that described by the large and small trucks
3. Truck designated as small, to which a fuel consumption rate of 2.3 km/L per comms Phillip Baxter (21/02/2014)
4. Anticipated diesel volume has been calculated by applying a conservative growth factor of 3 (Section *6.5.5*) to current estimated diesel volumes

*Scope 2 Emissions*

*Method Selection*

Scope 2 emissions are a form of indirect emission and, for the Project, include electricity generation consumed on-site. Two methods are listed under NGERS to estimate scope 2 emissions, they are defined as:

- Method 1 — purchase of electricity from main electricity grid in a State or Territory; and
- Method 2 — purchase of electricity from other sources

Method 1 is used for estimating scope 2 emissions released from electricity purchased from the main electricity grid in a State or Territory and consumed from the operation of a facility during a year (*Equation 6.2*). Scope 2 emission factors for the consumption of purchased electricity from Australia's major electricity grids are updated annually to reflect the latest data on the mix of electricity generation sources, which is a major determinant of the factors. Method 2 is not applicable for this site as electricity is not purchased from any other sources.

***Equation 6.2 Method 1 for calculating Scope 2 Emissions***

$$Y = Q\ x\ \frac{EF}{1000}$$

Where:

Y is the scope 2 emissions measured in CO2-e tonnes

Q is the quantity of electricity purchased form the electricity grid during the year and consumed from the operation of the facility measured in kilowatt hours

EF is the scope 2 emission factor in kilograms of CO2-e emissions per kilowatt hour of the State of Territory in which the consumption occurs

The scope 2 emission factors are state-based emission factors from on-grid electricity generation calculated systematically from the physical characteristics of the electricity grid. The state-based emission factor calculates an average emission factor for all electricity consumed from the grid in a given state, territory or electricity grid *(Table 6.33*).

*Table 6.33 Scope 2 Emission Factor from Consumption of Purchased Electricity*

| State | Emissions Factor[1] |
|---|---|
| | kg $CO_2$-e/kWh |
| New South Wales | 0.87 |

1. (Department of Industry, Innovation, Climate Change, Science Research and Tertiary Education, 2013)

### *6.5.6 Emission Estimates*

Using the methodologies, fuel usage, and electricity usage, emissions for the proposed operation have been estimated.

*Scope 1 Emissions*

The quantity of fuel currently used per annum from *Table 6.31* and *Table 6.32* have been utilised in *Equation 6.1* along with the energy content of the fuel and emission factors listed in *Table 6.24* to calculate the total scope 1 emissions of GHG from the site activities (*Table 6.34*).

*Table 6.34 Calculation of Scope 1 Emissions*

| | Current Quantity of Diesel (kL) | Anticipated Quantity of Diesel[1] (kL) | Emissions of $CO_2$ (t $CO_2$-e) | Emissions of $CH_4$ (t $CO_2$-e) | Emissions of $N_2O$ (t $CO_2$-e) | Anticipated Total Emissions (t $CO_2$-e) |
|---|---|---|---|---|---|---|
| On-site Vehicles | 430.0 | 1,290 | 3,446 | 10.0 | 24.9 | 3,481 |
| Transport Vehicles | 462.8 | 1,388 | 3,708 | 10.7 | 26.8 | 3,746 |
| Total Scope 1 GHG Emissions | 892.8 | 2,678 | 7,154 | 20.7 | 51.7 | 7,227 |

1. Anticipated total emissions have been calculated by applying a conservative growth factor of 3 (Section *6.5.5*) to current estimated diesel volumes and applying them in *Equation 6.1.*

*Scope 2 Emissions*

The quantity of electricity consumed per annum has been utilised, with the emission factor described in *Table 6.33,* in *Equation 6.2* to calculate the total GHG emissions for scope 2 (*Table 6.35*). It should be noted, that no new machinery will be used on-site for the proposed expansion and the operating hours will increase. Consequently, it is not expected that electricity usage will increase from that currently used.

*Table 6.35 Calculation of Scope 2 Emissions*

| | Electricity Consumption[1] (kWh) | Anticipated Electricity Consumption[2] (kWh) | Total Anticipated GHG Emissions (t $CO_2$-e) |
|---|---|---|---|
| Scope 2 emissions | 9,334,127 | 28,002,380 | 24,362 |

1. Taken from electricity bills provided by Sell and Parker (January – December 2013).
2. Anticipated electricity consumption has been calculated by applying a conservative growth factor of 3 (Section *6.5.5*) to current electricity usage.

### *6.5.7 Total Site Emissions*

The total GHG emissions for the site can be calculated by the addition of the scope 1 and scope 2 emissions totals from *Table 6.34* and *Table 6.35*. The total current contribution to GHG emissions from the site is therefore estimated to be 10,530 t $CO_2$-e. This contribution is estimated to increase to 31,589 t $CO_2$-e post-upgrade of the site.

This additional fuel and electricity usage estimated for the site post-upgrade has the potential to trip the NGERs reporting threshold. As defined in section 13 of the Act, a corporation may trip either a facility or corporate group threshold. Both the facility and corporate thresholds have three components:

- a greenhouse gas emissions threshold;
- an energy production threshold, and
- an energy consumption threshold.

If the site meets or exceeds one or more of these thresholds for a reporting year, the site must register and report for the first year the threshold is reached. Post-upgrade, the site has the potential to reach the facility threshold of 25,000 t $CO_2$-e or more of GHG emissions. However, it is believed the growth factor of 3 is a conservative estimate of the increase in GHG emissions likely to occur from the site post-upgrade.

It is advised that the site assess their GHG contributions post-upgrade for the assessment periods to ascertain if they are required to register and report their GHG emissions under the NGERs legislation.

### *6.5.8 Potential Impacts*

Based on the above estimates, the annual GHG emissions associated with the upgrade would represent an increase of 0.006% on Australia's national GHG emissions in 2010/11 of 563.1 Mt $CO_2$-e (Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, 2013).

The annual greenhouse emissions for NSW in 2010/11 were 159.0 Mt (Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, 2013). The scope 1 and scope 2 emissions from the upgrade represent an approximate increase of 0.02% of the NSW 2010/11 total. On the basis of the contribution of the emissions to the totals for NSW and the nation, the upgrade represents a negligible increase in GHG emissions. This potential increase in GHG emissions is unlikely to cause an impact to the environment.

### *6.5.9 Mitigation Measures*

The upgrade to the site to allow additional throughput of raw materials to 350,000 tpa has been designed to increase efficiency and reduce impact on the environment where possible. The site is equipped with state of the art technology associated with the metals shredder, including a cyclone and wet scrubber for reduction in particulate matter. Efficiencies on site that directly impact the emission of GHG include:

- the site will be sealed, which will reduce the emission of GHGs from the mobile materials handling equipment due to a more consistent driving surface and the ability to select more direct routes across the site;
- the new site design no longer requires trucks to enter the site twice but allows for one main entrance and exit point, reducing the kilometres travelled by trucks;
- the increased throughput allows for efficiencies due to the economy of scale;
- additional equipment purchased for the upgrade will conform to the standards of the latest technology including installation of conveyors to move material after processing rather than by FEL or truck;
- post-upgrade the site has an additional capacity to recover ferrous and non-ferrous materials from the recycling processes, decreasing the need for end users to source raw materials from the extraction industries; and
- where possible, the site will strive to continually improve the energy efficiency of its process and operations by implementing electricity and cost saving measures.

## 6.6 SOIL AND WATER MANAGEMENT ASSESSMENT

### 6.6.1 Background

A soil and water management assessment was undertaken by ERM (2014b) to ensure that runoff with the potential to impact on the beneficial uses of surface water offsite are retained and/or treated before directed offsite and that clean stormwater, such as rainfall on roof surfaces, are directed offsite with minimal treatment. The Soil and Water Assessment is summarized in this section and provided in full in *Annex J*.

### 6.6.2 Existing Environment

*Temperature*

Temperature data from the Seven Hills (Collins Street) AWS reveals that for the period of collected data, on average:

- December is the warmest month of the year, with a mean temperature of 28.4 Degrees Celsius (°C); and
- the coolest months are June and July, with a mean temperature of 17.4°C (*See Table 6.36*).

**Table 6.36 Monthly Temperature Data for Blacktown, NSW**

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Average Temperature** | 28.3 | 27.7 | 27.0 | 24.1 | 20.0 | 17.4 | 17.4 | 18.6 | 21.4 | 23.8 | 26.3 | 28.4 | 23.4 |

1. Data sourced from Seven Hills (Collins Street) AWS (67026).

*Rainfall*

Rainfall data from the Quakers Hill Treatment Works AWS reveals that for the period of collected data, on average:

- mean annual rainfall for the area surrounding the site is 921.5 millimetres (mm);
- September is typically the driest month with an average of 42.1mm; and
- February is typically the wettest month with an average of 113.3mm (See *Table 6.37*).

**Table 6.37 Monthly Precipitation Data for Blacktown, NSW**

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Average Rainfall** | 104.0 | 113.3 | 94.2 | 66.5 | 71.2 | 80.3 | 42.1 | 52.9 | 38.0 | 65.7 | 85.6 | 70.1 | 921.5 |

1. Data sourced from Quakers Hill Treatment Works AWS (67076)

*Landform and Elevation*

Lot 5 DP 7086 is a relatively flat site that drains to the south. The site runoff travels via overland flow and a network of pipe and inlet structures to the stormwater basin constructed in the southern portion of the site. The lot has been excavated into the landscape to allow for it to be sunk behind a noise wall in comparison to the elevation at street level. The site ranges from 41.7mAHD to 40.2mAHD before the dam excavation while the street level of Tattersalls Road is approximately 45mAHD. A sound mound is constructed at street level to approximately 45-47mAHD in height.

Lot 2 DP 550522 is also a relatively flat site that drains to the southwest of the site. The highest elevation is approximately 42mAHD in the northern carpark area of the site to the lowest point of around 40mAHD in the south western portion of the site (also a carpark). Tattersalls Road sits slightly higher than the site.

At present a vegetated mound travelling north-south separates the two lots. This will have to be removed to allow for the proposed expansion. Existing site contours and proposed contours are shown in the site drainage plans.

Ultimately runoff from both lots flows to Breakfast Creek to the south of the two lots. Breakfast Creek is a tributary to Eastern Creek which then merges with South Creek, flowing to the Windsor Reach of the Hawkesbury River. The Hawkesbury River flows to the South Pacific Ocean.

*Soil Landscape*

The Blacktown soil landscape group usually occurs on gently undulating rises over Wianamatta Group shales. The ground slopes are usually less than 5%. The soils range from shallow to moderately deep (less than 1m thick) and are hard setting, mottled textured clay soils. The soils are typically poorly drained with low fertility, localised high plasticity and expansive subsoils.

*Potential Acid Sulphate Soils*

Assessment of the Australian Soil Resource Information System (CSIRO, 2006) mapping layer identified that the site has no known occurrence of Acid Sulfate Soil (ASS).

*Surface Water Hydrology*

Runoff from the site flows to Breakfast Creek to the south. Breakfast Creek is heavily disturbed ephemeral stream that flows through the industrial estate. The Creek is currently being reinstituted by local Council, involving realignment and lining with rock.

Stormwater runoff generated at Lot 5 DP 7086 (the existing site) currently reaches a stormwater basin in the southern portion of the site via overland flow and a network of inlets and underground pipes. This basin has a riser that acts a discharge point that is not licensed. The outlet for the riser is currently closed with a shut-off valve, with all captured stormwater to remain on-site.

At the proposed expansion site (Lot 2 DP 550522) the predominant source of runoff is generated from the roof space occupying the majority of the site. This runoff is assumed to flow to the adjacent rock and earth lined stormwater drain to the east that links down gradient to Breakfast Creek. The carpark in the northern portion of the site drains to a series of inlet pits that discharge to the adjacent drainage line to the east. The carpark in the southern portion of the site is presumed to drain to Breakfast Creek in the south.

*Groundwater*

No groundwater investigations have been completed on the site, with ERM undertaking a desktop assessment of the NSW Office of Water (NOW) registered groundwater bores. The search identified 11 licensed bore within approximately 1km of the site

The logs for boreholes drilled to the east of the site reported a shallow water bearing zone of silty clay between 1.5 and 6.5m below ground level (BGL). The boreholes to the northwest of the site did not report any water bearing zones or aquifer geology, though the standing water level for these wells was uniform at seven metres.

*Current Site Water Use*

The main activities using water on the site include:

- cooling within the shredder (the majority of which is expelled from the process as steam);
- washing of scrap metal in the raw material stockpile area;
- dust suppression within the conveyor;
- washdown of areas required for pedestrian and truck movements and work areas outside of stockpile locations;
- typical domestic water uses, such as flushing toilets, showering and hand washing facilities; and
- minimal volume for dust suppression on the site.

Operational water supply for the site will be provided by:

- mains supplied town water;
- drawing water from the stormwater basin; and
- potentially rain water captured form the rooves of the manufacturing sheds.

No groundwater will be extracted for the operation.

*Existing Environment Protection Licence*

The site has an Environment Protection Licence (EPL) 11555 for the undertaking of the scheduled activity of scrap metal processing (0-100,000 tonnes processed).

Currently no surface water monitoring locations or discharge points are applicable to the site under EPL 11555.

*Riparian Corridor*

The NSW Office of Water (NOW) (2012) defines a riparian corridor (RC) as a transition zone between the land, also known as the terrestrial environment, and the river or watercourse or aquatic environment. Controlled activities carried out in, on or under waterfront land are regulated by the *Water Management Act 2000* (WM Act). Waterfront land includes the bed and bank of any river, lake or estuary and all land within 40 metres of the highest bank of the river, lake or estuary.

The rear (southern) boundary of each lot extends to the centre of Breakfast Creek, while the operational southern boundary of each lot is defined by a wire mesh fence, which varies in distances from the top of creek bank between approximately 32m in the south western corner of 45 Tattersall Road to less than 5m at the south eastern corner of 23-43 Tattersall Road. The rear portions of each property are therefore within waterfront land and in riparian corridors as defined by the WM Act. This usually means that a controlled activity approval must be obtained from the NOW before commencing the controlled activity. However, Section 89J of the EP&A Act turns off the controlled activity approval requirement, due to this project being a SSD (refer *Section 4.3.1)*.

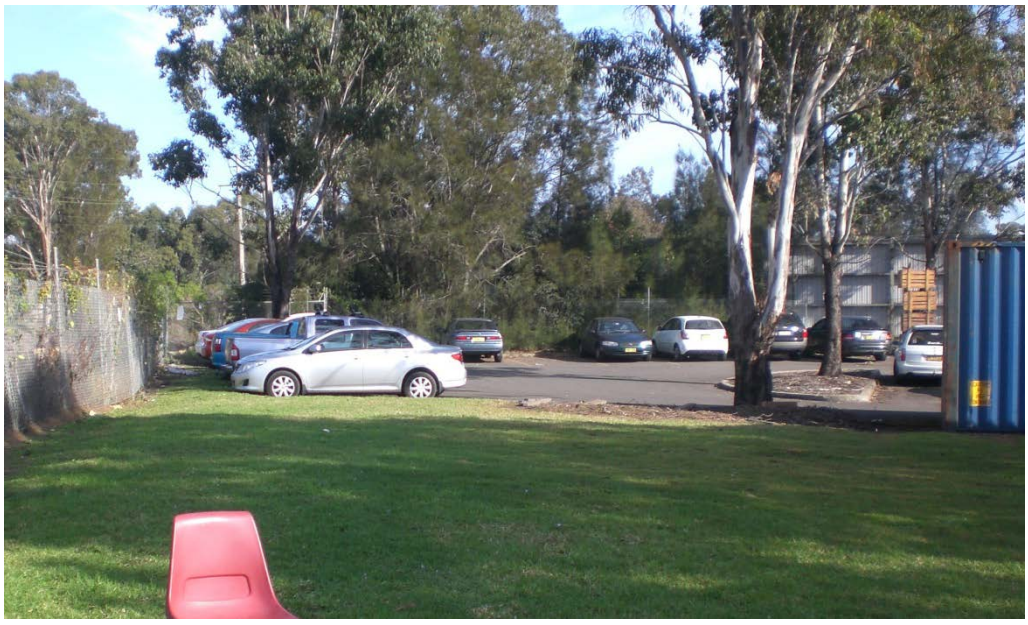
The existing riparian vegetation within the operational boundary is sparse. Isolated, mature and possibly remnant *Eucalypt species* remain in the south western corner of 45 Tattersall Road (inside the current rear fence line). A number of mixed Eucalypt species exist in a landscaped area in the south western corner of 23-43 Tattersall Road, with some immature Casuarina species also present along the rear fence line. A surveyed plan showing

distances of wire mesh fence, 40m buffer from top of creek bank and other structures such as the existing detention basin is provided in *Annex A*.

The riparian corridor beyond the rear fence line of both properties adjoining Breakfast Creek is highly disturbed and dominated by weed species. This area has recently been cleared of most vegetation and is subject to earthworks in association with creek reformation (channel realignment and bank reinforcement) works being undertaken by BCC.

The following photographs illustrate the existing riparian corridor both within and outside the operational boundary of the proposed development.

***Photograph 6.1 Existing landscaped areas in vicinity of detention basin at 45 Tattersall Road with riparian corridor, showing mixed native and weed species.***



***Photograph 6.2 Existing landscaped areas at 23-43 Tattersall Road with riparian corridor, showing mature Eucalypt Species.***

***Photograph 6.3 View of recently reformed Breakfast Creek and riparian corridor outside operation boundary fence of 45 Tattersall Road facing east along creek.***

***Photograph 6.4 View of recently reformed Breakfast Creek and riparian corridor outside operation boundary fence of 23-43 Tattersall Road facing east along creek.***

### *6.6.3 Impacts*

*Potential Contaminants*

The activities on-site have the potential to generate the following contaminants:

- sediment (mud tracking, contaminated imported material);
- oil, gasoline and diesel fuel;

- transmission fluid, power steering fluid and brake fluid;
- machinery lubricants and grease;
- battery acid and solvents;
- mercury;
- lead;
- CFCs and other refrigerants;
- asbestos from brake shoes and clutches;
- tyres;
- PCB from foam rubber, carpets and plastic components;
- metals, including aluminium, cadmium, copper, iron and zinc;
- plastics; and
- transmission and oil filters.

Wastewater will arise from the following sources:

- petrol and diesel removed from cars prior to processing;
- oily water from storm water runoff; and
- sewage from amenities.

*Key Earthworks*

Key earthworks associated with expansion include installation of services, excavation of the bioretention filter, and refurbishment of the existing stormwater basin. The stockpiles of excavated material will require management throughout the earthworks. The primary method of managing erosion and sediment is to schedule the works for periods outside of inclement weather, and implementing the measure outlined below. Further references for activity specific control measures are provided in the Soil and Water Management report (*Annex J*).

*Water Balance*

The estimate of current water usage based on the current processing capacity of 90,000tpa was assumed to be 68.24kL/day based on information provided in water consumption invoices. Production at 350,000tpa is a 3.89 times greater than the existing rate so this factor has been applied to the current estimated rate to estimate a predicted increased water usage rate of

265.4kL/day. Assuming an average number of site operational days of 304 days per year (by excluding Sundays and Public Holidays) this is a water requirement of approximately 80.68 Megalitres/year for the proposed increase production rate.

The volume of runoff likely to be harvested from the roof space of the sheds and hardstand areas was calculated to understand the yield available for potential reuse.

The calculations were based on the assumption that a runoff coefficient of 0.9 (that is 90% of rainfall will produce runoff) for the roof space shown on client provided plans and hard stand area catchments.

The rainfall percentages for the different percentile years were applied to give an estimation of volumes available to be captured by the existing stormwater pond during dry, median and wet years (refer *Table 6.38)*.

***Table 6.38 Catchment Yield for Stormwater Basin***

| **Stormwater Basin Catchment Area** | | 2.49ha |
|---|---|---|
| **Percentile Rainfall Year** | **Annual Rainfall** | **Catchment Yields (ML/annum)** |
| 10%ile rain year | 559.2 | 12.5 |
| 50%ile rain year | 923.7 | 20.7 |
| 90%ile rain year | 1268.2 | 28.4 |

Volumes available for capture for rainwater tanks determined from available roof space are shown on *Table 6.39*.

***Table 6.39 Catchment Yield from Roof Space from Lot 2 DP550522***

| **Roof Space Catchment Area** | | 0.91ha |
|---|---|---|
| **Percentile Rainfall Year** | **Annual Rainfall** | **Catchment Yields (ML/annum)** |
| 10%ile rain year | 559.2 | 4.6 |
| 50%ile rain year | 923.7 | 7.6 |
| 90%ile rain year | 1268.2 | 10.4 |

Given the significant volume of water likely to be required for the expanded operations of approximately 80.68ML/year, the beneficial reuse of water collected in the basin, as is current practice at the site, should continue as long as water is of a quality sufficient to minimise impacts to the processing infrastructure, the surrounding environment and the health and safety of employees.

*Groundwater*

The proposed development does not require any activities such as significant excavation that would cause direct disturbance to groundwater. Adjacent groundwater wells indicated that the shallowest aquifer would be approximately two metres BGL. The site of the proposed development is already sealed with associated drainage installed such that limited infiltration rainwater occurs on the site. The Natural Resource Atlas indicated that the groundwater identified in wells adjacent to the site is saline. There are not expected to be any significant effects on regional groundwater as a result of the expanded site operations.

*Riparian Corridor*

The rear portions of each site are within waterfront land and in riparian corridors as defined by the WM Act. This usually means that a controlled activity approval must be obtained from the NOW before commencing the controlled activity. However, Section 89J of the EP&A Act turns off the controlled activity approval requirement, due to this project being a SSD (refer *Section 4.3.1)*.

Notwithstanding the above, the redevelopment of the site has been designed to meet as far as practicably possible, the new rules developed by NOW (2012) regarding controlled activities within riparian corridors. In these new rules, the NOW recommends a vegetated riparian zone (VRZ) width based on watercourse order, classified under the Strahler System of ordering watercourses and using current 1:25 000 topographic maps. The recommended RC widths under the new rules are presented in *Table 6.40*.

***Table 6.40 NOW Recommended Riparian Corridor (RC) Widths***

| Watercourse Type | VRZ Width[1] (each side of watercourse) | Total RC Width |
|---|---|---|
| 1st order | 10 metres | 20 m + channel width |
| 2nd order | 20 metres | 40 m + channel width |
| 3rd order | 30 metres | 60 m + channel width |
| 4th order and greater (includes estuaries, wetlands and any parts of rivers influenced by tidal waters) | 40 metres | 80 m + channel width |

1. The width of the VRZ should be measured from the top of the highest bank on both sides of the watercourse.

In addition to the above distances, the Office of Water also allows for a range of works and activities on waterfront land and in riparian corridors to better meet the needs of the community, so long as they cause minimal harm outlined in the riparian corridor matrix (NOW, 2012). Among other works and activities, the riparian corridor matrix indicates that stormwater outlet structures and detention basins (only within 50% outer VRZ) can occur on waterfront land and in riparian corridors.

Breakfast Creek is a 1st order stream according to the Strahler System and as such the applicable VRZ width for the proposed development is 10m from the top of creek bank. Although the rear (southern) boundary of each lot extends to the centre of Breakfast Creek, the operational southern boundary of each lot is defined by a wire mesh fence. The distance of the wire mesh fence form the top of bank of Breakfast Creek varies, from approximately 32m in the south western corner of 45 Tattersall Road to less than 5m at the south eastern corner of 23-43 Tattersall Road. No change to this southern operational boundary is proposed as part of the redevelopment of the site. The detention basin at 45 Tattersall Road is between 25-40 m from top of creek bank, while the proposed bioretention filter at 23-43 Tattersall Road is at least 10m from top of creek bank. A surveyed plan showing distances of wire mesh fence, 40m buffer from top of creek bank and other structures such as the existing detention basin is provided in *Annex A*.

Although exempt from the requirements of the controlled activity approval, the above analysis indicates that the proposed development also generally meets the requirements of NOW (2012) new rules relating to controlled activities within riparian corridors. The operational boundary in the south eastern corner of 23-43 Tattersall Road marginally encroaches into the 10m VRZ, However, the distance to the closest proposed building (new truck wash), as shown on the Concept Landscape Plan is greater than 10m from top of creek bank. In addition to this, the area in between the proposed truck wash and operational boundary will be landscaped and planted with locally endemic species (refer *Annex N*). It is therefore considered that the requirements relating to controlled activities within riparian corridors under the new rules have been met to the greatest extent possible.

It is noted that the VRZ outside the southern operational boundary has been recently disturbed by BCC when undertaking reformation works within Breakfast Creek (refer *Section 6.6.2*). As such, it is expected that BCC will undertake riparian revegetation works in the VRZ outside the operational boundary of the proposed development.

### *6.6.4 Mitigation Measures*

*Stormwater Management*

Two oil/water separators are proposed for the new drainage system within Lot 2 DP550522 and one on Lot 5 DP7086. Each oil/ grit separator would be a precast unit such as a Humesceptor or similar device. Based on the manufacturer's performance details removal rates of 80% for total suspended solids and 65-99% for hydrocarbons would be expected. The majority of metals would be removed with the suspended solids. Heavy metals in such run-off are generally associated with the suspended solids. Removal of a high proportion of the finer fraction of the suspended solids will also prevent heavy metals being exported from the site. The oil/grit separators will also

provide for treatment of contaminated water generated during firefighting operations in the event of a fire occurring at the metal recycling facility.

To ensure that the pollutant removal performance is maintained regular cleaning of the units will be carried out. Each month a licensed contractor will remove the accumulated oils and sediment using an inductor truck. The performance of the unit will be monitored and the frequency of cleaning increased if required. The existing network of underground stormwater pipes, inlets and oil water separators will be cleaned and, if damaged, replaced during the site refurbishment activities.

A bioretention filter will be installed to receive runoff from overland flows and the underground pipe network on Lot 2 DP550522. The existing stormwater pond will be dredged and excavated to remove any contaminated sediments and lined with clay. Verification sampling will be required as will waste classification sampling to allow for the appropriate disposal of any dredged material.

*Erosion Control*

Erosion control will primarily be in the form of site stabilisation by sealing with concrete. Sediment control will be through the use of the existing sediment basin and additional network of inlet pits and underground pipework conveying water to a series of oil water separators and ultimately the existing stormwater basin or the bioretention filter. The general principles to be applied to soil and water management for the disturbed site include:

- plan for erosion and sediment control and assess site constraints during the design phase and before any earthworks begin;
- minimise the area of soil disturbed and exposed to erosion;
- control water flows from the top of and through the project area – divert up-slope 'clean' water away from disturbed areas and ensure concentrated flows are below erosive levels;
- rehabilitate disturbed lands quickly; and
- maintain erosion and control measures for the duration of the project and until the site is successfully rehabilitated.

*Sediment Control*

Key sediment controls include:

- protecting stormwater inlets;
- constructing a wheel wash;

- creating stabilised site access points;
- managing stockpiles; and
- utilising sediment traps such as sediment fence during construction.

The location and design characteristics for these controls are provided in the Soil and Water management report and the Sediment Control Plan.

*Pollution Control*

Pollution control methods will include:

- storage of chemicals within impervious bund of more than 110% of the largest container within the bund;
- Material Safety Data Sheets (MSDS) for all chemicals stored on-site and made available to site personnel;
- refuelling to occur away from drainage points, with drip trays used and spill kits available; and
- trade waste receptacles will be provided for the storage and disposal of all wastes generated on-site.

*Potential Future Discharges from the Stormwater Basin to Breakfast Creek*

Sell and Parker would require an alteration to the existing EPL to allow for discharges to Breakfast Creek from the stormwater basin on Lot 5 DP 7086. Such an alteration would require the allocation of a licensed discharge point (that is the existing riser outlet would have to be registered with the EPA). To allow discharge surface water quality parameters would need to be authorised by the EPA for Sell and Parker to meet prior to each proposed discharge. A licensed discharge point would require Sell and Parker to undertake water quality monitoring involving field and laboratory testing to ensure that discharge criteria are met prior to releasing the basin.

Suggested analytes and concentrations that may be used in a licence variation Sell and Parker would have to submit to the EPA are provided in *Table 6.41*.

*Table 6.41 Suggested Discharge Criteria for EPL Licence Variation to allow discharges to Breakfast Creek*

| Pollutant | Units of Measure | Maximum Concentration Limit | Frequency of Testing | Sampling Method |
|---|---|---|---|---|
| pH | pH units | 6.5 to 8.5 | Daily during any discharge | Grab |
| Oil and grease | Observation | No visible presence | Daily during any discharge | Grab |
| Total Suspended Solids (TSS) | mg/L | 50 | Daily during any discharge | Grab |

The potential for the site to meet these criteria will be improved upon refurbishment of:

- the site;
- the infrastructure leading to the pond; and
- the pond itself (removing current water, dredging and lining with clay).

Testing will verify if the water quality within the pond meets the criteria following the refilling of the pond after refurbishment.

*Water Balance*

From the preliminary calculations provided in Soil and Water report it assumed that between 15% and 35% of the total water requirement on-site could potentially be supplied by the stormwater basin in dry years (10%ile rain year) and wet years (90%ile rain year) respectively with an average rainfall year potentially supplying 26% of the site water requirements. Thus the reliance on mains supplied potable water is greatly reduced.

The stormwater basin has an estimated volume of 1,440m$^3$, a size that if the basin was empty prior to receiving rainfall would be suitable to capture a rainfall event up to 64mm.

Water for operational purposes for the proposed expansion will be sourced from mains supplied potable water and continued use of the runoff collected in the stormwater basin. The increase in water use with the proposed expansion warrants on-going use of collected runoff in the stormwater basin for operation requirements, thus reducing the requirement on mains supplied potable water, as long as the water is of a quality such that impacts to site infrastructure, the surrounding environment and the health and safety of employees is avoided.

Rainwater tanks may also be installed to utilise the runoff from roof spaces and would likely be best suited to providing water for personal use such as toilet flushing, reducing the requirement for mains supplied potable water. The option is available to use a system of rainwater tanks to capture the predicted roof rainwater, however the large size of tanks required, the likely excavations/preparatory works required to install the tanks in the space constrained site and the network of piping to distribute the water to the shredder may not be viable (compared to the more viable option of a single pipe required to distribute captured water from the stormwater basin to the shredder).

*Riparian Corridor Management*

Although exempt from controlled activity approvals, redevelopment of the site has been designed to meet as far as practicably possible, the new rules developed by NOW (2012) regarding controlled activities within riparian corridors. Landscaped areas along the south boundary will include a range of locally endemic species to enhance the portion of the riparian corridor inside the operational boundary of the redeveloped site.

## *6.7 CONTAMINATED LAND*

### *6.7.1 Background*

ERM (2014c) completed a Phase I Environmental Site Assessment (ESA) of the two adjoining properties, planned to be redeveloped by Sell and Parker. The Phase 1 ESA was prepared under the overarching objective for Sell and Parker to assess the suitability of each property for ongoing industrial land use. The key findings of the Phase I ESA is summarized in this section and provided in full in *Annex K*.

### *6.7.2 Existing Conditions*

Based on data obtained during the Phase 1 ESA, ERM concludes the following:

- historical titles and aerial photographs indicate that both properties were originally farm land and were progressively developed into commercial and industrial properties from the 1950's onwards;
- both properties are zoned "4A – Industrial – General", pursuant to *Blacktown Local Environmental Plan 1988* and "IN1 – General Industrial" under the *Draft Blacktown Local Environmental Plan 2013*;
- a search of WorkCover's Dangerous Goods records indicate that a number of dangerous goods are currently stored, at each property. Goods are all stored above ground and no dangerous goods are currently stored in underground tanks;

- the historical Dangerous Goods records indicate that at least two former underground storage tanks (USTs) were previously located on-site at 45 Tattersall Road, however, redevelopment works are not likely to disturb these areas;

- previous environmental investigations indicate that three historic USTs were removed in 1995, with validation results obtained during the removal showing that all concentrations of TPH , BTEX and lead were either below detection limits or applicable guideline criteria at the time. Review of the laboratory results for metals from the ADI Reports presented in the 1999 EIS (ERM, 1999) indicate that all soil samples reported concentrations below the current ASC NEPM 2013 Health Investigation Levels (HILs) for Commercial / Industrial Use;

- both properties operate in accordance with an Environment Protection Licence (EPL);

- an annotated survey plan provided by Sell and Parker shows three surveyed cells, in the northern portion of 45 Tattersall Road, shaded yellow and marked "A" for the restriction on the use of land at this property. Anecdotal information provided by Sell and Parker's Property General Manager, Mr Nigel Fox, indicated that these areas had been capped with a clay based fill and are now covered by concrete hardstand. Redevelopment works are not likely to disturb these areas. The location of these cells are not in an area that is proposed to be disturbed by redevelopment works and as such are not considered to pose significant risk of harm. The Conceptual Site Model (CSM) showed that there is not a complete source-pathway-receptor (SPR) linkage in relation to these cells;

- 45 Tattersall Road is relatively flat and drains to the south. The lot has been excavated into the landscape to allow for it to be sunk behind a noise wall in comparison to the elevation at street level. 23-43 Tattersall Road is also relatively flat and drains to the southwest of the property.

- review of the regional geology indicates the lithology of both properties comprises shale, carbonaceous claystone, claystone, laminite, fine to medium-grained lithic sandstone, rare coal and tuff;

- review of the soil landscapes indicates both properties are located on the Blacktown soil landscape group, comprising Wianamatta Group shales;

- runoff from the both properties generally flows to Breakfast Creek to the south;

- a search of NSW Office of Water (NOW) registered groundwater bore licences identified 11 licensed bore within approximately 1km of both properties, all of which are registered as monitoring bores; and

- the groundwater bore records indicate a shallow water bearing zone in silty clay between 1.5 and 6.5m below ground level (BGL) in the immediate vicinity of both properties.

### *6.7.3 Potential Impacts*

*Conceptual Site Model*

Fundamental to the risk assessment process is the development of a Conceptual Site Model (CSM), which is the qualitative description of plausible mechanisms by which receptors may be exposed to contamination. For exposure to the identified receptors to be considered possible, a mechanism ('pathway') must exist by which contamination from a given source can reach a given receptor. A complete 'source-pathway-receptor' exposure mechanism is referred to as a 'SPR linkage'.

The potential SPR linkages are evaluated for completeness based on the existence of the following:

- a source of chemical contamination;
- a mechanism for release of contaminants from identified sources (e.g. volatilisation into air or dissolution into groundwater);
- a contaminant retention or transport medium (e.g. soil, air, groundwater etc.);
- potential receptors of contamination (e.g. groundwater, surface water, people); and
- a mechanism for chemical intake by the receptors at the point of exposure (ingestion, dermal contact, inhalation or a combination thereof).

Whenever one or more of these elements are missing, the SPR linkage is incomplete and the potential risk to the identified receptor is considered unlikely.

A CSM was developed for both properties, which identified a number of potential contamination source areas, pathways and sensitive receptors (refer *Annex K*). The CSM assessed the 'source-pathway-receptor' (SPR) linkages as either 'unlikely', 'potential' or 'complete'. Of 29 possible SPR linkages identified in the CSM, 17 were found to be unlikely due to incomplete linkages between source area and receptor. A further 11 were assessed as a potential SPR linkage, however, given the appropriate controls (such as Environment Protection Licence requirements or other management measures) in place, these were deemed to have an insignificant likelihood of a potentially complete SPR linkage;

Only one SPR linkage was initially identified as having the potential to form a complete SPR linkage. This was in regards to the wash down sump located towards the rear of 23-43 Tattersall Road, which poses the possibility of locally impacted soils and groundwater which may be disturbed and/or come in contact with future demolition / construction workers during future expansion works. Given the limited potential contaminants of concern and the fact that the sump is concrete lined and in sound condition, it is considered unlikely that signification contamination has occurred. Appropriate management controls during redevelopment works, will therefore be sufficient to reduce the likelihood of a potentially complete SPR linkage being established to an acceptable level.

Although some potential for residual contamination remains, based on the results of this Phase I ESA and in particular the absence of potentially complete SPR linkages as presented in the CSM, along with the planned continued industrial land use at both properties, it is considered that further investigation is not required at this stage in order to facilitate the proposed redevelopment.

### *6.7.4 Mitigation Measures*

To ensure risks to human health and the environment resulting from potential historic contamination issues are minimised, the following mitigation measures will be employed:

- a contingency for the appropriate management of potential unexpected contamination finds should be incorporated in the Construction Environmental Management Plan (CEMP) for the planned redevelopment of both properties;

- if localised contaminated soils are encountered during construction works, they shall be segregated and assessed for waste classification and appropriately disposed of or re-used onsite, subject to the results of testing;

- if significant contamination is encountered during construction works, further investigation in the form of a Phase 2 Environmental Site Investigation (ESA) may be required;

- any imported fill must be certified at source location (e.g. quarry or property owner) as Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM) in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act) and the *Protection of the Environment (Waste) Regulation 2005* (POEO Waste Regulation);

- all pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act); and

- a Hazardous Materials Register and respective Safety Data Sheets (SDSs) shall be kept on site at all times and regularly maintained.

## 6.8 HAZARDS AND RISKS

### 6.8.1 Background

A Preliminary Hazard Analysis (PHA) was undertaken by Arriscar Pty Limited (Arriscar). The PHA includes a semi-quantitative analysis and assessment of off-site fatality, injury and property damage risk, in accordance with the NSW Hazardous Industry Planning Advisory Paper (HIPAP) guidelines. The PHA does not include an assessment of the following risks:

- environmental risks on-site;
- risk of property damage on-site; and
- fatality or injury risks for personnel on-site.

The PHA is summarized in this section and provided in full in *Annex L*.

### 6.8.2 Existing Environment

*Hazardous Materials*

Small quantities of dangerous goods are stored on site (*Table 6.42*). These are mostly required for maintenance or utility purposes. Some dangerous goods are removed from the metal before processing, stored and disposed through waste contractors.

**Table 6.42 List of Dangerous Goods and Quantities**

| Material | Quantity (L/Kg) | DG Class | UN No | Type of Store |
|---|---|---|---|---|
| Oxygen | 3,000 L | 2.2, sub5.1 | 1072 | 6 man-packs (15 bottles) |
| LPG - LP Gas | 540 L | 2.1 | 1075 | 12 x 45 L Cylinders |
| Argonshield - Argon | 135 L | 2.2 | 1956 | 3 x 45 L Cylinders |
| Petrol - Petroleum | 2,000 L | 3 | 1075 | Tank |
| Diesel - Diesel | 1,000 L | 3 | 1202 | Tank |
| Batteries - Sulphuric acid, spent | 30,000 kg | 8 | 1832 | |
| Hydraulic oil – hydraulic fluid | 2,000 L | 9 | 3082 | Tank |
| Engine oil & Gear oil – crude oil | 6,000 L | 3 | 1267 | Tank |
| Grease | 160 L | N/A | N/A | |
| Degreaser - Kerosene | 100 L | 3 | 1223 | Packaged goods |

In addition to the materials listed, some metal for recycling may be contaminated with dangerous goods. This has been considered in the hazard identification process.

### *6.8.3 Hazard Identification*

*Methodology*

A structured 'What-If' session was used to identify hazard associated with the planned expansion. The site was split into processing areas, and prompts used to assist brainstorming potential hazardous scenarios. Once a hazardous scenario was identified, causes and the uncontrolled consequence(s) of the scenario were explored and documented. Existing safeguards, and ones that have been incorporated into the expansion plans were identified and documented.

Following the identification of the scenario, the team qualitatively assessed the risk of each scenario using the Sell & Parker risk management system. The severity of each consequence was determined (*Table 6.43*), and the frequency with which the consequence could occur with the existing and proposed controls estimated (*Table 6.44*). The result was assessed using the Sell & Parker risk matrix (*Table 6.45*).

***Table 6.43 Sell & Parker Consequence Categories***

| Level of Effect | Example of each level |
|---|---|
| Insignificant/Acceptable | No effect – or so minor that effect is acceptable |
| Minor | First aid treatment only; spillage contained at site. |
| Moderate | Medical treatment; spillage contained but with outside help. |
| Major | Extensive injuries; loss of production |
| Catastrophic | Death; toxic release of chemicals |

***Table 6.44 Sell & Parker Frequency Categories***

| Criteria | Description | |
|---|---|---|
| Almost certain | Expected in most circumstances | Effect is a common result |
| Likely | Will probably occur in most circumstances | Effect is known to have occurred at this site or it has happened |
| Possible | Might occur at some time | Effect could occur at this site or I've heard of it happening |

| Criteria | Description | |
|---|---|---|
| Unlikely | Could occur at some time | Effect is not likely to occur at the site or I have not heard of it happening |
| Rare | May occur in exceptional circumstances | Effect is practically impossible |

*Table 6.45 Sell & Parker Risk Matrix*

| Likelihood | Consequences | | | | |
|---|---|---|---|---|---|
| | Insignificant | Minor | Moderate | Major | Catastrophic |
| **Almost certain** | 3 High | 3 High | 4 Acute | 4 Acute | 4 Acute |
| **Likely** | 2 Medium | 3 High | 3 High | 4 Acute | 4 Acute |
| **Possible** | 1 Low | 2 Medium | 3 High | 4 Acute | 4 Acute |
| **Unlikely** | 1 Low | 1 Low | 2 Medium | 3 High | 4 Acute |
| **Rare** | 1 Low | 1 Low | 2 Medium | 3 High | 3 High |

*Meeting*

The hazard identification session took place from 9:00am to 11:00am on 31 January 2014 in offices at the Sell & Parker site, 45 Tattersall Road, Kings Park, NSW. The attendees are presented in *Table 6.46*.

*Table 6.46 Hazard Identification Participants*

| Name | Title | Company | Role |
|---|---|---|---|
| Joel Leonard | Principal Consultant | Arriscar Pty Limited | Facilitator |
| Nigel Fox | General Manager, Property & Development | Sell & Parker | Attendee |
| Allen Floyd | Operations | Sell & Parker | Attendee |
| Ian Mace | Blacktown Manager | Sell & Parker | Attendee |
| Luke Parker | CEO | Sell & Parker | Attendee |

Minutes of the hazard identification are presented in the PHA (*Annex K*).

### 6.8.4 Impact Assessment

The PHA indicated that there was no significant offsite impact from the use of dangerous goods on site due to the small inventories involved. The NSW criteria for injury were not reached at sensitive or residential land use zones.

The potential for offsite fatality and property damage was limited to the scenario of a 45 kg LPG cylinder rupture in the dangerous goods store. The NSW criteria for offsite fatality and property damage are considered satisfied due to the rarity of LPG cylinder ruptures.

The assessment found that qualitative criteria for potentially hazardous development was satisfied, and the development is not considered a hazardous industry, as defined in State Environmental Planning Policy (SEPP) No. 33.

A number of recommendations were made in regard to fire protection requirements as detailed below.

### *6.8.5 Mitigation Measures*

- at least one hose reel and one fire extinguisher be provided for the oxygen and LPG cylinder storage (AS 4332-2004, Table 7.2). This is based upon the 3,000 L of oxygen in the store.

- provide one powder type extinguisher and one foam extinguisher for all bulk class 3 dangerous goods on site. This includes the storage of fuel and oil removed from vehicles prior to shredding. This recommendation assumes the recovered liquids are stored in intermediate bulk containers.

- maintain the height of the floc stockpile to less than 4 m, or the total volume to less than 1000 $m^3$. This ensures the warehouse in which the floc is stored will not be a high hazard occupancy.

- continue with the practice of providing water cannons to provide reach to feed and processed stockpiles in the event of a fire in any stockpile.

These recommendations are in addition to fire-fighting requirements contained in the "deemed to comply" provisions of the Building code of Australia.

## *6.9 FIRE AND INCIDENT*

### *6.9.1 Existing Environment*

The current fire protection systems consist of:

- fire hydrant systems;

- sprinkler systems; and

- first aid fire-fighting measures (fire extinguishers).

The hydrant systems servicing both sites will be maintained as separate systems. This consists of six hydrants at 45 Tattersall Road and eight hydrants at 23 – 43 Tattersall Road. The building at the northeast corner of 23 – 43 Tattersall Road has an existing sprinkler system. This building will be used for non-ferrous activities.

The current incident management procedures include responding to any spill or leakages promptly when they occur. Fuel, lubricants and waste oil stored in the workshop area were either within a sealed shipping container or in 205L drums placed on drum bunds (spill pallets).

### *6.9.2 Potential Impacts*

Floc material has been identified as a potential source of fire. This will be managed by keeping the stockpile small, so as not to consider the warehouse in which it is kept as a high hazard occupancy. Water cannons will also be provided for the various stockpiles.

Any uncontrolled leaks or spills have the potential to contaminate soils within unsealed sections of the site, or be entrained in stormwater flow to the detention basin at the rear of the site. Overflow of potentially contaminated water from the detention basin, has the potential to detrimentally impact on Breakfast Creek.

### *6.9.3 Mitigation Measures*

The recommendations made in regards to fire protection requirements as detailed in *Section 6.8.5* will be implemented

To ensure incidents such as accidental spills and / or leakages from machinery are contained and managed appropriately, the following measures will be implemented.

- The site will be kerbed to retain spillages or stormwater run-off, which outflow via a detention basin. The detention basin has a capacity of 1440 $m^3$. This basin will be required to be managed in accordance with the measures identified in *Section 6.6*).
- Spill kits will be available on-site and be deployed to manage and contain minor spills.
- All pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with POEO Act.

It is recommended that a Fire and Incident Response Management Plan, including but not limited to the mitigation measures above, be developed for the expanded site. Sell and Parker have an existing Emergency Response Plan, this may be updated to include the aforementioned information.

## *6.10 TRANSPORT IMPACT ASSESSMENT*

### *6.10.1 Background*

A transport impact assessment (TIA) was undertaken by GTA Consultants (2014) to determine the impact of the additional volume of traffic generated by the proposed development on the surrounding road network and identify any required mitigation. The TIA assessment is summarised in this section and provided in full in *Annex L*.

The TIA has been prepared in accordance with the Roads and Maritime Service's (RMS) Guide to Traffic Generating Developments (RTA 2002) and makes reference to appropriate Council's Codes and relevant Australian Standards.

### *6.10.2 Existing Environment*

*Tattersall Road*

Tattersall Road is a Local Road aligned in an east-west direction. It is a two-way, 12.8 metre wide road configured with one lane in each direction set within an approximate 26 metre wide road reserve. Unrestricted kerbside parking is permitted on both sides of Tattersall Road.

Tattersall Road carries approximately 6,000 vehicles per day (GTA Consultants 2014).

*Sunnyholt Road*

Sunnyholt Road is a State Road (MR642) aligned in a north-south direction. It is a two-way, 20 metre wide, dual carriageway configured with two lanes in each direction, set within an approximate 40 metre wide road reserve. Kerbside parking is not permitted on Sunnyholt Road.

Sunnyholt Road functions as a key connection between Blacktown and the Westlink M7 Motorway.

The Sunnyholt Road Motorway Interchange is located 1.2km north of Tattersall Road. A two-way, bus priority T-Way is located along the eastern side of Sunnyholt Road adjacent to Tattersall Road. The T-Way extends for approximately 6.5 kilometres from Old Windsor Road to Blacktown town centre.

Sunnyholt Road carries approximately 36,000 vehicles per day (GTA Consultants 2014).

*Vardys Road*

Vardys Road is a classified Regional Road (RR 7152) aligned in an east-west direction. It is a twoway, 22 metre wide, dual carriageway configured with two lanes in each direction, set within a 55 metre wide road reserve (approx). Kerbside parking is not permitted on Vardys Road.

Vardys Road carries approximately 18,000 vehicles per day (GTA Consultants 2014).

*Nearby Intersections*

The following intersections currently exist in the vicinity of the site:

- Tattersall Road/ Sunnyholt Road (signalised);
- Tattersall Road/ Vardys Road (unsignalised); and
- Sunnyholt Road/ Vardys Road (signalised).

*Vehicle Access and Circulation*

Currently there is a one-way entry and exit access at the existing facility (45 Tattersall Road) and a two way entry and exit access at the expanded part of the site (23-43 Tattersall Road). There is currently limited space available within the existing Sell and Parker site for trucks to layover between unloading unprocessed material and loading processed material. The existing access/ circulation of heavy vehicles at 45 Tattersall Road was observed by GTA Consultants during a site inspection and confirmed by the operator to be as follows:

- laden vehicles enter the site via driveway 1, are weighed at the weighbridge and unload metal for processing;
- unladen vehicles exit the site via driveway 2 and return to Tattersall Road;
- unladen vehicles re-enter the site via driveway 1 and are weighed at the weighbridge;
- unladen vehicles exit the site via driveway 2.

The process for loading vehicles is:

- unladen vehicles enter and are weighed at weighbridge and are loaded with processed metals;
- laden vehicles leave via driveway 2 and return to Tattersalls Road; and
- laden vehicles re-enter the site via driveway 1 get weighed at the weighbridge then leave the site via driveway 2.

Consequently each heavy vehicle that loads and unloads at the site effectively undertakes two entry and exit movements at the site accesses.

*Truck routes*

Heavy vehicles travelling to and from the two sites currently access Tattersall Road via the Sunnyholt Road signalised intersection. The vast majority of heavy vehicles accessing the two sites travel via the M7 Motorway, 1.5 kilometres north of Tattersall Road.

*Traffic Volumes*

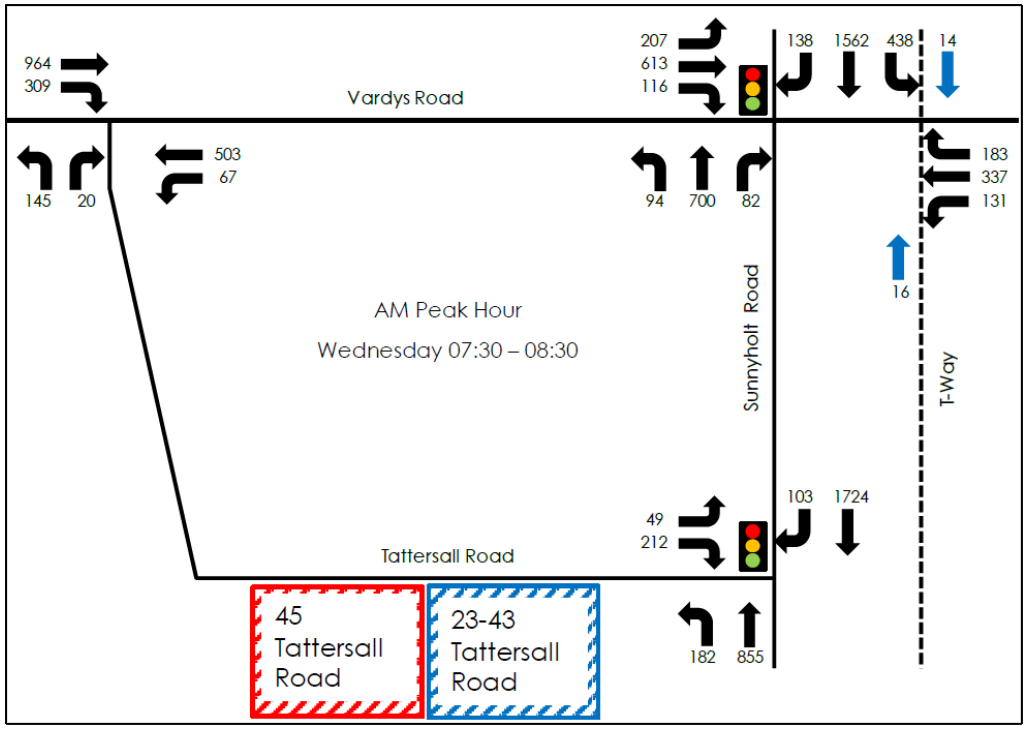
Surrounding Intersections

GTA Consultants commissioned 7 day, 24 hour traffic movement counts at key intersections in the vicinity of the site for the week commencing 16 December 2013 during the following peak periods:

- 7:00am and 10:00am
- 4:00pm and 6:00pm.

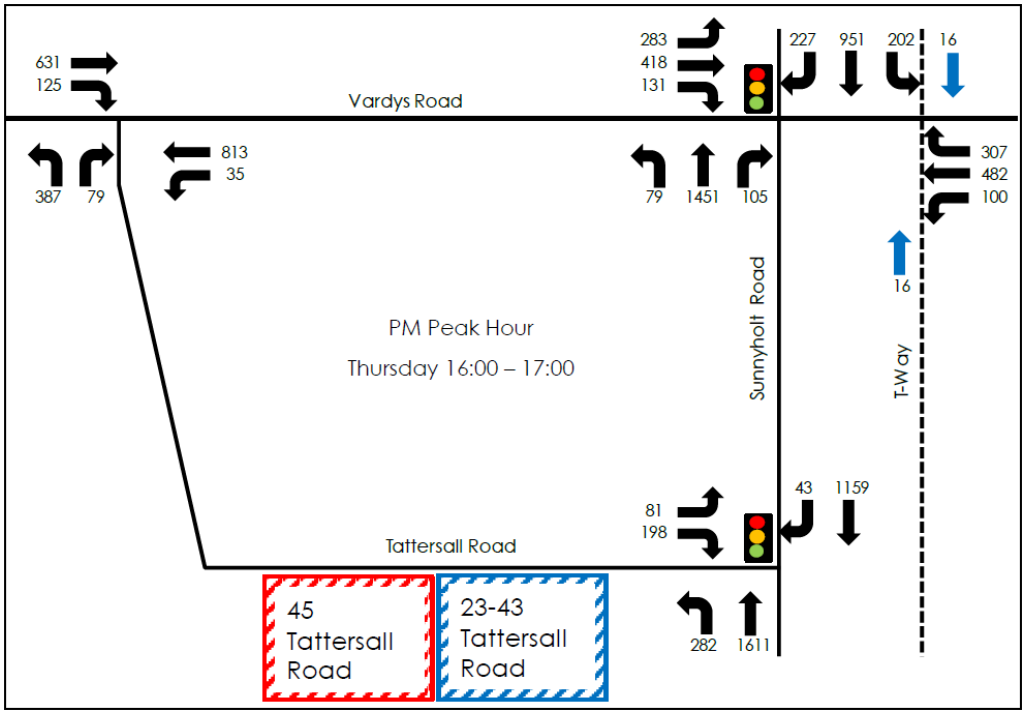
The AM and PM peak hour traffic volumes are summarised in *Figure 6.7* and *Figure 6.8*, with full results contained in the TIA (*Annex L*).

***Figure 6.7 Existing AM Peak Hour Traffic Volumes***




Source: GTA Consultants (2014)

*Figure 6.8 Existing PM Peak Hour Traffic Volumes*




Source: GTA Consultants (2014)

*Site Traffic*

Sell and Parker has a fleet of eight heavy vehicles, along with customer owned vehicles delivering and collecting scrap used for the transportation of metal to and from the site, the largest of which is a 19 metre semi-trailer. The site is also served by non-fleet heavy vehicles.

GTA Consultants commissioned 7 day, 24 hour vehicle volume counts using automatic tube counts at the four vehicle accesses to the two sites sfor the week commencing 14 December 2013. The tubes at driveways 1 and 2 (entry and exit to 45 Tattersall Road) were damaged during the course of the week and as a result did not yield reliable data. Following this, video camera surveys of these accesses was attempted, however the video cameras were vandalised and the associated data loggers were stolen. As a result no data was able to be obtained from the video surveys. Following this, manual traffic volume counts of driveways 1 and 2 were undertaken on 29 January 2014 from 5:00am to 5:00pm.

Based on the recorded traffic volume counts undertaken in December 2013 and January 2014, and the circulation of heavy vehicles at the site can be summarised as follows:

- 45 Tattersall road generates a total 204 vehicle movements (two-way) per day (including 165 heavy vehicle movements)

- the neighbouring site at 23-43 Tattersall Road generates 694 vehicle movements (two-way) per day (including 49 heavy vehicle movements)

- the two sites have a combined total traffic generation of 898 vehicle movements (two-way) per day.

Full results of the traffic surveys are contained in TIA (*Annex L*).

*Peak Hour Site Traffic Generation*

The two sites currently generate a total of 131 vehicle movements (two-way) in the road network AM peak hour and 71 vehicle movements (two-way) during the road network PM peak hour.

On the basis of the traffic movement counts undertaken at the Sell and Parker site on 29 January 2014 and the existing processing capacity of the Sell and Parker site (90,000 tonnes per annum), the AM peak hour traffic generation rate of the metal handling/ processing facility is as follows:

- 1.7 vehicle movements in the AM peak hour per 1,000 tonnes of metal processed per annum.

*Intersection Operation*

GTA Consultants assessed the operation of the key intersections within the study area using SIDRA INTERSECTION3, a computer based modelling package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by the RMS, is vehicle delay. SIDRA INTERSECTION determines the average delay that vehicles encounter and provides a measure of the level of service.

The key outcomes of SIDRA INTERSECTION analysis is as follows:

- the Tattersall Road/ Sunnyholt Road intersection currently operates well with minimal queues and delays on all approaches.

- the Tattersall Road/ Vardys Road intersection currently operates well with minimal queues and delays on all approaches.

- the Sunnyholt Road/ Vardys Road intersection is currently operating close to capacity with moderate queuing occurring for the through movements on the northern approach in the AM peak hour and on the southern approach in the PM peak hour. Minor delays are currently experienced by the right turn movements on all approaches during both the AM and PM peak hours.

*Car Parking*

Off-Street

The existing Sell and Parker site at 45 Tattersall Road provides very limited on-site car parking for staff or customers at 46 Tattersall Road, Kings Park. The neighbouring site at 23-43 Tattersall Road currently provides a total of 82 on-site car parking spaces for staff and customers at the northern end of the site.

On-street

There are approximately 35 publicly available unrestricted car parking spaces on Tattersall Road immediately adjacent to the frontages of the subject sites. Car parking demand spot-check surveys undertaken by GTA Consultants on Wednesday 15 January 2014 between 9:00am and 10:00am found there was ample spare on-street parking capacity in the vicinity of the subject sites.

*Public Transport*

The site is serviced by public buses with six stops located within 600 metres of the site. Six bus routes operate on the Sunnyholt Road T-Way and provide high frequency services to Blacktown Town Centre and Blacktown Railway Station (approximately 3 kilometres south of the site).

Vardys T-Way stop is located on the eastern side of Sunnyholt Road, 50 metres north of Tattersall Road (400 metres from the site). In addition to this the route 743 bus utilises Vardy's Road.

As well as regular connections via bus to Blacktown Railway Station, the site is located approximately 1.2km east of Marayong Railway Station.

Blacktown and Marayong Railway Stations are located on the T1 North Shore, Northern and Western Line, T5 Cumberland Line and the Blue Mountains Line of the Sydney Trains network and are served by high frequency rail services to Penrith, Richmond Parramatta and Sydney CBD.

*Pedestrian Infrastructure*

Off-Site

The pedestrian network in the vicinity of the sites is well established with a pedestrian path located on the northern side of Tattersall Road, adjacent to the sites. This path connects with Sunnyholt Road where pedestrian paths are located on both sides of the road. A pedestrian path is also located on the southern side of Tattersall Road along the frontage of 23-43 Tattersall Road.

On-Site

There is currently no dedicated pedestrian access to the existing Sell and Parker site at 45 Tattersall Road. All pedestrian access to the site is via the separate vehicle entry and exit driveways located at the eastern and western extremities of the site.

*Cycle Infrastructure*

The nearest dedicated bicycle facility is a 3.0 metre wide shared pedestrian and bicycle path located on the eastern side of Sunnyholt Road. This path is located approx. 300 metres from the development site and provides a critical north-south connection between Blacktown and the M7 Motorway shared path.

The M7 shared path is a high quality bicycle facility which consists of 40 kilometres of uninterrupted shared path from Baulkham Hills in the north to Dean Park in the west and south to Prestons. There with 60 entry/exit points to the path, the nearest of which to the site is located 1.5 kilometres north of Tattersall Road at the Sunnyholt Road Interchange of the M7 Motorway.

### *6.10.3 Potential Impacts*

*Vehicle Access and Circulation*

Part E of Blacktown Council Development Control Plan (DCP) 2006 sets out the vehicle access and circulation requirements for developments in industrial zones. Part E, Section 4.6 of DCP 2006 requires all internal roadways to be a minimum of 7 metres wide. The existing vehicle accesses to the two sites are all wider than 7 metres.

As part of the amalgamation of the two sites, the physical barrier between the two sites will be largely removed, permitting the movement of operational vehicles between the two sites. The increase in operational area at the expanded site will permit heavy vehicles to layover on-site in between weighing events, removing the need for these vehicles to return to Tattersall Road between loading and unloading of metal. This change will significantly reduce the movement of heavy vehicles on Tattersall Road adjacent to the site, improving the movement of vehicles along Tattersall Road.

*Pedestrian Access*

The relocation of all administration functions to the existing administration building at 23-43 Tattersall Road will greatly improve pedestrian safety at the expanded site by separating pedestrians from the operational activities of the site. The proposed pedestrian access arrangements to the administration building will be unchanged from the existing arrangements to this building with pedestrians accessing the building from the on-site car park.

*Car Parking Requirements*

The car parking provision requirements for industrial developments are set out in Part E of Blacktown City Council's DCP 2006.

The total area of the development is 10, 539m$^2$. Based on this, the proposed development is required to provide a minimum of 116 on-site car parking spaces. The proposed supply of 147 on-site car parking spaces for therefore meets the minimum car parking requirements outlined in DCP 2006 and is considered to be appropriate.

*Estimated Traffic Generation*

The following key assumptions have been made in estimating the future traffic generated by the proposed development:

- light vehicle movements are based on the 147 car parking spaces to be provided onsite and assuming 100% occupancy and 100% turnover of on-site car parking

- heavy vehicle movements are assumed to increase by 389% in line with the proposed increase in on-site processing capacity (90,000 tonnes per annum to 350,000 tonnes per annum).

On this basis, *Table 6.47* has been prepared to compare the existing and future daily traffic generation of the development.

***Table 6.47 Existing and Future Daily Traffic Generation***

| Site / Address | Existing Daily Traffic Generation | | | Estimated Daily Future Traffic Generation | | |
|---|---|---|---|---|---|---|
| | Light Vehicles | Heavy Vehicles | Total Vehicles | Light Vehicles | Heavy Vehicles | Total Vehicles |
| 45 Tattersall Road | 39 | 165 | 204 | 164 (20%) | 642 (80%) | 806 |
| 23-43 Tattersall Road | 645 | 49 | 694 | | | |
| TOTAL | 684 (76%) | 214 (24%) | 898 | | | |

As shown in *Table 6.47*, the expanded facility is estimated to generate a total of 806 vehicle movements (two-way) on a typical weekday. The amalgamation of the two sites will therefore result in a net decrease of 92 vehicle movements per day from the existing use of the sites. There is however expected to be an increase in overall traffic movements during AM and PM peak hours (explained further below).

The following key assumptions have been made with respect to calculating future traffic generated by the development in a typical weekday peak hour:

- 50% of daily light vehicle movements will occur in a typical peak hour (this is considered to be conservative, ie in excess of what could reasonably be expected to occur).

- 8% of daily heavy vehicle movements will occur in a typical AM peak hour with 4% of daily heavy vehicle movements will occur in a typical PM peak hour. This is based on the recorded peak to daily ratio recorded at the site (Section 2.3.2) and is considered to be reasonable given the proposed extension of operating hours associated with the development.

On the basis of the above, *Table 6.48* has been prepared to summarise the net increase in peak hour traffic generation associated with the development.

***Table 6.48 Net Increase in Peak Hour Traffic Generation***

| Weekday Peak Hour | Existing Traffic Generation | | | Estimated Future Traffic Generation | | | Net Increase | | |
|---|---|---|---|---|---|---|---|---|---|
| | Light Vehicles | Heavy Vehicles | Total Vehicles | Light Vehicles | Heavy Vehicles | Total Vehicles | Light Vehicles | Heavy Vehicles | Total Vehicles |
| AM | 73 | 32 | 105 | 82 | 52 | 134 | 9 | 20 | 29 |
| PM | 43 | 15 | 58 | 82 | 26 | 108 | 39 | 11 | 50 |

As shown in *Table 6.48*, it is estimated that the development will generate a total 134 vehicle movements (two-way) in a typical weekday AM peak hour and 108 vehicle movements (two-way) in a typical weekday PM peak hour.

Based on the existing peak hour traffic generation of the two sites, this represents a net increase of 29 vehicle movements (two-way) in the AM peak hour and 50 vehicle movements (two-way) in a typical weekday PM peak hour. However, compared to existing traffic volumes the proposed development is expected to generate an overall net decrease in daily traffic movements, including the removal of the current requirement for double entry and exist movements of trucks.

*Distribution and Assignment*

The directional distribution and assignment of traffic generated by the proposed development will be influenced by a number of factors, including the:

- configuration of the arterial road network in the immediate vicinity of the site;

- existing operation of intersections providing access between the local and arterial road network;

- likely distribution of employee's residences in relation to the site; and

- configuration of access points to the site.

Having consideration to the above, for the purposes of estimating vehicle movements, the following directional distributions have been assumed:

- Sunnyholt Road (north) 60%;
- Sunnyholt Road (south) 20%; and
- Vardys Road (west) 20%.

In addition, the assumptions made with respect to the directional split of traffic (i.e. the ratio between the inbound and outbound traffic movements) in the AM peak period is as follows:

- light vehicles – 80% inbound, 20% outbound
- heavy vehicles – 60% inbound, 40% outbound.

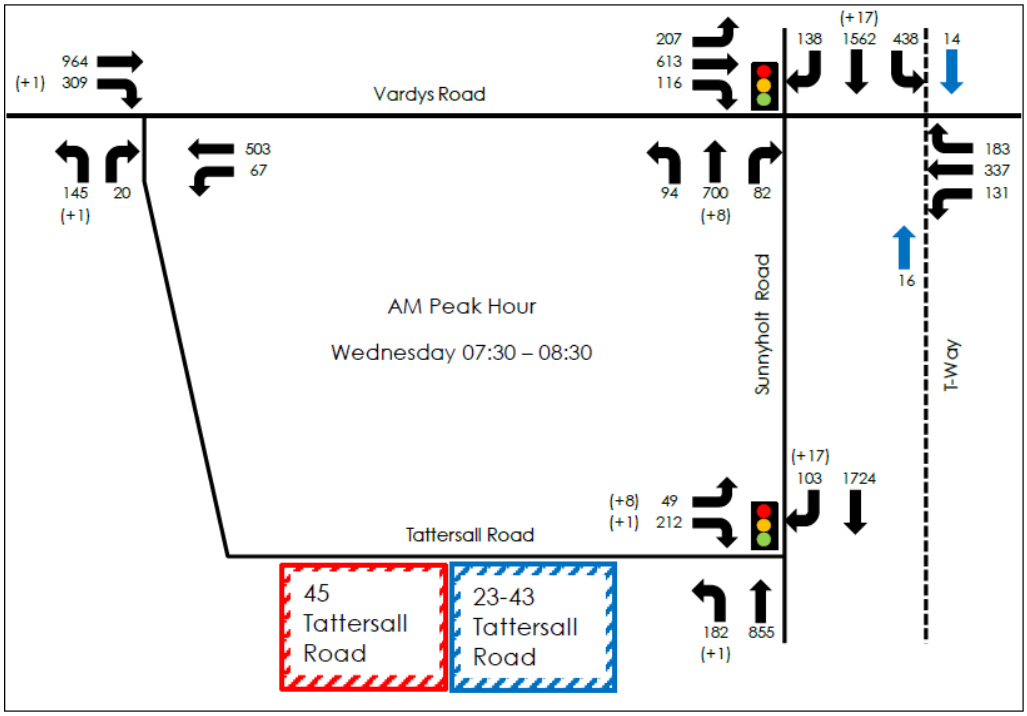
A corresponding reversal of the AM peak period directional split has been assumed for the PM peak period. This results in a directional split during the AM and PM peak periods as shown in *Table 6.49*.

***Table 6.49 Net Increase in Peak Traffic Generation***

| Weekday Peak Hour | Vehicle Type | Inbound | Outbound |
|---|---|---|---|
| AM | Light | 80% (7 vehicles) | 20% (2 vehicles) |
| | Heavy | 60% (12 vehicles) | 40% (8 vehicles) |
| | Total | 19 vehicles | 10 vehicles |
| PM | Light | 20% (8 vehicles) | 80% (31 vehicles) |
| | Heavy | 40% (4 vehicles) | 60% (7 vehicles) |
| | Total | 12 vehicles | 38 vehicles |

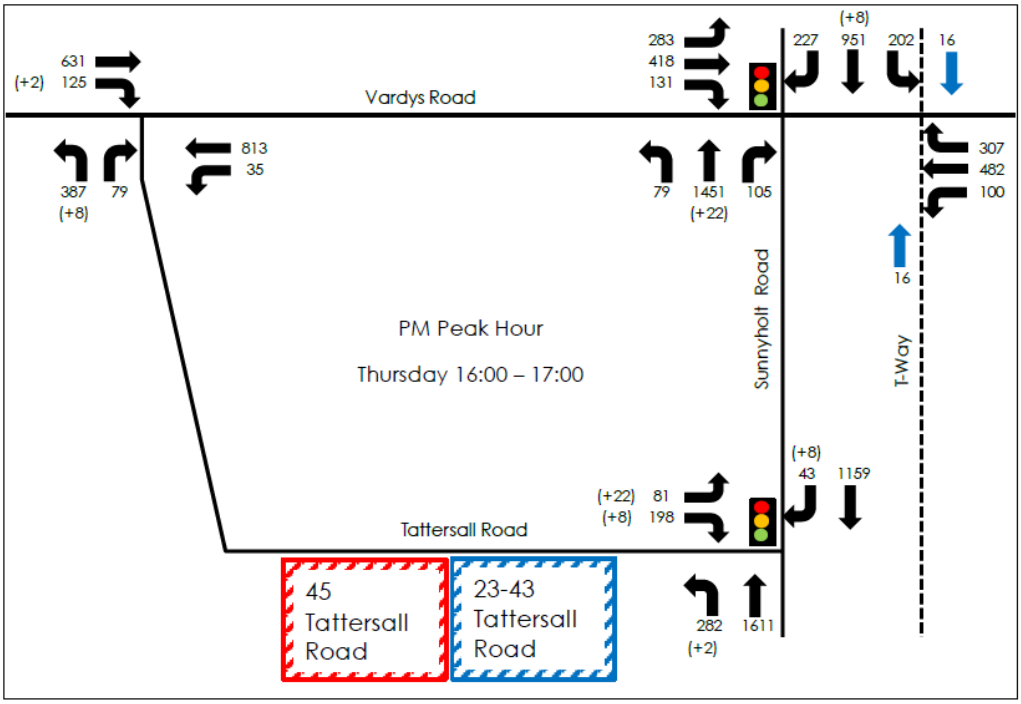
Based on the above, *Figure 6.9* and *Figure 6.10* have been prepared to show the estimate marginal increase in turning movements in the vicinity of the site following full site development, together with the existing traffic volumes in the vicinity of the site. The increases in traffic over the existing situation are shown in brackets. However, it is noted that compared to existing traffic volumes the proposed development is expected to generate an overall net decrease in daily traffic movements.

*Figure 6.9* *Existing Weekday AM Peak Hour Traffic plus Development Traffic*




Source: GTA Consultants (2014)

*Figure 6.10* *Existing Weekday PM Peak Hour Traffic plus Development Traffic*




Source: GTA Consultants (2014)

*Operational Traffic Impact Assessment*

An assessment of the impacts that the anticipated development traffic would have on the surrounding road network can be made by comparing intersection performance prior to and following full site development.

The proposed development is anticipated to generate an additional 29 vehicle movements (two-way) in a typical weekday AM peak hour and 50 vehicle movements (two-way) in a typical weekday PM peak hour. In comparison to the existing traffic flows on the road network surrounding the site, this represents a negligible increase in traffic volumes.

In addition, the impact of this additional traffic on the intersections in the vicinity of the site has been assessed using SIDRA INTERSECTION. Table 6.50 presents a summary of the anticipated future operation of the intersections following the full development of the site, with full results included in the TIA (*Annex L*).

***Table 6.50 Future Operating Conditions***

| Intersection | Peak | Degree of Saturation | Average Delay (sec) | 95th Percentile Queue (m) | Level of Service (LOS) |
|---|---|---|---|---|---|
| Tattersall Road / Sunnyholt Road | AM | 0.809 | 11.9 | 103 | A |
| | PM | 0.868 | 11.2 | 171 | A |
| Tattersall Road / Vardys Road | AM | 0.405 | 4.2 | 15 | N/A |
| | PM | 0.999 | 15.7 | 148 | N/A |
| Sunnyholt Road / Vardys Road | AM | 0.930 | 42.4 | 310 | C |
| | PM | 0.890 | 46.3 | 308 | D |

A comparison of the existing and future operating conditions of the key intersections surrounding the site shows that the impact of traffic generated by the development is negligible. Furthermore the comparison shows no change in Level of Service is required at the three intersections during either the AM or PM peak hours.

*Construction Traffic Impact Assessment*

Construction activities associated with the proposed development are anticipated to primarily involve demolition of existing buildings and modifying the remaining existing buildings. There will be minimal excavation, but there will be a need to remove demolition material and bring in construction materials, fittings and equipment. The construction activities are anticipated to involve the following:

- demolition of the existing office and maintenance shed at 45 Tattersall Road;
- demolition of some of the existing storage and processing sheds at 23-43 Tattersall Road;
- modifying and fit-out of the remaining buildings, storage and processing sheds at 23-43 Tattersall Road;
- relocation of the shear from 45 Tattersall Road to 23-43 Tattersall Road;

- relocation of the pre-shredder within 45 Tattersall Road;
- construction of an enclosed conveyor; and
- construction of a truck wash facility.

All construction activities associated with the proposed development will be undertaken following the ceasing of manufacturing operations at the Dexion Australia Pty Ltd site at 23-43 Tattersall Road. Manufacturing operations are anticipated to cease at this site in December 2014 which is estimated to result in a reduction of 694 vehicle movements per day on the road network.

At this stage it is not possible to accurately quantify the traffic volumes likely to be generated during construction as a contractor is yet to be appointed. However, construction activities associated with the proposed development are anticipated to generate only a small proportion of the daily vehicle movements currently generated by the Dexion site. Given this, the construction activities would result in a net decrease in traffic generation when compared with the existing traffic generated by the operation of the two sites. Thus construction traffic is not expected to compromise the safety and function of the road network surrounding the site.

It is anticipated that trucks associated with construction will access the site via the same routes as operational vehicles, ie via the Tattersall Road/ Sunnyholt Road signalised intersection with the vast majority of these travelling on the M7 Motorway, 1.5 kilometres north of the site.

### *6.10.4 Mitigation Measures*

Compared to existing traffic volumes the proposed development is expected to generate an overall net decrease in daily traffic movements and could not be expected to compromise the safety or function of the surrounding road network. This includes the removal of the current requirement for double entry and exist movements of trucks. Given this, the proposed development in its own right would not warrant any upgrades to existing road infrastructure on the vicinity of the site.

Once the contractor has been appointed, a site-specific construction traffic management plan (CTMP) should be prepared prior to works commencing on-site detailing construction traffic volumes, truck routes, access arrangements and construction worker parking arrangements.

## 6.11 SOCIAL AND ECONOMIC RESOURCES

### 6.11.1 Existing Environment

The current estimated resident population (ERP) of Blacktown City Council (BCC) Local Government Area (LGA) is 317,598 as of the 30th June 2012. BCC LGA is the largest local government area, by population, for the Western Sydney area and New South Wales. Blacktown City is at the heart of the Western Sydney region, which is anticipated to deliver 60% of Sydney's population growth over the next 30 years of which almost a quarter will be located in Blacktown. The city is well serviced by employment land, public transport and road access and supported by core infrastructure in health, education, recreation, culture and leisure (Blacktown City Council, 2012).

*Cultural Diversity*

BCC LGA has the largest urban Aboriginal and Torres Strait Islander population in NSW with 8,195 people making up 2.7% of the population (compared to 1.2% in Greater Sydney and 2.5% NSW). Other than English, the most common languages spoken in households across the BCC LGA are Filipino/Tagalog, Hindi, Arabic, Punjabi and Samoan (Blacktown City Council, 2013a).

*Education and Training*

Blacktown City Cuncil (2013a) report that in 2011, 41.9% of the Blacktown City population aged 15 years and over, held post school educational qualifications compared to 48.3% for Greater Sydney and 45.8% for New South Wales. At the same time, 57,120 people reported having achieved a tertiary qualification.

From 2006-2011, the major changes in the qualifications of the population of Blacktown City were for residents with Bachelor or Higher Degrees (+12,701 persons), vocational qualifications (+5,282 persons) and Advanced Diplomas or Diplomas (+4,620 persons). However, at the same time there was an increase in the number of people with no formal qualifications (+5,157).

In the Mt Druitt Precinct, 32.9% of the population aged 15 years and over held educational qualifications compared to 42.8% for the Blacktown Precinct and 51.7% for the North West Precinct, highlighting that there are distinct variations in the levels of advantage and disadvantage within the City.

*Economy*

The primary sectors that make up the City's economy are in the areas of manufacturing, wholesale trade, and transport and logistics. Combined they represent 35.1% of the total Gross Regional Product (GRP). Other significant sectors include education and training, retail, services and finance/insurance services.

The manufacturing sector is a strength of the City. It makes up 18% of the City's total GRP. This is significantly above the NSW State average of 10.6%. Over the past year, the growth in manufacturing, professional, and the technical services sectors (as a percentage of the total economy) has only increased marginally. However, this is still a significant achievement considering other parts of Sydney where growth in these sectors has declined.

The City's economy is diversifying. Some sectors are showing considerable growth over the last 12 months. Those sectors that experienced high levels of annual growth in the City include Construction, an increase of 8.7%, Arts & Recreation Services, an increase of 4.3%, and Information Media & Telecommunications, an increase of 3.8% (Blacktown City Council, 2013b).

*Employment*

Blacktown City Council (2013a) reported that in 2011, 92.8% of the eligible labour force (144,098) of Blacktown City were employed with 91,619 engaged in full time work and 38,510 employed part time. The City's unemployment rate (7.2%) was higher than in Greater Sydney (5.7%) and NSW (5.9%).

### *6.11.2 Potential Impacts*

In both the short and the long term, the potential impacts on social and economic resources are generally positive. The additional development has a capital investment value ("CIV") of $1.1 million. The proposed expansion of the site will provide for increase labour force, creating positive flow-on effects to the local economy. The proposed expansion of the site will also enable Sell and Parker to utilise the available plant capacity in order to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities. Average Sell and Parker wage for employees, excluding management at Blacktown in 2013 was over $80,000 per annum.

The proposed education and training centre within the new office area at the expanded site will be used to promote recycling initiatives and to explain the nature of resource recovery. Where possible, the centre will provide support and seek to participate with the education programme in schools and tertiary education facilities, thus positively contributing to the local community.

In the short term, construction works may have a minor negative impact on surrounding business with regards to amenity, noise, and air, however with implementation of mitigation measures these impacts can be appropriately managed. Environmental impact assessment has shown that in the longer term, operational activities, with implementation of proposed mitigation measures, will not negatively impact on the surrounding environment. In addition, as the proposed development is within an existing industrial estate it will not result in reducing available land for beneficial community uses.

### *6.11.3 Mitigation Measures*

The following measures should be implemented to ensure positive socio-economic impacts of the proposed developed are maximised:

- seek to utilise local available labour force when recruiting for additional employees, including where possible those that have been affected by job losses at the Dexion site;
- where possible, investigate opportunities for offering apprenticeships for new work force and offer additional training to current workforce;
- communicate to local business and community the expected start date of construction; and
- any complaints received relating to site operations are to be recorded and attended to promptly.

## *6.12 VISUAL IMPACT ASSESSMENT*

The site is already disturbed and is located within a heavily developed existing industrial area. The proposed increase in capacity at the metal recycling facility will not result in any negative visual impacts to the surrounding visual landscape.

There are no sensitive receptors with views to the site. The closest residence is located approximately 470m to the east of the site on Sunnyholt Road. The closest park is Headingley Reserve located approximately 460m to the east, also on Sunnyholt Road. Due to the topography and other industrial developments adjacent to the site, the site cannot be seen from either of these locations. There are no schools, parks or recreation facilities in close proximity.

Views to the site from Tattersall Road are limited as there is an existing 4m fence along the front (northern end) of number 45 Tattersall Road (refer to *Photograph 6.5*) as well as landscape plantings. This sound wall will prevent views of the proposed new non-ferrous processing building from Tattersall Road. Small modifications are proposed to the sound wall, including the extension of the dust screen on the western end of the wall, however these changes are only very minor. In addition, the second driveway on the western side of 45 Tattersall Road will be removed, providing an improvement to the Tattersall Road streetscape.

At number 23-43 Tattersall Road existing landscaping and buildings (refer to *Photograph 6.6*) will remain which will also screen the activities at the rear of this site from Tattersall Road.

It is therefore concluded that the proposed development will not result in significant visual impacts in the vicinity of the site or neighbouring areas.

Notwithstanding a concept landscape plan has been developed (refer *Annex M*), which will provide for plantings of native tree, shrub and grass species along site boundaries, particularly the frontage with Tattersall Road, which will complement and enhance existing landscaped vegetation.

***Photograph 6.5 View looking south across Tattersall Road to front boundary of existing facility (45 Tattersall Road)***


*Photograph 6.6 View looking west along Tattersall Road to front boundary of current Dexion site (23-43 Tattersall Road)*

## 6.13 WASTE MANAGEMENT

### 6.13.1 Background

This section investigates the waste materials that are recovered, processed and recycled as well as the waste streams that are produced, along with overall waste management strategies to be implemented as part of the Project.

The NSW EPA is the state government agency responsible for initiating waste avoidance and resource recovery strategies as a method of ensuring ecological sustainability. A summary of the legislative and policy framework for waste in NSW is provided below.

### 6.13.2 Legislative and Policy Framework

The regulatory requirements in NSW for waste management are provided within the *Waste Avoidance and Resource Recovery (WARR) Act 2001, Protection of the Environment Operations (POEO) Act 1997, Protection of the Environment Operations (Waste) Regulation 2005* and the Environmental Guidelines: Assessment, Classification & Management of Liquid and Non-Liquid Wastes.

*Waste Avoidance and Resource Recovery Act 2001*

The Waste Avoidance and Resource Recovery (WARR) Act establishes the waste hierarchy to ensure management options are considered for the effective management of resources against the following criteria:

- avoidance of unnecessary resource consumption;
- resource recovery Including reuse, reprocessing, recycling and energy recovery; and
- disposal- to assess how waste will be effectively disposed to minimise any adverse impacts on the environment.

The NSW Waste Avoidance and Resource Recovery Strategy 2007 outlines significance areas and actions for waste avoidance and resource recovery. The four key target areas outlined in the strategy include:

- preventing and avoiding waste;
- increasing recovery and use of secondary materials;
- reducing toxicity in products and materials; and
- reducing litter and illegal dumping.

Furthermore, the strategy outlines the following recycling targets, which are applicable to the proposed Project;

- increase recycling of commercial and industrial waste by 35% in 2014; and
- increase recycling of construction and waste generated from site decommissioning by 11% in 2014.

*Protection of the Environment and Operations Act 1997*

All material received, handled and processed including the classification of waste material generated as such is to be undertaken in accordance with the requirements of the POEO Act 1997. Key guiding requirements include:

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

*Protection of the Environment Operation (Waste) Regulation 2005*

The regulation provides the framework for the transportation, storage and disposal of waste material in NSW. In addition, the licencing requirements of waste activities are also provided. Part 3 of this Regulation details the requirements associated with tracking waste. Certain types of waste (listed in Schedule 1 of this legislation) which have the potential to be harmful to the environment are required to be tracked from the source to waste disposal facility. There would be quantities of waste oil that require tracking under this legislation as a result of the development. All other waste generated during the Project will be stored, transported and disposed in accordance with the regulation.

*NSW Environmental Protection Authority - Waste Classification Guidelines*

Part 1 of the NSW EPA Waste Classification Guidelines provides the framework for classifying waste for the purpose of storing, transporting and disposing of waste in NSW.

Under these guidelines, waste streams are classified into groups, which pose similar risks to the environment and human health and therefore require similar management and disposal procedures. The six waste categories are outlined in *Table 6.51* below.

***Table 6.51 NSW Pre-Classified Waste Classification***

| Waste Category | Description |
|---|---|
| Special waste | Waste including clinical and related waste (e.g. pharmaceuticals and sharps), asbestos and waste tyres. |
| Liquid waste | Waste that is generally not capable of being picked up by spade or shovel such as waste oil. |
| Hazardous waste | Pre-classified hazardous waste includes:<br>• containers having previously contained a substance of Class 1,3,4,5 or 8 or substances to which Division 6.1 of the Transport of Dangerous Goods Code applies;<br>• coal or coal tar pitch waste;<br>• lead acid or nickel cadmium batteries; and<br>• lead paint waste. |
| Restricted waste | Currently no waste have been pre-classified by the EPA. Restricted waste is classified by chemical assessment and then compared against trigger values for various contaminants to determine its waste classification. |
| General solid waste (putrescible) | Pre-classified general solid waste (putrescible) generally includes:<br>• household waste that contains putrescible organics;<br>• waste from litter bins collected by or on behalf of local councils;<br>• manure and night soil; and<br>• food waste. |
| General solid waste (non-putrescible). | Pre-classified general sold waste (non-putrescible) generally includes:<br>• glass, plastic, rubber, plasterboard, ceramics, bricks, concrete or metal;<br>• paper or cardboard;<br>• building and demolition waste; and<br>• garden waste including branches, grass, plants and tree trunks. |

Source: Department of Environment, Climate Change and Water NSW (2009)

### *6.13.3 Waste Identification and Classification*

In the case of the proposed development, the "feed-in materials" (ie cast iron scrap, wrought iron, and scrap car bodies) for re-processing can already be considered as a "waste" material under the Waste Classification Guidelines. However, the recovery, processing and recycling activities undertaken on-site would then produce recovered material that would be the facility's "end product". By-products produced by the recovery, processing and recycling activities would be the facility's "waste". As such for the purposes of this waste assessment, the materials handled on-site have been categorised as feed-in materials, end products, or waste, with the following definitions applying:

*Feed-in Materials* – A material that is used in the manufacturing process to create a new product. Feed-in materials of the facility would include cast iron scrap, wrought iron, and scrap car bodies.

*End Product* – The resulting material from the manufacturing process that is sold to consumers. End products of the process include ferrous and non-ferrous material.

*Waste* – Any other unwanted material or by-product generated from the process that needs to be discarded or recycled and is not sold for an intended purpose. Waste from the process includes automotive shredder residue or "floc", tyres, wastewater general cleaning and maintenance waste, office waste and oils and lubricants from maintenance of company vehicles.

The site establishment and construction phase would also generate waste from the demolition of existing buildings, establishment of ground levels, landscaping and construction of new buildings and associated infrastructure.

### *6.13.4 Anticipated Waste Materials*

*Site Preparation and Construction*

Site preparation works would generate temporary waste streams including construction waste, soil and some minor quantities of vegetation waste.

Vegetation removed prior to excavation would be transported to an appropriately licenced waste management facility accepting green waste.

Construction waste material would include waste off-cuts including plasterboards and metals, as well as general rubbish.

*Site Operations*

The production process would generate waste products at several stages. Feed-in materials including cast iron scrap, wrought iron, pressed and sheared material and scrap car bodies would be delivered in bulk and therefore no packaging waste would be generated. These feed-in materials would be stored on the uncovered hardstand area provided. Site stormwater generated in the raw material storage area would need to be captured and treated prior to release as in *Section 6.6*.

Petrol tanks are emptied and liquefied petroleum gas (LPG) cylinders will be removed from cars and stored in a quarantined area before being removed offsite for decommissioning. Petrol and oil will be drained from tanks and collected in an above ground storage tanks and removed offsite for processing.

Feed-in materials would then pass through the shredder and separation system where the components would be separated into non-ferrous and ferrous materials. Automotive shredder residue (ASR) or "floc" would be generated at various stages throughout the process.

Waste from the process will consist of materials such as mixed plastics, particulates, glass and foam from car upholstery and building materials. Most waste will emerge from the end of the non-ferrous metals sorting conveyor, and will be conveyed to a bunker in an enclosed building. Up to 7,000 tonnes of waste will be generated per month.

Additional solid waste will be generated from the air quality controls. This will consist of mud, which is sprayed onto the main waste stream at the end of the non-ferrous metals sorting conveyor, and thus joins other waste in the bunker.

Oils and lubricants generated following the maintenance of company vehicles and mobile equipment and machinery would be stored in a bunded area in the workshop.

There would also be minor quantities of office waste generated disposed of in designated general waste bins that are collected regularly.

The types of waste anticipated to be generated and handled during the Project are defined in *Table 6.52*.

*Table 6.52 Waste Inventory*

| Waste Type | Description | Classification | Estimated volume / mass |
|---|---|---|---|
| Construction and Demolition Phase | | | |
| Vegetation | Vegetation/timber mulch from removal of landscape trees. | General Solid Waste (non putrescible) | 20 tonnes |
| Excavated soil (overburden) | ENM (Excavated Natural Material). | If to be reused offsite, must meet the requirements of relevant sampling and testing requirements of The excavated natural material exemption 2012. | 20 tonnes |
| | Potentially contaminated soils. | Classification based on soil tests in accordance with the DECCW document Waste Classification Guidelines: Parts 1 and 2 (DECC 2009) | 5 tonnes |
| Building and construction waste | Estimates of construction and demolition waste include:<br>building materials;<br>steel reinforcing;<br>conduits and pipes;<br>concrete (solids) and asphalt;<br>packaging materials, including wood, plastic, cardboard and metals;<br>empty oil and other drums;<br>spill clean ups, paints and other chemicals; and<br>metals and bulk electrical cabling and equipment. | General Solid Waste (non putrescible) | 40 tonnes |
| Operational Phase | | | |
| Floc material | Floc material is anticipated to include:<br>mixed plastics;<br>particulates;<br>glass and foam from car upholstery;<br>building materials; and<br>loose dirt, mud and fines. | General Solid Waste (non putrescible) | 240 tonnes per day |
| Waste fuel | Waste fuel drained from car bodies prior to processing. | Hazardous Waste | 10,000 litres per annum |
| Office waste | Includes:<br>paper and cardboard;<br>ink cartridges;<br>glass, plastic and rubber; and | General Solid Waste (non putrescible) | 20 tonnes per annum |
| | food scraps. | General Solid Waste (putrescible) | 1 tonne per annum |
| Oils and lubricants | Oils and lubricants collected from on-site plant, equipment and machinery during regular maintenance activities. | Liquid | 1,000 litres per annum |

### *6.13.5 Potential Impacts*

The Project will involve the generation of various types of waste streams, which if not managed appropriately have the potential to impact the receiving environment as follows:

- excessive waste being directed to landfill;
- various types of waste being generated and stored onsite, with the potential for misclassification;
- contaminated waste not being correctly stored or disposed;
- off-site impacts to soil and/or water and/or groundwater.

To minimise the potential for environmental impacts the measures outlined in the following sections will be implemented.

### *6.13.6 Waste Minimisation – Application of the Waste Hierarchy*

To minimise waste generated during both the construction / demolition and operational phases, the anticipated waste materials outlined in *Table 6.52* will be managed under the waste hierarchy criteria established under the WARR Act.

As outlined in *Section 6.13.2*, the waste hierarchy consists of:

- avoidance of unnecessary resource consumption;
- resource recovery including reuse, reprocessing, recycling and energy recovery; and
- disposal to assess how waste will be effectively disposed to minimise any adverse impacts on the environment.

The nature of the proposed development promotes ecological sustainable development and follows the hierarchy of waste management. The proposed development will reduce waste to landfill and the scrap materials would be recovered as ferrous and non-ferrous material to be sold as valuable resources to be used in other industrial applications.

*Table 6.53* outlines how the application of the waste hierarchy will be applied to this project.

*Table 6.53 Application of the Waste Hierarchy*

| Waste Type | Application of the Waste Hierarchy | | |
|---|---|---|---|
| | **Avoidance** | **Resource Recovery** | **Disposal** |
| **Construction and Demolition Phase** | | | |
| Vegetation | Removal of vegetation will be minimised as far as practicable during the establishment of the site. | Where applicable, vegetation removed during site establishment will be reused as mulch in on-site gardens and landscaping or sent to an appropriately licenced green waste facility | All remaining green waste will be classified as "General Solid Waste (non-putrescible)" is to be disposed at an approved licenced facility. |
| Excavated soil (overburden) | Generation of excess excavated soil material will be avoided where possible during construction. | Material excavated and classified as ENM, will be reused on site where possible during construction. | Any material classified as ENM that cannot be reused on site will be classified as "General Solid Waste (non-putrescible)" and be disposed at an approved licenced facility. Any potentially contaminated soil will be classified based on soil tests in accordance with the DECCW document *Waste Classification Guidelines: Parts 1 and 2* (DECC 2009) and disposed at an approved licenced facility. |
| Building and construction waste | Building and construction generated during the construction and demolition phase is to be minimised as far as practicable. | Where applicable all efforts to be made to reuse/recycle the following materials on-site or an alternative approved facility:<br>• metal waste<br>• brick material; and<br>• timber. | All remaining building and construction waste will be classified as "General Solid Waste (non-putrescible)" is to be disposed of in accordance with the guidelines outlined in DECCW (2009) and disposed at an approved licenced facility. |
| **Operational Phase** | | | |
| Floc Material | No opportunities exist to avoid the creation of floc material during processing. | Limited options for reuse. Potential reuse options to be investigated further. | Floc material classified as "General Solid Waste (non-putrescible)" is to be disposed at an approved licenced facility. |
| Waste fuel from car bodies | Sell and Parker to request fuels be drained from car bodies prior to delivery to site. | Limited options for reuse. Potential recycling options to be investigated further. | Waste fuel to be collected in above ground tanks, classified as hazardous waste and disposed of at an approved licenced facility. |

| Waste Type | Application of the Waste Hierarchy | | |
|---|---|---|---|
| | **Avoidance** | **Resource Recovery** | **Disposal** |
| Office waste | Generation of office waste such as paper from unnecessary printing is to be avoided as far as practicable. | Paper, cardboard, glass, metals and plastics will be sorted and sent to Council collected recycling services. E-waste, including computers, printers and ink cartridges will be collected and sent for recycling. | All remaining office waste classified as "General Solid Waste (non-putrescible)" and as "General Solid Waste (putrescible)" is to be disposed of in accordance with the guidelines in DECCW (2009) and disposed at an approved licenced facility. |
| Oils and lubricants from site plant and machinery | Sell and Parker to maintain plant and equipment to ensure it runs efficiently and produces limited amounts of waste oil and lubricants. | Limited options for reuse. Potential recycling options to be investigated further | Waste oil and lubricants to be collected in 205L drums in bunded area classified as liquid waste and disposed of at an approved licenced facility. |

### *6.13.7 Waste Receipt, Handling, Storage and Disposal*

*Receipt of Feed-in Materials*

The quality of incoming feed-in materials would be controlled through management procedures. Manual checks would be conducted for truck loads prior to receipt on site to ensure the material is not contaminated with other waste items. In addition, regular independent audits would be undertaken to ensure compliance with permitted materials accepted on site.

The current set of reception procedures will be reviewed and updated prior to operation to standardise protocols for accepting scrap materials at the facility. These procedures would include record keeping for all incoming and outgoing material movements.

*Handling and Storage*

Approximately 1,500 tonnes of recyclable waste material, consisting of cast iron scrap, wrought iron, and scrap car bodies will arrive at the site each day. Approximately 50 tonnes of this material is separated out into non-ferrous material. The remaining material will be sorted and stockpiled in three separate stockpiles associated with the Pre-Shredder, Shredder and Shear (refer *Section 2.3.1* and *Figure 2.1).* Heavy ferrous material (approximately 400 tonnes), will go straight to shear. The remaining 1050 tonnes will be fed to the shredder, of which 300 tonnes will be first fed to the pre-shredder.. Most waste (floc) material will emerge from the end of the non-ferrous metals sorting conveyor, and will be conveyed to an enclosed building. Up to 240 tonnes of floc material will be generated per day.

The re-saleable products from the recovery, processing and recycling are ferrous metals, aluminium and small quantities of other metals such as copper. The ferrous metal is by far the largest product stream and will be stored in a contained designated area. This area is expected to hold approximately 3,000 tonnes, being four metres high, 20 metres long and 10 metres wide.

Aluminium product will be collected in skips next to the eddy-current Separators. Copper and other metals will be collected in skips near the sorting areas. All nonferrous metals will then be loaded directly into closed 20 foot shipping containers and exported to end users in Asia.

*Disposal*

All waste materials which meet the specification to be reused/ recycled will be processed on-site or be taken to an approved facility, capable of accepting those materials.

All other waste is to be disposed in accordance with the classification of the waste material at an approved licenced facility.

### *6.13.8 Waste Transport*

All waste transported to and removed from the site should be done so in accordance with road and transportation legislation. In all cases, appropriately licenced transport contractors are to be engaged to transport waste material to and from the site. The contractors appointed to transport waste are to ensure they:

- are licenced to transport the type of waste they receive;
- transport the waste to a licenced facility capable of receiving the type of waste and quantity they are carrying; and
- waste is adequately covered during transport.

The contractor transporting the waste is to ensure that completed waste data forms are provided to the waste facility upon arrival.

### *6.13.9 Waste Reporting and Auditing*

The designated site manager or an appointed responsible delegate should prepare monthly reports clearly documenting the waste that has been received and generated. These should be prepared using waste receipts that have been retained and should include:

- waste classification data to assess compliance with the DECCW *Waste Classification Guidelines (*2009);

- a review of licences held by the facilities where waste has been disposed to assess/ ensure their ability to accept the waste in accordance with relevant legislation; and

- include any incident reports relating to waste (i.e. spills) which have occurred over that month. Any corrective actions undertaken should also be included.

### *6.13.10 Waste Management and Mitigation Measures*

*Table 6.54* summarises the waste management and mitigation procedures to be applied on-site for each type of waste.

*Table 6.54 Summary of Waste Management and Mitigation Procedures*

| Waste Type | Description | Waste Classification | Storage | Transport | Disposal |
|---|---|---|---|---|---|
| **Construction and Demolition Phase** | | | | | |
| Vegetation | Vegetation/timber mulch from removal of landscape trees. | General Solid Waste (non putrescible) | Stockpiled within the site compound or fenced off area prior to transport and disposal. | By an approved and licenced contractor. | At an approved, licenced facility. |
| Excavated soil (overburden) | ENM (Excavated Natural Material). | If to be reused offsite, must meet the requirements of relevant sampling and testing requirements of The excavated natural material exemption 2012. | All excavated material should be stockpiled and dampened and/or covered to avoid dust emissions.<br><br>Any stockpiling to be undertaken within the fenced area. | By an approved and licenced contractor | At an approved, licenced facility. |
| | Potentially contaminated soils. | Classification based on soil tests in accordance with the DECCW document Waste Classification Guidelines: Parts 1 and 2 (DECC 2009) | Any potentially contaminated excavated material must be stored in a manner that contains any runoff until the material is appropriately classified and disposed of. | By an approved and licenced contractor | At an approved, licenced facility. |
| Building and construction waste | Potentially contaminated soils<br>Estimates of construction and demolition waste include:<br>• building materials;<br>• steel reinforcing;<br>• conduits and pipes;<br>• concrete (solids) and asphalt;<br>• packaging materials, including wood, plastic, cardboard and metals;<br>• empty oil and other drums;<br>• spill clean ups, paints and other chemicals; and<br>• metals and bulk electrical cabling and equipment. | General Solid Waste (non putrescible) | All waste to be stored/ stockpiled within the fenced boundary of the site.<br><br>Excess spoil from establishing the site should be dampened and/ or sealed to minimise dust emissions. | By an approved and licenced contractor | At an approved, licenced facility.<br><br>Where applicable all efforts to be made to reuse/recycle the following materials on-site or at an approved facility:<br>• metal waste;<br>• brick material;<br>• timber; and<br>• fencing. |
| **Operational Phase** | | | | | |
| Floc material | Floc material is anticipated to include:<br>• mixed plastics;<br>• particulates;<br>• glass and foam from car upholstery;<br>• building materials; and<br>• loose dirt, mud and fines. | General Solid Waste (non putrescible) | Conveyed to a bunker in an enclosed building, prior to removal by contractor. | By an approved and licenced contractor | At an approved, licenced facility. |
| Waste fuel | Waste fuel drained from car bodies prior to processing. | Hazardous Waste | Stored in above ground storage tanks prior to collection for recycling by contractor. | By an approved and licenced contractor | At an approved, licenced facility. |
| Office waste | Includes:<br>• paper and cardboard;<br>• ink cartridges;<br>• glass, plastic and rubber; and | General Solid Waste (non putrescible) | Waste stored in office bins and transferred to Council collection bins and skip bins where required. | By an approved and licenced contractor | At an approved, licenced facility. |
| | • food scraps | General Solid Waste (putrescible) | Stored in Council collection bins. | By an approved and licenced contractor | At an approved, licenced facility. |
| Oils and lubricants | Oils and lubricants collected from on-site plant, equipment and machinery during regular maintenance | Liquid | Stored in 205L drums in bunded area until sufficient quantity is available to be collected by contractor and sent for recycling. | By an approved and licenced contractor | At an approved, licenced facility. |

## 6.14 *CUMULATIVE IMPACT ASSESSMENT*

For a cumulative effect to occur, two impacts are required to impact on the same receptor. The key receptors in the local area include the local business community of Kings Park industrial estate, the residential areas which adjoin the industrial estate and the key environmental receptor, Breakfast Creek.

The proposed development has the potential to cause a number of environmental impacts. These impacts have been grouped, assessed and discussed as separate environmental aspects in the preceding sections of this Chapter. For the majority of these environmental aspects, there are expected to be no significant residual impacts during construction or operation on any of the identified receptors. As such, the majority do not require a cumulative impact assessment. Some minor impacts with the potential to create a cumulative impact are discussed below.

There is potential for short term minor adverse effects on properties close to the proposed development from the combination of construction noise, air quality, minor visual intrusion, traffic and general amenity effects arising from site activity, plant operation and traffic movements. These effects are not predicted to be significant and will be limited to temporary periods during construction.

With the implementation of the proposed mitigation measures, the environmental impact assessment has identified no long term adverse impacts to nearby receptors as a result of expanded operation at the site. In addition, as the proposed development is within an existing industrial estate it will not result in reducing available land for beneficial community uses.

The expansion of the site is predicted to have a number of positive impacts including:

- capital investment value ("CIV") of $1.1 million;
- increased labour force, creating positive flow-on effects to the local economy, offsetting the loss of jobs in response to the Dexion operations being closed and relocating offshore;
- ability to better respond to increasing demands, including community expectations for efficient an effective metal resource recovery and recycling facilities; and
- establishment of and education and training centre to promote recycling initiatives and to explain the nature of resource recovery to school groups and tertiary education facilities.

No significant cumulative effects with other project development proposals have been identified.

# 7 ENVIRONMENTAL RISK ASSESSMENT

*This chapter presents the results of the Environmental Risk Assessment undertaken for the proposed development.*

## 7.1 INTRODUCTION

The following Environmental Risk Assessment (ERA) provides an analysis of the environmental risks that have been identified as part of this EIS.

The environmental impact assessment (*Chapter 6*) has identified the potential environmental impacts associated with the proposed development, described mitigation measures for those proposed impacts and identified any significant residual environmental impacts which still exist after the application of the proposed mitigation measures.

This ERA has been based upon the methodology outlined in Standards Australia's *HB 203:2006 Environmental Risk Management – Principles and Process, Australian Standard AS/NZ 4360:2004 Risk Management,* and *AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines.*

The analysis categorised levels of risk for a given event based on the significant effects (consequences) and manageability of those effects (likelihood). The measures of likelihood categories and the measures of consequences categories as well as the risk ranking matrix are detailed in *Table* 7.1, *Table 7.2* and *Table 7.3* below.

***Table 7.1 Measures of Probability Categories for ERA***

| Rank | Probability | Description |
|---|---|---|
| A | Almost Certain | Happens often and is expected to occur |
| B | Likely | Could easily happen and would probably occur |
| C | Possible | Could happen and has occurred elsewhere |
| D | Unlikely | Unlikely to happen but may occur |
| E | Rare | Could happen, but only in extreme circumstances |

***Table 7.2 Measures of Consequence Categories for ERA***

| Rank | Consequence | Description |
|---|---|---|
| **Negative Consequences** | | |
| 1 | Extreme | Permanent and catastrophic impacts on the environment; large impact area: reportable incident to external agency; large fines and prosecution; operational constraints; substantial community concern. |
| 2 | Major | Permanent and detrimental impacts on the environment; large impact area: reportable incident to external agency; may result in large fines and prosecution; operational constraints; high level of community concern. |

| Rank | Consequence | Description |
|---|---|---|
| 3 | Moderate | Substantial temporary or minor long term detrimental impacts on the environment; moderate impact area; reportable incident to external agency; action required by reportable agency; community interested. |
| 4 | Minor | Minor detrimental impacts on the environment; small impact area; not reportable incident; no operational constraints; uncontroversial project; no community interest |
| 5 | Low | Nil or temporary impacts to the environment, small or isolated impact area; not reportable incident; no operational constraints; uncontroversial project; no community interest |
| **Positive Consequences** | | |
| 1 | Extreme | Permanent and extremely beneficial impacts on the environment or population; large impact area. |
| 2 | Major | Permanent and beneficial impacts on the environment or population; large impact area. |
| 3 | Moderate | Substantial temporary or minor long term beneficial impacts on the environment or population; moderate impact area. |
| 4 | Minor | Mino beneficial impacts on the environment or population; small impact area |
| 5 | Low | Nil or temporary beneficial impacts on the environment or population; small or isolated impact |

*Table 7.3* ***Risk Matrix for ERA***

| Likelihood | Consequences | | | | |
|---|---|---|---|---|---|
| | **1. Extreme** | **2. Major** | **3. Moderate** | **4. Minor** | **5. Low** |
| **A. Almost certain** | VH | VH | H | H | M |
| **B. Likely** | VH | H | H | M | M |
| **C. Possible** | H | H | M | M | L |
| **D. Unlikely** | H | M | M | L | L |
| **E. Rare** | H | M | L | L | L |

Considering the project scope, mitigation measures and cumulative impacts described in Chapter 6, *Table 7.4* provides an assessment of the mitigated risks associated with the Project, or the residual risk analysis. This has been completed for each potential environmental impact identified in *Table 7.4* based on the likelihood of occurrence and potential environmental consequence.

Note that where a positive impact has been identified, a shading of blue has been used in *Table 7.4.*

*Table 7.4 Environmental Risk Analysis*

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| Ecology | Impact / disturbance to downstream ecosystems from discharges from site | C | 3 | M | Sediment control barriers installed at the site during construction and while earthworks are undertaken.<br>All vehicles are to keep to the existing and proposed access roads on-site. | E | 5 | L |
| | Minor, localised alteration to vegetation on-site. Potential to spread noxious weeds | C | 3 | M | All undertaken in accordance with the *Noxious Weeds Act 1993* and the *Noxious and environmental weed control handbook - A guide to weed control in non-crop, aquatic and bushland situations* | E | 4 | L |
| Heritage | Unexpected heritage item uncovered during construction. | C | 2 | H | All staff, contractors and others involved in the construction works made aware of the statutory legislation protecting sites and places of heritage significance.<br>In the event that a site or artefact (as defined by the *National Parks and Wildlife Act 1974* or *Heritage Act 1977* is identified during construction works, works shall cease at the location. The find shall be immediately reported to the regulator in accordance with legislation. No work shall commence until any required approvals have been given. | E | 5 | L |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| Acoustics | Noise and vibration Impact assessment has indicated that noise emissions to residential premises were predicted to comply with the project-specific noise levels without noise mitigation measures. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| | Minor noise and vibration emissions from site operations to neighbouring existing and proposed new industrial premises | C | 3 | M | The following acoustic screen fencing is proposed to mitigate noise emissions from site operations to neighbouring existing and proposed new industrial premises:<br>• retain the existing acoustic screen fencing at a height of 4m, which is currently erected around the existing site northern and western boundary and along existing driveways as shown on the site drawings; and<br>• proposed new colorbond and electric fence along the new eastern boundary shall be an acoustic screen fencing of 4m height | E | 5 | L |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Noise and vibration impact assessment has shown potential traffic noise associated with the operation of the facility and impacting nearby residential receivers is assessed as being insignificant and would comply with the RNP. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| Air Quality | Air quality impact assessment has shown no additional exceedance of criteria due to the proposed development. | E | 5 | L | Although no additional exceedance are expected, a number of mitigation measures will be employed, including dust suppression where required and maintenance of vehicles and equipment in accordance with manufacturer's specifications. | E | 5 | L |
| Greenhouse Gas | The contribution of the emissions to the totals for NSW and the nation, the upgrade represents a negligible increase in GHG emissions. | B | 4 | M | The upgrade of the site will result in a number of efficiency improvements which will reduce the emission of GHGs from the mobile materials handling equipment kilometres travelled by trucks. The increased throughput will also allow for efficiencies due to the economy of scale; | E | 4 | L |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Post-upgrade the site has an additional capacity to recover ferrous and non-ferrous materials from the recycling processes, decreasing the need for end users to source raw materials from the extraction industries | A | 4 | | Improvement - no mitigation measure required. | A | 4 | |
| Soil and Water | Expansion of site operations will create increased demand for water supply. | B | 3 | H | From the preliminary calculations provided in the soil and water assessment it assumed that between 15% and 35% of the total water requirement on-site could potentially be supplied by the stormwater basin in dry years (10%ile rain year) and wet years (90%ile rain year) respectively with an average rainfall year potentially supplying 26% of the site water requirements.<br>Rainwater tanks would likely be best suited to providing water for personal use such as toilet flushing, reducing the requirement for mains supplied potable water. | B | 4 | M |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Potential for disturbance to site soils during construction, with minor potential to impact upon stormwater runoff. | C | 3 | M | With the limited site disturbance required to establish the site the erosion and sediment controls suggested within this report, along with the key management strategy of planning ground disturbance works for outside of forecast inclement weather periods are considered sufficient to limit the potential for possible stormwater impacts. | D | 4 | L |
| | Typical site operations are not expected to encounter or disturb acid sulphate soils, nor lower the water table on adjacent lands to expose acid sulphate soils to oxidation. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| | As the site will not be excavating material or extracting groundwater, it is not expected that the site operations will impact the regional groundwater quality or quantity. As such it is not proposed to undertake a groundwater monitoring program on the site. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Potential impact on the Breakfast Creek riparian corridor. | C | 3 | M | Although exempt from controlled activity approval under the WM Act, redevelopment of the site has been designed to meet as far as practicably possible, the new rules developed by NOW (2012) regarding controlled activities within riparian corridors. | D | 4 | L |
| Contaminated Land | Although some potential for residual contamination remains, based on the results of this Phase I ESA and in particular the absence of potentially complete SPR linkages as presented in the CSM, along with the planned continued industrial land use at both properties, it is considered that further investigation is not required at this stage in order to facilitate the proposed redevelopment. | C | 2 | H | A contingency for the appropriate management of potential unexpected contamination finds should be incorporated in the Construction Environmental Management Plan (CEMP) for the planned redevelopment of both properties. If localised contaminated soils are encountered during construction works, they shall be segregated and assessed for waste classification and appropriately disposed of or re-used onsite, subject to the results of testing. If significant contamination is encountered during construction works, further investigation in the form of a Phase 2 Environmental Site Investigation (ESA) may be required.<br>All pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act); and<br>A Hazardous Materials Register and | C | 4 | M |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | | | | | respective Safety Data Sheets (SDSs) shall be kept on site at all times and regularly maintained. | | | |
| Hazard and Risks | The PHA indicated that there was no significant offsite impact from the use of dangerous goods on site due to the small inventories involved. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| | The NSW criteria for injury were not reached at sensitive or residential land use zones. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| | The potential for offsite fatality and property damage was limited to the scenario of a 45 kg LPG cylinder rupture in the dangerous goods store. The NSW criteria for offsite fatality and property damage are considered satisfied due to the rarity of LPG cylinder ruptures | E | 1 | H | At least one hose reel and one fire extinguisher be provided for the oxygen and LPG cylinder storage. Provide one powder type extinguisher and one foam extinguisher for all bulk class 3 dangerous goods on site. This includes the storage of fuel and oil removed from vehicles prior to shredding. This recommendation assumes the recovered liquids are stored in intermediate bulk containers. | E | 3 | L |
| Fire and Incident | Floc material has been identified as a potential source of fire. | C | 1 | H | Floc material will be managed by keeping the stockpile small, so as not to consider the warehouse in which it is kept as a high hazard occupancy. Water cannons will also be provided for the various stockpiles. | D | 2 | M |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Any uncontrolled leaks or spills have the potential to contaminate soils within unsealed sections of the site, or be entrained in stormwater flow to the detention basin at the rear of the site. Overflow of potentially contaminated water from the detention basin, has the potential to detrimentally impact on Breakfast Creek. | C | 2 | H | The site will be kerbed to retain spillages or stormwater run-off, which outflow via a detention basin. Spill kits will be available on-site and be deployed to manage and contain minor spills.<br>All pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with POEO Act.<br>A Fire and Incident Response Management Plan will be developed for the expanded site. | D | 4 | L |
| Transport | Traffic impact assessment has indicated that compared against the existing operational traffic volumes in the vicinity of the site, the additional traffic generated by the proposed development is negligible and could not be expected to compromise the safety or function of the surrounding road network. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | Possible minor impacts associated with construction traffic | D | 3 | M | Once the contractor has been appointed, a site-specific construction traffic management plan (CTMP) should be prepared prior to works commencing on-site detailing construction traffic volumes, truck routes, access arrangements and construction worker parking arrangements. | E | 5 | L |
| Social and Economic | The proposed expansion of the site will provide for increase labour force, creating positive flow-on effects to the local economy. The proposed expansion of the site will also enable Sell and Parker to utilise the available plant capacity in order to better respond to community expectations for efficient an effective metal resource recovery and recycling facilities. | A | 4 | | Improvement - no mitigation measure required. | A | 4 | |
| | The proposed education and training centre will promote recycling initiatives and to explain the nature of resource recovery. The centre will provide support and seek to participate with the | A | 4 | | Improvement - no mitigation measure required. | | | |

| Environmental Issue | Unmitigated Potential Impacts / Inherent Risk | Probability | Consequence | Potential Risk Prior to Mitigation | Actions / Proposed Mitigation Measures | Residual Probability | Residual Consequence | Potential Residual Risk Post Mitigation |
|---|---|---|---|---|---|---|---|---|
| | education programme in schools and tertiary education facilities, thus positively contributing to the local community. | | | | | | | |
| | In the short term, construction works may have a minor negative impact on surrounding business with regards to amenity, noise, air and traffic | C | 4 | M | These impacts can be appropriately managed with implementation of mitigation measures stated through EIS | D | 5 | L |
| Visual | The proposed development will not result in significant visual impacts in the vicinity of the site or neighbouring areas. | E | 5 | L | No additional mitigation measures required. | E | 5 | L |
| Waste | The proposed development will involve the generation of various types of waste streams, which if not managed appropriately have the potential to impact on the receiving environment | C | 2 | H | A number of mitigation measures have been proposed to manage waste in accordance with the Waste Hierarchy and ensure appropriate receipt, handling and disposal of waste | D | 4 | L |

## 7.2 SUMMARY OF ERA

The environmental risk assessment presented in *Table 7.4* indicates how the assessments and mitigation measures contained in *Chapter 6* have assisted in understanding the proposed development and reduced the environmental risk associated with it. Certain risk associated with potential to uncover residual contamination, risk of fire and increase in water demand remain on-site but risk to environment has been reduced through proposed mitigation measures. Impact assessment for a number of other environmental risks, including air quality, noise and traffic has shown risks to the environment to be negligible.

In addition to these risks, the proposed development will create a number of beneficial effects, including a number of positive social and economic benefits to the local area, including considerable capital investment, creation of additional jobs and associated flow on effects to the local economy and the establishment of an education and training facility. Post-upgrade the site will have additional capacity to recover ferrous and non-ferrous materials from the recycling processes, thus decreasing the need for end users to source raw materials from the extraction industries and thus positively impacting on reducing greenhouse gas emissions.

## 8 SECTION 79(C) CONSIDERATIONS

When undertaking an assessment of a development application, a consent authority is required, pursuant to Section 79C of the EP&A Act, to take into consideration a range of matters. It requires that both the natural and built environments and the social and economic impacts in the locality are considered. Each of these matters is listed below in italics with relevant comments provided.

*(1) Matters for consideration – general*

*In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*

*(a) the provisions of:*

*(i) any environmental planning instrument, and*

The provisions of relevant EPIs relating to the proposed development are summarised in *Chapter 4 – Planning Considerations* of this Report, and include relevant SEPPs and local planning controls contained within Blacktown LEP 1988.

The proposed development is consistent with the relevant EPIs, and is a permissible development under Blacktown LEP 1988.

*(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*

Blacktown City Council has prepared a new *Draft Local Environmental Plan 2013* ('Draft LEP 2013'). The Draft LEP 2013 was publicly exhibited in March and April 2013. The exhibited Blacktown draft LEP 2013 proposes that the Blacktown Industrial Area (within which the site is located) be changed from an industrial area to a 'business park'. As a result, the proposed zoning for the site, and almost all of the existing 181ha industrial area, is *'B7 Business Park'* in Draft LEP 2013. Industrial land uses, including waste and resource management facilities are prohibited within the proposed *'B7 Business Park'* zone.

Notwithstanding the above, Blacktown City Council held a meeting on 12 March 2014, to hear a motion regarding making further amendments to the Blacktown Draft LEP, prior to its referral to DP&I.

The amendments which were adopted by Council have the effect of amending the originally proposed zoning of the subject site and surrounds from B7 (as proposed in the publicly exhibited Blacktown LEP) to an IN1 General Industrial zone. Specifically the proposed amendments include the land bounded by Sunnyholt Road to the east, Vardys Road to the north, Breakfast Creek to the south and Harvey Road (adjoining the railway line) to the west. The motion passed by Council has the effect of making the proposed development permissible with consent under the IN 1 General Industrial zone, under draft Blacktown LEP.

Sell and Parker maintain their position that the site and surrounds should maintain a general industrial zoning, noting that the Council resolution of 12 March 2014 achieves this objective and would allow a waste and resource recovery facility to be permitted with consent under the relevant Environmental Planning Instrument.

In accordance with Section 79C (a)(ii) of the EP&A Act, the provisions of draft EPI's such as the Blacktown Draft LEP 2013 should be considered and given relevant weight. Whilst some weight should be given to the draft LEP, given it has been placed on public exhibition and endorsed by Blacktown City Council, it is our understanding that the draft LEP has not been referred to DP&I for gazettal. The review and LEP gazettal process which is to be undertaken by DP&I, is expected to take up to six months and may lead to further changes to the draft LEP, which may affect land zonings and permissibility. The recent Council motion of 12 March 2014 should be validly considered in respect to weight, as it precedes the exhibited version of Blacktown draft LEP.

Irrespective of the draft LEP, this report maintains that the state and regional benefits of the metal waste and resource recovery facility to the Sydney Region is of such significance that the project should proceed and therefore insignificant weight should be given to the draft LEP. The expansion of the existing Sell and Parker facility is consistent with the overall general industrial nature of the locality and continues to service the waste, resource and metal sectors.

Furthermore we note that the draft Blacktown LEP contains relevant "Saving and Transitional" provisions which enable any DA, such as this SSD application be able to be considered in accordance with the previous EPI (Blacktown LEP 1988), on the basis that the application was made prior to the coming into effect of the draft LEP.

*(iii) any development control plan, and*

Section 4.5.2 of this Report identifies the compliance of the project with Blacktown DCP 2006. This assessment found that the proposed development is consistent with the provisions of the DCP.

*(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and*

There are no planning agreements that apply to the site.

*(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and*

The proposed waste metal recovery, processing and recycling facility is not a prescribed purposes under the Environmental Planning and Assessment Regulations 2000.

*(v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979 ), that apply to the land to which the development application relates,*

Coastal zone management plans are not applicable to the site.

*(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*

An assessment of key issues relating to the proposed development is provided in Chapter 6 of this Report and it is considered that the likely impacts of the development, including traffic, parking and access, air and odour, stormwater quality, waste management, and risk management have been satisfactorily addressed.

Additionally proposed mitigation measures are outlined in chapter 6 and summarised within *Table 9.1*, which will ensure that the likely environmental impacts are contained and able to be effectively managed on the site.

*(c) the suitability of the site for the development,*

The subject site is identified as industrial land for employment-generating purposes pursuant to Blacktown LEP 1988. The existing Sell and Park facility has been successfully operating from 45 Tattersall Road for in excess of 15 years, with the proposed expansion onto the adjoining Dexion site (23-43 Tattersall Road) a continuation of its existing activities.

The proposed expansion of the project continues the industrial use of the land on both the current Sell and Parker site, and the soon to be former Dexion site. The increase in the size of the Sell and Parker site from 2.86 hectares to 6.1 hectares will significantly improve site operations, allowing additional throughput, whilst allowing for more effective environmental mitigation measures to be employed and incorporated into the overall project design.

The key site improvements associated with the expanded site operations include;

- Reducing truck having to enter and exit the site twice as part of existing operations;
- Providing physical separation of retail and wholesale customers;
- Incorporating the existing Dexion office facilities into the Project (demolishing the existing Sell and Parker office building), which eliminates customers and other visitors having to enter the site via the current entrance driveway and towards the middle of the site;
- Sealing those areas of the site that a not sealed (except landscaping) to reduce and mitigate dust impacts;
- Enclosing post shredding activities within an industrial building that is currently on the Dexion site and will be amended to suit the proposed operations;
- Relocation of pre-shredder towards the centre portion of the site, away from side boundaries;
- Improving the collection and treatment of stormwater on the site, incorporating water treatment;
- Provision of upgraded landscaping throughout the site, mainly within the eastern boundary, front setback and rear vegetated area; and
- Retention of existing 4m high site fencing, with additional dust screen to be employed, thereby minimising dust, noise and visual impacts.

The above measures form critical components of the project and will be able to be successfully incorporated into this project due to the suitability of the site, having regard to its size, configuration and current industrial land uses.

*(d) any submissions made in accordance with this Act or the regulations,*

As the project is SSD, the DA will undertake an exhibition period for a 28-day period. During the exhibition period relevant agencies and appropriate regulatory authorities will also be consulted. As part of its assessment, DP&I will then have regard to any submissions received and Sell and Parker should be afforded the opportunity to address and respond to submissions accordingly.

*(e) the public interest.'*

The proposed development is for the purpose of waste metal recovery, processing and recycling facility which provides an economic and environmental benefit to the Sydney region.

The overall facility, including the Hammermill, is one of only two such facilities in the Sydney region, and the strategic location of the site, adjacent to major transport corridors such as the M7 and M4 motorways, is such that it supports businesses within the waste and metal sector within Sydney and NSW. It will contribute to the economic growth of the region, and will offset some of the expected loss of jobs associated with the relocation of the current Dexion operations offshore.

The environmental benefits of the project are also in the public interest, given the resource recovery nature of the project. Sell and Parker recognise the social and community benefit of recycling and resource recovery and have committed as part of this project to include a community and education resource centre within the site.

# 9 SUMMARY OF MITIGATION MEASURES

*This chapter provides a summary of the mitigation measures identified within Chapter 6.*

*Table 9.1 Summary of Mitigation Measures*

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| Ecology | The overall potential ecological impacts are considered low given the highly disturbed nature of the site. Only landscape trees separating the two current separate sites require removal. Potential impacts to threatened species are considered highly unlikely. | The following recommendations aim to minimise ecological impacts of the proposed works:<br>• sediment control barriers will be installed at the site during construction and while earthworks are undertaken to reduce the likelihood of silted runoff into adjacent Breakfast Creek in the event of high rainfall;<br>• all vehicles are to keep to the existing and proposed access roads on-site at all times; and<br>• all work should be undertaken to prevent the spread of pests and noxious weeds in accordance with the Noxious Weeds Act 1993 and the Noxious and environmental weed control handbook - A guide to weed control in non-crop, aquatic and bushland situations (NSW Government, 2011). |
| Heritage (Indigenous) | Potential impacts to previously unknown indigenous artefacts or relics during ground disturbance activities. | In accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW NSW, 2010) a conservative approach will be adopted at the site. The following mitigation measures will be implemented:<br>• all staff, contractors and others involved in the construction works would be made aware of the statutory legislation protecting sites and places of heritage significance; and<br>• all works would cease in the immediate area should any indigenous artefacts or relics be uncovered and the Cultural Heritage Division of the NSW National Parks and Wildlife Service (OEH) contacted. |
| Heritage (Historical) | Potential impacts to previously unknown items of historical significance during ground disturbance. | The following mitigation measures are recommended to ensure that if any historical heritage artefacts are encountered appropriate measures are implemented:<br>• all staff, contractors and others involved in the works would be made aware of the statutory legislation protecting sites and places of heritage significance prior to works commencing; and<br>• in the event that a site or artefact (as defined by the National Parks and Wildlife Act 1974 or Heritage Act 1977) is identified during construction works, works shall cease at the location. The find shall be immediately reported to the regulator in accordance with legislation. No work shall commence in the vicinity of the find until any required approvals have been given by the regulator. |
| Acoustics | Noise and vibration impacts to nearby commercial premises during construction and operation. | The following acoustic screen fencing is proposed to mitigate noise emissions from site operations to neighbouring existing and proposed new industrial premises:<br>• retain the existing acoustic screen fencing at a height of 4m, which is currently erected around the existing site northern and western boundary and along existing driveways as shown on the site drawings; and<br>• proposed new metal/colorbond and electric fence along the new eastern boundary shall be an acoustic screen fencing of 4m height<br>In addition to the above, the noise screen will be designed with regard to the following:<br>• the extent of noise reduction required of the noise screen as a whole as perceived from any potentially affected receiver sites; |

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| | | • any penetrations through the fabric of the noise screen will be sealed air tight;<br>• all joints between noise screen panels will be sealed air tight; and<br>• noise screens will have no clearance gaps underneath them. |
| Air Quality | Potential localised air quality impacts associated with increased concentrations of TSP at nearby commercial and residential locations. | The following mitigation measures will be implemented to manage potential localised air quality impacts during construction and operation:<br>• vehicles and equipment shall be maintained in accordance with the manufacturer's specifications;<br>• additional site fencing located on the eastern boundary of the site, should include appropriate dust screen to minimise airborne dust movements; and<br>• all surplus soils from excavations during construction, not reused on-site, shall be removed from site by covered trucks and disposed of at an appropriately licensed facility. |
| Greenhouse Gas | Release of GHG emissions into the atmosphere.<br><br>Based on the GHG assessment undertaken indicate that GHG emissions associated with the upgrade would represent an increase of 0.006% on Australia's national GHG emissions in 2010/11 of 563.1 Mt CO2-e, which is considered negligible. | Efficiency measures which will be implemented to manage GHG emissions during construction and operation include:<br>• the site will be sealed, which will reduce the emission of GHGs from the mobile materials handling equipment due to a more consistent driving surface and the ability to select more direct routes across the site;<br>• the new site design no longer requires trucks to enter the site twice but allows for one main entrance and exit point, reducing the kilometres travelled by trucks;<br>• the increased throughput allows for efficiencies due to the economy of scale;<br>• additional equipment purchased for the upgrade will conform to the standards of the latest technology including installation of conveyors to move material after processing rather than by FEL or truck;<br>• post-upgrade the site has an additional capacity to recover ferrous and non-ferrous materials from the recycling processes, decreasing the need for end users to source raw materials from the extraction industries; and<br>• where possible, the site will strive to continually improve the energy efficiency of its process and operations by implementing electricity and cost saving measures. |

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| Soil and Water | Potential impacts include:<br>• accidental release/spillage of contaminants and wastewater generated on-site;<br>• earthworks resulting in potential erosional impacts; and<br>• impacts to water balance as a result of the expansion | To manage and control stormwater, the following mitigation measures are proposed:<br>• installation of two oil/water separators for the new drainage system within the existing and expanded site area;<br>• regular cleaning of the oil/water separators should be carried out to maintain performance;<br>• the existing network of underground stormwater pipes, inlets and oil water separators will be cleaned and, if damaged, replaced during the site refurbishment activities;<br>• a bioretention filter will be installed to receive runoff from overland flows and the underground pipe network on the expanded site area; and<br>• the existing stormwater pond on the existing site will be dredged and excavated to remove any contaminated sediments and lined with clay. Verification sampling will be required as will waste classification sampling to allow for the appropriate disposal of any dredged material.<br>The general principles to be applied to erosion control for the disturbed site include:<br>• plan for erosion and sediment control and assess site constraints during the design phase and before any earthworks begin;<br>• minimise the area of soil disturbed and exposed to erosion;<br>• control water flows from the top of and through the project area – divert up-slope 'clean' water away from disturbed areas and ensure concentrated flows are below erosive levels;<br>• rehabilitate disturbed lands quickly; and<br>• maintain erosion and control measures for the duration of the project and until the site is successfully rehabilitated.<br>Key sediment controls include:<br>• protecting stormwater inlets;<br>• constructing a wheel wash;<br>• creating stabilised site access points;<br>• managing stockpiles; and<br>• utilising sediment traps such as sediment fence during construction.<br>Pollution control methods will include:<br>• storage of chemicals within impervious bund of more than 110% of the largest container within the bund;<br>• Material Safety Data Sheets (MSDS) for all chemicals stored on-site and made available to site personnel;<br>• refuelling to occur away from drainage points, with drip trays used and spill kits available; and<br>• trade waste receptacles will be provided for the storage and disposal of all wastes generated on-site.<br>To minimise the use of potable water associated with the expansion of the site, the following measures should be implemented: |

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| | | • on-going use of collected runoff in the stormwater basin for operation requirements is recommended, as long as the water is of a quality such that impacts to site infrastructure, the surrounding environment and the health and safety of employees is avoided;<br>• rainwater tanks may also be installed to utilise the runoff from roof spaces and would likely be best suited to providing water for personal use such as toilet flushing, reducing the requirement for mains supplied potable water.;<br>• landscaped areas along the south boundary will include a range of locally endemic species to enhance the portion of the riparian corridor inside the operational boundary of the redeveloped site. |
| Contaminated Land | Potential risks to human health and the environment resulting from exposure to historical contamination during ground intrusive works. | The following management measures will be employed to manage potential exposure to contaminants during construction and operation:<br>• a contingency for the appropriate management of potential unexpected contamination finds should be incorporated in the Construction Environmental Management Plan (CEMP) for the planned redevelopment of both properties;<br>• if localised contaminated soils are encountered during construction works, they shall be segregated and assessed for waste classification and appropriately disposed of or re-used onsite, subject to the results of testing;<br>• if significant contamination is encountered during construction works, further investigation in the form of a Phase 1/2 Environmental Site Investigation (ESA) may be required;<br>• any imported fill must be certified at source location (e.g. quarry or property owner) as Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM) in accordance with the Protection of the Environment Operations Act 1997 (POEO Act) and the Protection of the Environment (Waste) Regulation 2005 (POEO Waste Regulation);<br>• all pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with the Protection of the Environment Operations Act 1997 (POEO Act); and<br>• a Hazardous Materials Register and respective Safety Data Sheets (SDSs) shall be kept on site at all times and regularly maintained. |
| Hazards and Risks | Potential off-site impacts include fatality, human injury or damage to property caused from activities undertaken at the site. | • at least one hose reel and one fire extinguisher be provided for the oxygen and LPG cylinder storage (AS 4332-2004, Table 7.2). This is based upon the 3,000 L of oxygen in the store.<br>• provide one powder type extinguisher and one foam extinguisher for all bulk class 3 dangerous goods on site. This includes the storage of fuel and oil removed from vehicles prior to shredding. This recommendation assumes the recovered liquids are stored in intermediate bulk containers.<br>• maintain the height of the floc stockpile to less than 4 m, or the total volume to less than 1000 m3. This ensures the warehouse in which the floc is stored will not be a high hazard occupancy. |

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| | | • continue with the practice of providing water cannons to provide reach to feed and processed stockpiles in the event of a fire in any stockpile. |
| Fire and Incident | Floc material has been identified as a potential source of fire.<br>Any uncontrolled leaks or spills have the potential to contaminate soils within unsealed sections of the site, or be entrained in stormwater flow to the detention basin at the rear of the site. Overflow of potentially contaminated water from the detention basin, has the potential to detrimentally impact on Breakfast Creek. | The recommendations made in regards to fire protection requirements as detailed above will be implemented<br>To ensure incidents such as accidental spills and / or leakages from machinery are contained and managed appropriately, the following measures will be implemented.<br>• the site will be kerbed to retain spillages or stormwater run-off, which outflow via a detention basin. The detention basin has a capacity of 1440 m3. This basin will be required to be managed in accordance with the measures identified in Section 6.6).<br>• spill kits will be available on-site and be deployed to manage and contain minor spills;<br>• all pollution incidents that threaten or harm the environment shall be reported immediately to relevant authorities in accordance with POEO Act.<br>• It is recommended that a Fire and Incident Response Management Plan, including but not limited to the mitigation measures above, be developed for the expanded site. Sell and Parker have an existing Emergency Response Plan, this may be updated to include the aforementioned information. |
| Traffic and Transport | Compared against the existing traffic volumes in the vicinity of the site, the additional traffic generated by the proposed development is considered negligible and is not be expected to compromise the safety or function of the surrounding road network. | • a site-specific construction traffic management plan (CTMP) will be prepared prior to works commencing on-site. This is to outline construction traffic volumes, truck routes, access arrangements and construction worker parking arrangements. |
| Social and Economic Resources | The proposed development presents an overall positive impact to the local community in terms of employment opportunities and indirect contributions to the local community. | The following measures should be implemented to ensure positive socio-economic impacts of the proposed developed are maximised:<br>• seek to utilise local available labour force when recruiting for additional employees, including where possible those that have been affected by job losses at the Dexion site;<br>• where possible, investigate opportunities for offering apprenticeships for new work force and offer additional training to current workforce;<br>• communicate to local business and community the expected start date of construction; and<br>• any complaints received relating to site operations are to be recorded and attended to promptly. |

| Issue | Potential Impact | Mitigation/ Management Measure |
|---|---|---|
| Visual Amenity | The proposed development will not result in significant visual impacts in the vicinity of the site or neighbouring areas | Whilst visual amenity impacts associated with the proposed development are considered negligible the following management measure will be implemented:<br>• native trees, shrubs and grass species will be planted along site boundaries, particularly the frontage with Tattersall Road, which will complement and enhance existing landscaped vegetation in accordance with the Landscape Concept Plan provided in Annex M. |
| Waste Management | Potential impacts include:<br>• excessive waste being directed to landfill;<br>• various types of waste being generated and stored onsite, with the potential for misclassification;<br>• contaminated waste not being correctly stored or disposed;<br>• off-site impacts to soil and/or water and/or groundwater. | • all waste transported to and removed from the site should be done so in accordance with road and transportation legislation;<br>• in all cases, appropriately licenced transport contractors are to be engaged to transport waste material to and from the site. The contractors appointed to transport waste are to ensure they:<br>  • are licenced to transport the type of waste they receive;<br>  • transport the waste to a licenced facility capable of receiving the type of waste and quantity they are carrying;<br>  • waste is adequately covered during transport; and<br>  • the contractor transporting the waste is to ensure that completed waste data forms are provided to the waste facility upon arrival<br>• the designated site manager or an appointed responsible delegate should prepare monthly reports clearly documenting the waste that has been received and generated. These should be prepared using waste receipts that have been retained and should include:<br>  • waste classification data to assess compliance with the DECCW (2009) *Waste Classification Guidelines;*<br>  • a review of licences held by the facilities where waste has been disposed to assess/ ensure their ability to accept the waste in accordance with relevant legislation; and<br>  • include any incident reports relating to waste (i.e. spills) which have occurred over that month. Any corrective actions undertaken should also be included.<br>• all waste materials which meet the specification to be reused/ recycled will be processed on-site or be taken to an approved facility, capable of accepting those materials.<br>• all other waste is to be disposed in accordance with the classification of the waste material at an approved licenced facility. |

# 10 ENVIRONMENTAL MANAGEMENT PLAN OUTLINE

*This chapter outlines a framework for an environmental management plan to be formulated before the increase in handling capacity increases.*

## 10.1 ENVIRONMENTAL MANAGEMENT STRUCTURE

### 10.1.1 Environmental Management Context

Under section 75F of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the EIS must include a description of measures to "avoid, minimise, mitigate, offset, manage, and/ or monitor the impacts of the project".

These measures will be incorporated within site specific Construction and Operational Environmental Management Plans (collectively referred to as EMPs), which will provide an overall framework for the management of environmental impacts that could potentially arise from the proposed expansion of the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility. Whilst there is an existing approved EMP for the current facility, given the expansion of the site, this EMP will require updating to reflect the finding of this EIS.

All mitigation measures identified throughout this EIS and within the summary of mitigation measures table will be incorporated into the updated EMPs.

The EMPs will:

- act as an environmental operations manual for staff and contractors throughout construction and operation of the facility;
- identify potential impacts of the proposed expansion and the measures proposed to mitigate these impacts as described within this EIS;
- detail how environmental safeguards are to be implemented;
- detail the timing of the implementation of the mitigation measures;
- clearly define allocations of environmental responsibilities of all staff and contractors;
- outline monitoring and reporting requirements to demonstrate compliance with licensing and approval requirements; and
- provide procedures for review and updating of the EMPs.

Preparation of these EMPs complies with the requirements of the NSW Government Environmental Management Systems Guidelines and the proponents overall approach to environmental management. The EMPs will be prepared in accordance with the relevant environmental Acts and Regulations, principles of Ecologically Sustainable Development and good practice environmental procedures (including the "*Guideline for the Preparation of Environmental Management Plans"* NSW Department of Planning, 2004).

Adherence to the EMPs will enable environmental safeguards and mitigation measures to be effectively implemented and sustainable work practices adopted throughout the duration of the project. This will demonstrate the proponents intent to comply with relevant environmental legislation, prevent environmental pollution and minimise the impact of the proposal on the environment.

### *10.1.2 Approach to Environmental Management*

The proponent is committed to responsible environmental practices and the management of impacts associated with the proposed increased handling capacity at the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility will be in accordance with Council's Environmental Policy.

Specifically the proponent is committed to:

- conducting its operations to minimise environmental risk and, wherever practicable, eliminate adverse environmental impacts;
- continual improvement of our environmental performance including regular review and the setting of rigorous environmental objectives and quantified targets – particularly with regards to:
    - efficient use of energy (including appropriate use of alternative fuels);
    - conservation of water;
    - minimisation and recycling of wastes;
    - prevention of pollution;
    - effective use of virgin resources and supplemental materials;
    - open, constructive dialogue with communities surrounding our operations;
    - reducing the greenhouse gas emissions from our processes and facilities;
    - complying with environmental legislation, regulations, standards and codes of practice relevant to the particular business as the absolute minimum requirement in each of the communities in which we operate;

- conducting business with suppliers and contractors who have a commitment to the values and objectives contained in the Sell and Parker environmental policy; and

- remediating its disturbed and/or contaminated sites to standards acceptable for the site purpose.

At the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility, these commitments will be supported through the proponents implementation of the EMPs.

# 11 JUSTIFICATION OF THE DEVELOPMENT

*This chapter presents a justification for the proposal. An examination of ecologically sustainable development as related to the proposed production increase is also given.*

## 11.1 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Australia's National Strategy for Ecologically Sustainable Development (NSESD) (1992) defines ecologically sustainable development as: 'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'.

The NSESD states that there are two main features which distinguish an ecologically sustainable approach to development. These features are:

- the need to consider in an integrated way the wider economic, social and environmental implications of our decisions and actions for Australia, the international community and the biosphere; and
- the need to take a long-term rather than short-term view when taking those decisions and actions.

A number of principles form the foundation of Ecologically Sustainable Development:

- Precautionary Principle – where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- Intergenerational Equity – fairness and equal access to opportunities both in our lifetimes, as well as for future generations.
- Protecting Biodiversity – to protect biological diversity and maintain essential ecological processes and life-support systems.
- Improved Valuation – improved valuation, pricing and incentive mechanisms should be promoted to ensure the full costs, including the cost to environmental and social systems, are included in the final valuation of the product or service.

The principles of ESD have been considered throughout the preparation the EIS. This section summarises what steps have been taken to achieve the principles of ESD.

### *11.1.1 Achieving ESD*

The proposed expansion of the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility has been designed to minimise impacts and where possible improve the natural, social and economic environment of the region. This includes ensuring the protection and management of air quality, soil and surface waters as well as the appropriate disposal and management of wastes, hazardous substances and greenhouse gases. Impacts on social systems, such as noise, traffic and transport, visual and land use conflicts have been managed and improved through the proposed mitigation measures.

The increased handling capacity at the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility will result in considerable social and economic benefits at both the local and regional level. The expansion of the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility will better service both existing demand and projected future demand, particularly that from landfill operators, which are beginning to mine their sites to extract metal for recycling. The existing site is strategically positioned within the Blacktown Industrial Area, being in close proximity to existing industries and landfill operations.

### *11.1.2 Precautionary Approach*

A precautionary approach to the identification and management of environmental issues has been taken throughout the preparation of this EIS. In some instances where information was not fully attainable for reasons outside the control of ERM, a precautionary approach was taken to ensure all appropriate measures were employed to prevent any associated environmental degradation.

### *11.1.3 Benefits to Current and Future Generations*

The benefits to future generations include the protection and improved environmental management, increased employment opportunities, improved capabilities to respond to increasing demands (and community expectations) for efficient and effective metal resource recovery and recycling facilities and subsequent economic and social benefits which will be vital for the sustainable expansion and growth of the area.

### *11.1.4 Protection of Biodiversity*

The proposal is to take place on already disturbed and developed land within the Bankstown Industrial Estate. Only minor clearing of planted landscape species are to be cleared for the purpose of the proposed development. Notwithstanding, background literature reviews and database searches were conducted to obtain recent data on flora and fauna species, populations, communities and habitats known to occur within the site and locality.

### *11.1.5 Valuation of Resources*

The assessment of environmental, social and economic issues undertaken in this study has allowed for the improved valuation of these resources when considering the merits of the proposed development. The environmental and social costs associated with the proposed development have been minimised through the proposed mitigation measures, while it is expected that the proposed development will result in positive economic outcome for the region.

## *11.2 CONCLUSION*

This EIS has assessed the potential environmental impacts associated with the Tattersall Road Waste Metal Recovery, Processing and Recycling Facility proposal. The proposal will enable an increase in the handling capacity of waste metal recycling which will assist in meeting the current and expected future demand, particularly that from landfill operators, which are beginning to mine their sites to extract metal for recycling. .

The EIS was prepared having regard to biophysical, economic and social considerations and the principles of ESD. There were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation measures and management strategies.

The environmental assessment process has been used to drive the development of the site and ensure operations will be sustainable and create minimal disruption to the local community. Metal recovery, processing and recycling operations have been designed to ensure sustainable water use and management, minimise traffic impact on local roads, ensure acceptable noise and dust emissions, effective management of waste and to minimise visibility of the operations. All mitigation measures and management practices identified in the EIS form part of the summary mitigation measure for the proposal and will be incorporated into the updated environmental management plans for construction and operations.

The expanded facility will provide a viable metal recycling service for the surrounding region. The proposal can be implemented with minimal adverse environmental impacts as demonstrated throughout this assessment and is justified in terms of the overall economic benefits to both the local, state and national economies. The waste metal recycling service at the Tattersall Road facility will better meet demand and assist in meeting community expectations for efficient and effective metal resource recovery and recycling facilities. The Tattersall Road facility is based in the Blacktown Industrial Estate therefore providing an important employment role, not only at the facility itself, but also in related industries such as suppliers of equipment, landfills and construction and demolition firms.

The proposed development involves the expansion of an existing metal recovery, processing and recycling facility which is already equipped with modern equipment able to meet the proposed increase in handling capacity. The development will allow important components for waste metal recycling to be undertaken at a site that is already highly disturbed. The service provided by the facility will help achieve the reduction of solid waste going to landfills in Sydney, while the recycled metal products provide an alternative to raw materials used to make metal products. The proposal will have positive flow on effects throughout the local economy through the creation of jobs in associated industries.

All of the potential environmental impacts of the proposed development have been considered and mitigation measures developed to minimise any impacts as detailed elsewhere in this EIS report. As noise, soil and water, dust and waste are the main impacts associated with the metal recovery, processing and recycling facility, controls are placed on the facility operators in the Environmental Protection Licence (EPL) issued by the OEH.

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