

22nd April



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Ashley Cheong
NSW Planning and Infrastructure
Industry, Key Sites and Social Projects
GPO Box 39
SYDNEY NSW 1232

BY ELECTRONIC MAIL

Dear Mr Cheong

**Refusal to grant General Terms of Approval - Additional information required in EIS
Kings Park Waste Metal Recovery, Processing and Recycling Facility (SSD-5041)
23-43 and 45 Tattersall Road, Blacktown**

We refer to Department of Planning and Environment's (DP&E) letter dated 26 March 2014 to the Environment Protection Authority (EPA) requesting "General Terms of Approval" (GTAs) for the above development. We also refer to the air-quality modelling data that is to be provided by the applicant.

Sell & Parker Pty Ltd (Sell & Parker) currently hold Environment Protection Licence No. 11555 issued under the *Protection of the Environment Operations Act 1997* (the POEO Act). The Licence authorises the carrying out of metallurgical activities at 45 Tattersall Road Blacktown NSW (the Premises). The activities on site include processing scrap metal through oxy-cutting, hammermilling, sheering and sorting processes.

Summary of the EPA position

The EPA is of the clear position that the hammermill at the Premises is currently not operating in an environmentally satisfactory manner and improvements are required to prevent ongoing pollution incidents that are occurring at the current scale of processing. As a result, for the reasons set out below and in the attachments, the EPA cannot support the proposed increase in processing unless and until there a clear, timely and legally enforceable proposal to address these environmental impacts.

The proposed development will increase the amount of material being processed per annum by 389%, with an increased rate of processing and an increase of hours of operation, however, there are no improvements to the air polluting processes, being primarily the hammermill and the oxy-cutting, have been proposed.

Further, Sell & Parker have advised the EPA that the proposed development will breach air quality guidelines, and this means that the proposal will have impacts on the local community.

Sell & Parker have outlined a wide range of toxic water contaminants that may enter the stormwater system from the site activities but have failed to adequately characterise them or describe how the impacted water will be treated to mitigate the risk of those contaminants.

A detailed response on the air and water quality issues is attached.

Given the long history of poor environmental compliance on the issues referred to above, and the failure to completely address the pollution issues associated with the hammermill, the EPA cannot support a proposal that will clearly impact the local environment and community unless and until these issues are addressed in a clear, timely and enforceable way.

Earlier history between the EPA and Sell and Parker

To further assist DP&E, attached is an outline of the history of EPAs responses to SSD-5041, the EPA's position in relation to earlier relevant Land and Environment Court proceedings and the Current Operations.

Further response from the EPA in response to air quality modelling data

DP&E requested EPA finalise its position on the proposed development as Sell and Parker have filed an appeal against Deemed Refusal of the development against DP&E, however as Sell and Parker have only just agreed to provide the air quality modelling data, a further response following its assessment will be provided.

Should you have any further enquiries please contact Alex Bourne on 02 9995 5595.

Yours sincerely



22 APRIL 2015

Chris McElwain
Senior Manager Waste Compliance
ENVIRONMENT PROTECTION AUTHORITY

SSD-5041

On 26 March 2014 the EP&E requested the EPA provide "General Terms of Approval" (GTAs) for the proposed development.

On 22 April 2014, the EPA provided comments to DP&E requiring further information on be included in the final Environmental Impact Statement (EIS) regarding potential air, noise and odour issues together with an assessment of the current operation of the hammermill. This information was requested because of the large number of complaints the EPA receives about the facility regarding dust, odour and smoke from the existing operation.

EPA held a meeting to discuss this and other air quality issues with the applicant on 15 September 2014. A supplementary report titled ELM Air Pty Ltd report number N92746 – Emission testing report – Blacktown Plant prepared by ERM was provided to the EPA on 28 September 2014.

However, the EIS placed on public exhibition on 27 August 2014 did not include all additional information required by the EPA in relation to potential air, noise and odour impacts.

On 20 October 2014, the EPA refused to grant General Terms of Approval until the additional information was provided and assessed.

On 19 January 2015, the EPA received further information from DP&E in response to the submissions prepared by ERM on 7 January 2015 (Document Reference 0226308L01).

On 16 February 2015, the EPA wrote to DP&E providing detailed review of the response and considered it inadequate. The response did not include all additional information required by the EPA about the potential air and stormwater impacts. The EPA advised it was unable to grant GTAs until the additional information required was provided and assessed.

On 19 March 2015, the EPA received another response to submissions prepared by ERM on 24 February 2015 (Document Reference: 0226308L01 EPA RESPONSE TO SUBMISSIONS.DOCX)

On 20 April 2015, ERM advised that, as requested, they would be providing the air quality data files used for the modelling to the EPA.

The EPA considers it unacceptable that, despite the above mentioned written comments and meeting with the applicant to explain the EPAs requirements, the information supplied by Sell and Parker in about the air and water quality impacts of the proposal, has been inadequate. Hence, the EPA has been unable to provide General Terms of Approval for the development.

Land and Environment Court Proceedings No. 10336 of 2013

In November 2013, Sell & Parker successfully made an application to the Land and Environment court to have a condition limiting the operation of the hammermill to 20 years removed from the consent.

5 November 2013, the EPA wrote to the Commissioner of the Land & Environment Court about Blacktown City Council ats Sell and Parker Pty Ltd – Land and Environment Court Proceedings No. 10336 of 2013.

The EPA expressed its opinion that the purpose of that condition was to ensure that the activity would only take place after the expiration of the 20 year time limit by taking advantage of any improved technologies so as to prevent and mitigate any impacts on neighbours from hammermilling.

This was made clear by the Land and Environment Court's decision in *Sell and Parker Pty Limited v Blacktown Council* [2001] NSWLEC (11 May 2001) No: 1024 of 2000 where it states;

Condition 2 provided: "the life of this consent is limited to a period of 20 years from the date of this consent." This condition is imposed so as to be consistent with condition 3: "the development shall be carried out in accordance with the Environmental Impact Statement...". The EIS states that the estimated life of the facility will be 20 years. The condition does no more than impose as a condition on the development consent a statement contained in the EIS.

Although that condition was removed from the consent, the EPA is of the opinion that the hammermill is not currently operating in an environmentally satisfactory manner and improvements are required to prevent pollution events from impacting on neighbours.

Current Operations

The EPA has had to expend significant resources regulating Sell & Parker with the exiting site operations.

Since January 2013 the EPA has received 99 complaints about polluted water, odour, smoke and dust emissions from the facility, with a large majority of these from adjacent industrial premises.

During this period the EPA has conducted 33 inspections of the Premises and the surrounding environment.

In June 2013 the EPA issued Sell & Parker a Draft Pollution Reduction Program to address the ongoing environmental issues.

Sell & Parker advised the EPA that the air pollution issues would be addressed in the proposed development (being the current matter the subject of the application) and, on that basis, the EPA did not finalise the Pollution Reduction Program.

The EPA has recently taken regulatory action against Sell & Parker, issuing a Clean Up Notice to address a water pollution incident arising from a discharge out of the retention basin and is currently investigating two air pollution incidents at the Premises.

The EPA considers the current impact of the hammermill's operation on local air quality to be unacceptable.

The current environmental impacts of site operations must be taken into account as part of the assessment of SSD-5041 as no improvements to the processes impacting air quality are included as part of the proposal, despite Sell & Parkers earlier commitment to include them and the fact that the proposal is to increase the amount of scrap metal to be processed at the Premises.

Water Balance and Quality

The current proposal involves a 389% increase in processing, from 90 000 tonnes per annum (tpa) to 350 000 tpa. Wastewater from the existing site would pass through an oil/water separator before flowing to a stormwater basin, located at the southern boundary of the existing site. Excess wastewater would then be discharged from this stormwater basin to Breakfast Creek. Wastewater would be discharged from the expanded area through a second discharge point, after passing through an oil/water separator and a bioretention basin. In addition to these two discharge points, the proposal states that wastewater from the truck wash may also be discharged to stormwater.

The EPA has reviewed the Soil and Water Management Report (the SWM Report) and provides the advice set out below. The concerns previously raised by the EPA are still relevant to the current proposal and have not been adequately addressed.

Alternatives to discharge

In exercising its licensing functions, the EPA is required to take into consideration the practical measures that could be taken to prevent, control, abate or mitigate pollution and protect the environment from harm. Discharge of wastewater or contaminated stormwater directly to waters should generally only be considered after other options have been shown to not be viable or to deliver less satisfactory environmental outcomes overall. The EPA will not consider licensing a discharge to waters where practical measures can be taken to carry on the activity without polluting waters.

Sell & Parker has not adequately considered alternatives to discharge for the waste streams from either the existing site or expanded site in the SWM Report.

Best practice includes separation of 'contaminated', 'dirty', and 'clean' water systems to minimise the generation (volume) of wastewater requiring treatment. The EPA notes that Sell & Parker proposes to collect rainwater from some roofs and understands that excess collected rainwater will be transferred to treatment devices. The EPA considers this inappropriate as this will increase the volume of wastewater that must be managed, increasing the probability of discharges to Breakfast Creek. Ch.

The EPA recommends that Sell & Parker explore options to avoid discharges of 'contaminated' and 'dirty' water from the Premises. For example, Sell & Parker could consider discharging contaminated wastewater, such as process water or truck wash wastewater, to sewer under a trade waste agreement. Less contaminated wastewater could be captured, treated, and reused in processes or

dust suppression. Additional roofing could be considered to prevent rainfall run-off from becoming contaminated.

The EPA strongly recommends that consideration is given to separating the 'contaminated', 'dirty', and 'clean' water systems, with excess 'clean' water diverted to stormwater and not transferred to the 'contaminated' or 'dirty' water systems. OK.

Environmental Values of the Receiving Environment

In exercising its licensing functions the EPA is required to take into consideration the environmental values of water affected by an activity and the practical measures that could be taken to restore or maintain those values. Sell & Parker is proposing discharging treated wastewater to Breakfast Creek. Aquatic ecosystems, primary and secondary recreation, visual amenity, and water for agriculture are the relevant environmental values of the sub-catchment (HRC, 1998). Sell & Parker has not considered these environmental values or the practical measures that could be taken to restore or maintain these values. ?

Sell & Parker must consider the environmental values of water affected by the proposed activity and the practical measures that could be taken to restore or maintain those values.

Wastewater treatment

Sell & Parker has proposed treatment of wastewater, however, has not appropriately described the expected pollutants or their concentrations in the untreated or treated wastewater generated from either the existing or expanded site. Previous correspondence from the EPA requested that Sell & Parker characterise the waste stream to address this issue. Sell & Parker has also not provided estimates of expected volumes of wastewater generated so it is not possible to consider potential risks to the receiving environment and downstream beneficial uses should discharge occur.

It is unclear whether the proposed treatment system is adequate to effectively treat the wastewater, although on the basis of the calculations below the EPA has concerns that the proposed will not adequately manage wastewater generated at the Premises and so could not be supported. The SWM Report indicates that wastewater from the proposed expanded site will be treated using oil/water separators, which the manufacturer claims remove 80% of total suspended solids. The SWM Report states that metals would be removed with the suspended solids. Even under a scenario where there are no dissolved metals in the wastewater, which it not likely, 80% removal would not remove the potential for risk of non-trivial harm to human health or the environment. For example, water quality samples collected from the discharge point by the EPA in November 2013 contained lead concentrations 324 times the ANZECC trigger value for protection of freshwater species (ANZECC, 2000). If 80% of the lead was removed concentrations would still be 65 times greater than the guideline trigger value. The concentration of zinc was 525 times the recommended ANZECC trigger value in the same sample (ANZECC, 2000). The zinc concentration would still be 105 times the guideline trigger value after 80% removal (ANZECC, 2000).

Sell & Parker has proposed discharge limits for pH, TSS, and oil and grease. Considering the range of contaminants on site and that previous samples collected from this discharge point contained elevated concentrations of toxicants, the EPA considers the proposed limits to be inadequate to protect the receiving environment from non-trivial harm.

Consistent with the points raised above and matters that must be taken into consideration in exercising its licensing functions, the EPA would require the following information in consideration of any discharge from the premises:

- A more considered appraisal of the practical measures that can be taken to prevent, control, abate or mitigate the pollution and protect the environment from harm;
- An identification of all pollutants that pose a risk of non-trivial harm to human health or the environment, including their concentrations, expected in untreated and treated wastewater;
- The expected discharge volumes and frequencies;
- An assessment of the nature and degree of impact that any proposed discharge will have on the receiving environment, including consideration of all pollutants that pose a risk of non-trivial harm to human health or the environment. This must include consideration of the relevant environmental values of receiving waters, including the indicators and associated

trigger values or criteria for the identified environmental values with reference to ANZECC (2000); and

- Consideration of the environmental values of water affected by any proposed discharge and the practical measures that can be taken to restore or maintain those values.

Water balance

The EPA notes that the licence holder has provided a site water balance, including some details of run-off volumes, retention pond volume, and reuse volumes. However, only run-off from the existing site and from roofs and paved areas of the expanded site were included in this assessment.

The EPA requires Sell & Parker clarify whether all run-off generated on site is accounted for in the water balance.

The report indicates that a run-off coefficient of 0.9 was used in the water balance. The run-off coefficient is likely to vary across the site.

The EPA requires that the water balance assessments reflect the variable nature of the site by applying run-off coefficients specific to the permeability of surfaces.

Wastewater storage

If discharges were to be considered, Sell & Parker would be required to demonstrate that adequate storage was available to store wastewater and control discharges from both the existing and proposed sites. The report states that when empty the existing pond has capacity to capture a rainfall event up to 64mm.

The EPA requires that design criteria for storages should be consistent with those adopted at contaminated sites. This may involve active management of storage freeboard to maintain capacity. Sell & Parker would also be required to specify the conditions under which they are proposing to discharge to waters. This would likely include wastewater characteristics, flow in Breakfast Creek, and forecast weather conditions.

Other areas of concern likely to arise should development consent be granted and a licence variation for discharge be requested include:

- details of proposed maintenance and monitoring of all pollution control equipment; and
- details of proposed monitoring and reporting of discharge volumes and pollutant concentrations.

Air Quality Related Issues

Sell and Parker propose to increase the throughput capacity at the site from 90,000 tonnes per annum (tpa) to 350,000 tpa. The proposed Project will include expanding operations to the adjoining lot to the east and will result in changes to the layout of the site.

The existing facility has an ongoing history of complaints regarding odour, smoke and dust emissions primarily from adjacent industrial receptors.

On 4 February 2015, Sell & Parker filed an appeal for Deemed Refusal of the development against Department of Planning & Environment (DP&E). DP&E has requested that EPA continue to provide expert advice to DP&E.

DP&E has requested a detailed review of the air quality issues including:

1. Application of EPA criteria.
2. Analysis of the Air Quality Assessment and Sell & Parker's response to issues raised by EPA.
3. Appraisal of the risk of air quality impacts from the proposed facility.
4. Recommend potential mitigation measures that can be implemented to reduce the risk of air quality impact.

In addition, the oxy cutting sources were modelled at a very low flowrate and small diameter resulting in a low odour emission rate. Therefore, there is potential for odorous emissions from oxy cutting to have been underestimated, leading to underestimation of odour risks associated with the proposal.

Air Toxics

Air toxics were included in the air dispersion modelling of emissions from the hammermill in the December 2014 revision of the Air Quality Assessment. However, potential air toxic emissions from activities downstream (e.g. conveyors, transfer points, wind erosion, etc) of the hammermill was not included in the modelling. Therefore, there is potential underestimation of air toxics emissions from the facility.

The predicted incremental impact for iron oxide fumes, manganese and copper dusts and mists from oxy cutting is well above their respective EPA criteria at the nearby industrial/commercial receptors. ERM has indicated that the predicted impacts are in compliance with 8-hour average TWA. As discussed in **Point 1**, EPA's air toxic criteria are considered to be applicable for the proposed expansion.

Sell & Parker stated that as there is no criterion provided for elemental iron in the *Approved Methods*, potential impact of iron from the hammermill has not been assessed. It is impractical to specify impact assessment criteria for all possible air pollutants in the *Approved Methods*. Where a criterion is not available in the *Approved Methods*, Sell & Parker should specify an appropriate criterion for protection against adverse air quality impacts on the surrounding receptors. As iron is a major component of the material processed on site, Sell & Parker should assess potential impacts from iron emissions in the Air Quality Assessment.

In ERM's response dated 24 February 2015 it is stated that "*it is recognised within the industry that modelled results using a 1-hour average at the 100th percentile tend to over-estimate predicted concentrations*". However, the results for air toxics presented in the report are 99.9th percentile not 100th percentile as stated in ERM's response. Therefore, the modelled results are not as conservative as described by ERM.

Particulates

There are exceedances of the 24-hour average PM₁₀ criterion at nearby commercial/industrial receptors beyond the boundary of the site. The highest predicted 24-hour average PM₁₀ concentration at the industrial receptor (R20) located adjacent to the western boundary. The cumulative 24-hour average PM₁₀ assessment results showed that R20 is predicted to experience 23 additional exceedances over the five modelled years as a result of the site activities and ambient air quality. The maximum predicted incremental 24-hour average PM₁₀ concentration at R20 is 48.66 µg/m³, which is considered unreasonably high.

Wind erosion appears to be underestimated as it was only assumed to occur 3% of the year when the wind speed is greater than 5.4 m/s at the mean height of the source.

Emissions from the hammer mill and wind erosion are varied according to the hourly meteorology (e.g. wind speed and temperature) contained in the air dispersion modelling files which was not available to EPA at the time of this review. Therefore, a full review of the source apportion for PM₁₀ is not possible with the limited data presented in the Air Quality Assessment. Based on a rudimentary review of the emissions estimation presented in Appendix A of the Air Quality Assessment, the source with the highest emission of PM₁₀ appears to be from transfer points labelled "TP" in the Air Quality Assessment.

EPA was advised on 20 April 2015 that a copy of the modelling files will be provided. A review of the modelling files will be completed once the modelling files have been received.

3. Risk of Air Quality Impact

The operational history of the site has shown where identical activities are undertaken at a lesser scale, there are significant air quality impacts. The assessment results for the proposed expansion have also indicated there is significant risk of:

- Offensive odour impacts offsite;
- Adverse impacts due to particulate emissions; and
- Adverse impacts due to air toxic emissions.

The results of air dispersion modelling for the proposed expansion indicate exceedances of the EPA criteria at the neighbouring industrial/commercial receptors for the following:

- 1-hour average incremental iron oxide fumes, manganese and copper fumes;
- Incremental odour;
- 24-hour average cumulative PM₁₀; and
- 1-hour average cumulative NO₂.

Houston Department of Health and Human Services has conducted a study on waste metal recyclers due to repeated odour, smoke and dust complaints. The results of air monitoring study indicate there is potential for elevated levels of chromium and other air toxics (metals) in the vicinity of waste metal recyclers.

The following air pollutants from metal recycling activities were identified by Houston Department of Health and Human Services¹:

- Torch Cutting [metals, Particulate Matter (PM), odour]
- Shredding [PM, metals, Volatile Organic Chemicals (VOCs)]
- Shearing [PM, metals]
- Crushing [PM, VOCs]
- Conveyors [PM]
- Materials handling [PM, metals]
- Unpaved areas [PM]
- Equipment emissions [Nitrous Oxides (NOx), diesel PM, BTEX]

There are numerous management or mitigation measures available that have not been considered in the project design. Where these are implemented the extent of the impact would be reduced. However, the extent of the emission controls required to management air quality impacts to acceptable levels has not been evaluated by Sell & Parker.

4. Potential Mitigation Measures

Under Section 2.4.4 of the Approved Methods, if a premise does not comply with the impact assessment criteria, the assessment must be revised to incorporate additional control or mitigation measures.

Sell & Parker does not propose any mitigation measures for dust emissions from wind erosion from stockpiles, transfer points or exposed conveyors. Additionally, there are no odour mitigation measures proposed for the expansion project. In light of the result presented in the Air Quality Assessment, additional control measures to reduce air related impacts from the proposed expansion should be considered and assessed.

Based on literature review of international metal recyclers, potential additional mitigation measures include but are not limited to the summary in the table below.

Activity	Control	Comment
Hammer mill ¹	- Enclosure	Eliminate fugitive emissions from hammer mill
	- Baghouse filters, cyclones	Remove particulate and metal particles. Cyclones can be used in series to achieve greater reduction.
	- Carbon filters and afterburners	Removal of VOCs and other air toxics

¹ Houston Department of Health and Human Services, Presentation by Mr Arthur Blanco dated 30 October 2014
<http://www.h-gac.com/taq/airquality/raspac/documents/2014/October%2030/HDHHS%20Presentation%20to%20HGAC%20Oct%2030%202014.pptx>

Activity	Control	Comment
Transfer points ²	- Enclosure	Enclose transfer points to minimise air emissions
	- Enclosure with fabric filters	
	- Water application	Application of water on transfer points
Stockpiles ¹	- Industrial misters	Application of atomized water under high pressure over stockpiles and open areas
	- Cutting only on clean surfaces	Remove oil and dirt from large material prior to cutting to reduce emissions
	- Reduce oxy cutting	Reduce oxy cutting where possible by efficient work planning or replacement with other methods
Oxy cutting ³	- Extraction with baghouse filter	Extraction of air around oxy cutting area and treatment in baghouse

References:

¹ Bay Area Air Quality Management District, Staff Report - Regulation 6, Particulate Matter, Rule 4: Metal Recycling and Shredding Operations, February 2013.

² Katestone Environmental Pty Ltd, NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining, June 2011.

³ Health and Safety Executive, OC 668/30 Oxy-fuel cutting: control of fume, gases and noise.
http://www.hse.gov.uk/foi/internalops/ocs/600-699/668_30/