Our reference: EF13/5317; DOC20/789099-6
Contact: Matthew Corradin; (02) 4908 6830

Department of Planning, Industry and Environment
Returned via the Major Projects Portal

Attention: Ms Emma Barnet

21 October 2020

Dear Ms Barnet

EPA Advice on Environmental Impact Statement (PAE-9433811)
State Significant Development 10396

Thank you for the request for advice from the Department of Planning, Industry and Environment (DPIE) requesting the review by the Environment Protection Authority (EPA) of the Environmental Impact Statement (EIS) for the proposed Kings Park Metal Recovery and Recycling Facility Expansion (SSD 10396) at 23-43 and 45 Tattersall Road, Kings Park, NSW (Premises).

The EPA has reviewed the EIS titled "Kings Park Metal Recovery and Recycling Facility Expansion" prepared by Arcadis Australia Pacific Pty Limited and accompanying specialist reports of relevance including, but not limited to, the Noise Impact Assessment (NIA) prepared by Renzo Tonin & Associates Pty Ltd and the Air Quality Impact Assessment (AQIA) prepared by Northstar Air Quality Pty Ltd.

The EPA understands the proposal is for an increase to the throughput limit at the Premises from 350 000 to 600 000 tonnes per annum. The proponent indicates that the current plant and equipment operating at the Premises is capable of handling the increased capacity without modification and therefore no other changes are proposed. Environment Protection Licence 11555 (Licence) issued by the EPA is in-force at the Premises making the EPA the Appropriate Regulatory Authority for pollution matters under the *Protection of the Environment Operations Act 1997* (POEO Act).

The EPA has reviewed the EIS and notes that the EIS and accompanying specialist reports do not adequately address the Secretary's Environmental Assessment Requirements for the proposal or do not address relevant policies or guidance material. The EPA requests additional information to be able to properly assess the proposal.

The additional information required is provided at **Attachment A** to this letter.

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If you have any questions about this matter, please contact me on (02) 4908 6830.

Yours sincerely

MATTHEW CORRADIN
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Attachment A

Noise Impact Assessment

There is uncertainty regarding the measured ambient noise levels, which are critical to establishing appropriate Project Noise Trigger Levels in accordance with the Noise Policy for Industry (NPfI) (EPA, 2017).

- The NIA has indicated ambient noise monitoring has not been undertaken as part of the assessment as COVID-19 conditions would likely influence the results due to reduced transport and industrial activity despite EPA observations on 08 October 2020 that the majority of surrounding industrial Premises and mechanical sales/repairs Premises were all operational during this time period. The NIA has therefore relied upon ambient noise monitoring undertaken at two locations generally to the east of the Premises on two occasions several years ago. The original monitoring was undertaken in 2014 with additional synchronised short-term noise monitoring undertaken in 2015 to estimate ambient noise conditions at residential receiver areas located to the north and west of the Premises at the long-term monitoring Premises (east) and representative locations to the west and north to establish a correction factor between the locations. This correction factor has been used to estimate long term ambient noise conditions at residential locations to the north and west of the Premises. The estimated results are inconsistent with long term monitoring results to the west of the premise undertaken as part of SSD 8375 for the Pick n Payless Metal Recovery and Recycling Facility proposal.

  The proponent must review and revised as appropriate (including undertaking additional noise monitoring) the estimated ambient noise levels for residential receiver locations to the north and west of the Premises and consider, where possible, other sources of ambient noise data including, but not necessarily limited to, SSD 8375 (note a revised NIA has been supplied as part of the proponents Response to Submissions for SSD 8375).

- The NIA describes long term monitoring location "L1" as follows: *"The noise monitor was located in the 'free-field'. The noise monitoring location is considered representative of residential receiver locations along Sunnyholt Road";* and the nearby location L2 as follows: "*The noise monitor was located in the 'free-field'. The noise monitoring location was supplementary for residential receiver locations along Sunnyholt Road"*. The Rating Background Level (RBL) of noise for location L2 is some 5dB lower than for location L1 at night. As L2 is noted as being "*supplementary for residential receiver locations along Sunnyholt Road"*, the EPA is unsure as to why the RBL at L2 was not used to inform the intrusiveness level for residential receivers to the east of the Premises.

  The EPA's position is that that the RBL at L2 should be adopted for the intrusiveness level.

There is uncertainty in the meteorological conditions being appropriately considered in the assessment which could lead to underestimating operational noise impacts.

- The significance of wind vectors has been undertaken only to nominated receiver locations. However, these receiver locations are in some circumstances representative of groups (catchments) of receiver locations, especially in the case of residential receivers to the west, north and east of the Premises. The NIA appropriately acknowledges in Section 4.1 *"Furthermore, representative locations may be established in the case of multiple receivers as it is usually impractical to carry out measurements at all locations surrounding a Premises".* This fact needs to be considered in terms of relevant meteorological conditions. For example, the assessment has determined that light winds are relevant for receiver R6 (located directly to the east of the Premises). However, the assessment has determined that light winds are not relevant for receiver R1 (located to the south east of the Premises). R1 is representative of residential receiver locations, including residential receivers directly to the east of the Premises, and therefore some receiver in this "catchment" will potentially be subject to meteorological enhancement from light winds.

The proponent must, where a single representative receiver location has been selected to represent a "catchment" of receiver locations, undertake a conservative assessment of meteorological effects and consider worst case source to receiver wind direction in terms of meteorological effects to be applied to the noise modelling.

- The EPA does not accept the rationale for not considering inversions in the assessment; viz, *"As the Proposal Premises is situated within an industrial complex with surrounding urban locality, the likelihood of night-time temperature inversion occurrences is insignificant. Consideration of night-time temperature inversion is not required, and only wind effects are considered from herein"* (NIA, Section 5).

  The proponent must consider the occurrence of temperature inversions in accordance with the requirements of the NPfI.

There is uncertainty with the noise data used to inform the Project Noise Trigger Levels and sleep disturbance criteria.

- The EPA does not concur with the Project Noise Trigger Levels and sleep disturbance criteria presented in the assessment due to the issues raised with the characterisation of the existing acoustic environment in the area as outlined in the comments above. The criteria presented in the NIA, Section 6 needs to be reviewed in terms of the issues raised.

  The proponent must review and confirm, or amend if and as appropriate, the noise data used to inform the Project Noise Trigger Levels and sleep disturbance criteria taking into account the EPA's comments above.

There is uncertainty in the calculation methodology and assumptions used to predict operational noise.

- The NIA indicates that noise predictions were undertaken using CadnaA utilising the ISO9613 standard. The noise prediction model also appears to have nominated "soft" ground between the source and receiver (NIA, Section 7.2). This is not suitable when considering a paved urban environment and needs to be reviewed.

  The proponent must detail, explain and justify the method used to determine "neutral conditions" and "prevailing wind conditions" using the ISO standard given that the ISO standard does not have the ability, in isolation, to consider a range of meteorological conditions.

  The proponent must revise the nominated "soft" ground between the source and receiver to a more suitable option when consider paved urban environments.

- The NIA notes under Section 7.2 that: "*On the basis of noise measurements undertaken at Sell & Parker's Kings Park Premises and other similar metal recycling facilities, and after accounting for acoustic shielding provided by intervening structures between the Premises and both residential and industrial receptors, the character of noise as perceived at the receiver locations is not tonal, impulsive or low frequency. Therefore, it is not necessary to apply modifying factors to correct for the character of the noise*".

  The EPA's position is that it does not concur with this statement without an objective assessment that demonstrates that the factors outlined in the NPfI, Fact Sheet C have been considered. This is especially relevant given that the Premises is operational and measurements can be used to assess the potential for annoying noise characteristics. This should include the intermittency test for activities undertaken during the night-time period. Furthermore, on 08 October 2020, EPA Officers did identify intermittent metal processing noises from the Premises at Anthony Street, Blacktown.

- The NIA does not include justification that the selected receiver locations used in the assessment are, or are representative of, the worst affected receiver in the catchment.

  The proponent must identify the catchment that the residential receiver locations are representative of, and then justify why the location represents the worst affected location in the catchment. The presentation of noise contour plots would assist in this determination where factors including relative ground elevation and exposure pathways are considered.

- The assessment of sleep disturbance levels has presumably used the LAmax sound power level presented in the NIA at Table 7.1. LAmax noise levels of concern from resource recovery facilities often relate to impact noise from delivery, handling, processing of materials including dropping bins, dropping material into process hoppers etc.

  The proponent must undertake and present an assessment of existing Premises activities and related LAmax noise levels involving material handling to ensure that the LAmax sound power levels considered in the assessment adequately cater for material handling noise.

  The proponent must include an explanation to justify why sound power levels for plant and equipment used in the assessment will not increase as part of the increase throughput of the Premises.

  The proponent must objectively account for materials delivery, handling and processing as a noise source for all noise modelling scenarios.

  The proponent must undertake noise model verification / calibration to demonstrate the accuracy of the noise model. This is particularly relevant (and possible) when dealing with an existing and operational Premises.

Additional comments.

- Since 25 June 2020, the EPA has received 18 complaints of excessive noise being emitted from the Premises from residents at various locations near to the Premises.

  The EPA recommends that the proponent carefully outline the noise mitigation measures committed to under existing approvals and whether that mitigation has been appropriately deployed as well as any other planned noise mitigation measures for the Premises.

Air Quality Impact Assessment

The AQIA has omitted the industrial receptors from the assessment of long-term impacts (annual and 24-hour) with the justification that individuals are not expected to be at those locations for a 24-hour period.

- Sensitive receptors are defined in the Approved Methods as a location where people are likely to work or reside and that future sensitive receptors should be considered. While the impacts at residential receptors are predicted to be below the Impact Assessment Criteria (IAC), cumulative impacts for 24-hour averages have not been provided for the industrial receptors to evaluate the potential impacts from the proposal at these locations. Incremental impacts for the industrial receptors have been provided (Appendix D and E) which indicate that cumulative impacts would exceed the IAC for PM_{10} (50 µg/m^3) and $PM_{2.5}$ (25 µg/m^3) for numerous industrial receptors, with some receptors above the IAC for the incremental impact alone:
  - Incremental 24-hour PM_{10}: 60.3 µg/m^3 (R11), 42.9 µg/m^3 (R10), 40.8 µg/m^3 (R12), 36.1 µg/m^3 (R19); and
  - Incremental 24-hour $PM_{2.5}$: 9.4 µg/m^3 (R11), 6.8 µg/m^3 (R10), 6.3 µg/m^3 (R12), 5.6 µg/m^3 (R19).

The proponent must include the industrial receptors in the complete assessment of air quality impacts. Any predicted exceedances of the IAC must be addressed and all existing and any proposed mitigation measures should be benchmarked against industry best practise.

There is uncertainty in the meteorological conditions being appropriately considered in the assessment which could influence with dispersion of emissions, potentially changing the results and conclusions of the assessment.

- The meteorology data from the Prospect AQMS was analysed to determine the representative year as it is considered to most likely represent the conditions at the Premises based on proximity and lack of significant topographical features between the two locations. This is despite the 2015 assessment (ERM, 2015) sourcing the meteorological data from Horsley Park AWS. Site representative meteorological data was generated using TAPM but did not assimilate the Prospect meteorological data. The AQIA also states this was done in the absence of any measured onsite meteorological data. The AQIA has not evaluated the model generated meteorological data, however the EPA advise that the actual meteorological data from Prospect and the TAPM generated site-specific meteorological data appear to be significantly different. The wind fields and percentage of calms are particularly inconsistent between the two data sets. These inconsistencies would influence with dispersion of emissions, potentially changing the results and conclusions of the assessment. Further, the proponent is required to conduct weather monitoring onsite, including for wind speed and direction. Although the AQIA states there is no onsite meteorological monitoring, the AQIA includes meteorological from the onsite weather station in Table 12.

  The proponent must undertake quality assurance of the collected onsite meteorological data to evaluate the suitability of assimilating the onsite meteorological data in the model. Where onsite data is suitable, it must be incorporated into TAPM/CALMET to generate the meteorological data or alternatively used to validate the model generated data.

  The EPA recommends extracting CALMET data at Prospect to evaluate the validity of the model generated data.

It is not clear whether the assumed operations and emissions in the AQIA are representative of normal operations or a worst-case scenario and how the increased throughput will be handled at the facility.

- The single scenario presented in the AQIA has used a pro-rata of operations from the assessment prepared for the original approval (ERM, 2015). The AQIA must be able to be viewed on its own merits and in a stand-alone context. The AQIA has attempted consistency with the previous assessment (ERM, 2015) however the EPA cannot infer the approach of the assessment to understand if the worst-case scenario has been appropriately assessed and how the 600,000 tonnes would be processed at the site with there being no clear process description of how the current 350,000 tpa or proposed 600,000 tpa are distributed through the site. For example, Appendix C of the AQIA includes a table that gives activity rates in tonnes per day for each source location. The EPA has calculated that all the material handling activities amount to 11,022 tonnes per day and 4,023,030 tpa (assuming average distribution). The source MH08 (transferring scrap from stockpile onto hammermill conveyor) has an activity rate of 1800 tonnes per day, with 6 days of operation a week giving an annual activity rate at this source alone of 561,600 tonnes. MH09 (the same activity description as MH08) has the same daily and therefore annual activity rate, implying that these two sources have over 1 million tonnes of material pass through annually. The understands that while day-to-day activities may be variable, the AQIA should provide a clear description of activities occurring at the facility and how the increased throughput of material will be handled.

  The proponent must present and adequately justify that a worst-case scenario has been assessed and if it has not, undertake such an assessment.

The proponent must detail how the facility is capable of handling the increased throughput, particularly in light of no additional works being conducted to facilitate the increase.

The proponent must provide a clear linkage between emission sources (Table 14), process (Figure 3), movement of materials onsite, throughput and activity rates.

The proponent must include total emissions per year for each activity and as an entire site in the emission inventory.

There is uncertainty as to whether the hammermill is meeting current Licence limits.

- The AQIA has modelled the hammermill at the emission concentration limits from the Licence, Type 1 and 2 substances (in aggregate) of 1 mg/m3 and TSP of 20 mg/m3. The parameters of the hammermill modelled include a discharge velocity of 25 m/s. Emission concentrations from the hammermill for PM10 and PM2.5 have been given as 47 % and 15 %, respectively, of the TSP concentration (Appendix C). No testing data has been provided to support these emission concentrations and parameters despite the requirement for annual testing of TSP on the licence since 2016. Further, the SEARs specifically required evidence that the existing emissions collection system can accommodate the increased throughput. No such evidence is provided in the AQIA.

  The proponent must provide the emissions testing reports for the hammermill to demonstrate it is achieving compliance and to validate the use of the emission concentrations and parameters in the AQIA.

  The proponent must provide evidence that the existing infrastructure, including the emissions collection system, can accommodate the proposed increased throughput.

There is uncertainty in regard to emissions and metal speciation in relation to the hammermill and oxy-cutting activities.

- Metal emissions from the hammermill were assumed to be speciated by mass fraction of $PM_{2.5}$ consistently with that assessed by the USEPA (SPECIATE database). This reflects how the Type 1 and 2 substances (in aggregate) from the hammermill were assessed in the 2015 AQIA (ERM, 2015). However, annual testing of the hammermill for Type 1 and 2 substances (in aggregate) is required by the EPL and has been since 2016. Given there is existing data regarding the emission concentrations of Type 1 and 2 substances (in aggregate) and the metal speciation, the actual emission data should support the assessment of air quality impacts for the proposal as a higher priority than emission factors which are generally averages of all available data and not representative of individual facilities.

  The proponent must provide the emissions testing reports for the hammermill and where the total and speciated concentrations of Type 1 and 2 substances (in aggregate) differ from those assessed in the AQIA, the AQIA be revised to assess the impacts from actual emissions from the hammermill.

- The AQIA has not considered or included in the assessment particle or metal emissions from the oxy-cutting activities (Appendix C) as the emissions from the process are considered to be low. The EPA advises that the proponent has been required previously to verify the air emissions from oxy-cutting and the EPA can advise that oxy-cutting is not an insignificant source of particulates from the premises.

  The proponent must include particulate and metal emissions from oxy-cutting activities in the AQIA.

There is uncertainty as to the emission factors and variables.

- The AQIA states that emission factors were sourced from the USEPA's AP42 Chapters 11 and 13. The emission factors for each activity is listed in Appendix C however specific details regarding the emission factors and variables used to calculate the emissions inventory have not been provided. Therefore, the EPA is unable to confirm the emissions from the proposal.

  The proponent must provide and justify all emission factor equations and variables used to determine the emissions inventory.

There is uncertainty as to the source of odour emission concentration data.

- Estimated odour concentration and odour emission rates are given in Appendix C for the oxy-cutting and the hammermill. No information as to the source of odour data is provided in the AQIA.

  The proponent must provide supporting information to evaluate the odour emission rates used in the assessment (oxy-cutting and hammermill).

There is uncertainty regarding current air related pollution controls and proposed air related pollution controls.

- The AQIA lists site-specific mitigation measures "to be implemented" to achieve best available techniques. The AQIA also states that the 2015 AQIA (ERM, 2015) presented a list of best practise measures to be implemented. Control factors applied in the modelling appear limited to water sprays on material handling and truck dumping (70 %) and fully enclosed conveyors (100 %). The cyclone and wet scrubber controls on the hammermill are assumed in the emission concentrations for that source. The EPA advise that it is unclear which control and mitigation measures from the 2015 assessment have been put in place, which are still to be implemented and which are additional measures for the current proposal. It is also unclear the potential impact on the emissions as the AQIA has not discussed the additional controls in reducing offsite impacts. However, it is clear from the results of onsite monitoring presented in the AQIA (Table 11 and 12) that the current operations and controls are not adequately able to reduce particulate concentrations to below relevant criteria.

  The proponent must clarify existing controls and proposed controls for the site, including time frames for implementation of additional controls.

- Further, the predicted impacts for the proposed increase in throughput are likely to exceed the EPA's criteria at multiple receptors which indicate that even with the proposed controls there remains a high risk that impact above the EPA's criteria will occur. The SEARs required the AQIA to consider the feasibility of semi-encapsulation of oxy-cutting activities. The AQIA concludes that the semi-encapsulation of the oxy-cutting is not considered to be practical nor warranted as the emissions from the oxy-cutting are low and impacts are lower than the criteria. As outlined above, this is not the case and consideration to additional enclosures or encapsulation should be considered.

  The proponent must consider additional control and mitigation measures aimed at ensuring particulate impacts do not exceed the EPA's air quality criteria at receptors.

  The proponent must assess the impacts from each activity to determine where additional controls may be most effective and considers those controls which may be implemented.