



Our Reference: DOC20/607708-26

Ms Ellen Lu
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Department of Planning and Environment
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EMAIL
25 August 2020

Dear Ms Luu

Luddenham Resource Recovery Facility (SSD-10446) 275 Adams Road Luddenham NSW (Lot 3 DP 623799) – Request for advice and recommended conditions

The NSW Environment Protection Authority (EPA) refers to your request on 27 July 2020 for the EPA to provide advice and recommended conditions on the Environmental Impact Statement (EIS) prepared by EMM Consulting dated July 2020, for the Luddenham Resource Recovery Facility (SSD-10446) at 275 Adams Road Luddenham NSW (Lot 3 DP 623799) (the Premises), submitted by Coombes Property Group and KLF Holdings Pty Ltd (Proponent) for the Luddenham Advanced Resource Recovery Centre.

The EPA has reviewed the EIS for the SSD-10446 and requires further assessment by the Proponent before advice and conditions can be provided. The EPA provides comments and details on further assessment required below.

1. Noise Impact and Vibration Assessment

The EPA reviewed the Noise and Vibration Impact Assessment (NIVA) prepared by EMM Consulting dated July 2020 and is unable to provide recommended conditions because the exceedances of the Project Noise Trigger Levels (PNTLs) for the intervening period between the proposed start of operations and the rezoning are too significant to be licenced.

Table 5.1 of the NIVA indicates large exceedances of the PNTLs at several residential receivers. The table presents PNTLs for what is termed “current zoning”, which is to say identifying the receivers as residential dwellings, as well as a future industrial zoning. There is as yet no fixed date for the rezoning of these residential dwellings. Further, Receiver 3 (R3), which is marked with the “4” superscript, refers to the fact that the dwelling is not currently occupied.

It is considered unlikely that reasonable and feasible measures will be able to be incorporated into the development to solve this issue. We also note that whether or not a dwelling is occupied should not factor into the investigation of reasonable and feasible mitigation. As such, we anticipate that a negotiated agreement will be required between the owners/occupants of the dwellings and the Proponent.

2. Air Quality Impact Assessment

The EPA reviewed the Air Quality Impact Assessment (AQIA) prepared by EMM Consulting dated July 2020 and is unable to provide recommended conditions until the issues set out below are addressed:

a) Assessment has not sufficiently identified the measures to manage predicted exceedances.

The AQIA concludes that *“The most effective way to control potential exceedances will be to control wheel generated dust from trucks entering and exiting the site, which is the largest contributing source. This will be achieved through the installation of a wheel wash (which has not been incorporated into emission reduction measures for modelling) and through deployment of a street sweeper twice a day. Both measures will act to reduce the silt loading of the road surface and will significantly reduce dust emissions from truck movements”*

EPA notes that:

- Vehicle movements on sealed roads account for ~45 % of total PM_{2.5} emissions assessed from the Premises. Diesel emissions from onsite equipment account for ~51% of PM_{2.5} emissions from the Premises. As such particulate emissions from diesel combustion represent the highest PM_{2.5} emission source from the Premises.
- A 70% control factor has been applied to the estimated emissions for vehicle generated dust emissions. The 70% control factor adopted is stated as being for water flushing/street sweeping. As such the assessment has accounted for the measures discussed in the conclusion portion of the AQIA.
- No assessment of reductions in particulate matter emissions from diesel equipment that could be achieved has been conducted. Diesel particulate matter emissions represent the highest uncontrolled PM_{2.5} emission source in the emissions inventory.

Additionally, it is noted that diesel combustion emissions have been based on a series of assumptions, including assuming that off-road diesel equipment will achieve a Tier 2 emission performance. The EPA considers that reduction in particulate matter emissions from diesel equipment could be achieved:

- Through a commitment to use better performing diesel engines.
- By the reduction in the usage rate or number of non-road diesel equipment used.

The AQIA has not benchmarked proposed non-road diesel emission performances against best practice, considered the emission reductions that could be achieved through implementation of better performing diesel engines, or demonstrated that particulate matter emissions have been reduced as far as practicable.

The EPA recommends the AQIA be revised to:

- i. Identify additional mitigation measures to manage predicted exceedances, and:
 - reduce PM_{2.5} annual average contributions from the Premises
 - reduce 24-hour average PM_{2.5} and PM₁₀ contributions from the Premises
- ii. Revise the assessment accounting for the additional mitigation measures identified in (i) to reduce incremental ground level concentrations.
- iii. Demonstrate that particulate matter emissions have been reduced as far as practicable.

In addressing the above items, consideration should be given to source contributions to predicted exceedances at assessed receptors, and source contributions to total emissions from the Premises.

b) Predicted exceedance of annual average total suspended particles (TSP) requires further discussion and assessment

The AQIA predicts an exceedance of the annual average impact assessment criteria (IAC) for TSP at R3. However, it is noted that no exceedances of the annual average PM₁₀ IAC are predicted. It would not be expected that annual average TSP impacts would be predicted without having predicted exceedances of annual average PM₁₀. As such further analysis, discussion and assessment of the predict TSP exceedance must be provided.

The EPA recommends that the AQIA be revised to include further analysis, discussion and assessment of the predicted TSP exceedance.

3. Water Assessment

The EPA reviewed the Surface Water Assessment (SWA) prepared by EMM Consulting dated July 2020 and provides the following comments and recommended conditions relating to Leachate management, water treatment plant discharges and the onsite detention basin.

a) Leachate management

The SWA and EIS details that leachate from within the warehouse will drain to the Leachate Tank (130KL). Contaminated water within the Leachate Tank will be directed to the Water Treatment Plant, and then stored within the Reuse Water Tank (100KL) prior to reuse onsite. The maximum treatment rate of the Water Treatment Plant is 6L/sec. The EIS has not demonstrated that there is enough holding capacity in the leachate and water reuse tanks. There are no contingency measures if the treatment plant is offline, operating at a reduced efficiency or unable to treat water to the appropriate quality for the nominated end-uses.

To account for this issue, the EPA recommends that the consent, if granted, include a condition where the Proponent must develop a Leachate Management Plan that includes contingency measures if the treatment plant is offline or unable to treat water to the appropriate quality for the nominated end-uses.

b) Water treatment plant discharges

The EIS and SWA detail that the water treatment plant will use clarification with chemical dosing, chlorination and filtration. The expected input water quality and treated wastewater quality has not been provided. Untreated construction/demolition waste can leach the following pollutants:

- Alkalinity
- sulfate/sulphide
- salinity
- heavy metals
- polycyclic aromatic hydrocarbons (PAHs)
- chemicals in admixtures, e.g. surfactants, methylphenols, nitrates and cyanide
- chemicals in supplementary cementitious materials (SCMs) (e.g. industrial by-products). These could include:
 - pulverised fly ash (PFA) from coal combustion;
 - blast furnace slag (BFS) from iron making;
 - condensed silica fume (CSF) from the ferrosilicon industry;
 - silica fume;
 - granulated furnace slag; and
 - metakaolin (calcined clay).

The EIS proposes to use the recycled water for a range of end-uses within the enclosed warehouse where it would continue to be recycled. The EIS, however, also includes landscape irrigation as a proposed end-use for treated wastewater. Use of treated wastewater for irrigation requires that the water quality is characterised and the sustainability of irrigation considered and safely managed.

It is noted that treated wastewater will also be used for dust suppression and toilet flushing. It is recommended the applicant assures themselves that the water will be appropriately treated for those end uses in consideration of relevant guidelines and regulations.

To account for this issue, the EPA recommends that the consent, if granted, include a condition where the Proponent must prepare an Irrigation Management Plan (IMP). The IMP should include, at a minimum:

- a characterisation of the expected quality of the untreated and treated wastewater including typical and maximum concentrations and loads of all pollutants likely to be present;
- consider the sustainability of irrigating the treated wastewater consistent with the Environmental Guidelines - Use of effluent by irrigation (DEC 2004)
- sufficient detail to demonstrate sustainable irrigation practices based on the treated wastewater characterisation and volumes to be irrigated
- proposed environmental monitoring measures and action-based trigger criteria that the proponent will implement to monitor the sustainability of the irrigation reuse scheme
- details of management practices the proponent will implement (e.g. application rates) to maintain sustainable hydraulic and pollutant loads.

c) On Site Detention Basin

The overflow discharge quality from the on site detention OSD basin (OSD) has not been characterised. However, the EIS indicates that the OSD will only contain uncontaminated stormwater runoff from the site and will not receive any water from the Reuse Water Tank. If the OSD receives treated leachate water, the applicant will be required to characterise the discharges from the OSD and potentially apply for a licenced discharge point.

4. Timing of stages

The EIS describes three stages in the long-term development of the Premises. Stage 1 relates to quarry reactivation and is being assessed through a separate planning approval process. Stage 2 is the construction and operation of an Advanced Resource Recovery Centre (ARRC) which is what is being applied for in SSD-10446. Stage 3 describes a further development intended to occur after Stage 1 and 2 and is not part of SSD-10446.

The EIS does however, throughout, refer to Stage 2 components that are dependent on the approval of Stage 1 planning process. The EPA would like to clarify that it cannot provide comments based on the assumption of the approval of another development application. The EPA must consider the EIS and proposal for Stage 2 based on current consent for the Premises, independent of whether Stage 1 is or isn't approved.

5. Rehabilitation of the quarry

The EIS references throughout the intention to rehabilitate the on-site quarry and potentially dispose of residual waste in the quarry. The EPA notes that the EIS specifies that this quarry rehabilitation/void fill in component is a second part of stage 2 and will be subject to a separate development application. The EPA has therefore not considered this quarry rehabilitation component as part of SSD-10446.

If you have any questions in relation to this matter, please contact Carla Thomas on (02) 9995 5302 or Carla.Thomas@epa.nsw.gov.au.

Yours sincerely



25 August 2020

ROB HOGAN
Manager Regulatory Operations - Metropolitan West