



DOC20/249727-8
Your Ref. DA267-11-99-Mod-4

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15 April 2020

Dear Caleb,

**RE: EPA review of Response to Submissions
Roberts Road Quarry Modification 4 (DA267-11-99-Mod-4)**

I refer to your correspondence dated 25 March 2020 seeking advice from the Environment Protection Authority (EPA) in relation to the Response to Submissions (RtS) report dated March 2020, for the above modification located at Roberts Road, Lot 1 and part Lot 2 DP 228308 and Lot 2 DP 312327 Maroota, NSW 2756.

Hodgson Quarries and Plant Pty Ltd (the proponent) operates the Roberts Road Quarry located on Roberts Road at Maroota NSW (the premises). The proponent is seeking to modify the development consent (DA 267-11-99) for the premises to allow for importation of Virgin Excavated Natural Material (VENM) and Excavated Natural Material (ENM) for backfilling the extraction area to construct a free-draining final landform, and to undertake processing and blending. Specifically, the modification to the consent seeks:

- Extending the life of the quarry by five years (to 2030);
- Importing up to 320,000 tonnes per annum of Virgin Excavated Natural Material (VENM) and Excavated Natural Material (ENM);
- On-site processing of selected VENM and ENM for sale or blending with sand produced from in-situ resources;
- Increasing maximum allowable truck movements from 100 to 140 per day;
- Removal of a condition limiting exposed and active areas in the quarry to permit backfill and rehabilitation of completed sections of the quarry with VENM and ENM; and
- Construction of a free-draining final landform.

An Environmental Protection Licence 6535 (the licence), issued by the EPA to HB Maroota P/L (the licensee), permits extractive and crushing/grinding/separating activities at the premises, which a capacity limit of 500,000t per activity per year. With the proposed importation and processing of the VENM and ENM, the EPL will require a variation application to include an ancillary activity for 'Receipt and processing of VENM and ENM' with limitations under additional conditions of the licence

to restrict the amount of VENM/ENM received as approved by any conditions of consent and the need to meet all conditions of any resource recovery order, made under Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2019, at the time the VENM/ENM is received. The EPL variation will also include changes to conditions, where relevant, around Air, Water and Noise. The EPA previously provided comments to NSW Department of Planning (DPIE) in a letter dated 3 February 2020 (DOC20/6390). The EPA understands that the latest RtS is in response to this letter.

The EPA has reviewed the RtS and has determined that at this stage that responses and assessments are still not adequate to determine the impacts and provide recommended conditions of approval in relation to air and noise impacts. These concerns and recommendations are outlined below, and further detail is provided in Attachments A to B.

Air

The EPA have reviewed the RtS, which included a revised Air Quality Impact Assessment. The EPA has provided detailed comments and advice on the adequacy of the information in addressing the issues identified, in **Attachment A**. In summary, the EPA considers that whilst issues identified with the air quality impact assessment for the have been adequately addressed, the referenced site-specific monitoring data for annual average PM_{2.5} is significantly above the annual average impact assessment criteria of 8 ug/m³. The revised Air Quality Impact Assessment identifies an annual average PM_{2.5} monitoring result of 11.6 ug/m³ for the 2017 calendar year.

This indicates that that there is an impact occurring from the existing operations, and hence there are potential issues with the actual implementation of best practice mitigation measures. The EPA recommends that prior to project determination the proponent investigate the source of elevated annual average PM_{2.5} impacts from current operations (which have been adopted as background), and if required, propose mitigation and rectification measures to reduce these impacts. If rectification and mitigation measures are proposed, the EPA will consider requiring these measures to be implemented via a pollution reduction program or special condition on the licence.

Noise

On 24 April 2019 the EPA responded to a letter from Umwelt, dated 9 April 2019 (EPA Ref: DOC19/313616-1), providing advice in relation to the Environmental Impact Assessment for Modification 4 of DA-267-11-99. In this advice the EPA specifically requested that a noise assessment be undertaken in accordance with the EPA *Noise Policy for Industry* (2017), and information on what the assessment should include.

As mentioned in both the 24 April 2019 and 3 February 2020 letters to Umwelt and DPIE respectively, the EPA's review of the Noise Impact Assessment (NIA) identified a key missing information. The EPA requested that the proponent update the assessment to take account of the *Noise Policy for Industry* (NPfI) 2017 and to address specific technical concerns raised in that letter.

The March 2020 RtS has not addressed the EPA's concerns and as such the EPA cannot fully evaluate the likely noise impact of this project or recommend any conditions to manage potential noise impacts. The EPA also notes that the licence should reflect existing consent conditions, however during the MOD3 process this did not occur and different metrics are used to assess compliance with noise related monitoring limits (L10 vs. Leq). Aligning the licence with the consent conditions will require an assessment against the NPfI, as requested, rather than including conditions in the licence that are derived from a superseded document.

Therefore, in the absence of the information requested on a number of occasions, the EPA cannot support this development without these concerns being appropriately addressed. As requested previously, the EPA recommends that the NIA be revised in line with the NPfI to address the issues in Attachment B of the EPA's letter dated 3 February 2020.

Water

The RtS clarifies that no discharges are expected to occur during operational quarrying, however the RtS indicates that discharges may be required during construction of the final landform.

No further assessment is required at this stage, given that no licensed discharge point is currently proposed, and noting the site-specific circumstances, including:

- the immediate receiving waterway is not considered a sensitive receiving environment; and
- there are likely to be practical measures readily available to manage any potential water quality risks (which can be managed under the licence, if required).

The RtS suggests that water quality data from the receiving waterway could be used to inform future licensed discharge concentration limits and that limits would only be required for total suspended solids, turbidity, pH and electrical conductivity. The EPA would expect that any water quality impact assessment would include consideration of all pollutants present at non-trivial levels with reference to the relevant guideline values from the national Water Quality Guidelines. Any discharge limits would be determined with consideration for the s45 POEO Act matters (e.g. practical measures to minimise pollution and impacts).

The recommended condition of approval is outlined in **Attachment B**.

Should you have further questions in relation to this matter, please contact Lisa Crambrook on 02 8837 6079 or email lisa.crambrook@epa.nsw.gov.au.

Yours sincerely,



15 April 2020

JAMES BOYLE
A/Unit Head – Regulatory Operations
Environment Protection Authority

Attachment A – Air Quality Impact Assessment

Information reviewed

- *Hodgson Quarries and Plant Pty Ltd Roberts Road Quarry Modification 4 Response to Submissions*, dated March 2020 prepared by Umwelt (Australia) Pty Limited (the Response to Submissions)
- *Air Quality Impact Assessment for Proposed Modification 4*, dated 18 March 2020, prepared by Jacobs Group (Australia) Pty Limited (the revised AQIA)

Adequacy of additional information and assessment in addressing issues identified

1. Variables for emission estimation

The EPA recommended that the proponent revise the Air Quality Impact Assessment to ensure emission estimates are robustly justified and represent a reasonable worst-case emission estimate. It was noted that the exhibited Air Quality Impact Assessment adopted a silt content of 2 % for haul road emissions.

The revised AQIA incorporates revisions to the estimated emissions for haul roads. The silt contents adopted within the revised AQIA are considered representative of the ranges reported in the literature referenced within the AQIA (US AP42). The assessment also incorporates revisions to other parameters utilised for emission estimation of particular sources (such as moisture content). The revised parameter values have also been referenced from ranges reported in the literature referenced within the revised AQIA (US AP42). The EPA considers that the issue with adopted parameters for emission estimation have been adequately addressed.

2. Particulate matter emission estimates for screening activities

The EPA recommended that the proponent review the emission estimates for screening activities and revise the Air Quality Impact Assessment to include further information and justification for the adopted emission factors and throughputs. Additionally, it was requested that a demonstration be provided that screening activities adequately account for any additional increase in material throughput associated with the proposed modification.

The Response to Submissions advises that a higher emission factor had previously been used for screening for the two proposed scenarios and that there would not be any change in throughput as a result of the proposal with the additional truck movements proposed for VENM/ENM importation.

The revised AQIA incorporates changes to emission estimation for screening. The EPA understands that emission estimates for screening activities were based on some errors/inconstant application of emission factors for screening. The revised AQIA does not account for any mitigation measures (i.e. wet suppression) for screening activities, however the EPA considers that the issue with estimation of emissions for screening activities have been adequately addressed.

3. Potential emissions associated with proposed crushing activities

The EPA recommended that the Air Quality Impact Assessment be revised to include emission estimates for proposed crushing activities.

The Response to Submissions advises that emission estimates for crushing were included within the emission estimates for the screening activities. Additionally, the Response to Submissions advises that the crushing activities have been included as a separate item in the emission estimates of the revised AQIA.

The revised AQIA incorporates emission estimates for crushing as separate item with supporting information on the emission estimation techniques applied. The EPA considers the issues for emissions from proposed crushing activities have been adequately addressed.

4. Assessment predicts exceedances and has not benchmarked mitigation measures against best management practice

The EPA recommended that the proponent benchmark mitigation measures against best management practices and revise the Air Quality Impact Assessment incorporating all feasible and reasonable best practice mitigation measures.

The Response to Submissions advises that:

- In consultation with Hodgson Quarries, and based on the outcomes of the revised AQIA the controls listed in Table 6-4 of the revised AQIA were applied in the existing and proposed emission inventories
- These controls are considered the most reasonable and feasible measures which can practically be applied

Table 6-4 of the revised AQIA includes the following mitigation measures:

- Watering of internal haul route (50% control efficiency applied)
- Water sprays for Unloading and loading materials (50% control efficiency applied)
- Water of primary haul route (75 % control efficiency applied)
- Watering of exposed areas (50% control efficiency applied)

The EPA advises that:

- Screening is a significant emission source from the premises as assessed and accounts for:
 - ~19% of total particulate emissions for proposed scenarios
 - ~21% of PM₁₀ emissions for proposed scenarios
 - ~23% of PM_{2.5} emission for proposed scenarios
- The assessment is based on uncontrolled emission estimates for screening activities

The revised AQIA concludes that “*Measures consistent with best-practice were recommended to control emissions to air including the use of water during material hauling, loading and unloading and screening, as well as on exposed surface and stockpiles and during screening and crushing activities as identified as being required*”. The EPA notes that the revised AQIA has not accounted for implementation of mitigation measures on screening activities.

The EPA advises that whilst the assessment identifies mitigation measures, the existing site specific annual average PM_{2.5} concentrations are significantly above the impact assessment criteria. This indicates an impact occurring from existing operations. This then further identifies potential issues with the actual implementation of mitigation measures consistent with best practice.

5. Change in potential PM₁₀ (24-hour average) and PM_{2.5} (24-hour average) impacts not clear

The EPA recommended that the proponent revise the Air Quality Impact Assessment to include tabulated results articulating maximum incremental and cumulative ground level concentrations for 24-hour average PM₁₀ and PM_{2.5} for each scenario and the number of additional exceedances predicted for each scenario.

The revised AQIA provides the additional information requested. The revised AQIA predicts:

- Compliance with the annual average TSP, and annual average PM₁₀ impact assessment criteria;
- Predicts 6 exceedances of the 24-hour average PM₁₀ impact assessment criteria for the existing and proposed scenarios. No additional exceedances of the 24-hour average are predicted as a result of the proposal. The exceedances are attributable to background air quality data being above the impact assessment criteria.
- Predicts 17 exceedances of the 24-hour average PM_{2.5} impact assessment criteria for the existing and proposed scenarios. No additional exceedances of the 24-hour average are predicted as a result of the proposal. The exceedances are attributable to background air quality data being above the impact assessment criteria.

- Predicts exceedances of annual average PM_{2.5} impact assessment criteria for the existing and proposed scenarios. Adopted PM_{2.5} background air quality concentration exceeds the impact assessment criteria without contributions from the premises. The maximum predicted increment is approximately 6% of the cumulative impact assessment criteria under the proposed scenarios.

The EPA advise that whilst the revised assessment addresses the information requested and predicts that there is unlikely to be a significant change in predicted off site impacts as a result of the proposal, it is noted that referenced existing annual average PM_{2.5} concentrations are significant: Specifically:

- The adopted annual average PM_{2.5} annual average concentration for cumulative assessment purposes is 13 ug/m³
- The annual average PM_{2.5} from site specific monitoring was 11.6 ug/m³ for the 2017 calendar year

The referenced site specific annual average concentrations are significantly above the impact assessment criteria of 8 ug/m³, which indicate an impact occurring from the existing operations. Whilst the revised assessment provides further clarity on the change in potential 24-hour average impacts, the assessment identifies a potential impact from existing operations which must be investigated prior to project approval.

In regard to Item 4 and 5 above, the EPA recommends that prior to project determination the proponent investigate the source of elevated annual average PM_{2.5} impacts from current operations (which have been adopted as background), and if required, propose mitigation and rectification measures to reduce these impacts. If rectification and mitigation measures are proposed, the EPA will consider requiring these measures to be implemented via a pollution reduction program or special condition on the licence.

Attachment B – Water Assessment

The following condition of approval is recommended to ensure potential water quality impacts of any future proposed discharge are appropriately assessed and managed:

There must be no discharges to waters from the premises, except as regulated by an environment protection licence. Consistent with section 45 of the Protection of Environment Operations Act, any application to include a discharge point on the environment protection licence would require a water quality impact assessment consistent with the national Water Quality Guidelines to inform consideration by the EPA. Any such assessment must include consideration of all pollutants present at non-trivial levels, based on a risk assessment of the materials and activities at the premises, with reference to the relevant guideline values from the national Water Quality Guidelines.