



Your Reference Exhibition of EA – Central Coast Sands Quarry
Our reference: DOC 13/ 8065. LIC08/1622
Contact: David Bell (02) 49086817

Ms Ruth Murphy
Planner, Mining and Industry Projects
NSW Department of Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Ms Murphy,

**Central Coast Sands Quarry Extension (MP08_173)
Comments on Exhibited Environmental Assessment**

Reference is made to your email of 6 March 2013 requesting comments on the exhibited Environmental Assessment (EA) for the Hansen Central Coast Sands Quarry Extension.

On 26 March 2010 the Environment Protection Authority (EPA) (the then Department of Environment, Climate Change and Water (DECCW) wrote to the Department of Planning and Infrastructure following an adequacy review of the EA for this project. EPA found at that time the Noise Impact Assessment (NIA) and Air Quality Impact Assessment (AQIA) were deficient and requested further information.

EPA has now reviewed the exhibited EA and supplementary documentation. EPA again considers that the proponent has not appropriately addressed both the Air Quality Impacts and Noise Impacts.

Note: Previously DECCW advised that the proponent had not appropriately addressed impacts on Threatened Species and biodiversity. These areas do not fall within EPA's areas of statutory authority and comment on those issues should be obtained from the Office of Environment and Heritage.

EPA is not in a position to suggest recommended conditions of approval until such time as air and noise issues are satisfactorily addressed. Attachment 1 provides specifics of the EPA's areas of concern.

If you require any further information regarding this matter please contact Peter Matthews on (02) 4908 6868.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'P. Jamieson', followed by the date '12-4-13'.

Peter Jamieson
Head Regional Operations Unit – Hunter
Environment Protection Authority

ATTACHMENT 1

COMMENTS ON EXHIBITED ENVIRONMENTAL ASSESSMENT

Noise

The EA and *Noise Impact Assessment Somersby Quarry Extension* (the "NIA", SLR Consulting Australia Pty Ltd 2012) do not appear to assess the noise impact of the proposal on sensitive receivers in accordance with the *New South Wales Industrial Noise Policy* (INP, EPA 2000) for the following reasons:

1. Recorded Rating Background Levels (RBL) were stated to be not affected by existing operations at the premises, however justification for this assertion has not been provided. Additionally the NIA states that "agricultural activities" were observed during attended monitoring to determine the RBL, but does not explain how "agricultural activities" were distinguished from operations at the premises – the EPA notes that agricultural noise sources such as tractors are acoustically similar to equipment used in quarrying and may be easily confused;
2. The noise contribution of existing industry in the area (affecting noise amenity) was not considered in the setting of Project Specific Noise Levels (PSNL) as required by the INP; and
3. The EA and NIA state that "Construction Noise Goals" of RBL + 10dBA apply to the construction of the noise bund proposed for the project. However, the *Interim Construction Noise Guideline* (ICNG, DECC 2009) does not apply to noise from quarrying. The EPA notes that in the NIA construction of the noise bund was predicted to result in noise impacts at sensitive receivers up to $L_{Aeq(15min)}$ 64dBA, 26dBA above the adopted INP daytime PSNL;

Therefore, the EPA requests the following additional information from the proponent:

1. An explanation of how the reported RBL were determined to be not affected by existing operations at the premises;
2. An explanation of why other industrial noise sources in the area were not considered in setting PSNL;
3. The expected duration of works to construct the noise bund;
4. An analysis of all feasible and reasonable noise mitigation measures that can be implemented to reduce noise impacts during works to construct the noise bund; and
5. A description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during works to construct the noise bund.

Air Quality

The EA and *Noise Impact Assessment Somersby Quarry Extension* (the "AQIA", SLR Consulting Australia Pty Ltd 2012) do not adequately assess the air impacts of the proposal.

1. Lack of justification for background concentration of Respirable Crystalline Silica

The preliminary air quality impact assessment (Heggies, 2010a) assessed by the EPA in 2010 stated a respirable crystalline silica (RCS) background concentration of $1.7 \mu\text{g}/\text{m}^3$ has been assumed for the project site based on personnel communication with Mr Paul Ratajczyk, Victorian EPA. No other information was provided regarding the background concentration such as how it was derived and whether or not it adequately accounts for the activities at the existing quarry.

In our letter of 26 March 2010 EPA recommended the final air quality impact assessment include additional information regarding the assumed background concentration of RCS which demonstrates it is suitable for the project site which includes an existing sand quarry. Further information was provided

in Heggies (2010b) regarding the source of the assumed background concentration. Specifically, the assumed background concentration was based on an assessment undertaken by Heggies for the proposed Somersby Fields sand quarry, located approximately 3 kilometres from the project site.

The final air quality impact assessment (SLR, 2012), which was submitted with the exhibited EA, has assumed a RCS background concentration of $0.7 \mu\text{g}/\text{m}^3$, which is lower than the background concentration assumed in the preliminary assessment. This background concentration was sourced from a health risk assessment of crystalline silica from a proposed recycling/transfer station of construction waste. It is stated that due to an absence of local data, a background concentration of $0.7 \mu\text{g}/\text{m}^3$ is assumed to be suitable.

The lack of acknowledgement in the final air quality impact assessment of the changed RCS background concentration is unacceptable. EPA recommends the proponent provides a detailed discussion regarding the assumed RCS background concentration, including a robust justification for the assumed concentration.

2. Modelling scenario may not reflect worst case impacts

As part of the 2010 adequacy review, EPA noted that it was unclear whether or not the modelled scenario reflects the potential worst case air quality impact of the proposed operations. No information was provided in the draft air quality impact assessment on the proposed scheduling of operations across the existing quarry and the extension area and whether or not sand removal activities will be occurring simultaneously on both sites.

The final EA provides information regarding the seven stages of the development. It is confirmed that extraction will not be occurring simultaneously in the existing quarry and the extension area. Extraction will be occurring in the existing quarry during stage 1 and stage 6 and in the extension area during stage 2, 3, 4 and 5. The processing plant will remain in its' existing location in all stages except stage 6 where it will be re-located to just north of the workshop.

The final air quality impact assessment has modelled one scenario which '*reflects the extension area and processing areas of the Project*'. It is uncertain which stage of the development the modelled scenario represents. It is stated that the scenario is considered to be representative of the operating conditions during the life of the extension area and that of the Project. It was selected considering the location of the sand removal and processing area and the closest residential receivers.

It remains unclear whether or not the modelled scenario reflects the potential worst case air quality impact of the proposed operations. Of particular concern is the absence of a modelling scenario which includes extraction in the existing quarry as will be occurring in stage 1 and stage 6. This is of particular concern as extraction in the existing quarry will be occurring adjacent to the other main sources of particulate emissions on the site, the processing plant and stockpile area.

EPA recommends that the proponent:

- **Provides additional information regarding the modelled scenario and which stage of the development it represents.**
- **Includes additional scenarios in the air quality impact assessment to ensure the worst case air quality impacts are predicted. These scenarios must represent the various stages of the development. As a minimum, EPA expect scenarios to represent stage 3/4, stage 5 and stage 6 of the development to be included in the assessment.**

3. Exclusion of sources in final air quality impact assessment

EPA compared the sources of particulate emissions included in the preliminary and final air quality impact assessments. The following sources were noted to be excluded from the final air quality impact assessment:

- Screening;
- Primary crusher;
- Crushing operations raw material stockpile wind erosion;
- Hauling to crusher from screening;
- Crushing operations handling transfer and conveying; and
- Crushing operations front end loader.

SLR (2012) explain the screening plant was excluded from the assessment due to it being a wet process (wet trommel, wet screened, and then wash tub and cyclone). A reference to support an assumed emission rate of zero from the screening plant was not provided. No explanation is provided for the exclusion of the other sources.

EPA recommends the proponent is requested to:

- Provide a reference and justification to support the assumed emission rate of zero for the screening plant; and
- revise the air quality impact assessment to include all the sources associated with the crushing operations and material handling or confirm that the crushing plant no longer operates on the site.

4. Change in Modelled Year

The preliminary air quality impact assessment was based on the year 2004. The background air quality data was obtained for Richmond for the year 2004 and TAPM was run to generate year 2004 meteorological data.

The final air quality impact assessment has changed the modelled year to 2008. No explanation is provided in the assessment for the change in the modelled year. This change in the modelled year has resulted in assumed lower background TSP and PM₁₀ concentrations. A comparison of the assumed background concentrations in the preliminary and final air quality impact assessments is provided in Table 1.

Table 1 Comparison of background concentrations included in the preliminary and final air quality impact assessments

Pollutant	Averaging Period	Assumed Background Level	
		Preliminary (2010) Air Quality Impact Assessment	Final (2013) Air Quality Impact Assessment
TSP	Annual	36 µg/m ³	26 µg/m ³
PM ₁₀	24 hour	varies	varies
	Annual	18 µg/m ³	13 µg/m ³
Respirable Crystalline Silica (RCS)	Annual	1.7 µg/m ³	0.7 µg/m ³
Deposited Dust	Annual	2g/m ² /month	2g/m ² /month

It is noted that both the preliminary and final air quality impact assessments refer to the assumed background concentrations as '*conservatively high*'.

EPA considers the use of a different modelled year in the final air quality impact assessment is inappropriate, particularly as it results in a less conservative assessment of air quality impacts. EPA recommends the proponent is requested to revise the air quality impact assessment to include year 2004 data as was used in the preliminary air quality impact assessment.

5. Air Monitoring

In our comments of 26 March 2010 EPA noted an intention to add dust and PM₁₀ monitoring to the Environment Protection Licence (possibly at residences B and R). EPA suggested the proponent may like to address this issue in the revised Environmental Assessment.

EPA is moving away from dust deposition monitoring due to issues with this monitoring method and the fact that results are only produced monthly, well after the actual time of monitoring. EPA is moving towards PM₁₀ monitoring for quarries and the EA should therefore explore a monitoring network based on PM₁₀. The EIS should also examine the most appropriate method of monitoring PM₁₀ and in particular compare the costs / benefits of using high volume sampler technology (which will produce a result every six days and has a delay for sample analysis) verses using technology such as a Tapered Element Oscillating Microbalance (TEOM) (which will give daily instantaneous results).

EPA considers the EA needs to detail a proposed monitoring network based on PM₁₀.