



DOC17/511395-22

The Environmental Assessment Officer
Minerals Quarry Assessments
Department of Planning, Industry and Environment

Dear Mr Herbert

Re SSD 8804

I refer to the notification to the Environment Protection Authority (EPA) on 23 April 2020 from the Major Projects Portal about the State Significant Development 8804 proposing the expansion of operations at the existing Howlong Sand and Gravel Quarry at Howlong.

We have reviewed the Environmental Impact Statement (EIS) and specialist consultant reports supporting the application. Our review has identified that further information is required in regards to the Noise Impact Assessment to allow us to fully assess the environmental impacts of the proposal. The requested information is detailed at Attachment A with justification and further detail provided in Attachment B.

Please note we have contact Nicholas Warren from R.W. Corkery & Co and discussed our information requests with him. We are also available to meet to discuss these issues should the proponent or the Department of Planning, Industry and Environment require any further information about this request.

If you have any further enquiries about this matter please contact Briohny Seaman by telephoning 02 6969 0700 or by electronic mail at riverina.farwest@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'C. Bretherton'. To the right of the signature is the date '15.5.2020' written in blue ink.

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Attachment A

The Environment Protection Authority (EPA) has reviewed the Environmental Impact Statement (EIS) and specialist consultant reports supporting the State Significant Development application for the expansion of operations at the existing Howlong Sand and Gravel Quarry located at Howlong.

Based on the information provided, we cannot adequately assess the potential noise impacts of the proposal. To fully assess these impacts, we require the following information.

Noise Modelling Assessment

1. Assessing low frequency noise

The derived project noise trigger levels have been adequately derived in accordance with the Noise Policy for Industry (NPfI). However, the predicted noise levels at the nearest residential receiver are equal to the trigger level for that receiver. In addition, the assessment of annoying characteristics is not considered adequate. The assessment of low frequency noise should include one-third octave or narrowband frequencies down to 10Hz. The assessment in Noise Modelling Assessment shows octave frequencies of 63Hz.

We recommend that the proponent assess the annoying characteristics in accordance with Fact Sheet C of the NPfI (see Attachment B for further information) and apply a correction where applicable to the predicted noise level before comparison with the trigger level, and provide details of any further feasible and reasonable mitigation measures that are necessary to reduce the noise levels.

2. Provision of noise contour maps

The Noise Modelling Assessment provides noise contour maps for Stage 2 of the proposal, however noise contour maps have not been provided for all the proposed stages of work.

We recommend that the proponent provide the noise contour maps for each stage of the work, not just for Stage 2.

3. Assessment of noise impacts within Victoria

The proposal is on the border of NSW and Victoria. The NPfI is a NSW policy and in the Noise Modelling Assessment it has been applied to the sensitive receivers on the NSW side of the border. The EPA note that there are sensitive receivers to the south of the premises, on the Victorian side of the border, who may be impacted by operations.

We recommend that the proponent considers assessing the potential noise impacts to those sensitive receivers to the south of the premises, on the Victorian side of the border.

Attachment B

Noise Policy for Industry: assessing low frequency noise

The Noise Policy for Industry (NPfI) requires low frequency noise (LFN) to be assessed against the requirements of Fact Sheet C. Where LFN is or is likely to occur, and it cannot be mitigated, the NPfI requires a modifying factor correction to be applied to the measured or predicted noise levels at the noise-sensitive receiver locations before comparison with the project noise trigger levels. Fact Sheet C has two requirements to determine the presence of LFN as follows.

1. a 'screening' test to identify the potential for LFN by assessing whether there is a difference of 15 dB or more between C- and A-weighted measurements; and where this is the case,
2. a detailed evaluation of the 1/3 octave frequencies between 10Hz to 160Hz in Table C2 of Fact Sheet C.

The EPA (or other regulatory authorities) will consider the outcome of a noise assessments undertaken in accordance with the NPfI, including any modifying factor arising from the presence of LFN, when recommending noise limits in an environment protection licence or other approval. The EPA acknowledges that there are practical constraints to assessing low frequency noise when using standard assessment approaches including the following.

- limited availability of published sound power level data below 63Hz for plant and equipment that may generate LFN; and
- limitations in the ability of commercial noise modelling software to predict noise levels below 31.5Hz (and in some instances below 63Hz).

The following outlines how low frequency noise can be assessed in different circumstances to satisfy the requirements of Fact Sheet C of the NPfI. Alternative methods may be used where this is supported by sufficient evidence to demonstrate that LFN has been considered in accordance with the requirements set out in Fact Sheet C of the NPfI.

Determining LFN modifying factor corrections for existing developments

- Measure source contributions in the one-third octave band range of 10Hz to 160Hz at the existing development.
- Document the measurement methodology including: the prevailing meteorological conditions; the operating conditions of the existing development during measurements; the location of the measurements; and any adjustments applied to the measurements to assess LFN in accordance with Fact Sheet C of the NPfI.

Determining LFN modifying factor for a new development

- Predict the one-third octave band noise levels using proprietary noise modelling software down to the lowest one-third octave band that can be predicted by the noise model. The noise model used, the lowest one-third octave band noise level that can be predicted by that noise model, and the sound power levels data used should be reported.
- Supplement the modelling results with measurements from comparable sources of noise to the proposed new development.
- Using this measurement data, develop a low frequency curve (or a "tail") in the one-third octave band frequency between the lowest one-third octave band noise levels that can be predicted by the modelling software and down to 10Hz.
- Apply an adjustment to the measured frequency curve based on the difference between the predicted and measured noise level at the lowest one-third octave band noise levels that can be predicted by the modelling software. For example, if the lowest one-third octave band frequency that can be modelled is 63Hz, then the data measured below 63Hz should be adjusted in each one-third octave band between 10Hz to 63Hz based on the difference between the predicted and the measured one-third octave band noise levels at 63Hz.

- Once the frequency curve down to 10Hz has been established, this should be used to assess LFN in accordance with Fact Sheet C of the NPfl.

Note that all measurements should be undertaken using a Class 1 sound level meter conforming to AS IEC 61672.1-2013 with appropriate wind screen protection over the microphone (Refer NPfl, Fact Sheet C); and at measurement location(s) where LFN can be measured in the absence of extraneous noise to accurately capture LFN.