Hunter New England Local Health District
Hunter New England Population Health
Direct Contact Details
Phone: (02) 4924 6494 Fax: (02) 4924 6490
Email: philippe.porigneaux@hnehealth.nsw.gov.au

NSW GOVERNMENT Health
Hunter New England
Local Health District

22 January 2019

Mr Colin Phillips
Planner
Major Projects
NSW Department of Planning & Environment
G P O Box 39
SYDNEY NSW 2001

Dear Mr Phillips

PROPOSED SAND QUARRY AMMOS RESOURCE MANAGEMENT PTY LTD C/- TATTERSALL LANDERS PTY LTD
LOTS 10 & 11 DP1071458 & LOT 254 DP753204 & LOT 51 DP1015671 NELSON BAY ROAD, BOBS FARM

The proposed development of Bobs Farm Sand Mine incorporates the following:

- Establishing a quarry to extract and process sand at a rate of 750,000 tonnes per annum, from a total resource of 10 million tonnes over a period of 15 years; and
- Constructing extractive materials processing and transport infrastructure; and
- Transporting extractive materials off-site via public road; and
- Site rehabilitation; and
- Options for final landform and land use incorporating an internal water body that would be used for a tourist facility or a solar energy farm, post mining.

The Environmental Impact Statement (EIS) for the proposed development has been reviewed paying particular attention to construction & operational noise, air quality, potable water supply, recycled water and community engagement. The following discussion is provided:

Noise (Construction)
It is noted that the EIS presents in Annex K, Section 5.1.1 Table 4 which is referred as being noise Management Levels. However, the table presents data related to current ambient noise levels. This provides some confusion in the assessment of noise criteria for this EIS.

Nevertheless, the results of noise modelling for the construction phase of the project (Eastern End worst-case and Western End worst-case) are predicted to exceed the Noise Affected – Noise Management Levels for Standard Construction Hours for neighbours R1, R13, R14 and R15.

Hunter New England Local Health District
ABN 63 598 010 203

Hunter New England Population Health
Locked Bag 10
Wallsend NSW 2287
Phone (02) 4924 6477 Fax (02) 4924 6490
Email HNELHD-PHEnquiries@hnehealth.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

The predicted noise levels during all of the phases of project construction demonstrates that noise levels are within the Highly Noise Affected – Noise Management Levels for Standard Construction Hours at all of the neighbours.

Should construction works be undertaken outside of Standard Construction Hours, the predicted noise levels during all of the phases of project construction demonstrates that noise levels are predicted to exceed the Noise Affected – Noise Management Levels at neighbours R1, R13, R14, R15 and R16.

Should construction works be undertaken outside of Standard Construction Hours during the night-time period, then the sleep disturbance criteria is predicted to be exceeded for neighbours R1, R12, R13, R14 and R15. This however is an unlikely event.

To limit the impact of construction noise on neighbours, the proponent proposes to reduce noise impacts associated with chainsaw operations for neighbours R1, R12, R13, R14 and R15 through consultation involving notification of planned works with information provided on the planned schedule for tree removal works.

The proponent also plans to minimise potential construction phase noise impacts on neighbours through a Noise Management Plan which adopts feasible and reasonable noise attenuation and management measures.

Noise (Operations)

The results of noise modelling demonstrate that there are exceedances for neighbours R1 and R3 for both neutral and worst-case conditions from Year 1 operation onwards. Exceedances are also predicted for neighbours R2, R5 and R7 which coincide with worst case weather conditions.

For the western end of mine operations, noise modelling demonstrated exceedances for neighbours R13 – 16 for Year 1, 2 and 3 operation under worst-case conditions. To mitigate noise levels for these neighbours, a 4m high bund or noise barrier is proposed around the processing area and a 6m high bund is proposed around the pit. With the proposed mitigation measure in place, noise levels are predicted to fall within criteria for Year 1 and 2. During Year 3, a 1dB exceedance of criteria is predicted (with mitigation measures in place) for neighbours R14 – 16. This is predicted to be an insignificant impact and is expected to be for only a short period of time before the pit progresses to a lower level beneath sea level.

Additional noise modelling was performed for assessment of 200 export truck movements with noise mitigation measures in place. The results of this modelling demonstrated that noise criteria would be exceeded for neighbours R1 and R2 due to the truck movements utilising the haul road and exiting the mine. Modelling was then performed to determine the maximum number of export trucks that can utilise the private haul road and exit the mine utilising Marsh Road during the daytime period under worst-case conditions with a result complying with noise criteria. This assessment determined that 150 truck movements is the maximum number that can utilise the private haul road and utilise Marsh Road as the exit route whilst still complying with noise criteria.

Given the issues of noise associated with truck movements, noise assessment was not performed for night-time (6:00 pm to 7:00 am) truck movements. Should the proponent consider truck movements to export sand from the site during night-time, then it is recommended that the proponent conduct additional noise impact assessment to determine if night time truck movements are within night-time noise criteria for neighbours.

The proponent has proposed noise mitigation measures which contribute to reducing noise levels for neighbours. However, some noise level exceedances remain for some neighbours and the proponent is encouraged to review mitigation measures to ensure that noise levels do not exceed any criteria.

The noise impact assessment recommends the mine not operate during the night-time period between 6:00 pm and 7:00 am due to modelled noise exceeding the sleep disturbance criteria, even with noise mitigation measures in place.

The proponent proposes a construction phase Noise Management Plan only. The EIS should consider noise issues during the whole life cycle of the project. The proponent should therefore incorporate into the EIS an Operational Noise Management Plan which outlines reasonable and feasible mitigation measures to minimise, monitor and measure operational noise impacts.

Air Quality

Air quality modelling for 24-hour average PM_{10} concentrations identified the maximum average 24-hour PM_{10} concentrations at each neighbour and the number of daily exceedances of the criteria of 50 $\mu g/m^3$.

The neighbour, Port Stephens Avocado Farm will exceed the criteria on one day during the initial stage (Year 1), during the production stage 1 (Year 2) and during production stage 2 (Year 3). The neighbour 640 Marsh Road will exceed the criteria on one day during production stage 2 (Year 3). Excluding the above exceedances, it is noted that on one day during the initial stage (Year 1), during the production stage 1 (Year 2) and during production stage 2 (Year 3), neighbours are subject to 24-hour average PM_{10} concentrations of 49·6 $\mu g/m^3$ to 49·7 $\mu g/m^3$. This is approaching the maximum 24-hour average PM_{10} concentration of 50 $\mu g/m^3$.

It is suggested that the common heading in Table 8-2 *Predicted Max 24-Hour Average Contemporaneous PM_{10} Concentrations ($\mu g/m^3$) with Background Concentrations in Brackets* (Annex L, Air Quality Assessment) be amended to reflect the data in the table. The current wording indicates that the background concentrations are in the brackets, however the data within the brackets show the number of exceedances per stage at each neighbour.

The annual average PM_{10} concentration will be less than the 25 $\mu g/m^3$ criterion at all neighbour locations. The highest annual average PM_{10} concentration is 24·3 $\mu g/m^3$ which will occur at the Port Stephens Avocado Farm during all production stages. As such the annual PM_{10} emissions from the project are not predicted to adversely impact upon neighbours. Nevertheless, the proponent is encouraged to adopt best practice to reduce annual average PM_{10} concentrations for all neighbours.

There are no exceedances of the 24-hour average $PM_{2.5}$ criteria (25 µg/m3) predicted at any modelled neighbour. The total annual average $PM_{2.5}$ concentration will be less than the 8 µg/m^3 criterion at all neighbour locations. The highest annual average $PM_{2.5}$ concentration is 7·95 µg/m3 which will occur at the Port Stephens Avocado Farm during production Stage 2. As such the annual average $PM_{2.5}$ emissions from the project are not predicted to adversely impact upon the neighbours. Nevertheless, the proponent is encouraged to adopt best practice to reduce annual average $PM_{2.5}$ concentrations for all neighbours.

The commentary on air quality provided within this response are contingent on confirmation by the NSW EPA that the methods employed to assess air quality impacts are appropriate.

Potable Water Supply

The proponent has not provided discussion in relation to a potable water supply in the exhibited Environmental Impact Statement. It is the understanding of this office that a reticulated water supply from a local water utility is not available for the proposed development. Therefore the proponent will be required to provide a source of potable water for staff, contractors and visitors to the site.

Whilst there are various options for the provision of a private potable water supply, the proponent is encouraged to contact Hunter New England Local Health District to explore suitable options for the provision of a private potable water supply.

The selected option for the provision of a private potable water supply is likely to require a Quality Assurance Program in accordance with the provisions of the *Public Health Act 2010*. Again, the proponent is encouraged to contact Hunter New England Local Health District with respect to developing a Quality Assurance Program.

Additional information can also be accessed through the NSW Health website via the following link:
https://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx

Recycled Water

The proponent proposes to direct runoff from rainwater tank, stockpile, truck wash-down, landscaped area plus truck wash-down wastewater to a bioremediation basin and treated stormwater detention basin with 80 KL/day of water from the treated stormwater detention basin utilised for truck wash-down.

The catchment of stormwater and blending with truck wash-down wastewater for recycling onsite and intend to utilise in processing onsite, the proponent is advised that there are National Guidelines to be utilised to ensure appropriate and safe utilisation of stormwater such as in industrial processes.

The '*Guidelines for Stormwater Harvesting and Reuse'* extends the guidance given in the Phase 1 guidelines to cover the harvesting and reuse of stormwater. The primary purpose of this document is to provide guidance on managing potential public health and environmental risks associated with the reuse of:

- Roof water collected from residential buildings (including industrial buildings)

- Urban stormwater from sewered areas, including stormwater collected from drains, waterways and wetlands.

The relevant guidelines are able to be accessed via the following link:
http://www.waterquality.gov.au/guidelines/recycled-water

The proponent is encouraged to consult with WorkSafe NSW and the EPA to ensure aspects of worker safety and environmental protection are covered in the proposed stormwater harvesting and utilisation. Hunter New England Local Health District is not a regulatory authority for the proposed stormwater harvesting and recycling scheme as the recycled water scheme is not proposed to be provided for use by the public.

Community Engagement

The proponent has provided discussion in relation to community engagement in the exhibited Environmental Impact Statement. This has included information on public meetings held and discussion with respect to the establishment of a Community Consultation Committee.

The proponent is encouraged to continue to engage with the community to ensure genuine community consultation and active participation of the community in the process of establishing the project and its ongoing operations should the project be approved.

Part of community engagement also includes avenues and mechanisms for lodgement of complaints in relation to construction and operational phases of the project. Whilst this submission discusses specific Management Plans, all Management Plans should include a complaints handling, investigation and actions system for addressing complaints lodged by the community.

Should you require any additional information in relation to the above, please telephone Mr Philippe Porigneaux, Environmental Health Manager on 4924 6494.

Yours sincerely

Professor David Durrheim
Director - Health Protection
Hunter New England Population Health