



9 April 2020

Department of Planning Industry and Environment

OBJECTION: Stockton Sand Quarry Dredging State Significant Development Application No SSD 9490

We have no objection to this submission being published in full, without any redaction.

Page references are to the EIS¹ unless otherwise indicated.

Contents

OBJECTION: Stockton Sand Quarry Dredging.....	1
About us	2
Overview	2
Quality of application and supporting reports	2
Traffic impact.....	3
The direct effect on traffic of this proposed project	3
Greenhouse gas emissions from haulage	4
Air quality	4
Groundwater.....	5
Ecological impact	6
Bio-banking offsets	7
Site rehabilitation	7
Economic impact.....	8
Conclusion	8
Appendix A: Figure 1 Sand mining Map.....	8
Appendix A: Table 1 Sand mining overview	8

¹ Environmental Impact Statement prepared for Boral Resources (NSW) Pty Ltd by Element Environment, dated February 2020



About us

Tomaree Ratepayers and Residents Association Incorporated (TRRA) has since 2008 actively represented the Tomaree community on issues such as planning and development, protecting the built and natural environment, economic development, tourism, culture and other grass roots issues.

Overview

TRRA submits that this project is not acceptable on multiple grounds and should not be approved.

The sand quarry would significantly increase heavy vehicle movements (for the next 25 years) on a road system which has a number of unsuitable single carriageway sections and which is already overloaded in some areas at peak times. The impact of this proposal on heavy vehicle traffic cannot be considered in isolation from other existing and proposed sand extraction projects relying on the same inadequate road network.

The quarry is located in close proximity to the 'red-zone' affected by PFAS contamination originating from RAAF Base Williamtown. Given the uncertainty surrounding the level of risk, it would be grossly irresponsible to approve excavation well below ground and water table level (in Stages 2-6) over a 37ha site, disturbing the soil and affecting the groundwater.

The project would involve a significant loss of valuable fauna habitat and other environmental damage, which would continue in perpetuity after the end of mining operations due to the large residual lake.

Quality of application and supporting reports

The applicant has clearly spent a lot of time and money on preparing their application, with the EIS and supporting reports running into hundreds of pages with much detail. It is impossible for concerned citizens and community groups to analyse (or even read) all of the documents and to judge whether assertions are credible.

The various expert reports are prepared specifically for the developer, and will understandably present the best possible case favourable to the applicant and downplay any adverse effects.

It is therefore essential that in assessing the project and the supporting documentation, the Department of Planning takes a critical and sceptical approach, and where necessary seeks independent third party expert advice on any questionable claims.

Traffic impact

We understand that the project proposes a 50% increase in the maximum permitted annual despatch volumes (for the existing windblown sand operation and the new project combined) - from 500,000 tonnes to 750,000 tonnes - until 2028, reverting to the currently approved limit of 500,000 tonnes for the extended extraction period from 2029 to (potentially) 2045² (EIS 4.2). In addition, the project would involve the movement onto the site of up to 70,000 tpa of VENM material for stabilisation (EIS 4.27).

The site is serviced primarily by Nelson Bay Road and Cabbage Tree Road, both of which have lengthy single carriageway sections – with no short or medium term proposals for improvement. These roads are two of the three³ which link the Tomaree and Tilligerry peninsulas with the rest of the country. The peninsulas have a resident population of 30,000 which more than doubles in the peak tourist season.

There are already 7 operating sand mines/quarries with a further three new or expanded operations currently proposed in addition to this one. See Figure 1 and Table 1 in Appendix A.

TRRA submits that the assessment must consider the cumulative impact of all existing and proposed sand mining operations in the eastern part of Port Stephens LGA.

This assessment should also take into account the potential for additional truck movement over and above current levels from existing approvals – if some or all of the existing operations are currently operating below their approved limits, then the future load on the road network may include additional traffic from those operations as well as from any new approvals.

The direct effect on traffic of this proposed project

The EIS summarises the proposed truck movements stating only that:

‘The project will generate 30 heavy vehicle movements per hour during a maximum hour of production, equating to approximately 284 laden vehicle movements per day. The maximum traffic generation for the project comprises 26 heavy vehicles transporting sand product per hour, and four heavy vehicles importing VENM to the project site per hour.’ (4.29)

² The project staging anticipates exhaustion of the resource in 19 years, but the applicant seeks approval for 25 years of potential operation to allow for variations in demand (EIS 4.3)

³ The other link – Richardson Road from Medowie and Raymond Terrace to Salt Ash, is also entirely single carriageway with no plans for significant improvement.

Table 4.2 in the EIS compares up to 284 truck movements (per day) with a maximum of 152 from the existing windblown sand operation. This would be an 87% increase – nearly double. More detailed figures are given in Chapter 12 of the EIS and Appendix H – Traffic Impact Assessment.

The EIS asserts that *'Traffic generated by the project would not result in detrimental impact to the surrounding and arterial road network.'* (Table 6.3)

The application seeks the same hours of operation as the existing (2006) consent i.e. 06.15-1700 Monday to Friday, with an extra hour (to 1800) during major supply contracts (which could presumably be for any period). This means that the heavy truck movements would potentially occur during morning and afternoon commuter peak times, compounding the load and associated safety risk.

We have been unable to locate any reference in the EIS to the number of truck movements from the other sand mines already located or approved around Williamstown and Salt Ash. The numbers already involved is significant, particularly around the Cabbage Tree Road, Richardson Road and Medowie Road roundabouts. Significant increases are now generated by the approved expansion of the Salt Ash Quarry at Janet Parade. The approved quarry on Cabbage Tree Road will be commencing operations in the near future (with all departing trucks using the Cabbage Tree Rd roundabout) and there are applications being assessed for further quarries at Bobs Farm and Anna Bay. We attach our own overview of the cumulative impact at Appendix A.

The applicant should be required to document, and the assessment should consider, the cumulative number of truck movements *when all existing and proposed mines reach capacity*. We suggest that any such assessment will conclude that the local road system cannot support major increases in heavy truck movements without compromising safety.

Greenhouse gas emissions from haulage

The EIS claims that while the project triggers reporting requirements under the *Commonwealth National Greenhouse and Energy Reporting Act 2007 (NGER Act)*, it *'is anticipated to generate minimal quantities of greenhouse gas emissions'*. (6.2.3). Not mentioned however are what will inevitably be significant greenhouse gas emissions from the truck movements associated with the quarry, and the loss of carbon capturing vegetation. We submit that these must be considered against Sustainable Development principles, and that as concerns about climate change and the effect of emissions continue to grow, it is no longer acceptable to dismiss this issue so lightly.

Air quality

The EIS appears to assert that there will be no significant adverse effect on air quality from the project (Chapter 10).

We are not qualified to comment in detail on the detailed assessment of air quality impacts, but assume that the Department has access to expert advice, and trust that it will critically review the findings in the EIS and supporting reports.

Groundwater

We note that Hunter Water and the Natural Resources Access Regulator (NRAR) have both raised some concerns about groundwater (EIS Table 5.2) – the applicant asserts that it has addressed these concerns in Chapters 8 & 17 and Appendices D & L, and that *'The project is not anticipated to result in impacts to the quantity and quality of available surface and groundwater resources'* (6.3.2).

We are not qualified to comment in detail on the detailed assessment of groundwater impacts, but assume that the Department has access to expert advice, and trust that it will critically review the findings in the EIS and supporting reports.

It seems obvious that such a major operation, involving in its later stages excavation to 15 metres below AHD (sea level) (= 16-17 metres below the groundwater table at this site (EIS 4.2) must have at least the potential to effect some changes, which could have consequences both for other water users in the area and for the ecological status of the site itself, both during and after mining operations. We doubt if the project is compatible with water related provisions of the *Hunter Regional Plan* – specifically *Direction 15: Sustain water quality and security*.

We observe that this (along with the proposed mine at Bobs Farm – SSD 6395) would be one of the first significant sand mines in the area to propose excavation well below groundwater level – most of the others are either harvesting windblown sand or taking surface deposits from vegetated land with consents typically limiting excavation to a metre or less below ground level, and above the water table. As such the proposal for 'wet-mining' represents a completely new and uncertain threat to the local hydrology (and ecology).

From Appendix D Hydrogeological Assessment Table 10, we note that there is a significant change in the site water balance with existing or Pre-Lake inflow rates (345 ML/a) greater than outflow rates (307 ML/a). However, following the completion of the lake, the estimated flow rates have increased and the balance is reversed with inflow (522 ML/a) now lower than outflow (589 ML/a). This invites the question how will the lake ever fill?

We note that in relation to the proposed Bobs Farm mine, Hunter Water have major concerns about the potential effect on groundwater and is opposed both to the depth of excavation proposed and to the creation in that project of a permanent 25ha lake. (*Hunter Water submission on the DoP Major Projects website for SSD 6395*).

The site falls only just outside the Broader Management Zone for the PFAS contamination area at Williamstown. It is not clear what the following statement actually means in terms of risk: *'All analysis for PFAS compounds at bores MW_X1, MW_X2, MW_X7 and GW4 reported no concentrations above the laboratory limit or reporting between January and June 2018'.* (8.3.2) In any case, the main concern relating to PFAS would be the potential effect of the large scale disturbance of soil and groundwater from the proposed excavations over 20-25 years.

Table 17.1 suggests that the issue of the PFAS contamination area is expressly addressed in section 17.3-17.5 and Appendix L but we can see no such consideration in those paragraphs. It may be contained in Appendix L but if so a summary of the findings should be included in the EIS. We submit that the applicant should be required to provide a more detailed analysis of the potential implications of the project for the community adversely affected by PFAS contamination.

The EIS mentions washing of the extracted sand (Table 1.1 and 4.2.4, and Chapter 17) but does not adequately explain the quantities of water required, from where it would be sourced and to where it would be discharged. Chapter 17 is far from clear about the overall water balance and implications of water use for the project and we submit that further information is required.

Ecological impact

The EIS summarises the rehabilitation to date of the former extraction area that comprises the project site (extraction ceased in 2008), noting that *'with the older rehabilitated areas of the former inland extraction area having well established tree cover, while more recent rehabilitated areas of the inland extraction area have smaller trees and shrubs.'* (22.1.2) Photograph 1 in Appendix A of Appendix O (Rehabilitation Strategy) to the EIS clearly shows that the areas include sizeable trees.

The EIS admits that there will be *'partial loss of two native vegetation communities and threatened species habitat in the project site'* and that *'A residual risk of indirect impacts to biodiversity remains.'* (Table 6.3)

The EIS asserts that *'Despite the unavoidable loss of native vegetation communities and threatened fauna habitat, compensatory measures would be implemented in the form of a biodiversity offset strategy, with long term biodiversity impacts likely to be minimised via the implementation of a successful rehabilitation strategy for the project site.'* (6.3.2)

The EIS states that under the Port Stephens Comprehensive Koala Plan of Management (PSCKPoM) *'The project site is mapped as 'Supplementary' Koala habitat ... important to the long-term conservation of Koalas in Port Stephens'* (6.7.4) It appears that all of this habitat on the site will be cleared leaving a freshwater pond in perpetuity (22.2). While the EIS asserts that the project *'will avoid decreasing the width of a wildlife corridor along Nelson Bay Road'*, it is difficult to see how the loss of the

adjacent supplementary habitat on the currently rehabilitated inland (previous) extraction area will not have precisely that effect.

We submit that the project is not consistent with Direction 14 of the Hunter Regional Plan HRP which identifies the need to protect biodiversity and connect natural areas, despite the attempted re-assurance in the EIS (6.8.1)

Bio-banking offsets

The EIS suggests that Boral may buy bio-banking offset credits to offset unavoidable environmental losses (discussed above), although other options are mentioned, but no specific proposal is made (9.6)

We have fundamental concerns about the entire bio-banking and offset policy as currently implemented in NSW, and while we have to reluctantly accept that it is currently available to Boral for this project, we submit that the consent authority should not automatically accept that any environmental damage can just be 'paid off' with a cash payment to biodiversity protection in other geographic areas.

As already noted above, the permanent lake to be left after the cessation of the quarry mine would significantly decrease in the width of the current wildlife corridor.

Site rehabilitation

Rehabilitation is addressed by Chapters 22 and 23 of the EIS and Appendix O. The EIS explains that *'Upon completion, the project site will be left as a freshwater pond'* (22.2)

To call this a pond is misleading – at 23.3 hectares, this would be a large lake (Appendix D, p34).⁴ The applicant proposes a range of rehabilitation measures around the edges of the lake, and possibly some aquatic species. (EIS 22.2)

The EIS asserts that *'The Stockton Transgressive Dune Quarry Rehabilitation and Landscape Management Plan will be updated to reflect biodiversity management measures to protect and manage biodiversity values.'* (23.2) This commitment is wholly misleading without a clear admission that almost the entire area currently subject to the management plan will be under water in perpetuity!

Academic papers highlight the issues and the consequences of leaving remediation in the hands of miners (Walters A. *The Hole Truth: the mess coal companies plan to leave in NSW*, Energy and Resource Insights NSW 2016., and Hunt, D B *A new framework for evaluating beneficial end-uses for mine voids. Ph.D. Thesis Curtin University, School of Agriculture and Environment. 2013*). Relevant key messages from these papers include the time required for holes to fill with water that is clean enough for the

⁴ Assuming it ever fills – see out comments above on the estimated flow rates.

proposed use and the costs of remediation (including land management costs between the cessation of mining and establishment of the new use.

Enforcement of rehabilitation conditions is often poor and fines when levied so small as to make them an acceptable business risk. We submit that unless sufficient financial bonds are required to be lodged in advance to pay for all required rehabilitation in the event of financial failure etc., the assessment must judge the project on the assumption that the mined area will remain unimproved, with the consequent loss of amenity, habitat and other adverse ecological, economic and social effects.

Economic impact

The EIS confirms that the sand from the project is primarily intended for use in the Hunter Region and Greater Sydney as fine aggregate in concrete. (1.2.1)

The analysis of the need for the project (Chapter 21 and Appendix N) includes this statement: *'it is most likely that other Stockton Bight sand suppliers further to the north will take up a shortfall in Boral's production if the quarry closes.'* (EIS 1.2.2) This suggests that there are alternative sources of supply and that the applicant's case is largely one based on competitive commercial interest rather than an absolute supply shortage.

The EIS states that *'The CBA (cost benefit analysis) determined the project will have a maximum net benefit of \$41 M to Australia and \$17 M to NSW. (6.3.2) Estimated employment is 9 jobs (direct and indirect) + a further 16 from associated transportation (21.4)*

We submit that the claims of a net economic benefit cannot be sustained in light of the earlier admission that alternative supplies would likely meet the demand – presumably with a similar level of investment and employment elsewhere in the locality.

We submit that the Department needs to seek independent assessment of the applicant's economic justification, including expert advice from NSW Resources and GeoScience.

Conclusion

TRRA Inc. submits that this application should be refused, on multiple grounds as detailed in this submission.

Appendix A: Figure 1 Sand mining Map

Appendix A: Table 1 Sand mining overview