



Our Ref: DOC21/966417

Your Ref: SSD_10398

Team Leader, Energy Resource Assessment
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

Attention: Mr James McDonough

Dear Mr McDonough

RE: Response to Submissions Tweed Sand Plant Expansion, Cudgen Tweed LGA (SSD 10398)

Thank you for your referral dated 1 November 2021 about the Response to Submissions for the proposed Tweed Sand Plant Expansion at Cudgen seeking comments from the Biodiversity and Conservation Division (BCD) of the Biodiversity, Conservation and Science Directorate in the Environment, Energy and Science Group of the Department of Planning, Industry and Environment. I appreciate the opportunity to provide ongoing input and appreciate the extension of time provided for these comments.

We have reviewed the documents supplied in the Response to Submissions package. We reiterate the major issue for the BCD is that the EIS, and the revised supporting documents, fail to identify a suitable final land use or provide for the appropriate rehabilitation of the site following sand extraction. Detailed comments on this are provided in **Attachment 1** to this letter.

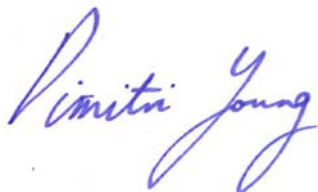
The BCD recommends:

1. The project must identify a suitable end use and a proposed rehabilitation strategy for the site having regard to the key principles in the *Strategic Framework for Mine Closure*, and should set out a comprehensive closure plan that returns the site to viable, and where practicable, self-sustaining ecosystems, and demonstrates the plan will be adequately financed, implemented and monitored.
2. The rehabilitation plan should be amended to describe how the land will be restored to viable, self-sustaining ecosystems that will provide diverse and flourishing habitats for native species and should also demonstrate clear measurable targets, timeframes, responsibilities, monitoring and performance criteria for these works that will enable future oversight.
3. All required offsets must be identified in the BDAR for the development. The BDAR should set out the staged delivery of the offset requirements so that these will be met before any clearing occurs for each stage. This must include delivering offsets for areas that were required to be rehabilitated for the existing Tweed Sand Plant prior to commencing any expansion works should this project be approved.

The BCD requests an opportunity to review any revised information in relation to the issues we have raised.

If you have any questions about this advice, please do not hesitate to contact Ms Rachel Lonie, Senior Conservation Planning Officer, at rachel.lonie@environment.nsw.gov.au or 6650 7130.

Yours sincerely



3 December 2021

DIMITRI YOUNG
Senior Team Leader Planning, North East Branch
Biodiversity and Conservation

Enclosure: Attachment 1. BCD Detailed Comments - Response to Submissions Tweed Sand Plant Expansion, Cudgen Tweed LGA (SSD 10398)

Attachment 1: Detailed BCD Comments – Response to Submissions for the proposed Tweed Sand Plant Expansion at Cudgen

The Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment has reviewed the Response to Submissions for the proposed Tweed Sand Plant Expansion at Cudgen and we provide the following comments.

1. Final Land Use

The EIS and revised documentation fail to identify a suitable final land use or provide for appropriate rehabilitation of the site.

The Secretary's Environmental Assessment Requirements issued for this project required the proponent to provide a proposed rehabilitation strategy for the site having regard to the key principles in the *Strategic Framework for Mine Closure*. This Strategic Framework aims to encourage the development of comprehensive closure plans that return all mine sites to viable, and wherever practicable, self-sustaining ecosystems, and that these plans are adequately financed, implemented, and monitored. These requirements have not been met as discussed below.

In addressing the final end-use issue, the Submission Response Table (SRT) (p14) states:

"...Hanson will retain ownership of the site following completion of sand extraction and any proposed subsequent use of the site would be decided via the appropriate consultative, application and regulatory processes in place at that time... In summary, if an appropriate alternative use cannot be found for the site at the completion of sand extraction, the land will be left as a rehabilitated natural area to provide flora and fauna habitat."

The JWA Response to our BCD comments states:

"The details requested by BCD would be addressed in future detailed RLMPs prepared and approved prior to each phase of the proposed expansion (as required by the Concept RLMP)."

These responses do not address the issues that we have raised and seek to defer decisions on these critical matters .

North-eastern NSW is undergoing rapid urban growth as evidenced by the nearby Tweed Valley Base Hospital, which is currently under construction, and numerous large residential land releases in the Tweed Local Government Area. Land for residential and open space to meet the needs of a growing population will be in high demand given its proximity to the Gold Coast and Brisbane.

Climate change will impact on sea level rise and will likely accelerate coastal erosion in the coastal strip, placing more pressure on coastal lands for such land uses. The BCD questions the use of this land for an extractive industry and the extent of the proposed extraction area with the legacy issues that it will entail for the community and the council.

Deferring resolution of the final land use to a future stage (estimated to be 30 years in the future) does not meet the requirement to demonstrate how the extraction areas will be returned to viable, and wherever practicable, self-sustaining ecosystems, or how the rehabilitation will be adequately financed, implemented and monitored at this time. The lack of a defined and suitable end use or uses creates potential future risks and costs for future generations.

BCD Recommendation

1. The project must identify a suitable end use and a proposed rehabilitation strategy for the site having regard to the key principles in the *Strategic Framework for Mine Closure*, and should set out a comprehensive closure plan that returns the site to viable, and where practicable, self-sustaining ecosystems, and demonstrates the plan will be adequately financed, implemented and monitored.

2. Concept Rehabilitation and Landscape Management Plan

The BCD does not consider the rehabilitation arrangements as described in the Concept Rehabilitation and Landscape Management Plan (CRLMP) prepared by JWA dated November 2021 adequately meet the above Strategic Framework principles. The proposed rehabilitation involves small, linear strips of vegetation around open bodies of water. These strips will become increasingly waterlogged and degraded over time as described in the SRT (p2):

“The predicted sea level rise in this area will, over time, exacerbate the tidal inundation and impede the site’s drainage, leading to increased waterlogging and salinisation of soils. As time progresses the site (and indeed the adjacent land uses on the same landform) will degrade further with a consequent reduced capacity to support agricultural production, including sugar cane.”

The proposed final phase of the project is for large open water bodies where the sand has been extracted with limited rehabilitation areas around the fringes of the water bodies. These areas will have limited biodiversity or recreational values. As noted above, the SRT states “if an appropriate alternative use cannot be found for the site” the land will be retained in private ownership (Hanson). Such areas would require ongoing management and monitoring to protect water quality and other environmental values. It is not clear how such management and monitoring would be funded by the company once it has completed its extraction operations at the site.

The final rehabilitation will result in large bodies of standing open water. No specific goals for the end-use water quality have been established as discussed in the Surface Water Assessment Appendix B to the EIS by Gilbert and Sutherland.

The Tweed Shire Council commented that:

“it is possible substantial resources will have to be allocated to maintaining water quality at a primary contact recreation standard. Correction of pH may be required due to acid sulfate soil conditions. Algae growth may need to be addressed. Further information is required regarding end use and long-term management/control/ownership of the lakes.”

The BCD agrees with these comments and questions how the water quality in the lakes will be managed and maintained over time. It might be possible for the lakes to provide habitat for migratory and other bird and aquatic species. However, the CRLMP does not provide details on how aquatic or migratory bird habitats would be created despite including limited monitoring requirements for birds, fish, and macroinvertebrates. These requirements are not meaningful without measurable targets.

We do not have any certainty the land would be retained by Hansons and the company would continue costly rehabilitation and monitoring works once the commercial use of the land has ceased.

The existing Hanson Sand Plant requires detailed water and terrestrial monitoring and is yet to reach the targets for rehabilitation. The BCD (and formerly OEH) has reviewed Annual Reports since 2017 and notes the terrestrial and wetland rehabilitation has been slow with limited success. For example, the most recent *Annual Review Tweed Sand Plant Cudgen by Gilbert and Sutherland dated September 2021* reported Transect Results for rehabilitation area 1 as 81% exotic cover and 46.6% native cover. This area was required to be fully rehabilitated by 2021.

The current wetland regeneration is characterised by dense stands of Broad-leaved cumbungi (*Typha orientalis*) and/or Common reed (*Phragmites australis*) in rehabilitation areas 1, 3 and 5. The BCD has raised issues with the progress and effectiveness of the rehabilitation including the dominance of the above wetland species which are known to form monocultures. From the data provided in the Annual Review *P. australis* appears to be dominating the wetland rehabilitation areas with very limited plant diversity. These results demonstrate the current Sand Plant will still require considerable work over a longer period to become a viable restored landscape.

BCD Recommendation

2. The rehabilitation plan should be amended to describe how the land will be restored to viable, self-sustaining ecosystems that will provide diverse and flourishing habitats for native species and should also demonstrate clear measurable targets, timeframes, responsibilities, monitoring and performance criteria for these works that will enable future oversight.

3. Biodiversity Development Assessment Report (BDAR)

The Revised Biodiversity Development Assessment Report (BDAR) prepared by JWA and dated October 2021 suggests that prior to the commencement of sand extraction works within each phase, a phase-specific BDAR (or assessment in line with the relevant legislation at that time) will be prepared to accurately assess impacts and offset obligations. The BCD does not support this approach.

BCD Recommendation

3. All required offsets must be identified in the BDAR for the development. The BDAR should set out the staged delivery of the offset requirements so that these will be met before any clearing occurs for each stage. This must include delivering offsets for areas that were required to be rehabilitated for the existing Tweed Sand Plant prior to commencing any expansion works should this project be approved.