



Office of
Environment
& Heritage

Our Ref: DOC15/505335

Your Ref: Cudgen Lakes Sand Project – Modification 1

Dr. H Aiken
Team Leader – Resource Assessments Planning Services
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Attention: Ms Genevieve Seed

Dear Dr Aiken

Re: Cudgen Lakes Sand Project – Modification 1 Invitation to Comment

Thank you for your email dated 7 December 2015 regarding the proposed Modification to the Cudgen Sands Project requesting comments from the Office of Environment and Heritage (OEH). I appreciate the opportunity to provide input and apologise for the delay in responding.

We note that the project will be assessed in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The feedback on the Environmental Assessment (EA) provided by the OEH is limited to Aboriginal cultural heritage, biodiversity, OEH estate, historic heritage, acid sulphate soils, flooding, stormwater and coastal erosion.

Please be aware that the Environment Protection Authority (EPA) is no longer part of the OEH and so this response is not based on any consideration of matters relating to noise, air and water quality. If you do require information on these matters or any licensing requirements under the *Protection of the Environment Operations Act 1997* please contact the EPA separately.

The proponent should ensure that the Environmental Assessment (EA) will be sufficiently comprehensive to enable unambiguous assessment of all direct and indirect impacts of the proposal. The EA should include an assessment of the potential impacts on biodiversity, including threatened species, populations, ecological communities, or their habitats likely to occur on or near the subject site, as well as Aboriginal cultural heritage values and flooding. We consider that this information is necessary for a comprehensive EA for the proposal.

The OEH cannot currently support the modification application for the Cudgen Lakes Sand Project – Modification 1 with respect to flooding issues as the Environment Assessment prepared by Gales – Kingscliff Pty Ltd does not provide sufficient supporting information to undertake a detailed assessment.

The OEH recommends, that, prior to the determination of the Modification the proponent undertakes a detailed flood impact assessment of the proposed filled area and particularly the 2m high bund. The flood impact assessment should include the following:

- Description of the flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 10% AEP , 1% AEP and the probable maximum flood events (or an equivalent extreme event) for both the local catchment and Tweed River flooding.
- The impact of the proposed project on existing flood behaviour for a flood events mentioned above.
- Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.

This flood impact assessment is to be provided to the OEH for further consideration and advice.

The full list of our requirements was previously provided in correspondence from the OEH issued during 2005 to 2008. The OEH now provide a list of additional requirements relevant to the current modification, these requirements are in **Attachment 1**. In preparing the EA, the proponent should refer to the relevant guidance material listed in **Attachment 2**.

If you have any further questions about this issue, Mr Clyde Treadwell, Conservation Planning Officer, Regional Operations, OEH, can be contacted on 6659 8288 or at clyde.treadwell@environment.nsw.gov.au.

Yours sincerely



12/1/2016

ROSALIE NEVE
A/Senior Team Leader Planning, North East Region
Regional Operations

Contact officer: CLYDE TREADWELL 6659 8288

Enclosure: OEH Recommended Requirements for Cudgen Lakes Sand Project – Modification 1

Attachment 1

OEH's Recommended Requirements

for

Cudgen Lakes Sand Project – Modification 1

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A. The Proposal

Background

The Cudgen Lakes Sand Quarry is located in Cudgen northeastern NSW, approximately 8 km south of the New South Wales/Queensland Border. The Proposal by Gales-Kingscliff Pty Ltd to develop and operate the sand extraction and processing operation was initially approved on 16 June 2009.

The approved quarry provides for the hydraulic delivery of sand for use as fill at nominated locations within the local area to raise the elevation of land for development in accordance with a proposed strategic development plan. The quarry will also supply construction materials to the surrounding region and receive virgin excavated natural material (VENM) for back filling and rehabilitation purposes.

The sand resource within the approved extraction areas totals approximately 5 million m³. The maximum approved annual extraction rate is 650,000 m³ of which up to 300,000 tpa of products, including fine-grained concrete/construction sand, mortar sand/brickies loam and fill sand, may be transported from site by road registered trucks.

Following rehabilitation, it is proposed to retain the southern extraction area as a recreational lake tying into the broader strategic development plan of Gales-Kingscliff Pty Ltd.

The proponent has submitted a Modification Application for the Cudgen Lakes Sand Project, Altona Road, Cudgen, in the Tweed Shire local government area. The proposal involves:

- constructing and operating a temporary processing area (6 year life) within the northwest corner of the approved Southern Extraction Area;
- constructing a 2 metre bund adjacent to the southern and south-eastern boundary of the temporary processing area;
- constructing a temporary site entrance and access road from Altona Drive;
- obtaining fill material from an existing sand stockpile and imported surface material; and
- site landscaping.

The Environmental Assessment (EA) has identified the environmental objectives for the proposal and clearly describes the proposal. These environmental objectives identified will guide decisions on environmental controls and management throughout the life of the proposal.

B. Environmental Impacts of the Proposal

Before determination of the Modification, impacts related to the following environmental issues need to be assessed, quantified and reported:

- Flooding, Stormwater and Coastal Erosion

The EA should address the specific requirements outlined in section D below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at **Attachment 2**.

C. Acid Sulphate Soils

The EA should address the following:

1. The potential impacts of the proposal on acid sulphate soils must be assessed in accordance with the relevant guidelines in the Acid Sulphate Soils Manual (Stone et al. 1998) and the Acid Sulphate Soils Laboratory Methods Guidelines (Ahern et al. 2004).
2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

D. Flooding, Stormwater and Coastal Erosion

OEH cannot currently support the modification application for the Cudgen Lakes Sand Project – Modification 1 with respect to flooding issues as the Environment Assessment prepared by Gales – Kingscliff Pty Ltd does not provide sufficient supporting information to undertake a detailed assessment.

The OEH recommends, that, prior to the determination of the Modification the proponent undertakes a detailed flood impact assessment of the proposed filled area and particularly the 2m high bund. The flood impact assessment should include the following:

- Description of the flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 10% AEP , 1% AEP and the probable maximum flood events (or an equivalent extreme event) for both the local catchment and Tweed River flooding.
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This flood impact assessment is to be provided to the OEH for further consideration and advice.

The EA should include an assessment of the following referring to the relevant guidelines in Attachment 2:

1. The potential effect of coastal processes and coastal hazards including potential impacts of sea level rise:
 - a. on the proposal; and

- b. arising from the proposal.
2. Whether the proposal is consistent with any coastal zone management plans.
 3. Whether the proposal is consistent with any floodplain risk management plans.
 4. Whether the proposal is compatible with the flood hazard of the land.
 5. Whether the proposal will significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties.
 6. Whether the proposal will significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
 7. Whether the proposal incorporates appropriate measures to manage risk to life from flood.
 8. Whether the proposal is likely to result in unsustainable social and economic costs to the community as a consequence of flooding.
 9. The implications of flooding over the full range of potential flooding, including the probable maximum flood, should be considered as set out in the NSW Government Floodplain Development Manual. This should include the provision of:
 - a. Full details of the flood assessment and modelling undertaken in determining any design flood levels (if applicable), including the 1 in 100 year flood levels.
 - b. A sensitivity assessment of the potential impacts of an increase in rainfall intensity and runoff (10%, 20% and 30%) and sea level rise on the flood behaviour for the 1 in 100 year design flood if applicable.
 10. All site drainage, stormwater quality devices and erosion / sedimentation control measures should be identified and the onsite treatment of stormwater and effluent runoff and predicted stormwater discharge quality from the proposal should be detailed.

E. Cumulative Impacts

The EA should include an assessment of the following:

1. The cumulative impacts, including both construction and operational impacts, from all clearing activities and operations, associated edge effects and other indirect impacts on cultural heritage, biodiversity and OEH Estate in accordance with the *Environmental Planning and Assessment Act 1979*.
2. The cumulative impacts, including both construction and operational impacts, of the proponent's existing and proposed development and associated infrastructure (such as access tracks etc.) as well as the cumulative impact of the development in the context of other developments located in the vicinity.

Attachment 2 – EA Guidance Material

Title	Web address
<u>Relevant Legislation</u>	
<i>Coastal Protection Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+13+1979+cd+0+N
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Floodplain Development Manual</i>	http://www.environment.nsw.gov.au/floodplains/manual.htm
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Threatened Species Conservation Act 1995</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<u>Aboriginal Cultural Heritage</u>	
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (2005)	Available from DPE.
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/consultation.htm
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/licences/archinvestigations.htm
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm

Biodiversity

BioBanking Assessment Methodology (DECC, 2008)	http://www.environment.nsw.gov.au/resources/biobanking/08385bbassessmethod.pdf
BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW, 2008)	http://www.environment.nsw.gov.au/biobanking/operationalmanual.htm
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (DECCW, 2009)	http://www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004)	http://www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf
Guidelines for Threatened Species Assessment (Department of Planning, July 2005)	Draft available from DPE
OEH Threatened Species website	http://www.environment.nsw.gov.au/threatenedspecies/
Atlas of NSW Wildlife	http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp
BioBanking Threatened Species Database	http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm
Vegetation Types databases	http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm
PlantNET	http://plantnet.rbgsyd.nsw.gov.au/
Online Zoological Collections of Australian Museums	http://www.ozcam.org/
Threatened Species Assessment Guideline - The Assessment of Significance (DECCW, 2007)	http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf
Principles for the use of biodiversity offsets in NSW	http://www.environment.nsw.gov.au/biocertification/offsets.htm

OEH Estate

Land reserved or acquired under the NPW Act

List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
OEH Revocation of Land Policy	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/protectedareas/10509devadjdeccw.pdf

Water and Soils

Acid sulphate soils

Acid Sulfate Soils Planning Maps

<http://canri.nsw.gov.au/download/>

Acid Sulfate Soils Manual (Stone et al. 1998)

Manual available for purchase from:

<http://www.landcom.com.au/whats-new/the-blue-book.aspx>

Chapters 1 and 2 are on DPI's Guidelines Register at:

Chapter 1 Acid Sulfate Soils Planning Guidelines:

<http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf>

Chapter 2 Acid Sulfate Soils Assessment Guidelines:

<http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf>

Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)

<http://www.derm.qld.gov.au/land/ass/pdfs/lmg.pdf>

This replaces Chapter 4 of the Acid Sulfate Soils Manual above.

Flooding and Coastal Erosion

Reforms to coastal erosion management

<http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm>

Floodplain development manual

<http://www.dnr.nsw.gov.au/floodplains/manual.shtml>

Coastline management manual

<http://www.environment.gov.au/coasts/publications/nswmanual/index.html>

Note: To be replaced by the Guidelines for preparing coastal zone management plans, due for release by end of 2010. This document will be available on OEH's website – draft currently available at <http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm>.

Estuary management manual

Available on request from OEH or on interlibrary loan

Note: To be replaced by the Guidelines for preparing coastal zone management plans, due for release by end of 2010. This document will be available on OEH's website – draft currently available at <http://www.environment.nsw.gov.au/coasts/coastalmgtdocs.htm>.

Water

Water Quality Objectives

<http://www.environment.nsw.gov.au/ieo/index.htm>

ANZECC (2000) Guidelines for Fresh and Marine Water Quality

http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality

Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones

<http://deccnet/water/resources/AWQGuidance7.pdf>

Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)

http://www.environment.nsw.gov.au/resources/legislation/approved_methods-water.pdf

