



Our reference: : DOC18/93227-03
Contact: : Armidale EPA Office – 02 6773 7000 – armidale@epa.nsw.gov.au
Date : 20 March 2018

Mr Ken Fox
Acting Service Leader Business Units
Armidale Regional Council
Po Box 75A
ARMIDALE NSW 2350

By Email: council@armidale.nsw.gov.au

Dear Mr Fox,

Armidale Regional Landfill - Proposed liner redesign - DA06_220

The Environment Protection Authority (EPA) refers to recent discussions with Armidale Regional Council ('Council') staff regarding proposed changes to the waste cell liner, leachate pond liner and sidewall leachate drainage system from those currently stipulated within the approved Development Consent DA06_220. Proposed changes to these designs, prepared by GHD on behalf of Council, were forwarded to the EPA for review and comment on 15 February 2018.

The EPA has reviewed the documentation and can provide the following comments;

1. **Condition No. 5 of DA 06_220, Waste Cell Liner:** – Council have proposed to remove the 900mm clay liner and replace with a geosynthetic clay liner (GCL) directly over the existing clay in situ with appropriate quality assurance on the subgrade material with a 2mm HDPE liner over the top of the GCL.

The proposed change meets the requirements of the EPA. I note it is in accordance with Section 1.1 of the EPA's 2016 Environmental guidelines for solid waste landfills which states: "*As an alternative to compacted clay, a geosynthetic clay liner may be used, provided it is used in composite with an overlying geomembrane liner.*"

2. **Condition No. 7 of DA 06_220, Changes to Leachate pond liner:** – Council have proposed to reduce the thickness of the clay from 900mm with a permeability of less than 10^{-9} down to 600mm with a permeability of 2×10^{-10} in conjunction with a 2mm HDPE liner on top.

The proposed change meets the requirements of the EPA to reduce the thickness of the clay down to 600mm deep but with an improvement in the permeability to 2×10^{-10} .

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3. **Sidewall leachate drainage system:** – proposed to change the construction from a leachate drainage gravel to a drainage geocomposite.

The proposed change meets the requirements of the EPA. It is in accordance with Section 1.8 of the EPA's 2016 Environmental guidelines for solid waste landfills which states: *"An appropriately designed geonet drainage geocomposite may be used as an alternative to gravel drainage layer in secondary applications, such as sidewall leachate drainage"*.

The EPA can confirm that the proposed changes meet the relevant requirements of the EPA's 2016 Environmental Guidelines for Solid Waste Landfills. As such, the EPA considers these changes to be a minor amendment to design and will not result in any additional or adverse environmental impact.

Council must seek clarification or modification of the relevant consent conditions from NSW Department of Planning & Environment to ensure compliance with the consent prior to undertaking the intended works.

If you have any questions or wish to discuss this matter further, please contact the Armidale EPA office on (02) 6773 7000 or by email to armidale@epa.nsw.gov.au

Yours sincerely,



REBECCA SCRIVENER
Acting Head Regional Operations Unit – Armidale Region
Environment Protection Authority