



Department of Primary Industries

OUT14/40587

Mr Thomas Piovesan
Industry, Key Sites and Social Projects
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

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Dear Mr Piovesan,

Penrith Lakes Scheme (DA 1 Mod 1) Proposed Modification

I refer to your email dated 10 November 2014 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment by Agriculture NSW

Agriculture NSW has reviewed the modification documents and provides comments in Attachment A.

For further information please contact Andrew Docking, Resource Management Officer (Richmond office) on 4588 2128, or: andrew.docking@industry.nsw.gov.au.

Comment by NSW Office of Water

The NSW Office of Water has reviewed the Section 75W Modification Environmental Assessment for the proposed Management of Residual Materials and has minimal comment on the proposal.

The report titled "s75W Modification Application – Environmental Assessment Report – Penrith Lakes Management of Residual Materials" (the report), dated October 2014, prepared by JBA Urban Planning Consultants Pty Ltd on behalf of Penrith Lakes Development Corporation (PLDC), states that PLDC has identified that some of the residual materials derived from previous agricultural and extractive industries at the site would be better consolidated on-site, compared with off-site transport and disposal. The materials are claimed to include concrete, rubber tyres, metal piping, general plastics and vehicle parts, and asphalt/road base stockpiles. Many of these materials are able to be recycled and recycling could be encouraged in place of onsite burial where this is a viable option. The NSW Environment Protection Authority should be consulted in this regard. No cost-benefit analysis of recycling/reuse of these materials appears to have been provided.

The report claims that as the base of the proposed residual materials consolidation area is at a minimum of 10m above the level of the Nepean River, and similarly above the water-level that will be created in nearby lakes system and the underlying groundwater level, the proposed modification is unlikely to impact on existing groundwater flows. Evidence of groundwater levels relevant to the proposed consolidation area should be provided to substantiate this claim.

I note that the physical barrier of the residual materials consolidation area would include a 500mm thick highly impervious clay seal, which will minimise the amount of water infiltrating into the residual materials consolidation area and so will minimise the amount of water coming into contact with buried residual materials. While it is claimed that the inert dry materials proposed to be consolidated are relatively stable in the natural environment and are not characteristic of products that generate contaminated leachate, the NSW Office of Water would prefer the entire consolidation area to be clay-lined to prevent any potential contamination of the local aquifer, unless evidence of isolation of the consolidation area from the aquifer can be provided.

The proposed location of the consolidation area appears to be on the outside bend of the Nepean River, making it more susceptible to erosion during floods. As such, the geomorphic implications of this proposal need to be explored to ensure that the disturbed area will not be significantly impacted during periods of floods and high flows over the site.

While the proponent is exempt from the need to obtain a Controlled Activity Approval in relation to this proposal, any works on waterfront land (as defined in the *Water Management Act 2000*) should still be conducted in accordance with the NSW Office of Water's Guidelines for Controlled Activities.

The recommended condition of approval is at Attachment B.

Should you require further information please contact Richard Nevill on (02) 8838 7570 or email richard.nevill@dpi.nsw.gov.au.

Yours sincerely



Kristian Holz
Director Policy, Legislation and Innovation

Attachment A

Penrith Lakes Scheme (DA 1 Mod 1) Proposed Modification Comment by Agriculture NSW

Residuals and Tyre Burial on Agricultural Land, Penrith Lakes Scheme

Agriculture NSW has reviewed the proposal for the disposal of residues including a large numbers of vehicle tyres through burial and topsoil coverage and forwards the following comments.

1. The land is near or within mapped Biophysical Strategic Agricultural Land (Attachment).
2. The rehabilitation of the site should be to at least the previous existing level of agricultural potential. The use of tyres for filling land is not a recommended or common technique for rehabilitating agricultural land. The Department has no field experience on the practice. There are a number of potential impacts.
 - The benefits in terms of improved drainage and subsoil aeration would depend strongly on the particle size of the rubber material. Buried whole tyres would retain large air gaps and be of limited use for water retention and root growth. Drainage through such a zone would not occur until the topsoil was saturated, limiting the benefits and restricting root growth to the topsoil zone. However, under supersaturated conditions the zone may assist in reducing extended waterlogging, provided that a high water table did not develop in the zone. The benefits might be greater if the tyres were more finely shredded and mixed with soil.
 - If the zone of buried tyres contains little interspersed soil, it would create a layer of low soil fertility and contribute little to plant growth.
 - Any large air gaps would make the zone susceptible to rapid movement of saturated flow, containing any soluble material. The zone would transmit readily any water table movements.
 - During saturated conditions, any air pockets in the tyres may cause the tyres to rise over time. Whether this occurs would depend on how effectively they have been 'laced'.
 - Over the very long term, some breakdown of the tyres may occur. There may be some potential for contaminant release and movement. It is unlikely that this would affect plant growth noticeably.
3. Any weed management should be in line with State, regional or local weed management plans or strategies, in particular, it should be consistent with the Hawkesbury River County Council Weed Management Plan.
4. Topsoil should remain on-site for the final landform rehabilitation.
5. In conclusion, the site post tyre fill should be capable of growing pasture. Shredding of tyres and mixing with soil would most likely be better for soil drainage and limit creating a zone of soil infertility. The use of car waste products as landfill is not an economically or environmentally sustainable solution and alternative-recycling options should be investigated. Although the Department of Primary Industries does not formally object to this proposal, Agriculture NSW does not support in principle the use of tyres as landfill unless it improves the quality of the agricultural land.

Attachment



Mapped Biophysical Strategic Agricultural Land – Penrith Lakes

End Attachment A

Attachment B

Penrith Lakes Scheme (DA 1 Mod 1) Proposed Modification

NSW Office of Water recommended condition of approval

1. Works on waterfront land (as defined in the *Water Management Act 2000*) are to be conducted in accordance with the NSW Office of Water's Guidelines for Controlled Activities.

End Attachment B