Ms Jacqueleine Moore
A/ CEO
NSW EPA
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3 May 2022

Dear Ms Moore

Re: Operational purpose deductions from the waste levy

The Waste Management and Resource Recovery Association of Australia (WMRR) and the Australian Landfill Operators Association (ALOA) are writing to the EPA to jointly request consideration and review of the current regulations regarding deductions from the waste levy for materials used for operational purposes at landfill sites.

WMRR is the national peak body for all stakeholders in the essential $15.5 billion waste and resource recovery industry. We have more than 2,000 members across the nation who are involved in a range of important waste management and resource recovery activities within the Australian economy, including the responsible management of residual materials, which is an important and essential role in an effective best practice waste management and resource recovery system.

ALOA was formed in late 2008 and is the national body representing landfill owners across Australia. Its primary purpose is to work with its members and government to develop and amend legislation that maximises the benefit the community receives in having well located, professionally operated and highly compliant engineered landfills. ALOA is entirely focussed on the landfill industry; an industry that is an essential service to the community and its membership spans both private industry and local government.

A number of technical subject matter working groups operate within the WMRR structure and this piece of correspondence has been developed with the assistance of both the NSW landfill working group that meets regularly throughout the year and ALOA. WMRR in particular, would welcome the NSW EPA attending regular meetings with the parties, similar to what occurs in other Australian states, leading to greater knowledge-sharing and understanding between the parties in relation to the NSW landfill sector.

WMRR and ALOA support the waste levy, acknowledging that it is an essential economic tool within an integrated suite of policies designed to both incentivise resource recovery and recognise the true long-term cost of managing disposed material. As an appropriate economic tool, it can support diversion targets with the overarching objective being to achieve the socially optimal level of residual waste going to landfills versus alternatives, such that the overall economic welfare of society is maximised.

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Ww also recognise that best practice landfills are required in our integrated resource recovery system, and that these must be planned, sited, designed, constructed, and operated to the highest environmental and regulatory standards. Clay and geosynthetic liners and covers are needed to minimise emissions of leachate and landfill gas to protect human health and the environment. Landfills are not simple infrastructure to manage given their size, length of life, and potential environmental impact, and in NSW, they are constructed and operated in accordance with the NSW Landfill Guidelines (which may be amended from time to time).

At present, members strive to maintain the highest possible level of quality assurance at NSW landfill sites; however, they are financially penalised when applying for operational purpose deductions due to the inconsistency between what is possible to achieve in terms of tolerance in best practice construction, and what is recognised in the *Protection of the Environment Operations (Waste) Regulation 2014* (the Waste Regulation) Clauses 14 and 15. The NSW EPA's *Environmental Guidelines: Solid Waste Landfills, Second edition, 2016* (the Landfill Guidelines) are currently being applied by landfill owners/operators, design/CQA engineers, and the EPA for the design, construction, and operation of landfills in NSW.

There are a number of inconsistencies between the 'minimum standards' outlined in the Landfill Guidelines and the operational purpose deduction criteria listed in Clause 15 of the Waste Regulation. Table 1 at Annexure A compares the requirements of the Landfill Guidelines with the operational purpose deduction criteria listed in Clause 15 of the *Waste Regulation*. It is industry's view that the inconsistencies listed in Table 1 create a situation where landfill operators incur the waste levy for these materials for operational purpose, placing an undue cost penalty on operators. This cost can significantly impact construction costs and in the case of local government sites, translates to higher costs for ratepayers and diversion of capital away from other critical community assets.

For example, one of the major problems with the limitation on allowable thickness is that this is inconsistent with the manner in which liners are able to be constructed. Kempsey Regional Council completed the construction of their last landfill cell in 2020. As with all landfill cell construction contracts, Council's contract stipulated a thickness of 300mm for the leachate drainage layer with a tolerance of -0mm, +50mm. The tolerance of -0mm, +50mm is required to ensure compliance with the Landfill Guidelines requirement of ***at least*** 300mm thick leachate drainage layer being installed across the cell base. However, as Clause 15 of the Waste Regulation specifies drainage layer media having a thickness **not greater than** 300mm, Council incurred an additional $80,000 in landfill levies for the "excess" aggregates which were placed greater than 300mm thick. This is an unreasonable cost imposed on both Council and private operators.

We believe that the current approach is in no way in line with the spirit and intent of the NSW landfill levy, which is designed to divert material from landfill, and submits that NSW EPA and industry should work together to develop a workable and practical solution that would ensure continued (and improved) best practice landfill design and operation. This would involve recognising the tolerance issue as implicit in earthworks construction. As such, we propose the Waste Regulation be amended to include an appropriate tolerance allowance (in addition to updating the materials in accordance

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with modern practices), and this could be based on each project's as-built survey and in-situ test results, instead of the fixed maximum value.

Given the complexity that exists with assessing, regulating, and managing landfills in NSW, industry is concerned that there is currently a lack of resourcing within the NSW EPA, with insufficient skills and knowledge required to review and assess this critical infrastructure; we understand that there is currently only one (1) technical EPA officer that works there part-time. These resourcing challenges have led to lengthy delays in assessing applications, as well as some very unusual guidance/license conditions issued by regulatory staff across NSW in relation to the management of issues such as alternate daily cover. Industry is very keen to work with the NSW EPA to assist with the training and development of EPA officers in the development and management of this critical infrastructure, which will only improve the quality of operations of facilities in NSW.

WMRR and ALOA would like to jointly engage and work with the EPA to resolve these challenges and invites you to meet with a representative group from the NSW landfill working groups as a matter of urgency to ensure that NSW landfills can continue to operate at the highest environmental and regulatory standards without being penalised unnecessarily in relation to costs and delays. We also request that a NSW EPA officer joins the NSW landfill group for its regular meetings to assist in increasing the understanding of the challenges and opportunities that currently exist for landfills in NSW.

We look forward to working with you on this issue. Please contact me at gayle@wmrr.asn.au to arrange a meeting time.

Yours sincerely

Gayle Sloan
Chief Executive Officer
Waste Management and Resource
Recovery Association of Australia

Colin Sweet

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Table 1 Comparison of Landfill Guideline requirements with Clause 15 of the Waste Regulation

Application	Landfill Guideline requirements	Waste Regulation, Clause 15 requirements	Inconsistencies noted
Leachate barrier system (landfill liner)	The primary barrier system should include the following components: ● Compacted sub-base 200 mm thick ● Compacted clay liner **at least 1000 mm** thick For landfills receiving more than 20,000 tonnes of waste per year, the liner should include a geomembrane over the compacted clay. A geosynthetic clay liner may be used as an alternative to compacted clay, provided it is used in composite with an overlying geomembrane liner. A protection or cushion geotextile should be used to protect geomembranes from damage by construction equipment and overlying materials.	Kinds of waste prescribed for landfill lining systems (Item 4 of Clause 15.1) include: ● Geomembranes ● Geotextiles ● Clay liners (having thickness **not greater than 900 mm**) ● Piping	● The 200mm thick sub-base required by the Landfill Guidelines is not included in Clause 15 of the Waste Regulation as an operational purpose. ● The Landfill Guidelines require the compacted clay liner to be at least 1000mm thick. Clause 15 of the Waste Regulation allows for clay liners having thickness not greater than 900 mm. ● Geosynthetic clay liners (GCLs) are not included as a prescribed waste in Clause 15 of the Waste Regulation. ● Piping is not required in landfill lining systems.
Leachate collection systems	The leachate collection layer shall comprise a 300 mm thick gravel drainage layer including collection pipework.	Kinds of waste prescribed for leachate collection systems (Item 3 of Clause 15.1) include: ● Geonets ● Geotextiles	The Landfill Guidelines require the gravel drainage layer to be **at least** 300mm thick. Clause 15 of the Waste Regulation allows for drainage layer

	A separation geotextile should be placed above the drainage layer to reduce the ingress of fines from the overlying waste A geonet drainage geocomposite may be used as an alternative to the gravel drainage layer for wall drainage and leak detection layers. The gravel drainage material should be installed in a continuous layer at least 300 mm thick across the entire base of the landfill cell.	• Drainage layer media (having thickness not greater than 300 mm) • Piping	media having a thickness **not greater than** 300mm.
Groundwater relief/management system	A groundwater relief layer may be needed below the leachate barrier where high groundwater levels could affect the stability and performance of the barrier. Where needed, the materials used in this system should be of the same quality as the materials used in the leachate drainage layer. Materials used in groundwater relief systems may therefore include: • Gravel drainage layers/trenches • Pipework • Geotextiles • Geonet drainage geocomposites	Kinds of waste prescribed for groundwater management systems (Item 6 of Clause 15.1) include: • Drainage gravels • Piping	Geotextiles and geonet drainage geocomposites are not included as a prescribed waste in Clause 15 of the Waste Regulation.
Stormwater management	Stabilisation measures include the use of batter blankets, mulching, geocellular containment systems and geobinders. Concentrated stormwater flows should be managed by armouring channels with rock or rubble to provide scour protection, check dams, batter drains, grade control structures and flumes, outlet dissipation structures, and revetments and retaining walls.	Kinds of waste prescribed for stormwater management systems (Item 5 of Clause 15.1) include: • Geomembranes • Geotextiles • Clay liners (having thickness not greater than 900 mm) • Piping • Drainage layer media (having thickness not greater	A wide range of materials and methods are used in stormwater management on landfill sites, with new products and techniques regularly becoming available to the market. The materials listed in Item 5 of Clause 15.1 of the Waste Regulation are too specific and do not encompass the materials now

	Sediment controls include vegetative buffers, silt fences, fibre rolls, turbidity or silt curtains, and sediment basins.	than 300 mm) placed over landfill base and side liners	commonly used in stormwater management systems on landfill sites.