

Proposal to revise AS/NZS 1546.1:2008 On-site domestic wastewater treatment units, Part 1: Septic tanks.

21st June 2024

Background

Standards Australia is consulting on a proposed revision to AS/NZS 154.6.1: 2008. The proposal is to mandate the installation of fixed security grates in septic tank openings with a view to preventing accidental drownings, facilitating safe maintenance practices, and promoting standardisation and compliance.

Water New Zealand Comments

Water New Zealand supports improved measures for preventing falls into septic tanks, and notes that this appears to be a wide spread issue. We do not see an update of the standard as being a priority focus to prevent this. Our members not there are existing provisions to ensure the safety of septic tanks and onsite wastewater units. The existing standard makes the following provisions:

- An opening in the top surface of the tank fitted with a cover which is removable to allow access for desludging and for visual inspection of the interior of the tank and contents, **but not intended to allow people to enter a tank.**
- Access openings are not intended to allow people to enter the tank. Where it is envisaged that a person must be able to enter the tank, such as for the purposes of repairs and maintenance, the access opening size **shall comply with the appropriate regulations.**
- The lid and the access opening cover shall both be bedded on a bead of flexible sealant, or on a rubber seal, in accordance with the manufacturer's instructions. The lid and the access opening cover shall then **be secured in a position with fasteners** to provide a watertight seal.

New Zealand regulations (and likely similar Australian equivalents) that address these issues include:

- The Health and Safety at Work Act refers to Duties see **Subpart 2—Duties of PCBUs.** Given these duties, Designers, manufacturers and contractors needs to ensure a septic tank does not pose an unreasonable risk to health and safety. Lids of septic tanks, as well as manholes (which are widely used in public and private places) would have lids that cannot be opened without a special key. Usually this is the case. Old septic tanks are an issue.
- Building code provisions for safety from falling under clause F4, first schedule "(g) Restrict the passage of children under 6 years of age when provided to guard a change of level in areas likely to be frequented by them".

Our Onsite Wastewater Group promotes enforcement of requirements for designers and installers of septic tanks and other onsite wastewater systems to be suitably qualified. In

addition, a warrant of fitness, as promoted by Child Safe Victoria in the appended coroners report, would provide a mechanism to check standards are maintained over time. It is our view such measures would be more impactful interventions than updates to AS/NZS1546.1.

It is important to New Zealand onsite wastewater professionals that the standards is not disjointed. If it proceeds we would promote New Zealand involvement in its development.

Specific comments from our members are as follows:

“Having had my leg slip into a septic tank as a kid, I certainly understand the need for improved safety regarding septic tanks.

I am wondering if the fixed security grate is the correct option however. In my opinion that lockable/screw down, raised riser lids would not only reduce the risk of accidental entry but also help to resolve infiltration/ingress issues. “

Emily Collings, Citrix, Engineering Team Leader

“I have no problems with the proposal but suspect that issue will be much better addressed by making the security of lids retrospective, (don’t know how that stacks up legally), but as a drainlayer and a structural engineer I have seen numerous old lids on tanks which have pretty much rotted out and are just waiting for someone to disappear into the tank. Most modern tanks, (septic or package plants) are probably safe, it’s the older ones where the risks lie.”

Stu Clark, CP Eng, NZET Consulting Engineers

“it’s probably not just one NZ standard that solves the issue – it comes back to performance requirements set from legislation and how that then flows into compliance documents”

John Papesch CMEngNZ CPEng IntPE(NZ), Senior Civil Engineer – Director, Haigh Workman Ltd

«I have been involved on several projects where children have fallen into the open riser of a septic tank, most just had a very smelly shoe, but this could definitely have been far worse.

I am for the submission of child safety grates in risers, and I wonder if this should be more than in septic tanks? I wonder if there are other standards already requiring fall arrestors.”

Marc Jensen Equity Associate, Senior External Hydraulics Engineer, Mechanical Engineer, TMCO

“My suggestion is that in addressing this matter, a broader approach is needed. E.g. when selling a house, someone needs to certify the septic tank or any other below ground structure is not posing a risk to health and safety. Maybe the current regulations are adequate if they are monitored and reinforced?”

John Cocks, CMEngNZ, CPEng IntPE, FEngNZ, Consulting Engineer, Dunedin

“It was not clear to me on whether this is a standard for all new and replacement tanks, or whether to be mandated to be retrofitted. Understanding the fit and forget mentality, and the affordability of replacement/ modification on many tanks even if mandated retrofitting is unlikely to be widespread. The approach of mandatory for suppliers to provide a fixed grating from a set date is I think the best practicable solution although this is beyond the power of the standard. How can this be made to happen in NZ?”

Andrew Springer, Technical Principal - Wastewater Treatment

Further feedback and enquiries

This submission was prepared by Lesley Smith of Water New Zealand, with feedback from the Onsite Wastewater Management Group. Further feedback or enquiries can be directed to technical@waternz.org.nz.