

SOIL DISPOSAL

According to one major developer who is a WasteMINZ member, **disposing of soil can add more than \$50,000 to the cost of a first home** in 'pain points' such as Wellington and Canterbury.¹

More than 40 % of the fill in our municipal landfills is soil. Our members say that soil is by far the largest waste stream generated in residential demolition, so the proportion of soil in construction and demolition fills is even higher. Controlled fills, managed fills and cleanfills almost solely dispose of soil and rock. New Zealand has one of the highest per capita waste disposal rates to landfills in the OECD but if soil disposal was addressed, we could be among the lowest.

Wasting soils is not good for us. Our agriculture sector and our lifestyles depend on our soils. The Parliamentary Commissioner for the Environment's recent report *Urban ground truths* says that urban soils absorb and filter stormwater and permit the growth of trees that provide vital shade and cooling; however extensive earthworks are eroding the capacity of soil to provide these services.

Better infrastructure planning would ensure that every region had a range of waste disposal options. Currently there is no Class 1 landfill in the Bay of Plenty, Gisborne, Taranaki, Wairarapa or the West Coast, and those in Hawkes Bay, Wellington and Nelson are nearly full. Most regions do not have a C&D fill. There are very few sites where soil and fill are stockpiled for reuse, and they compete in a low value economy where quality control can only extend as far as visual inspection.

Better resource planning would avoid developing contaminated sites or peatlands for sensitive uses – these kinds of site may genuinely need a lot of soil removal to be fit for housing. It would also plan to reuse large volumes of low level contaminated soil in stopbanks, berms, noise bunds and so on.

Better geotechnical engineering would avoid removing soft soils, for example changing foundation design from slab to beam or pile where suitable. It would also move from definition-based standards to performance-based standards.

Better resource consenting would stop imposing 'cleanfill' conditions and accept soil that is fit for residential purposes. It would prohibit creating and disposing of waste soil without a robust justification.

Better contaminated land regulation would only deal with soil that poses a genuine risk of harm to people's health or the environment. Preferably it would stop using the terms 'cleanfill' and 'background'. At minimum, regulation would move away from 'natural background', which has been unachievable since the 1970s, to 'ambient conditions', the ordinary condition of topsoil all around the country.

Better waste management would reuse this soil, by separating out aggregate, mixing fines to reduce contamination, adding amendments to improve soil properties.

None of this is happening because there is no driver to reduce soil disposal. To the contrary, **policy settings and accepted practices at all levels are geared toward wasting soil. Our new home buyers will be poorer for it. Our future cities will be poorer for it.**

¹ Removing 300 mm of soft soil from a 1,000 m² section creates 300 m³ of waste soil, approximately 500 tonnes. Subdividing and putting 2.5 houses on the section means each of those houses requires 200 tonnes soil disposal. At landfill gate prices of \$220 a tonne, that is \$44,000. Haulage adds a further \$9,000 plus, a site contamination investigation perhaps \$3,000 and project management at least \$2,000.