



About the Recycled Roads To Zero Waste Project

Recycled Roads to Zero Waste Project

- In 2009, a unique alliance of government and industry groups partnered together to establish and demonstrate a case for the use of recycled crushed glass (RCG), crushed concrete and crushed brick in council road and pathways construction – an Australian first.
- The Packaging Stewardship Forum (PSF) of the Australian Food and Grocery Council provided funding to the MAV to support specifications development and the use of recycled materials in demonstration sites
- With additional funding from Sustainability Victoria, the MAV engaged Swinburne University's Centre for Sustainable Infrastructure to conduct laboratory testing of crushed brick and RCG for the base and sub-base of footpaths and shared pathways.
- Based on the finding, recommended specifications were developed by Swinburne University for the MAV, and supported by VicRoads, to use 15 per cent and 30 per cent RCG and crushed concrete or brick in the sub base of footpaths and shared pathways.
- A separate 2011 VicRoads specification now allows up to 15 per cent crushed brick and RCG content for a Class 3 road base construction, and up to 25 per cent in a Class 4 sub-base construction
- Crushed brick, crushed concrete and RCG are now defined as an 'additive', not 'foreign material'.
- A Project Advisory Group was set up to increase councils' use of approved recycled materials in road construction projects
- Using the new specifications, five Victorian councils have participated in road, footpath and shared pathway construction demonstration sites.
- All Victorian councils are now encouraged to increase their use of approved recycled materials in civil construction through the *Local Government Recycled Roads to Zero Waste Sustainability Challenge*.

Benefits of Using Recycled Materials in Civil Road and Footpath Construction

1. Divert construction and demolition waste from landfill under Victoria's *Towards Zero Waste* strategy
2. Reduce energy use - in some cases up to 65 per cent reduction in CO₂ for crushed concrete compared to quarried rock (RMIT, 2008, Alex Fraser LCA)
3. Support local industries by creating new market opportunities for recycled materials
4. Reduce current stockpiles of crushed glass and brick
5. Ongoing reduction in construction costs
6. Reduce recovery costs for glass (collection, processing, reuse), and increase diversion from landfills
7. Reduce the need for virgin materials as base aggregate, without any reduction in performance.

Drivers for the Recycled Roads to Zero Waste Project

- Victorian local government manages 85 per cent of the state's entire road network
- Councils are also members of the Sustainability Accord and have a carbon reduction target to achieve
- Quarried rock, which is traditionally used in road base is more difficult to obtain, while approximately 4 million tonnes of approved recycled material is generated annually in Victoria. Of this, 1 million tonnes is used in construction application, 2.2 million tonnes is stockpiled, and 800,000 tonnes sent to landfill.
- Glass accounts for one quarter of all recyclables collected from Victoria's kerbside recycling services, and 13 per cent of all items dropped off at waste transfer facilities.
- Almost 157,000 tonnes of glass were recovered in Victoria in 2008-09.
- Glass breakage during the collection process causes difficulties for the sorting into different colours for reprocessing back into glass bottles - alternative markets must be found to boost recycling rates.
- Glass is already being used extensively in pavement construction in the UK, EU, US and New Zealand
- VicRoads has been leading the way in using recycled materials in road-base for some years.

<http://www.zerowasteroads.org.au/>