

Palmerston North 5% Crushed Glass Aggregate Project

A local partnership of Fullcircle, Higgins Aggregate and Palmerston North City Council

PROJECT Prove the concept of crushed glass aggregate in the New Zealand context and pave the way for other New Zealand organisations to use excess recycled glass in this manner.



Glass Recycling Issues in New Zealand

- There is an excess of recycled glass in New Zealand
- The price paid for the recycled glass has fallen in the last two years
- Transportation and rigid colour sorting standards make it marginally economic to transport glass to the ACI glass smelter from Palmerston North.



Technical Overview

The glass is weighed as a 5% mix and blended with the aggregate. This is fed through the aggregate processing plant and processed to the desired mix and size. The cost of this process is around \$30 to \$40 per tonne which is less than the local landfill charges (\$95/tonne). This unique process was developed by Higgins Aggregates and is a relatively cost effective process compared to other crushing processes. Contamination is removed before the crushing process.



Funding from Glass Packaging Forum

The Council in partnership with Fullcircle and Higgins Aggregates were selected and funded by the Glass Packaging Forum to undertake a trial of 5% excess glass in an aggregate for use in roads and building foundations in 2006 and 2007.



Summary of Results

In 2006/2007 around 2,000 of excess recycled glass was crushed by Higgins Aggregates. This comes from Palmerston North, Manawatu, Wanganui and Tararua Districts. From 1st July 2007 the Council will pay Higgins Aggregates \$30/Tonne to generate the 5% glass aggregate. This is less than the local Landfill charge which is currently \$95/Tonne. There has been good buy-in from other smaller collectors and some adjacent Councils. There has also been good buy-in from Council Engineering and Roading Staff. Initial compaction tests have shown that the glass in a 5% mix does not detrimentally effect the aggregate.

