

## Redruth Landfill, Stage 3/4 Development - Cell 3.1

The Redruth Landfill owned by Timaru District Council is located on low-lying estuarine flats adjacent to a recreational water body known as Saltwater Creek. The site has been in use since the 1940s and in 1996 the Stage 2 development was modernised to incorporate liner and leachate collection systems.

The consents for the site allowed for Stage 3/4 to be developed in a similar way, but it was recognised that the existing liner and leachate collection system no longer reflected modern landfill design practice and the stage 3/4 design was upgraded to provide a best practice engineering solution.

The major issues affecting development of Stage 3/4 were:

- The very flat and low-lying nature of the site, making conventional leachate drainage difficult
- A shallow groundwater table that affected construction practicality
- A lack of low permeability soils on the site suitable for liner construction
- The need to ensure development was economically viable.

Workable solutions were found to address all these constraints.

Development of the Stage 3/4 area used a combination of synthetic and natural liner components to provide a pragmatic design achieving a high standard of environmental performance at an affordable cost.

### Project Data

Owner - Timaru District Council.

Tonkin & Taylor Involvement - Consent review, concept design and consent variation for Stage 3/4, final design, tender process and construction supervision for Cell 3.1.

Landfill Extension Volume - 1.29 Mm<sup>3</sup>.

Footprint Area - 16.2 ha (Stage 3/4).

Liner - Clay/geomembrane, with GCL in key areas.

Commenced Filling - 2005.



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