



Tonkin & Taylor

3-D Modelling and CAD Design

Tonkin & Taylor's computer aided design (CAD) capabilities have continued to expand in response to client needs for specialist services in the infrastructure (road, rail and tunnelling), land development and solid waste sectors.

T&T has an impressive track record in these areas, having had a significant input into high profile projects such as SH 20/20A extension to Mangere Airport, Vector tunnel, Northern Gateway (Albany to Puhoi motorway extension) and Redvale Landfill to name a few.

A key feature of our design capability includes:

- a high level of technical expertise
- team commitment
- efficiency and productivity.

Road, Rail and Tunnelling

12d Model has been in use at T&T for over 10 years and is the principal design software used for road, rail and tunnelling projects.

Key features of 12d Model include:

- powerful string based terrain modelling
- particularly suitable to alignment design
- allows fast production in a wide variety of projects
- seamless data exchange with other software such as MX Road and AutoCAD.

Some of our recent design projects that have utilised 12d Model include the 9.2 km long Vector Tunnel and 7.5 km Northern Gateway extension to the northern motorway.

Land Development and Solid Waste

Land Development Desktop (LDD) has been in use at T&T for over 8 years and is the principal design

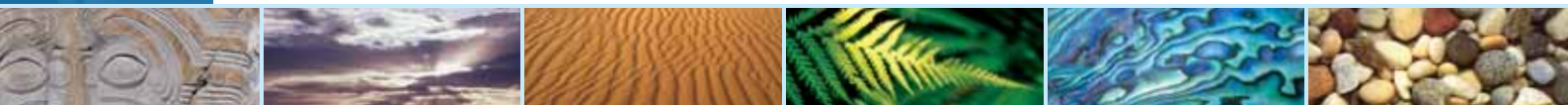


software used for major earthworks projects including landfills, quarries and subdivisions.

Key features of LDD include:

- fully integrated into AutoCAD
- comprehensive surveying, design, analysis, and documentation solution to deliver land development and solid waste projects faster and with improved accuracy
- used extensively for earthworks modelling and extrapolation of volumes,
- producing rendered images for high quality presentations and photomontages.

Some of our recent design projects that have utilised LDD include Redvale Landfill (Volume - 20 Mm³), Kate Valley Landfill (Volume - 11 Mm³), Westfield Albany Shopping Centre and Botany Town Centre.



ENVIRONMENTAL AND ENGINEERING CONSULTANTS