



DANIEL SMITH INDUSTRIES LTD

JOB PROFILE

Selwyn River / Bealey Road Bridge Canterbury, New Zealand

Client:	Selwyn District Council
Design / Project Engineer:	Montgomery Watson / Bryan Peters
Alternative Design & Technical Issues:	Frank Dennis / Ocel Consultants
Main Contractor:	Daniel Smith Industries Ltd
Roading subcontractor:	Francis Construction
Contract Value:	\$1,430,000.00
DSI Project Manager:	Daniel Smith
DSI Site Supervisor:	Mason Teira
Contract Period:	January 1998 to June 1998

The Bealey Road Bridge consisted of constructing a 2 lane, 9 span, 176 metres long bridge across the Selwyn River in Canterbury. At tendering DSI submitted both a conforming bid and an alternative design consisting of a bridge of the same dimensions, with steel H piles (replacing the conforming 1.2 diameter cylinders) and precast concrete pile bases, stems, caps and beams. DSI's tender for both the conforming and alternative were the cheapest of the 14 tenders received, and the client awarded the contract for the alternative design proposal.

Foundations for the Bealey Bridge consisted of installing 260kgm, 400UC piles, 15m long into alluvial clay bound river gravels. Because of the precast concrete pile base design and geometry pile position, accuracy was of the utmost importance. Piles were installed using our 8 ton BSP Air hammer rigged on Kobelco 55 ton crawler crane.

The precast concrete pile base, stem and caps were manufactured in DSI Rangiora yard. All reinforcing was detailed, bent and tied by DSI personnel. Precast componentry weighing up to 43 ton was transported to the site and craned in place with DSI's own crawler cranes. Precast componentry was connected using a combination of cement grout and reid threaded reinforcing connectors. By using the precasting alternative the construction period was significantly reduced.

This project ran extremely smoothly, in front of the programme, and was completed early, at the tendered price, to the clients and engineers satisfaction.

