

# SINCLAIR KNIGHT MERZ

## & ABLE DEMOLITIONS

When contractors Able Demolitions and project manager Sinclair Knight Merz demolished the Red Cliffs Power Station in Mildura, they managed to divert an impressive 95% of waste material from landfill. The team also managed to achieve a cost saving of \$17,418.



### WHY ABLE DEMOLITIONS INVESTIGATED THE RECYCLING OF DEMOLITION MATERIALS

In November 2000, management consultants Sinclair Knight Merz sought tenders to demolish Mildura's Red Cliffs Powers Station, stressing the importance (and financial value) of pursuing environmentally responsible solutions to the disposal of any resultant 'waste' materials.

To ensure that an environmentally responsible demolition company won the contract, Sinclair Knight Merz specified in tender documents that the winning contractor would be required to provide a waste minimisation plan.

Unfortunately, at tender time all contractors indicated that there was a limited scope for the recycling of steel and concrete in the area: Concrete recycling was to prove to be especially difficult, as there appeared to be no suitable crushing plant for concrete in or near Mildura, and no local market for the resultant rubble.

### HOW ABLE DEMOLITIONS APPROACHED THE RECYCLING OF DEMOLITION MATERIALS

Having engaged the lowest price tenderer (Able Demolitions), to do the work Sinclair Knight Merz began consultations with Mildura Regional Waste Management Group (MRWVG) to identify a locally based contractor potentially interested in recycling the materials. Able Demolitions then took the next step, by sourcing a concrete crushing contractor to process the concrete waste.

The project team's persistence in finding an environmentally responsible use for the crushed concrete, resulted in Able Demolitions finding a company keen to take the concrete rubble, for use in road base construction.

Able Demolitions undertook additional processing, employing five workers for 10 hours (and some additional equipment), to separate the wastes for recycling. The concrete brick and concrete building frame rubble, which constituted 85% of the total building materials, was all recycled. By separating and cleaning the steel, a market could also be found for this waste stream.

# CASE STUDY

Combined with diverting steel for reprocessing, which made up a further 10% of the waste stream, 95% of the demolished material was recycled. The only materials not recycled were the asbestos products, for obvious health reasons.

## ACTIVE RECYCLING OF DEMOLITION MATERIALS

95% of materials have been recycled:

<b>Recycled</b>	<b>m<sup>3</sup></b>
Concrete rubble	1966
Steel	330



## COSTS, SAVINGS AND SUCCESSES

The outcomes of this demolition job demonstrated the economic benefits of separating waste materials for recycling purposes. The project showed that opportunities to divert waste from landfill are reliant on staff participation and willingness to finding end markets and local recyclers. The enterprise also highlighted that extra costs and effort incurred in separating and sorting the waste can result in generating profitable outcomes.

	Material	Details	Cost Saving / Revenue
Cost Savings and Incremental Revenue	Concrete Rubble	Landfill fees avoidance	\$15,728
		Savings in cartage fees (due to shorter round trip)	\$5,200
	Steel	Landfill fees avoidance	\$2,640
		Savings in cartage fees (due to shorter round trip)	\$1,000
		Incremental revenue from separating and sorting steel waste	\$17,600
		<b>Total combined costs savings and incremental revenue</b>	<b>\$42,168</b>
Additional Project Related Costs	Additional Processing Costs	Labour and Equipment Hire	- \$24,750
<b>TOTAL PROJECT SAVINGS GAINED</b>			<b>\$17,418</b>

## CONTACT DETAILS

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