

AMI Stadium - East Stand Development Demolition

VBase

Introduction to the Project

This waste reduction case study demonstrates that with careful planning and management close to 100% of demolition waste can be separated for recycling and reuse.

Client: VBase

Site: AMI Stadium - East Stand

Location: Waltham, Christchurch

Project Manager: Prodirections

Demolition and Waste Contractor: Southern Demolition

VBase signed a Memorandum of Understanding with the Christchurch City Council to participate in this Target Sustainability project. The objective of the project was to reduce waste going to landfill and cleanfill.



AMI East Stand Development © Copyright

Demolition Waste Recycling

Southern Demolition achieved the following results:

Waste Materials	Reuse and Recycling		Disposal	Comments
	On-site (tonnes)	Off-site (tonnes)	Off-site (tonnes)	
Concrete	6,053			This was crushed and used on site for new foundations, roading and parking areas.
Vegetation / green waste		28		This was removed, sent to ECO Recycling Park, and chipped for use as a garden product.
Metal		900		This was sent to various scrap metal dealers in Christchurch for recycling.
Plasterboard		65		This was removed and crushed and reused for soil conditioner on farms.
Timber (treated)		12		This was sent to ECO Recycling Park where it was prepared for resale.
Seats		15		50 seats were given to charity/fund raising activities and 325 were sold. The remainder will be sold though the Southern Demolition yard and TradeMe.
Building components (steel portals)		8		These were removed by Southern Demolition and sent to the Southern Demolition Salvage Yard.
Plastics			0.1	This was sent to Metro Transfer Station. It was not recyclable as some plastic was contaminated and not able to be separated.
Asbestos and paint tins			1.2	The asbestos went to Kate Valley. The paint tins were contaminated and couldn't be recycled. They were sent to Metro Transfer Station.
Paper			5	The paper was "tar" paper i.e. covered in tar on one side. It could not be recycled.
General			2.5	This included batts, building paper and other miscellaneous waste that could not be recycled.
TOTAL (TONNES)	6,053	1,028	8.8	
Percentage	85.4%	14.5%	0.1%	

NB: The tonnage figures in the table include actual and estimated tonnage.

Demolition Waste Recycling

Southern Demolition aimed to reuse/recycle 98% of the materials. They achieved over 99% reuse/recycling of the material both on and off-site. They recovered over 7,000 tonnes of materials for reuse and recycling.

Southern Demolition did the following to achieve these results:

- Prepared a waste management plan with clear waste targets.
- Inducted all staff to the waste management plan.
- Held daily meetings to plan the days salvage activities.
- Initially removed materials by hand e.g. wooden floor boards and then bought in a high reach arm to remove steel and concrete as they deconstructed.
- Separated materials and stored them on-site in neat piles.
- Removed re-bar from the concrete and crushed the concrete on-site using a mobile concrete crusher.

Southern Demolition kept waste docket, scrap docket, yard reports and compiled this information using the project waste management record.



Wooden floor boards recovered for resale © Copyright



Concrete crushed for reuse on-site © Copyright



Seats recovered for reuse © Copyright



Re-bar being removed from the crushed concrete prior to crushing © Copyright

Difficulties

The staff member responsible for collecting the waste information, left during the project. The waste information collected prior to this could not be located. Southern Demolition went back through month's worth of waste dockets to compile the waste information.

TIP: Allocate responsibility for collecting waste information and record the information in an easily located spreadsheet. Collect the waste information monthly; don't wait until the end of the project.

Summary

The AMI Stadium East Stand demolition commenced in October 2007. Construction on the new stand started in June 2008 and will be completed in December 2009. The aim of the project is to replace the east stands, which are more than 40 years old and nearing the end of their structural life.

**Want more information? Visit the Target Sustainability website at www.target sustainability.co.nz
The REBRI guides are available at www.rebri.org.nz**