

Environment

Our Environment continued

Waste, recycling and re-use

Boral Waste Solutions' landfill site at Deer Park in Victoria is one of the largest landfill sites in Australia. Deer Park received more than 500,000 tonnes of commercial and municipal waste in 2008/09. Of this, around 4% was green waste which was recycled or composted to produce manufactured topsoil.

Throughout Boral, an estimated total of 4.62 million tonnes of waste and by-products was re-used or recycled in 2008/09, down 17% year on year reflecting lower production volumes. We measure waste from our production processes based on a combination of quantitative waste data where available, mass balance calculations or estimations through sampling. We also measure the proportion of this waste that is re-used or recycled and, in general, Boral's businesses re-use or recycle between 38% and 114% of the production waste that they generate in the year (ie some businesses consume more waste than they produce in a year by reducing stockpiles).

Our own returned waste materials re-used to produce the same product include concrete washout slurry, recycled asphalt pavement (RAP), plasterboard waste from production and building sites, brick bats and bricks from customers' sites, and green and cured masonry product. External waste products or secondary resources that we use to manufacture our products include: cementitious waste materials and by-products in cement, crushed demolition concrete in new concrete ("Envirocrete™") and granulated used tyres in LoNoise™ Asphalt. Information on some of Boral's sustainable products can be found on page s25 and www.boral.com.au/buildsustainable.

Boral's businesses only deal with very minor amounts of hazardous waste and this is managed in accordance with government regulations. Similarly, we only use relatively small amounts of packaging, as the vast majority of our products are delivered in bulk.

Examples of waste recycling and re-use

At Blue Circle Southern Cement's Marulan lime kiln, a kiln dust automated pneumatic conveying system was installed in 2008, allowing the recycling of kiln dust into lime products. The Marulan kiln loses about 7% of its production volume as kiln dust generated by lime crushing into lime products. The project has resulted in a decrease in lime manufacturing costs; a 7% decrease in greenhouse gases from lime manufacturing activity; and a saving of \$100,000 per annum in lime dumping costs.

The cement kiln at Blue Circle Southern Cement's Warrn Ponds site is using at least 10,000 tonnes of contaminated foundry sand, salvaged from automotive manufacturing facilities, as a direct replacement for freshly quarried sand. This sand is usually disposed to landfill each year. The project received EPA approval following trials which demonstrate that the resin contaminant present in the sand is destroyed in the manufacturing process and results in no increase in emissions.

In the USA, the small Best Block masonry business has initiated a program that recovers production waste previously directed to landfill. Block rejects are now recovered by an independent contractor, who crushes and screens the rejects, which are then re-used in the production of concrete block. This has eliminated over 4,500 tonnes of landfill waste and resulted in savings from recycling of over \$64,000.

During the year, Midland Brick, through its Midland Magpies recycling program, returned ~14,000 tonnes of surplus building materials from off-site to be recycled back into brick products; this is equivalent to 5.4 million bricks, which is enough to build around 250 average-size double brick houses. Since 2007, Boral has returned ~36,000 tonnes that would have otherwise gone to landfill (equivalent to 13 million bricks).

Figure 19
Boral's mains water consumption (million litres)

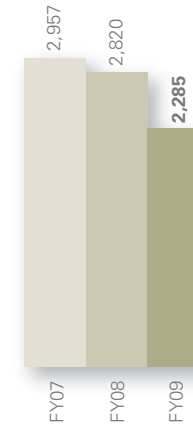


Figure 20
Boral's mains water consumption by division

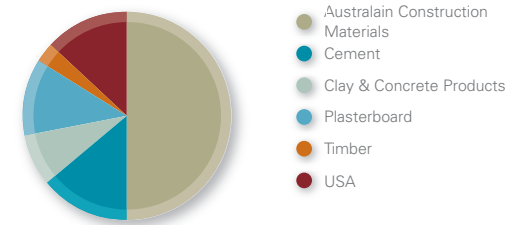


Figure 21
Internal and external waste and by-product re-used/recycled ('000 tonnes)

