

Case study – Edstein Creative Stone



Transforming a thirsty, power hungry business

Forget any vision you have of the traditional stonemason. In an industry notorious for its voracious use of water and power, Edstein Creative Stone is showing how eco friendly manufacturing practices respect our environment and save money.

Located at Taree, Edstein is renowned for its use of technology, software and modern machinery to manufacture traditional stone for monuments, and architectural stone for building. Everything is computerised. The downside of this cutting-edge approach is high energy consumption.

‘We knew we could improve,’ says Edstein Creative Stone CEO, Nigel Ferguson. ‘We just needed the right strategy.’

In 2009, Edstein joined Sustainability Advantage to reduce waste, cut its use of water and power, and save money.

Electricity and water were the business’s biggest expenses. Following an increase in charges, Edstein was facing 16 per cent annual growth in water costs over the next five years.

‘Apart from the fact that we have an environmental conscience, and it was wrong to simply use more water, we wanted to reduce our consumption to save money,’ says Ferguson. ►

In brief

Edstein Creative Stone joined Sustainability Advantage in September 2009 to examine its environmental performance, develop a strategic approach to sustainability, manage environmental risk, engage staff to become an employer of choice, and use resources more efficiently.

The results have been significant:

- Savings in water, electricity and waste of more than \$75,000 per year.
- Water use cut initially by 97 per cent – equal to nine Olympic swimming pools. Now, Edstein draws no water from the mains water supply.
- Factory water treated and reused.
- Every month 32 tonnes of stone off-cuts diverted from landfill and recycled.
- All paper, cardboard, and plastic from process-generated waste recycled.
- Carbon emission accounting in place to help Edstein monitor, report on and reduce its carbon footprint.
- An Energy Saver audit found ways for Edstein to reduce annual electricity use from 280 to 174 megawatt hours – a saving of \$28,600 and a cut in carbon pollution of 108 tonnes.



- ▶ Edstein exceeded expectations. Initially, the firm cut its water use by 97 per cent – from 24.5 megalitres per year to 0.6 megalitres. Now, Edstein does not draw any water from the main water supply. Not a drop. This remarkable achievement is possible by harvesting rainwater from the large factory roof into a 250,000-litre tank – the firm's new water source.

Combine this with other sustainability initiatives undertaken by Edstein and you have a textbook example of a smart, 21st century environmentally savvy business.

Edstein consumed about 280 megawatt hours of electricity in 2009 at a cost of \$66,000. An Energy Saver audit revealed ways for Edstein to reduce this by 105.7 megawatt hours per annum – a saving of \$28,600. The main areas where Edstein will save energy are through its compressed air system and lighting.

For quality control, Edstein craftsmen require high lighting levels to detect blemishes in the stone they manufacture and prevent flawed product leaving the factory. Edstein will replace its 400 watt mercury vapour high bay lighting with more energy efficient 85 watt compact fluorescent fittings. This should save \$10,000 per year.

Also, Edstein has installed power factor correction – a way to reduce peak demand on the electricity supply network. This should generate further annual savings of \$6000.

Instead of sending 32 tonnes of stone off-cuts to landfill every month, Edstein recycles all of its stone waste for re-use as decorative aggregate. Paper, cardboard, and plastic wrap from process-generated waste is also recycled. All of the firm's internal information systems are also paperless.

The improvements in water, electricity and stone waste recycling alone equates to an

annual saving for Edstein of more than \$75,000.

'The light bulb moment for us came with completing the Sustainability Advantage Environmental risk and responsibility module,' Ferguson says. 'When we looked at the Protection of the Environment Operations Act, the ramifications of causing environmental damage far outweigh any other risk to our business. Few businesses appreciate what this means. The fines are huge. The costs of being part of Sustainability Advantage are minimal in comparison.'

Ferguson is proud of Edstein's achievements.

'We thought we could save some water and a bit of power, and it would all be driven by management,' he says. 'But the changes have been driven by every person in the company, and the results are staggering. The fact that we are involved as a team, that we have made a positive impact on the environment, and that we have achieved such cost savings shows that Sustainability Advantage is an amazing Program.'

'The entire Sustainability Advantage team has been awesome. The Program has made change easy for us. The meetings are delivered on site, they are relevant to our company, they deal with real life experience, and they show how you can develop solutions. It's invaluable.'

Your next step

To find out how your business can join the Sustainability Advantage Program, contact the team:

Email sustainbus@environment.nsw.gov.au
Call 02 8837 6000
Visit environment.nsw.gov.au/sustainbus/sustainabilityadvantage.htm