



INNOVATIVE APPLICATIONS OF RECYCLING TECHNOLOGIES

**Hunter Business
Awards 2011**

Environmental Sustainability

Sustainable solutions

More than three decades ago, the founders of Tyrex Solutions (Tyrex) developed a viable business opportunity that provided a solution to everyday waste.

Using creative sustainable technology, a small team of Hunter people recycle the rubber of discarded tyres into new applications that take advantage of the durability and safety properties of original tyre compounds.

Tyrex has generated a wide range of premium recycled products that continue to provide outstanding environmental benefits.

While countless tyres are dumped as damaging, dangerous and unsightly landfill at the end of their useful life, Tyrex salvages and extends the life of more than 2600 tyres every year – fashioning them into innovative, practical and customised pieces used in homes and workplaces nation-wide.

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A range of industry sectors benefit from the success of the Tyrex business model, as we carefully research, design and manufacture products in Australia to encompass all the benefits of modern recycling technology.

In our Cardiff factory, expert manufacturers creatively engineer an extensive range of high-quality products including access ramps for the elderly, anti-fatigue mats for people at work and heavy-duty traffic management solutions.

When challenge meets opportunity

According to the National Waste Policy, developed by the Department of Sustainability, Environment, Water Population and Communities in December 2009, around 52.5 million tyres reached their end of life in Australia in one year alone.¹

Approximately 64 per cent of these tyres went to landfill or were illegally dumped or stockpiled. Researchers discovered that if this trend remains unchanged, up to 680 million tyres will be sent to landfill over the next 20 years.¹

Tyres left to contaminate our landscapes and waterways cost our community and government, and claim scarce landfill space. Tyre stockpiles often provide breeding habitats for mosquitoes, while fires can result in toxic gases and polluted waterways.

We salvage waste that might otherwise cause significant environmental damage and use it to engineer products that offer safety, stability and security to everyday Australians.

Tyrex contributes to environmental sustainability by giving end-of-life tyres a second chance. We salvage waste that might otherwise cause significant environmental damage and use it to engineer products that offer safety, stability and security to everyday Australians.

This is how Tyrex shows our commitment to maintaining the qualities of our unique and precious physical environment for today and for future generations.

¹Department of Sustainability, Environment, Water, Population and Communities: National Waste Policy, Product stewardship for end of life tyres <http://www.environment.gov.au/settlements/waste/tyres>

An innovative process

The Tyrex factory is strategically located in the industrial area of Cardiff, Lake Macquarie.

Our team is committed to assessing and improving business practices in terms of safe work practices, efficiency, energy use and profitability.

Recycled rubber from discarded tyres is transformed from waste to resource as it is brought in to form the basis for customised designs that meet industry safety regulations and client requirements.

Using modern technology in a regulated work environment, the rubber is combined with safe mixing agents that convert the raw material into a versatile substance. Treated and moulded into shape, technicians craft final products with properties to suit a multitude of environments and purposes.

Keeping a careful eye on our manufacturing process, any left-over rubber material or off-cuts collected and reused in the creation of future products. This process ensures that minimal waste is left.

Technicians craft final products with properties that suit a multitude of environments and purposes.

Well-formed and customised applications of corporate branding are also possible, with options for logos and text imprinted into the surface of mat products.

Even old Tyrex products can be recycled using this process and refashioned into a new sustainable solution.

Outstanding results

The result of the manufacturing process is environmentally sustainable products which can be applied to a host of commercial and residential needs.

Tyrex provides products to a diverse industry sector including mining and industry, business, retail, hospitality, disability and aged care facilities and the energy sector.

The Tyrex product range includes:

- Variety of ramps including those suitable for wheelchair access, disability and aged care purposes
- Residential and commercial anti-slip and anti-fatigue door mats
- Safe playground flooring and mats
- Wheel stops and speed humps
- Customised products for playgrounds, workspaces and industrial sites.

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Our products are gaining attention in local and national arenas. Prestigious Newcastle restaurant *Scratchleys on the Wharf* use Tyrex door and safety mats as part of their commitment to the environment: 'Their product works effectively and looks attractive'.²

Tyrex products are also used in KFC car parks as a durable and safe alternative to concrete wheelstops.

²Scratchleys on the Wharf: Environmental Policy <http://www.scratchleys.com.au/environment.htm>

Looking ahead

It is the simplicity of the Tyrex concept and our logical approach to business that has been the backbone of our success to date. It is what recently led to a successful sale and purchase of the establishment.

The Tyrex team – local business people and manufacturing experts, are convinced of the quality of the product and the impact it can have on our environment.

Tyrex staff have the required industry knowledge and understanding of the technologies needed to recycle material that is reported take up to 30,000 years to degrade naturally.³

When we sell a product that was made from waste material, it shows respect for our environment, expressed in innovation. When customers purchase a Tyrex product, they are helping to fulfil their own commitment to sustainability.

Tyrex is continually focused on wider industry opportunities. With such a versatile product, flexible to a whole range of modifications, uses of Tyrex technology are only limited by the imagination.

We can't wait to find out how our product will be used in the future.

Exciting opportunities for new applications of the Tyrex concept exist in orders yet to be made, and we can't wait to find out how our product will be used in the future.

We look forward to a long future of meeting the needs of individuals and businesses in a high-quality, environmentally friendly way.

³Waste Management & Environment Media: LIFECYCLE – TYRES
http://www.wme.com.au/categories/waste_management/march9_04.php



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