

BarChip Helps Plastek Industries Deliver Low Cost, High Performance Precast Concrete Solutions

If you had told us in early 2020 that you were starting a manufacturing company, right when the world was being struck down by a global pandemic, we might have told you to think twice. But that's exactly what the team at Plastek Industries did. With over 50 years of continuous experience in the industry, this multi-generational Australian-owned and operated business saw an opportunity to restore local industry and bring jobs back to the Ballarat region in Victoria. Three years on and that vision is coming true.

Plastek Industries manufactures Rotationally Moulded Polyethylene products and a wide variety of precast concrete products including stormwater pits, septic tanks and treatment systems, water tanks and troughs, telecommunications and electrical pits, manholes and access covers, as well as custom solutions within these markets, all of them reinforced with BarChip macro synthetic fibre concrete reinforcement.

Plastek is a customer focused organisation, determined to deliver added value through product and operational excellence. It was this goal that led them to BarChip when the business started. Managing Director Russell Coxall explains;

“BarChip helps us deliver long-term durability for our customers. The ductility of the fibre combined with our engineered designs generates the best performance possible, and by eliminating steel from our products we eliminate any risk of corrosion related issues in the future”

Using engineered designs from Plastek, BarChip provided Finite Element Analysis for a fibre reinforced solution for the 1,800L, 3,300L and 5,000L septic tanks, which were manufactured and tested according to Australian standards. The tests passed with flying colours and the tanks certified to Australian Standards by SAI Global.

Since those first designs, Plastek have collaborated with BarChip to provide engineered solutions that incorporated fibres into all their concrete products and worked together to have products certified in various markets. While the primary purpose of fibres was to improve the performance of their precast concrete vs traditional steel mesh, Plastek discovered numerous additional benefits.



Plastek Industries, Ballarat Victoria



3,300 L Septic Tanks



Stormwater Pits

Time - BarChip eliminated the time required to prepare and install steel mesh in concrete moulds, a significant time saving.

Safety - Unrolling, cutting, and placing steel in moulds presented numerous points of risk for worker safety. These were all eliminated with a fibre reinforced concrete solution.

Waste - When using steel mesh, the volume of off-cut wastage can become significant over time, which was eliminated with a fibre reinforced concrete solution.

Cost vs Steel - Macro synthetic fibre is significantly cheaper per cubic metre than steel reinforcement, especially in the current market of rising steel prices.

Labour - Eliminating steel mesh processes reduces construction times and associated labour costs. More than that, fibre reinforced solutions provide an easier process for workers to follow. Installing mesh is hard work.

Carbon Footprint - BarChip has a significantly lower carbon footprint when compared to traditional and even low carbon steel alternatives.

Performance - Unlike traditional reinforcement solutions, BarChip reinforces the entire cross section of a concrete element, top to bottom and front to back, providing superior performance to precast concrete.

Durability - BarChip eliminates corrosion, increasing the durability of concrete elements.

On top of all of this, compared to traditional reinforcement BarChip makes casting Precast concrete just that little bit easier. Plastek General Manager Alex Coxall explains;

“It used to take us up to half a day to roll, cut and place steel into all our moulds. With BarChip we don’t have to do any of this, which gives us more time to focus on the quality of the products we’re delivering to clients.”

BarChip is proud to be a supplier partner to Plastek Industries. Their products are a wonderful application of high quality, durable fibre reinforced concrete that delivers benefits to customers, manufactures and suppliers alike.



Casting Septic Tanks



Various Precast Products



Large Treatment Systems

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