



*Delivering concrete solutions
for a sustainable future*

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Emesh used in Stradbroke Island Artificial Reef



Emesh was chosen to reinforce 38 reef modules to create a new 30 hectare reef off Point Lookout on North Stradbroke Island.

A collaborative initiative between Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) - the Traditional Owners of North Stradbroke Island - and the Queensland Government, the new reef will boost tourism in the area by providing fishing and diving opportunities.

"The reef modules were reinforced using Emesh fibres, made from 100% recycled plastic with a direct saving of 95% carbon equivalent compared to reinforcing the modules with steel mesh," stated Member for Redlands electorate, Kim Richards.

Each module weighs 17 tonne and stands around 5 metres high.

Pacific Marine Group was responsible for designing and constructing the 38 modules in their Townsville facility, and transporting and installing on site. [Channel 7 News covered the project here.](#)



Victoria first sees trial of Emesh in Trail Upgrade



Hobson Bay Mayor Cr Angela Altair and a local cyclist enjoying the recycled plastic path trail

Hobsons Bay Council leads the way for Victorian Councils in using Emesh as part of their Skeleton Creek Trail Upgrade.

Mayor, Angela Altair, said an 80 metre section of the new path along the Skeleton Creek trail will be reinforced with plastic fibres from waste that would likely otherwise end up in landfill.

"The fibres, which are mixed in with concrete, replace the need for traditional steel reinforcement and are perfect for salty and coastal environments like ours. Installing the Emesh product on the path has saved more than 108kg of waste from going to landfill and has avoided the use of 807kg of steel," stated Mayor Altair.

"The recycled plastic alternative has also reduced carbon emissions by almost 2,500kg as less energy is consumed during its production compared to the production of steel."

The Mayor said the product offers three-dimensional reinforcement as it runs throughout the concrete, instead of using a singular layer of steel. "It also enables greater flexibility in design, such as curved paths and trails, therefore avoiding waste generated by steel cut offs."

Emesh saves 32,670 m3 of water

Steel production is heavily dependent on water. By using Emesh instead of traditional steel reinforcement, not only are we recycling plastic but we have also saved 32,670m3 of water.

71% of the earth is covered in water, so why should we conserve it?

- 97% of all the water on earth is salt water, which is not suitable for drinking.
- Of the remaining 3% of fresh water, only 1% is available for drinking—the rest is locked in ice caps and glaciers.

By using less water in production, we don't need to treat and pump as much water, so less money is spent on energy, chemicals and additional reservoirs or boreholes.

Reducing the amount of energy used in the pumping of water also reduces our carbon emissions.



Another State first, as South Australia's Charles Sturt Council uses Emesh in Community Upgrades



Artist impressions of the St Clair Recreation project, (above) and the new Coast Park, from North Haven to Sellicks Beach



In a joint collaboration with Hi Mix Concrete and Nova Group, the City of Charles Sturt became the first Council in South Australia to use Emesh fibres in a number of major community upgrades.

Daniel Romano of Hi Mix Concrete was the catalyst for the decision. "Hi Mix was established by my father in 1989 – in the world of concrete, innovation and protection of our environment are key differentiators for us."

"I found Emesh searching for an environmentally better solution for ready mix concretes. Emesh just made sense, and had so many other benefits with cost, safety, and ease of construction."

"So when Nova Group came to us to supply concrete for a number of Charles Sturt Council projects, I recommended Emesh instead of the traditional steel reinforcement", said Daniel.

To date, Emesh has been used in the \$26.5million St Clair Recreation project; the Adelaide Parklands Upgrade – linking the CBD to key inner city suburbs; the Port Road Drainage Project, and a number of reserve upgrades throughout the Charles Sturt Council area.

Ticking all the Right Boxes to help gain approval for your next Project

Fibercon's Emesh meets all of the major certifications required in today's increasingly environmentally and socially conscious world—these help secure approval for your projects:

Social Procurement:

Emesh is produced and packaged at McCallum Industries in Ballarat. McCallum is a registered NDIS provider and employs only workers with disabilities.

Environmentally Sustainable:

Fibercon is the **only** company in the world to use 100% recycled plastic, with an independently audited 3rd party EPD (Environmental Product Declaration). We provide an Environmental Impact Assessment Statement for every project on request.

Innovation:

- Won the 2015 The Australian Innovation Challenge Award in the Construction and Manufacturing category.
- Mark Combe, CEO of Fibercon, recognised by Engineers Australia in 2016 as one of Australia's Top 60 most innovative engineers .

Assessed & Approved by ISCA

- Emesh is on the ISupply Calculator V2 with the Infrastructure Sustainability Council of Australia—this provides certainty to any project requiring sustainability performance.