



COLLABORATION FOR CHANGE

Case Study: EFC Artificial Reef

Embodied CO2e reduction
(tCO2e)

100

CATEGORY

PRODUCT	SYSTEM	PROJECT	CONCEPT
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SUPPLY CHAIN

MANUFACTURING	PROCESSING	TRANSPORTATION	CONSTRUCTION
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REGION

WA	NT	SA	QLD
NSW	ACT	VIC	TAS

Profile

Organisation: EFC Artificial Reef

Website:

<https://www.wagner.com.au/main/what-we-do/earth-friendly-concrete/efc-home/>

About: Wagners EFC is the world's leading zero-cement concrete technology producer.

EARTH FRIENDLY CONCRETE

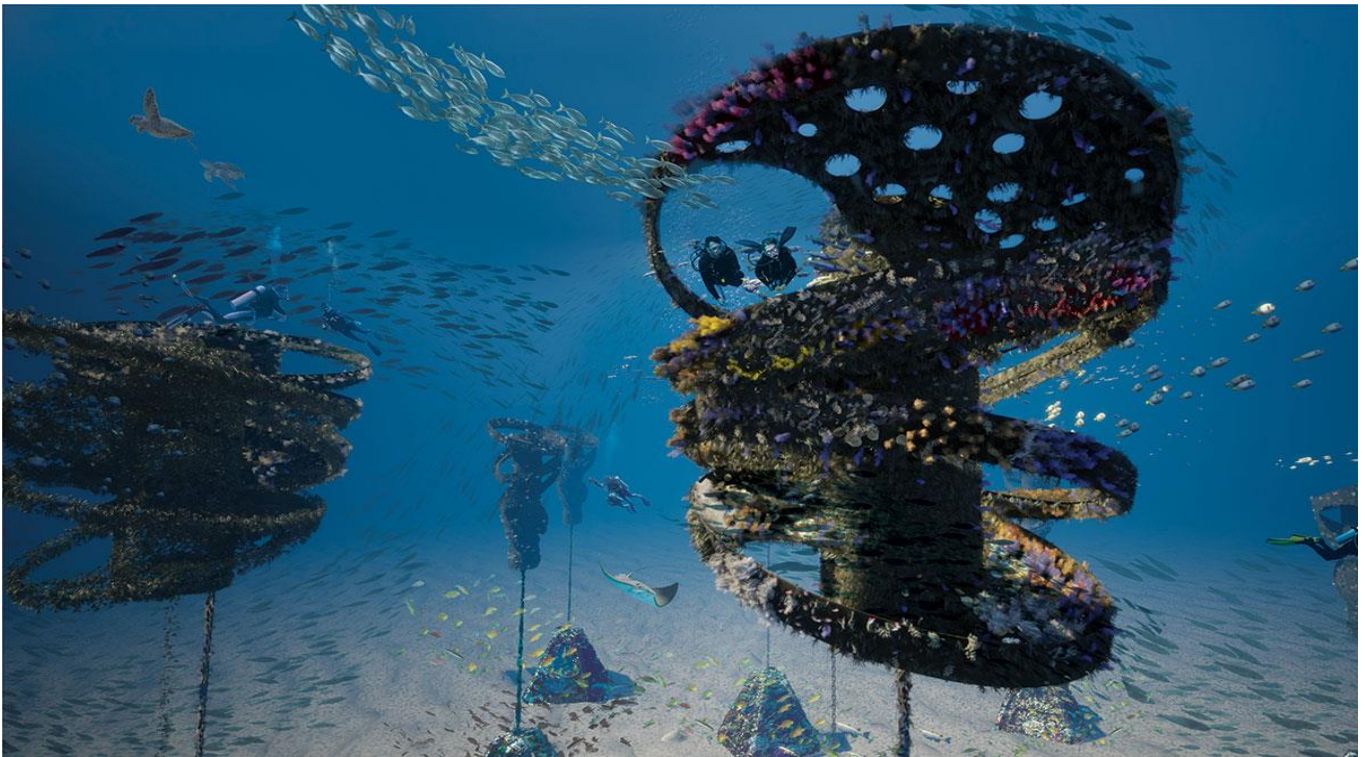
by **WAGNERS**

Section 1: Opportunity

The client, Subcon, recognised expertise in high strength, low carbon concrete technology. They directed the contractor, Foreshore Marine, to work with us to develop a mix design to meet the challenging concrete spec for the Wonder Reef project.

Section 2: Solution

We developed a special 50MPa mix design with 35kg of steel fibres / m3, that could be pumped. We tested this mix in the lab and on our site through a boom pump with all stakeholders. Our EFC product performed above expectations. We needed to hit 40MMPa in 72 hrs, we got there in 48!



Section 3: Lessons

This specific high slump, high early strength design limited the amount of free water available in our mix design. We had to mitigate rain impacts that could potentially dilute the strength. Other than that, we successfully delivered EFC on a 1.5hr drive time through a boom pump.

Section 4 : Impact measurement

By using Earth Friendly Concrete by Wagners instead of ordinary concrete, this project saves close to 100t of CO₂, which is equivalent to what 95 acres of forest would absorb in a year. Earth friendly Concrete eliminates cement and CO₂, without the need for offsets.

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