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## Mangrove-mimicking magnets for Sydney Harbour seawall life

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Industrial designer Alex Goad on the seawall at Milsons Point. Picture: Hollie Adams

Green walls are a growing feature across modern city skylines, but sea walls teeming with marine life rather than plants are set to follow suit as the largest of its kind is unveiled in Sydney Harbour today.

More than 500 tiles, designed by Melbourne-based industrial designer Alex Goad, have been fitted to existing sandstone seawalls at five harbour foreshore locations in a green-engineering initiative spearheaded by the Sydney Institute of Marine Science.

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It is hoped the walls will encourage ocean species including barnacles, starfish, mussels, crabs, algae and Sydney rock oysters to make a home among the rivets of the design, which mirrors the root structure of mangrove trees.

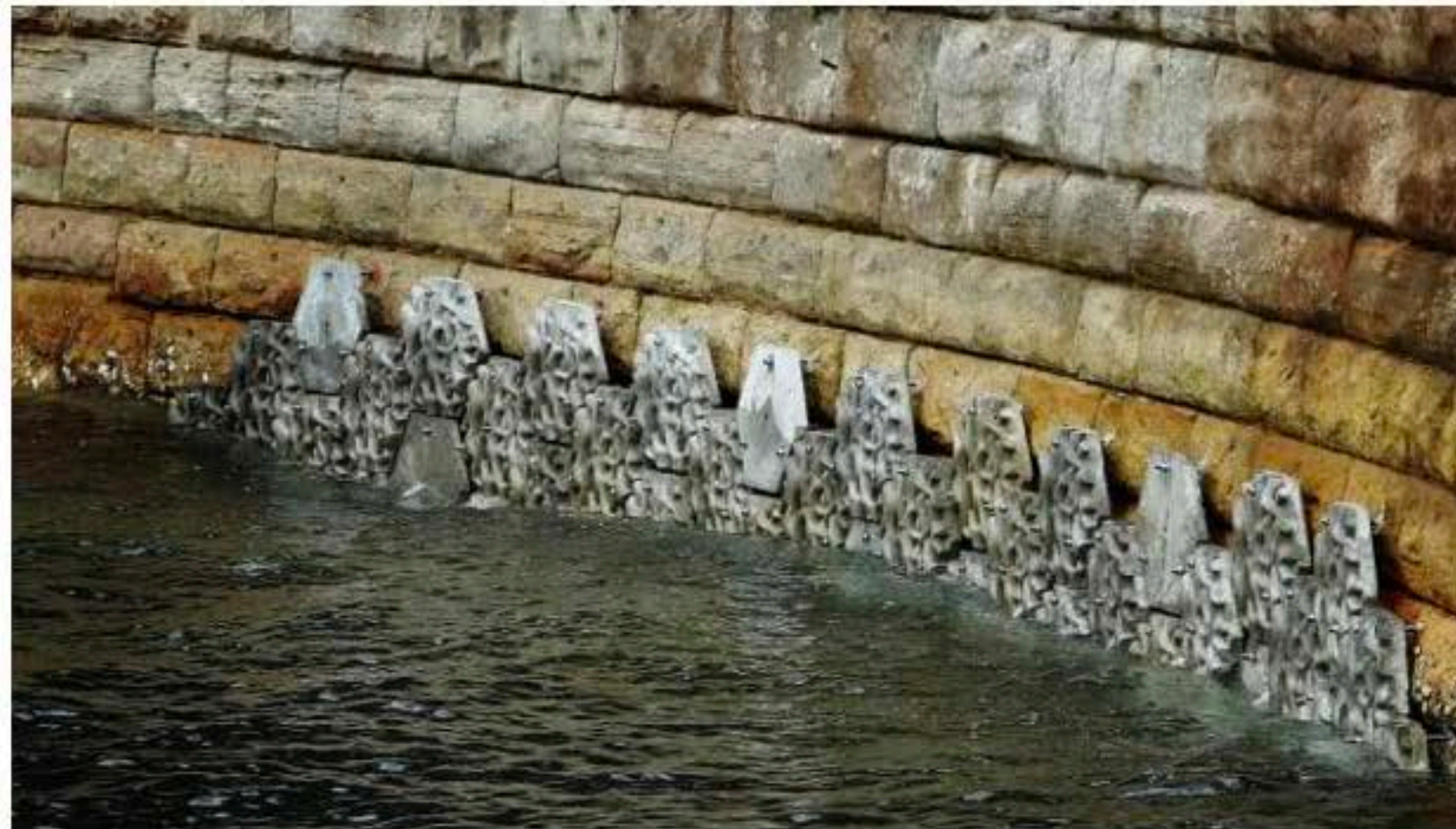
The collaboration between SIMS, Volvo, Reef Design Labs and North Sydney Council aims to test ways of restoring the mangrove ecosystems, which were destroyed during the development of Sydney harbour.

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Fitted tiles that will attract Sydney Harbour sea life. Picture: Hollie Adams

Mr Goad, who created the honeycomb structure using a 3D-printer and traditional moulding techniques, said that like many Australians, he had always been passionate about the ocean.

The collaboration, which combines his passion for design and marine life, builds upon his previous projects, having created the world's largest 3D-printed, modular artificial reef system in the Maldives earlier this year.

“With rising sea levels, global cities are going to be building more and more marine infrastructure and sea walls,” Mr Goad said. “If we can incorporate sea wall designs such as these, we can create habitat for marine life at the same time.”

Maria Vozzo, research associate at SIMS, said she expected the tiles to remain in place for at least 20 years. They would be continually monitored for increasing biodiversity and marine life.

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“Over 50 per cent of Sydney Harbour’s shoreline has been modified, most of that through sea walls,” Ms Vozzo said. “This project provides important information about the environmental benefits of adding these designs to other seawall sites around Sydney and harbours around the world.”

Mr Goad said one sea wall installation, beneath the Harbour Bridge, took two weeks to complete because of ferries cutting across the water to Circular Quay. “This area is called the washing machine because it’s a notoriously splashy area,” he said pointing to a small cut received during the installation. “We only worked a few hours per day at low tide.”

Mr Goad said SIMS’s scientists were the true heroes of the initiative, with oysters already colonising some areas of the wall.

**OLIVIA CAISLEY, REPORTER**

Olivia Caisley is a reporter with The Australian. She has a Master of International Relations from the University of Technology and a Bachelor of Media and Communications from the University of Sydney. She was ... [Read more](#)



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