

# Artificial reef makes its debut at Sydney Opera House

June 6 2019

---



Created by Reef Design Lab, the metre-high pods are constructed from marine-grade steel and concrete and feature elements of 3D printed design. Half of the units have additional complexity in the form of triangular tiles. Data collected from the two different reef structures help inform future reef design. Credit: Alex Goad

What began as a low-tech construction made from milk crates has morphed into something decidedly more elegant with the unveiling of a purpose-built artificial reef for Sydney Harbour.

Launched to coincide with the United Nations' World Environment Day, the project complements a number of significant sustainability achievements announced by the Sydney Opera House.

University of Technology Sydney (UTS) Professor of Marine Ecology David Booth has led the project in which a series of modular artificial reefs—eight pods, each containing three hexagonal-shaped units—have been installed alongside the Opera House sea wall at Bennelong Point.

The pioneering project, announced in 2017, is funded through a NSW Government Environmental Trust Restoration & Rehabilitation grant with the aim of finding new ways to increase local marine biodiversity and support [native species](#) in Sydney Harbour.

Created by Reef Design Lab, the metre-high pods are constructed from marine-grade steel and concrete and feature elements of 3-D printed design. Half of the units have additional complexity in the form of triangular tiles. Data collected from the two different reef structures help inform future [reef](#) design.

In time the structures will become encrusted with seaweed and sea life, providing a home for smaller fish species. Even after a short time underwater some of Sydney Harbour's marine inhabitants are taking note.

"It's amazing, after only a few weeks the pods are already attracting the interest of the types of species we hope will be drawn to this new habitat such as leatherjackets, bream and octopus," UTS Science's Professor Booth said.

"We will continue to monitor the reefs and adjacent sites to document change and how effective adding small fish habitat structures is in enhancing fish life on seawalls. We hope it is a model for other cities on harbours," he said.

The Opera House also announced the awarding of a 5 star Green Star performance rating from the Green Building Council of Australia and the signing of an industry-leading Power Purchase Agreement for renewable energy supply.

Sydney Opera House Environmental Sustainability Manager Emma Bombonato added: "Each of the initiatives announced today are essential to the Opera House's long-term sustainability strategy. The achievement of our 5 Star Green Star rating reflects the significant progress we have made in reducing our own environmental impact.

"At the same time, the installation of the [artificial reef](#) is a example of our broader commitment to protecting and preserving the environment in action. As we look to the future, innovative approaches such as PPAs are essential to secure long-term, sustainable renewable energy sources, so it's exciting to be involved at the early stages of these projects."

Provided by University of Technology, Sydney

Citation: Artificial reef makes its debut at Sydney Opera House (2019, June 6) retrieved 26 June 2024 from <https://phys.org/news/2019-06-artificial-reef-debut-sydney-opera.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.