

CCell[®]



Engineered
by Zyba

Transforming Waves into Rock



Beach
Nourishment



Tourist
Attraction



Renewable
Energy

ONE AFFORDABLE SOLUTION

We envisage a world where wave energy is used to protect coasts from erosion, enhance coral reefs and deliver sustainable power.

WHY

Waves are the primary cause of erosion, yet they carry a readily accessible supply of energy.

We capture this energy and use it to grow artificial reefs to protect beaches from these waves and provide the foundations for corals.

WORKING WITH NATURE

OUR SOLUTION

At Zyba, our goal is to engineer beautifully simple systems that work with nature. Together with BioRock Technology, we are delivering the world's first wave-powered artificial reefs.

Zyba's core product, CCell, is a curved wave energy converter that moves with the waves to simultaneously extract their energy and reduce their impact on the beach. CCell is efficient, light, and simple to assemble and operate.

BioRock reefs are wire mesh frames that can be built in any shape or size. Secured to the seabed, they use a safe, low-voltage electrical charge, to form limestone rock from seawater minerals. With over 500 reefs in existence, the process has demonstrated its ability to accelerate the formation of reefs from 100s of years to less than 5.

Tourist Attraction

Building a beautiful coral reef right in front of your beach.

5x

Accelerated growth rate for corals.

20x

Corals are twenty times more resilient to environmental stress.

- ✓ Safe for tourists - low voltage
- ✓ Custom designed reefs
- ✓ Restoring marine ecosystems

“

About 80% of the beach grew back in less than 3 months and has continued to grow ever since, even during strong storm conditions that in the past caused severe erosion. ”

Dr Thomas Goreau
North Sulawesi, Indonesia



Beach Nourishment

Creating an active breakwater to protect shores from erosion and enhance beaches.

72%

More affordable than current solutions.

- ✓ Restores natural breakwaters
- ✓ Stronger than concrete
- ✓ Self repairing
- ✓ Creates a permanent solution



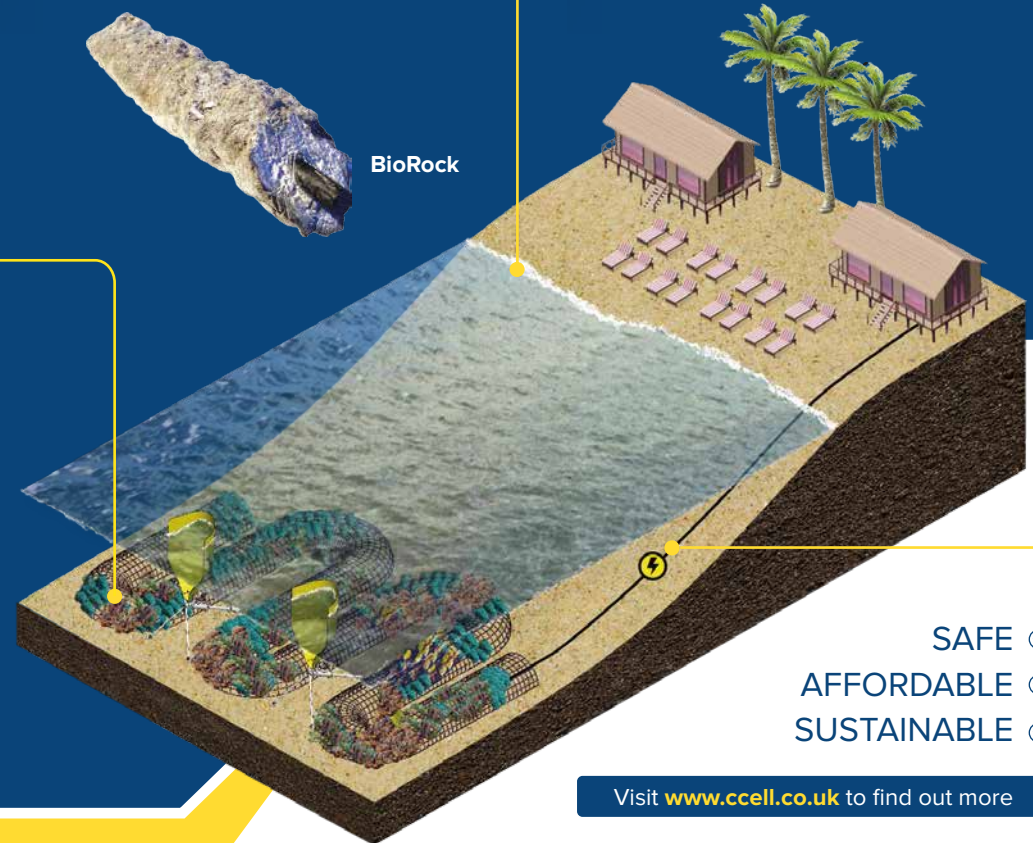
Renewable Energy

Using sustainable wave energy to power CCell BioRock and complement other renewables.

100%

CCell is a 100% eco friendly solution.

- ✓ Sustainable solution
- ✓ Innovative technology
- ✓ Working with nature
- ✓ Complementing solar at nights and in the winter



SAFE ✓
AFFORDABLE ✓
SUSTAINABLE ✓

Visit www.ccell.co.uk to find out more

WHAT WE OFFER



Site Survey: Measuring bathymetry, marine life and environmental conditions.



Design Optimisation: Simulating the impact of differing reef designs on beach nourishment.



Manufacture: Procurement, fabrication and delivery of CCell and reef structures.



Installation: Managing assembly and installation with local contractors, without interrupting tourist activities.



Operations: Remote monitoring and annual site surveys, with ongoing support.

Tailored to your needs:

- ✓ Coastal protection
- ✓ Beach nourishment
- ✓ Sustainable tourism
- ✓ Renewable electricity
- ✓ Marine reserves



Governments



Tourism



Fishing



Property Developers



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Innovate UK

