Biology of Marine Concretes

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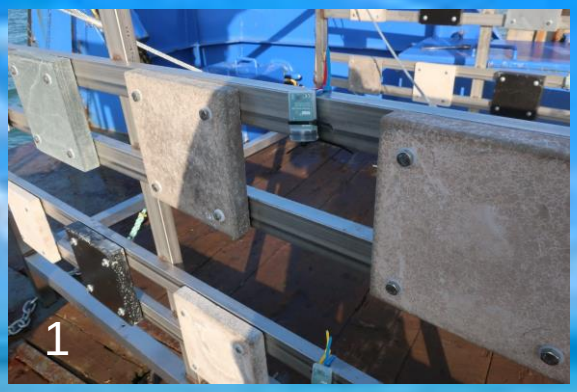
Rationale

SEACAMS2 is testing colonisation of marine species upon different industry-standard marine concretes (Figs 1 & 2). Wave-tricity is developing a wave-energy device with a concrete hull, which provides key ballast. If calcifying species encrust the hull, this may add strength and mass. Alternatively, as the devices are designed to be moved between regions (i.e. to aid disaster relief), so transport of encrusting non-indigenous invasive species may be problematic. Information upon colonisation patterns across different concretes is necessary. In extension, we are investigating critical properties of artificial habitats to potentially alter biodiversity colonising marine concretes (Fig 3).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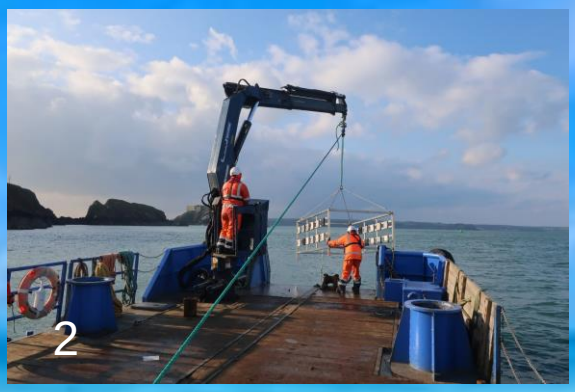
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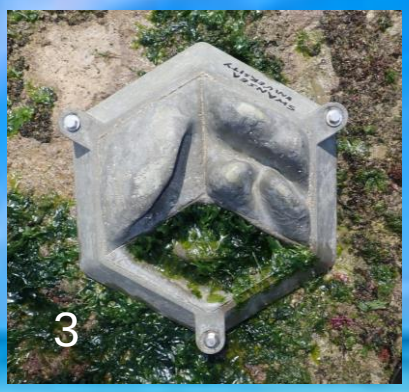
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Outcomes

- Experimental testing will determine biological properties of different concretes to inform design of wave-energy device, and vitally, inform upon the usage of concrete in all marine infrastructure (sea defences, ports, foundations of marine energy devices)
- Determination of micro-habitat performance to enhance / minimise biodiversity colonising marine concrete

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