

REEFWORKS

Tropical marine technology test ranges



ReefWorks tropical marine technology test ranges offer a national capability to safely test marine technologies, autonomous and uncrewed vessels, and new sensors in a real-world tropical environment. ReefWorks is an Australian Institute of Marine Science initiative supported by the Queensland Government.



Australian Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

Photo: Marie Roman

One of the world's first tropical marine technology test facilities

While 42 percent of the world's oceans are tropical, ReefWorks is one of the first marine technology test ranges in the world in a tropical climate - a challenging operating environment for marine technologies.

At the [Australian Institute of Marine Science \(AIMS\)](#) headquarters, near Townsville, on the doorstep of the Great Barrier Reef, ReefWorks is a secure facility open to industry, government, and academic innovators.

We offer development, design, and testing services for uncrewed and autonomous aerial, surface, and underwater systems as well as other innovations or sensors.



Photo: Jo Hurford



Photo: Jo Hurford



Photo: TwoSquare

Catalysing marine technology development

ReefWorks brings a new capability to Australia: facilities and expertise to routinely test and evaluate marine technologies, especially autonomous systems. This is essential for certification and commissioning of these systems into operational service.

ReefWorks is positioned to catalyse Australia's innovation in marine RAS-AI by offering testing at different levels of technology readiness – from proof-of-concept to operations. It also enables innovators to verify technologies as fit-for-purpose, safe to operate and environmentally compliant.

Our Services

We support the full development cycle from simulation validation, bench testing, tank tests through to nearshore and offshore field testing. The ReefWorks team includes:

- Systems engineers
- ICT and digital specialists
- Regulatory compliance expertise
- Drone pilots
- Technical support
- Marine operations support



Photo: Scott Bainbridge

ReefWorks services and facilities

The three test ranges are linked by drone corridors to allow routine monitoring.



AIMS Inshore Test Range

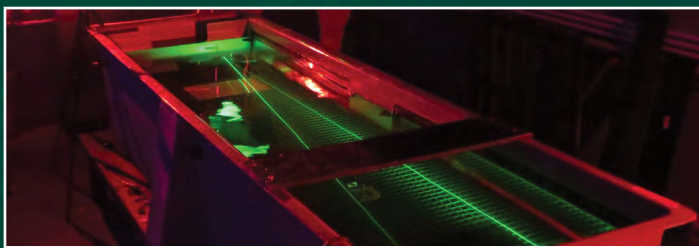
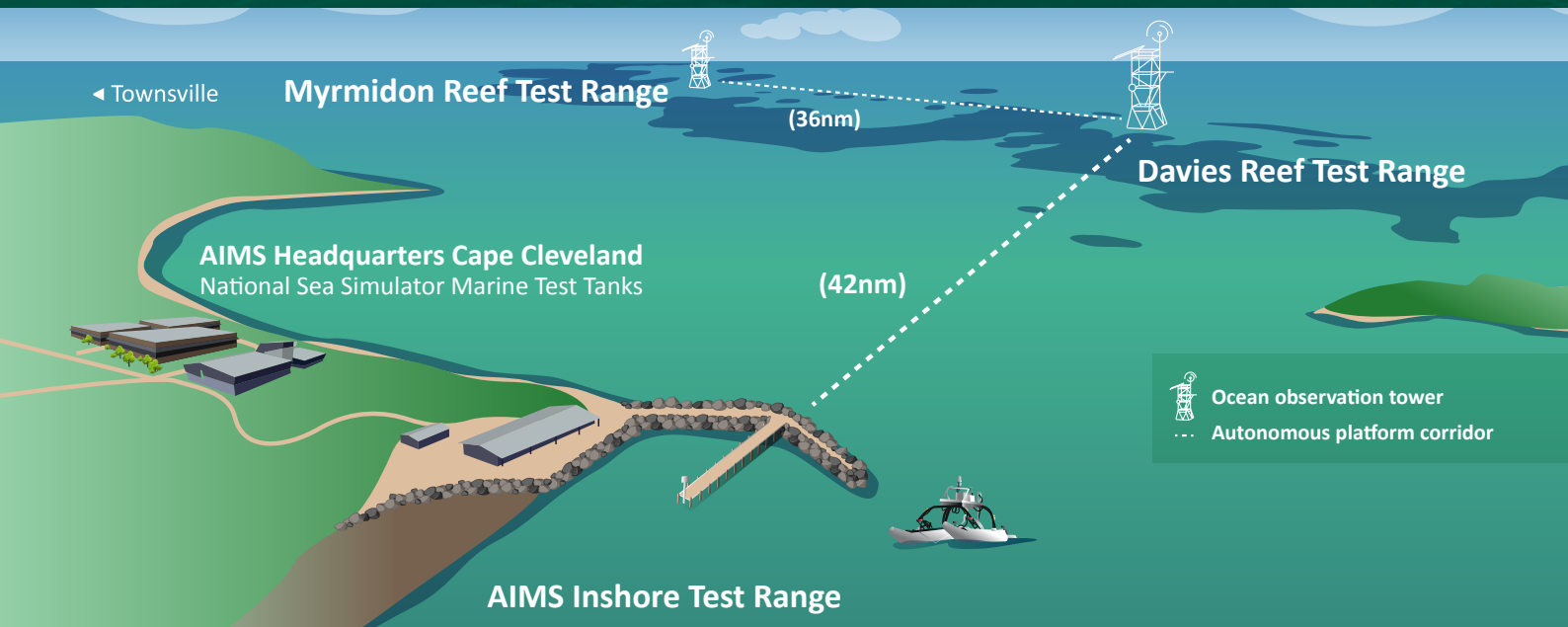
A controlled Great Barrier Reef Marine Park Scientific Zone with wharf facilities. It caters for shallow testing in turbid waters and has regulatory sandbox approval for AMSA permit-free testing and evaluation of vessels up to 12m, travelling up to 20 knots.

Davies Reef

A clear-water coral reef range with a sensorised research tower connected to AIMS Cape Cleveland. It typically has low currents.

Myrmidon Reef

A clear-water coral reef range further offshore, with a connected research tower, offering remoteness as a test factor with deeper water and stronger currents.



Marine platform and sensor test facility

A test tank in the National Sea Simulator offers a controlled environment to evaluate next-generation marine sensors and vessels.



Test range digital twin

Testing a platform in a virtual environment, using real-time collected data, is a safe and cost-effective way to refine the design in preparation for a tank test or field trial. Digital environment testing is being established, and is envisaged to be hosted at the [North Queensland Simulation Park \(NQSpark\)](#), an advanced environmental training facility.

Location

ReefWorks is based at AIMS headquarters, an isolated, shore-based, secure government facility 50km south of Townsville, North Queensland. We have a wharf with a crane, marine vessels, and a boat ramp, as well as reliable Telstra 4G coverage, Wi-Fi connectivity and a Continuously Operating Reference Station (CORS). Facilities include onsite accommodation, a data centre and operational support.



Photo: Jo Hurford

Photo: Joe Gioffre

About AIMS

AIMS is the nation's tropical marine research agency helping governments, industry and the wider community make informed decisions about Australia's marine estate.

Contact us

ReefWorks
Australian Institute of Marine Science
E: reefworks@aims.gov.au
W: aims.gov.au/about/facilities/reefworks
T: +61 7 4753 4444



Australian Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

REEFWORKS

