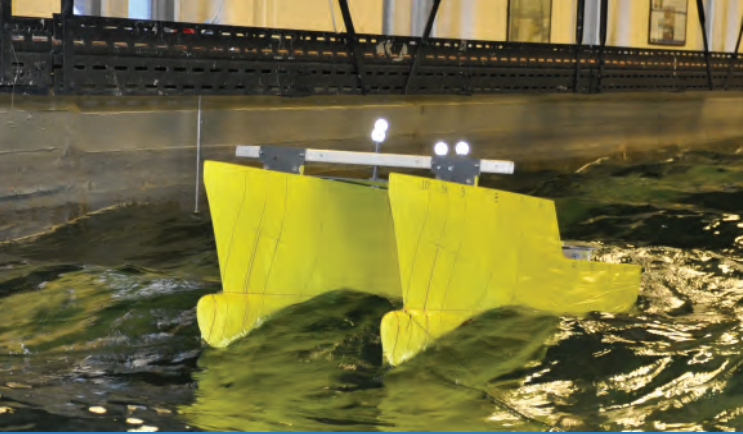


# RV The Princess Royal



school of marine science and technology



## The School of Marine Science and Technology

The School enjoys a substantial international reputation for its work, which covers the fields of marine engineering, marine biology, naval architecture, offshore engineering, coastal management and small craft technology, and enjoys a substantial international reputation.

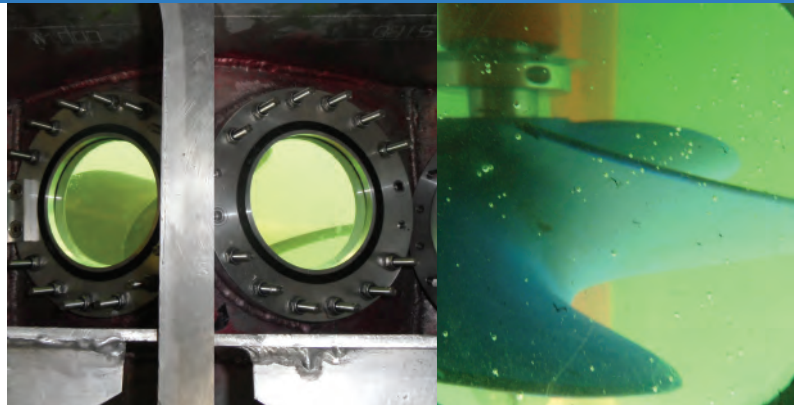
Teaching in the School is informed by internationally recognised and industrially relevant research. This is backed by extensive specialist facilities on the main campus, complemented by the Dove Marine Laboratory located nearby on the coast, and further enhanced by the School's own sea-going Research Vessel.

All our research groups are actively involved in industrial partnerships, which often take advantage of the interdisciplinary expertise available in the School. Partnerships can take the form of consultancy projects, sponsored student and research projects, 'access to our facilities, or combinations of these tailored to individual requirements.

### RV The Princess Royal

Newcastle University's new research vessel, The Princess Royal, has been designed in-house by staff and students in the School of Marine Science and Technology.

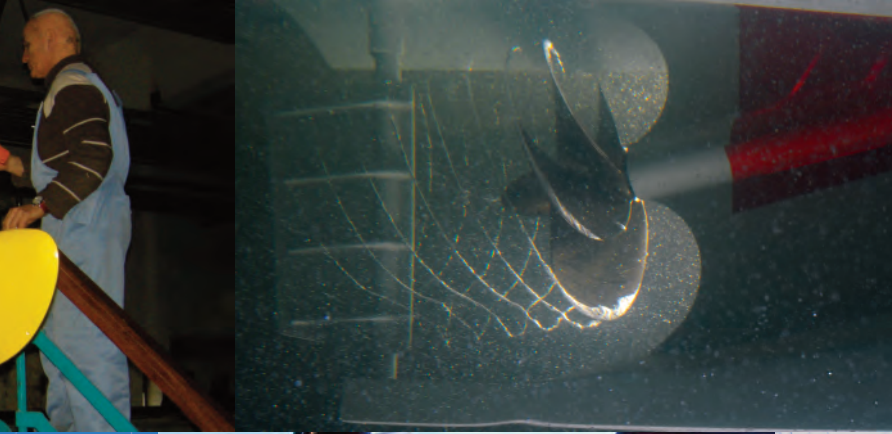
The catamaran has established itself as the ideal platform for small research vessels due to its stability, large deck area and manoeuvrability. Our unique marriage of the catamaran and the deep-vee hull form gives enhanced seakeeping, efficiency and speed potential whilst maintaining its other inherent virtues.



### Outline specifications are as follows:

Length Overall	18.9m
Beam Overall	7.3m
Design Draft	1.64m
Displacement (light)	36 tonnes
Payload	5 tonnes
Max Speed	20 knots
Cruising Speed	15 knots
Engines	2 x 600hp
Propulsion	Fixed pitch propellers





## Normal Area of Operation

The coastal waters, rivers and estuaries of North East England.

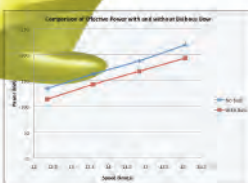
## Operating Conditions

Classification	MCA category 2
Sea state	4-5
Range	400 nautical miles

### Anti-slamming bow



Inspiration from the tried and tested Northumberland Fishing Coble.



### Bulbous bow



### Bulbous Bow Development



### Tunnel stern and cut-up

- Greater efficiency
- Reduced shaft angle
- Reduced draft
- Better stern gear protection
- Beaching Ability

## Research Vessel

### Capabilities

- Low and high speed (> 20 knots) transit to research grounds
- Use of static fishing gear
- Conventional surface, mid-water and bottom trawling
- Plankton sampling and bottom dredging
- Water sampling at depths up to 200m
- Sea floor coring and rock dredging
- Soft sediment sampling and sea floor photography
- Undergraduate / postgraduate teaching facility
- Platform for a wide variety of research programmes
- Charter for government and commercial organisations
- Marine wildlife observation and acoustic monitoring
- Environment (wind/wave/current) monitoring
- Underwater acoustic investigations
- Cavitation observations
- Performance monitoring (of torque, thrust, fuel consumption, SOG, STW etc.)
- Anti-fouling performance assessment
- Bio-fouling sampling
- Biofuels research
- Full scale experimentation
- Vocational training
- Water quality assessment
- Wind farm / wet renewable farm support
- Underwater ROV/AUV/diving support

## Equipment and features

### Integral equipment

- 3 tonne hydraulic A-frame
- 2 x 2 tonne trawl winches
- 2 tonne auxiliary winch
- Hydrographic conducting winch
- 6.5 tonne-m knuckle boom crane
- Pot hauler
- Static drift-net hauler
- 1.5m x 1.5m moon pool for ROV deployment
- Wave radar
- Motion sensor
- Speed log (EM type flush STW)
- Propeller shaft thrust and torque gauges
- 150mm propeller observation windows
- Boroscope apertures
- Hydrophones at bow

### Marine science equipment

- 6 x 5 l Rosette water sampler with integral CTD unit
- Coupled, or independent, fast repetition-rate fluorimeters and C-DOM sensors
- Scientific Meteorological package
- Day grab and Van Veen grab
- Range of static and towed fishing gears
- Underwater stills and video cameras
- In-line thermosalinograph
- Towed Side-scan sonar
- Movement compensating Marine balance
- Laboratory PCs
- Onboard microscope & camera

## Shore Station

The vessel will be supported by a fully-equipped shore station at Blyth Harbour, Northumberland, and by the Dove Marine Laboratory at Cullercoats, as well as by the School of Marine Science and Technology laboratories on Newcastle University's main campus.

## Contact Details:

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### Research Vessel Skipper

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[www.ncl.ac.uk/marine/rvprincessroyal](http://www.ncl.ac.uk/marine/rvprincessroyal)

