

# EQUITY STUDIO (PTY) LTD

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## SIMONSTOWN NAVAL BASE: CONSTRUCTION AND INSTALLATION OF A SUBMARINE ESCAPE SIMULATOR FOR CLASS 209 SUBMARINE.

LOCATION: SIMONSTOWN, WESTERN CAPE

DATE: 2007-2010

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### BACKGROUND

The South African Navy purchased three submarines and subsequently needed a training facility that could simulate the escape of navy personnel from a type 209 submarine. The facility will train local as well as international sub-mariners to escape from this kind of submarine.

The project is built in Simons Town next to the existing dive tank in the Western Dock Yard near the Navy museum. The old police station (timber structure) on the site had to be demolished to make room for the new building. The facility is of a world class standard and complies with international standards and requirements.

### DESIGN

The main component of the project is the tank with the simulated hull of the submarine at the bottom of the tank that has two escape hatches.

The 16 by 5 meter diameter water tank sits above the chamber and is the space that students escape into. The ground floor links to the existing dive school.

The tank is surrounded at the ground and first floor by a circular brick building that houses the ablution office and lecture facilities. Access to and from the tank is located at level 7. A concrete lift core and staircase clad externally with corrugated aluminium provides access from the 7th level to the other lower floors. The tank is also surrounded with aluminium corrugated cladding.

The complex co-ordination of all the services was one of the biggest challenges as this is the first building of its kind on the African continent. As part of the design, renewable energy approaches were used in the form of solar panels to heat not only the domestic water but also support the heating of the water tank. The building blends into the existing harbour context with its red face brick, porthole windows and corrugated iron cladding.

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