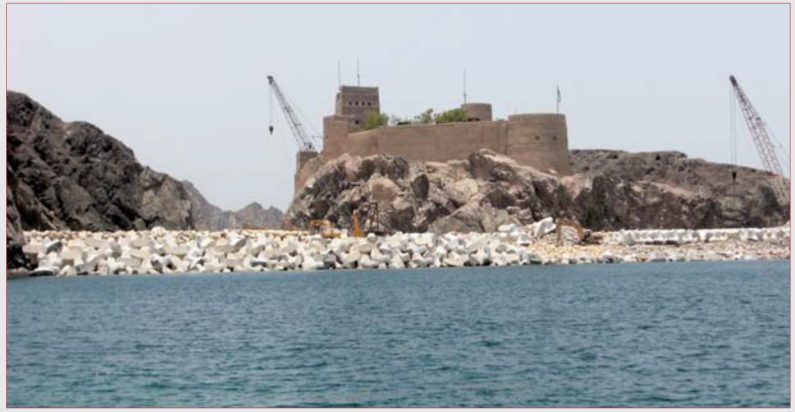
MARINE



REVETMENT

In this magnificent setting, the revetment blended nicely and tidily.

Fort Jalali, a Portuguese fort could be seen in the background.

DREDGER AT WORK

Dredger 'Ave Caesar' was mobilized to carry out the excavation works underwater.

It is seen here removing debris of previous revetment damaged by Cyclone Gonu.

TRANSPORTATION OF ACCROPODES

The transportation of Accropodes across the city incited curiosity and offered Sarooj a free publicity.

Most of the units, however, were transported at night not only to avoid traffic jams, but also to limit inconvenience and hazard to public.

40 T ACCROPODES

40 T concrete units called 'Accropodes' were pre-cast in special patented steel moulds on a site close to a concrete batching plant.

These were cured and stored before transporting them to site. Each unit is marked and numbered for quality control purposes.

CROWN BEAM

The crown beam was cast in-situ at 12.5 meters above sea level to cater for 9 m high wave and an extra 3.5 meters splash zone.

From land side, local rocks were used to complete the structure and present a neat and tidy face.

FORT JALALI REVETMENT (EPC)

Following Cyclone Gonu that hit the Omani coasts, causing havoc and considerable damage, marine engineers had to change their design parameters to account for lessons learnt.

One area that was particularly affected was Fort Jalali, built by the Portuguese to control Muscat's natural harbour entrance.

Sarooj were commissioned by the Royal Court Affairs (RCA) to design and build an adequate revetment that could withstand sea action.

After conceptual design, hydraulic modelling was carried out in the UK and the final features were established.

The crown had to be raised +12.5 meters above mean sea level, huge Accropodes had to be placed, and massive concrete blocks (80 T each) formed the toe.

Rock armour ensured resistance to scouring effects.

Dredging was carried out by 'Ave Caesar' mobilized especially for this work.

The access to site and the confined space allocated for the works represented a difficult challenge.

The finished product integrated nicely with its surrounding.