



tel 041-368 2771
or 083 626 1917

e-mail: werner@illenberger.biz
www.illenberger.biz

Illenberger & Associates
55 Emerald Street
Mount Pleasant
6070 Port Elizabeth
South Africa

Update on the erosion of the St Francis Bay Marina spit/dune

by Dr Werner K Illenberger
November 2008

Over the last 3 years the St Francis Bay beach has been eroded severely, damaging public infrastructure and private properties. The spit/dune that separates Ski Canal from the open ocean has been narrowed considerably, and is in imminent danger of breaching, which would cause extensive damage to the St Francis Bay Marina.

A report prepared last year illustrates what will happen if the spit/dune is not protected with a rock revetment to prevent breaching into Ski Canal.

This report gives an update of erosion that has taken place over the last year. There was one major erosion event, the extreme wave storm of 1 September 2008. This storm removed all the sand that had built up on the beach during last summer, and eroded into the spit/dune, with some wave wash-over.

The map on the next page shows the erosion that has taken place from 2003 to October 2008. The northern end of the spit is eroding fastest, and the tip is being broken into “islands” that are easily destroyed by wave erosion, shortening the spit.

Conclusions

The conclusions regarding the current situation are the same as last year; *a rock revetment should be built as an emergency measure to stop the erosion of the spit/dune*, except that ***the urgency is increased***, particularly because the northern tip of the spit is being destroyed rapidly.

The construction work that will be needed in the event of the spit/dune breaching before the rock revetment is built will be much more expensive and difficult. The rock revetment should thus be built as soon as possible.



The base photograph in this map shows the spit/dune between Ski Canal of St Francis Bay Marina and the open ocean in 2003.

The blue line shows the spit/dune in October 2008. The northern end is eroding fastest, and the tip is being broken into “islands” that are easily destroyed by wave erosion, shortening the spit. The island formed during the extreme wave storm of 1 September 2008 is shown in red.

Map prepared in conjunction with Afri-Coast Engineers, Port Elizabeth, www.africoast.com