



ISSUE 7 • DECEMBER 2017 Catch up on previous editions [here](#)

Photo courtesy of Chris Grounds

## THE BRAND NEW LAKE CONJOLA BOARDWALK

The \$700,000 Lake Conjola boardwalk is open for public use. Council's project delivery team and AgTrans Services have completed the project on time and under budget. The structure is 400m long and 1.8m wide and is mostly constructed with a composite material called **FRP - fibre reinforced polymer**.



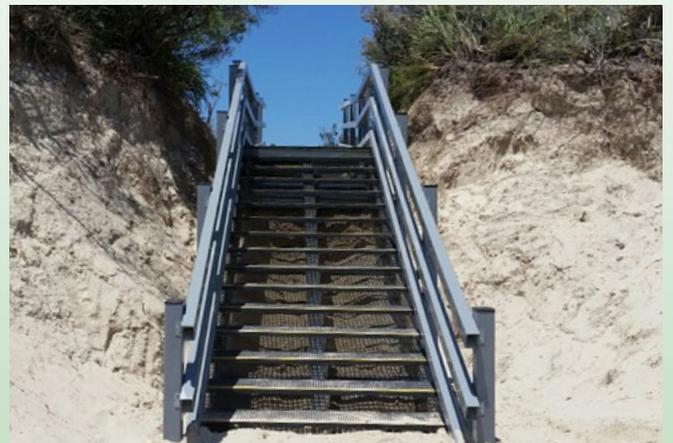
## FRP THE NEW MATERIAL FOR COASTAL ACCESS

As with the Lake Conjola boardwalk, many of Council's beach accesses, with timber components, are reaching 'end of life' and will soon need replacing.

The June 2016 ECL brought about a very sudden end of life for all the timber stairs at Currarong Beach.

Council has replaced two of these accesses with a product called FRP (fibre reinforced polymer). Whilst FRP is more expensive than timber, it has a life expectancy of up to three times that of timber and requires less maintenance.

FRP is now the material of choice and, as steps and stairs are replaced at our beaches, you will see it become more common.



Beach access stairs at the eastern end of Currarong Beach.

# GRANTS ROLL IN

**Council has received grants for four big projects.**



*Section of Shoalhaven River bank to be protected and rehabilitated.*



*There are two different sea walls at south Mollymook Beach - sand stone blocks (above) and gabion baskets (below). Both walls will need replating.*



## **\$300,000 from the Improving Local Parks and the Environment Program**

(Australian Government) to restore approximately 1000 metres of the Shoalhaven River bank, just west of Broughton Creek. The project involves fencing to keep stock off the river bank, low rock revetment bank protection, planting aquatic and terrestrial plants. The work will be undertaken by Shoalhaven Riverwatch volunteers, SCC and the Soil Conservation Service.

## **\$100,000 from the Coast & Estuary Program**

(NSW Government) towards the preparation of Council's new Coastal Management Program (CMP). Currently staff, and community representatives from the Natural Resources & Floodplain Management Committee, are preparing the Scoping Study for the CMP. Consultant's will be engaged early in 2018 and it's estimated that the CMP will be completed by the end of 2020.

## **\$100,000 to prepare a cost benefit analysis**

(CBA), also from the Coast & Estuary Program, for the replacement of sea walls at south Mollymook Beach. Following the June 2016 East Coast Low, the sea walls suffered damage and, given they are also reaching the 'end of life', they were assessed as needing replacement. The CBA is a requirement of the NSW Government and will provide Council with information regarding the most cost effective means of replacing the sea walls.

## **River Road, Shoalhaven Heads**

A grant application has been submitted to the Regional Growth - Environment & Tourism Fund (NSW Government) for foreshore erosion protection and remediation works along 1km of Shoalhaven River foreshore at Shoalhaven Heads, following damage done during the June 2016 East Coast Low.

The grant request is \$1,550,000 for the detailed design, coastal protection works, sand nourishment, stormwater infrastructure, pedestrian access ramp, stairs, viewing platform and boardwalk and foreshore vegetation planting. Should the grant application be successful, Council will contribute \$550,000 towards implementation of the project. Council is working closely with the Shoalhaven Heads community to develop the project.

# THE ANOMALOUS EASTERLY DIRECTION???

**A detailed study of the June 2016 east coast low (ECL) has identified a new climate change hazard; as storm patterns change, coastal areas once thought to be safe, are likely to be severely affected.**

The research team, led by engineers at UNSW, used drones, floating sensor buoys, LiDAR sensors, fixed cameras, quad bikes & jet skis to document before and after conditions of a 200km stretch of coastline north of Sydney. It was the largest and most detailed pre and post storm analysis ever undertaken.

They found that, during the storm, the coastline shifted inland an average of 22m – that's 65 cubic meters eroded from the beach for every linear meter alongshore. This is the largest beach volume change in 40 years.

'The amount of erosion was astounding,' said Dr Mitchell Harley who led the study. 'It was akin to the amount of sand shifted by Hurricane Sandy which lashed the east coast of the United States in 2012.'

Whilst the storm was only moderately intense, equivalent to a 1 in 5 event, it hit from a highly

unusual direction - the anomalous easterly direction - approximately 45 degrees more counter-clockwise than average.

The wave energy also had a longer period of time to do damage. The ECL was combined with a blocking high pressure system in the south Tasman Sea, which meant that the coastline was battered by storm waves for several days. The predominantly easterly wave direction for those conditions was unprecedented when compared to the available 25 years of directional wave measurements.

This presents a new danger to coastal areas.

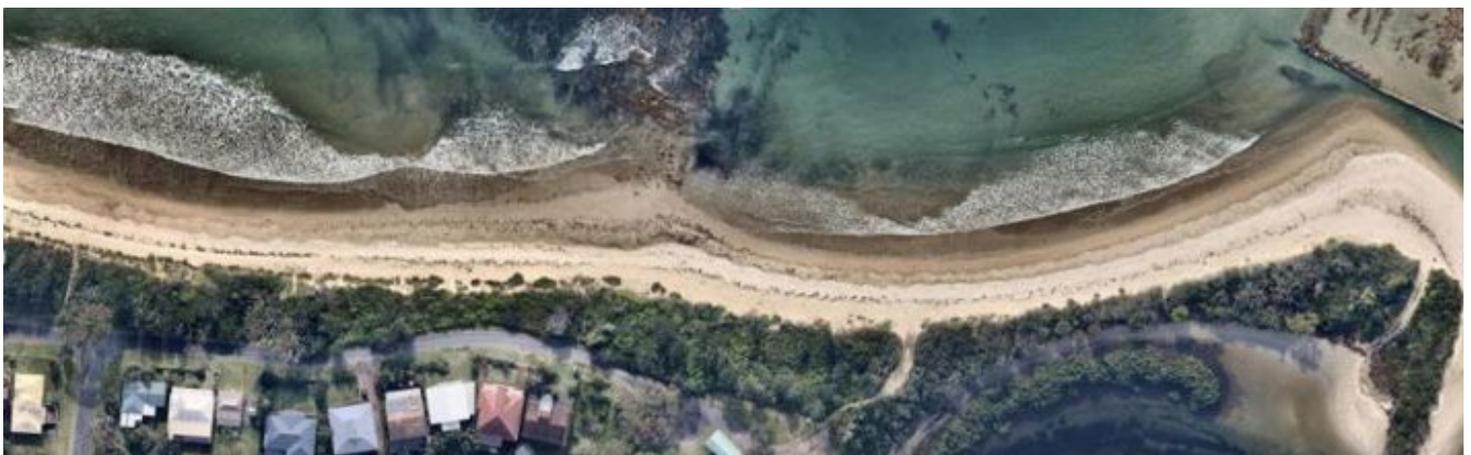
'If you have waterfront property or infrastructure that have previously been sheltered from the impacts of extreme waves, this is worrying news,' said Mitchell Harley. 'What this study confirms is that simply by changing direction, storms can be many times more devastating, and that's what we're facing in many locations as the climate continues to change.'

Read the full report

[Extreme coastal erosion enhanced by anomalous extratropical storm wave direction](#)



Currarong Beach May 2016, just prior to the June 2016 ECL



Currarong Beach May 2017 - note the difference in width of the dune vegetation

# The lines in the sand have moved...

Shoalhaven's coastal hazard lines have been reviewed, moved and adopted by Council.

A timeline explanation of what, when and why is provided below...it's complicated. It's all connected to the NSW Coastal Reforms, Stages 1 & 2, and sea level rise (SLR).

To prepare the new coastal hazard mapping, the consultant coastal engineer used Council's revised sea level rise (SLR) figures together with new data that had become available since the 2009 mapping was completed; updated beach transect surveys, bathymetry, LiDAR ground level information, aerial photos as well as information gathered after the June 2016 ECL.

## 2012 | May

Draft Shoalhaven Coastal Zone Management Plan (CZMP)

### Completed September

NSW Coastal Reforms Stage 1 announced, including withdrawal of the 2009 NSW sea level rise benchmarks which had been used for the development of the coastal hazard lines shown in the draft Shoalhaven CZMP.

Coastal LGAs were then supported by OEHL to set their own regional SLR benchmarks.

Certification of CZMPs was deferred until the Stage 2 reform process had been completed – predicted, at the time, to begin in early 2013.

## 2014 | October

South Coast Regional Sea Level Rise Policy and Planning Framework completed in conjunction with Eurobodalla Shire Council, with support from OEHL.

### November

NSW Coastal Reforms Stage 2 begins.

## 2015 | February

Council voted not to adopt SLR projections recommended by the consultants in the Regional SLR document, and resolved to adopt SLR projections of

- 10cm – 2030
- 23cm – 2050
- 36cm – 2100

## 2016 | March – July

### Our Coast Our Lifestyle

Community education and engagement project about management of coastal erosion.

### August

Shoalhaven Coastal Hazard Mapping Review completed using SCC's 2015 SLR projections and other new data.

Adopted by Council in June 2017.

## 2018 | January

Shoalhaven draft CZMP 2012 submitted to the NSW Government for certification. Concurrently, the preparation of a new Coastal Management Program will begin, as required by the Stage 2 NSW Coastal Reforms. It will be completed in 2020.

[View the new coastal hazard mapping here](#)