

# Fact Sheet



The Entrance channel - impacts due to significant rainfall event since 6 February 2020

UPDATED 13 FEBRUARY 2020

## **Why did Council not dredge the channel at The Entrance before this recent significant rainfall event**

The channel was naturally open and water from the estuary continued to flow and exit the channel at The Entrance before and during this significant rainfall event. Exchange of water at the channel was low before the event, as lake levels were low (0.25m AHD) due to prolonged dry weather. This means there was minimal flow of water between the lake and the channel. Observations throughout this period are that the channel has never closed. The trigger to artificially open the channel through dredging pursuant to the Review of Environmental Factors, was not met.

## **What happens with other closed lagoons**

Other closed lagoons either naturally breached to permit the flow of water, or were opened by Council as required by creation of a 'pilot channel'. The channel at the Entrance was already open at the time leading into this significant rainfall event.

## **What was the purpose of the works at the channel entry on 11 February**

Council conducted works at Karagi sandspit at The Entrance North on Tuesday afternoon. These works were to encourage realignment of the channel at The Entrance back to the northern side of the rock shelf and to help protect public infrastructure at The

Entrance, such as the lifeguard tower, beach accesses and other infrastructure. Some large concrete blocks had already fallen from the embankment on the southern side of the channel as a result of fast flowing waters eroding this foreshore. Spreading the current flow of waters across different parts of the channel by creation of additional exit points was designed to try and reduce water velocities along the southern part of the channel and reduce the risk of further erosion, and costly damage to public infrastructure.

## **If Council carried out these works prior to the significant rainfall event, would it have made a difference to the water levels in Tuggerah Lakes**

There is no evidence to suggest that carrying out works prior to the significant rainfall event would have made any difference to the water level in Tuggerah Lakes. The works were designed to realign direction of water flow already escaping the channel and help protect public infrastructure at The Entrance. Since the works were carried out, there is nothing to confirm that the works have had an impact on water level in Tuggerah Lakes. The water level of Tuggerah Lakes is gradually receding as the volume of water flowing from the catchment areas has slowed whilst water continues to escape the estuary.

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## **What impacted the water level in Tuggerah Lakes since Thursday 6 February**

The water level of Tuggerah Lakes was impacted by the significant water volume flowing from the catchment into the lake due to the rainfall event. The Bureau of Meteorology [river height data](#) recognises this event as a 'Minor' flood event in terms of scale of the event in terms of flood height.

## **Has the installation of the groyne wall impacted on changes to water flow at the channel at The Entrance**

The groyne \* wall on The Entrance Beach was installed by the State Government in 2017 and designed to keep sand on The Entrance Beach. Council is still monitoring the impacts to the water flow at the channel as a result of the groyne. The groyne appears to have been successful in keeping sand on The Entrance Beach but may have created a sand deficit to the north of the groyne wall, which could have influenced the channel to flow further to the south in this rainfall event, which is a very different natural flow than has previously been observed. This is the first significant rainfall event since installation of the groyne wall and has allowed observation of the impacts on the direction of water flow at the channel at The Entrance.

\*A groyne is a hydraulic structure.

Council staff are proposing further studies on the potential impacts of the groyne on the channel behaviour later this year. Additionally, a review of the dredging plan for The Entrance is also proposed, taking into account changing climatic conditions.

## **Why does Council not have an ongoing dredging program in place**

Central Coast Council has maintained a recurrent dredging program for the channel at The Entrance for nearly 30 years with the program being delivered every two to three years. The channel at The Entrance has not been identified as a priority location for dredging by the State Government in the NSW Coastal Dredging Strategy 2019-2024. Council has mostly funded dredging programs at The Entrance through rate revenue. This has been supplemented in more recent dredging programs through Council's successful grant applications under the State Government's Rescuing Our Waterways grant program.

Central Coast Council received a Letter of Offer and Funding Agreement under Rescuing our Waterways from DPIE – Crown Land on 13 February 2020. This is in response to Council's grant submission for \$600,000 submitted to the State Government in June 2019 for another dredging program at The Entrance channel.

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## **What are the future plans for the channel at The Entrance**

Council resolved in the Council Meeting on 12 February 2020 to work on a long term solution for the channel at The Entrance. The first step will be to set aside budget funding and to also seek grant funding to help guide the actions needed to improve the condition of the Tuggerah Lakes system and the channel at The Entrance. Preliminary designs for a long-term solution to the channel's silting will be developed, while a dredging program will be considered in the short-term. Council will draw on previous studies conducted into the 2013 and 2015 to help guide the work.

## **How does this significant rainfall event compare to other weather events**

The rain experienced in the catchment, and the flood levels achieved in the Tuggerah Lakes Estuary were both comparable to the June 2007 'Pasha Bulker' storm. Both of these flood events are considered approximately a 1 in 10 year event. This means there is a 10% chance in any given year of a flood event of this scale occurring at this location.

## **Who approves a breakwall or seawall at The Entrance**

Council would need to apply via NSW Crown Lands, who own and manage the land, for a licence to build a break wall or seawall on the state owned waterways. Council cannot approve these works. Council is required to

apply for a licence every time works are required to be undertaken at the channel to The Entrance. Council currently has a Crown Land licence for dredging activities at The Entrance channel. Council would also need to seek approval from the Coastal Council under the Coastal Management Act.

## **What is the management plan for Tuggerah Lakes**

The current certified plan is the Tuggerah Lakes Estuary Management Plan (2006). As part of the mandatory review of the Tuggerah Lakes Estuary Management Plan to comply with new legislative requirements, a panel of industry experts is being assembled by the State Government to assess the management requirements of the estuary from the top of the catchment to the channel at The Entrance.

The panel will collaborate with the community, government agencies and Central Coast Council on the development of the new Coastal Management Program in accordance with the Coastal Management Act 2016.

## **For more information:**

[Search Dredging at The Entrance Channel at centralcoast.nsw.gov.au](http://centralcoast.nsw.gov.au)