

Navigational Dredging of Cudgen Creek and Sand Nourishment for Kingscliff Beach

September 2016

Navigational Dredging to Improve Vessel Safety on Cudgen Creek

Dredging, mining and reclamation works have occurred in lower Cudgen Creek since the 1960's. The most recent dredging occurred in 2011 and involved the removal of approximately 4,000 m³ of material from an area between the boat ramp and the old Coastguard tower.

Sand has since infilled Cudgen Creek (Figure 1) and compromised the safe navigation of vessels.



Figure 1 - Cudgen Creek looking south across the proposed navigational dredging area.

The current proposed navigational dredging area is similar to the previous dredge area and will involve dredging to a channel depth that allows for safe passage of vessels.

The estimated volume of sediment to be removed is 25,000 m³ which will be pumped via pipelines to two separate locations, dewatered and used to nourish nearby eroded beaches.

Some sediment will be placed on the bank of Cudgen Creek to rehabilitate existing erosion and buffer against potential future bank erosion.

Kingscliff Beach Sand Nourishment

The primary goal of the proposed works is to remove accumulated sediment from the navigation channel in lower Cudgen Creek to enable safe boat passage. As an addition, a majority of the dredged material will be used for beach nourishment with a focus on Kingscliff Beach (Figure 2). It is expected the beach nourishment will alleviate the often severe coastal erosion at this site and help mitigate future erosion.

Nourishment will involve the placement of sand above Mean High Water Level then spreading and shaping it to create a suitable dune profile. The sand will be added to the primary dune which has been subject to coastal erosion in recent years.



Figure 2 - Kingscliff Beach looking north from the northern breakwater across to the placement area.

Details of Proposed Works

The NSW Government has provided \$345,000 for the maintenance dredging at Cudgen Creek through the "Dredging of Priority Waterways on the North Coast" program.

A Review of Environmental Factors has been completed and approved for the project. Works are expected to commence in August 2016 and be undertaken over a period of 10 weeks.

The map below (Figure 3) indicates the location of the proposed dredge area, pipeline route and dewatering/placement areas. Details of the works include:

- A dredge area located entirely within lower Cudgen Creek from a point approximately 150 m upstream of the mouth of the estuary and extending approximately 220 m upstream.
- Dredging to a channel depth of -2.0 m below Lowest Astronomical Tide.
- Removal of up to 25,000 m³ of sediment.
- A main pipeline route extending from the dredge area in Cudgen Creek to a small river beach on the north side of the creek at a break in the rock wall. From there the pipeline will extend to the dewatering/ placement site on Kingscliff Beach. A short secondary pipeline to the southern estuary beach will be directly between the dredge and dewatering/placement site.
- Two dewatering/placement sites for dredged material at:
 - The southern end of Kingscliff Beach impacted by severe erosion extending from the northern breakwater for a distance of approximately 1,100 m to a point adjacent to the northern end of the Kingscliff Bowling Club.
 - An area impacted by erosion on the southern bank of Cudgen Creek directly to the south of the dredge area, approximately 100 m in length.
- A temporary partial closure of the lower Cudgen Creek. Safe passage of vessels will be maintained through project management and control measures within the lower reach of the Creek.

More information

More information about the Coastal Infrastructure Unit or Department of Industry - Lands visit www.crownland.nsw.gov.au or call 1300 886 235

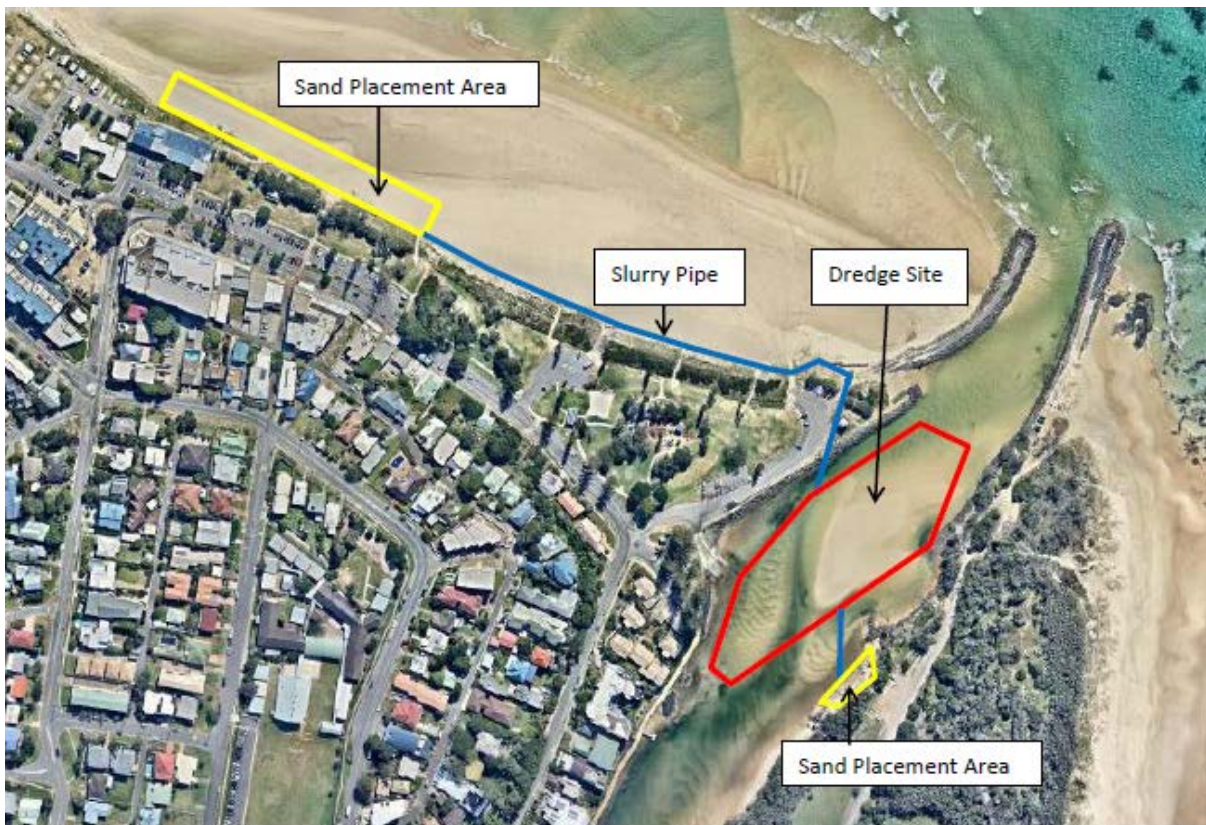


Figure 3 - Location of navigational dredging within Cudgen Creek (red). Pipeline routes (blue) transfer sand to the southern bank of Cudgen Creek (yellow) and the severely eroded southern end of Kingscliff Beach (yellow).

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