

# Water Quality Monitoring Gold Coast, 2017/18



## Palm Beach and Northern Beaches Shoreline Project Water Quality Monitoring Program

Australasian Marine Associates (AMA) were commissioned to assist the Council of the City of Gold Coast (CCGC) in undertaking the Water Quality Monitoring Program for the Northern Beaches and Palm Beach Shoreline Projects, which included large scale offshore dredging and beach nourishment (1.5 to 3 M m<sup>3</sup>), completed in the later half of 2017. The dredging operation utilised a medium size trailing suction hopper dredger. There were two (2) specific components of the project, which required the following to be executed:

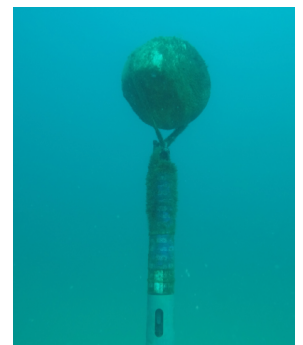
Part A – Develop and update a Dredge Management Plan for the Northern Beaches and Palm Beach Shoreline Projects in accordance with relevant approval permit conditions.

Part B – Execute environmental monitoring services for the Northern Beaches and Palm Beach Shoreline Projects to ensure that the Principal and the dredging contractor met all required environmental conditions and requirements as set out by the applicable approval permits, including pre-dredge (works) baseline monitoring, monitoring during the works and post-works close out.

CCGC also requested support during project establishment, and periodic meetings with the Principal and regulatory agencies. CCGC negotiated with the regulatory agencies to refine and update permitting and monitoring requirements. AMA supported this process to maximise project and environmental outcomes.

The fixed site instrumentation data collected was used to derive the baseline 80<sup>th</sup> percentiles, and help guide the management of the dredging works. The baseline data was also analysed to investigate spatial variation between monitoring sites and comparison with other environmental variables or weather events.

It was concluded that the water quality monitoring program successfully captured the natural range of water quality conditions during the Autumn and early Winter months of 2017 off the Gold Coast. The values determined during this program were used to inform management of the dredging works in accordance with the two-tiered monitoring program in the project EMP.



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