

# Pre-Dredging Surveys Gold Coast, 2016



## Palm Beach and Northern Beaches Shoreline Project Pre-Dredging - Geotechnical and Geophysical Surveys

The City of Gold Coast (CGC) is responsible for the management of Gold Coast beaches, as part of the Ocean Beaches Strategy 2013-2023 (OBS). The OBS details the strategic outcomes required to maintain and improve the ocean beaches of the Gold Coast, including the Northern Beaches Shoreline Project (NBSP). To provide comprehensive up to date information on the physical environment, Australasian Marine Associates (AMA) was commissioned to undertake a series of geotechnical and geophysical investigations.

### Background and Scope of Work:

Recently, the Gold Coast was selected to host the 2018 Commonwealth Games. To ensure pristine beaches that will be utilised by tourists and athletes during the Games, CGC gained approval to dredge sand from several offshore areas between Palm and Main Beach for beach nourishment. The approved dredging campaign is for >1,000,000 tonnes of dredge material, comprising clean sand to be taken from specified locations to a depth no greater than 3 m below the seabed.

As part of CGC's commitment to the OBS, the City aims to collect, record and analyse coastal data to ensure that all material dredged is characterised as clean sand. The outcomes of these investigations will provide updated information for dredging of offshore locations and relocation of dredge materials onshore for future beach nourishment control beach erosion. In addition to beach nourishment works, the CGC is also planning the construction of a submerged control structure as part of the PBSCS.

To ensure that sufficient baseline data were gathered, geotechnical and geophysical works were required including

- (1) a geophysical survey (2D marine reflection seismic bottom profiling) along the nominated transects at the PBSBS project site; and
- (2) a series of sediment core samples at specified locations at the PBSCS site and the NBSP site, within the nominated offshore dredge borrow sites for analysis.

### The objectives of this investigations were:

- To further inform the design component of the PBSCS; and
- Confirm the availability, suitability and quality of the available sand for beach nourishment purposes within the Surfers Paradise and Nobbys Offshore Borrow Area.

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