

TSHD Balder R near shore nourishment at the Gold Coast, Australia

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The RN Group operates world wide performing beach nourishment, land reclamation, port development, offshore trenching and backfilling and capital maintenance dredging, with a highly professional team.



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# Largest dredging project in Gold Coast's history

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In 2017, Rohde Nielsen A/S was awarded the contract to work on one of Australia's most prestigious beaches.

The City of Gold Coast is situated approximately 80 kilometers south of Brisbane in Queensland, and is the most prominent tourist destination in all of Australia. Powerful cyclones have made the beaches vulnerable to coastal erosion. Consequently, the Gold Coast City Council has invested \$13.9 million in a Gold Coast Beach Nourishing Project.

### MOVING 3 MILLION CUBIC METERS OF SAND

As part of the project, the 111-meter hopper dredger Balder R, owned by Rohde Nielsen A/S, spent 16 weeks - from 15 June 2017 and onwards - working along the beaches. The boat worked all hours dredging tonnes of sand from deepwater to the surf zone. The sand was either dumped from the bottom of the vessel's hull or 'rainbowed' from the hull.

The hopper dredger dredged 3 million cubic meters of sand from deep water offshore sand supply areas and

relocated it around the wave-break zone. This makes the project the biggest offshore dredging program in Gold Coast's history.

#### **BENEFITS FOR 15 YEARS**

In collaboration with the Rohde Nielsen team on site, the project was driven by council engineers who had studied data from wave buoys, beach surveys, camera monitoring and computer modelling before calling in the hopper dredger. Thus, the crew knew exactly where to place the sand.

The replenished sand will benefit the Gold Coast for at least the next 15 years. The sand placement will have two benefits: Firstly, sand in the wave-breaking zone will have an immediate effect on beach widening. The sand was placed in patterns to replicate natural rhythmic sand bar formations known to promote good quality surfing conditions. Secondly, sand placed further offshore in deeper areas will move more slowly, increasing the volume of sand along the beach.