

# Palm Beach Artificial Reef

**Historically, Palm Beach is one of the Gold Coast's most vulnerable beaches to the threat of coastal erosion. As part of the City's Ocean Beaches Strategy 2013–2023, the City is delivering the Palm Beach Artificial Reef to enhance coastal protection of Palm Beach and ensure everyone can enjoy a beach experience.**

The City has worked with a team of world-class experts in coastal engineering to develop the best possible outcome for Palm Beach. The City's solution is a two-phase project incorporating sand nourishment (phase 1) and construction of an artificial reef (phase 2).

## Phase 1: Sand nourishment (completed)

Phase 1 was completed in September 2017 and saw the successful nourishment of Palm Beach with more than 470,000m<sup>3</sup> of clean sand.

This sand is being monitored through coastal survey and aerial photography, and has provided an effective buffer to coastal erosion since its placement.

## Phase 2: Artificial reef

The artificial reef will be located approximately 270 metres offshore from Nineteenth Avenue, between the beach and the existing natural reef.

It will be constructed of large rock boulders and will be 1.5 metres below the average water level at its highest point. The footprint of the structure will be approximately 160 metres long and 80 metres wide.

Significant investigation has gone into designing the artificial reef, including computer modelling, wave tank testing and real-life coastal data capture and analysis.

The reef will work by influencing the surrounding waves and currents to help prolong the benefit provided by the sand delivered through phase 1 and promote a long-term increase in sand along vulnerable sections of Palm Beach. The increase in sand will generally be located just offshore, not always distinctly visible to beach users, but in a position to act as a protective buffer against future erosion.

While the primary purpose of the artificial reef is coastal protection, surfing outcomes have been considered during the design phase, and under certain swell conditions there is predicted to be waves breaking on the reef suitable for intermediate surfers.

## Artificial Reef Construction (April to October 2019)

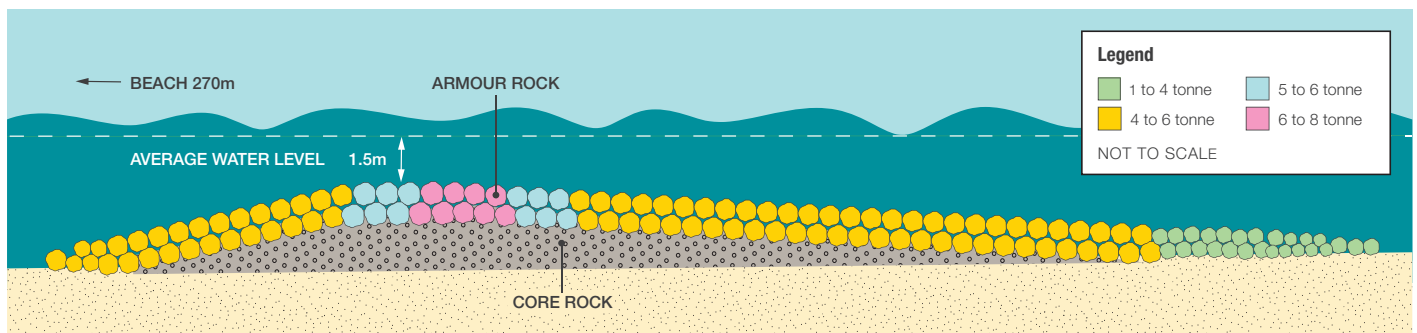
Construction of the artificial reef is scheduled between April and October 2019, weather permitting. To ensure the safety of all beach and ocean users, a temporary exclusion zone will be established offshore around the artificial reef construction site. This will prohibit all watercraft, swimmers and boardriders from entering the reef construction site. Exclusion zone boundaries can be viewed over the page.

## For more information

**P** 1300 GOLDCOAST (1300 465 326)

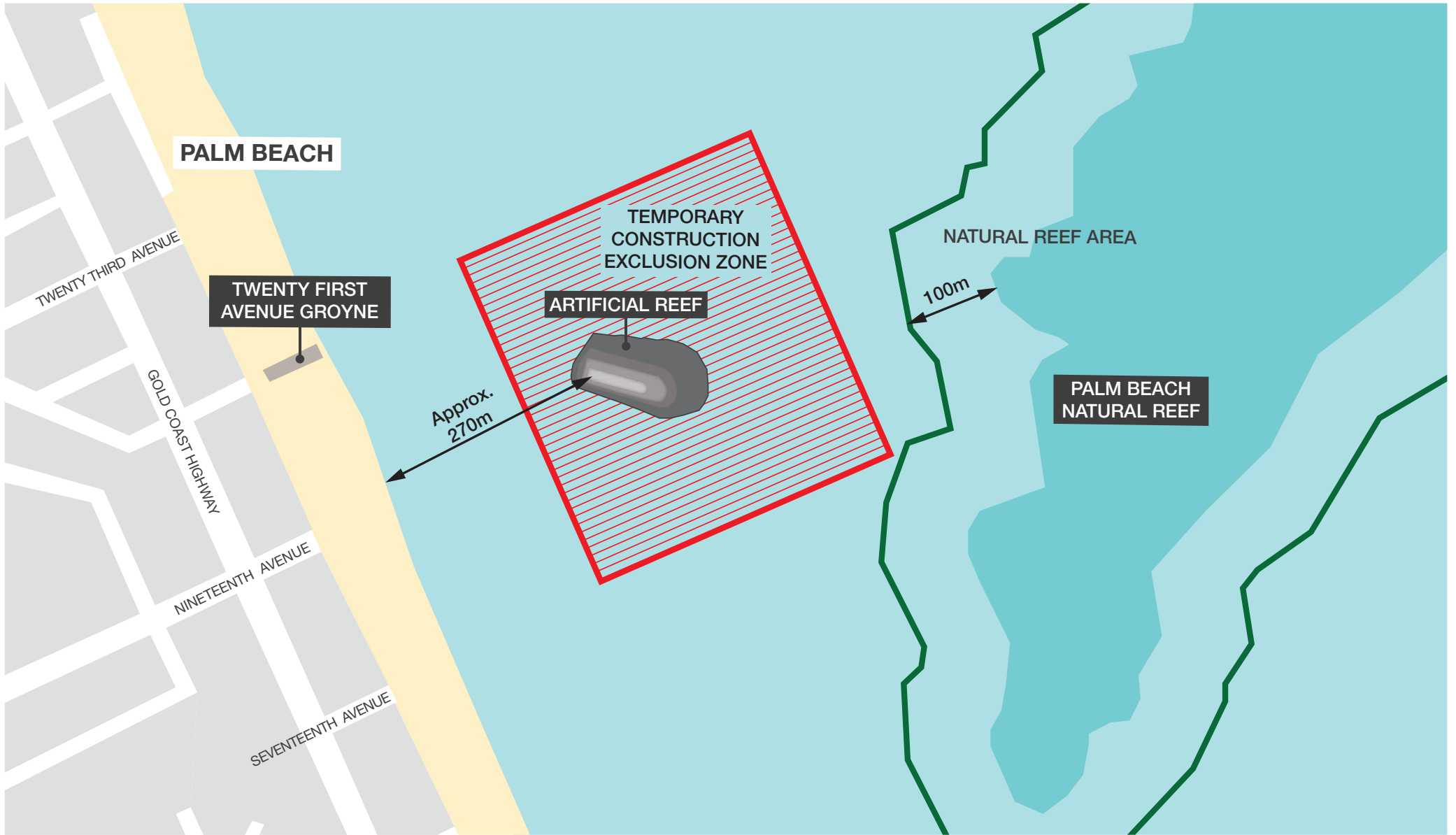
**E** [pbsp enquiry@goldcoast.qld.gov.au](mailto:pbsp enquiry@goldcoast.qld.gov.au)

**W** [cityofgoldcoast.com.au/palmbeachshorelineproject](http://cityofgoldcoast.com.au/palmbeachshorelineproject)



Section view of the Palm Beach Artificial Reef showing rock sizes.

# Construction exclusion zone



CGC14125