

NORTH DANGER REEF OVERALL

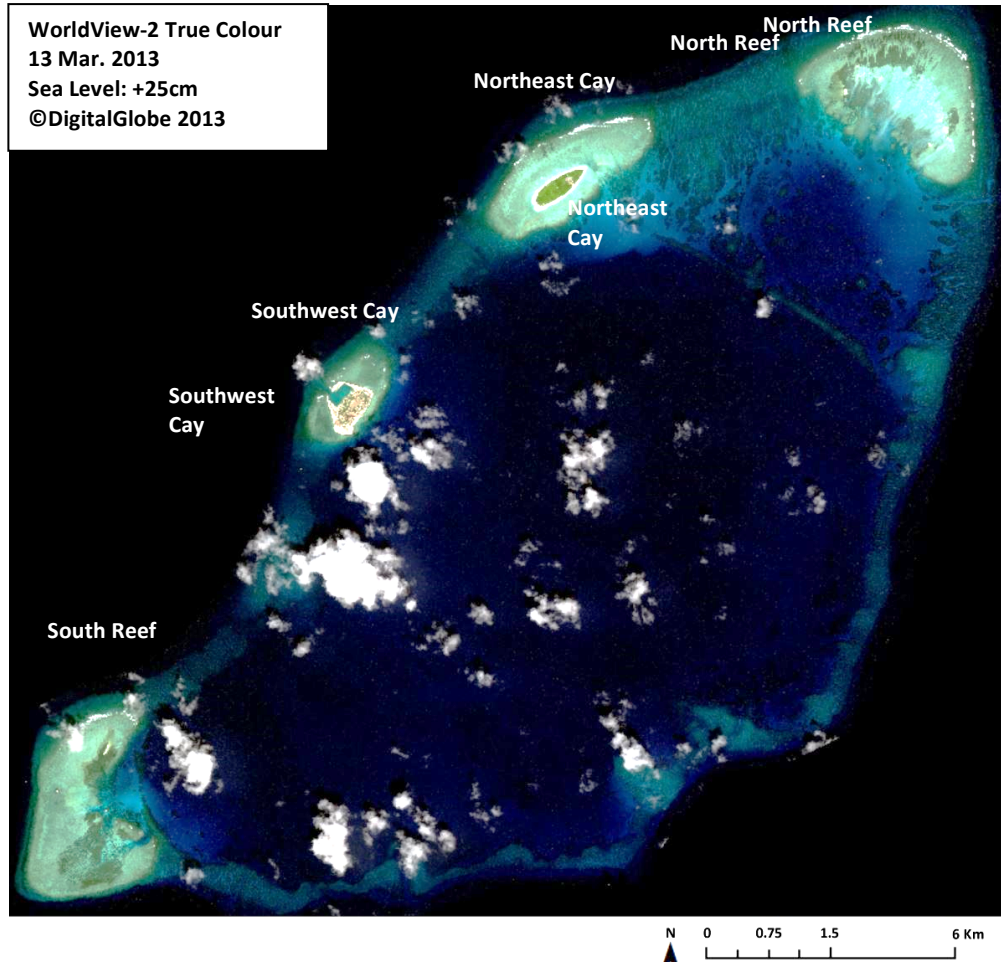
11°25'08.47"N, 114°21'20.37"E

Geographic area

North Danger Reef is a coral atoll that comprises a collection of four coral reef platforms located on the western side of the coral ring and connected through deeper and discontinuous ribbon-like reef systems. It is one of the northernmost atolls of the Spratlys. It is located in the northwestern part of the Spratlys, 12-14NM west of Lys Shoal and Trident Shoal. It extends over 15km along its northeast-southwest axis and reaches over 7km along its northwest-southeast axis. The overall surface area of the atoll is 75.29km² (including the central lagoon).

Land area above water

Two of the four shallow coral reef platforms that support vegetated and inhabited above-water land areas are Northeast Cay and Southwest Cay. The other two platforms, South Reef and North Reef are mostly submerged; only sand banks are visible. Additional satellite images used to describe the physical characteristics of this atoll are viewable on Google Earth as captured on 27 January 2005, 7 October 2014, and 16 April 2014 and 27 February 2015 (for Southwest Cay and South Reef only).



Human infrastructure

In addition to man-made structures on the two largest above-water land areas (Southwest Cay and Northeast Cay), a man-made structure can be observed on South Reef from as early as 27 January 2005.

Intertidal and submerged area

The shallow reef platforms are 2m deep or less and each of them are the subject of a specific description sheet. However, the many deeper coral reef platforms that connect these shallow platforms are not. The aerial coverage of the coral reef area is 21.31km² (including the above-water land areas of Northeast Cay and Southwest Cay) surrounding a lagoon of 54.28km². The total aerial coverage of reef flats and of reef slope is 6.58km² and 14.34km², respectively. Areas of reef flats that are around 1.30m deep or less are expected to be exposed at Lowest Astronomical Tide. The eastern and southeastern sides of North Danger Reef form a narrow 200m by 500m coral ridge that is 8-10m deep and connects North Reef to South Reef. One shallower part of this ridge (in the north) is around 5m deep.

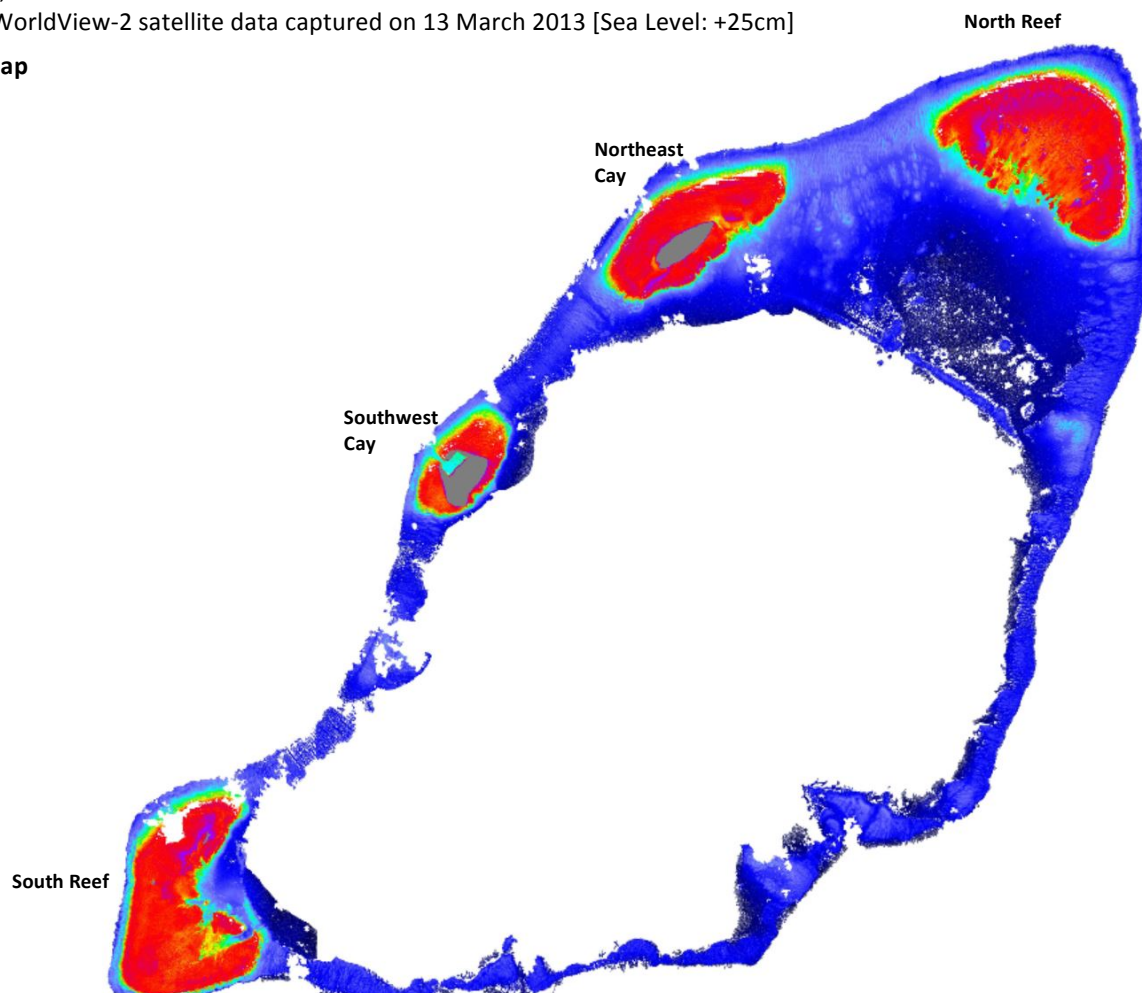
Dredging marks are visible on Northeast Cay and North Reef and are the result of the raking and extraction of coral and sand substrate from reef flats; it is unclear if the coral and sand were collected as building material, removed to prepare the area for later construction works, or dredged for fishing purposes. Satellite images also show fishing activities over the reef slopes as well as maritime traffic including numerous wide barge-looking vessels possibly used to carry small dredgers; twelve vessels ranging 10-40m in length can be seen in the 13 March 2013 satellite image.

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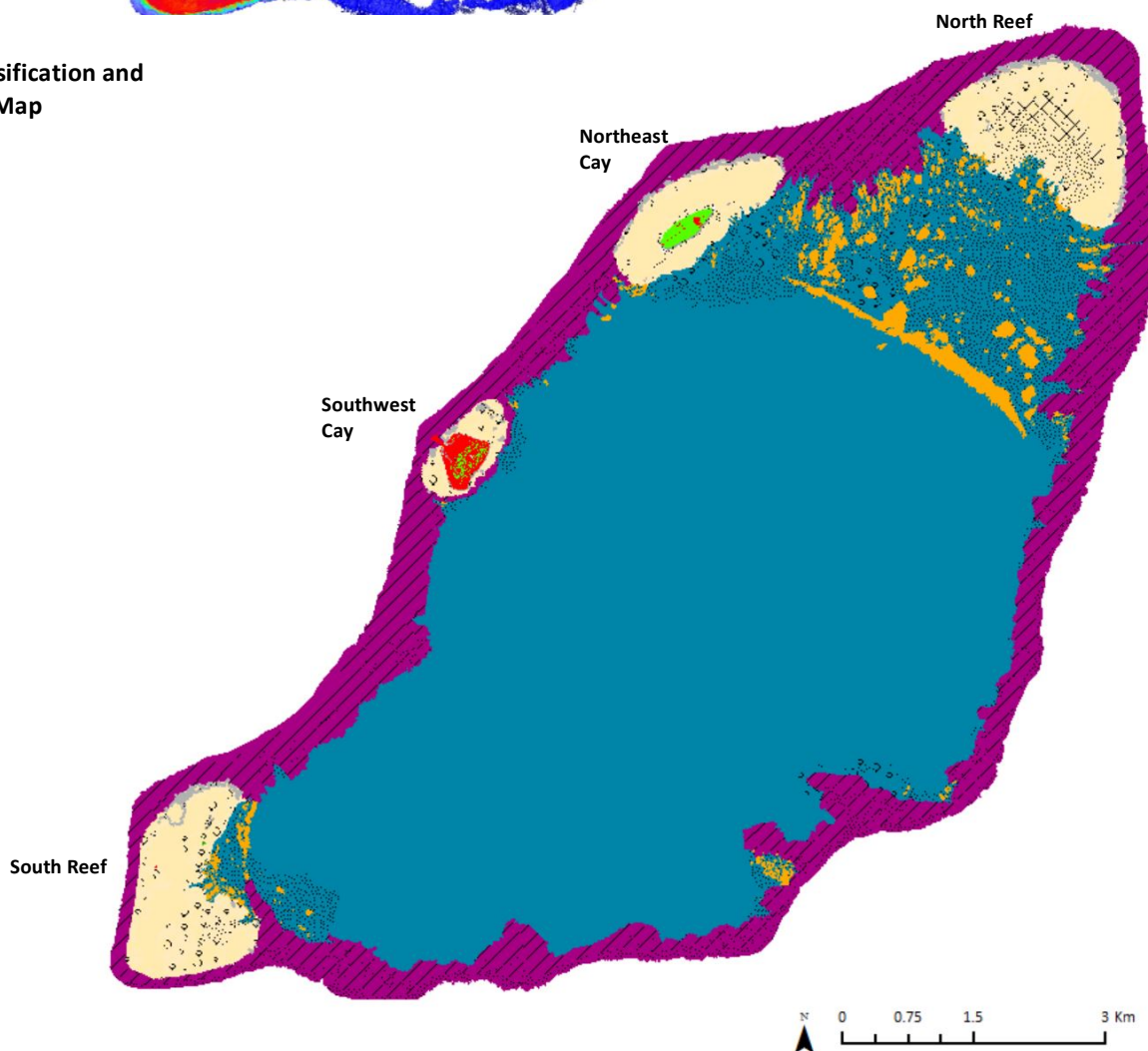
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Derived from WorldView-2 satellite data captured on 13 March 2013 [Sea Level: +25cm]

Bathymetry Map

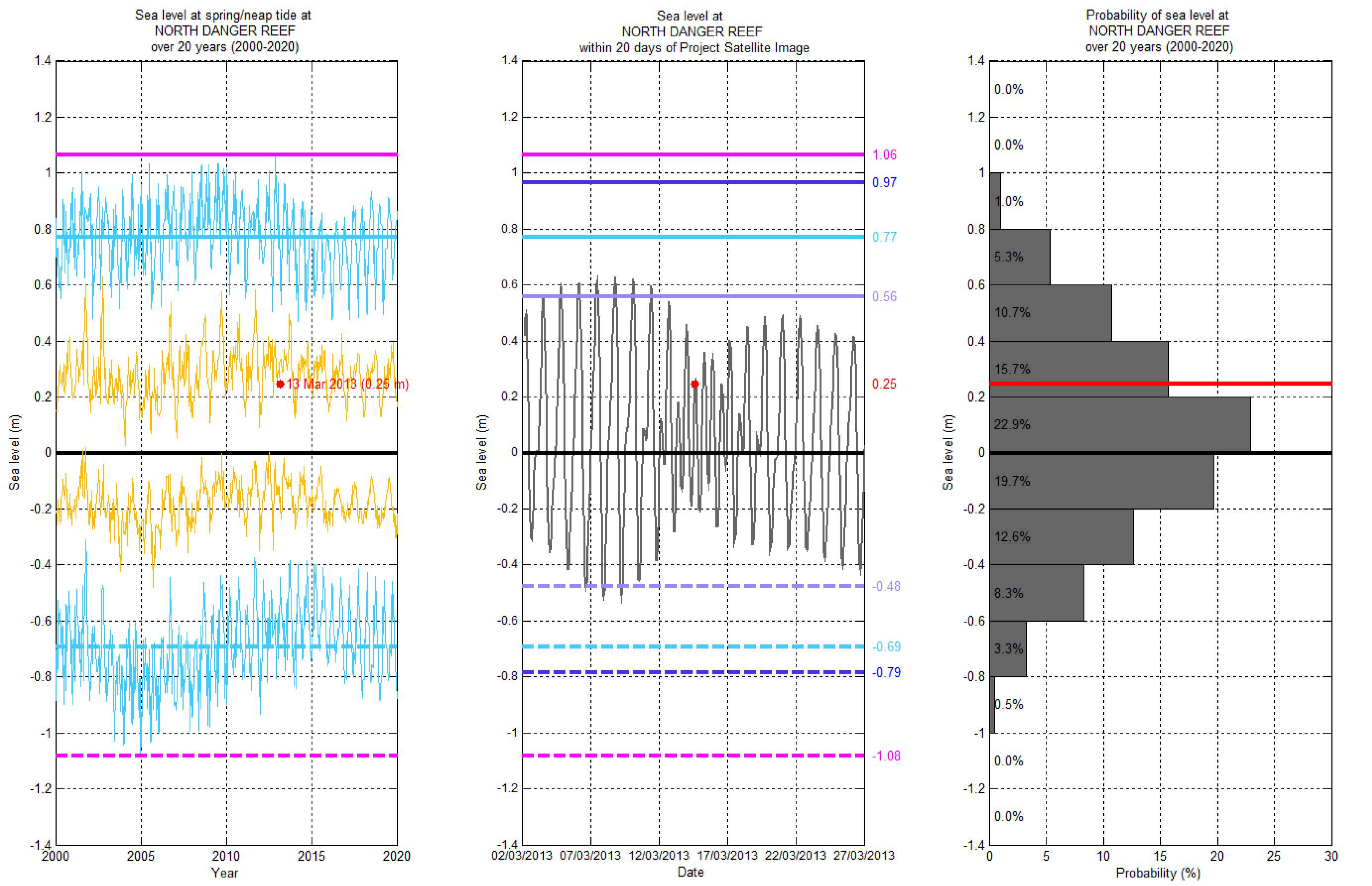


Habitat Classification and Land Cover Map



Sea level (SL) at NORTH DANGER REEF

[11°25'08.47"N, 114°21'20.37"E]



Hourly sea level SL at spring tide SL at Mean High Water Spring SL at highest tide of the year SL at Mean Higher High Water SL at Highest Astronomical Tide Project Satellite Image

Mean Sea Level SL at neap tide SL at Mean Low Water Spring SL at lowest tide of the year SL at Mean Lower Low Water SL at Lowest Astronomical Tide Google Earth and Landsat satellite images