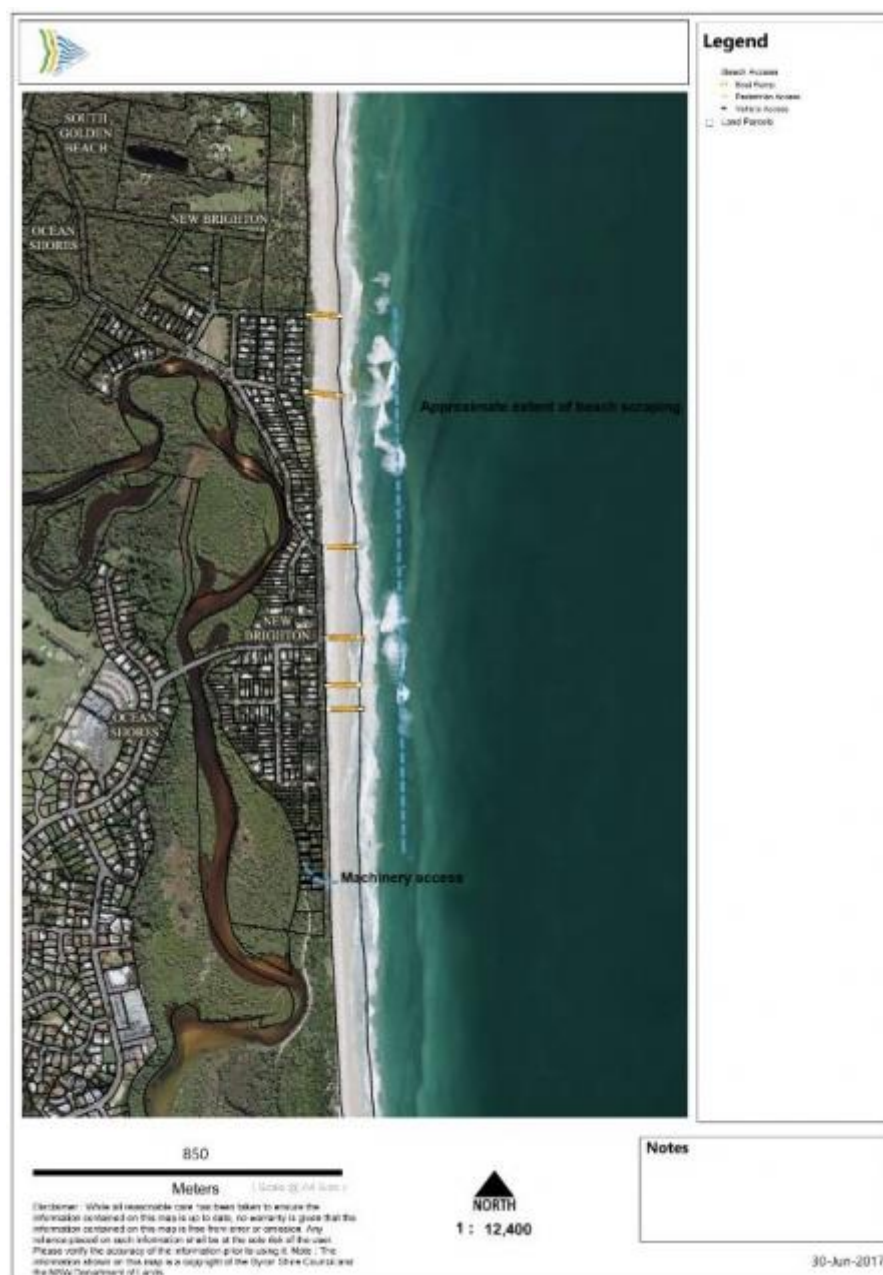


New Brighton Beach Scraping October, 2017-

Council is proposing to undertake another campaign of beach scraping between October and December 2017 for up to 3 consecutive weeks (weather permitting). Works will be undertaken between 7am and 6pm Monday to Friday and may include some Saturdays subject to project progression.

How & where will works be done?

Scraping works will be undertaken using a bulldozer and two excavators. The location of the proposed works spans approximately 1.3 kilometres from 380m south of Strand Avenue to 920m north of Strand Avenue. Each beach scraping 'run' will take approximately 6 days. Two runs have been scheduled with approximately one week in between to allow for some recovery of the inter tidal zone.



Will I be able to access the beach?

Pedestrian access will be restricted to parts of the beach, and along parts of the beach at various locations at various times over the scraping period. Safety officers will be on the beach to manage public risk and access issues. We ask for your understanding and consideration during the works period and ask that you follow signage and directions from Council's project staff.

What environmental protection and monitoring measures are being used?

An ecologist will attend the beach scraping works site on a daily basis to conduct foot surveys along the length of the work site before scraping proceeds. The ecologist will monitor for the presence of threatened fauna such as birds and turtles, bird nests, and any other significant ecological values.

What happens after the scraping works are complete?

Beach accessway management and dune rehabilitation and plantings will be implemented to vegetate, stabilise and enhance the dunal system following the scraping works.

NEW BRIGHTON BEACH SCRAPING

The coastline north of the Brunswick River in the Northern Rivers region of New South Wales, has a long history of beach erosion. The 1960s and 1970s saw several homes at the southern end of New Brighton beach abandoned, and further south the village of Sheltering Palms was completely lost to coastal erosion. See images of the Sheltering Palms village during the late 1970s in the [Hastings Point Erosion Study](#) (PWD 1978)

Recent studies have predicted that a large 'design' storm (100 year Average Occurrence Interval) could result in the erosion of the beach at New Brighton by some 40 to 50 m landward, or 200 m³/m ([WBM 2013](#)). As a consequence, parts of the main public road and infrastructure at New Brighton are under an immediate threat from an extreme storm or series of very large storms which may occur at any time. New Brighton beach is also experiencing underlying long-term shoreline recession due to an imbalance in the sediment budget with more sediment leaving the system than being returned.

This long-term recession has been estimated at 8 to 15 cm per year. The risk to New Brighton beach from projected climate change induced sea level rise is also very significant when looking into the future. The vulnerability of this area of the coast to beach erosion and shoreline recession increases with time and most of the seaward properties and road infrastructure in New Brighton are projected to be at risk from, or impacted by coastal recession by the year 2050. Wave over-topping to the hind-dune areas also presents a significant inundation hazard along the beach where the dune is narrow and/or low.



Erosion hazard lines at New Brighton for the immediate (red), 2050 (orange) and 2100 (blue) timeframes

([WBM 2013, report prepared for Byron Shire Council](#))

Past response to the threat of erosion at New Brighton has included the practice of beach scraping. Beach scraping is the mechanical movement of sand from the intertidal zone and placement of this sand onto the dune. The practice is designed to speed up the rebuilding of the dune system post-storm event. It can also be used to assist in the reshaping and rebuilding of a dunal system at any other time to protect coastal lands from coastal erosion, underlying shoreline recession, wave overtopping and inundation.



Machinery at work during beach scraping (Byron Shire Council 2013)

Beach scraping was used during the late 1970s to 1990s as a strategy to combat the threat of significant erosion events ([WRL 2010](#)). Works continued into the early 1990s in combination with an active dune care campaign, and were successful in enhancing the storm buffer provided by the dunes. However, due to possible negative impacts on 'pipi' populations, beach scraping was suspended (Erskine and Thompson 2003; in WRL 2010).

After a period of hiatus of beach scraping at New Brighton, a trial was undertaken by Byron Shire Council in 2010 to understand the effectiveness of beach scraping as a coastal hazard management strategy. The primary objectives of the project were to:

- reduce the severity of the immediate coastline hazard threat to infrastructure, by increasing greater foredune volume and a preferred dune profile;
- to provide data to allow determination of both positive and negative impacts; and
- to enable council to assess the viability of beach scraping over the short to medium-term.

The 2010 trial program was considered a success from an environmental, technical and social perspective and Council resolved to implement an on-going beach scraping program subject to funding and the prevailing coastal processes at the time. A successful campaign was undertaken in 2013 with before and after photos highlighting the increased beach width and dune volume.



New Brighton beach before beach scraping works in 2013 (BSC 2013)



New Brighton beach after beach scraping works in 2013 (BSC 2013)

The success of the 2017 program will be subject to the severity and frequency of future storm events post scraping episodes. Beach scraping will not eliminate the threat to infrastructure and private property from a 'design' storm event but will certainly reduce the severity of this threat. Beach scraping is unlikely to provide a long-term coastal adaptation solution to address coastal erosion and shoreline recession, especially under rising sea level. However, it may provide a useful coastal adaptation tool in Australia in the short to medium-term to reduce the risk to protect property and infrastructure from the immediate and medium term threat of coastal hazards.