

# Presentation Summary:

## Halifax Park / Fly Pt Sand Accumulation Study

The main findings from this study are as follows:

- Sand is periodically transported around Nelson Head, moving from Shoal Bay into Little Beach. This is shown in aerial photographs from the 1950's and 1960's;
- The rate of sand bypassing around Nelson Head appears to be greater now than in the past (cf 1950's);
- The sand bypassing is the main reason why the sponge gardens at Halifax Park have become smothered;
- The processes causing sand movement from western Shoal Bay around Nelson Head is complex and involves many different and sometimes opposing factors, such as:
  - ongoing erosion in Shoal Bay,
  - stabilisation of Zenith Beach hind dunes,
  - past nourishment of Shoal Bay, and
  - interaction of wave climate changes resulting from broad scale changes in the southern oscillation index (SOI);
- The first priority is to protect marine biodiversity at Fly Point (marine park sanctuary zone), which is potentially at significant risk of being smothered by sand; and
- To reduce the rate of sand bypassing Nelson Head, sand will need to be removed from around western Shoal Bay, including a large sand lobe located to the immediate east of Nelson Head. This is likely to be the most effective short term strategy.

Proposed steps involved in a short term strategy to address the issue involve:

1. Obtain detailed bathymetric and beach survey;
2. Detailed design and environmental assessment for beach sand removal from the western end of Shoal Bay beach and from Little Bay beach (total volume approximately 57,000m<sup>3</sup>);
3. Undertake beach sand removal from the western end of Shoal Bay beach and from Little Bay beach;
4. Detailed design and environmental impact assessment for underwater dredging at Fly Point and the lobe adjacent to Nelson Head (total volume approximately 80,000m<sup>3</sup>);
5. Undertake underwater dredging at Fly Point and the lobe adjacent to Nelson Head;
6. Ongoing monitoring for a period of at least two years.

(Total cost for steps 1 – 6 is in the order of \$3.5m)

The Shoal Bay Management Plan (2001) prepared for Port Stephens Council previously flagged the need for periodic dredging works such as these to achieve a long term sustainable beach environment.



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