TWEEDSAND BYPASSING

OVERVIEW

In December 2018:

- 28,545 m^3 of sand was pumped to Snapper Rocks East.
- 0 m^3 of sand was dredged and placed at Snapper Rocks East.
- 2,914 m^3 of sand was pumped to Duranbah Beach.
- 0 m^3 of sand was dredged and placed at Duranbah Beach.
- Significant wave heights ranged mostly from calm to moderate (0.62 m to 2.11 m), with a maximum significant wave height of 2.11 m on 9th December. Wave directions ranged from ENE and SE.
- 1,608 vessel crossings were recorded for the month (This is 77% of the December average (2002 – 2018)).
- The modelled estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 25,000 m^3 (this is 92% of the December average of 27,858 m^3).

1. SAND PUMPING & DREDGING

Sand Delivery December 2018

Pumped:	31,459 m^3
Dredged:	0 m^3
Total:	31,459 m^3

The number of days sand was pumped this month = 21

Sand Delivery January 2018 to December 2018

Pumped:	361,247 m^3
Dredged:	0 m^3
Total:	361,247 m^3

Stage II Sand Delivery April 2000 to December 2018

Pumped:	9,289,400 m^3
Dredged:	2,320,514 m^3 *
Total:	11,609,914 m^3 *

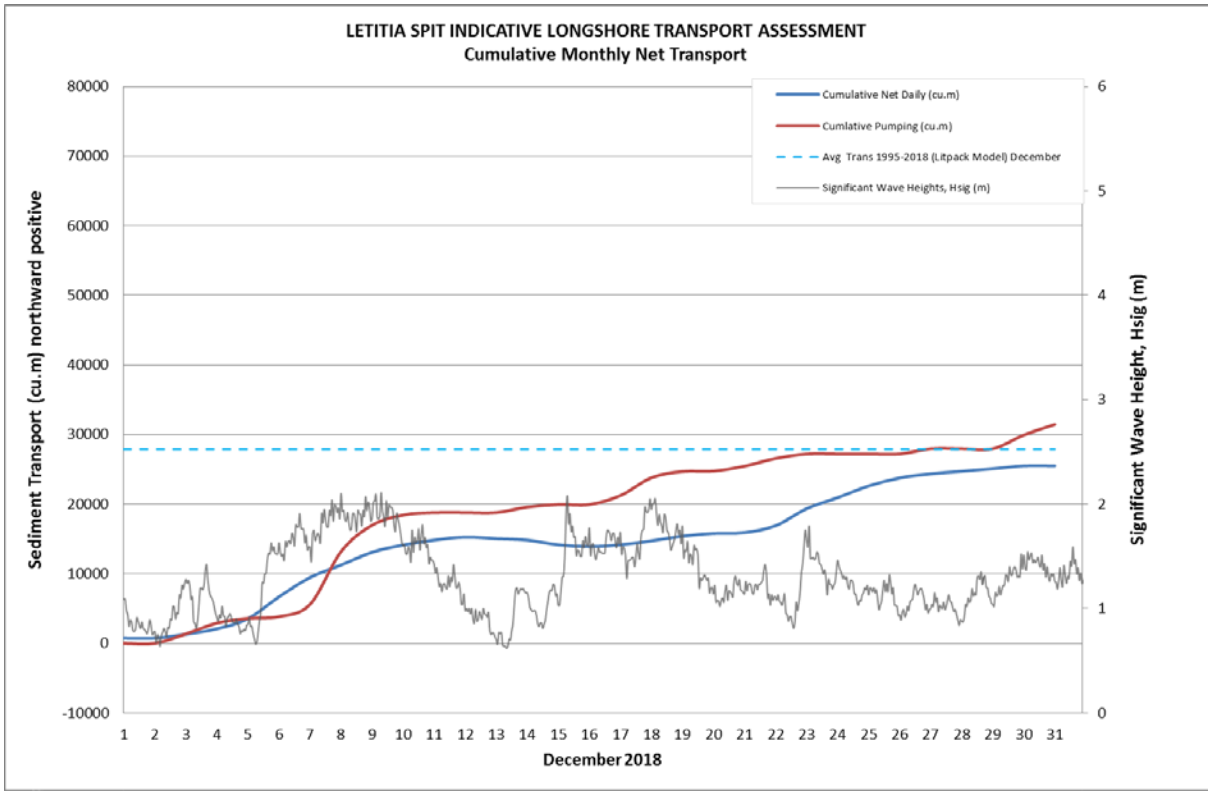
* This Includes 22,870 m^3 of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

The graph below is based on simplified sediment transport modelling and is indicative only.

In December 2018 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be 25,497 m^3.

This result is 92% of the average estimated sand transport quantity of approximately 27,858 m^3 for the month of December.



3. TWEED RIVER ENTRANCE USAGE

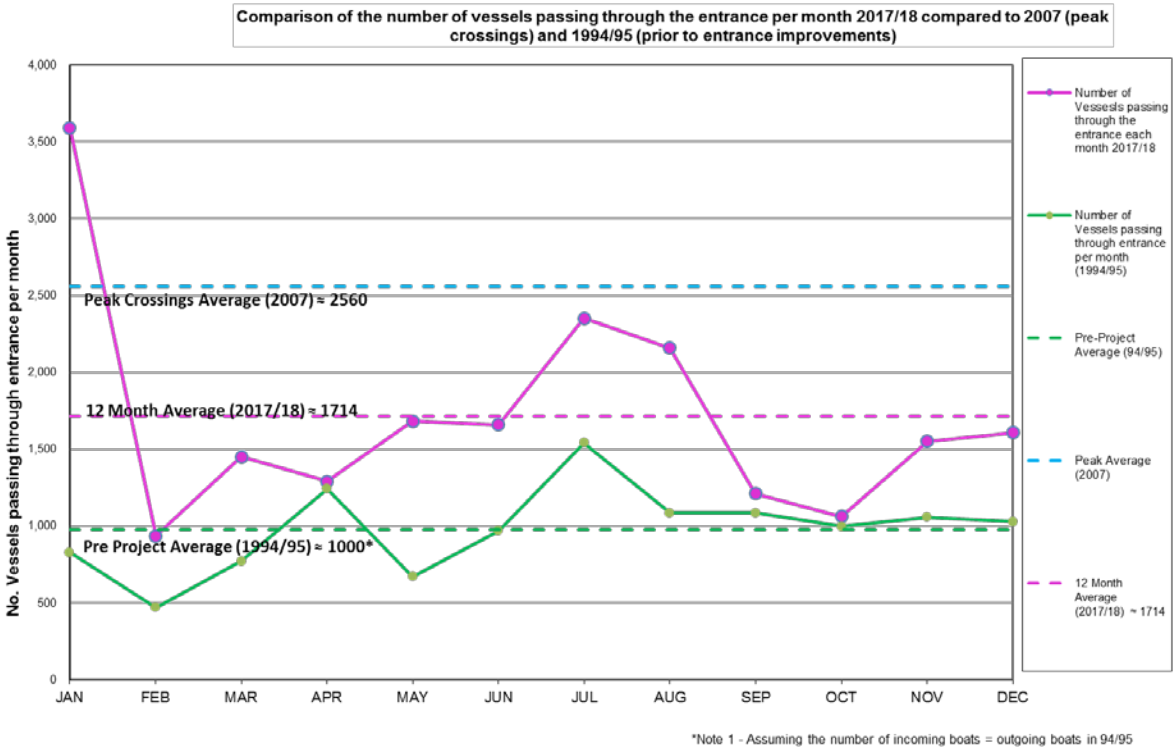
Marine Rescue NSW - Monitoring Results (Not including trawlers)

Weekends and public holidays

N/A for the month of December

Source: *Marine Rescue NSW, Point Danger*

* Total does not include trawlers


Comparison of the number of vessels passing through the entrance per month 2017/18 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)
No. Vessels passing through entrance per month
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Peak Crossings Average (2007) ≈ 2560
12 Month Average (2017/18) ≈ 1714
Pre Project Average (1994/95) ≈ 1000*
Number of Vessels passing through the entrance each month 2017/18
Number of Vessels passing through entrance per month (1994/95)
Pre-Project Average (94/95)
Peak Average (2007)
12 Month Average (2017/18) ≈ 1714
*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

4. WAVE CONDITIONS

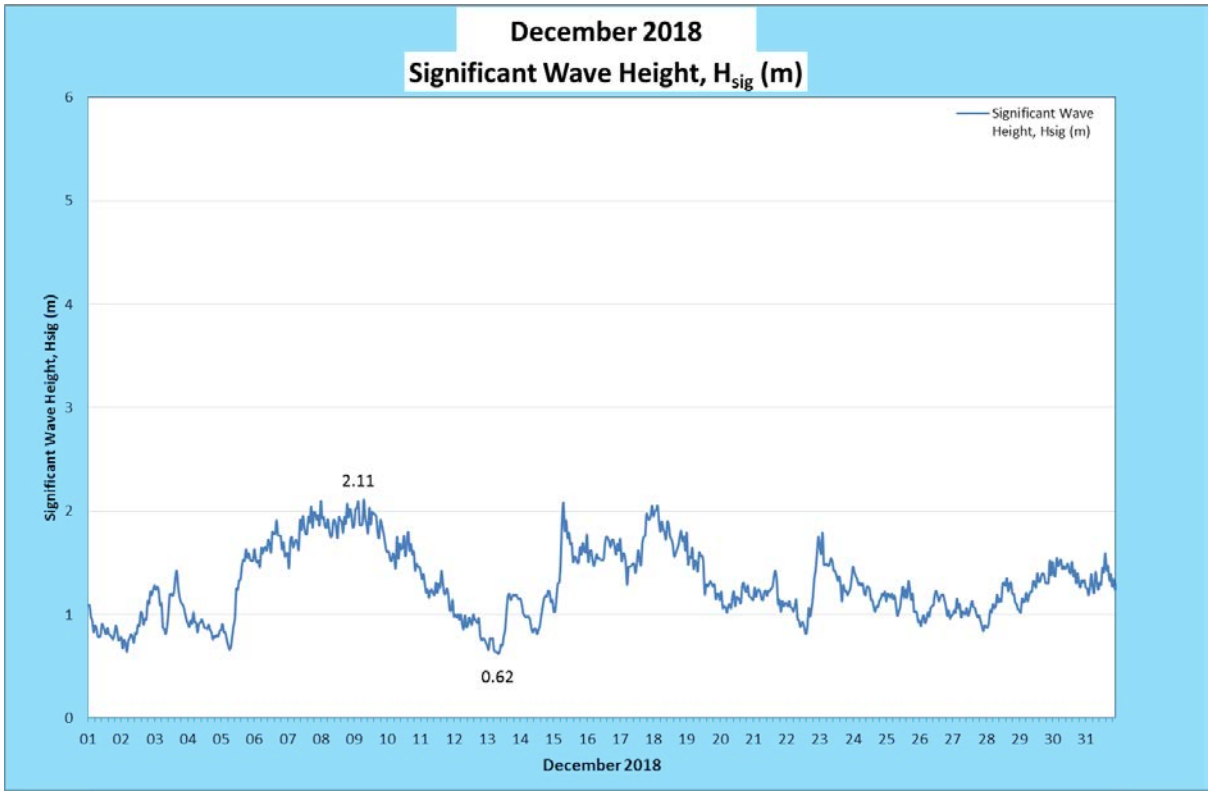
Wave conditions over the month: Significant wave heights ranged mostly from calm to moderate (0.62 m to 2.11 m), with a peak significant wave height of 2.11 m on 9th December. Wave directions were predominantly from the ESE and SE.

Monthly minimum significant wave height: 0.62 m on 13th December
Monthly maximum significant wave height: 2.11 m on 9th December

Number of days on which waves were below 1.0 m at some point in the day: 13 days

Number of days on which waves were above 2.0 m at some point in the day: 6 days

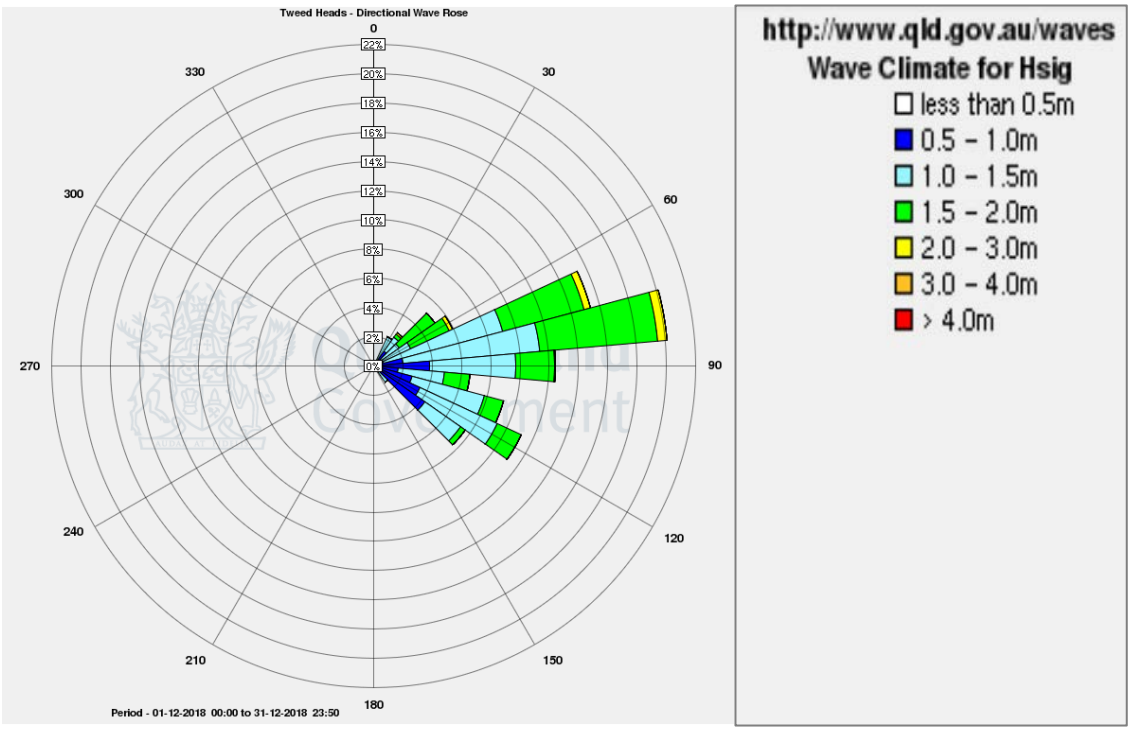
Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes



*(**Source:** Tweed Heads Waverider Buoy; Queensland Government)*

A link to data recorded by the Tweed Waverider Buoy is available at: http://www.qld.gov.au/waves

WAVE DIRECTION



*(**Source:** Tweed Heads Waverider Buoy; Queensland Government)*