

TWEED SAND BYPASSING

OVERVIEW

In July 2019:

- 50,124 m³ of sand was pumped to Snapper Rocks East.
- 82,129 m³ of sand was dredged and placed at Snapper Rocks East, Duranbah and Tugun/Bilinga.
- Significant wave heights ranged from calm to moderate (0.26 m to 2.14 m), with a maximum significant wave height of 2.14 m on 30th July. Wave directions were predominantly from the east and SE.
- 1,962 vessel crossings were recorded for the month (This is 96% of the July average (2002 – 2019)).
- The modelled estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 74,000 m³ (this is 108% of the July average of 60,612 m³).

1. SAND PUMPING & DREDGING

Sand Delivery July 2019

Pumped:	50,124 m ³
Dredged:	82,129 m ³
Total:	132,253 m ³

The number of days sand was pumped this month = 24

Sand Delivery January 2019 to December 2019

Pumped:	268,250 m ³
Dredged:	82,129 m ³
Total:	350,379 m ³

Stage II Sand Delivery May 2000 to July 2019

Pumped:	9,557,650 m ³
Dredged:	2,402,643 m ³ *
Total:	11,960,293 m ³ *

* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between July and September 2005

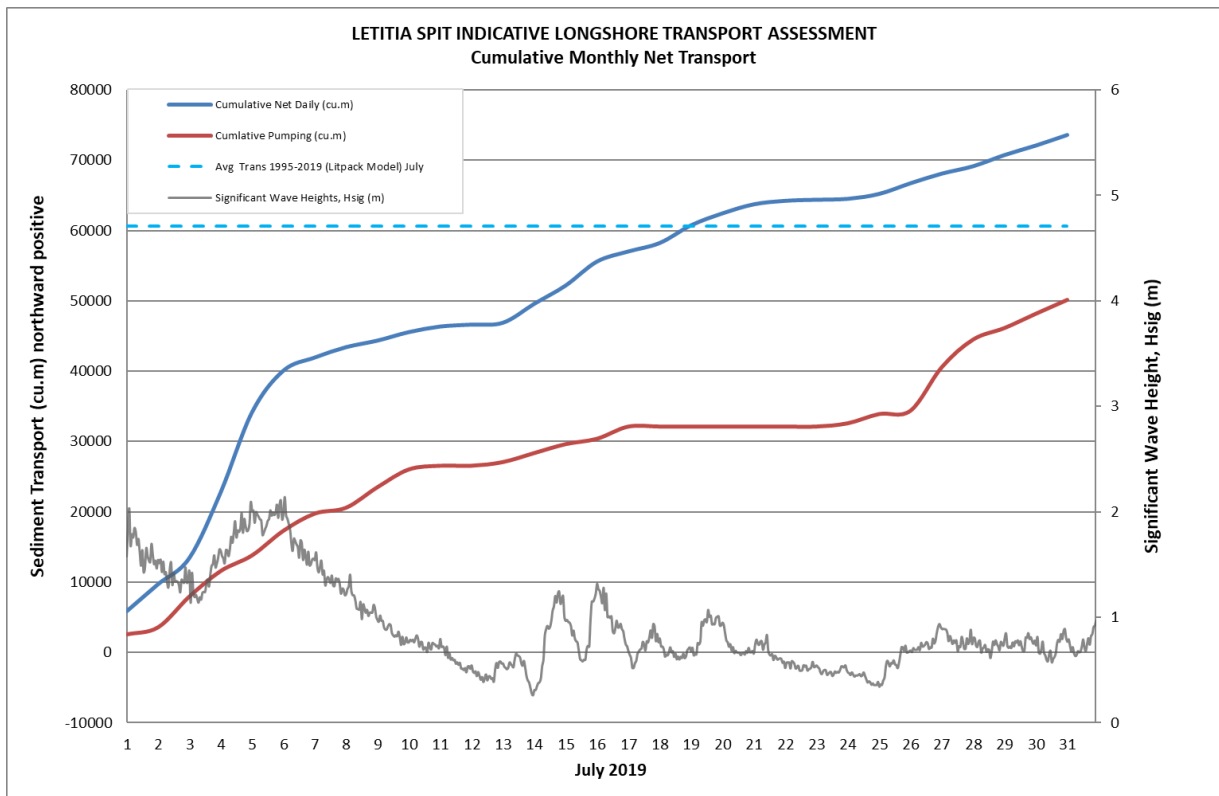
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2. INDICATIVE LONGSHORE TRANSPORT

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

In July 2019 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be 73,627 m³.


This result is 108% of the average estimated sand transport quantity of approximately 60,612 m³ for the month of July.



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3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

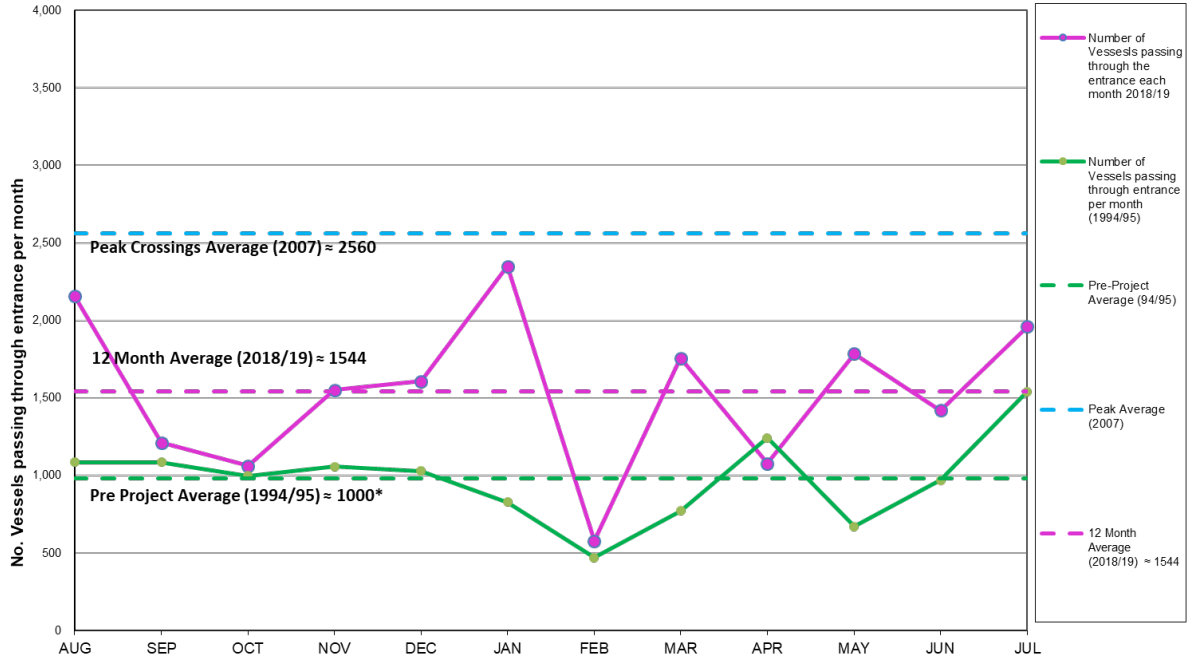
Date July 2019	Navigation Rating					Number of Crossings
	Impassable < - - - - > Good					
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						0
2						3
3						6
4						1
5						0
6						0
7						2
8						14
9						66
10						81
11						57
12						151
13						116
14						69
15						36
16						39
17						102
18						43
19						115
20						147
21						201
22						78
23						82
24						83
25						33
26						136
27						74
28						73
29						91
30						48
31						15
					Total:	1962

Source: Marine Rescue NSW, Point Danger

* Total does not include trawlers

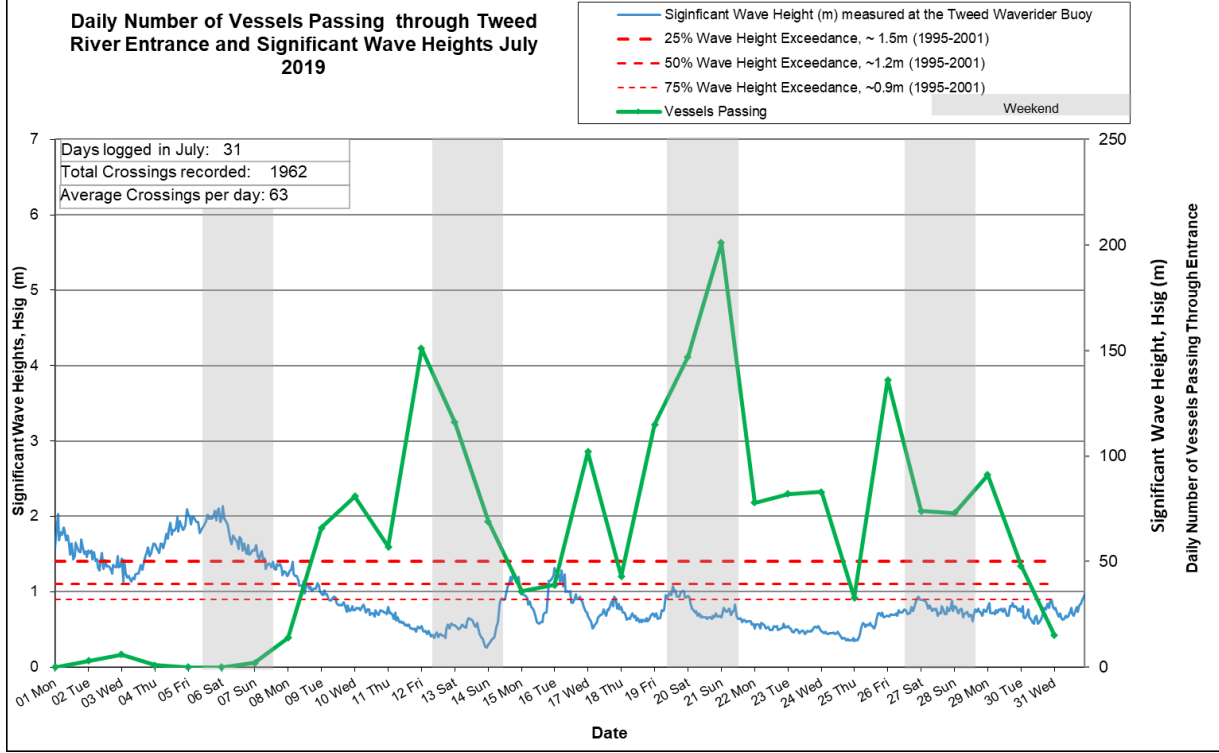
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Comparison of the number of vessels passing through the entrance per month 2018/19 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

Daily Number of Vessels Passing through Tweed River Entrance and Significant Wave Heights July 2019



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4. WAVE CONDITIONS

Wave conditions over the month: Significant wave heights ranged mostly from calm to moderate (0.26 m to 2.14 m), with a peak significant wave height of 2.14 m on 30th July. Wave directions were predominantly from the east and SE.

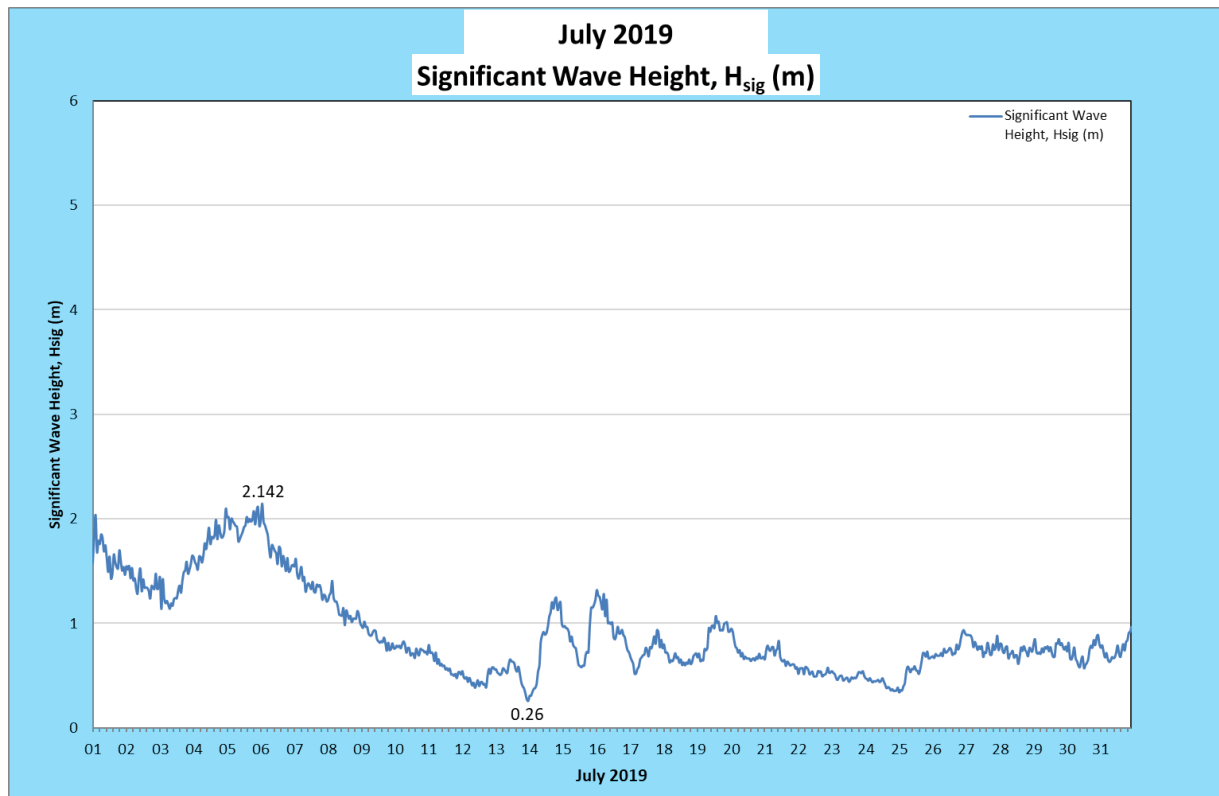
Monthly minimum significant wave height: 0.26 m on 13th July

Monthly maximum significant wave height: 2.14 m on 6th July

Number of days on which waves were below 1.0 m at some point in the day: 24 days

Number of days on which waves were above 2.0 m at some point in the day: 4 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

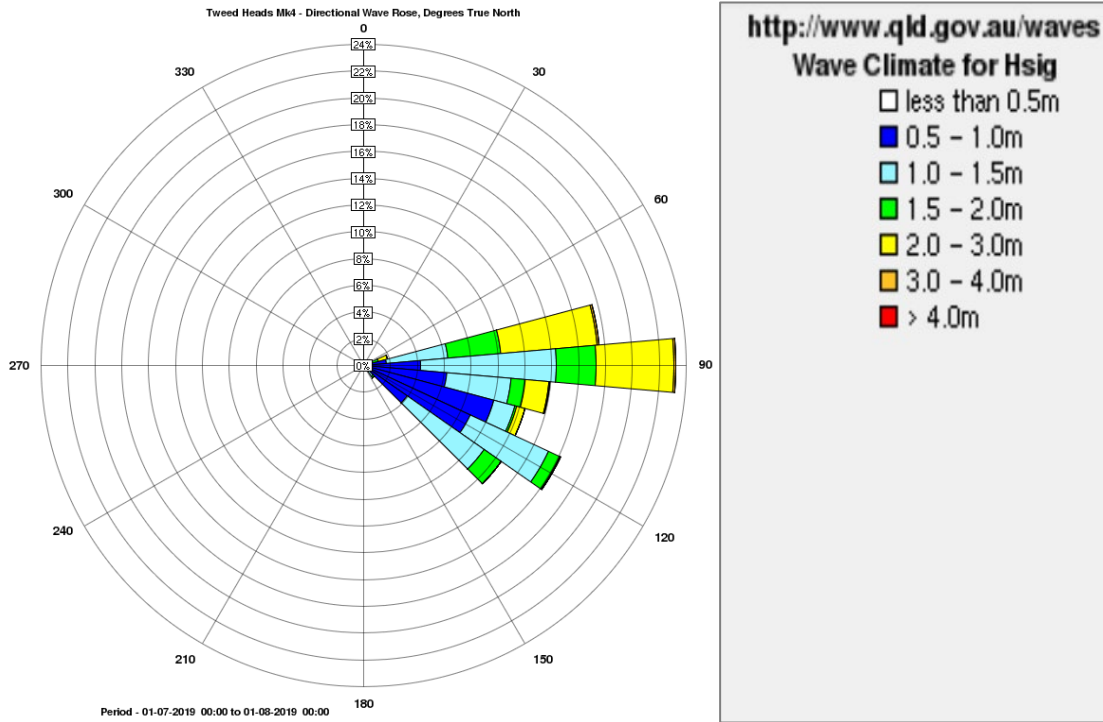


(Source: Tweed Heads Waverider Buoy; Queensland Government)

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

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WAVE DIRECTION



(Source: Tweed Heads Waverider Buoy; Queensland Government)