



Tweed River Entrance Sand Bypassing Project (TRESBP)

www.tweedsandbypass.nsw.gov.au

Worksheet 1: review TRESBP information

Worksheet 1, of 4

Required for this worksheet:

- TRESBP Fact Sheets 1 & 2 (PDFs) available online
- atlas or online mapping tool such as www.atlas.nsw.gov.au or maps.google.com.au
- internet access for extension activities

Review

1. What does TRESBP stand for?
2. In your own words, what does the TRESBP do?
3. Using appropriate geographical terminology—distance, direction, place names etc.—describe the location of the TRESBP. An atlas or online mapping tool will assist here.
4. Why is there a need for the TRESBP?
5. Draw a very short section of the northern New South Wales and southern Queensland coast. (Again, an atlas or online mapping tool will assist here.) On your map, indicate:
 - the location of the Gold Coast and Tweed Heads
 - the New South Wales–Queensland border
 - the direction which drifting ocean sand (longshore drift) moves along this coast
 - the location of the TRESBP jetty and intake pumps.
6. Describe, using your own words, what happens to drifting ocean sand drawn into the system at the TRESBP jetty.
7. How do volumes of sand drawn in at TRESBP jetty vary naturally at different times of year?



8. What role does sand dredging play in the TRESBP?
9. What, set down by law, are the two key objectives of TRESBP?
10. Could there be any alternatives to a sand bypassing system such as the TRESBP for keeping the river entrance clear and keeping beaches north of the river entrance nourished?

Evaluate

1. Use the matrix below to evaluate the effectiveness of Tweed sand bypassing as a coastal management strategy.
 - Think about each criterion, make notes and allocate a score. A higher score means better performance against the criteria.
 - Work out your final evaluation and final score for Tweed sand bypassing as a coastal management measure in this region.
2. Use the matrix to evaluate any alternatives you proposed in the earlier Review question 10.

How well does it benefit:	Notes	Score (0-5) 5 = highest
– the local community?		
– the natural environment?		
– the local economy?		
Final evaluation		Final score

Aerial image work



1. Categorise the elements (left) by drawing a cloud around natural features and a box around built features.
2. On the aerial image below, locate and mark in these features.
 - a. Tweed River entrance
 - b. Tweed River entrance walls
 - c. Point Danger (the largest rocky headland)
 - d. Letitia Spit (vegetated sand spit)
 - e. TRESBP jetty
 - f. Snapper Rocks
 - g. Duranbah Beach
 - h. Greenmount (rocky headland with trees)
 - i. Kirra groyne (a rock groyne extending from Kirra Point)
 - j. Coolangatta Bay (local name for bay from Snapper Rocks to Kirra Beach)
 - k. NSW-Queensland border.

Use an atlas or online mapping tool where necessary.

3. Sketch an outline of this aerial image. Reserve a small space within the map for a 'legend'. On your map draw arrows to indicate i) the direction of flow of the Tweed River, and ii) the direction of longshore drift along the coast. Use a large red cross to identify several natural and man-made features likely to be obstacles to longshore drift.



Vertical aerial photograph of Coolangatta, Tweed Heads & Tweed River entrance. Scale 1:12,000

EXTENSION ACTIVITIES

1. Explore the Aboriginal history of the Tweed River area or the Gold Coast. Online references such as Minjungal Cultural Centre, Tweed Heads Historical Society or Gold Coast City Council's Indigenous History Notes will help.
2. Research and recount with details an interesting historical Tweed Heads shipwreck.
3. Explain the 'venturi effect', mentioned in TRESBP Fact Sheet 2, in relation to the workings of the TRESBP jetty pumps.