



## Tweed River Entrance Sand Bypassing Project (TRESBP)

[www.tweedsandbypass.nsw.gov.au](http://www.tweedsandbypass.nsw.gov.au)

# SUSTAINABLE APPROACHES AND THE COMMUNITY

Case study part 5, of 5

For a coastal management system such as the Tweed River Entrance Sand Bypassing Project (TRESBP), considerations and implications emerge beyond sand transfer or 'delivery'.

### Sustainable activity

For sand bypassing to be a sustainable operation, approaches are required for environmental, social and economic 'wellbeing'. Effective monitoring and partnerships are important for TRESBP.

#### Coastal video monitoring

The coastline where Tweed sand bypassing operates is monitored through a systematic video monitoring system. Every hour, during daylight hours, a digital image is taken at sixteen different coastal locations from the Tweed River entrance to North Kirra Beach. The system allows close study of outcomes from sand bypassing or severe weather events. The images allow up-to-date viewing at these locations, or past images can be used to study erosion and accretion patterns.



Point Danger, with Gold Coast beaches to the north, and Duranbah Beach south.

The video monitoring occurs through a formal research agreement between TRESBP and the University of New South Wales (UNSW) to operate an Argus Coastal Imaging system. UNSW's Water Research Laboratories analyse images, monitoring and quantifying beach changes. To cover the sixteen locations, four cameras (pointing at different locations) are mounted at each of four locations. The locations and beaches monitored are Kirra, Coolangatta, Rainbow Bay and Duranbah. Current images are on the TRESBP website, with earlier images found through a link to UNSW. See more on coastal video monitoring: [www.tweedsandbypass.nsw.gov.au/coastal\\_video\\_monitoring](http://www.tweedsandbypass.nsw.gov.au/coastal_video_monitoring)

#### Environmental Management System (EMS)

TRESBP's EMS is an ongoing, systematic check or review. Some examples of areas covered are beach management, surf quality, water quality, distribution of information to the community, estuary management and avifauna management. All key areas of operations and environmental and social impacts are monitored and analysed. This ensures regular, systematic checking and reporting. EMS was also used during construction of the Tweed sand bypassing system. For more on EMS: [www.tweedsandbypass.nsw.gov.au/environmental\\_management](http://www.tweedsandbypass.nsw.gov.au/environmental_management)



Tweed estuary—shorebird habitat (left); & volunteers & scientists protect the little tern.

#### Little tern protection

The little tern—an endangered shorebird in New South Wales, Queensland and other states—is found on Letitia Spit, south of the Tweed River entrance, the location of the TRESBP jetty. Jetty operations are elevated and do not interfere with the beach. Local measures protecting the little tern, which TRESBP has initiated or participated in, include habitat and breeding studies, site inspections, beach signage and leaflets—all in conjunction with local bird observers, ornithologists, and Tweed Shire Council.

#### Strong partnerships

Consultation and strong partnerships are important for sustainable operations. TRESBP partners are: the New South Wales and Queensland governments; Gold Coast City and Tweed Shire councils; and contractor McConnell Dowell with subsidiary TRESBCo. The local councils, Gold Coast and Tweed, have been involved since sand bypassing planning in the 1990s and commencement in 2001.

The community and special interest groups are also important stakeholders and partners. Community members constitute forty per cent of the TRESBP Advisory Committee. Requirements for community relations and feedback are set out in TRESBP legislation. Community members also contribute a great deal to coastal preservation through groups such as Coastcare and Dune Care.

#### Local and state governments links

In Australia, beaches and the coastline are the responsibility of the relevant coastal council (except where there is a Commonwealth Defence Force facility). So in the area where Tweed sand bypassing operates, TRESBP works closely with Gold Coast City and Tweed Shire councils. Councils 'manage' and monitor coastlines with policies and approaches in-line with their own state's particular coastal laws, guidelines and reporting practices.



Image courtesy of Destination Tweed

Some of the important state and local policies and documents that guide coastal management in the case study area are listed below.

- A Queensland state policy in effect from 2012 called the *Queensland Coastal Plan* focuses on areas including development, hazards, conservation, settlement patterns, access and amenity.
- A New South Wales state document called the *NSW Coastal Policy* covers areas such as population growth, water and soil quality, provision of reserves, planning and heritage issues.
- For Gold Coast City Council, the *Gold Coast Shoreline Management Plan* guides sustainable development of the beach environment. Council also has, for example, a *Policy for Management of Coastal Dune Areas* and is reviewing sandy beach environments through the *Gold Coast Shoreline Management Review*.
- Tweed Shire Council's yearly *State of the Environment Report* identifies priorities, responses and pressures. Council also uses its Tweed Shire Coastal Management Plan, and guides and management plans in areas such as coastal hazards, estuary and boating management, and broadwater and river bank management.

## The community and equity

Tweed sand bypassing maintains a sand supply to southern Gold Coast beaches (reducing erosion) and improving navigation conditions at the Tweed River entrance. While sand 'transport' is the objective, broader implications include social and community benefits and participation.

### Stability

For those visiting, living or working at this coastline, security is increased—sand bypassing, as a coastal management system, reduces risk. The likelihood of drastic foreshore erosion or foreshore collapse, such as occurred in previous decades, is significantly reduced. Such events cause upheaval, with social, recreational and economic setbacks. In these situations, valuable resources are often diverted to short-term solutions.



Tweed sand bypassing operates at a much-loved, heavily populated coastline.

### Information access

As TRESBP is a long-term coastal management measure, community access to images and information is important. TRESBP website [www.tweedsandbypass.nsw.gov.au](http://www.tweedsandbypass.nsw.gov.au) is a 'vehicle' for information:

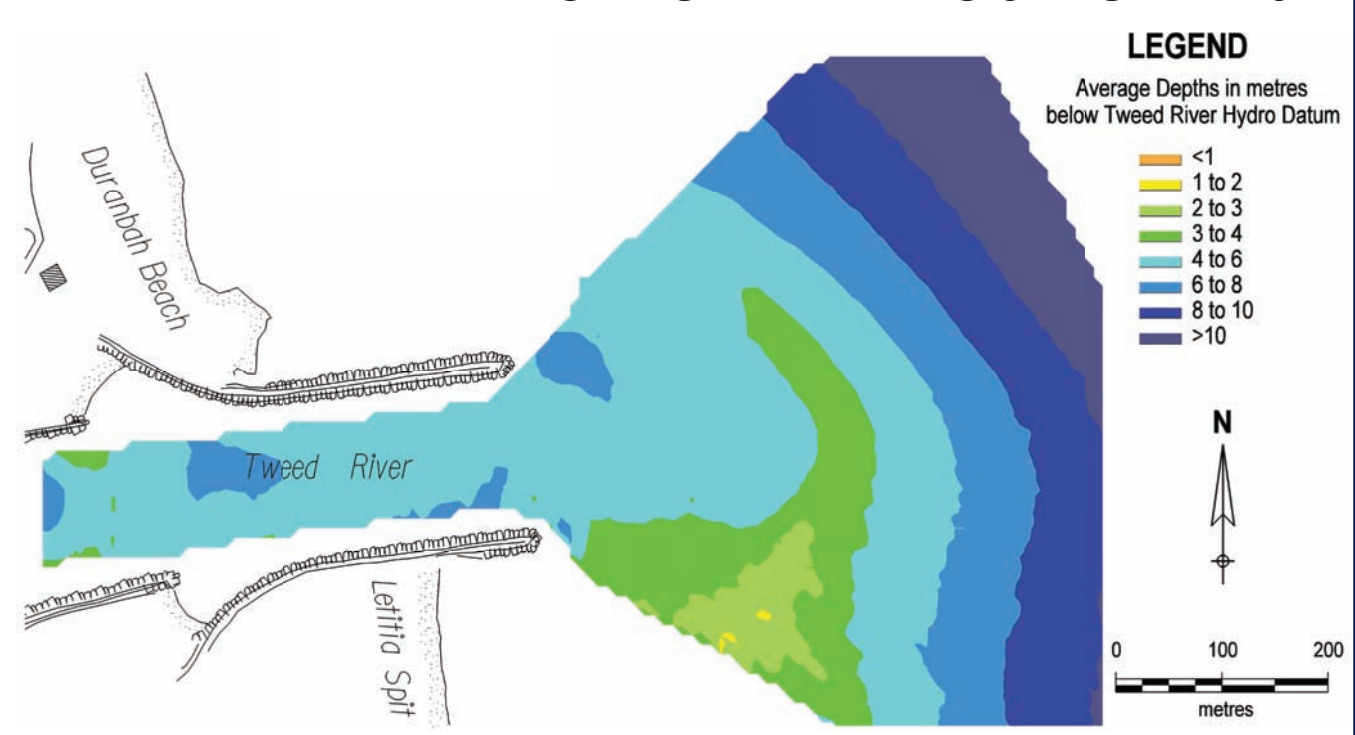
- Argus Coastal Imaging monitors four southern Gold Coast beaches each day. Current and past online visual records are at [www.tweedsandbypass.nsw.gov.au/coastal\\_video\\_monitoring](http://www.tweedsandbypass.nsw.gov.au/coastal_video_monitoring)
- Historic beach photos are also available, see [www.tweedsandbypass.nsw.gov.au/historic\\_photographs](http://www.tweedsandbypass.nsw.gov.au/historic_photographs)
- Up-to-date sand bypassing activity, charts and detailed monthly reports, are all online. So too are seabed maps, see [www.tweedsandbypass.nsw.gov.au/surveys](http://www.tweedsandbypass.nsw.gov.au/surveys)

### Community involvement

Consultation and community representation are built into TRESBP's structure. This is reflected in several ways.

- Community members make up forty per cent of the membership of the TRESBP Advisory Committee.
- The advisory committee meets locally three or four times a year. Open, discussion-style meetings allow community members to give feedback or submissions.
- Each quarter, TRESBP surveys about thirty groups for feedback on coastal use, opinions on coastal conditions, and responses to sand bypassing operations. Groups include local surf life saving, surfing, business and tourism, and navigation and marine organisations.

## TWEED RIVER ENTRANCE NOVEMBER TO JANUARY 2011



TRESBP online information includes seabed contour maps, such as above, and reports, photos, charts.