

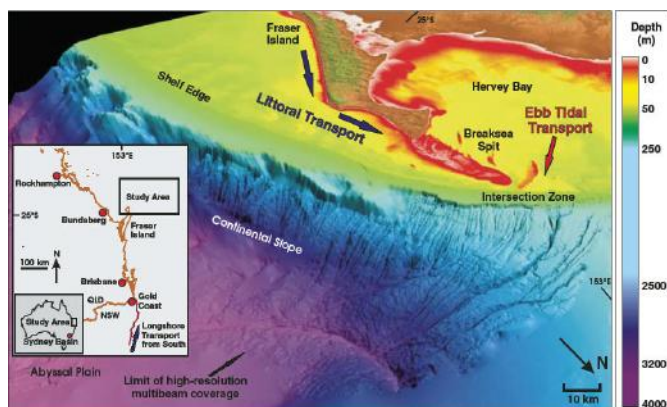
Marine features off Fraser Island deserve World Heritage Listing

In 2003 a team of scientists led by University of Newcastle's Assoc Prof. Ron Boyd followed a "river of sand" from its origins in the soft sandstones of the World Heritage Blue Mountains and other parts of the Great Divide along the east Australian coastline to where it discharges to the bottom of the Tasman sea off the northern tip of Fraser Island. By using multi-beam echo sounding from a research vessel the scientists were able to discover the shape of the seabed and it convinced them that the submarine topography along the continental shelf off Sandy Cape and Breaksea Spit is at least as outstanding in global significance as Fraser Island's better recognized complex dune systems. This backgrounder describes why the Fraser Island Defenders Organisation believes that the proposed new World Heritage nomination of the Great Sandy Region should include such outstandingly significant geomorphic features that are an integral part of the evolutionary processes demonstrated on Fraser Island should also be included in the enlarged Great Sandy World Heritage site.

FIDO proposes that the proposed World Heritage boundaries be enlarged to incorporate the outstanding geomorphic features of the continental shelf from east of Indian Head to north of Breaksea Spit east of the northern tip of Fraser Island and Breaksea Spit. This would be the first time in Australia a seabed would be recognized with World Heritage status for its geomorphic features. The river of sand is so integral to the whole geomorphological development of the sand masses and where it terminates in such dramatic fashion should not be excluded in the proposed World Heritage boundaries. Fraser Island itself is a deposition of sand built near the edge of the continental shelf built from sand from the south amassed over eons by littoral transport.

Some of the amazing submarine features where the stream of sand that shifts about 500,000 cubic metres per year northwards to cascade right over the edge of the continental shelf 4,000 metres down to the floor of the Tasman Sea warrant description.

At 4,000 metres the height of the continental shelf is about twice the height of Mt Kosciusko. The sand slides here appear like enormous waterfalls. There are 30 or more places where underwater rivers of sand flow from the shallow water at the end of Breaksea Spit, over the edge of the continental shelf and funnel 500,000 cubic metres of sand per year, down into the deep water on the ocean floor. All the sand flowing from the south stops at Breaksea Spit and flows goes over the edge of the continental shelf and down to the bottom of the sea. These are spectacular features



This is the area near Breaksea Spit identified by scientists as including outstanding submarine features that should be included in the proposed enlarged Great Sandy World Heritage area.

Additional features include very large ripples or bed forms on the bottom, 5 to 10 metres high and half a kilometre long. Elsewhere the remnants of coral reefs that have been smothered by the sand and the ancestral bed of the Burnett Isis Rivers have been identified.

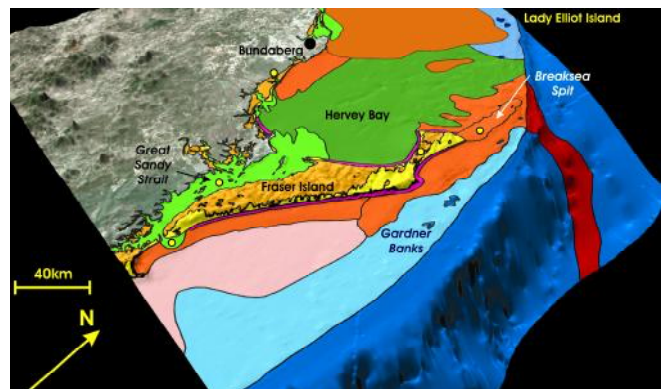


Diagram showing submarine chasms off Breaksea Spit where the "river of sand" cascades 4000 m to the ocean bottom

Although the Queensland Government has proposed that Breaksea Spit be included in the new World Heritage nomination for Fraser Island (proposed to be called the Great Sandy World Heritage Area) FIDO believes that because the nomination is to be made by the Commonwealth Government there should be no difficulty in extending the World Heritage boundaries beyond the three mile limit.

FIDO also proposes that the boundaries on the western side of Fraser Island near Moon Point should also be extended into Hervey Bay to include the huge movements and relocation of sand around the end of the Zeta Curve. This is the most dynamic area of coastal sand movement along the western side of the island. A decade ago the Pelican Banks were small and submerged by almost every high tide. Now they are significantly larger and represent a sand island and growing larger and higher. It now sits higher than all tides and vegetation is beginning to take hold. The source of the sand is the erosion occurring along the area from Rooney's Point to Moon Point.



This illustrates the accumulation of sand moved down the western Zeta Curve and deposited near Moon Point.

The illustrations used in this FIDO Backgrounder were developed by Assoc Prof Ron Boyd for the paper presented at FIDO's 2004 20-20 Vision Conference. They can be seen in colour on FIDO's web site: www.fido.org.au