

Photo: Jillian Keating

Breakwater Project: multi use & eco features

Initiative 2

Online Forum - July 2021

Threat And Risk Assessment

Trained entrances cause significant environmental impact

ESTUARIES		Clean waters			Estuarine Habitats and Assemblages																		Threatened and Protected Species																	
		Estuarine Waters			Saltmarsh			Mangrove			Seagrass			Beaches and Mudflats			Shallow Soft Sediment			Rocky Shores			Subtidal Reefs			Planktonic Assemblages			Fish assemblages (harvest and bycatch)			Species & communities protected under FM Act			Species protected under BC Act					
Resource Use		North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South						
Hydrologic Modifications	Estuary entrance modifications	Moderate	Moderate	Moderate	High	High	High	Moderate	Moderate	Moderate	High	High	High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low	Low	Moderate	Moderate	Moderate	n/a	n/a	n/a	High	High	High	Moderate	Moderate	Moderate
Dredging including placement	Navigation & entrance management and modification, harbour maintenance etc	Moderate	Moderate	Moderate	Low	Low	Low	Minimal	Minimal	Minimal	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	High	High	High	Minimal	Minimal	Minimal	Low	Moderate	Low	Moderate	Moderate	Moderate	n/a	n/a	n/a	Moderate	Moderate	Moderate	Low	Low	Low	Low	Low	Low

Trained entrances can provide improve access to the marine estate

SOCIAL, CULTURAL & ECONOMIC VALUES		Participation						Employment						Cultural heritage			Indirect values			Viability of businesses			Direct values					
		Safety, health & well being			Socialising & sense of community			Enjoying the biodiversity & beauty			Consumptive uses (extracting)			Tangible and Intangible Aboriginal cultural			Intrinsic & bequest values			Employment & values of production			Individual enjoyment value					
Social and Economic Threats		North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South	North	Central	South
Lack of access availability	Limited or lack of access infrastructure	193	Mod	Mod	194	Mod	Mod	195	Mod	Mod	196	Mod	Mod	197	Med	Med	198	Min	Min	199	Mod	Mod	200	Mod	Low			
Environmental	Modified hydrology / hydraulics	105	Low	Low	106	Mod	Mod	107	Low	Low	108	Mod	Mod	109	Med	Med	110	Low	Low	111	Low	Low	112	Low	Low			



Breakwater project

Assess cumulative and legacy impacts for estuary entrance modification

Audit existing structures and develop guidelines to maximise marine habitat and recreational values into existing structures during maintenance and upgrade works





Audit outcomes

- 43 trained, or partially trained, estuary entrances
- 30 estuary harbours
- 9 ocean harbours
- 13 groyne fields (8 are in estuaries)
- Cumulatively 45 km of breakwaters and 72 km of training wall and groyne infrastructure
- Stabilised sand for 3 km of ocean beach
- 15 structures facilitate 1093 ha reclamation of commercial / residential land
- Most structures near car parks and 70 structures have crest surfaces that provide access to most people



Multi-use: access, views, seating and fishing



FRONT-ROW SEATS: A line-up of four people in motorised scooters formed to watch the passing parade of whales from Ballina's North Wall. PHOTO: CONTRIBUTED

Nth Wall works for everyone

IT'S been a number of years now since the path at North Wall was upgraded from a rocky track to the bitumen we have today.

Then, of course, there was the battle to have the State Government raise the crest of the wall after more concrete blocks, called hanbars, were placed at the end of the structure.

One reader says the value in those works is often seen

SEND IT IN

If you have an interesting photo taken around Ballina, send it to ballinaadvocate@northernstar.com.au.

today as four people in motorised scooters were able to watch the passing parade of whales, forming their own line-up at the wall.



Extract from: Northern Star newspaper

North Wall Ballina
2 Lighthouse Parade, East Ballina NSW

4.6 ★★★★★ 458 reviews ⓘ

[Write a review](#)

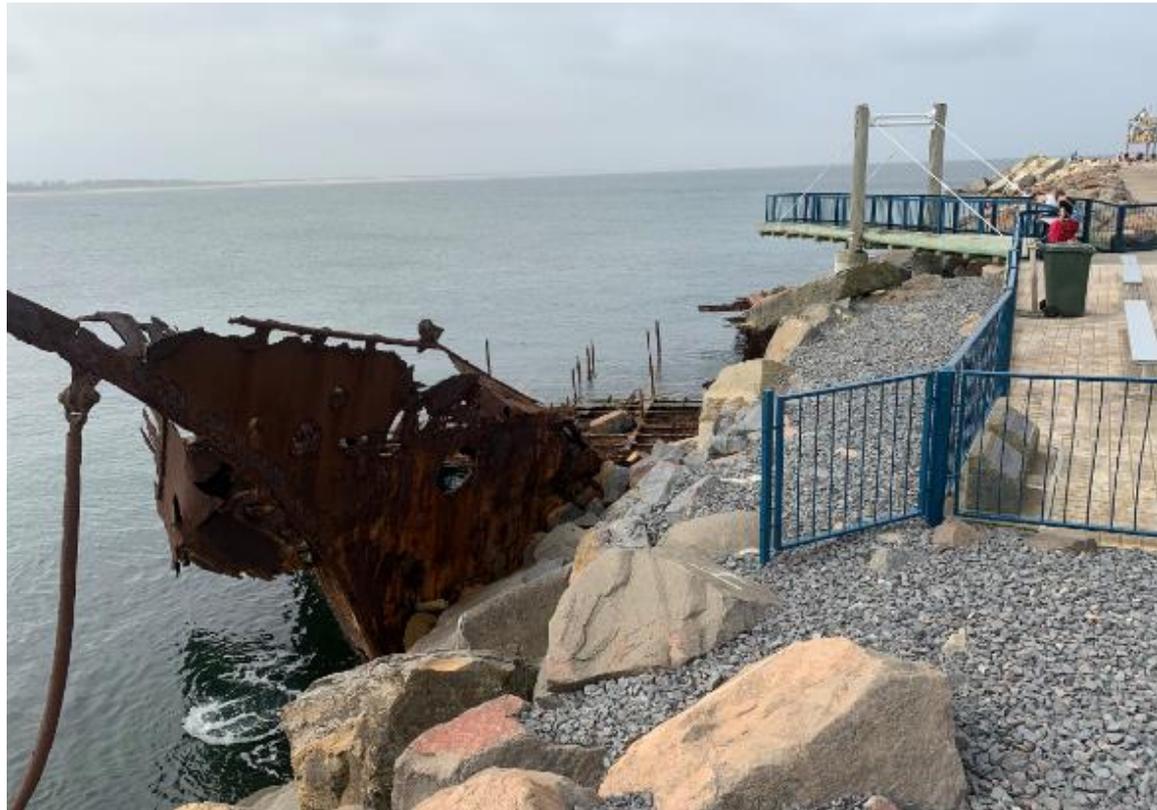
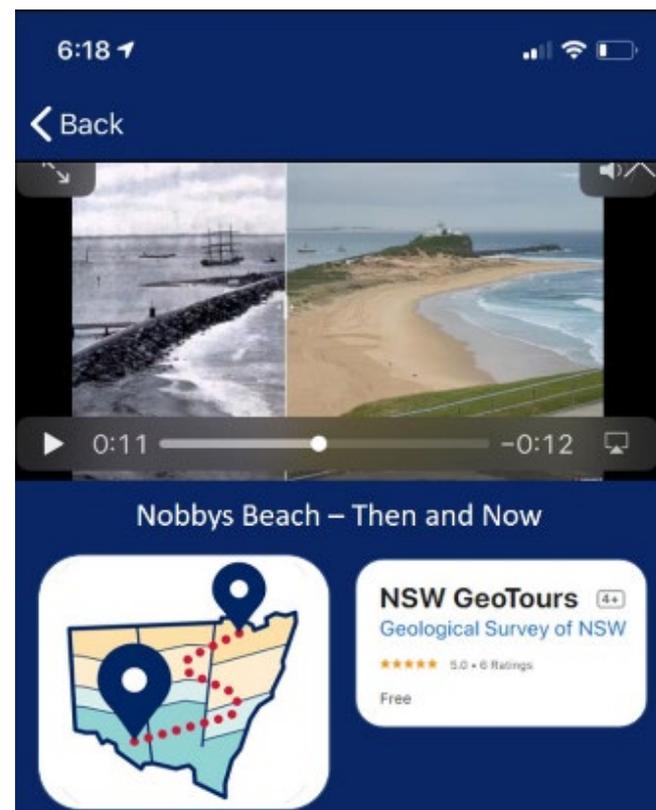
Sort by: Newest ▾

All walk 104 beach 24 surf 21 whales 18 +6



Multi-use: heritage assets

- Heritage trails, coast-wide regional tourism





Multi-use: safety stairs



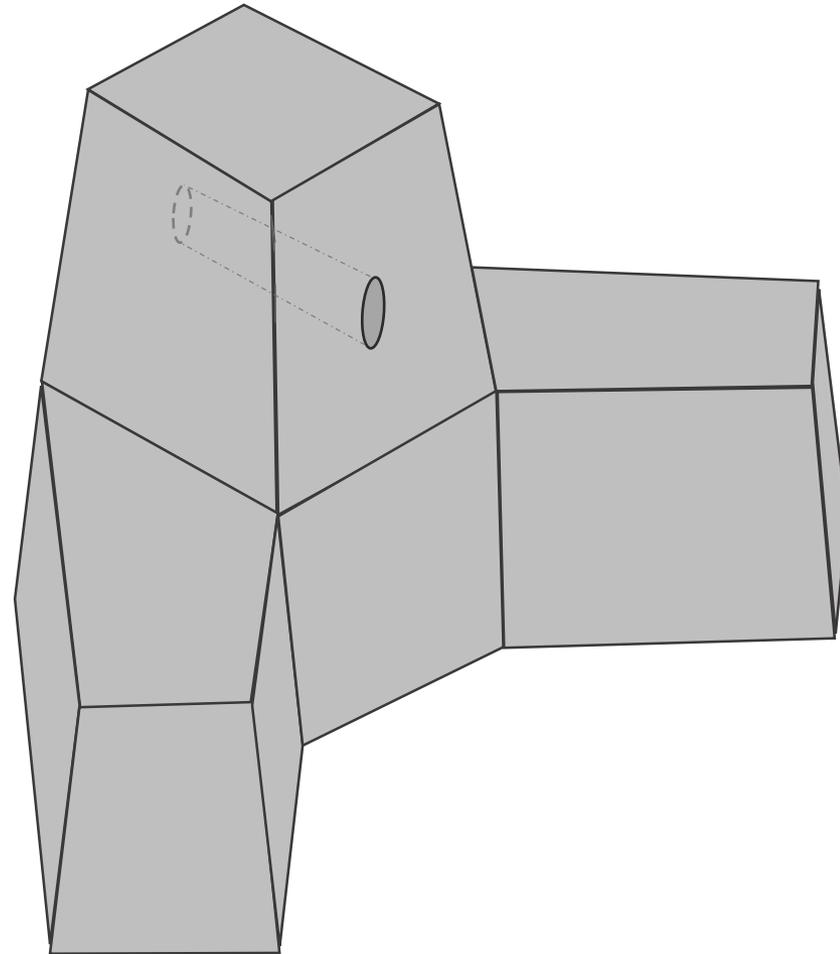


Eco feature: submerged key fish habitat

- Colours, surfaces, ridges
- Lifting points: future habitat hollows
- Affixable tiles



Photo: Leah Wood



Where to find out more

Patrick Dwyer

patrick.dwyer@dpi.nsw.gov.au

Project profile page:

www.marine.nsw.gov.au/strategy-implementation/delivering-healthy-coastal-habitats-with-sustainable-use-and-development/fish-friendly-breakwater-maintenance

