Issue No.	Zone	Location	Management Issue	Ranking
1	2	As mapped.	Sediment build at existing boat ramps prevents boat access for all boats other than dinghies at Saratoga, Green Point and Davistown (opposite Killcare Convent).	L
2	2	As mapped.	Barrier to access near Merindah Ave, north of Wharf Reserve, Green Point.	L
3	2	As mapped.	Existing boat ramp near Iguana Joe's inadequate. Suggest upgrade for general boating use (potential funding through NSW Maritime).	L
4	2	As mapped.	Sediment build-up, algae/weed build up (rotting smell) and pollution preventing boating access and causing problems regarding amenity at Victory Pde, Tascott. Issue exacerbated by stormwater discharge. Need for improved pedestrian access.	L
5	2	As mapped.	Sediment build-up and pollution entering water from stormwater drains near 27 Coogee Rd, Point Clare/Noonan Point. Resident requested more sea walls (built by owners).	М
6	1	As mapped.	Fagan's Bay: sediment build-up and weed/algae infestation over last four years. Limited flushing from Coorumbine Creek.	L
7	1	As mapped.	Railway bridge/structure obstructing water movement and influencing natural flushing resulting in sediment build-up.	М
8	2	As mapped.	Saratoga Channel: dredging option to allow it to be re-opened for navigation and help flush Saratoga inlet. Unsafe navigation due to sediment build-up. Observed reduction in the velocity of currents in major navigation channels.	L
9	2	As mapped.	Entrance to Paddy's Channel drop over: provision of safe navigation channel (dredging). No other access in and out of Brisbane Water. Seven year, gradual build-up of sediment. Observed reduction in velocity of currents.	М
10	2	As mapped.	Sediment build-up at Gosford Harbour preventing yacht access.	L
11	2	As mapped.	Bank/foreshore erosion and sea wall collapse at Gosford Scout Hall.	L
12	2	As mapped.	Yattalunga seawall should be a priority for construction. Plan of Management (GCC, 1995) identifies the issue with funding approved. Suggest "Use your brain" program reinvigorated. Improved stormwater management through implementation of PoM - additional location at Green Point.	L
13	2	As mapped.	Culvert at Tascott Station has water quality issues - low rates of flushing cause odours and amenity issues. Sediment and pollution problems.	L
14	2	As mapped.	Safety issue with boat users not observing speed limits and causing increased wave action, leading to damage and safety issues. Anecdotal observation of man in water carrying out boat maintenance a risk of crush against a structure from boat wave action. Request reduced speed limit to allow equity of access and safety.	Н
15	2	As mapped.	Floating pontoons to be installed at boat ramps instead of fixed height jetties.	L
16	4	As mapped.	Unsafe navigation due to sediment build-up. Observed reduction in velocity of currents in major navigation channels.	М
17	2	As mapped.	Sailing Club and Brisbane Water Rowing Club have conflicts in key training locations with ski boat users causing safety issues. Boat storage problems near foreshore.	М
18	2	As mapped.	Pollution and stormwater runoff problem; increase in seagrass. Also, Policy of rock walling restricts user-friendly access to water. Gosford is the last venue suitable for regattas.	М
19	2	As mapped.	Management issue regarding location and number of moorings. Improved policy and guidelines on number and location of moorings.	М
20	2	As mapped.	Noise from PWC and other boats, speeding vessels, mosquitoes and water quality issues associated with stormwater discharge.	L
21	3	As mapped.	Sedimentation and poor flushing of water.	M
22	3	As mapped.	Sedimentation - sediment traps required.	M

Issue No.	Zone	Location	Management Issue	Ranking
23	4	As mapped.	Sedimentation and foreshore erosion.	М
24	4	As mapped.	Sedimentation and low water level. Woy Woy Creek and the creek from the Everglades are the main sources.	М
25	3	As mapped.	Sedimentation needs removal and clean up. Plants and trees growing in the water.	L
26	3	As mapped.	Boat wake and speed limits exceeded.	Н
27	3	As mapped.	Siltation and issues relating to boat access via channel.	L
28	4	As mapped.	Unlit channel markers. Slime over seagrass in winter.	M
29A	4	As mapped.	29A-F. Canals off St Hubert's Island in need of urgent maintenance to return to original design criteria. Also channels leading to the Island silting up.	L
29B	4	As mapped.	See above.	L
29C	4	As mapped.	See above.	L
29D	4	As mapped.	See above.	L
29E	4	As mapped.	See above.	L
29F	4	As mapped.	See above.	L
30	3	As mapped.	Sedimentation traps are not being maintained. Need additional traps upstream of the Bay.	М
31	3	As mapped.	The amount of sediment flowing out in heavy rains goes way past Horsfield Road point. Correa Bay sand bar needs a pole or other navigational marker. Boats approaching boat ramp come in at high speed and go around moored boats, hitting and extending the sand bar on the lower side of the tide.	М
32	4	As mapped.	Sediment build-up has almost blocked the channel. The entrances to St Hubert's Island canals are almost closed to navigation. Disappearance of aquatic vegetation in the channels.	L
33	3	As mapped.	Waterfall Bay: conflict between skiers using PWC and larger boats used by families who may sleep overnight. Ski boats ride around family boats wake and skiers take off from the sand bar.	L
34A	4	As mapped.	Boat wash from large vessels. Compacted soils from vehicles prevent regrowth of saltmarsh and mangroves.	Н
34B	4	As mapped.	See above.	Н
34C	4	As mapped.	See above.	Н
35	3	As mapped.	Need to increase height of the bridge.	L
36	3	As mapped.	Unmarked rocky outcrop.	M
37	3	As mapped.	Needs a culvert under Brisbane Water Dr and the railway line to flush Woy Woy Bay and stop the increased water level.	M
38	2	As mapped.	Sand accumulation at the entrance prevents tidal interchange in the estuary. Velocity of currents in major channels is decreasing. Natural scouring to maintain depths is not occurring. Sand build-up is occurring in all the major channels. Dredging at the entrance is necessary.	M
39	4	As mapped.	Foreshore erosion at Illoura Reserve, Davistown, at the end of Pyang Ave.	М
40	6	As mapped.	Siltation of channel causing navigational hazard.	M
41	4	As mapped.	St Hubert's Island overall (assumed to refer to the need to address navigability issues associated with the canals).	M
42	4	As mapped.	Sedimentation problem. Pelican Island has trebled in size (at low tide) over the past 2 years. Jetties are unusable at times other than high tide. Health hazard from mosquitoes.	L
43	3	As mapped.	Every time it rains a lot of clay comes down Dead Man's Creek (aka Woy Woy Creek).	L
44	4	As mapped.	Four knot zone not observed, leading to erosion of the foreshore, damage to moored vessels and structures, and compromises the safety of other waterway users. Navigation markers need updating/moving to reduce confusion and help highlight no wash zone. No sedimentation traps on concrete drains.	M
45	5	As mapped.	Actually a massive weed bed. Shoaling up - needs dredging.	М
46	5	As mapped.	Sailing boats with drop/fixed keel cannot access the Broadwater.	
.0	5	As mapped. As mapped.	Medium to large sized craft (1m draught) cannot get in at half tide.	М

Issue No.	Zone	Location	Management Issue	Ranking
			Bay has filled up over the last couple of years. The ferries that previously ran here kept it open.	
48	4	As mapped.	Merrit's Wharf: seagrass dragged in by trawlers has been washing ashore.	L
49	5	As mapped.	Weeds have been present in wetland area for 20 years; Lantana, Blackberry, Privet, Asparagus Fern. Loss of fauna due to cats. Fauna sighted incl. Echidna and Bandicoots. These fauna need protection. Also, need to prevent flooding in residential areas.	Н
50	4	As mapped.	Valuable flood zone.	L
51	5	As mapped.	Unique flora and fauna needs to be maintained.	Н
52	5	As mapped.	Poor navigation markers, not easily visible. A lot of vessels being damaged and running aground.	L
53	5	As mapped.	Inadequate drainage leading to an alluvial fan. Increased sedimentation and only one sediment trap.	М
54	4	As mapped.	Rubbish getting washed in and caught up in mangroves.	М
55	5	As mapped.	No large fish, only small ones. Loss of seagrass.	М
56	5	As mapped.	Oyster leases, can only get in at low tide.	L
57	5	As mapped.	Meadow Creek is all silted up. Acid Sulfate Soils present.	L
58	5	As mapped.	Silting up again.	М
59	5	As mapped.	Overflow from septic tanks at times.	L
60	4	As mapped.	Bar mouths need dredging.	М
61	5	As mapped.	Lack of navigation lights at night, all the way from Linton Channel up to the Broadwater.	L
62	5	As mapped.	Seagrass getting torn up by vessels in the navigation channel.	M
63A	5	As mapped.	Saltwater coming out of the drain. Sewer overflows into the creek draining to Empire Bay.	L
63B	5	As mapped.	See above.	L
64	5	As mapped.	Turbidity issues.	M
65A	5	As mapped.	Only four boat entry points - need for greater access and dedicated parking.	L
65B	5	As mapped.	See above.	L
65C	5	As mapped.	See above.	L
65D	5	As mapped.	See above.	L
66	5	As mapped.	Potential stormwater retention site. One large drain drains to Empire Bay.	L
67	5	As mapped.	Main issue is egress of fresh water into the estuary - turbidity, sediment and water quality.	L
68	5	As mapped.	Decline in large cockles and pippies. Hatching area no longer functioning.	Н
69A	5	As mapped.	Noisy water skiers early in the morning.	L
69B	5	As mapped.	See above.	L
70	5	As mapped.	No boating facilities except for one or two (e.g. Empire Bay Marina). Need for re-fuelling, hard-stand maintenance area, slipways, boating hardware and pump out areas. People are currently dumping sewage.	Н
71	5	As mapped.	Swamp mahogany trees need to be protected.	Н
72	6	As mapped.	Oyster leases that appear to not be in use at present - should they be removed? They encourage siltation e.g. around the jetty. Better usage of this area for recreational rather than commercial purposes. Boat users vessels are being moved to other sites resulting in loss of revenue. Blockage of entrance and sediment accretion.	М
73	6	As mapped.	New mangroves associated with stormwater outlets; capture sediments/rubbish/wrack and overtaking seagrass. Ferry operations probably causing seagrass loss. Conflict between residents and the existing marina - marina expansion said to impinge on seagrass and impact on parking and dinghy storage. Loss of Posidonia seagrass (due to sedimentation?). High turbidity after storm events and lack of flushing. Lack of silt control on the escarpment. Progradation of mud flat.	Н

Issue No.	Zone	Location	Management Issue	Ranking
74	6	As mapped.	Siltation related to creek and stormwater outlet.	M
75	6	As mapped.	Channel inadequate - have to wait for ferries to come in. Problem with SE swell. Impact on race days / regattas. Issue primarily over last 18 months.	L
76	6	As mapped.	Issue with navigation, especially during bigger swell. Quite strong currents there as well. Boat waves from larger craft impact on smaller craft. Channel narrowing at Half Tide Rocks. No speed restrictions here.	L
77	6	As mapped.	Mangroves inhibiting flow of creek and encouraging sedimentation.	L
78A	6	As mapped.	Dumping of sand on Ettalong Beach caused by blocking of entrance channel. Beach used to be longer. Issue regarding rock placement and access. Suggest shoreline protection or seawall at this location.	M
78B	6	As mapped.	See above.	М
79	6	As mapped.	Mounds of sediment left by those harvesting nippers at this location contributing to sedimentation. Rubbish accumulates, especially after big winds. Education required and boat users need facilities.	М
80	6	As mapped.	Shoaling of entrance affecting tidal exchange in the estuary? Need for dredging to encourage tourism and boating.	М
81	4	As mapped.	Confusing at the moment. Four knot zone is located too far away for people to see. Needs to be moved for clarity.	L
82	6	As mapped.	Cardinal marker has been damaged - yachts run aground. Also unlit markers at night. Particularly a problem for visitors.	L
83A	4	As mapped.	Sedimentation and pollution associated with stormwater drains. Seagrass wrack concentrating in this zone. Local water quality issues and rubbish. Damage to boats. Sewage overflows and leaks. Wash also an issue for smaller boats.	М
83B	4	As mapped.	See above.	М
84	6	As mapped.	Ferry cuts across sand banks rather than going via the channel - impact on sedimentary processes, changing the hole at this location.	М
85	6	As mapped.	Safety issues for navigation, erosion and damage to moored boats. Wash also an issue for small boats.	М
86	6	As mapped.	Access to wharf difficult.	L
87	6	As mapped.	Very dangerous spot due to presence of oyster and pearl leases.	L
88	6	As mapped.	Oysters continue to require depuration despite presence of sewage pump out. This has implications for revenue. Issues with boats having adequate capacity for holding sewage - need greater education about the presence of this pump out facility.	М
89	-		Fees paid to state government for use of waterways need to go to implementation of the management plan when it's developed.	М
90	-		Observation of change in ecology with increase in human population.	Н
91	-		Seagrass issues and potential loss of marine biodiversity.	Н
92	-		Concerns about climate change impact.	Н
93	-		Need to increase boating facilities and associated foreshore infrastructure.	М
94	-		Pollution from boats is minimal.	L
95	-		Moored boats - copper-based antifouling leads to sediment contamination and also prevents the growth of seagrasses especially as they occur in shallows (problem is enhanced by increased abundance of shallow areas related to sedimentation for locations such as Hardy's Bay and Pretty Beach).	M
96	-		Sedimentary contamination - boat cleaning contributing to contamination.	М
97	-		Swing moorings allocated but boats not used. Potential sources of contamination.	L
98	6		Loss of shellfish in Hardy's Bay in recent years.	М

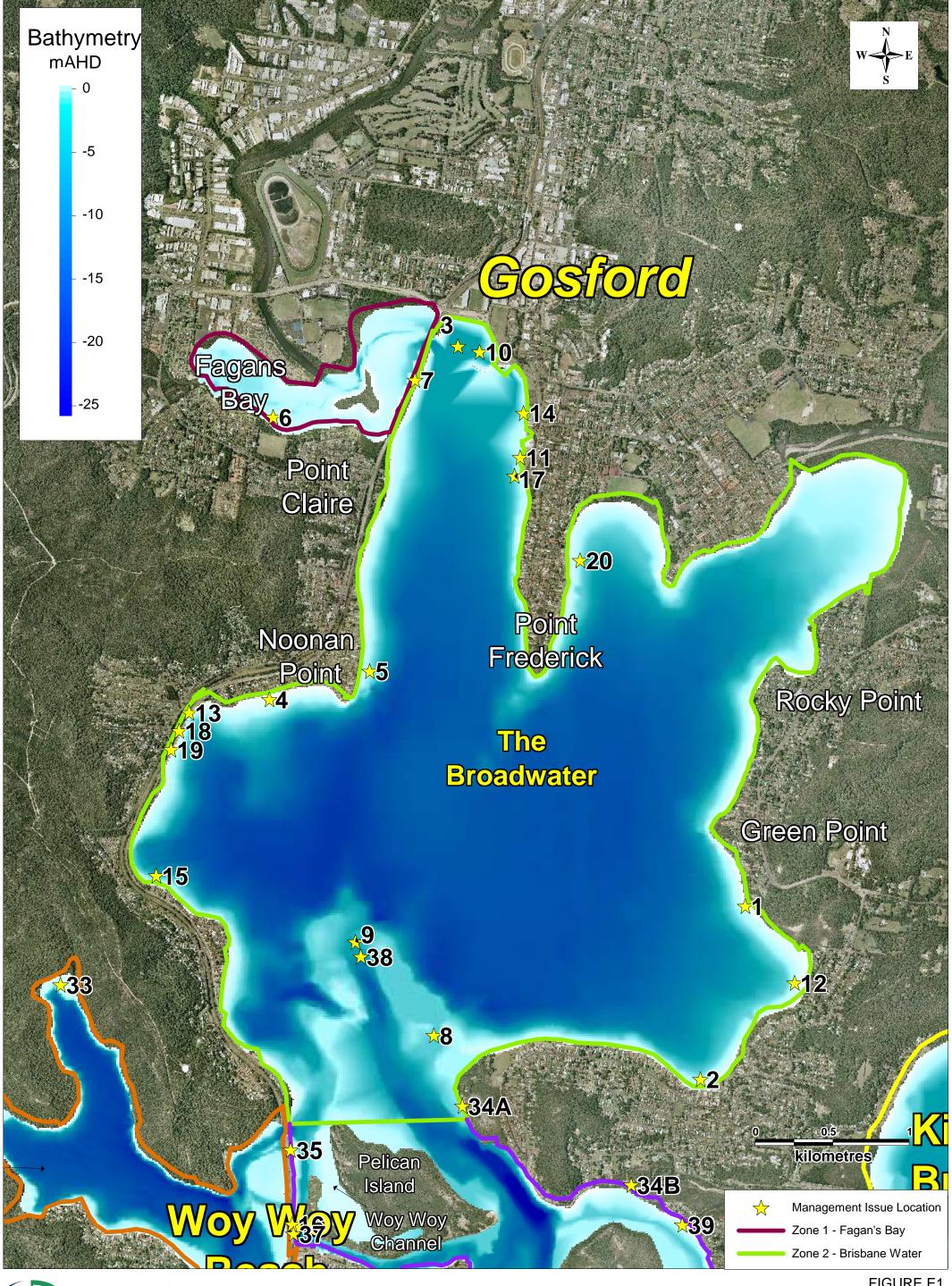
Issue No.	Zone	Location	Management Issue	Ranking
99	-		Lack of large fish - impact on fishing charters over 20 years has been a problem. Declines in fish numbers have resulted in increases in fishing pressure for both shore and water based fishers.	М
100	-		General lack of fish in the area.	М
101	-		Dolphins used to be sighted more regularly than they are now.	L
102	-		Pretty Beach baths in wrong location. Flow impeded by mangroves and wharf.	L
103	-		Shift in ecology - different seagrass, different growth on boats and changes to fish populations.	М
104	-		Issue regarding ballast - introduced species. Previously there were barnacles, now there is generally an orange sponge-like growth.	М
105	-		Potential pollution related to roadways.	L
106	-		Navigation issue in entrance is increasingly bad. Used to be two way channel.	Н
107	-		Ongoing issue with septic systems overflowing in wet weather.	L
108	-		No kerb and gutter - increased sediments into the waterways. Alluvial deposits associated with stormwater drains. Need for catchment based controls and stormwater is bypassing natural wetland filters.	M
109	-		Enforcement of construction and operational erosion and sedimentation controls and related council policy.	Н
110	-		Important to conserve the existing wetlands and riparian vegetation.	Н
111	-		Epiphytes on seagrass didn't used to be there - damage to seagrass. Concerns regarding loss of communities associated with seagrass and the effect on fishing. Number and diversity of fish associated with seagrass. Caused by high nutrient loads encouraging epiphytic growth.	L
112	-		Flushing problems especially after storm events.	М
113	-		Not many cockles and shellfish, and no large ones due to overharvesting. May be overarching issues of habitat loss and general ecological changes.	L
114	-		Uncontrolled activity on foreshore such as the proliferation of jetties.	Н
115	-		Acid Sulfate Soils are a potential problem when flushing is impeded.	L
116	-		Swing moorings remove aquatic vegetation and increase turbidity, which means decreased light penetration and loss of seagrass.	L
117	-		Poor water quality.	Н
118	-		Impact of flood mitigation works on wetlands.	M
119	-	All; especially Narara and Erina Creek catchments	Increasing/uncontrolled development of the catchment resulting in changes to catchment hydraulics and impacting on water quality.	Н
120	-	Kincumber, Cockle Bay	Stormwater/sewer/septic overflows impact on water quality.	L
121	-		Soil erosion in the catchment.	M
122 123	5	Cockle Bay	Loss of riparian vegetation. Impacts on tidal prism in relation to human activity.	H M
123	6	Ettalong Shoals	Impacts on tidal prism in relation to shoal propagation / siltation of	M
125	1	Fagan's Bay	waterways. Low rates of flushing in the upper estuary.	M
126	6	St Hubert's Island	Foreshore inundation; flooding.	M
127	-	All; esp. St Hubert's Island	High levels of sediment re-suspension in intertidal areas, around oyster leases and around St Hubert's Island.	M
128	-		Impacts of projected sea level rise on foreshore infrastructure.	Н
129	4, 5, 6	Ettalong Shoals, Paddy's Channel, N of Pelican Island, Cockle Channel, Saratoga	Impacts of shoal propagation on navigability of waterways.	М

Issue No.	Zone	Location	Management Issue	Ranking
130	-	Hardy's Bay, Woy Woy, Fagan's Bay, Gosford Harbour, Kincumber Creek, St Hubert's Island	Siltation of waterways.	М
131	-		Poor sediment quality, particularly in the upper estuary; associated with antifoulants and stormwater outlets.	M
132	-	Cockle Bay	Occurrence of Potential and Actual Acid Sulfate Soils.	L
133	-	St Hubert's Island, Ettalong and Point Clare	Disruption to natural shoreline processes by artificial structures (e.g. seawalls, jetties, wharves and boat ramps).	M
134	-	Yattalunga, Ettalong Beach, N of Blackwall Pt, Davistown	Shoreline erosion / recession.	Н
135	-	Hardy's Bay, Cockle Bay, Woy Woy, Horsfield Bay	Erosion and/or sedimentation associated with stormwater outlets.	M
136	2	Gosford 1st Sea Scouts	Seawall collapse.	L
137	-		Poor water quality, esp. after rainfall.	Н
138	6	Hardy's Bay	Impacts of high suspended sediment loads on primary productivity.	M
139	3, 5	Fagan's Bay, Woy Woy Bay (Brisbane Water Drive), Cockle Bay, Kincumber Broadwater, Tascott (culvert).	Low rates of estuarine flushing.	M
140	-		Poor water quality associated with stormwater outlets.	M
141	3, 4	Woy Woy, Ettalong	Water quality impacts due to leachates from garbage tip.	L
142	-		Loss of biodiversity and need for environmental protection - Pelican Island, Swamp mahoganies need protection in Cockle Bay Nature Reserve.	Н
143	-		Loss and degradation of natural foreshore vegetation in association with foreshore structures.	Н
144	-		Degradation of seagrass beds.	Н
145	2, 3, 6	Pelican Island, Caroline Bay, Hardy's Bay, Woy Woy	Change (often loss, but increase in some cases) in extent of seagrass habitats.	Н
146	5, 6	Cockle Channel, Ettalong	Loss of seagrass due to boating activity (scour).	Н
147	6		Loss of aquatic vegetation due to swing moorings.	Н
148	2, 6	Noonan Point, St Hubert's Island	Accumulation of seagrass wrack.	L
149	4	Empire Bay	Reclamation of tidal wetlands.	M
150	4	Empire Bay	Restricted tidal inundation of wetlands due to human constructs.	M
151	5, 6	St Hubert's Island, Cockle Bay	Anthropogenic disturbance of estuarine flora habitats and fauna.	M
152	6	Hardy's Bay	(Suspected) increase in the extent of mangroves at the expense of saltmarsh/seagrass.	H
153 154	1, 6 1	Fagan's Bay, Hardy's Bay	Progradation of mangroves near tributaries. Algal infestation.	M M
155	4	Fagan's Bay Davistown	Compaction of soils due to vehicles and associated loss of intertidal vegetation.	L
156	-		Introduction of pest species (both flora and fauna). Fouling species; weeds (Cockle Bay wetlands); cats.	M
157	-		Presence of mosquitoes.	L
158	6	Pretty Beach	Overharvesting of shellfish and beach worms, leading to declines in size/number.	Н
159	-		Decline in fish numbers and size ranges.	М
160	-		Declines in the number of birds visiting the estuary.	М
161	-		Observations of dead birds (pelicans and ducks).	L
162	2, 3	The Broadwater, Ettalong, Lobster Beach, Hardy's Bay, Waterfall Bay	Conflicts between different user groups, particularly between passive and active recreational users.	Н
163	5	Kincumber Broadwater (water skiers), Woy Woy	Disturbance of the peace (primarily relating to powered water craft).	М

Need for integrated approach to planning for the estuary and surrounds. H Surrounds. Lack of public access to parts of the estuarine foreshore. M Inadequate recreational amenities, particularly walking tracks/pathways, BBCs and tollets. M Inadequate recreational amenities, particularly walking tracks/pathways, BBCs and tollets. Poorly planned foot and cycle paths that lack connectivity, go nowhere or are unsafe. Inadequate facilities for swimming (i.e. enclosures). L New years with the public safety as a construction of navigation channels, which was a construction of navigation of navigation channels, which was a construction of the public safety associated with high usage of boat mamps and community for safety associated with high usage of boat mamps and community for safety and the public safety associated with high usage of boat mamps and community for safety and the public safety associated with high usage of boat mamps and community for safety and the public safety associated with high usage of boat mamps and construction of the value of the watercraft was storage facilities for dinghies and other watercraft was constructed with public safety and post materials. M Not enough moorings.	Issue No.	Zone	Location	Management Issue	Ranking
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Public safety on the waterway. H	167	-			М
Navigational hazards - poor identification of navigation channels, why, etc. etc.	168	-		Inadequate facilities for swimming (i.e. enclosures).	L
171 2,3	169	6			Н
Rocks, Woy Woy Waterway traine exceeding speed infinits rexcessive Doat wakes. H	170	6	Woy, etc.		М
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174	172	6	Hardy's Bay		M
175 2			The Broadwater		
Not enough moorings.					
Inadequate boating facilities generally. M		2	The Broadwater		
Sediment accretion near boat ramps and loss of access. M	176	-			M
179 2,6 Gosford, Hardy's Bay Public boat ramp inadequate to service existing use. M	177	-		Inadequate boating facilities generally.	M
Illegal and undesignated launching of boats. M	178	2, 5		Sediment accretion near boat ramps and loss of access.	М
Insufficient provision for car and trailer parking. M	179	2, 6	Gosford, Hardy's Bay		M
Inadequate lighting of boat ramps and car parks. M	180	-			M
Seawalls and other foreshore structures prevent access to the water for users of small craft (e.g. rowing clubs) M	181	-		Insufficient provision for car and trailer parking.	M
Mater for users of small craft (e.g. rowing clubs) Mater for users of u	182	-		Inadequate lighting of boat ramps and car parks.	M
Commercial and tourism potential of the estuary not fully realised. Caroline Bay, Hardy's Bay, Pretty Beach, St Hubert's Island Oyster leases not in use but left in place (need decommissioning). Littering M M 187 6 Hardy's Bay Oyster leases untidy and poorly maintained. Lack of awareness amongst boaters re: sewage pump out requirements and facilities. 190 2 Empire Bay Poor drainage for some roads. L Lyngleasant odours associated with stormwater outlets, mud flats and/or seagrass wrack. Presence of shipwrecks makes dredging difficult. Behavioural problems associated with off-leash dogs. L 191 4 Bensville Wharf Dumping of fuel by helicopters L 195 1 Reserve (off Manns Road) Between Ironbark Point and Rocky Point, Green Point Careen Point Poreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. Poane Drive, Gosford Dane Drive, Gosford Caroline Bay, Hardy's Bay, Koulewong, Littering M Mondstand Proving Adamson Parade, Gosford M M Accumulation of seagrass wrack along the estuary not fully realised. M M M M M M M M M M M M M	183	2	Tascott		М
Caroline Bay, Hardy's Bay, Pretty Beach, St Hubert's Island Littering M	184	-		Overdevelopment of the Brisbane Water foreshores.	Н
Pretty Beach, St Hubert's Island Standard	185	-		Commercial and tourism potential of the estuary not fully realised.	M
188 - Oyster leases untidy and poorly maintained. M	186	-	Pretty Beach, St Hubert's	Littering	М
Lack of awareness amongst boaters re: sewage pump out requirements and facilities. 190 2 Empire Bay Poor drainage for some roads. 191 2, 6 Hardy's Bay, Koolewong, Tascott Unpleasant odours associated with stormwater outlets, mud flats and/or seagrass wrack. 192 6 Ettalong Shoals Presence of shipwrecks makes dredging difficult. M 193 - Behavioural problems associated with off-leash dogs. L 194 4 Bensville Wharf Dumping of fuel by helicopters L 195 1 Upstream of Ann Close Reserve (off Manns Road) 196 2 Between Ironbark Point and Rocky Point, Green Point Orana Street boat ramp only accessible at high tide. L 197 2 Green Point Orana Street boat ramp only accessible at high tide. L 198 2 Green Point Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. 199 2 Dane Drive, Gosford With Drain Seady With breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 201 2 Dane Drive and Mason Parade, Gosford Scouring is occurring behind the seawall. 202 2 Dane Drive and Mason Parade, Gosford Sciling Club.	187	6	Hardy's Bay	Oyster leases not in use but left in place (need decommissioning).	L
requirements and facilities. 190 2 Empire Bay Poor drainage for some roads. L	188	-		Oyster leases untidy and poorly maintained.	M
191 2, 6 Hardy's Bay, Koolewong, Tascott Unpleasant odours associated with stormwater outlets, mud flats and/or seagrass wrack. 192 6 Ettalong Shoals Presence of shipwrecks makes dredging difficult. M 193 - Behavioural problems associated with off-leash dogs. L 194 4 Bensville Wharf Dumping of fuel by helicopters L 195 1 Upstream of Ann Close Reserve (off Manns Road) 196 2 Between Ironbark Point and Rocky Point, Green Point Orana Street boat ramp only accessible at high tide. L 197 2 Green Point Orana Street boat ramp only accessible at high tide. L 198 2 Green Point Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. 199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. 190 2 Dane Drive, Gosford Scouring is occurring behind the seawall. 201 2 Dane Drive and Mason Parade, Gosford Scouring is occurring behind the seawall. 202 2 Dane Drive and Mason Parade, Gosford Scalinig Club.	189	-			Н
Tascott and/or seagrass wrack. 192 6 Ettalong Shoals Presence of shipwrecks makes dredging difficult. M 193 - Bensville Wharf Dumping of fuel by helicopters L 194 4 Bensville Wharf Dumping of fuel by helicopters L 195 1 Upstream of Ann Close Reserve (off Manns Road) 196 2 Between Ironbark Point and Rocky Point, Green Point Orana Street boat ramp only accessible at high tide. L 197 2 Green Point Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. 199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. 100 2 Dane Drive, Gosford Scouring is eacuall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 100 2 Dane Drive and Mason Parade, Gosford Sciuring is occurring behind the seawall. 101 2 Dane Drive and Mason Parade, Gosford Saliing Club.	190	2	Empire Bay	Poor drainage for some roads.	L
192 6 Ettalong Shoals Presence of shipwrecks makes dredging difficult. M 193 - Behavioural problems associated with off-leash dogs. L 194 4 Bensville Wharf Dumping of fuel by helicopters L 195 1 Upstream of Ann Close Reserve (off Manns Road) 196 2 Between Ironbark Point and Rocky Point, Green Point Orana Street boat ramp only accessible at high tide. L 197 2 Green Point Orana Street boat ramp only accessible at high tide. L 198 2 Green Point Orana Street boat ramp only accessible at high tide. L Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. 199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 201 2 Dane Drive, Gosford Scouring is occurring behind the seawall. M Accumulation of seagrass wrack along the beach in front of the Sailing Club.	191	2, 6			М
1944Bensville Wharf Upstream of Ann Close Reserve (off Manns Road)Dumping of fuel by helicoptersL1951Upstream of Ann Close Reserve (off Manns Road)Bank erosion along Narara Creek.M1962Between Ironbark Point and 	192	6	Ettalong Shoals	Presence of shipwrecks makes dredging difficult.	M
1944Bensville Wharf Upstream of Ann Close Reserve (off Manns Road)Dumping of fuel by helicoptersL1951Upstream of Ann Close Reserve (off Manns Road)Bank erosion along Narara Creek.M1962Between Ironbark Point and Rocky Point, Green PointNarrow stretch of reserve restricts public access.L1972Green PointOrana Street boat ramp only accessible at high tide.L1982Green PointForeshore erosion; degradation of foreshore vegetation through mowing to the water's edge.M1992Dane Drive, GosfordFloating booms currently in place to capture rubbish from the stormwater outlets need addressing.M2002Dane Drive, GosfordThe existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion.M2012Dane Drive, GosfordScouring is occurring behind the seawall.M2022Dane Drive and Mason Parade, GosfordAccumulation of seagrass wrack along the beach in front of the Sailing Club.L	193	-			L
Reserve (off Manns Road) Bank erosion along Narara Creek. M	194	4	Bensville Wharf		L
Rocky Point, Green Point Orana Street boat ramp only accessible at high tide. In part of the water's edge. Dane Drive, Gosford Dane Drive and Mason Parade, Gosford Sailing Club. Narrow stretch of reserve restricts public access. L Narrow stretch of reserve restricts public access. L Narrow stretch of reserve restricts public access. L L Accumulation of reserve restricts public access. L Dane Drive and Mason Parade, Gosford Narrow stretch of reserve restricts public access. L L Accumulation of reserve restricts public access. L Dane Drive stretch of reserve restricts public access. L L Dane Drive and Narrow stretch of reserve restricts public access. L Dane Drive stretch of reserve restricts public access. L Dane Drive stretch of reserve restricts public access. L Dane Drive and Narrow stretch or reserve restricts public access. L Dane Drive stretch of reserve restricts public access. L Dane Drive stretch of reserve restricts public accessine, and high tide. L	195	1		Bank erosion along Narara Creek.	М
197 2 Green Point Orana Street boat ramp only accessible at high tide. 198 2 Green Point Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. 199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 201 2 Dane Drive, Gosford Scouring is occurring behind the seawall. Dane Drive and Mason Parade, Gosford Sailing Club. Orana Street boat ramp only accessible at high tide. L Advantage of Foreshore vegetation through mowing to the water's edge. M M Accumulation of seagrass wrack along the beach in front of the Sailing Club.	196	2		Narrow stretch of reserve restricts public access.	L
Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. 199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 201 2 Dane Drive, Gosford Scouring is occurring behind the seawall. Dane Drive and Mason Parade, Gosford Sailing Club. Foreshore erosion; degradation of foreshore vegetation through mowing to the water's edge. M Accumulation of seagrass wrack along the beach in front of the Sailing Club.	197	2		Orana Street boat ramp only accessible at high tide.	L
199 2 Dane Drive, Gosford Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. 201 2 Dane Drive, Gosford Scouring is occurring behind the seawall. Dane Drive and Mason Parade, Gosford Sailing Club. Floating booms currently in place to capture rubbish from the stormwater outlets need addressing. M Accumulation of seagrass wrack along the beach in front of the Sailing Club.	198	2	Green Point		М
The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased salinity, vegetation die-back and erosion. Dane Drive, Gosford Dane Drive, Gosford Scouring is occurring behind the seawall. Dane Drive and Mason Parade, Gosford Accumulation of seagrass wrack along the beach in front of the Sailing Club.	199	2	Dane Drive, Gosford	Floating booms currently in place to capture rubbish from the	М
201 2 Dane Drive, Gosford Scouring is occurring behind the seawall. M 202 2 Dane Drive and Mason Parade, Gosford Sciling Club. Scouring is occurring behind the seawall. M Accumulation of seagrass wrack along the beach in front of the Sailing Club.	200	2	Dane Drive, Gosford	The existing seawall does not function to dissipate wave energy, with breaking waves affecting the foreshore resulting in increased	М
202 Dane Drive and Mason Accumulation of seagrass wrack along the beach in front of the Sailing Club.	201	2	Dane Drive, Gosford		М
-			Dane Drive and Mason	Accumulation of seagrass wrack along the beach in front of the	
	203	2			L

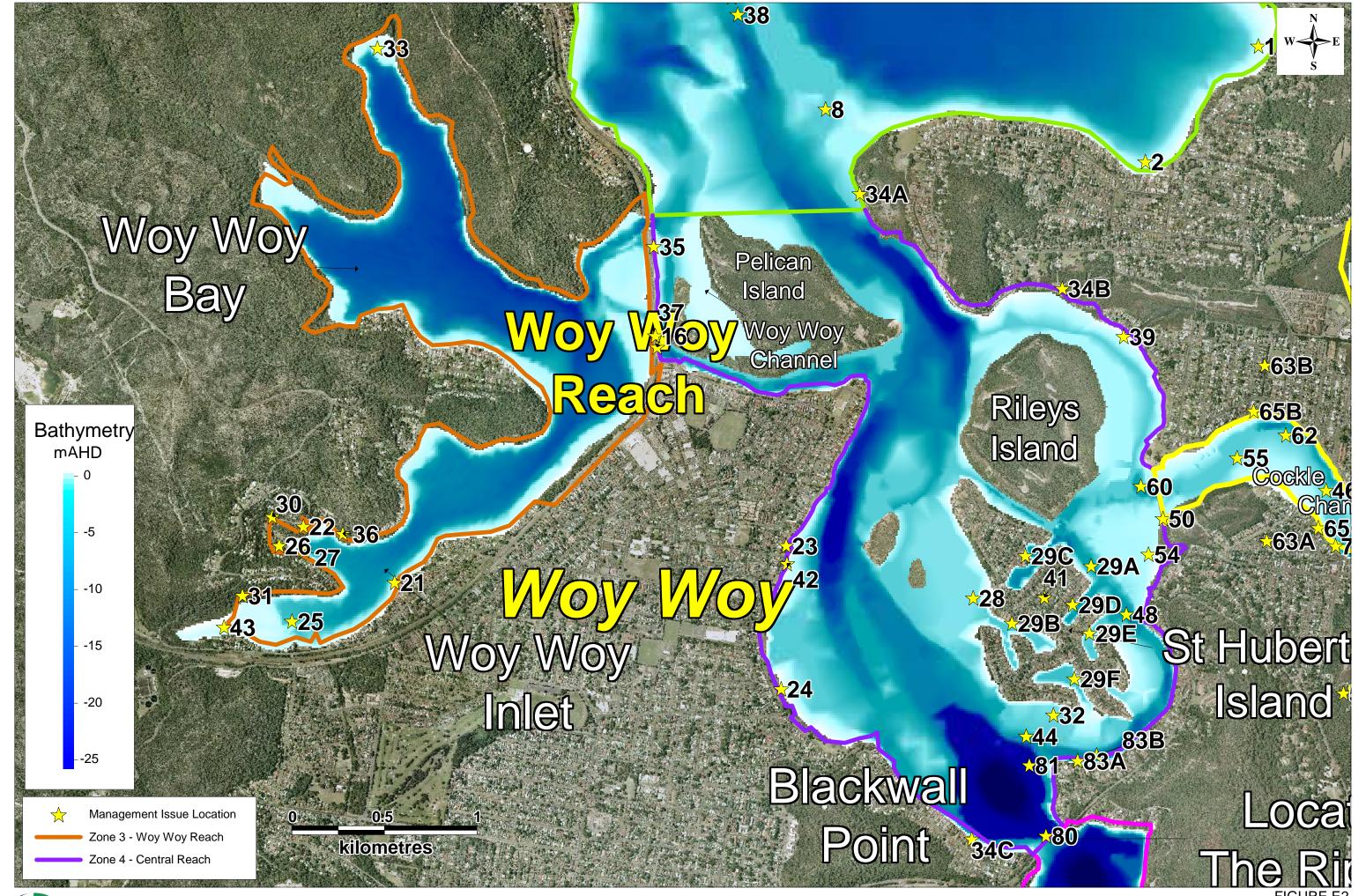
Issue No.	Zone	Location	Management Issue	Ranking
		Tascott and Point Clare	foreshore.	
204	2	Punt Bridge, Central Coast Highway	Boat ramp has poor access due to lack of parking.	L
205	2	Punt Bridge area, Central Coast Highway	Erosion and loss of vegetation.	М
206	2	Masons Parade, Gosford	Dinghies currently being stored in an Endangered Ecological Community adjacent to the Scout Hall.	Н
207	2	Muloora Road, Springfield	Subsidence into Erina Creek is occurring.	M
208	3	Correa Bay and Horsfield Bay.	Weeds present.	М
209	-		Encroachment on reserves by public residents.	Н
210	3	Goondi Close, Horsfield Bay	Foreshore erosion.	М
211	3	Railway Street, Woy Woy	Mangroves are impeding flow out of the stormwater outlets near the train station.	М
212	3	Woy Woy	Foreshore access impeded by rail line.	L
213	3	Parks Bay	Erosion is occurring under the bridge near Lara Street.	L
214	4	Brick Wharf Road, Woy Woy	Stormwater outlets located in the Lions Memorial Park are obstructed by weeds and also get inundated under some conditions.	М
215	4	Brick Wharf Road, Woy Woy	A large amount of weeds have built up around the boat ramp in Lions Memorial Park.	L
216	4	Brick Wharf Road, Woy Woy	The seawall located in Lions Memorial Park is collapsing. It is noted that this seawall has been repaired a number of times in the last 30 years.	М
217	4	Austin Butler Access, Woy Woy	The main stormwater drain between the two ovals has collapsed and is accreting sediments.	L
218	4	Saratoga, Davistown and Empire Bay	Damage to saltmarsh.	Н
219	4	Blackwall	Stormwater runoff from fire trails located in Blackwall Mountain is causing water quality issues.	М
220	4	Daleys Point	Loss of reserve due to foreshore erosion in Palermo Reserve on Empire Bay Drive.	М
221	4	Blackwall	Substantial erosion is occurring near the Blackwall Point boat ramp and is affecting the road.	М
222	6	Fisherman's Parade, Daleys Point	Stormwater runoff from the dirt access road and fire trail is causing water quality issues.	М
223	5	Davistown	Scouring is occurring behind the seawall in Illoura Reserve. In addition, the design permits vandalism and other tampering, thereby exacerbating the erosion.	М
224	4	Blackwall	Shoreline erosion is occurring at the Rip Road Reserve.	М
225	5	Davistown	Shoreline erosion is occurring near from Lintern Street to 28 Malinya Road in Illoura Reserve.	М
226	4	Saratoga	Poor access via the waterway to the Centennial Street boat ramp.	L
227	4	Woy Woy	Degradation of the tidal baths near Brisbane Water Drive.	L
228	5	Cockle Bay	Erosion and siltation.	M
229	4	Saratoga	Drainage issues are impacting on recreational usage of the oval near Willaroo Road.	L
230	5	Kincumber	Poor access for bikes and pedestrians near Carrak Road.	L
231	5	Kincumber	Regionally significant vegetation located in the reserve near Carrak Road is subject to vandalism.	Н
232	5	Davistown	Provide protection of the Green and Golden Bell Frog and Bush Stone Curlew.	Н
233	4	Paddy's Channel	Siltation.	М
234	5	Hawke Street, Kincumber	Unsealed car parks are eroding into Kincumber Creek.	М
235	5	Hawke Street, Kincumber	Disused boat trailer and floating pontoon still in place.	L
236	2	Mundoora Avenue, Yattalunga	Drainage from private residences is being directed onto the public reserve.	L
237	5	Kincumber	There is difficulty cleaning stormwater pipes in the region of Hawke Street due to pollution originating from the industrial area.	М

Issue No.	Zone	Location	Management Issue	Ranking
238	2	Saratoga	Potential for erosion from the sloping lands draining to the stormwater outlet opposite Byalla Lane.	L
239	2	Saratoga	Scour associated with high velocity stormwater flows from the outlet near the corner of Jirramba and Mimosa Avenues.	L
240	2	Yattalunga	Poor drainage and flow in the open drain near Mundoora Avenue to low invert.	L
241	2	Yattalunga	Siltation is occurring in the open drain located on the foreshore between Mundoora Access and Wilkie King Avenue.	М
242	2	Green Point	Siltation in the creek is exacerbating flooding over the road near Avoca Drive and Sun Valley Drive.	М
243	2	Green Point	Bank erosion of the creek running to the north of Sun Valley Drive in the region of Avoca Drive.	М
244	6	Hardy's Bay	Erosion of the seawall along the southern shore in Hardy's Bay.	М
245	6	Ettalong	Build up of litter in the open drain near Beach Street.	L
246	6	Killcare	Erosion and collapse of trees into the water along Hardy's Bay Parade.	М
247	6	Ettalong	Lance Webb Reserve is subject to erosion, thought to be attributable to wash from ferry. In addition, access to the reserve and beach is limited.	М
248	-		Residents of land adjacent to foreshore reserves may often encroach on public reserves and undertake maintenance.	Н
249	-		There is a lack of opportunity for Bushcare groups due to a lack of resources for their management within Council.	Н
250	-		The promotion of Brisbane Water as a tourist destination is generally lacking. There is a lack of information about scenic drives and available facilities. Interpretive signage is also lacking.	Н
251	-		Vandalism of trees is an ongoing issue for vegetation management and foreshore erosion.	L
252	-		There is a need for improved coordination of project implementation, asset management and sourcing of funding within Council.	Н





Brisbane Water Estuary Management Study FIGURE E1 MANAGEMENT ISSUES ZONES 1 AND 2





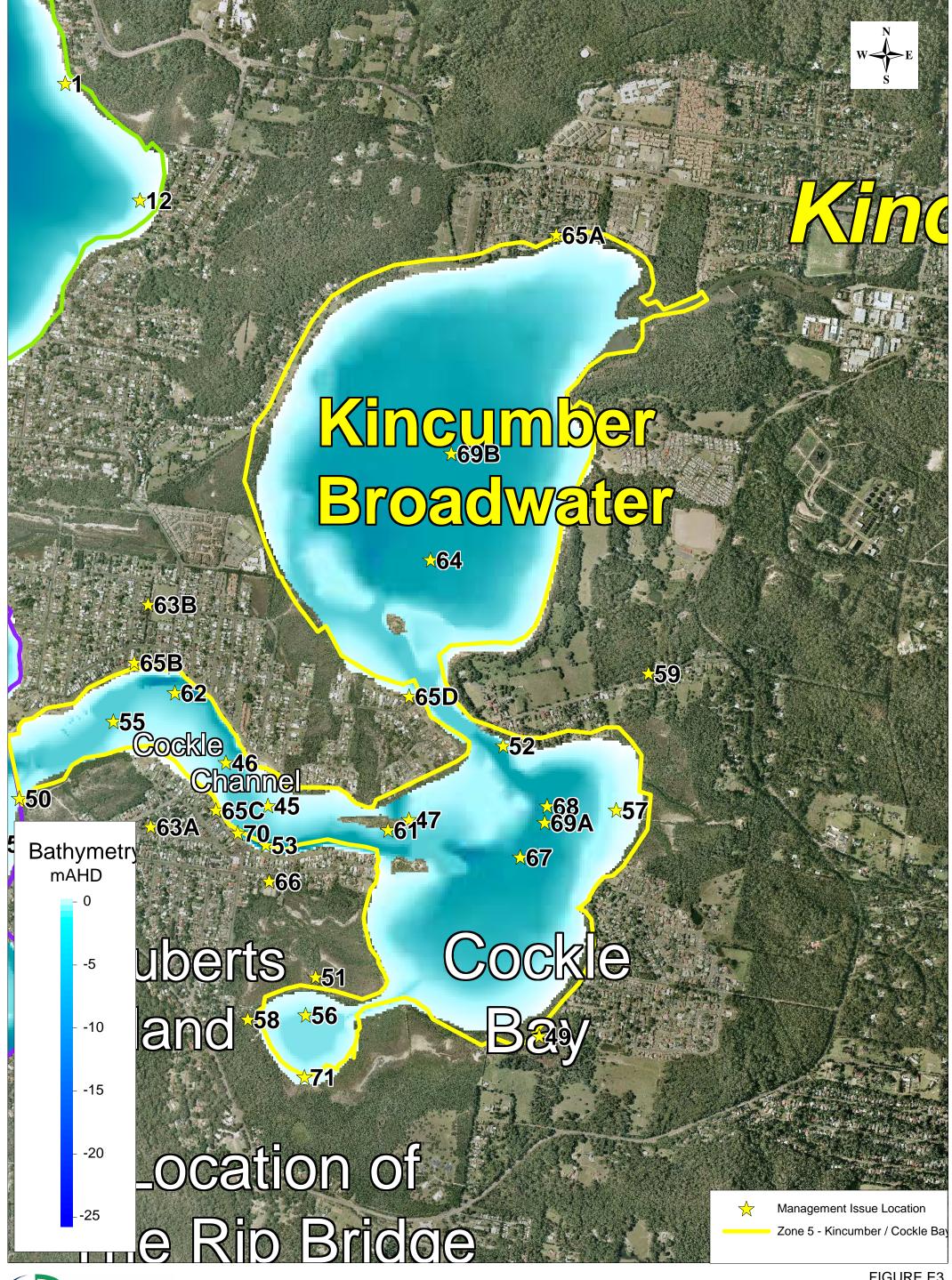




FIGURE E3 MANAGEMENT ISSUES ZONE 5

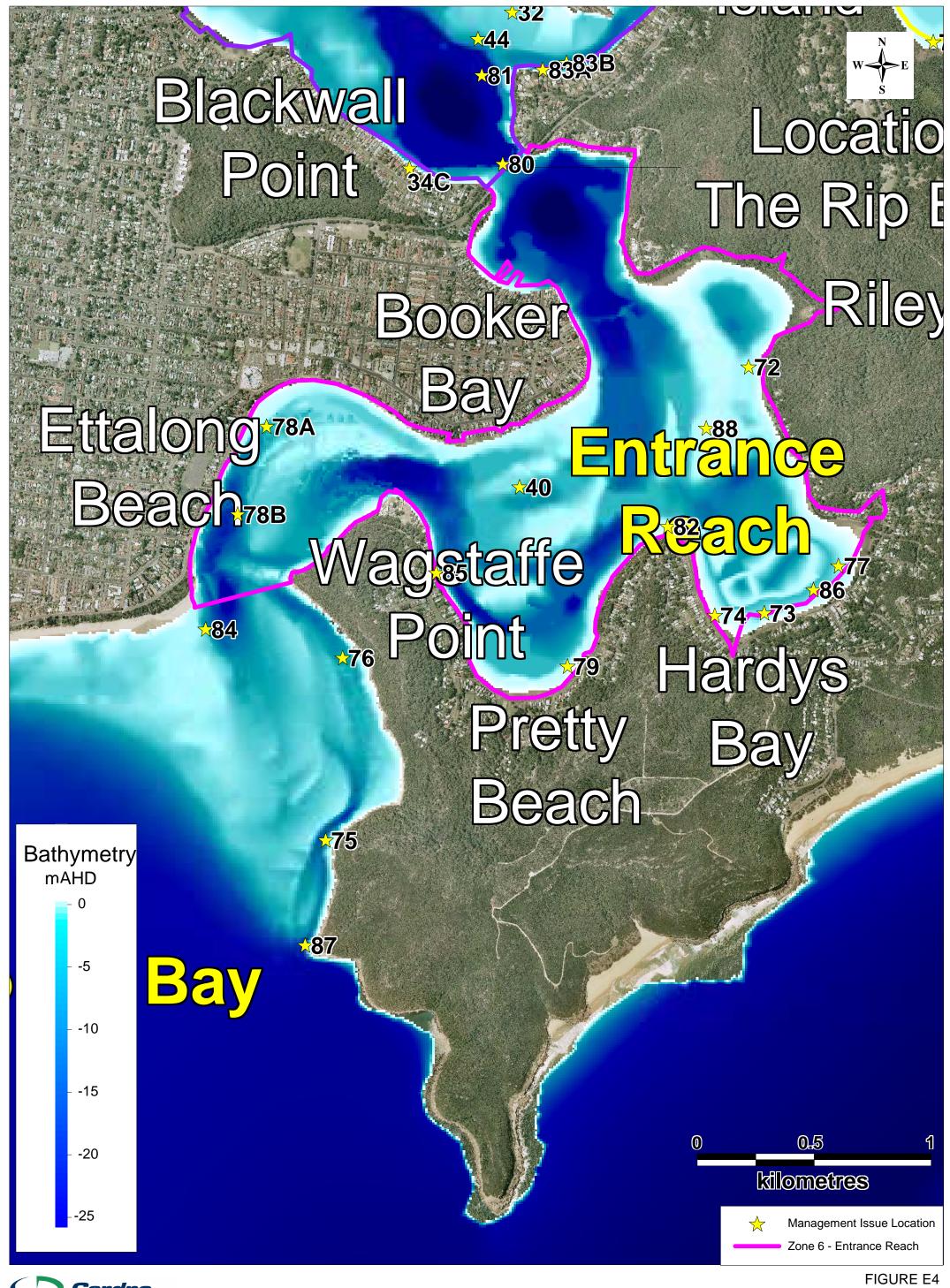




FIGURE E4 MANAGEMENT ISSUES ZONE 6