

Locality summaries

LOCALITY: Toorbul

Toorbul is located on the western side of Pumicestone Passage with Bribie Island to the east. It is bounded on the east by Pumicestone Channel, to the north by Elimbah Creek and the south by Ningi Creek. Parrot Island and Shag Island are low flat islands immediately off the coast within the locality (Figure 1). Toorbul is also an important shorebird habitat with several roosting sites along The Esplanade.

The shoreline includes mangroves, pockets of beaches, and sections of protection works, backed by the main access road. Some sections of existing revetment are undergoing upgrades and extensions are currently planned. Existing areas of mangroves along the frontage are providing protection for adjacent land and assets from erosion and inundation hazards.

There is no immediate coastal erosion threat to the Toorbul foreshore, but some areas may become threatened by projected sea level rise in the future.

Low-lying areas may also be increasingly exposed to tidal and storm tide inundation. Assets that may be at risk include public foreshore infrastructure, some private assets, and access roads.

Important infrastructure includes Toorbul Community Hall, Toorbul Fire Station Metro and Toorbul Community and Sports Centre.

Pumicestone Road is the only local connector road connecting Toorbul and when cut means that Toorbul becomes an isolated community.

The present day adaptation response for Toorbul is to continue to actively manage coastal hazard risk, and begin preparations for additional hazard mitigation and potential transition of the foreshore use in the future. If a resilient built form cannot be achieved by 2050, work would need to commence for a potential transition plan for very high intolerable risk areas of Toorbul.

The adaptation pathway includes a focus on mangrove protection and enhancement, trialling a living shoreline design, maintenance and upgrades for foreshore protection works, reviewing planning controls, resilient homes, and drainage upgrades (Table 1).

Review of the adaptation pathway will be ongoing and guided by the outcome of present day actions. Region-wide actions also apply where relevant to this locality.



Figure 1. Toorbul




Table 1. Toorbul adaptation pathway



Sea level rise projections

0.3m

0.8m

	Present day	2050	2100
Adaptation response	Actively manage 	Actively manage 	Transition and change 
Adaptation Actions			
Region-wide initiatives to enhance custodianship	As per region-wide actions identified in Table 35.		
Planning updates	As per region-wide actions, including:		
<i>Place-based planning</i>	Develop place-based Local Resilience Plan for the foreshore areas of Toorbul to assist with coordinated adaptation and transition planning in the long-term.		Review adaptation pathway and reduce 2100 approach to “actively manage” if a resilient built form for very high intolerable risk properties is achieved.
Maintaining and improving infrastructure	As per region-wide actions, including:		
<i>Increasing infrastructure resilience</i>	<p>Promote resilient homes and public infrastructure within the community and building sector (link in with action 1.2).</p> <p>Review opportunities to improve drainage networks and backflow prevention devices where the risk of inundation is high (embedded within asset management plan). The drainage network including stormwater run-off and tidal inundation to be investigated as part of the Local Resilience Plan.</p>		
<i>Relocate infrastructure</i>	<p>Undertake feasibility study for drainage upgrades and road/services raising for Pumicestone Road or alternative adaptation options.</p> <p>Assess septic system vulnerability to coastal hazards.</p>	<p>Implement drainage upgrades and road/services raising.</p> <p>Prepare Asset Management Plan to consider extent/use of the foreshore land and assets in the coastal hazard area, and alternatives for the future.</p>	Implement relocation of assets in accordance with Asset Management Plan (if feasible).
Environmental protection, maintenance and enhancement	As per region-wide actions, including:		
<i>Environmental enhancement</i>	Coastal management plans for the protection of highly valued environmental areas and significant shorebird habitat.		
Coastal engineering and nature-based	As per region-wide actions, including:		
<i>Living shorelines</i>	<p>Living shoreline pilot site - develop concept design and monitoring plan for living shoreline in front of The Esplanade (link to action 1.3.3).</p> <p>Implement living shoreline design. Review effectiveness of living shoreline design.</p> <p>Progress hybrid solution detailed design at The Esplanade and seek grant funding for oyster reef (hybrid solution).</p>	<p>Review of effectiveness of living shoreline design.</p> <p>Implementation hybrid solution at The Esplanade.</p> <p>If living shoreline does not achieve expected level of service, consider hybrid or other solutions.</p> <p>Review pathway options and establish triggers for change of pathway.</p>	<p>Review of effectiveness of living shoreline design.</p> <p>Review pathway options.</p>
Coastal engineering	As per region-wide actions, including:		
<i>Coastal hazard protection works</i>	<p>Review and implement Shoreline Erosion Management Plan.</p> <p>Maintain existing shoreline protection works.</p> <p>Implement seawall prioritisation works at Pumicestone Road and The Esplanade.</p>	<p>Implement seawall prioritisation works at The Esplanade.</p> <p>Concept planning for additional structural protection or upgrades (if applicable).</p>	<p>If triggered, implement wall raise.</p> <p>Implement additional structural protection or upgrades (if applicable)</p>