

8.2.3 Draft Coastal Management Att 1 Summary Table

Attachment 1: Summary table of proposed SEMP management actions

	Beach unit	The issue	Desired outcome	Preferred management action	Cost estimates (indicative)	Indicative Budget (2013/14 10-year capital program)	
						2014/15	2015/16 - 2022/23
General Actions	All	Ongoing maintenance requirements of existing protection structures and beaches	Protection of public land and assets and preservation of beach access, amenity and dunes	Ongoing maintenance, repairs, rehabilitation and addressing emergent management issues	Ongoing asset management and beach management program: variable Includes dune management program, general management, unscheduled emergent works and non-SEMP items	Ongoing existing operational program typically \$2M	-
	All	Information gap regarding beach survey data and trends in the rate of erosion and accretion of sand	Improved understanding of shoreline fluctuations and identification of emerging erosion patterns to inform management responses	Delivery of coordinated monitoring program to support the SEMP	\$100,000/year to support beach and project monitoring and reporting	Capital works \$100k	Capital works (\$100k / year) \$900k
	All	Limited sand available for beach nourishment	Identification of viable sources of sand for beach nourishment	Investigate potential offshore sand sources for beach nourishment	Sand sourcing study investigation including offshore fieldwork: \$150,000	Capital works \$150k	
	Numerous	Degraded dunes	Improved dune resilience and habitat	Dune building and revegetation for beach management units at Maroola, Maroochydore, Point Cartwright to Kawana, Warana, Bokarina, Wurtulla and Shelly Beach. Coastal management education and information sharing.	Environment Levy (SEMP) Project \$395,000 program over 4 years.	Environment Levy (SEMP) \$120k	Environment Levy (SEMP) 2015/16 and 2016/17 \$240k
Zone 1 priorities	Coolum Beach	Long term suitability of existing seawall uncertain	Protection of public assets	Assess structural integrity of existing structure and upgrade if necessary	\$25,000 to undertake structural assessment: Capital upgrade costs to be determined pending assessment of structural integrity of existing structure	-	Capital works assessment 2015/16 \$25k
Zone 2 priorities	Maroochy River Entrance	Maintenance requirements of existing geotextile groynes and seawalls	Protection of public assets	Continue the replacement or repair of existing groyne and seawalls as needed Consider upgrading to rock if lifecycle costs are favourable	Ongoing maintenance included in existing operational program If favourable, upgrading structure to rock is estimated at \$2.725M (5 to 10 years plus), and ongoing maintenance of \$24,000/yr	Existing operational program Ongoing maintenance/repair	Capital works Rock upgrade of existing structures (\$2.725M) unallocated and subject to lifecycle cost assessment cost allocations include: 2015/16 Groyne design/ approvals \$25k 2016/17 groyne extension \$200k 2021/22 \$1.5M 2022/23 \$1M
	Maroochydore Beach	Alexandra Parade, Holiday Park under threat of defined storm erosion	Protection of public assets	Hybrid option: Beach renourishment along 2km of shoreline (between Alexandra Headland and Maroochydore Surf Clubs) Build a 1680m long rock seawall, based on erosion trigger	Beach re-nourishment Major sand re-nourishment (110,000 m ³) to widen beach by 20m: \$1.875M (complete September 2013) Major sand re-nourishment (up to 100,000m ³) every 1-2 years,	Existing operational program Beach Re-nourishment	Operational program Beach Re-nourishment 2015/16

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				distance and staged as necessary depending on risk	depending on need: up to \$1.1M Rock seawall Seawall design: \$90,000 (complete) Seawall capital cost: \$5.9M (staged including state section)* Future seawall maintenance: \$59,000/yr*	Capital works Seawall design and approval \$50k	Capital works Seawall 2016/17 to 2020/21 \$5.9M* ¹
	Alexandra Headland Beach	Existing seawall structural integrity uncertain with respect to defined storm Alexandra Parade, park and car park under threat of defined storm erosion	Protection of public assets and beach amenity	Assess structural integrity of seawall and upgrade structure if necessary Prepare shoreline defence plan covering design and construction of 360m seawall south of surf club	Seawall structural integrity assessment: \$50,000 Capital renewal costs to be determined, if required, pending assessment of structural integrity of existing structure Design and construction of 360m seawall: \$1.8M south of surf club. Ongoing maintenance of future seawall: \$18,000/yr		Capital works Seawall structural assessment 2015/16 \$20k -
	Mooloolaba Beach (North)	Deterioration of geofabric formed concrete armoured seawall (far north) Public infrastructure under erosion threat, including Mooloolaba Esplanade, Beach Terrace car park and facilities	Protection of public assets and improved beach amenity	Repair / renew existing seawall (far north) Major beach nourishment along 1.5km of shoreline (between Mooloolah River and Beach Terrace) - depends on viable sand source Assess structural integrity of main seawall Prepare seawall concept design and construct if erosive trend is identified Monitor beach movements to determine need for 480m seawall	Repair/renew existing seawall \$400,000 Beach re-nourishment part of Mooloolaba Beach South existing program Major beach nourishment part of Mooloolaba South preferred program Main seawall assessment \$25,000. Upgraded seawall concept design (if required – capital costs dependent on design): \$40,000 480m seawall approximately \$2.4M (need not yet determined)	Existing operational program Re-nourishment Capital works Main seawall assessment 2014/15 \$25,000	Capital works Seawall repair/renewal 2016/17 \$200k
	Mooloolaba Beach (South)	Deterioration of beach amenity Public car park at Urunga Parade under erosion threat Rotary Park Ct and part of Parkyn Parade in erosion area with moderate buffer	Protection of public assets and improved beach amenity	Continue current beach nourishment and management program (including buried Geotextile Wall) Consider major beach nourishment works along 1.5km of shoreline (between Mooloolah River and Beach Terrace) - depends on viable sand source Monitor beach movements Extend sand pumping pipeline by 300m Determine long term plan for Rotary Park Ct and a section of Parkyn Parade after 2 years of monitoring	Continued sand re-nourishment as required (approximately 15,000m ³ /year under existing program) Major nourishment works 75,000m ³ : \$1.1M (unallocated and dependant on viable sand source) Pipeline extension: \$300,000	Existing operational program Re-nourishment Capital works Pipeline extension 2014/15 \$300k	Existing operational program Re-nourishment
Zone 3 priorities	Dicky Beach	Degraded existing seawall at Lower Neill St Public assets (skate park, part of Holiday Park) in the defined erosion area	Protection of public assets (including beach, open space & Norfolk Island pines)	Repair existing seawall (lower Neill St) Consider skate park and Holiday Park options under adaptation/risk management planning	\$200,000 for existing seawall repair/ renewal to be completed 2013/14	Works already commenced	-

*Indicative budget only - the need for the construction of a sea wall in this beach management unit is triggered by coastal erosion events which cause erosion to within 15metres of public infrastructure.

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	Moffat Beach	Public open space subject to current shoreline erosion	Protection of public land (including beach, Norfolk Island pines) and beach access	<p>Replenish dune following erosion events (existing programme)</p> <p>Restore upper beach and dune system adjacent to emergency seawall.</p> <p>Prepare heritage management plan for Norfolk pines if additional intervention is required</p> <p>Prepare seawall design following heritage plan, if deemed suitable following public consultation</p>	<p>Ongoing maintenance part of existing operational program "All Beach Units - Maintenance requirements"</p> <p>Beach nourishment works to restore upper beach and dune (unallocated and dependant on viable sand source): \$200,000</p> <p>Seawall design \$20,000 (unallocated)</p>	Existing operational program	-
Zone 4 priorities	Kings Beach	Deteriorating groyne structure	Protection of public assets and improved beach amenity	<p>Assess structural integrity of groyne and upgrade structure if necessary</p> <p>Consider beach nourishment following sand sourcing study</p>	<p>Structural integrity assessment of groyne: \$20,000</p> <p>Capital cost to be determined pending assessment of structural integrity of existing groyne</p> <p>Nourishment 50,000m³: \$500,000 (unallocated and dependent on sand sourcing study)</p>	Capital works approvals \$50k	Capital works construction 2015/16 \$370k
	Nelson Street to Lamerough Canal	<p>Narrow beaches</p> <p>Receding shoreline adjacent to Boat Club, boat ramp and car park</p> <p>Increased pressure from potential Bribie Island breakthrough</p>	<p>Protection of public car park and open space.</p> <p>Improved amenity</p>	<p>Maintain and replace/upgrade existing groynes in Golden Beach Groyne field (common action to all of Golden Beach)</p> <p>Consider longer term issues under Coastal Hazard Adaptation planning</p> <p>Undertake nourishment as-needed in the interim</p>	<p>Maintenance of existing assets is included under "All Beach Units - Maintenance requirements" (including as needed nourishment)</p> <p>Design and construct revetment north and south of boat ramp – north \$150,000 and south \$110,000 (unallocated)</p>	Capital works Groyne repairs \$70k	Capital works 2015/16 \$245k
	Lamerough Canal to Bells Creek	<p>Narrow northern beaches</p> <p>Deteriorating rock revetment</p> <p>Mainland effects of potential Bribie Island breakthrough</p>	Protection of public open space and improved shoreline amenity	<p>Ongoing minor beach nourishment as required to maintain useable shoreline</p> <p>Upgrade/renewal and extension of existing rock revetment and enhance/establish groynes and beach</p> <p>Consider longer term options under coastal hazard adaptation planning</p>	<p>Maintenance of existing assets is included under "All Beach Units - Maintenance requirements"(including as needed nourishment)</p> <p>Rock revetment upgrade/renewal/extension between Roy and Joan St, as needed, and extension north and south: approximately \$1250/m</p> <p>Establishment of groynes subject to further investigation</p>		Capital works Revetment upgrade/extension (initial stages) 2015/16 \$150 2017/18 \$200k
	TOTAL						\$2,865,000