



Appendix F

Option Detailed Costs

Project Number :	13142.401	Date :	4-Sep-22	Innovation Engineered.
Staff Member :	SJG			
Title :	Eurobodalla CMP - Engineering Options Costings Development			
Summary / Description :	Summary of Costings for Engineering Concept Management Options			
File Reference :	C:\Rhelm Dropbox\1400-1499\1412 - Eurobodalla CMP\4. Reports\Stages 3 and 4_CMP\CMP Appendices\Appendix F_Option Costs\13142.401.W.SJG.Rev2_EngineeringOptions_Costings.xlsx\Baird-WorkingNotes			

Task

Develop concept level engineering design and cost estimates for proposed management options

Inputs / Methods

Costings are based on industry knowledge and reference cases from Caseys Beach seawall and IAG Actions of the Sea study. See summary of Caseys Seawall on tab "Benchmark", which has been escalated based on recent market conditions including contractor availability, labour rates and material costs. Input received from independent cost estimator.

Assumptions / Constraints / Clarifications

Conceptual level engineering detail only, focussed on dimension of structure required (length, crest height etc.). Cost estimates based on Order of Magintude unit rates (e.g. \$/length of structure type) and considered +/-50% accurate (Class 5). Relativity of structure types/costs considered representative.

Calculations

Site / Structure	Unit Cost (Capital)	Length / Size	Captial Cost	Class 5 Capital Cost Range		Notes
				low	high	
CH1_P Batehaven/Caseys Protection Works						
Rubble Mound	\$12,500 /m length	525 m in length	\$6,562,500	\$3,281,250	\$9,843,750	< from 2019 costing escalated to 2022
Rubble Mound w crest wall	\$15,000 /m length	525 m in length	\$7,875,000	\$3,937,500	\$11,812,500	< delta to seawall raising based on onsite casted concrete crest wall
Retrofit crest wall	\$6,500 /m length	525 m in length	\$3,412,500	\$1,706,250	\$5,118,750	< accounts for remobilisation
CH4_K CBD Inundation Protection						
Seawall Raising no crest wall	\$8,500 /m length	1200 m in length	\$10,200,000	\$5,100,000	\$15,300,000	< scaled from MTO relative to Caseys Seawall
Seawall Raising with crest wall	\$12,500 /m length	1200 m in length	\$15,000,000	\$7,500,000	\$22,500,000	< delta to seawall raising based on onsite casted concrete crest wall
Retrofit crest wall	\$5,000 /m length	1200 m in length	\$6,000,000	\$3,000,000	\$9,000,000	< accounts for remobilisation
CH1_D Long Beach Protection Works						
Rubble Mount Revetment - Stage 1	\$12,500 /m length	200 m in length	\$2,500,000	\$1,250,000	\$3,750,000	
Rubble Mount Revetment - Stage 2	\$12,500 /m length	280 m in length	\$3,500,000	\$1,750,000	\$5,250,000	
CH4_D Surside Flood Levee						
Surside Flood Berm	\$7,500 /m length	320 m total	\$2,400,000	\$1,200,000	\$3,600,000	< Stage 1 (2017) imunity. MTO of concept cross sections and unit rates for earthworks/landscaping
Surside Flood Wall	\$8,500 /m length	300 m total	\$2,550,000	\$1,275,000	\$3,825,000	< benchmarked on NSW installs of vertical structures
CH1_ZA Surside West Groyne						
Groyne / Culvert Extension	\$40,000 /m length	90 m in length	\$3,600,000	\$1,800,000	\$5,400,000	< scaled from MTO relative to Caseys Seawall, culvert units and marine construction
CH1_B Northcove Drive, Maloneys Protection						
Retaining structure and wave return wall	\$10,500 /m length	250 m in length	\$2,625,000	\$1,312,500	\$3,937,500	< benchmarked on NSW installs of vertical structures, plus wave crest wall
CH1_K Wharf Road Protection						
Wharf Road Stage 1	\$21,000 /m length	100 m in length	\$2,100,000	\$1,050,000	\$3,150,000	< scaled from MTO relative to Caseys Seawall plus inclusion of cutoff wall and road shoulder works
Wharf Road Stage 2	\$8,500 /m length	440 m in length	\$3,740,000	\$1,870,000	\$5,610,000	< benchmarked on NSW installs of vertical structures
Maintenance	Maintenance Rate					
Rubble Mound	1.0%					< assumes 2 x maintenance events (25% of capital cost) over 50year design life of

