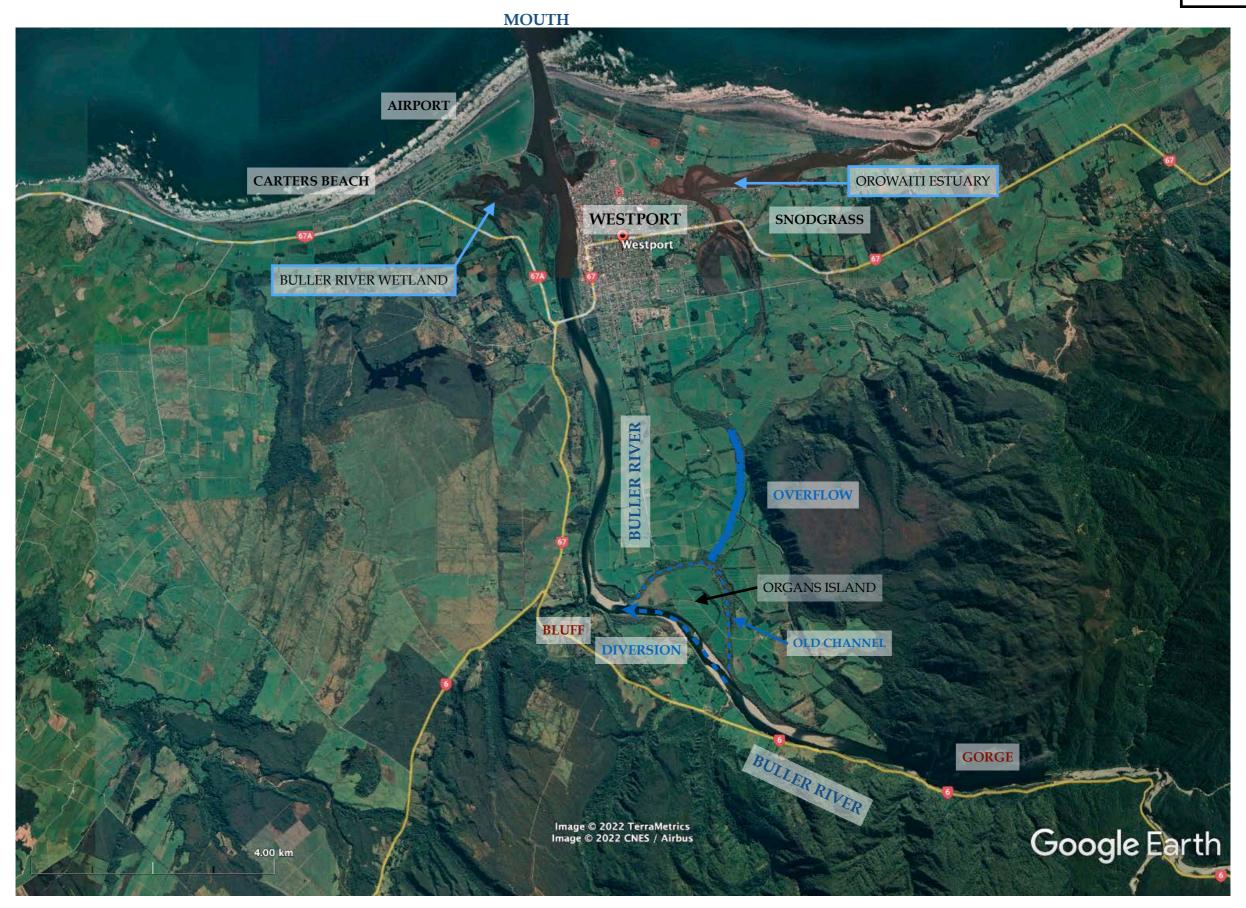
LOCATION PLAN

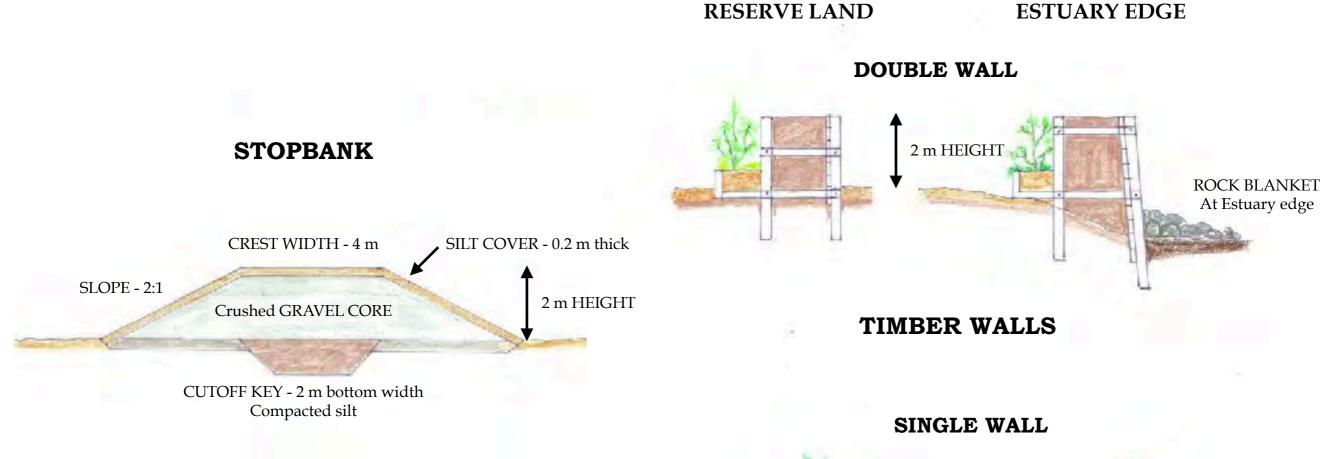


FLOOD MITIGATION — FLOOD DEFENCE SECTIONS

FIGURE 2

Γ&G BOARDS

2 m HEIGHT

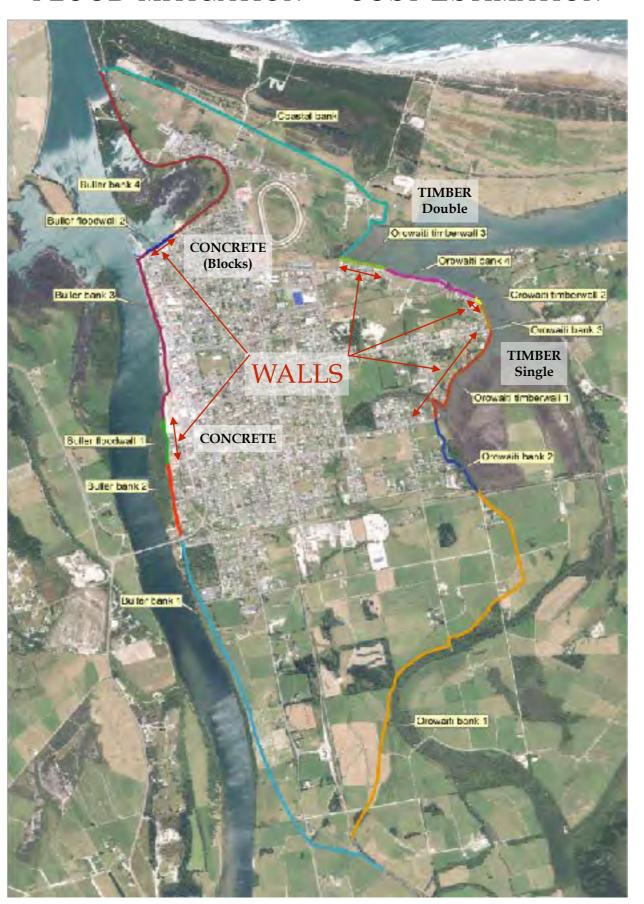


FLOOD MITIGATION — COST ESTIMATION

FIGURE 3

FLOOD DEFENCE SECTIONS

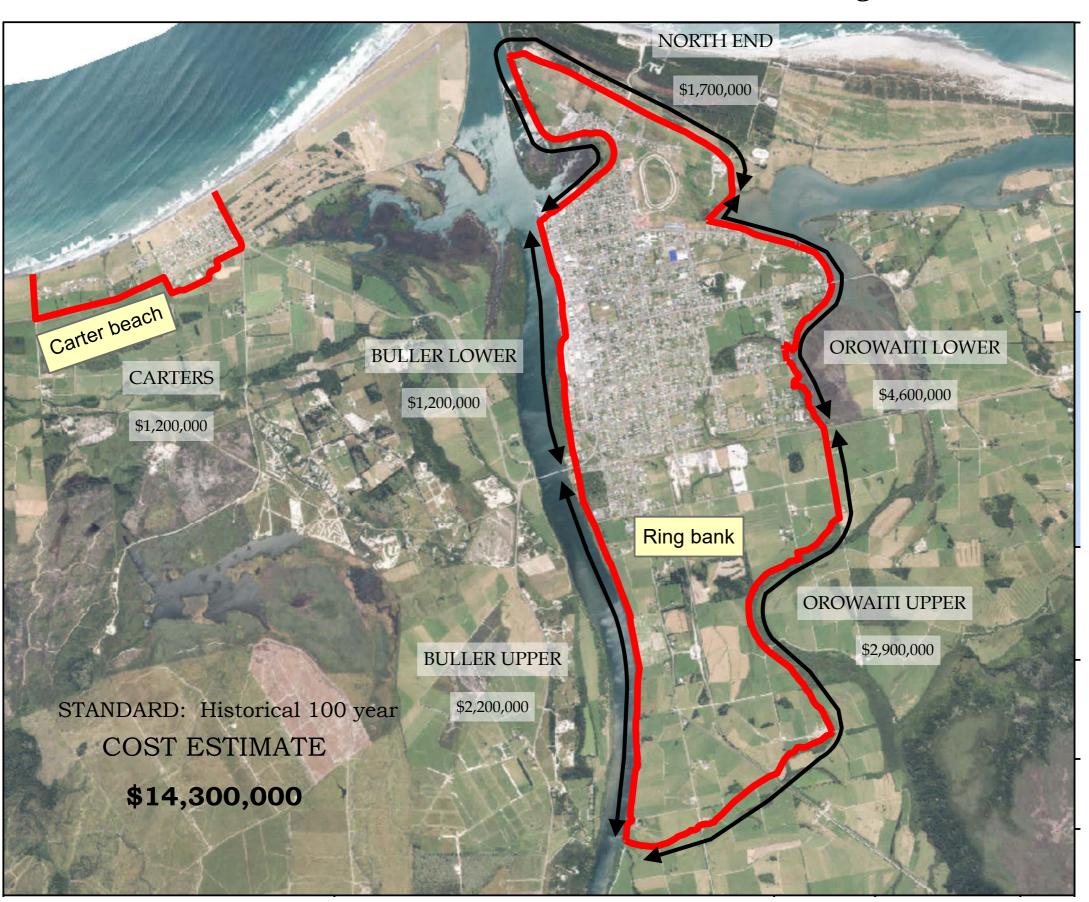
FLOOD DEFENCE LENGTHS USED FOR COST ESTIMATION



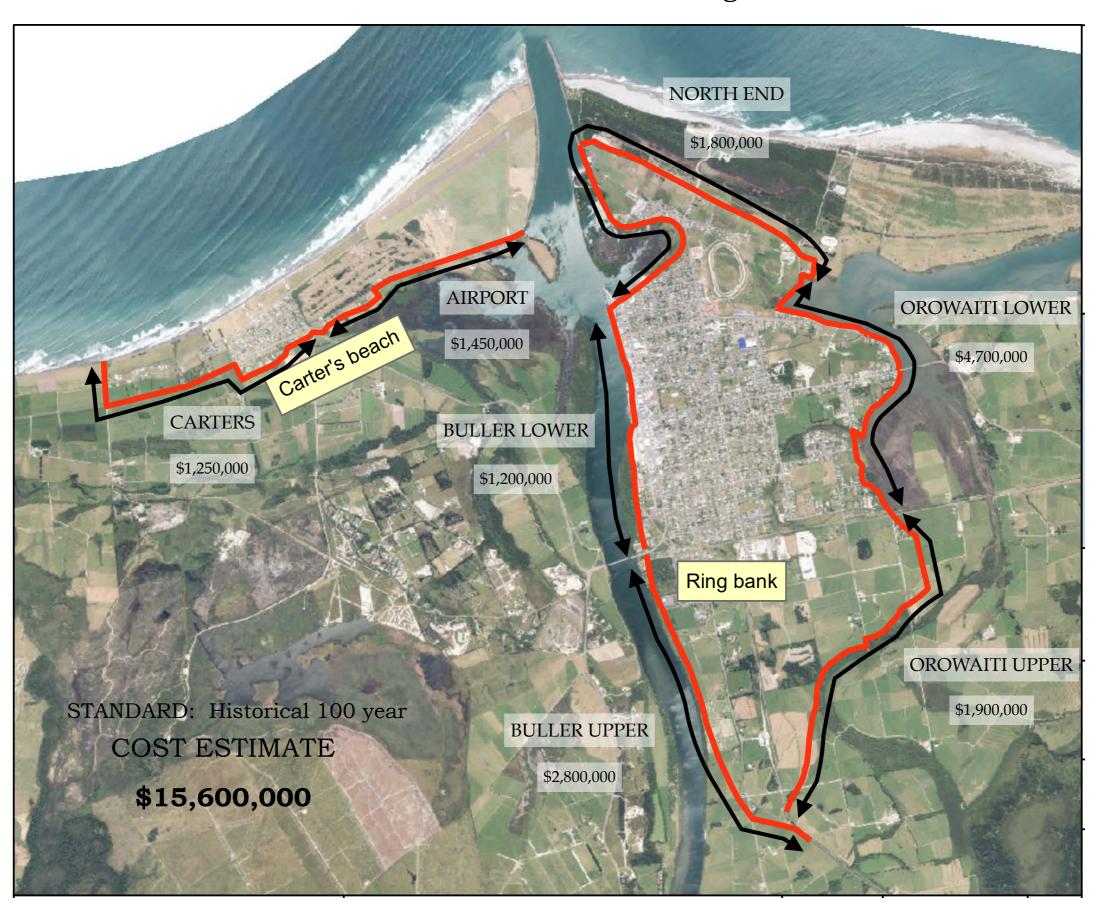
FLOOD MITIGATION — COUNCIL LTP



FLOOD MITIGATION — COUNCIL LTP - without Snodgrass



FLOOD MITIGATION — HYDRAULIC - without Snodgrass + extended Carter's



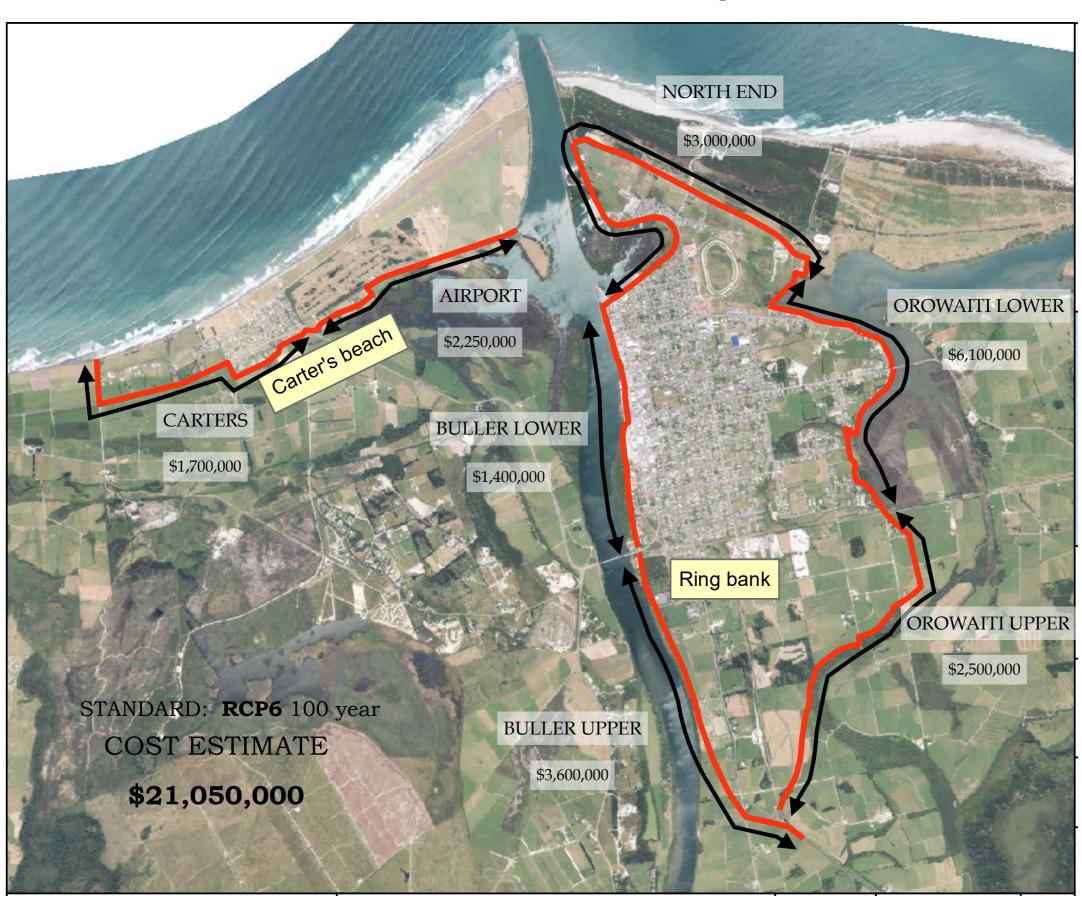
FLOOD MITIGATION — COUNCIL LTP



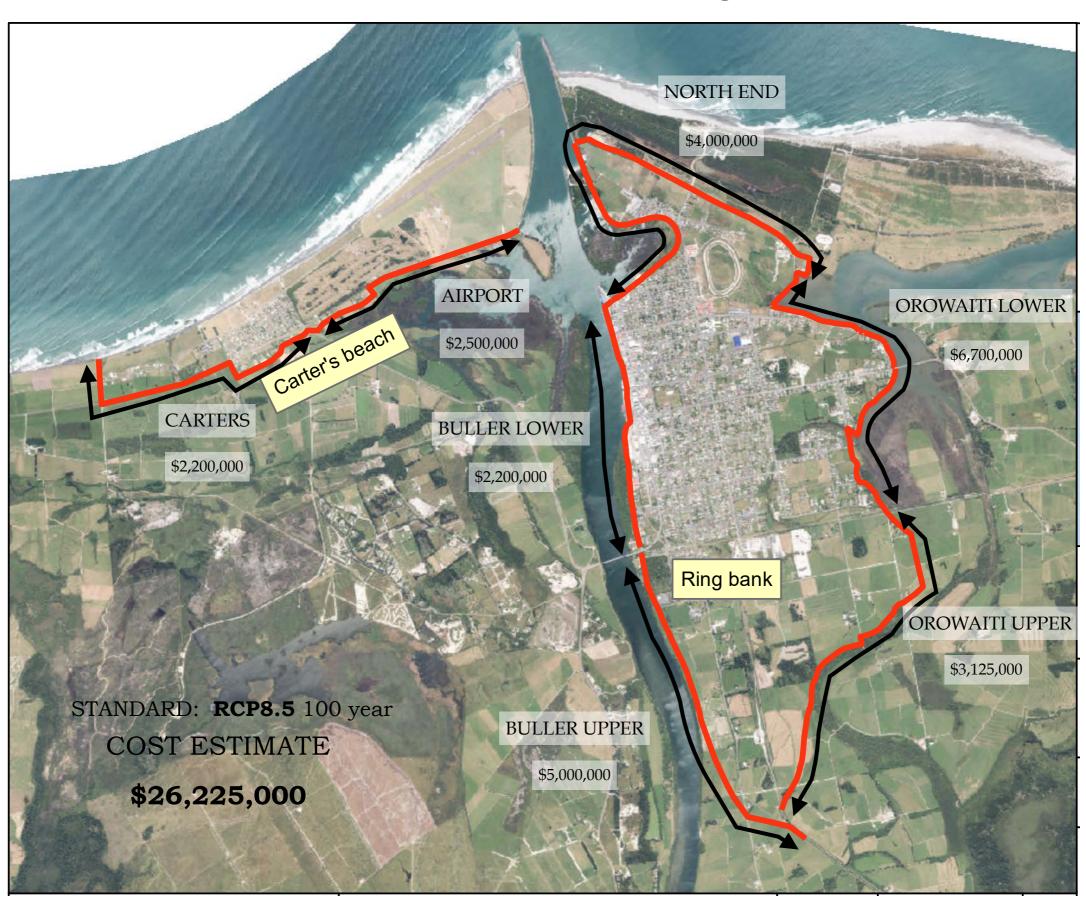
FLOOD MITIGATION — COUNCIL LTP - without Snodgrass



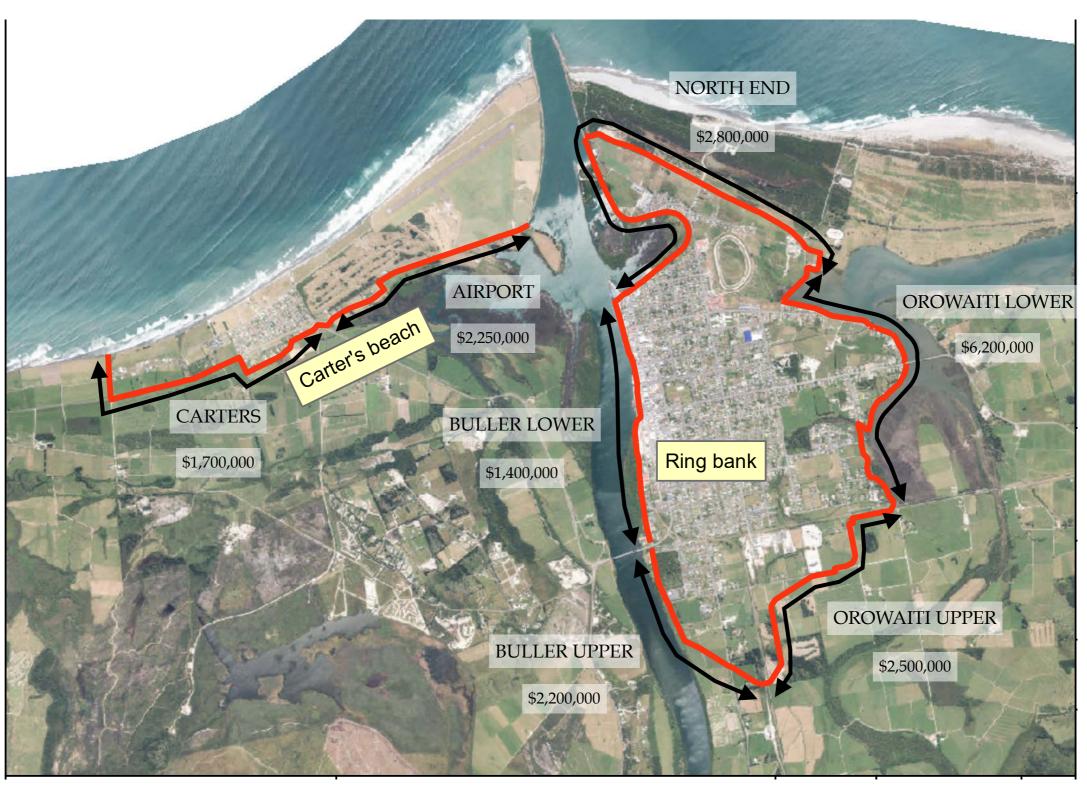
FLOOD MITIGATION — HYDRAULIC - without Snodgrass + extended Carter's



FLOOD MITIGATION — HYDRAULIC - without Snodgrass + extended Carter's



FLOOD MITIGATION — TOWN RING BANK - without Snodgrass + extended Carter's FIGURE 11



STANDARD: RCP6 100 year

COST ESTIMATE

\$19,550,000

FLOOD MITIGATION — Westport Ring bank + extended Carter's STANDARD — BULLER RCP6 100 year - OROWAITI Historical 100 year



FLOOD MITIGATION — TOWN RING BANK - without Snodgrass + extended Carter's FIGURE 13 STANDARD — BULLER RCP6 100 year - OROWAITI Historical 100 year



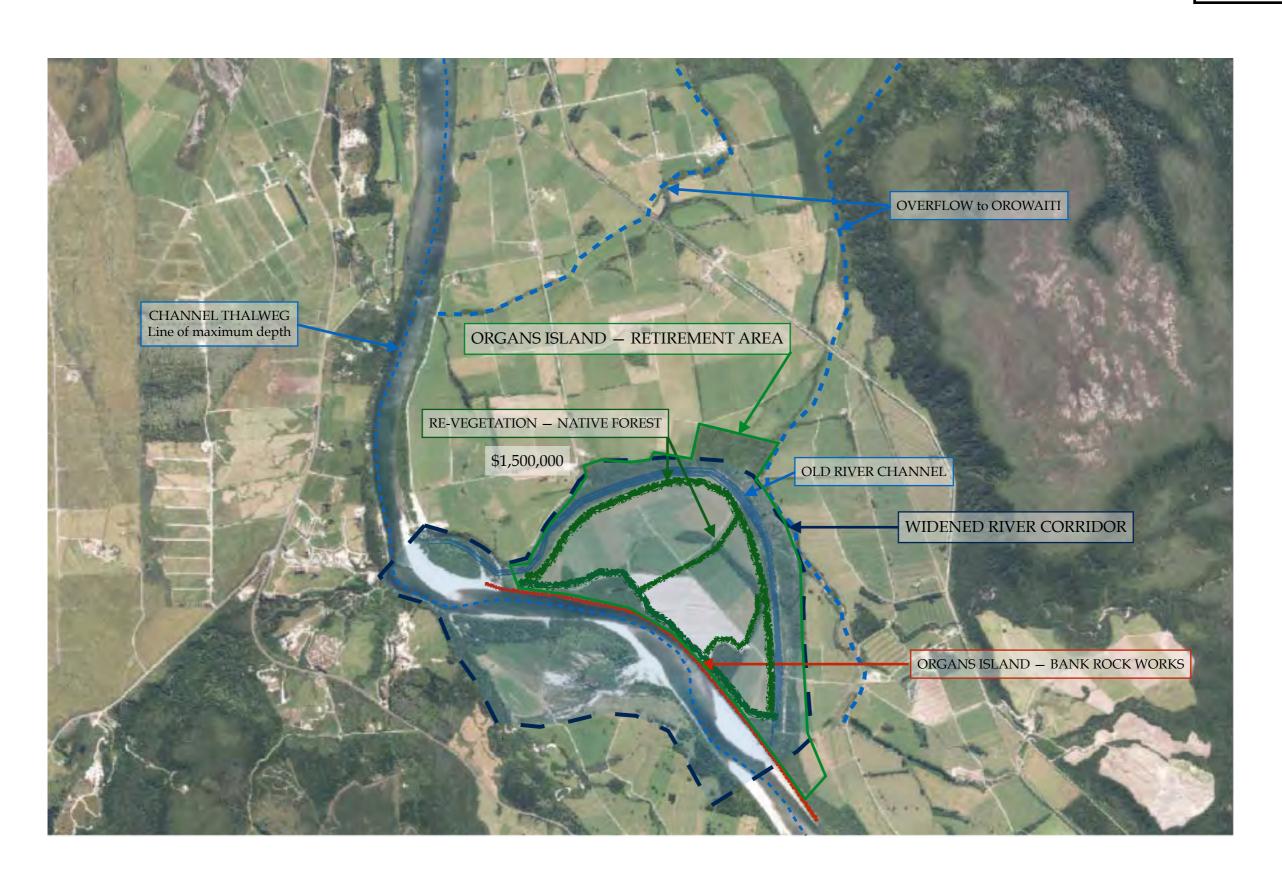
STANDARD: Historical & RCP6 100 year

COST ESTIMATE

\$17,450,000

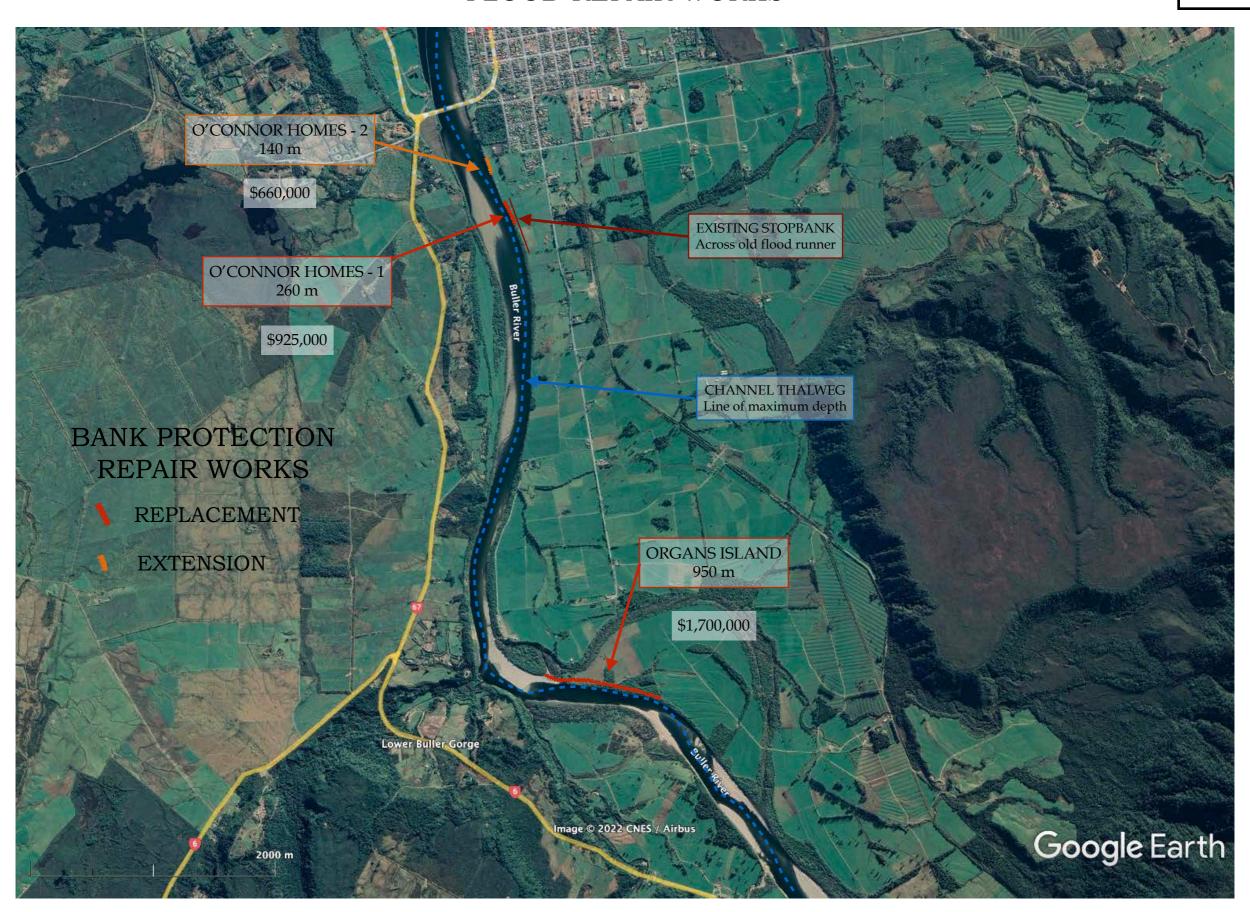
BULLER RIVER — RIVER MANAGEMENT

RIVER CORRIDOR — RETIREMENT

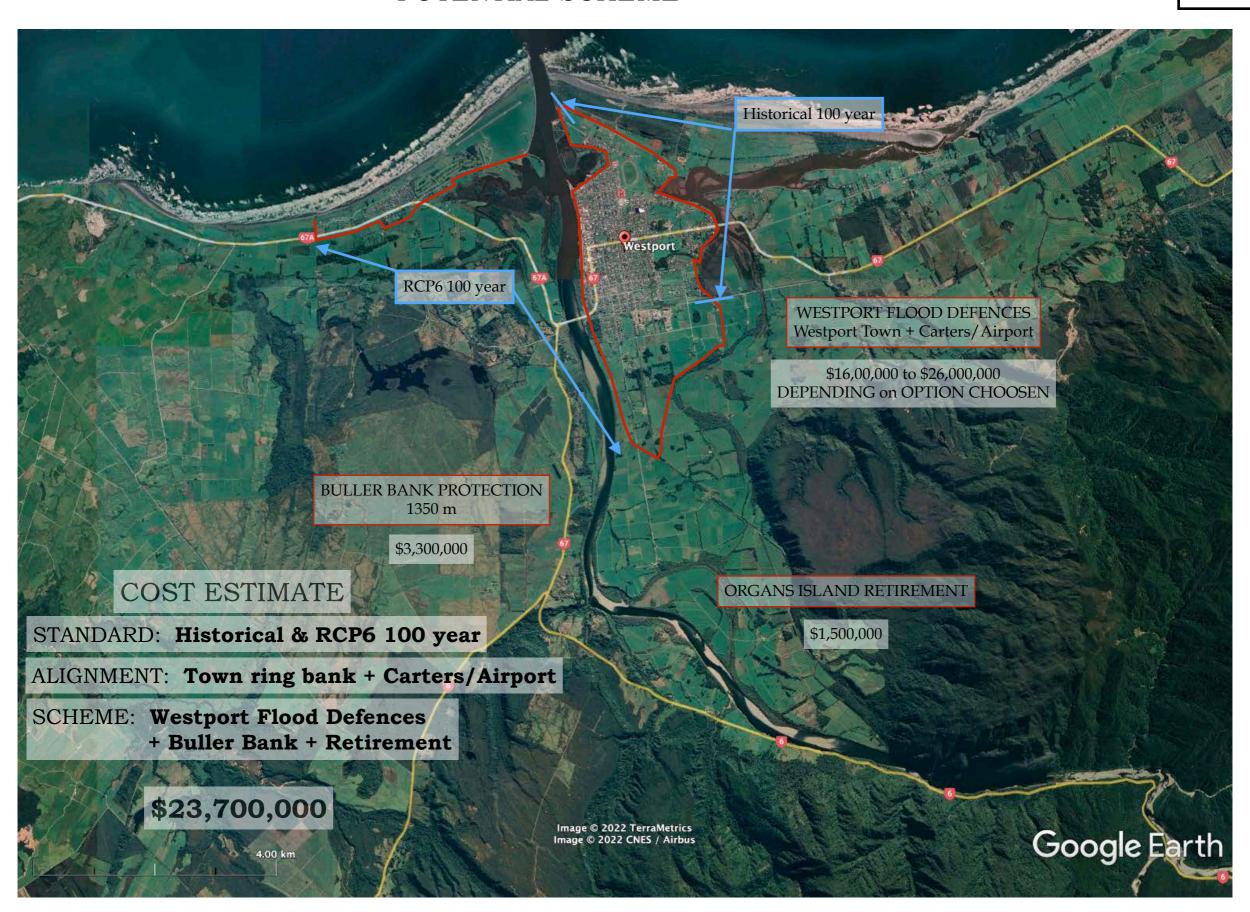


BULLER RIVER — BANK PROTECTION

FLOOD REPAIR WORKS



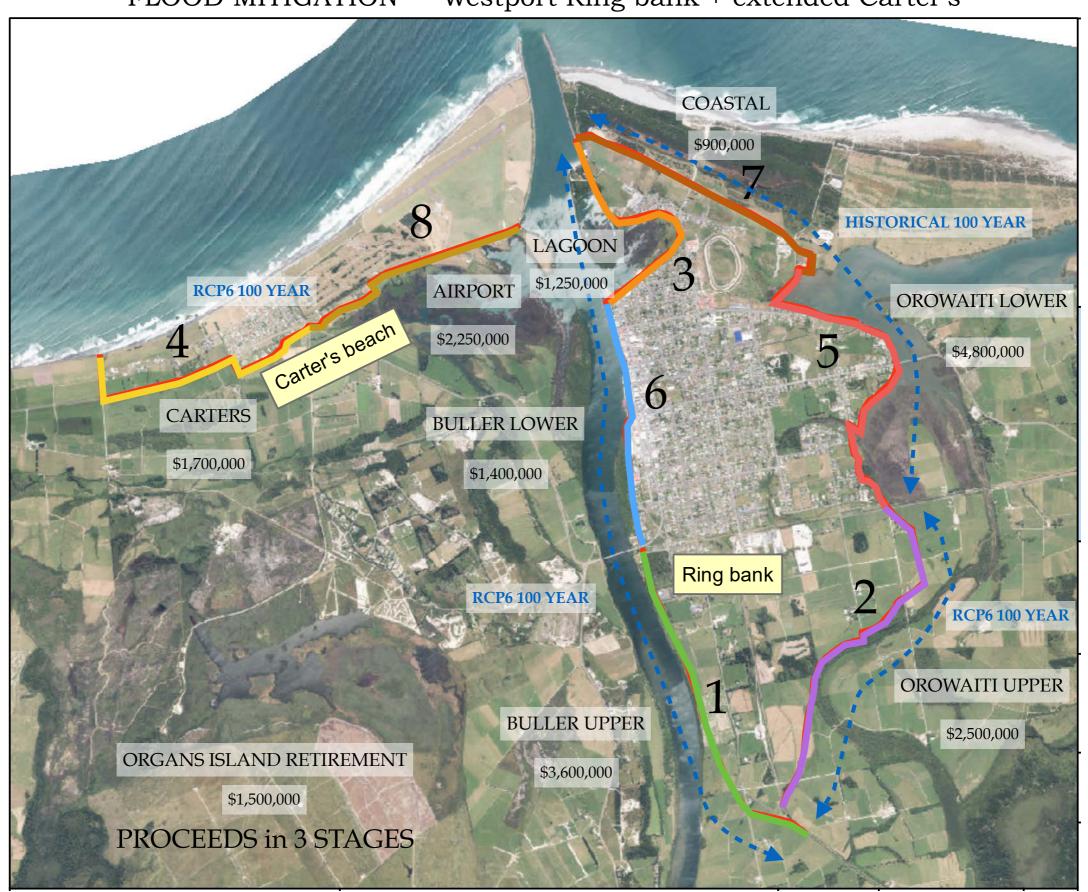
POTENTIAL SCHEME



STAGING

FIGURE 17

FLOOD MITIGATION — Westport Ring bank + extended Carter's



FLOOD MITIGATION — OPTION COSTS

TABLE 1

	COUNCIL LTP		COUNCIL LTP - without Snodgrass		HYDRAULIC	
	Historical 100 year	RCP6 100 year	Historical 100 year	RCP6 100 year	Historical 100 year	RCP6 100 year
WHARF to S H BRIDGE	\$1,200,000	\$1,700,000	\$1,200,000	\$1,700,000	\$1,200,000	\$1,400,000
S H BRIDGE to SOUTH END	\$2,200,000	\$2,650,000	\$2,200,000	\$2,650,000	\$2,800,000	\$3,600,000
UPPER OROWAITI	\$2,900,000	\$4,300,000	\$2,900,000	\$4,100,000	\$1,900,000	\$2,500,000
LOWER OROWAITI	\$5,250,000	\$7,300,000	\$4,600,000	\$6,100,000	\$4,700,000	\$6,100,000
NORTH END	\$1,700,000	\$2,800,000	\$1,700,000	\$2,800,000	\$1,800,000	\$3,000,000
SNODGRASS	\$2,300,000	\$3,500,000	\$0	\$0		
CARTERS BEACH	\$1,200,000	\$2,100,000	\$1,200,000	\$2,100,000	\$1,250,000	\$1,700,000
AIRPORT					\$1,450,000	\$2,250,000
Drains & Stormwater	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
	\$17,250,000	\$24,850,000	\$14,300,000	\$19,950,000	\$15,600,000	\$21,050,000
		HYDRAULIC	TOWN RING BANK		7 07 1 -	
	-	IIVDD ATTIC	TOWN BUYER AND			
	RCP8.5 100 year	Historical/RCP6	Historical/RCP6	Historical 100 year	RCP6 100 year	
WHARF to S H BRIDGE	\$2,200,000	\$1,400,000	\$1,400,000	\$1,200,000	\$1,400,000	
S H BRIDGE to SOUTH END	\$5,000,000	\$3,600,000	\$2,200,000	\$1,700,000	\$2,200,000	
UPPER OROWAITI	\$3,125,000	\$2,500,000	\$2,600,000	\$2,150,000	\$2,500,000	;
LOWER OROWAITI	\$6,700,000	\$4,800,000	\$4,700,000	\$4,700,000	\$6,200,000	
NORTH END	\$4,000,000	\$2,150,000	\$2,100,000	\$1,800,000	\$2,800,000	
SNODGRASS						
CARTERS BEACH	\$2,200,000	\$1,700,000	\$1,700,000	\$1,250,000	\$1,700,000	,
AIRPORT	\$2,500,000	\$2,250,000	\$2,250,000	\$1,450,000	\$2,250,000	
Drains & Stormwater	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	;
	\$26,225,000	\$18,900,000	\$17,450,000	\$14,750,000	\$19,550,000	•
ORGANS ISLAND - Retirement		\$1,500,000				
	TOTAL	\$21,000,000				

FLOOD MITIGATION — 3 YEAR PROGRAM

TABLE 2

			STAGING	1 1 1 1 1 1		
DESCRIPTION	COST (\$)	COMMENT	YEAR 1 (22/23)	YEAR 2 (22/23)	YEAR 3 (22/23)	
BULLER LOWER	\$1,000,000	Part of section 6	\$1,000,000			with cycleway
BULLER UPPER	\$3,600,000		\$3,600,000			
OROWAITI UPPER	\$2,500,000			\$2,500,000		
LAGOON	\$1,250,000			\$1,250,000		
CARTERS	\$1,700,000				\$1,700,000	
OROWAITI LOWER	\$4,800,000			\$4,800,000		
BULLER LOWER	\$400,000	d/s Railway Land			\$400,000	
COASTAL	\$900,000				\$900,000	
AIRPORT	\$2,250,000				\$2,250,000	
STORMWATER	\$500,000			\$250,000	\$250,000	
BULLER - ROCK WORKS	\$3,300,000		\$3,300,000			
BULLER - RETIREMENT	\$1,500,000	3 stages over 5 years	\$500,000		\$500,000	
TOTAL	\$23,700,000		\$8,400,000	\$8,800,000	\$6,000,000	\$23,200,000
	NOTE:	Staging based on: Lik	kelihood of flooding/	Consequences of flood	ing/Constructability	
		As a Risk Matrix: from Minor to Catastrophic				

BULLER RIVER — BANK PROTECTION

BANK PROTECTION ASSETS

