

BULLER RIVER – WESTPORT FLOODING

LOCATION PLAN MOUTH

FIGURE 1

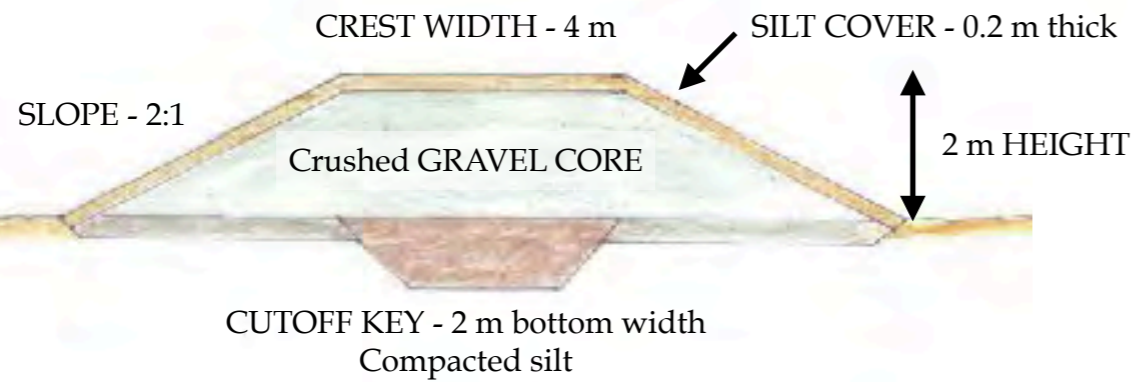


BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — FLOOD DEFENCE SECTIONS

FIGURE 2

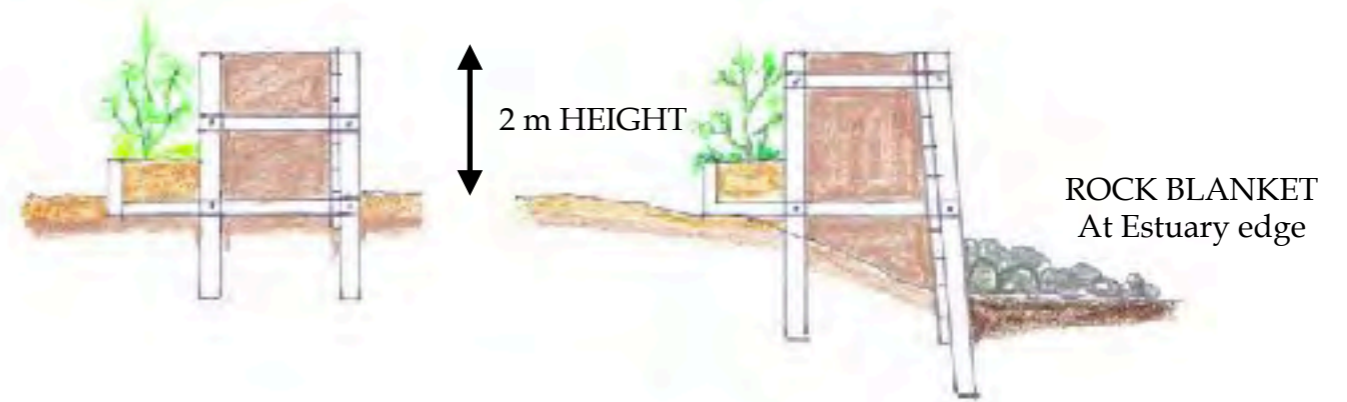
STOPBANK



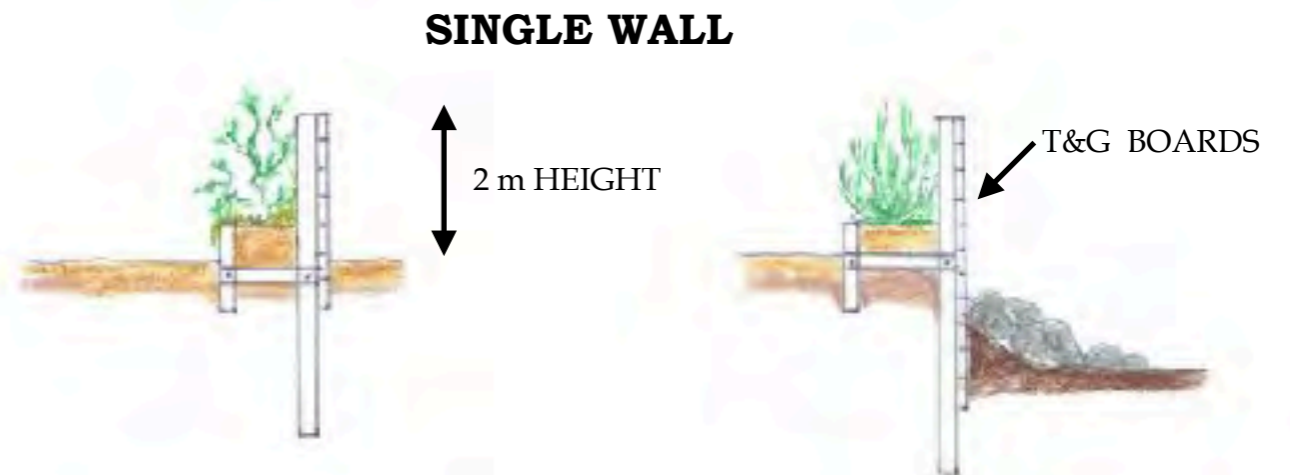
RESERVE LAND

ESTUARY EDGE

DOUBLE WALL



TIMBER WALLS



BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — COST ESTIMATION

FIGURE 3

FLOOD DEFENCE
SECTIONS

FLOOD DEFENCE LENGTHS
USED FOR COST ESTIMATION



BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — COUNCIL LTP

FIGURE 4



FIGURE

BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — COUNCIL LTP - without Snodgrass

FIGURE 5



BULLER RIVER – WESTPORT FLOOD DEFENCES

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

FIGURE 6



BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — COUNCIL LTP

FIGURE 7



BULLER RIVER – WESTPORT FLOOD DEFENCES

FLOOD MITIGATION — COUNCIL LTP - without Snodgrass

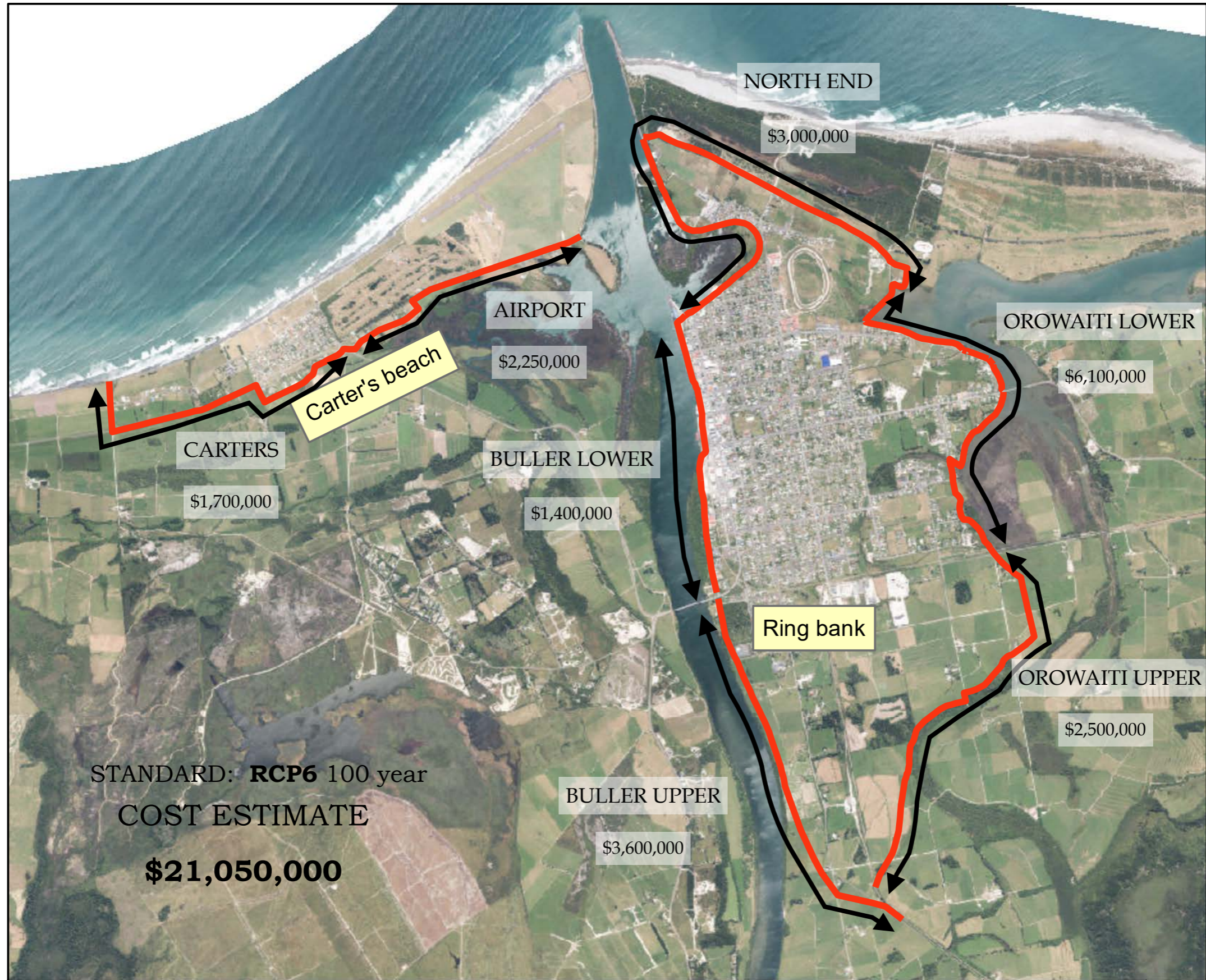
FIGURE 8



BULLER RIVER – WESTPORT FLOOD DEFENCES

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

FIGURE 9



BULLER RIVER – WESTPORT FLOOD DEFENCES

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

FIGURE 10



BULLER RIVER – WESTPORT FLOOD DEFENCES

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



STANDARD: **RCP6** 100 year

COST ESTIMATE

\$19,550,000

BULLER RIVER – WESTPORT FLOOD DEFENCES

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

FIGURE 12



BULLER RIVER – WESTPORT FLOOD DEFENCES

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

FIGURE 13



STANDARD: **Historical & RCP6 100 year**

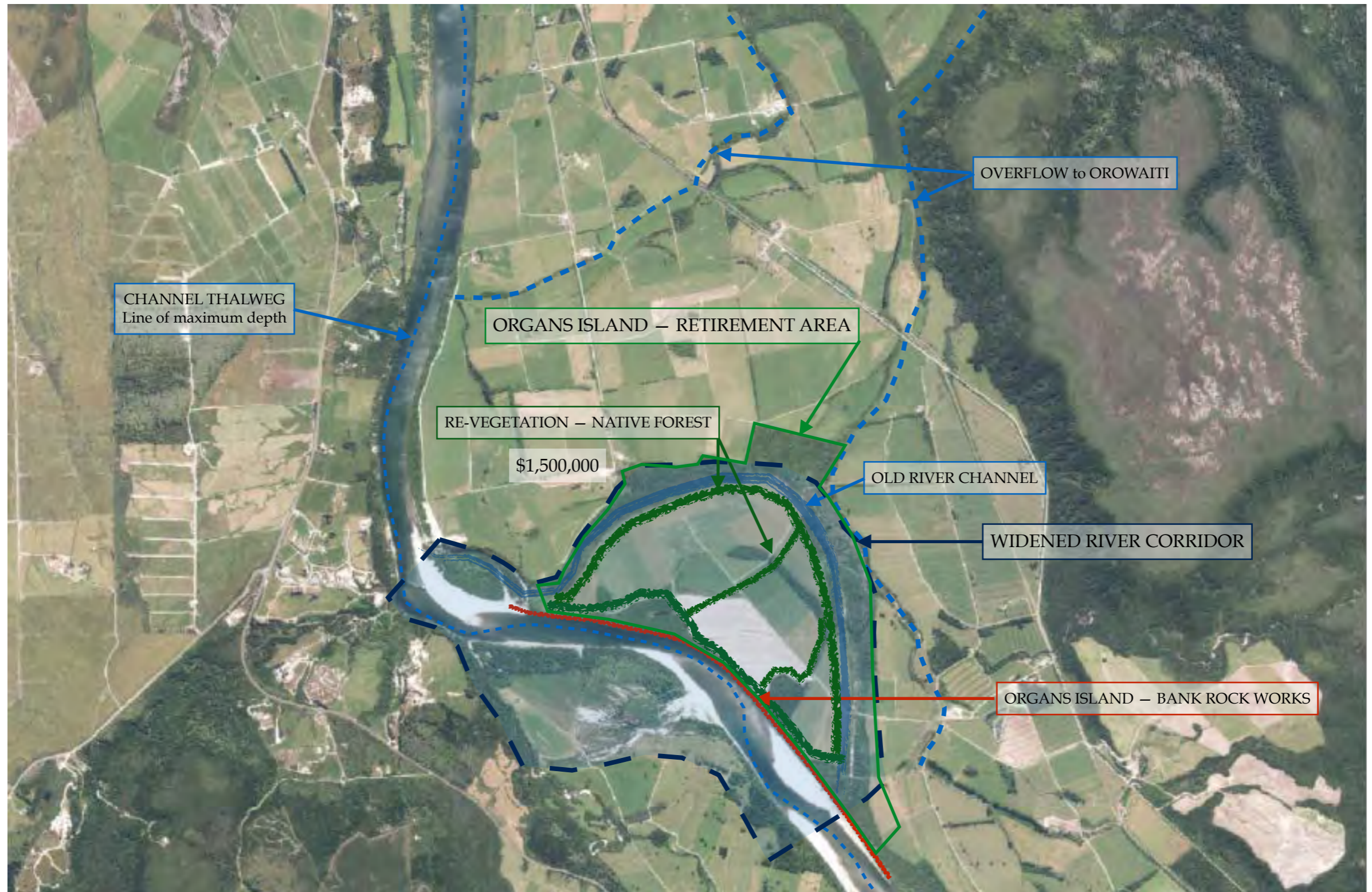
COST ESTIMATE

\$17,450,000

BULLER RIVER – RIVER MANAGEMENT

RIVER CORRIDOR – RETIREMENT

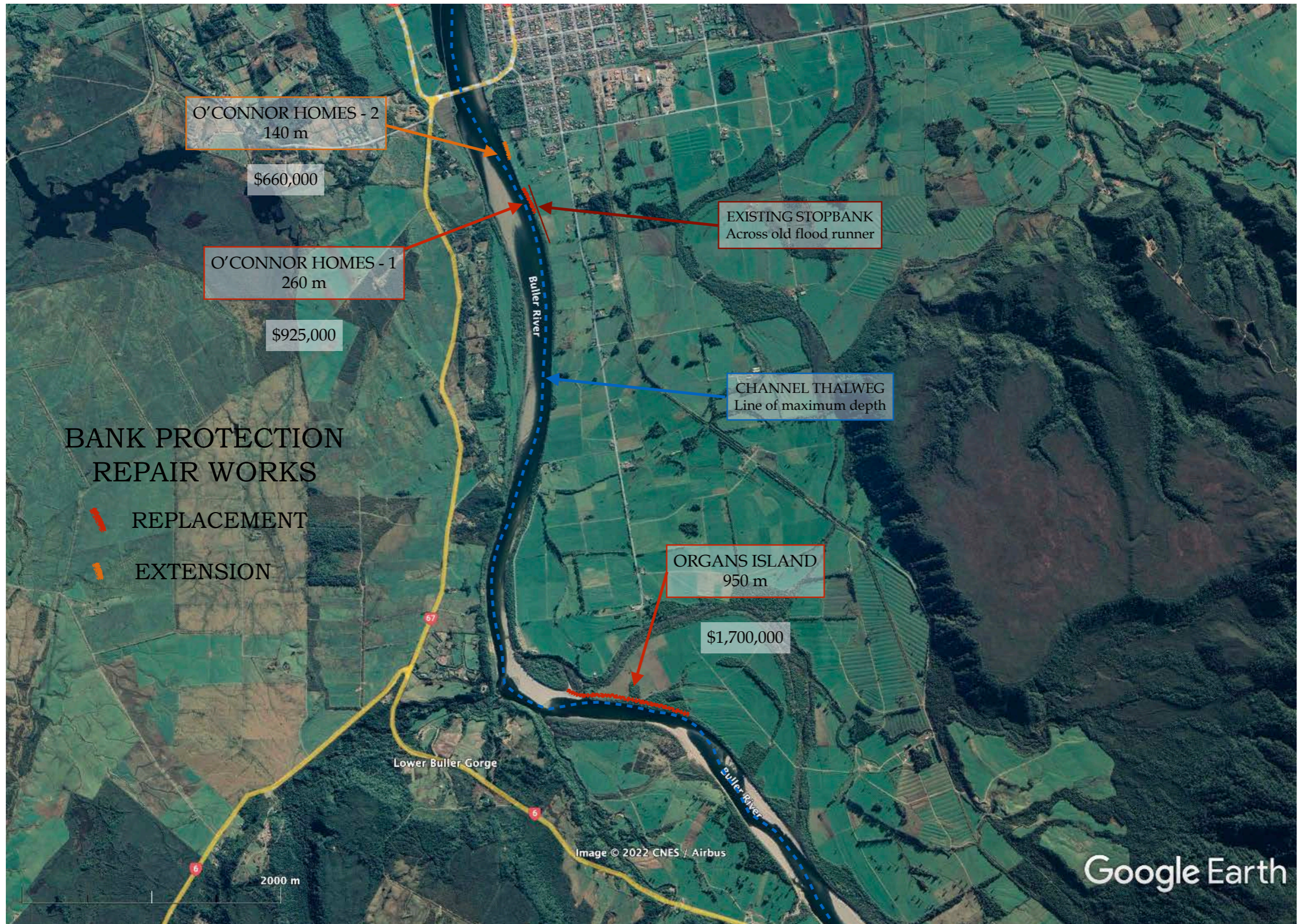
FIGURE 14



BULLER RIVER – BANK PROTECTION

FLOOD REPAIR WORKS

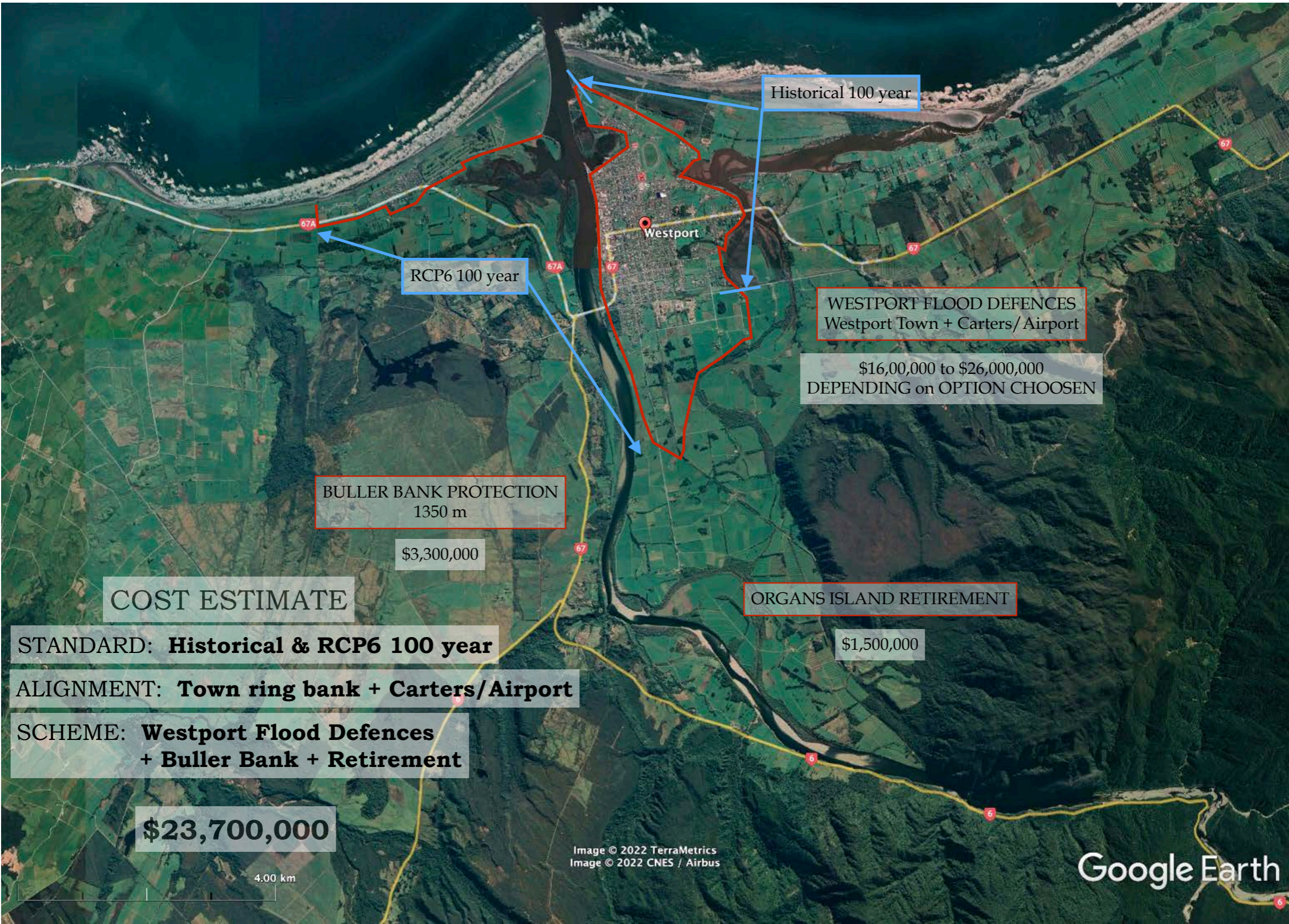
FIGURE 15



BULLER RIVER – WESTPORT FLOODING

POTENTIAL SCHEME

FIGURE 16

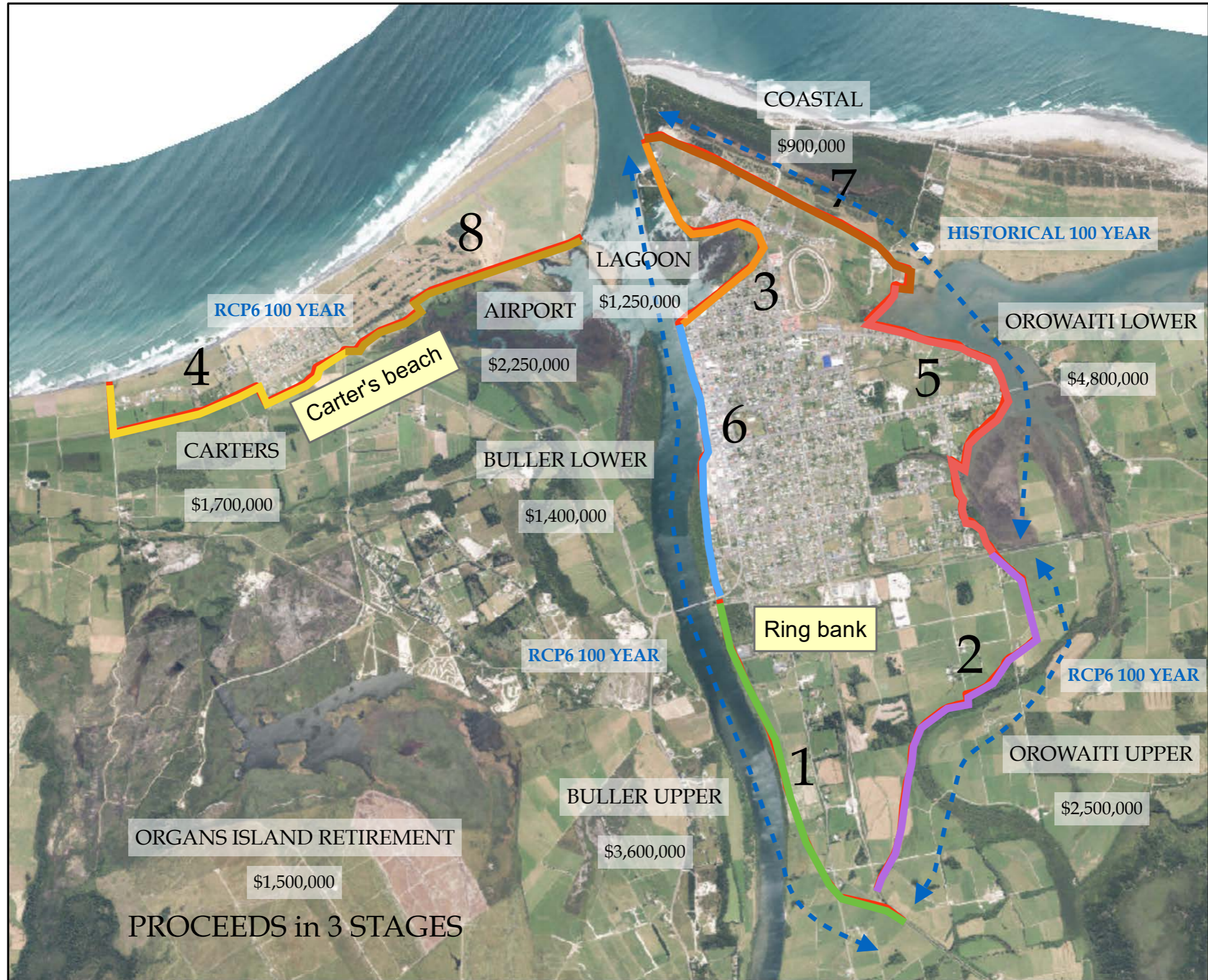


BULLER RIVER – WESTPORT FLOOD DEFENCES

STAGING

FIGURE 17

FLOOD MITIGATION — Westport Ring bank + extended Carter's



BULLER RIVER – WESTPORT FLOODING

FLOOD MITIGATION — 3 YEAR PROGRAM

TABLE 2

DESCRIPTION	COST (\$)	COMMENT	STAGING			
			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: Likelihood of flooding/Consequences of flooding/Constructability

As a Risk Matrix: from Minor to Catastrophic

BULLER RIVER – BANK PROTECTION

BANK PROTECTION ASSETS

FIGURE 18

