



## 8 Action Plan (2015 – 2023)

The 8-year action plan has been developed with four key action areas. These are:

- A. Focus on maintaining or improving estuarine condition and values
- B. Actions to mitigate the need for artificial estuary mouth openings
- C. Collecting information to inform estuary management
- D. Actions within the catchment to reduce upstream threats to the estuary.

The action plan is presented in the tables below. Actions are colour coded to show the area of focus.

A.	Orange
B.	Green
C.	Purple
D.	Yellow

Action locations are displayed on the action plan maps and are colour coded to show the area of focus. Locations of actions are approximate and subject to detailed work planning and funding processes.

## 8.1 Actions in the estuary (E)

### A. Focus on maintaining or improving estuarine condition and values

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.1	Install bollards to exclude parking within the saltmarsh, east of the bridge on Mouth of Powlett Rd.	60	Metres	BCSC	N/C	H
E.2	Investigate raising and formalising the Mouth of the Powlett carpark and entrance road. Ensure the height and drainage is consistent with that proposed in E.30. Use permeable materials and stormwater management to prevent road contaminants from reaching estuary.	1	Investigation	Parks Victoria	N/C	M
E.3	Install signage clearly indicating removal of rubbish and location of nearest bins and toilet facilities (Kilcunda).	3	Interpretive signage	BCSC, WGCMA/ Parks Victoria	3,000	H
E.4	Maintain signage indicating location, season and requirements for Hooded Plover breeding on the beach and importance of the areas to other shore birds.	1	Interpretive signage	Parks Victoria	1,500	H
E.5	Maintain permit system for horse riding on the beach to continue to inform riders of Hooded Plover habitat and how they can avoid disturbing their fragile environment.	1	Plan	Parks Victoria	N/C	H
E.6	Continue to temporarily fence Hooded Plover nest sites in breeding season (August – February).			Birdlife Bass Coast	N/C	H
E.7	Improve signage regarding responsible dog ownership in public places.	1	Interpretive signage	Parks Victoria	1,500	H
E.8	Investigate improved fishing access (including all abilities access) south of the Mouth of the Powlett Road Bridge (focussing on the area adjoining the mouth of the Powlett Carpark). This will consider improved pathways and fishing platforms.	20	Metres	Parks Victoria/ WGCMA, DEDJTR	260,000	H
E.9	Undertake public events discussing the values of the estuary.	4	Engagement Event	All	8,000	H
E.10	Install fishing platforms upstream of the Mouth of the Powlett Bridge on the western bank.	20	Metres	WGCMA/ DEDJTR, VRFish	100,000	L

## A. Focus on maintaining or improving estuarine condition and values continued

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.11	Install boardwalk through saltmarsh and along bank downstream of the Mouth of Powlett Bridge on the eastern bank.	45	Metres	WGCMa	90,000	L
E.12	Investigate the feasibility of installing fishing/viewing platforms at the end of the Wonthaggi Drain and Western Bank of the Rail Trail Bridge at Dalyston with kayak access included.	1	Investigation	WGCMa/ DEDJTR, VRFish	N/C	M
E.13	Work with VRFish and local recreational anglers regarding fishing facilities and funding.			DEDJTR/VRFish	N/C	H
E.14	Install large woody habitat at four sites within the estuary, to increase habitat for Black Bream and other recreationally targeted species - liaise with fishing community and fish experts for best locations.	4	Large Woody Habitat	WGCMa/ VRFish	N/C	M
E.15	Continue to undertake maintenance of the Coast Banksia Woodland habitat, including weed control and maintenance of protective fencing and bollards.	5	Ha	Parks Victoria	10,000	H
E.16	Fence remnant Coastal Saltmarsh and Estuarine Wetland to protect vegetation from the impacts of grazing.	20	Ha	WGCMa/ BCLN	120,000	H
E.17	Fence remnant Swamp Scrub and Swampy Riparian Woodland to protect vegetation from the impacts of grazing.	5	Ha	WGCMa/ BCLN	30,000	H
E.18	Enhance riparian areas through planting of indigenous vegetation.	5	Ha	WGCMa/ BCLN	19,200	M
E.19	Ensure that Crown land water frontage licensees are aware of their licence conditions and obligations.			DELWP	N/C	H
E.20	Ensure that drainage, waterway and floodplain works are undertaken in accordance with planning and works on waterways permit conditions.		Statutory Plan	WGCMa	N/C	H
E.21	Undertake fox and feral cat management programs, particularly targeting Orange-bellied Parrot feeding areas and Hooded Plover nesting area.			WGCMa/ Parks Victoria/BCLN and DELWP	N/C	H
E.22	Establish riparian management agreements with landholders.	8	Agreements	WGCMa/ BCLN	N/C	H

**A. Focus on maintaining or improving estuarine condition and values continued**

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.23	Undertake maintenance of past river health works, including woody and other weed control, replanting and fence maintenance (3 passes over 8 years).	5	Ha	WGCMA, BCLN/ Landholders	10,000	H
E.24	Investigate formalising the carpark and developing a canoe launch on the western upstream side of the Mouth of Powlett Road.	1	Sites	BCSC	N/C	M
E.25	Install fishing platforms near the confluence with Bridge Creek to assist with water quality monitoring activities.	4	Metres	WGCMA/ DEDJTR, VRFish	20,000	L
E.26	Undertake compliance activities to ensure that game hunting during estuary mouth closure is undertaken according to all legal requirements.			DEDJTR	N/C	M
E.27	Review game hunting access annually in line with seasonal conditions and specific likely impact to estuary values.			DELWP	N/C	M
E.28	Develop communications materials to assist with prevention of the introduction and spread of threats weeds such as Spiny Rush and Spartina into the estuary and wetlands.	1	Publication	WGCMA	2,000	M
E.29	Investigate unlicensed grazing of Crown land water frontage along the estuary and lower Powlett and opportunities for riparian improvement activities.	1	Investigation	DELWP	N/C	H
Estimated Total Cost					\$675,200	

Notes: Costs provided in this action plan are indicative only. They do not include project management or overhead costs for delivery of projects.  
N/C – Not costed.

### B. Actions to mitigate the need for artificial estuary mouth openings

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.30	Investigate the raising of Mouth of Powlett Road to mitigate the need to open the river mouth to avoid inundation of this road. Investigate alternative options for access when the road is inundated.	300	Metres	WGCMMA/BCSC	N/C	H
E.31	Investigate further opportunities for land buyback within the inundation area of the estuary.		Ha	WGCMMA	N/C	H
E.32	Design and implement a program of stewardship payments for the seasonal inundation of estuary floodplain, resulting from estuary mouth closures. Priority should be given to enhancing coastal saltmarsh and estuarine wetland communities. Payments should be calculated and prioritised based on potential value to estuary health and ability to minimise artificial estuary mouth openings.			WGCMMA	150,000	H
E.33	Investigate options for the provision of communication services to residents downstream of the Mouth of Powlett Road Bridge during estuary mouth closure.			Telstra / landholders	N/C	H
Estimated Total Cost					\$150,000	

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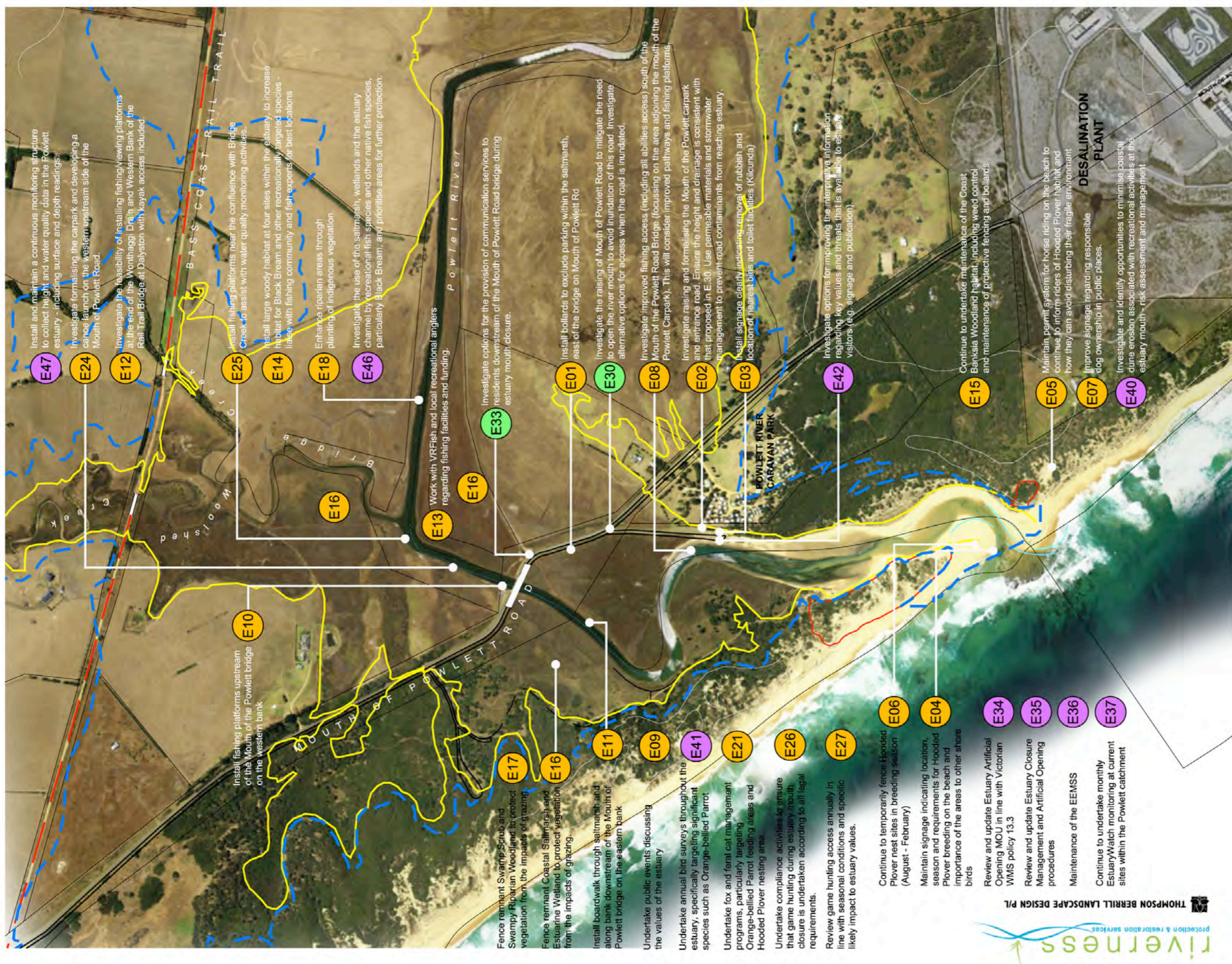
### C. Collecting information to inform estuary management

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.34	Review and update Estuary Artificial Opening MOU in line with Victorian Water Management Strategy policy 13.3.	1	Plan	WGCMA	N/C	H
E.35	Review and update Estuary Closure Management and Artificial Opening procedures.	4	Plan	WGCMA	N/C	H
E.36	Maintenance of the EEMSS.	1	Plan	WGCMA	N/C	H
E.37	Continue to undertake monthly EstuaryWatch monitoring at current sites within the Powlett catchment.	6	Sites	WGCMA	N/C	H
E.38	Establish Waterwatch monitoring at key confluences of tributaries and the Powlett River to capture data on nutrient inputs.	6	Sites	WGCMA	N/C	M
E.39	Investigate opportunities to encourage the conversion of Crown land water frontage grazing licences to riparian management licences.	20	Agreements	WGCMA	N/C	H
E.40	Investigate and identify opportunities to minimise coastal dune erosion associated with recreational activities at the estuary mouth - risk assessment and management.			Parks Victoria	N/C	L
E.41	Undertake annual bird surveys throughout the estuary, specifically targeting significant species such as Orange-bellied Parrot.	8	Investigations	BirdLife Bass Coast	N/C	M
E.42	Investigate options for improving the interpretive information regarding key values and threats that is available to estuary visitors (e.g. signage and publication).	1	Publication & Interpretive Signage	Parks Victoria/ WGCMA	N/C	H
E.43	Undertake hydraulic modelling and bathymetry survey of the Powlett estuary floodplain to understand the impacts and benefits of the structures (including levees and drains) and landforms that affect the movement of water before, during and after artificial estuary mouth opening, before considering any updates, changes or removal of these floodplain features.	1	Investigation	WGCMA	80,000	H
E.44	Undertake a detailed risk assessment, including onground mapping to identify potential and active acid sulphate soils with the Powlett estuarine floodplain.	1	Investigation	DEDJTR	30,000	H

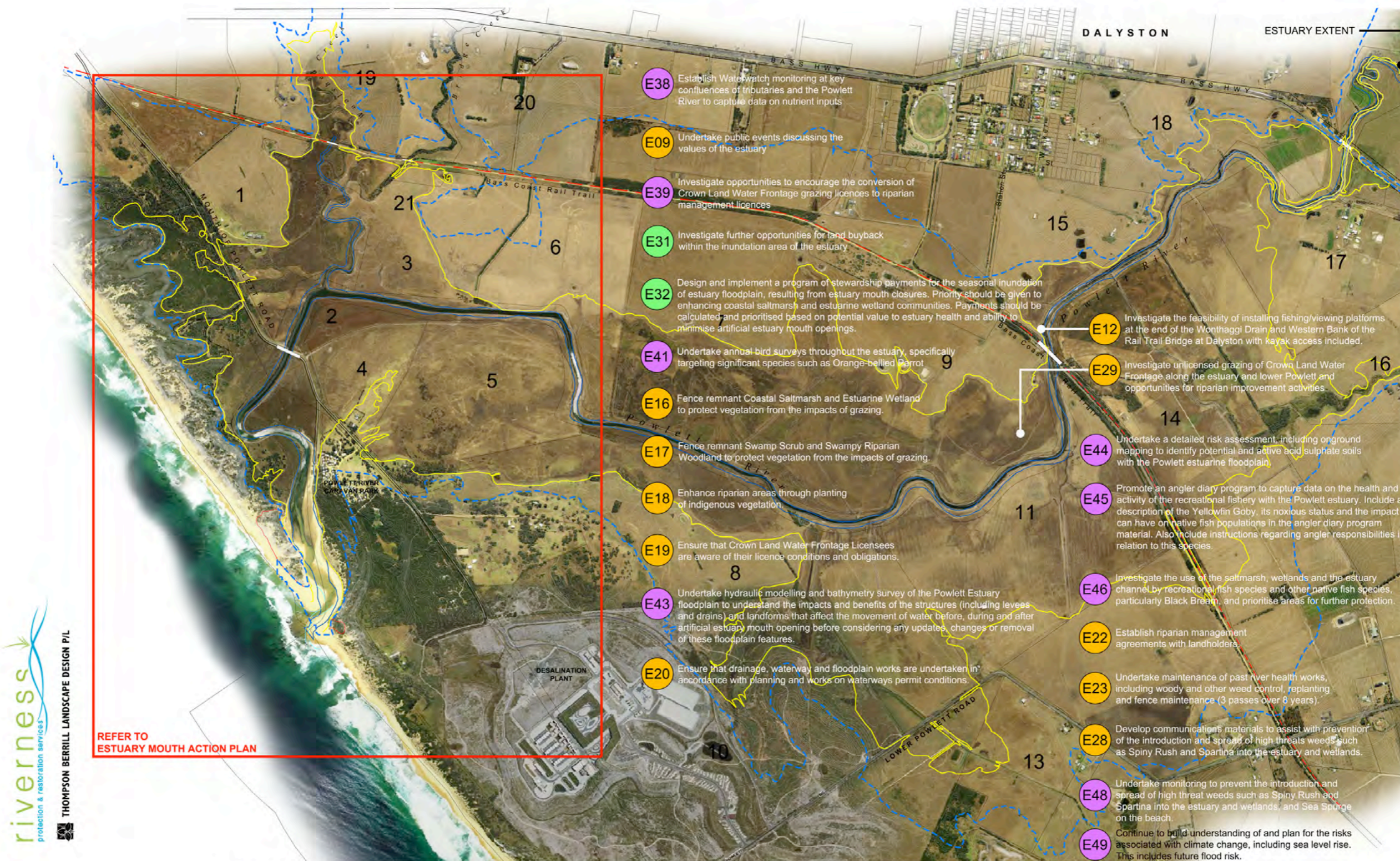
## C. Collecting information to inform estuary management continued

Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
E.45	Promote an angler diary program to capture data on the health and activity of the recreational fishery with the Powlett estuary. Include a description of the Yellowfin Goby, its noxious status and the impact it can have on native fish populations in the angler diary program material. Also include instructions regarding angler responsibilities in relation to this species.			DEDJTR	N/C	H
E.46	Investigate the use of the saltmarsh, wetlands and estuary channel by recreational fish species and other native fish species, particularly Black Bream, and prioritise areas for further protection.	1	Investigation	DEDJTR	N/C	M
E.47	Install and maintain a continuous monitoring structure to collect height and water quality data in the Powlett estuary – including surface and depth readings.	1	Monitoring Station	WGCMA	110,000	H
E.48	Undertake monitoring to prevent the introduction and spread of high threat weeds such as Spiny Rush and Spartina into the estuary and wetlands, and Sea Spurge on the beach.	8	Investigations	WGCMA	N/C	M
E.49	Continue to build understanding of, and plan for, the risks associated with climate change, including sea level rise. This includes future flood risk.			WGCMA	N/C	H
				Estimated Total Cost		\$220,000

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N/C – Not costed.







**riverness**  
protection & restoration services

THOMPSON BERRILL LANDSCAPE DESIGN P/L

REFER TO ESTUARY MOUTH ACTION PLAN

**DRAWING KEY**

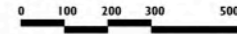
- 1% ARI FLOODLINE
- 2.2-2.8 ESTUARY INUNDATION LINE
- BASS COAST RAIL TRAIL
- CONTOUR
- WATERWAY

5 PROPERTY NUMBERS  
EEMSS Ag Assessment Map 29/1/2010

**MANAGEMENT PLAN ACTIONS**

- E00 Focus on maintaining or improving estuarine condition and values
- E00 Actions to mitigate the need for artificial estuary mouth openings
- E00 Collecting information to inform estuary management

FIGURE 2: JULY 2015



**OVERALL ACTIONS**  
**POWLETT RIVER ESTUARY** FINAL



## 8.2 Actions in the catchment (C)

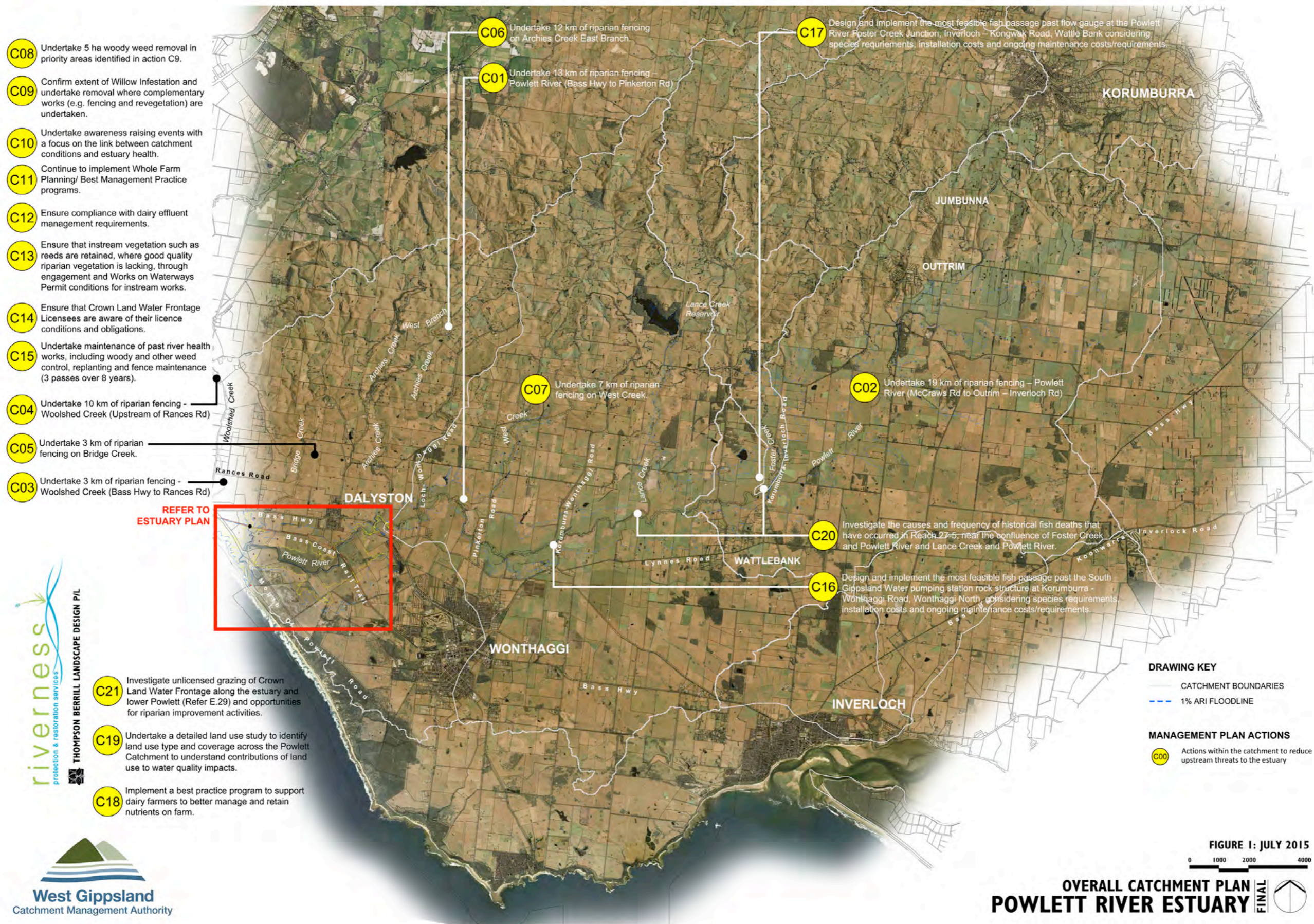
### D. Actions within the catchment to reduce upstream threats to the estuary

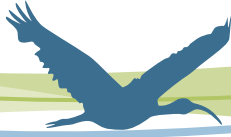
Reach	Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
Powlett River	C.1	Undertake 13 km of riparian fencing – Powlett River (Bass Hwy to Pinkerton Rd).	13	Km	WGCMA/BCLN	\$81,770	H
Powlett River	C.2	Undertake 19 km of riparian fencing – Powlett River (McCraws Rd to Outtrim – Inverloch Rd).	19	Km	WGCMA/BCLN	\$119,510	M
Woolshed Creek	C.3	Undertake 3 km of riparian fencing – Woolshed Creek (Bass Hwy to Rances Rd).	3	Km	WGCMA/BCLN	\$18,870	H
Woolshed Creek	C.4	Undertake 10 km of riparian fencing – Woolshed Creek (Upstream of Rances Rd).	10	Km	WGCMA/BCLN	\$62,900	H
Bridge Creek	C.5	Undertake 3 km of riparian fencing on Bridge Creek.	3	Km	WGCMA/BCLN	\$18,870	H
Archies Creek East Branch	C.6	Undertake 12 km of riparian fencing on Archies Creek East Branch.	12	Km	WGCMA/BCLN	\$75,480	H
West Creek	C.7	Undertake 7 km of riparian fencing on West Creek.	7	Km	WGCMA/BCLN	\$44,030	H
All	C.8	Undertake 5 ha woody weed removal in priority areas identified in action C.9.	5	Ha	WGCMA	\$60,000	M
All	C.9	Confirm extent of willow infestation and undertake removal where complementary works (e.g. fencing and revegetation) are undertaken.	1	Investigation	WGCMA	N/C	H
All	C.10	Undertake awareness raising events with a focus on the link between catchment conditions and estuary health.	4	Ha	WGCMA/BCLN	\$8,000	H
All	C.11	Continue to implement Whole Farm Planning/ Best Management Practice programs.	16	Plans	BCLN/DELWP	N/C	H
All	C.12	Ensure compliance with dairy effluent management requirements.		N/A	EPA Victoria	N/C	H
All	C.13	Ensure that instream vegetation such as reeds are retained, where good quality riparian vegetation is lacking, through engagement and Works on Waterways Permit conditions for instream works.		N/A	WGCMA/ BCLN	N/C	H

## D. Actions within the catchment to reduce upstream threats to the estuary continued

Reach	Activity Number	Management Activity / Output	Quantity	Unit	Project Partners	Cost (\$)	Priority
All	C.14	Ensure that Crown land water frontage licensees are aware of their licence conditions and obligations.		N/A	DELWP/ WGCMA	N/C	H
All	C.15	Undertake maintenance of past river health works, including woody and other weed control, replanting and fence maintenance (3 passes over 8 years).	5	Ha	WGCMA, BCLN/ Landholders	\$10,000	H
Foster Creek	C.16	Design and implement the most feasible fish passage past the South Gippsland Water pumping station rock structure at Korumburra – Wonthaggi Road, Wonthaggi North, considering species requirements, installation costs and ongoing maintenance costs/requirements.	1	Fishway	WGCMA/SGW	\$50,000	H
Powlett River	C.17	Design and implement the most feasible fish passage past flow gauge at the Powlett River Foster Creek Junction, Inverloch – Kongwak Road, Wattle Bank, considering species requirements, installation costs and ongoing maintenance costs/requirements.	1	Fishway	WGCMA	\$70,000	H
All	C.18	Implement a best practice program to support dairy farmers to better manage and retain nutrients on farm.	1	Program	WGCMA	N/C	H
All	C.19	Undertake a detailed land use study to identify land use type and coverage across the Powlett catchment to understand contributions of land use to water quality impacts.	1	Investigation	WGCMA	N/C	H
Powlett River	C.20	Investigate the causes and frequency of historical fish deaths that have occurred in Reach 27-5, near the confluence of Foster Creek and Powlett River and Lance Creek and Powlett River.		Investigations	WGCMA/ EPA Victoria	N/C	H
Powlett River (27-5)	C.21	Investigate unlicensed grazing of Crown land water frontage along the estuary and lower Powlett (Refer E.29) and opportunities for riparian improvement activities.		Investigations	DELWP	N/C	H
Estimated Total Cost						\$619,430	

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N/C – Not costed.





## 9 Monitoring, Evaluation and Review of the Plan

Monitoring, evaluation and reporting (MER) are integral components of natural resource management programs. A simple MER approach is recommended for this EMP.

To determine the effectiveness of the Plan it is recommended that the West Gippsland CMA produce:

- A short implementation report for the community every year outlining:
  - a summary of activities completed.
  - a summary of key issues or events that occurred along the waterway.
- A mid-term review report (2019) of implementing the Plan, including:
  - the findings from the short annual implementation reports.
  - progress against the management outcome targets.
  - progress against the activity targets.
- A final review following the eighth year of the implementation period.



*Powlett River Estuary Mouth.*



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