

ESTUARY ASSESSMENT FRAMEWORK FOR NON-PRISTINE ESTUARIES

Estuary 917 (DARBY RIVER)

Estuary ID 917

Name DARBY RIVER

Location

Latitude / Longitude -38.989 146.268 **Datum** GDA94

Condition Assessment This estuary is in largely unmodified condition

Initial Classification In the first stage of this condition assessment this estuary was classified as being largely unmodified.

Basis of Initial Classification This was based on the changes to the land use: national park/state reserve.

Processed-Based Classification

Issues:

General Comments / Notes:

Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
STATE COMPONENT (OVERALL)	2	C	
ECOSYSTEM INTEGRITY INDEX		D	
Eutrophication			
Chlorophyll a (µg/L) [median(80th)] HEAD			
Chlorophyll a (µg/L) [median(80th)] MIDDLE			
Chlorophyll a (µg/L) [median(80th)] MOUTH			

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Chlorophyll a (µg/L) [median(80th)] AVERAGE

Harmful algal blooms

Turbidity [median(80th)]

Turbidity (NTU or secchi depth) HEAD

Turbidity (NTU or secchi depth) MIDDLE

Turbidity (NTU or secchi depth) MOUTH

Turbidity (NTU or secchi depth) AVERAGE

Shellfish closures

Fish/bird kills

Pathogens

Faecal coliforms (no/100mL) [median(80th)] HEAD

Faecal coliforms (no/100mL) [median(80th)] MIDDLE

Faecal coliforms (no/100mL) [median(80th)] MOUTH

Faecal coliforms (no/100mL) [median(80th)] AVERAGE

Critical habitat loss

Anoxic and hypoxic events

Invasive species

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
HABITAT CONDITION INDEX	No Deviation Calculated		D	2
Seagrass species present				

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Seagrass coverage	
Mangrove species present	
Mangrove coverage	2
Saltmarsh coverage	2
Wetland coverage	

Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
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FISH CONDITION INDEX		D	
Diversity	Fish species present: Common Galaxias, Pouched Lamprey, Short-finned Eel, Tupong, Flat-headed Gudgeon, Southern Pigmy Perch		1
Abundance			
Health			
Recruitment			

Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
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WATER QUALITY INDEX		D	
Nutrients [median(80th)]			
Dissolved oxygen [median(20th)]			
Dissolved oxygen [surface] (%sat or mg/L) HEAD			
Dissolved oxygen [surface] (%sat or mg/L) MIDDLE			
Dissolved oxygen [surface] (%sat or mg/L) MOUTH			
Dissolved oxygen [surface] (%sat or mg/L) AVERAGE			
Dissolved oxygen [bottom] (%sat or mg/L) HEAD			

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Dissolved oxygen [bottom] (% sat or mg/L) MIDDLE
 Dissolved oxygen [bottom] (% sat or mg/L) MOUTH
 Dissolved oxygen [bottom] (% sat or mg/L) AVERAGE
 pH
 Heavy metals
 Are heavy metals a problem in this estuary (Y/N)?
 Other toxicants (including pesticides)
 Salinity
 Temperature
 Depth

Surface salinity [means, mouth closed] HEAD 0.22 MIDDLE 0.32 MOUTH 0.23

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
SEDIMENT QUALITY INDEX			D	
Sediment toxicants	No study undertaken			
Sediment load TN				
Sediment load TP				
Invertebrate diversity				
Invertebrate abundance				

	Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
PRESSURE COMPONENT (OVERALL)			D	
UTILISATION INDEX	1995 BRS data: Crop/pasture & Plantations comprise 0.230415 % of the catchment. Native woody vegetation comprises 59.5864 % of the catchment.		D	3

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Recreation Pressure	
Aesthetic & Amenity	
Yachting & Boating	No yacht marinas
Shellfish	
Swimming	
Recreational Fishing	
Infrastructure Pressure	
Sewage Treatment Plants	
Urbanisation and urban runoff	
Dredging	
Commercial Pressure	None
Industry	
Aquaculture	Absent
Reclamation / Declamation	1 bridge in estuary
Commercial fishing	
Tourism	
Agriculture	Absent
Habitat clearing	
Ports & Port Works	No commercial fishing operators
Shipping Activity	

Notes, Data and Supporting Qualitative Text	Rating (1-4)	Data Confidence	References
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SUSCEPTIBILITY INDEX	D
Flow-modifying structures	

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Catchment loads Absent

Flows and flushing

Acid sulphate soils No mapping/survey

RESPONSE COMPONENT (OVERALL)

Institutional Arrangements

Management Actions No habitat-protected areas

Community Initiatives

Details of References 1. VIC state data, 2. AGSO, 3. Derived from BRS landcover data

Key Contacts