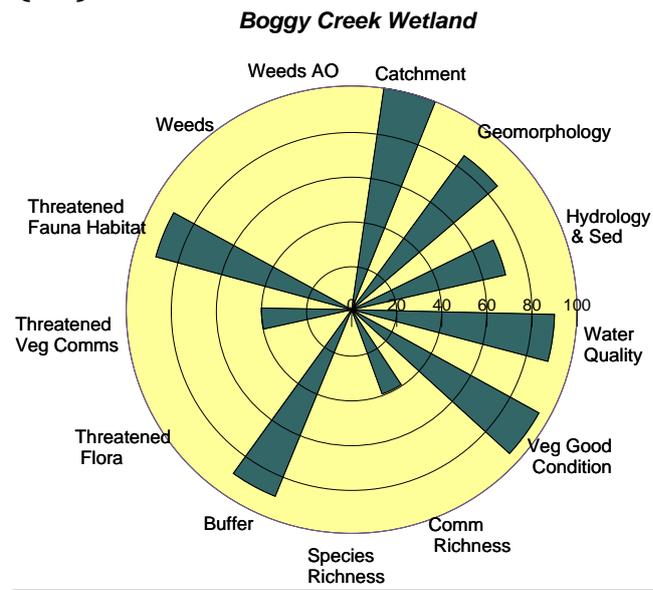


## 14 Boggy Creek Wetland (#6)



**Photo 14.19. Boggy Marsh Creek looking south into wetland**



**Photo 14.2. Google Earth aerial photo of Boggy Marsh Creek study area.**



### **14.1 Geomorphology**

Boggy Creek wetland lies at the southern end of George's Bay, and is fed by Boggy Creek. Unlike the other lagoons bordering George's Bay (Chimneys, Parkside), Boggy Creek wetland has a sizeable catchment which extends to Flagstaff Lookout on the Scamander Tier. The catchment is steep, and the wetland occupies a small flat area adjacent to the Tasman Highway.

Similar to the other lagoons draining into Georges Bay, Boggy Creek has a permanent connection to the sea via a channel under the road bridge. The mouth has undergone additional modification more recently through the establishment of the bike / walking track downstream of the road bridge which results in additional constriction of the mouth of the lagoon.

### **14.2 Hydrology & sediments**

The hydrology of the lagoon has been substantially modified by construction of the road, and more recently the pedestrian track. These restrictions at the mouth have likely increased sedimentation upstream of the bridge, with thick accumulations of organic rich mud present even following a recent very high rain events which should have flushed the area. The road and track also restrict the ingress of marine water from Georges Bay, which is likely to alter the natural salinity regime of the saltmarsh.

Prior to modification, the wetland would have experienced very high energy flow following high rainfall due to the large steep catchment upstream. The back water created by the bridge and pedestrian track may lead to increased water levels in the upstream wetland during a rain event relative to 'natural' conditions. The catchment is generally undeveloped, so the organic rich sediment are likely derived from within the wetland / salt marsh complex.

### **14.3 Water quality**

The catchment inflows to the wetland are probably of high quality due to the good condition of the catchment. Runoff from the road, and the degradation of organic matter within the wetland are likely the greatest impacts to water quality.

### **14.4 Wetland Condition**

The upstream wetland in Boggy Creek is in good physical condition. The salt marsh in the lower catchment is in moderate to poor conditions compared to natural due to the major modifications to the hydrology of the outflow.



Figure 144.3. Left - View of downstream end of wetland showing channel

Figure 144.4. Right - Sedimentation upstream of bridge.



Figure 144.4. Restricted flow through pedestrian walkway.

## 14.5 Flora and Fauna

### 14.5.1 Overview

The Boggy Creek Wetland study area covers approximately 9.2 hectares (including a 100m buffer), with an estimated 95% of the buffer area being native vegetation communities. A total of six native vegetation communities were recorded, covering a variety of habitats including wet forest, forest and woodland, swamp forest, sedgeland, and saline aquatic habitats.

### 14.5.2 Vegetation Condition

The condition of the study area was excellent overall, with an estimated 95% being at Condition Level 1. This condition level is characterised by no or very low levels of weed invasion, with the vegetation being structurally and floristically intact. The remaining 5% was in a poor condition due to urban development.

### 14.5.3 Vegetation Community Richness

Seven vegetation communities were recorded in the study area, with six being native. Of the native vegetation communities recorded three are considered to be threatened under the

Tasmanian *Nature Conservation Act 2002*. Full details of vegetation communities recorded, their threatened status and their condition is provided below in Table 14.1.

**Table 14.1 – Vegetation Communities recorded in the study area, including their conservation priority, reservation status and condition.**

Veg Code <sup>92</sup>	Vegetation Community Description	State-wide Conservation Priority and Reservation Status <sup>93, 94</sup>	Bioregional Conservation Priority and Reservation Status <sup>2, 3</sup>	Condition*
ARS	Saline sedgeland/rushland	Not threatened	Not threatened	1
DSO	<i>Eucalyptus sieberi</i> forest and woodland not on granite	Not threatened	Not threatened	1
DVC	<i>Eucalyptus viminalis</i> - <i>Eucalyptus globulus</i> coastal forest and woodland	Threatened and inadequately reserved	Threatened and inadequately reserved	1
FUR	Urban areas	-	-	4
NME	<i>Melaleuca ericifolia</i> swamp forest	Threatened and inadequately reserved	Threatened and inadequately reserved	1
OAQ	Water, sea	-	-	-
WVI	<i>Eucalyptus viminalis</i> wet forest	Threatened and inadequately reserved	Threatened and inadequately reserved	1

\* - Refer to mid and high level assessments for descriptions of the condition levels.

#### 14.5.4 Threatened Flora & Fauna

One threatened flora species listed under either the Tasmanian *Threatened Species Protection Act 1995* (TSPA) or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) has been previously recorded within the study area<sup>95</sup>. No threatened fauna species have been recorded. No additional threatened flora or fauna species were recorded during the current survey. All species of conservation significance recorded within the study area are listed below:

- *Brachyloma depressum* (spreading heath) (r/-)

#### 14.5.5 Threatened Fauna Habitat

An estimated 75% of the study area is habitat that is potentially suitable for threatened fauna. Thirteen threatened fauna species are known to use the habitat types that are present within the study area. No species listed under the JAMBA and CAMBA<sup>96</sup> migratory bird agreements

<sup>92</sup> As per Tasveg 2.0 Vegetation Classification System, DPIPWE

<sup>93</sup> Nature Conservation Act 2002

<sup>94</sup> FCF 2007. Note there is no recent analysis of reservation status of non forest communities

<sup>95</sup> Natural Values Atlas, DPIPWE

<sup>96</sup> Japan Australia Migratory Bird Agreement (1974) and China Australia Migratory Bird Agreement (1986)

have potential habitat within the study area. Details of the species of threatened fauna and migratory birds that may occur at Boggy Creek Wetland and their preferred habitats are in Appendix 1. The habitats within the study area that are preferred by at least one threatened fauna species include;

- *Eucalyptus sieberi* forest and woodland not on granite substrates (DSO)
- *Eucalyptus viminalis* - *Eucalyptus globulus* coastal forest and woodland (DVC)
- *Eucalyptus viminalis* wet forest (WVI)
- *Melaleuca ericifolia* swamp forest (NME)
- Saline sedgeland/grassland (ARS)

#### **14.6 Weeds**

No declared or environmental weed species were recorded within the study area.

#### **14.7 Threats**

The key threats identified include;

- Development within adjacent native vegetation
- Poor flushing leading to increased sedimentation and infilling
- Rubbish and runoff from road

#### **14.8 First Aid**

Suggested first aid actions, listed in priority order, include the following;

1. Encourage planning laws which restrict further development within a defined buffer zone around Boggy Creek Wetland.
2. Undertake educational activities with local residents.
3. Install an information/education sign in adjacent park.
4. Remove scattered rubbish from Tasman Hwy edge.
5. Increase flushing at mouth of salt marsh.