

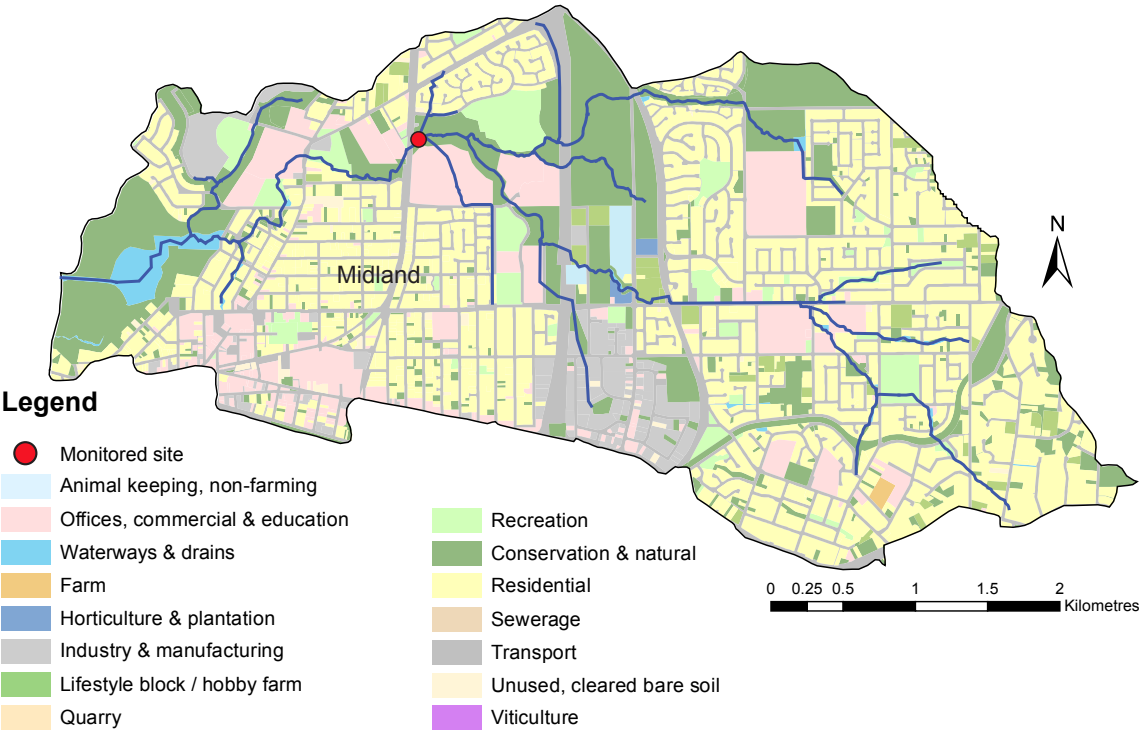
# Blackadder Creek

**B**lackadder Creek was originally a natural creek but sections have been modified into a series of drains. It discharges into the Upper Swan Estuary, upstream of Ray Marshall Park in Midland. Just upstream of its confluence with the Swan Estuary, Blackadder Creek flows through a small area of floodplain wetlands, the Blackadder wetlands.

Most of the catchment has been cleared for urban residential use and very little remnant vegetation remains. Most of the intact bushland is in poor condition except for the regionally significant Talbot Brook Reserve which is in reasonably good condition. As most of the land adjoining Blackadder Creek is publicly owned, on-ground works are easier to undertake.

Soils in the catchment comprise shallow red and yellow earths on the Darling Scarp at the catchment's eastern edge; gravelly and sandy acidic soils (Forrestfield and Guildford soils); and alluvial red and yellow soils to the west of the monitoring site. Depth to groundwater in the catchment ranges from around 0.5 to 3 m.

Water quality is monitored fortnightly at a site near Lloyd Street in Midland, approximately 450 m below the confluence of Blackadder and Woodbridge creeks. This site monitors what nutrients are leaving the upper catchment, but not the influence of nutrient sources between the sampling site and the confluence with the Swan Estuary. There is a closed landfill site downstream of the monitoring site next to the estuary, which may be affecting nutrient concentrations and contributing other pollutants.



Weeds smothering vegetation along Blackadder Creek, October 2010 (left); A fyke net set in Blackadder Creek as part of a river health assessment, October 2010 (right).

## Blackadder Creek – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	17 km <sup>2</sup>
Per cent cleared area (2005)	80%
River flow	Ephemeral No major water supply dams in catchment
Average annual flow	No flow data available as catchment not gauged
Main land uses (2005)	Residential and transport (roads).



Weeds lining Blackadder Creek, August 2010.

## Nutrient Summary: concentrations, rainfall and targets

Year	Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual rainfall (mm)	009225	703.0	807.8	607.2	503.8	860.8	608.2	782.4	674.4	617.8	715.8	854.0
TN median (mg/L)	SWN8	1.00	0.99	1.25 <sup>#</sup>	0.99	1.25 <sup>#</sup>	0.64	1.00	1.10 <sup>#</sup>	0.73	0.93	0.74
TP median (mg/L)	SWN8	0.047	0.046	0.049	0.045	0.050	0.049	0.050	0.037	0.040	0.038	0.059

TN short term target = 2.0 mg/L      TN long term target = 1.0 mg/L      TP short term target = 0.2 mg/L      TP long term target = 0.1 mg/L

insufficient data to test target      failing both short and long-term target      passing short but failing long-term target      passing both short and long-term target

\* Best estimate using available data.      <sup>#</sup> Statistical tests that account for the number of samples and large data variability are used for testing against targets on three years of winter data. Thus the annual median value can be above the target even when the site passes the target (or below the target when the site fails).