

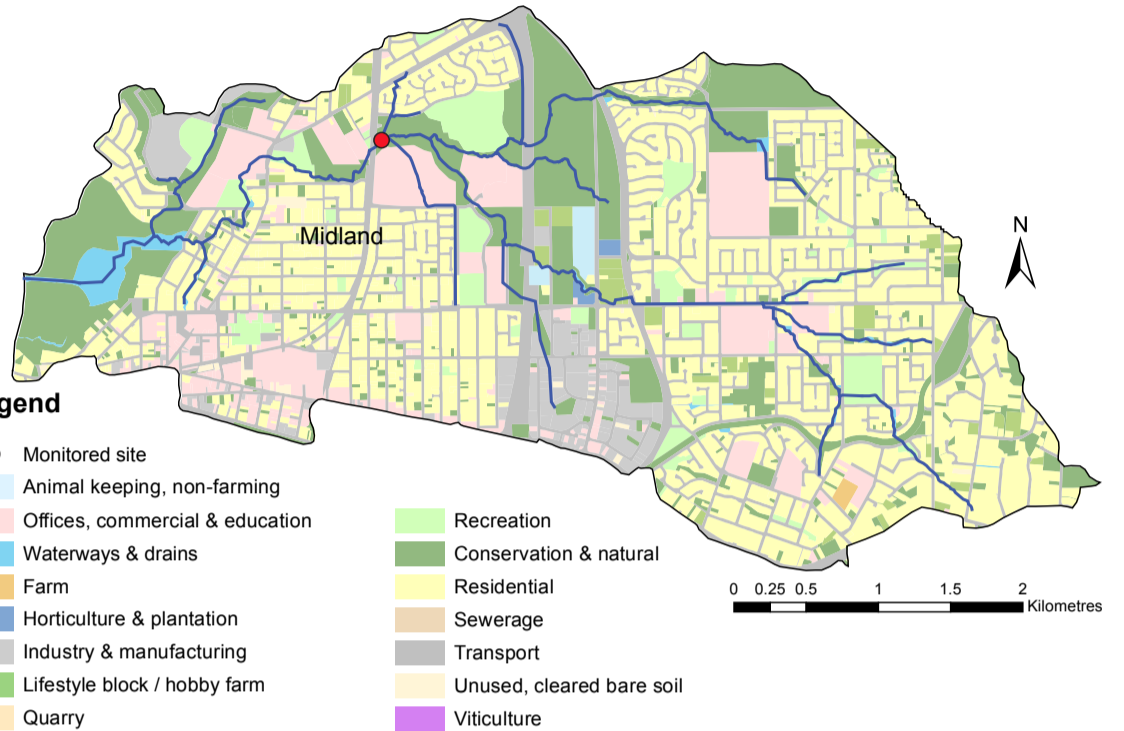
Blackadder Creek

Blackadder 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 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 an abandoned landfill site downstream of the monitoring site next to the estuary, which may be contributing nutrients and other pollutants.



Woodbridge Creek (left); Weeds smothering the vegetation along Blackadder Creek (right).



Blackadder Creek – facts and figures

| | |
|-------------------------------------|--|
| Length | ~ 7.1 km (Blackadder Creek Main Drain); ~ 11.5 km (total Water Corporation drains) |
| Average rainfall | ~ 800 mm per year |
| Gauging station near monitored site | There is no gauging station on Blackadder Creek |
| Catchment area | 17 km ² (total) 12 km ² (monitored) |
| River flow | Ephemeral No major water supply dams in catchment |
| Average annual flow | Not able to calculate |
| Main land uses | Urban, light industry and commercial areas |

Nutrient Summary: concentrations, loads and HRAP targets

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|
| Annual flow (GL) | | | | | | | | | | | | | |
| TN median (mg/L) | 0.73 | 0.74 | 0.97 | 1.00 | 0.77 | 1.00 | 0.99 | 1.25 | 0.99 | 1.25 | 0.64 | 1.00 | 1.10 [#] |
| TP median (mg/L) | 0.071 | 0.041 | 0.049 | 0.046 | 0.067 | 0.047 | 0.046 | 0.049 | 0.045 | 0.050 | 0.049 | 0.050 | 0.037 |
| TN load (t/yr) | | | | | | | | | | | | | |
| TP load (t/yr) | | | | | | | | | | | | | |

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.

[#] 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).