

Bannister Creek

Bannister Creek was once a natural system that has been highly modified to become a deeply incised, permanently flowing drainage network. It discharges into the Canning Estuary downstream of Kent Street Weir.

Most of the catchment has been cleared for industrial and residential uses. This has altered the flows entering the creek because hard surfaces, such as roads and roofs, don't retain water and it runs quickly into nearby compensating basins and waterways. Weeds including blackberry and hydrocotyle are an environmental concern in Bannister Creek.

The dominant soil types in the catchment are leached Bassendean and Southern River sands. During the dry summer months, groundwater is the principal water source into the drainage network. A part of the catchment's southern end lies over the Jandakot Underground Water Pollution Control Area.

Water quality is monitored at a site near the catchment's lower end close to Hybanthus Road, shortly before Bannister Creek flows into the Canning Estuary. Flows were recorded at this site between 1988 and 1993, however since then only water quality has been monitored. The site is positioned to indicate what nutrients are leaving the catchment and entering the estuary. In 2007 a Department of Water gauging station was constructed at Acacia Place in Lynwood.

Bannister Creek – Facts and Figures

Length	~ 18 km (total); ~ 8 km (main drain)
Average rainfall	~ 800 mm per year
Gauging station near monitored site	Site number 616134 (flow only measured from 2008 onwards)
Catchment area	23 km ² (total) 23 km ² (monitored)
River flow	Permanent No major water supply dams in catchment
Average annual flow	~ 5.2 GL per year (2010–14 average)
Main land uses	Residential, commercial and industrial



Photo: Water Science Branch



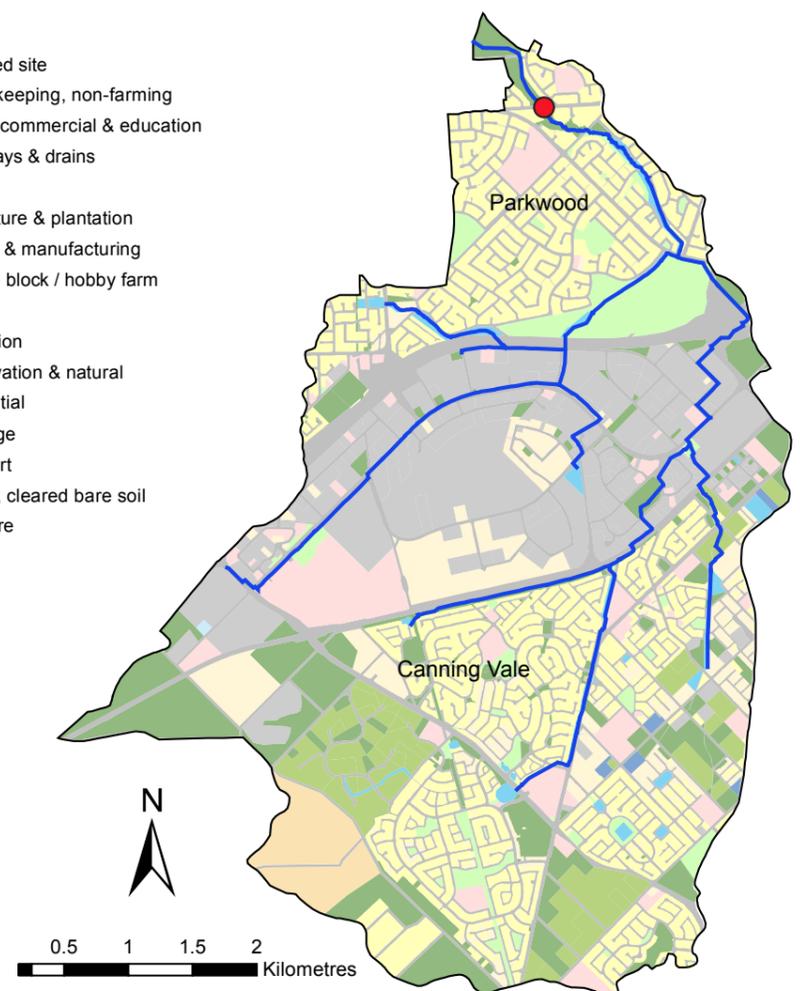
Photo: Kelli O'Neill

A gross pollutant trap covered in wood and other debris following heavy rainfall, June 2011.

Constructing a rock riffle on Bannister Creek, April 2012.

Legend

- Monitored site
- Animal keeping, non-farming
- Offices, commercial & education
- Waterways & drains
- Farm
- Horticulture & plantation
- Industry & manufacturing
- Lifestyle block / hobby farm
- Quarry
- Recreation
- Conservation & natural
- Residential
- Sewerage
- Transport
- Unused, cleared bare soil
- Viticulture



Nutrient Summary: concentrations, loads and HRAP targets

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Annual flow (GL)							6.5*	5.8*	3.5*	5.6*	5.3*	6.7*	5.0*
TN median (mg/L)	1.50	1.50	1.35	1.40	1.35	1.20	1.30	1.30	1.40	1.15	1.10	1.30	1.50
TP median (mg/L)	0.083 [#]	0.076	0.063	0.092	0.080	0.076	0.071	0.080	0.092	0.094	0.084	0.100	0.105 [#]
TN load (t/yr)							8.70*	7.70*	4.62*	7.41*	6.64*	8.70*	6.30*
TP load (t/yr)							0.44*	0.39*	0.26*	0.39*	0.40*	0.52*	0.40*

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).