

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 fortnightly 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 and Environmental Regulation gauging station was constructed at Acacia Place in Lynwood.



Photo: Water Science Branch



Photo: Kelli O'Neill

Living stream site on Bannister Creek, four years after restoration works, October 2016.

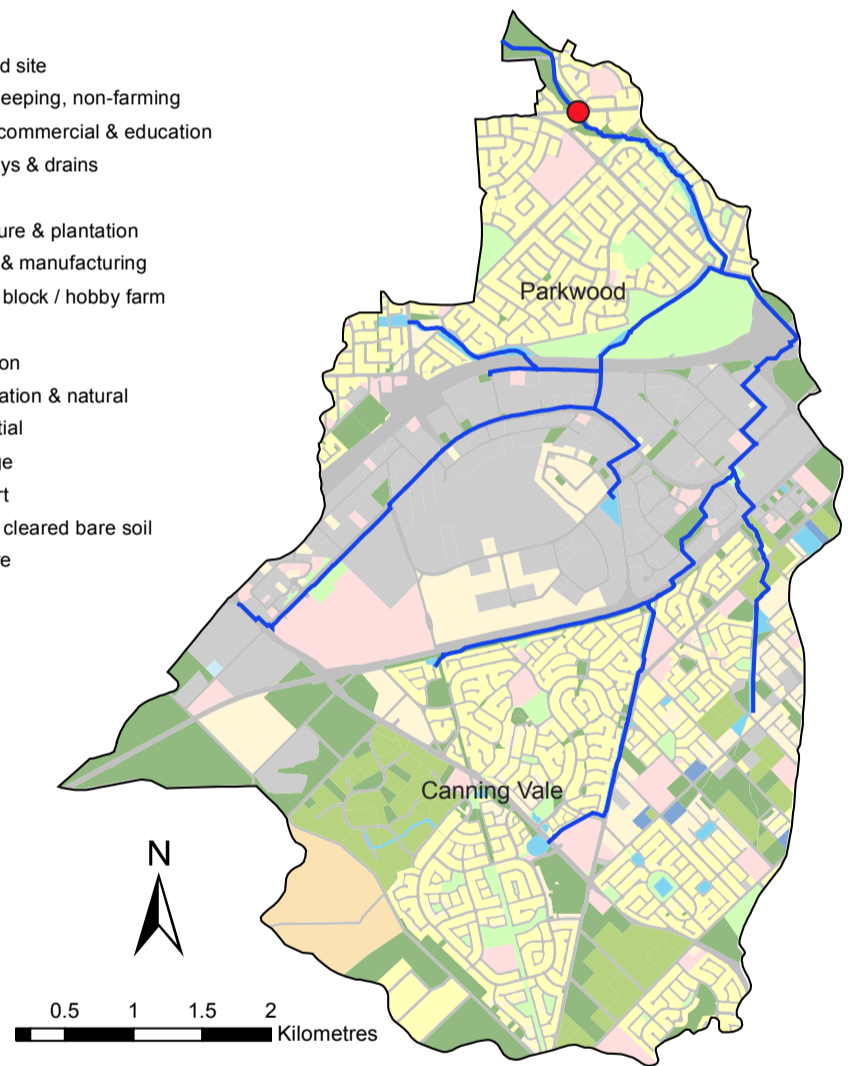
Bannister Creek is a drain along much of its length, like this section here. November 2012.

Bannister Creek – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	23 km ²
Per cent cleared area (2005)	86%
River flow	Permanent No major water supply dams in catchment
Average annual flow	~ 5.3 GL per year (2013–17 average)
Main land uses (2005)	Residential, transport (roads), industry and manufacturing

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, estimated loads and targets

Year	Site	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual flow (GL)	616134		6.5*	5.8*	3.5*	5.6*	5.3*	6.7*	5.0*	3.4*	5.6*	5.9*
TN median (mg/L)	SWS2	1.20	1.30	1.30	1.40	1.15	1.10	1.30	1.50	1.20	1.30	1.40
TP median (mg/L)	SWS2	0.076	0.071	0.080	0.092	0.094	0.084	0.100	0.105 [#]	0.099	0.091	0.092
TN load (t/yr)	SWS2		8.70*	7.70*	4.62*	7.41*	6.64*	8.70*	6.30*	4.28*	6.98*	7.44*
TP load (t/yr)	SWS2		0.44*	0.39*	0.26*	0.39*	0.40*	0.52*	0.40*	0.27*	0.45*	0.44*

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).