St Leonards Creek

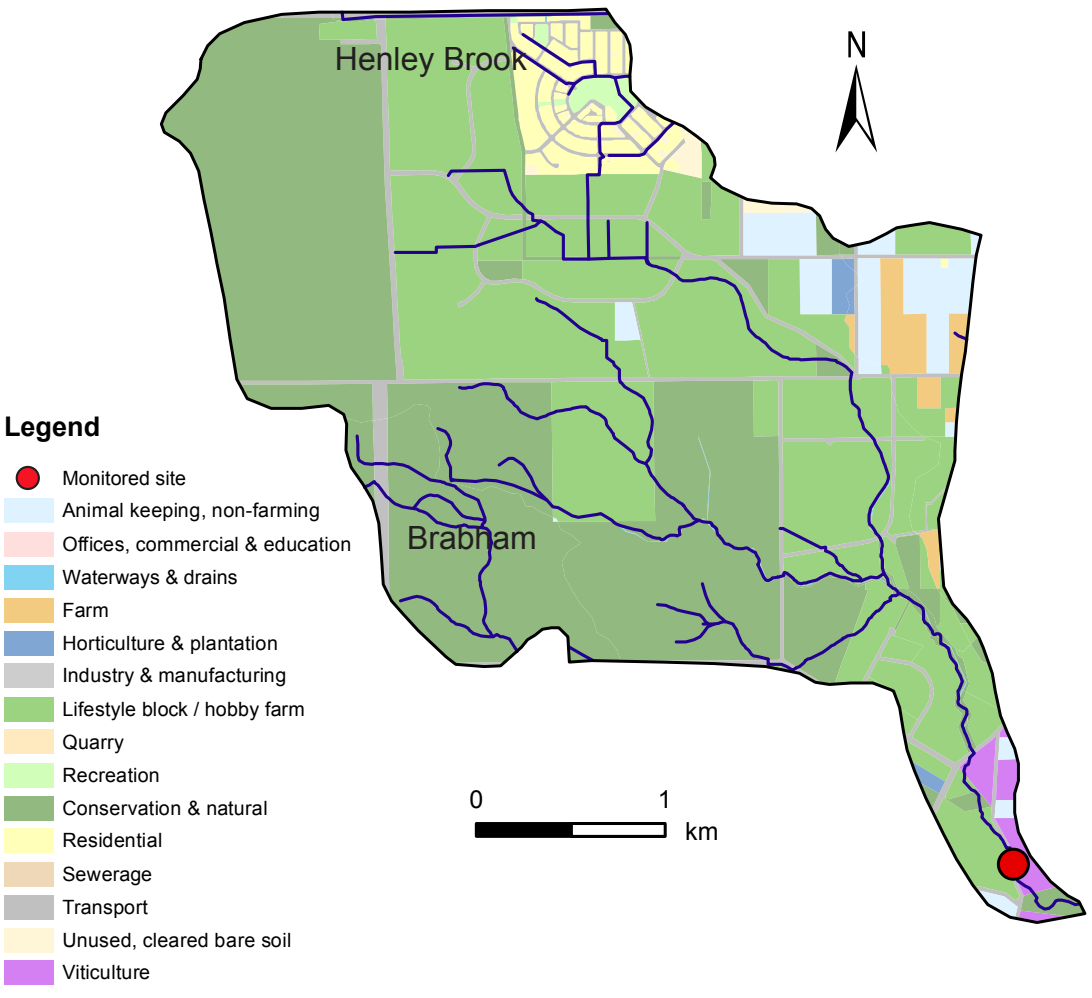
St Leonards Creek is a largely natural waterway which runs through bushland, lifestyle blocks and urban areas before discharging to the Upper Swan Estuary in West Swan. The creek is ephemeral, only flowing for a few months each year. Damming of the creek and the installation of water-retention features such as sumps along the creek may have reduced the amount of water discharging from this catchment into the Upper Swan Estuary.

Before European colonisation, the abundance of water would have meant that the area was an important food resource. There are a number of identified Aboriginal sites of significance in the catchment and surrounding area.

Early settlers in the region typically ran several types of agriculture such as wheat crops, fruit and vegetables as well as livestock such as sheep and cattle. The catchment is now predominantly rural lifestyle blocks, with a small area of viticulture near the Upper Swan Estuary. It is in the Swan urban growth corridor and rapid urban development is expected in the future.

Almost the entire catchment lies over highly permeable, leached Bassendean Sands. These soils have poor nutrient-retention capabilities so nutrients applied as fertiliser rapidly enter the underlying groundwater after the application of water.

Water quality is monitored fortnightly at a site located near the catchment's lower end, shortly before the creek flows into the Upper Swan Estuary in West Swan. This site is positioned to indicate what nutrients are leaving the catchment and flowing into the Upper Swan Estuary, so the data may not represent nutrient concentrations in upstream areas.



St Leonards Creek – facts and figures

Average rainfall (2014–18)	~ 720 mm per year (Perth metro)
Catchment area	11.6 km^2
Per cent cleared area (2005)	57%
River flow	Ephemeral creek, only flows for a few months each year
Major land uses (2005)	Lifestyle blocks/hobby farms and unused, cleared areas covered in grass

Ornamental lake in Henley Brook, February 2016.

Nutrient summary: concentrations, rainfall and targets

Year	Site	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Annual rainfall (mm)	009225	807.8	607.2	503.8	860.8	608.2	782.4	674.4	617.8	715.8	854.0	741.6
TN median (mg/L)	SCCIN3			1.50	3.65	3.05	3.45	3.40	3.10	3.30	2.75	2.50
TP median (mg/L)	SCCIN3			0.096	0.160	0.120	0.165	0.170	0.130	0.140	0.130	0.091#

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).

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