Department of **Water and Environmental Regulation**
Department of **Biodiversity, Conservation and Attractions**
GOVERNMENT OF WESTERN AUSTRALIA

Perth Airport South

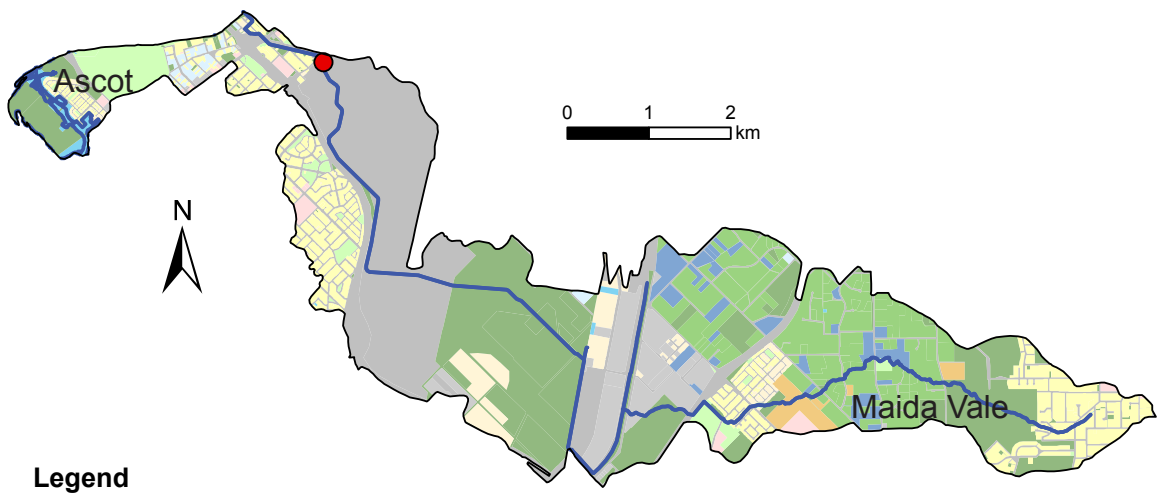
Perth Airport South Main Drain is an ephemeral waterway, drying for a short period over summer. The headwaters are in the Darling Scarp where it is a natural waterway called Crumpet Creek. Shortly before it enters the airport it has been converted into a drain. It discharges to the Middle Swan Estuary in Ascot.

European settlers used the land in the catchment for agricultural activities and stock grazing. The site for the airport itself was selected in 1938 on Dunreath golf course. Construction commenced in 1943 though the airport was initially used for military purposes only. Most of the undeveloped land at the airport is technically a wetland and has been categorised as a conservation category wetland. The majority of the airport lies in the Perth Airport North catchment though part of the runways and other infrastructure associated with the airport lies in the Perth Airport South catchment.

There is a mixture of landuse in the catchment including urban, conservation and natural, lifestyle blocks, industry and manufacturing as well as part of the airport itself.

The most common soil types in the catchment are Bassendean Sands and Forrestfield and Guildford soils. In the eastern portion of the catchment there is a small area of red gravels and earths as well as shallow red and yellow earths along the Darling Scarp. Bassendean sands have poor nutrient-retention capabilities so any nutrients applied as fertiliser are quickly transported to groundwater when water is applied.

Water quality is monitored fortnightly near Kanowna Avenue West in Ascot. This site is positioned to indicate what nutrients are leaving the catchment and entering the Middle Swan Estuary, so the data may not represent nutrient concentrations in upstream areas. Prior to August 2016, the site was located just off Second Avenue in Belmont but needed to be moved after access to the original site was cut-off due to the drain being redirected and piped.



Crumpet Creek in Maida Vale, March, 2016.

Perth Airport Drain – facts and figures

Average rainfall (2013–17)	~ 730 mm per year (Perth metro)
Catchment area	24 km^2
Per cent cleared area (2005)	74% (total catchment)
River flow	Flows for most of the year, drying for a short period in summer
Major land uses (2005)	Transport (roads and airport) and conservation and natural (total catchment)

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)	KANAV	0.60			0.79	0.72	0.71	0.67	0.90	1.00	1.10#	1.30#
TP median (mg/L)	KANAV	0.016			0.021	0.026	0.028	0.027	0.036	0.042	0.054	0.039

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).

For further information please contact the
Water Science Branch, Department of Water and Environmental Regulation
catchmentnutrients@dwer.wa.gov.au

ISSN 2209-6779 (online only)
Publication date: April 2019