

City of Vincent Lawler St Sump to Park

Land use / development type	Scale
Public Open Space	Lot
Retrofitting	Lot

Stormwater controls	Scale
Soakwell	Lot
Bubble-up pit	Lot
Overland flow path	Lot

Efficient use of water	Scale
Waterwise landscaping	Lot & street

Site conditions	
Soils	Sand
Groundwater	18 mBGL

Local government	Location
City of Vincent	North Perth

A fenced-off sump on the corner of Lawler and Bedford streets in the City of Vincent was constructed decades ago to receive stormwater from the surrounding road network. Typical of most neighbourhood sumps, it contained weeds and rubbish, and the fence required ongoing maintenance to prevent public access to the site due to its depth. As well as providing flood protection to neighbouring properties, the sump also contained some beautiful, mature trees.

The City of Vincent and its Environmental Advisory Group identified the opportunity to convert the sump into a park to increase the community's access to open space, particularly in the context of the City's growth and predominantly infill development. Given the sump's location on a corner block and next to a school, the City of Vincent decided to turn it into a pocket park where people could relax, play and interact with nature.

An independent hydraulic engineer was contracted to model the catchment and determine the volume required to store the 5% annual exceedance probability (AEP) event in underground cells (195 m³). The park drainage system was designed to allow runoff associated with larger events (1% AEP) to discharge through a connected bubble-up pit and overland flow path.

Excavation works were undertaken in April 2018, resulting in the installation of over 300 stormwater storage cells. The cells were covered with ~500 mm soil to support the establishment of grass and landscaping.

Key Project Features

- The underground stormwater system provides storage for the 5% AEP event.
- The park includes a bubble-up pit and overland flow path to allow the 1% AEP event to discharge off-site.
- Storage cells were wrapped in geofabric to prevent soil entering the cells during a storm event.
- Existing mature trees were retained to provide shade and habitat for local birds and insects.
- Additional soakwells were installed in Lawler and Bedford Streets to capture and slow down the flow of the runoff generated at the beginning of rainfall events.



Sump as it originally looked



Over 300 stormwater cells were installed



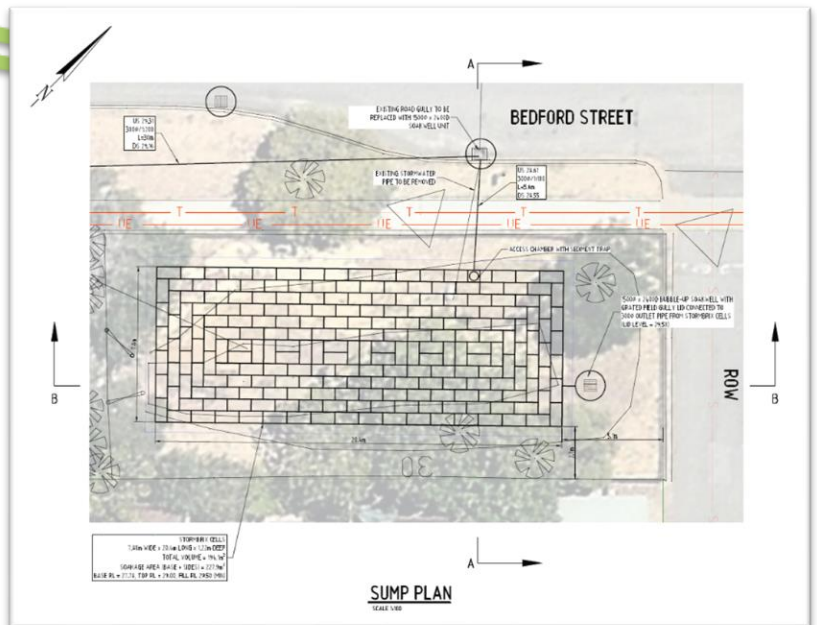
Bubble-up pit & overland flow path

Project Costs¹

Underground storage cells	\$91,000
Additional soakwells	\$25,000
Excavation and earthmoving	Included above
Landscape costs	\$36,000
Misc/sundry costs ²	\$30,000
TOTAL	\$182,000

¹All costs are site-specific and are an approximation for guidance purposes only

²Traffic control, kerbing and asphalt reinstatement, disposal, plant hire



Outcomes

The City of Vincent successfully retrofitted an unsightly, inaccessible drainage sump into a green, attractive, and useable pocket park. The park increased stormwater storage, with the project resulting in an increase in local drainage capacity of approximately 50% (total storage of 195 m³), which reduced local flood risk. The increased available open space improves neighbourhood liveability and the park is used by the neighbouring school and the local community. The City was able to retain mature native trees for shade and habitat and installed bush tucker plants, logs and play areas for people in the community to enjoy.



Contact details for further information:

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Department of Water and Environmental Regulation

