# Capricorn

Land use /	Scale
development type	
Residential	<b>Residential lot</b>
development	
Commercial	Commercial lot
development	
Public open space	Precinct
	(subdivision)
Stormwater controls	Scale
Swales	Street
Raingardens	Street
Living streams	Precinct
	· · · · · · · · ·
	(subdivision)
Retention of native	(subdivision) Precinct
Retention of native vegetation and	
	Precinct
vegetation and	Precinct

Ellicient use of water	scale
Waterwise	Precinct
landscaping	(subdivision)
	<b>Residential lot</b>
	Street

Site conditions	
Soils	Sand
Groundwater	> 5 m
Slope	< 10 %

Local government	Location
City of Wanneroo	Two Rocks
	Road

# In 2010 the Australian Bureau of Statistics estimated that the Perth metropolitan area had a growth of

3.2 per cent in 2008-09. This population growth rate is the fastest of any metropolis in Australia. Western Australia was also the fastest growing state or territory in Australia.

With such high growth rates the demand for land and housing increases. These pressures include securing water supply and improved management of stormwater systems.

In an effort to conserve water and achieve better urban water management outcomes, Capricorn Village Joint Venture partners Yanchep Sun City Pty Ltd and the Capricorn Investment Group Pty Ltd initiated the Capricorn development which began construction in 2005 in the City of Wanneroo. Capricorn is approximately 220 Ha and will deliver around 2,200 lots. Water sensitive urban design features are evident throughout the development. The site is predominantly sandy soils with depth to groundwater of over 5 m and moderate grades across the site.

# **Key Project Features**

- Vegetated swales designed to detain and treat stormwater runoff prior to infiltration
- Living streams designed to convey stormwater from larger, infrequent events whilst providing habitat diversity
- Raingardens installed within residential lots and within the local road network to treat stormwater and aid infiltration
- Waterwise landscaping promoted to residents with incentives and implemented within public open spaces
- Retention of existing native vegetation incorporated into road verges and public open spaces





Image courtesy of Cossill and Webley













#### Development Costs<sup>1</sup>

Raingardens Living streams Vegetated swale<sup>2</sup> \$140 / m<sup>2</sup> \$30 / m<sup>2</sup> \$80 / m<sup>2</sup>

<sup>1</sup>All Costs are site specific and are an approximation given for guidance purposes only <sup>2</sup>Swales are catchment specific and the cost above is given as a guideline only

## Maintenance Costs<sup>1</sup>

Garden beds New Trees Existing trees Living Streams (reed bed) \$5 - \$20 / m<sup>2</sup> / yr \$10 / tree / yr \$30 / tree / yr \$1 / m<sup>2</sup> / yr

 $^{1}\mbox{All}$  Costs are site specific and are a broad approximation given for guidance purposes only

Image courtesy of Cossill and Webley

### **Outcomes**

In 2010 the Housing Industry Association of WA awarded Capricorn the GreenSmart Community Award. The Development was also one of the State's first to receive EnviroDeveloper Certification.

More recently Capricorn was awarded the Sustainable Urban Development award by the Urban Development Institute of Australia (UDIA).



Image courtesy of Cossill and Webley



Image courtesy of Cossill and Webley

WALGA

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