

WATER SENSITIVE URBAN DESIGN

POLICY

POL-RDS 07

Objective:

The City of Mandurah (the 'City') aims to:

- a) improve the achievement of total water cycle management outcomes in all City activities.
- b) achieve better integration of land and water management which results in improved environmental outcomes for the Peel-Harvey Catchment; and
- c) ensure City activities and decisions are compatible with achievement of the objectives and maintenance of the Environmental Quality Criteria in the Environmental Protection (*Peel Inlet-Harvey Estuary*) policy 1992, the Ministerial Conditions imposed in Bulletin 994 "Peel Region Scheme" and the Water Quality Improvement Plan for the Rivers and Estuary (EPA, Nov 2008) of the peel Harvey System – Phosphorous Management.

Statement:

1. The City acknowledges that urban development disrupts the natural water cycle and has a significant impact on the environment, both in terms of water quality and quantity. As such, this policy will apply to all activities, works, services and programs conducted by the City, its contractors, consultants and volunteers.
2. Any proposed works must be assessed in the planning stage to ensure they are in line with the Peel-Harvey Coastal Catchment Water Sensitive Urban Design Technical Guidelines. All prospective contractors and external organisations working on behalf of the City must have access to this document. Additionally, data collected must satisfy the Department of Waters pre-development monitoring requirements as outlined in the Better Urban Water Management document.
3. When conducting any earthworks, construction, general maintenance, building or landscape retrofits or infrastructure upgrades, the following water sensitive urban design principles must be considered:
 - a. Protection to life and property from flooding that would occur in a 100 year Average Recurrence Interval (ARI) event;
 - b. Rainfall events will be managed to minimise runoff as high in the catchment as possible. Rainwater harvesting and infiltration is encouraged to minimise run off, and can be achieved through the directing of runoff to grassed or vegetated areas, bottomless stormwater pits or to appropriate devices;
 - c. Retain and restore existing elements of the natural drainage system, allowing natural filtering processes to be utilised prior to infiltration;
 - d. Maximise water use efficiency;
 - e. Upgrades of drainage sumps should aim to involve progressive retrofitting and transformation of the site into a multi-use site;

- f. Any construction works must not allow direct discharge of stormwater into a waterbody or stormwater system. Primary and, if feasible, secondary infiltration and treatment must be implemented for any discharge and appropriately sized storage options should be considered;
- g. Pollutant inputs must be minimised through planning controls, pollution prevention procedures, education and participation programs and regulatory controls;
- h. In infiltration areas where there is less than 20% area of deep rooted perennials, the City will endeavour to meet this standard;
- i. Fertiliser use will be kept to a minimum to reduce phosphorous and nitrogen input to surface and groundwater. Fertilisers are required and essential for effective amenity provision and will be selected based on nutrient demand and minimal impact on the environment.
- j. An appropriate monitoring and maintenance schedule will be adopted to measure the outcomes of this policy and ensure the City is in line with best management practice.
- k. The location and design of public open space, where it incorporates urban water management measures, should promote the detention of run-off through the use of swales, depressions, contour banks, rock channels, pebble paths, sedges, reed beds or other suitable measures without compromising the principal function of the public open space.
- l. Nutrients monitoring will be conducted before winter and after winter annually, to establish nutrient loads to selected sump sites. These nutrients will be for soil and water within the sump sites.

Responsible Directorate:	Works and Services
Reviewer:	Manager Technical Services
Creation date:	Minute G.32/10/07, 16 October 2007
Amendments:	Minute G.43/12/09, 15 December 2009 Minute G.57/2/12, 28 February 2012 Minute G.35/2/15, 24 February 2015 Minute G.12/7/19, 23 July 2019
Related Documentation and/or Legislation:	<i>Environment Protection & Biodiversity Conservation Act 1999</i> Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992 State Planning Policy 2.1: Peel-Harvey Coastal Plain Catchment Policy (February 1992) State Planning Policy 2.9: Water Resources (December 2006) Peel-Harvey Coastal Catchment Water Sensitive Urban Design Technical Guidelines (October 2006) Stormwater Management Manual for Western Australia, 2004-current

Water Quality Improvement Plan (WQIP) for the Rivers and Estuary of the Peel-Harvey System – Phosphorous Management EPA (Nov 2008)

City of Mandurah Operating Strategy and Groundwater Conservation Plan.

IPWEA (WA) Subdivisional Guidelines

Department of Water, Better Urban Water Management (October 2008).

Liveable Neighbourhoods: a Western Australian Government Sustainable Cities initiative, Western Australian Planning Commission and Department of Planning and Infrastructure, 2007.