9.4.6 Stormwater management code[19]

9.4.6.1 Application

(1) This code applies to assessable development identified as requiring assessment against the Stormwater management code by the tables of assessment in **Part 5 (Tables of assessment)**.

(2) All provisions in this code are assessment benchmarks for applicable assessable development.

9.4.6.2 Purpose and overall outcomes

(1) The purpose of the Stormwater management code is to provide for sustainable stormwater management *infrastructure* which protects water quality, environmental values and public health.

(2) The purpose of the Stormwater management code will be achieved through the following overall outcomes:-

(a) development is located, designed, constructed and operated to protect and enhance the environmental values and flow regimes of both constructed and natural *waterways*, *wetlands*, lakes, ground waters and drainage systems;

(b) development is provided with effective stormwater drainage systems to protect people, property and the environment from the effects of stormwater runoff;

(c) development avoids the provision of new constructed waterbodies, except where a demonstrated overriding need exists;

(d) development provides for suitable treatment, harvesting and re-use systems for urban stormwater runoff; and

(e) stormwater management systems are designed and constructed to enhance biodiversity, landscape and recreational values, and to achieve acceptable maintenance, renewal and adaptation costs.

9.4.6.3 Performance outcomes and acceptable outcomes

Table 9.4.6.3.1 Performance outcomes and acceptable outcomes for assessable development

Performance Outcomes		Acceptable Outcomes	
Development Design			
PO1	Development design, including but not limited to layout, scale, intensity and staging, is based on a thorough assessment of:- (a) site characteristics; (b) potential environmental risks; and (c) the likely effectiveness and limitations of available erosion and sediment control and stormwater drainage measures to achieve protection of the environmental values of water and the functioning of stormwater *infrastructure*, both during and post construction.[20]	**AO1**	No acceptable outcome provided.
Stormwater Drainage Systems			
PO2	Development is provided with a stormwater drainage system which:-	**AO2.1**	Development is provided with a stormwater drainage system which is

[19] Editor's note—the **Planning scheme policy for development works** provides guidance and specifies standards for satisfying certain outcomes of this code, including requirements for the preparation of a Stormwater Management Plan.

[20] Editor's note—the **Planning scheme policy for development works** provides guidance for satisfying PO1, including requirements for the preparation of an Erosion Risk Assessment and an Erosion Hazard Evaluation Report. **Section 9.4.11 (Works, services and infrastructure code)** sets out additional requirements in relation to erosion and sediment control during construction activities and works.

Performance Outcomes		Acceptable Outcomes	
	(a) incorporates allowance for climate change; and (b) ensures the development is adequately drained, and stormwater is managed and lawfully discharged without altering stormwater drainage characteristics external to the *site*.		designed and constructed in accordance with the standards specified in the **Planning scheme policy for development works.**
		AO2.2	The stormwater drainage system connects to a lawful point of discharge in accordance with the **Planning scheme policy for development works.**
		AO2.3	Stormwater flows discharged from the development are either within the capacity of the downstream drainage system such that non-worsening occurs, or are mitigated to pre-development characteristics.
		AO2.4	Development provides for the management of stormwater to incorporate appropriate allowance for climate change impacts (including rainfall intensity and sea level rise), in accordance with the **Planning scheme policy for development works.**
PO3	Development is provided with stormwater conveyance channels which use natural channel design principles to convey external catchment stormwater through development and support landscape, passive recreation and ecological values.	**AO3.1**	Development is provided with stormwater conveyance channels designed in accordance with the standards specified in the **Planning scheme policy for development works.**
		AO3.2	Landscape and ecological features (e.g. plant species and habitat types) used in stormwater conveyance channels are complementary to the local context, including natural *waterways*.
		AO3.3	Bank and bed stability and planting densities result in a stable channel over the long term and minimal potential for invasive weed growth.
PO4	Stormwater *infrastructure* is designed to minimise maintenance costs and the requirement for specialised equipment or maintenance techniques.	**AO4**	Stormwater *infrastructure* is designed and constructed in accordance with the standards specified in the **Planning scheme policy for development works.**
PO5	Development avoids stormwater inflow and infiltration to the sewer *infrastructure* network.	**AO5**	No acceptable outcome provided.
Hydrology and Waterway Stability			
PO6	Development prevents increased channel bed and bank erosion in *waterways* by limiting changes in flow rate and flow duration within receiving waters.	**AO6**	Stormwater discharges are mitigated to achieve the waterway stability objective specified in the **Planning scheme policy for development works.**
PO7	Development protects in-stream ecology by maintaining pre-development low flow discharge regimes.	**AO7**	Frequent stormwater discharges are captured and managed to achieve the frequent flow management objective specified in the **Planning scheme policy for development works.**
PO8	Development ensures adequate surface and sub-surface water to maintain the environmental values of water dependent ecosystems, including downstream in stream and off stream aquatic, riparian, wetland and terrestrial ecosystems.	**AO8**	Stormwater harvesting (excluding roof water harvesting) and the location and form of stormwater discharge points do not compromise the pre-development hydrology of receiving waters.

Performance Outcomes		Acceptable Outcomes	
Stormwater Quality			
PO9	Development protects or enhances the environmental values and water quality objectives[21] of receiving waters or buffer areas within or downstream of a *site*.	**AO9.1**	Stormwater discharges achieve the pollutant load reduction objectives specified in the **Planning scheme policy for development works.**
		AO9.2	Where a development includes or adjoins a *constructed waterbody* or a *buffer* to a *waterway* or *wetland*, the pollutant load reduction targets are met prior to the discharge entering that *buffer* or waterbody.
PO10	Treatment systems that use natural processes and materials are integrated into the development, wherever practicable, taking into account the whole of life cycle cost to enhance biodiversity and landscape benefits.	**AO10**	No acceptable outcome provided.
PO11	Treatment systems are designed to eliminate or minimise health, safety and aesthetic hazards.	**AO11**	Risks associated with insect breeding, odour and public safety are minimised by designing treatment systems in accordance with the **Planning scheme policy for development works.**
PO12	Treatment systems are designed to minimise maintenance, renewal and adaptation costs and the requirement for specialised equipment or maintenance techniques.	**AO12**	Design achieves acceptable maintenance, renewal and adaptation costs for the project life[22] in accordance with the **Planning scheme policy for development works.**
Stormwater Harvesting and Re-use			
PO13	Development provides for stormwater capture, in addition to roof water capture.	**AO13**	Stormwater harvesting systems are designed in accordance with the standards specified in the **Planning scheme policy for development works.**
PO14	Stormwater capture for the purpose of substituting for potable water use does not create a health, safety or aesthetic hazard.	**AO14.1**	Stormwater harvesting systems are designed in accordance with the standards specified in the **Planning scheme policy for development works.**
		AO14.2	Water quality treatment is designed, established and monitored to human health standards appropriate for the intended use.
PO15	Stormwater harvesting systems are designed to minimise maintenance costs and the requirement for specialised equipment or maintenance techniques and are provided with an ongoing funding source.	**AO15.1**	For systems that are to be dedicated to *Council* as public assets, there is an overriding community benefit resulting from the stormwater harvesting system.
		AO15.2	A detailed operations and maintenance budget is prepared for the project life and financial assurances are in place to operate and maintain the system for the project life.
Construction and Establishment of Stormwater Management Systems			
PO16	Construction methods and materials minimise environmental impacts and minimise the risk of asset failure.	**AO16.1**	Construction methods are undertaken in accordance with the standards specified in the **Planning scheme policy for development works.**
		AO16.2	Construction timing is co-ordinated with civil and other landscape works to minimise risks to stormwater *infrastructure* and the environment.
PO17	Vegetated stormwater management	**AO17**	Establishment and maintenance of

[21] Editor's note—water quality objectives are prescribed in Schedule 1 of the *Environmental Protection (Water) Policy 2009*.
[22] Editor's note—project life is a minimum of 50 years, unless the asset is proposed to be decommissioned in a shorter period.

Part 9

Performance Outcomes		Acceptable Outcomes	
	systems proposed to be dedicated as public assets are established and maintained during the maintenance period to ensure optimal *vegetation* growth and that the functional elements of the system achieve the design function at the end of the maintenance period.		stormwater management systems is undertaken in accordance with the standards specified in the **Planning scheme policy for development works.**
Constructed Waterbodies			
PO18	Constructed waterbodies which are proposed to be dedicated as public assets are avoided, unless there is an overriding need in the public interest.	**AO18**	Where a *constructed waterbody* is proposed to be dedicated as a public asset, an overriding need for the waterbody is demonstrated in accordance with the requirements of the **Planning scheme policy for development works.**
PO19	Constructed waterbodies are designed and constructed to achieve environmental values and water quality objectives which correlate to their intended function, use and receiving waters.	**AO19**	Constructed waterbodies are designed and constructed in accordance with standards specified in the **Planning scheme policy for development works.**
PO20	Constructed waterbodies are designed, constructed and established to minimise maintenance and decommissioning costs and the requirement for specialised maintenance equipment and techniques, and are provided with an on-going funding source.	**AO20**	A detailed maintenance and decommissioning costing is prepared for the project life in accordance with the **Planning scheme policy for development works** and financial assurances are in place to provide for maintenance for the project life and, if required, decommissioning.
PO21	Constructed waterbodies are not used as stormwater quality treatment devices.	**AO21**	Stormwater discharges achieve the pollutant load reduction objectives specified in the **Planning scheme policy for development works,** prior to entering the *constructed waterbody*.
PO22	Constructed waterbodies support landscape, passive recreation and ecological values, and do not pose a health, safety or aesthetic risk.	**AO22**	Constructed waterbodies are designed and constructed in accordance with the standards specified in the **Planning scheme policy for development works.**