2.7 Code for Integrated Water Management

PURPOSE

(a) The efficiency of all elements of the water cycle is optimised, including reduction in potable demand, non worsening of stormwater peak discharges and runoff volume and maximisation of reuse opportunities;

(b) Water cycle infrastructure is provided in a manner which maximises resource efficiency and minimises whole of life cycle costs;

(c) Water cycle infrastructure is integrated with surrounding networks;

(d) Development is undertaken in accordance with best environmental management practice to support the achievement of ecological sustainability;

(e) Development does not result in the deterioration of waterway environmental values (as defined in Volume 1 or declared under an environment protection policy or regulation pursuant to the *Environmental Protection Act 1994*) and water quality;

(f) Development does not detract from the character and amenity of the locality;

(g) Adverse impacts, including cumulative impacts, as a result of flooding are minimised and unacceptable risk[1] to people and property is not created.

[1] *'Unacceptable risk' is defined in State Planning Policy 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide.*

(1) Water Quality

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 The environmental values and quality of receiving waters within or downstream of a development site are protected or enhanced.	**A1.1** Water quality objectives identified in *Planning Scheme Policy No. 5 – Operational Works* are met[2]. Where a site includes or adjoins a buffer to a waterway or wetland established in accordance with the Code for Waterways and Wetlands, the water quality objectives are to be met prior to water entering that buffer.

(2) Water Cycle Management

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 The design and management of the development integrates water cycle elements so that: • potable water demand is reduced; • wastewater production is minimised; • stormwater peak discharges and runoff volumes are not worsened; • natural drainage lines and hydrological regimes are maintained as far as possible; • disconnection of impervious surfaces is maximised; and • reuse of stormwater and greywater is encouraged where public health and safety will not be compromised.	**A1.1** Integrated water management practices and infrastructure are designed in accordance with *Planning Scheme Policy No. 5 – Operational Works*.

(3) Flooding[3]

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 Development does not result in: • adverse impacts on flood conveyance capacity; • unacceptable risk[4] to people's safety; and • adverse impacts on the capacity to use land within the floodplain.	**A1.1** In areas identified on Regulatory Map 1.5 – Flood Prone and Drainage Constraint Areas Special Management Area: (a) works do not involve: (i) any physical alteration to a waterway or floodway including vegetation clearing[5]; or (ii) net filling exceeding 50m^3; **OR**

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[2] *For development involving more than 40% impervious area or more than 2000sqm total development area (excluding land that will not be disturbed during construction or subsequent use eg conservation areas, existing waterways), an Integrated Water Management Plan will be required to be prepared in accordance with Planning Scheme Policy No. 5 – Operational Works to demonstrate that the water quality objectives of the receiving waters would be met and that appropriate management practices can be implemented. For other development, the implementation of stormwater best management practices in accordance with the Planning Scheme Policy will be sought.*

[3] *Council may request the Integrated Water Management Plan to include a flood assessment element that demonstrates compliance with these Performance Criteria and Acceptable Measures.*

[4] *'Unacceptable risk' is defined in State Planning Policy 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide.*

[5] *Vegetation clearing for the purposes of this code and the relevant special management area is defined in Volume 1 of this Planning Scheme.*

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 continued	(b) any reductions of on site flood storage capacity is avoided and any changes to depth, duration and velocity of floodwaters of all floods up to and including the 100year ARI are contained within the site; **OR** (c) there is no change in the flood characteristics of the 100year ARI outside the subject site in ways that result in (i) loss of flood storage; or (ii) loss of/changes to flow paths; or (iii) acceleration or retardation of flows; or (iv) any reduction of warning times elsewhere on the floodplain. **A1.2** Stormwater peak discharges and levels are equivalent to the pre-developed condition. **A1.3** Where a "regulation line" has been set by Council to define the limit to which development may encroach onto a floodplain development is undertaken outside such "regulation line".
P2 For all floods up to and including the 100 year ARI: • **the safety of people on the site is maintained;** • **potential damage to property on the site is minimised; and** • **the functioning of essential services is maintained.**	**A2.1** (a) Development is sited on land that would not be subject to flooding during the 100 year ARI flood event. **OR** (b) There is no increase in the number of people living or working on the site, except where the premises are occupied on a short-term or intermittent basis (e.g. by construction / maintenance workers, certain agricultural and forestry workers). **OR** (c) Development complies with the standards for flood immunity set out in *Planning Scheme Policy No. 5 – Operational Works.* **A2.2** Any components of infrastructure that are likely to fail to function or may result in contamination when inundated by flood water (e.g. electrical switchgear and motors, water supply pipeline air valves) are: (a) located in accordance with the standards for flood immunity set out in *Planning Scheme Policy No. 5 – Operational Works;* **OR** (b) designed and constructed to exclude floodwater intrusion/infiltration. **A2.3** Infrastructure is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the 100 year ARI flood event.

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P3 Public safety and the environment are not adversely affected by the detrimental impacts of floodwater on hazardous materials manufactured or stored in bulk.	**A3.1** (a) The manufacture or storage in bulk of hazardous materials takes place above the 100 year ARI flood level. **OR** (b) Structures used for the manufacture or storage of hazardous materials in bulk are designed to prevent the intrusion of floodwaters from a 100 year ARI flood.

2.8 Code for Erosion and Sediment Control

PURPOSE

The purpose of this code is to:

(a) protect the environmental values and water quality objectives of waterways by ensuring that the influence of climate, hydrology, soils and topography is adequately considered in development.

(b) protect and manage soils, vegetation, hydrological regimes, and the healthy functioning of aquatic, marine and wetland ecosystems, natural processes, and habitat, by minimising soil erosion and sediment loss into waterways from development.

(1) Erosion & Sediment Control

PERFORMANCE CRITERIA	ACCEPTABLE MEASURES
P1 The development is compatible with the land use constraints of the site, and provides for best practice environmental management of stormwater based on a thorough assessment of site characteristics including erosion risk, so as to not cause adverse impacts on waterways including not causing adverse changes to: • hydrologic regimes including groundwater, waterway baseflow, and stream power; • waterway channel morphology and substrata; • the chemical, physical or biological condition of receiving waters	**A1.1** Acceptable solution for all developments: An appropriately qualified person[1] prepares (and certifies in the prescribed form) an Erosion Risk Assessment which predicts total soil loss for the development in accordance with Planning Scheme Policy No. 14 – Erosion and Sediment Control. **AND** Best practice environmental management measures to minimise erosion and sediment loss, as detailed in Planning Scheme Policy No. 14 – Erosion and Sediment Control, are applied to the site at all times, including during and after over-design storm events, until the site is permanently stabilised. **AND** The programming of works on the site seeks to minimise the total area of soil exposed at any one time. **AND** Disturbed land is promptly and progressively revegetated or otherwise protected, and must be stabilised with vegetation or synthetic cover in accordance with Planning Scheme Policy 14 – Erosion and Sediment Control. **AND** All drainage lines, diversion and collection drains and banks, chutes and outlets are able to carry peak flow, and remain stable, at least in the 10-year ARI time of concentration storm event. **AND** **A1.2** Acceptable Solution for development which has predicted total soil loss greater than 150 tonnes (high risk):

[1] ***Appropriately qualified person*** *is a person who has appropriate professional qualifications and experience as defined in Planning Scheme Policy No. 14 – Erosion and Sediment Control.*