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On-Site Stormwater Detention Policy

Version: 1.2

Date updated: 25 May 2018

Responsible Department: City Planning

1. Purpose

This policy details the safeguards enforced by Council to ensure that stormwater runoff generated by new developments does not adversely impact downstream properties for all storm events up to and including the 100-year ARI (1% AEP) event.

2. Definitions

Annual exceedance probability (AEP)	The probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.
Average recurrence interval (ARI)	The average or expected time period between exceedances of a given rainfall total accumulated over a given duration. It is implicit in this definition that the periods between exceedances are generally random.
Catchment	The land area draining to a point of interest.
Council	means Casey City Council, being a body corporate constituted as a municipal Council under the Local Government Act 1989
Councillors	means the individuals holding the office of a member of Casey City Council
Council officer	means the Chief Executive Officer and staff of Council appointed by the Chief Executive Officer.
Discharge	Rate of flow of stormwater expressed in unit volume per unit time (litres per second).
Drainage system	Comprises all components of stormwater infrastructure from the legal point of stormwater discharge to the receiving water body. Includes both constructed assets (pipes, culverts, overland flow paths, roadways, kerb and gutters) and natural assets (waterways and creeks).

Council policy documents change from time to time and it is recommended that you consult the electronic reference copy at www.casey.vic.gov.au/policiesstrategies to ensure that you have the current version. Alternatively you may contact Customer Service on 9705 5200.

On-site stormwater detention (OSD)	Temporary storage and controlled discharge of stormwater runoff intended to reduce the peak flow from a site.
Overland flow	The surface flow of stormwater runoff that occurs when the volume of runoff exceeds the capacity of the piped drainage system.
Runoff	The portion of rainfall that does not infiltrate into the soil, resulting in the presence of surface water.

3. Scope

This policy applies where:

- A development increases the impervious area of a site, and
- The existing drainage system is unable to accommodate an increase in stormwater discharge from the site.

4. Context

Australian Rainfall and Runoff and *Australian Standard AS3500.3:2003 Plumbing and Drainage* establish that stormwater runoff in all storm events up to and including the 100-year ARI (1% AEP) storm event must be conveyed safely and not present a hazard to people or cause significant damage to property.

Council has a responsibility under the *Local Government Act 1989*, *Planning and Environment Act 1987* and *Water Act 1989* to ensure that new developments within the municipal district do not adversely impact on the performance of the local stormwater drainage system or cause an unreasonable flow of water on to downstream properties in all storm events up to and including the 100-year ARI (1% AEP) storm event.

This will be achieved by ensuring that on-site stormwater detention systems are incorporated into new developments to reduce the peak flow of stormwater from the site. The on-site detention system reduces the peak flow by temporarily storing stormwater runoff within the development site while discharging to the Council drainage system at a controlled rate.

The need for an on-site stormwater detention system will be assessed by Council upon receipt of a planning application. The installation of an on-site stormwater detention system will be enforced as a planning permit condition.

5. Policy

5.1 On-Site Stormwater Detention Requirement

On-site stormwater detention is required where:

- A development increases the impervious area of a site, and

- The existing drainage system is unable to accommodate an increase in stormwater discharge from the site.

5.2 Exemptions from On-Site Stormwater Detention Requirement

Council may consider waiving a requirement for on-site stormwater detention where:

- The downstream drainage system has been upgraded to accommodate the increase in runoff from the site for all storm events up to and including the 100-year ARI (1% AEP) event.

- The Applicant can demonstrate to Council's satisfaction that provision of on-site stormwater detention on the subject site would not be of benefit in reducing the adverse impacts of flooding on downstream roads, properties and watercourses. The Applicant must model the total catchment containing the site at its full development potential while maintaining the existing drainage system. It is anticipated that this exemption may apply at the lower end of major catchments where delayed release of runoff may worsen the flood peak.

5.3 Design Objectives

The on-site stormwater detention system must:

- Restrict the rate of stormwater discharge to the permissible rate of discharge during the design storm event specified by Council (up to and including the 100-year ARI (1% AEP) event).

- Provide sufficient storage to ensure peak flow rates at any point within the downstream drainage system do not increase as a result of the development during the design storm event specified by Council (up to and including the 100-year ARI (1% AEP) event), unless the downstream drainage system has been designed to accommodate an increase in stormwater discharge from the site.

- Drain within 72 hours to ensure the storage volume is available for a subsequent storm event.

The on-site stormwater detention system should:

- Be integrated into the architectural design of the development so that adequate storage areas are included in the initial stages of the site design.

5.4 Design Guidelines

Council will publish and maintain a set of *On-Site Stormwater Detention Design Guidelines* to assist applicants to design the system in accordance with Council's requirements.

5.5 Maintenance Requirements

The property owner is responsible for the operation, maintenance and replacement of the on-site stormwater detention system. Where the on-site stormwater detention system is located on common property within a multidwelling site, the body corporate is responsible for the operation, maintenance and replacement of the system.

Council recommends that on-site stormwater detention systems are cleared of debris and sediment at least once per year to ensure correct operation.

The clearing of below ground storage facilities should be conducted in accordance with the requirements and risk control measures specified in *AS2865-2009 Confined Spaces*.

6. Administrative Updates

It is recognised that, from time to time, circumstances may change leading to the need for minor administrative changes to this document. Where an update does not materially alter this document, such a change may be made administratively. Examples include a change to the name of a Council department, a change to the name of a Federal or State Government department, and a minor update to legislation which does not have a material impact. However, any change or update which materially alters this document must be by resolution of Council.

7. Review

The next biennial review of this document is scheduled for completion by 31 January 2022.