

Amendment VC154 - Stormwater management

Planning Advisory Note 75

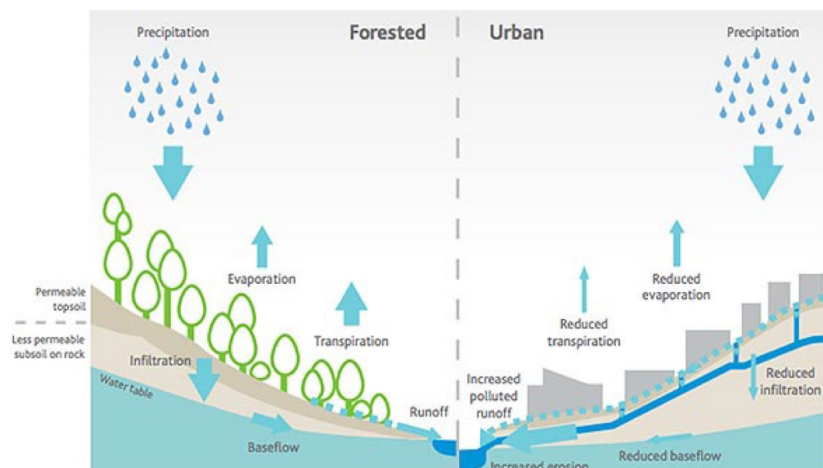
OCTOBER 2018

This advisory note provides information about the changes made to the *Victoria Planning Provisions* (VPP) and all planning schemes by Amendment VC154 to introduce new stormwater management provisions for urban development and amend State planning policies related to integrated water management.

Why is stormwater management important?

The increase in stormwater from urban development can impact the health and amenity of our waterways. Large volumes of stormwater entering our waterways can cause flooding that damages both natural and built environments.

Traditional stormwater management practices direct stormwater into drainage systems that are directly connected to urban waterways, carrying pollutants to our rivers and bays. Stormwater flows also impact waterways by scouring creek and riverbeds and degrading aquatic habitat.



Impact of development on the urban water cycle (adapted from Walsh et al. 2004)

Why have new stormwater management provisions been introduced?

The new provisions ensure that stormwater generated from all forms of urban development, not just residential subdivision and apartment developments, is managed in an integrated way to mitigate the impacts of stormwater runoff on the environment, property and public safety, and to provide cooling, local habitat and amenity benefits.



What changes have been made to the Victoria Planning Provisions?

A new integrated water management policy has been introduced into the Planning Policy Framework (PPF) at **Clause 19.03-3S** to embed integrated water management objectives and strategies in urban land-use planning.

This requires adoption of an integrated approach to the planning, design and assessment of new developments which brings all the elements of the water cycle together, including sewage management, water supply, stormwater management and water treatment, to maximise community and environmental benefits.

New and amended planning provisions, including a new **Clause 53.18 - Stormwater management in urban development**, have been introduced to extend the existing stormwater management requirements for residential subdivision and apartment developments to:

- All commercial and industrial subdivisions and developments
- All public use developments
- All residential multi-dwelling developments

Clause 53.18 Stormwater management in urban development

The new Clause 53.18 applies to non-residential development in the:

- Commercial 1, 2 and 3 Zones
- Industrial 1, 2 and 3 Zones
- Public Use Zone
- Public Park and Recreation Zone
- Special Use Zone, Comprehensive Development Zone, Priority Development Zone, Capital City Zone and Docklands Zone
- Mixed Use Zone, Township Zone, Residential Growth Zone, General Residential Zone and Neighbourhood Residential Zone.

Clause 56.07 - Integrated water management, already applies stormwater management provisions to residential subdivision – see Planning Practice Note PPN39: *Using the integrated water*

management provisions of Clause 56 - Residential subdivision for guidance about residential subdivision.

Clauses 55.07 and 58.03 already apply stormwater management provisions to an application for an apartment development (see the *Apartment Design Guidelines for Victoria* (DELWP, 2017) for guidance about stormwater management for apartment development).

The stormwater management requirements have been extended to all multi-dwelling residential development by amending Clause 55.03-4 – Permeability to include the new stormwater requirements.

The new Clause 53.18 does not apply to:

- A VicSmart application.
- An application for development associated with the use of land for agriculture or earth and energy resources industry.
- An application to alter, extend or make structural changes to an existing building provided the gross floor area of the building is not increased by more than 50 square metres.
- An application to construct a building with a gross floor area not exceeding 50 square metres.
- An application to construct or carry out works with an area not exceeding 50 square metres.
- An application to subdivide land into lots each containing an existing building or car parking space.
- An application to construct a building or to construct or carry out works on a lot in a subdivision that was assessed against the new stormwater provision.
- An application for land affected by a development plan or incorporated plan that was approved or incorporated in the planning scheme before the approval date of Amendment VC154.
- An application lodged before the approval date of Amendment VC154.
- An application for an amendment of a permit under section 72 of the Act if the original permit application was lodged before the approval date of Amendment VC154.



How do the new stormwater management provisions operate under Clause 53.18?

An application must be accompanied by details of the proposed stormwater management system, including drainage works and retention, detention and discharges of stormwater to the drainage system.

There are three key elements to be met under Clause 53.18:

- Stormwater management objectives and standards **for subdivision**
- Stormwater management objectives and standards **for buildings and works**
- Site management objectives and standards **for site management prior to and during the construction period.**

Clause 53.18 operates in the same way as Clauses 54, 55 and 58. An application:

- must meet all of the relevant objectives
- should meet all of the relevant standards.

The decision guidelines at Clause 53.18-7 guide the assessment of applications against the objectives.

Meeting the stormwater management objectives for subdivision - Standard W1

Stormwater management systems must be designed and managed in accordance with the requirements of the relevant drainage authority. In metropolitan Melbourne, this is either Melbourne Water (the water authority) or the local council where a catchment is 60 ha or less. In regional areas, the local council is generally the relevant drainage authority.

Drainage requirements for the effective passage of stormwater flows are also included in this standard.

If reuse of stormwater is proposed, the stormwater system must be designed and managed to the requirements and satisfaction of the water authority.

The stormwater management system must also be designed to meet the *Urban Stormwater – Best Practice Environmental Management (BPEM) Guidelines* (Victorian Stormwater Committee, 1999).

The current best practice performance objectives are:

- 80 per cent retention of typical urban annual suspended solids load
- 45 per cent retention of typical urban annual total phosphorus load
- 45 per cent retention of typical urban annual total nitrogen load.
- 70 per cent reduction of typical urban annual litter load
- maintain flow discharges for the 1.5 year Average Recurrence Interval (ARI) at pre-development levels.

The BPEM Guidelines are available on Commonwealth Scientific and Industrial Research Organisation (CSIRO) publishing website: publish.csiro.au/book/2190

For further information on designing stormwater management systems refer to:

- Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2016, **Australian Rainfall and Runoff**

This is a national guideline document, data and software suite that can be used for the estimation of design flood characteristics in Australia. It supersedes Australian Rainfall and Runoff 1987 and includes practical advice for incorporating climate change considerations into the design process.

Visit: arr.ga.gov.au/arr-guideline

- Melbourne Water has produced detailed guidelines for safety criteria as part of its **Land Development Manual (LDM)**. The LDM index is a handy index of information for the land development process.

Visit: melbournewater.com.au/planning-and-building/developer-guides-and-resources/ldm-index



Meeting the stormwater management objectives for buildings and works - Standard W2

Standard W2 also requires the design of a stormwater management system to meet the BPEM Guidelines.

The standard requires the development to be designed to minimise the impact of chemical pollutants and other toxicants. This can be achieved by:

- avoiding the use of chemical pollutants or only using chemicals in highly managed/isolated work areas
- taking all reasonably practicable measures to avoid or treat harmful chemical pollutants
- bunding and covering, or roofing of areas, to isolate where potentially harmful chemicals are stored, loaded and otherwise handled from the stormwater system
- ensuring that these high-risk areas drain to suitable forms of treatment, which may be on or off-site (with the agreement of relevant authorities).

EPA has published guidance on liquid storage and handling to help businesses with practical controls to ensure liquid substances are appropriately stored and handled to prevent spills and leaks and harm to the environment and human health:

- *Liquid storage and handling guidelines* (publication 1698).
- *Prevent liquid spills and leaks* (publication 1699)
- *Preventing liquid leaks and spills from entering the environment* (publication 1700).

Visit: epa.vic.gov.au/business-and-industry/guidelines/liquid-storage-and-handling-guidance

Standard W2 also requires the stormwater management system to be designed to contribute to cooling, improving local habitat and providing attractive and enjoyable spaces. This can be achieved by:

- using stormwater (or other alternative water supplies) to irrigate (directly or passively) public or private landscape areas (for example, gardens, green walls and roofs and trees) for recreational, environmental or amenity benefits

- using stormwater (or other alternative water supplies) to keep water bodies full (for example, wetlands and lakes) for recreational, environmental or amenity benefits.

Meeting the site management objectives - Standard W3

Standard W3 requires an application to describe how the site will be managed prior to and during the construction period. The application should include a site environmental management plan describing how the following impacts will be managed:

- erosion and sediment
- stormwater
- litter, concrete and other construction wastes
- chemical contamination.

EPA's online guide, *Preventing erosion and sedimentation impacts: A guide for business*, sets out a risk-based approach to preventing and minimising impacts from erosion and sedimentation.

Visit: epa.vic.gov.au/business-and-industry/guidelines/erosion-and-sedimentation-impacts-guidance

Melbourne Water provides information on how to prepare a site environmental management plan

Visit: <https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/standards-and-specifications/develop-site>



More information on stormwater management

More information on stormwater management is available online:

- **EPA** provides guidance and resources on stormwater management: epa.vic.gov.au/your-environment/water/stormwater
- **Melbourne Water** provides information on how to apply best practice stormwater management and the use of WSUD for subdivision and/or development: melbournewater.com.au/planning-and-building/stormwater-management
- **Clearwater** is a leading capacity building program for urban water management providing support to local government, industry groups, government agencies, non-government organisations and research institutions. It provides a wide range of tools and background information regarding stormwater management issues and the Clearwater website has many examples of WSUD solutions: clearwater.asn.au
- **Stormwater Victoria** advocates for improved management of stormwater, builds industry capacity and recognises industry best practice stormwatervictoria.com.au

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