SECTION 18 STORMWATER MANAGEMENT

18.1 INTRODUCTION

Stormwater drainage refers to systems from private developments such as;

- Inter-allotment stormwater draining through adjoining private property that remain in private ownership,
- Stormwater draining to a public road that reverts to Council's ownership.

Nuisance drainage problems resulting from developments are one of the most commonly reported complaints received by many Councils. Therefore disposal of stormwater drainage requires special attention.

Since private development is a primary contributor to stormwater entering Council's drainage system, the cost of providing a new drainage system from private development that is to revert to Council's ownership, must be borne by the developer.

Inter-allotment stormwater drains through private property remain forever the responsibility of the owner of the property. This includes inter-allotment easements that drain stormwater unless Council is mentioned in the Title Deeds as being responsible for maintenance of the easement.

Many drainage structures are required to be upgraded to meet current standards as a result of new development. Generally the developer is responsible for the cost of up-grading these structures in the vicinity of the development, where it can be demonstrated that the proposed development further overloads the existing drainage system.

North Sydney has many areas of kerb having heritage and conservation significance. Heritage kerb must be reconstructed where it is impacted by drainage systems from private development at no cost to Council.

Most development requires a drainage connection to a Council gutter or stormwater pipe located in an adjoining public road. Consequently, most development involves the carrying out of excavation or other work within the footpath or carriageway of a public road.

18.1.1 General Objectives

The general objectives of this Section of the DCP are to:

O1 To establish a long term drainage strategy for affected land, that will control stormwater run off from development and minimise nuisance flow onto adjacent land.

O2 To mimic pre-development or natural drainage systems as much as is possible.

O3 To improve Council stormwater drainage systems by achieving a high level of compliance with Council's design and construction standards.

O4 To minimise the impact of new development on the existing stormwater system.

O5 To minimise the risk of injury to people and damage to private and public property from the effects of stormwater disposal.

O6 To preserve, conserve and reinstate of heritage kerbs.

18.1.2 When does this section of the DCP apply?

This section of the DCP applies to all development applications that involve:

(a) An increase in hard surface areas on a site; or

(b) Any change to the existing stormwater drainage requirements of the site.

18.1.3 Relationships to Other Sections

Where relevant, this section of the DCP should be read in conjunction with the following Sections of the DCP:

(a) Part A: Section 3 – Submitting an Application;

(b) Part B: Section 1 – Residential Development;

(c) Part B: Section 2 – Commercial and Mixed Use Development;

(d) Part B: Section 13 – Heritage and Conservation;

(e) Part B: Section 15 – Bushland;

(f) Part B: Section 16 – Tree and Vegetation Management;

(g) Part B: Section 17 – Erosion and Sediment Control; and

(h) Part B: Section 20 – Public Infrastructure.

18.1.4 Further Information

For more information about stormwater design and construction and associated details regarding permits, fees and charges consult with Council and refer to:

(a) North Sydney Council *Performance Guide*; and

(b) North Sydney Council *Infrastructure Specification Manual*.

18.2 REQUIREMENTS

18.2.1 Objectives

O1 To ensure that stormwater drainage systems are satisfactorily designed to minimise impacts to neighbouring properties.

O2 To reduce stormwater discharge and improve stormwater quality through the incorporation of WSUD on-site.

18.2.2 Provisions

P1 A *Stormwater Management Plan* is required for all developments and must demonstrate compliance with this section as well as the relevant stormwater management provisions contained in Part B: Section 1 – *Residential Development*, Part B: Section 2 – *Commercial and Mixed Use Development* or Part B: Section 3 – *Non-residential Development in Residential Zones* to the DCP.

P2 New and reconstructed stormwater drainage systems should be designed and constructed to a minimum standard that complies with the technical requirements of the North Sydney Council *Performance Guide* and *Infrastructure Specification Manual*.

P3 Stormwater drainage disposal from private property should not cause nuisance drainage problems to any other property. Nuisance drainage is any damage to other property from stormwater caused by the development of property.

P4 Where stormwater drainage from private property cannot drain directly to a road without first draining through adjoining private property, an inter-allotment stormwater drainage easement is required. This easement should be sought by negotiation, mediation or by using mechanisms of s.88 of the *Conveyancing Act, 1919*.

P5 Easement widths are governed by requirements for access and maintenance of pipes by appropriate machinery.

P6 Zone of influence of stormwater pipes should not affect the structural stability of any structure, building or utility service.

P7 Stormwater should not be diverted into an adjoining catchment unless it can be demonstrated that the diversion will not cause detriment to any property or structures.

P8 Where an inter-allotment drainage easement cannot be obtained, Council may consider alternative proposals based on their merit.

P9 Minimum permissible pipe size leading from down pipes to primary inter-allotment drainage pipes is 100mm internal diameter sewer grade pipe or greater as required to meet drainage design criteria. Minium permissible pipe size for primary inter-allotment drainage systems is 150mm diameter sewer grade pipe.

P10 Stormwater drains may not be constructed on public property without holding a *Street Opening Permit*, a Construction Certificate and design approved by Council.

P11 Stormwater drainage systems through adjoining private property should be designed and constructed to allow for an emergency overflow path to be located within the inter-allotment drainage easement.

P12 Pipes within an easement are permitted to carry only the amount of stormwater for which they are designed. Damage caused to property by unapproved works maybe be subject to legal action and a claim for damages.

P13 Physical obstructions should not be placed within an easement or emergency overflow path that may block the flow of surface run-off.

P14 Sandstone kerb and gutter with heritage significance is to be retained and not replaced with concrete.

P15 The stormwater drainage is designed to ensure existing downstream systems are not adversely affected. It should:

(a) 'fit' as much as possible, within the hydrology of the natural system;

(b) emphasise stormwater detention, vegetated overflow lines, sensitive location of discharge points and quality of receiving waters;

(c) minimise non-porous surfaces to reduce stormwater run-off;

(d) store water for re-use (such as in rainwater tanks);

(e) retain existing trees and;

(f) exclude land needed for natural or modified drainage, floodplains, remnant vegetation, environmental values;

(g) ensure stormwater drains are designed to accept rainwater only excluding other pollutants from the City's waterways.

P16 On -site detention, preferably on unpaved or grass surfaces, is used to trap and remove contaminants from stormwater and increase infiltration into the ground. Where technically possible, on-site gravel filled retention pits are incorporated.

18.3 MAINTENANCE AND MONITORING

18.3.1 Objectives

O1 To ensure that erosion and sediment impacts are minimised during both the construction and post-construction period and that drainage systems are monitored and maintained.

18.3.2 Provisions

During Construction

The consent holder has an ongoing responsibility to maintain all sediment control devices during construction as required by the Erosion and Sediment Control Plan and as directed by Council. Stormwater drainage and erosion/sediment control devices will be inspected in the course of Council site inspections following issue of a construction certificate.

Where non-compliance with the approved construction drawings or Erosion and Sediment Control Plans occurs, Council may charge a reinspection fee, claim the environmental bond, and issue a stop work notice or infringement notice.

General Maintenance

P1 The owners of the properties affected by stormwater drainage easements are required to:

(a) Permit stormwater to be drained via the stormwater drainage system;

(b) Keep the stormwater system clean and free from silt, rubbish and debris;

(c) Maintain and repair the stormwater system so that it functions in a safe and efficient manner;

(d) Replace, repair, alter and renew the whole or parts of the stormwater system within the time and in the manner specified in a written notice issued by the Council;

(e) Not make any alterations to the stormwater system or elements thereof without prior consent in writing from the Council;

(f) Permit the Council, or its authorised agent, from time to time upon giving reasonable notice to enter and inspect the land for compliance with the requirements of this clause;

(g) Permit the Council, or its authorised agent, at any time and without notice in the case of an emergency to enter and inspect the land for compliance with the requirements of this clause; and

(h) Comply with the terms of any written notice issued by the Council in respect to maintenance requirements within the time stated in the notice.

P2 Where non-compliance occurs legal action may be considered under legislation dealing with environmental protection.

18.4 PROCEDURES

18.4.1 Objectives

O1 To provide a framework which outlines the procedures to be followed when proposing and undertaking stormwater drainage works.

18.4.2 Provisions

P1 When lodging a development application the applicant should provide:

(a) Conceptual stormwater design plans; and

(b) Conceptual stormwater drainage easement details.

P2 Before starting stormwater drainage construction work, obtain:

(a) Street Opening Permit;

(b) Construction Certificate; and

(c) Copy of design plans approved with the construction certificate.

P3 With an application for a Construction Certificate the applicant should provide:

(a) Evidence of an inter-allotment stormwater drainage easement having been created (if applicable);

(b) Detailed stormwater drainage design complying with the conditions of the Development Consent, this DCP, the Performance Guide and references for design and construction of infrastructure in North Sydney;

(c) Evidence of having paid all contributions, bonds and securities to Council; and

(d) Dilapidation report showing the pre-development condition of private and public property, utility services and heritage items.

P4 A qualified Hydraulics engineer should prepare Stormwater designs. Designs should incorporate hydraulic grade line analysis and demonstrate that WSUD has been incorporated to the maximum extent practicable and that the capacity of the existing downstream drainage system is sufficient to carry any additional flow from a development.

P5 Before applying for a refund of bonds and/or security, applicants are required to obtain approval from Council for completion of the stormwater drainage works.

P6 Work must not be carried out in a public road or footpath unless consent has been granted by Council (or other relevant roads authority) under s.138 of the *Roads Act 1993* and s.68 of the *Local Government Act 1993*. These are separate approvals to development consent or a complying development certificate. Consult with Council to determine if a permit is required.

P7 Where stormwater from development contributes to the overload of existing drainage systems at some distance downstream of the development site, Council may consider carrying out *works in association* with works required by the developer.

18.5 STORMWATER DRAINAGE MATRIX

Table B-18.1 comprises a Stormwater Drainage Matrix which describes the process, prerequisites and references for addressing stormwater drainage.

TBALE B18.1: Stormwater Drainage Matrix

This is About	Main activities	The Process	Pre-requisite	Compliance with	References	Comments
Stormwater Drainage	• Drainage from private property that is to revert to Council' s ownership	1. Lodge a Development Application	• Survey details • Concept stormwater design • Statement of Impact of stormwater • Dilapidation report	• This section of the DCP • Development Application Guides	• NSC Performance Guide • NSC Infrastructure Specification Manual	• Provide enough information to allow Council to assess the merit of the proposal • The Statement of Environmental Impact must address the issues raised in the checklist within the EP&A Act
		2. Obtain development consent	• Council considers impact of stormwater from new development on capacity of existing infrastructure and adjoining property	• EP&A Act 1979		• In order to minimise delay the applicant should ensure that the Information provided in the application is relevant, accurate and fit-for-purpose
		3. Lodge a Construction Certificate Application	• Detailed stormwater design • Erosion Control Plan • Section 138 Permit • Pay all fess and bonds • Certifications as required	• This section of the DCP • Development consent • s.138 of Roads Act 1993 (if Applicable)	• NSC Performance Guide • NSC Infrastructure Specification Manual	• Provide enough detailed design information to show that work can be built as per development consent conditions • No work is permitted on public property without a 138 Permit • Bonds are a security against damage to Council Infrastructure
		4. Obtain a Construction Certificate	• PCA assesses docs for compliance with development consent	• Development Consent		
		5. Start Construction	• Install erosion and sedimentation control measures • Given Council Notice	• This section of the DCP • Construction Certificate	• NSC Performance Guide • NSC Infrastructure Specification Manual	• A Construction Certificate must be obtained before construction may commence.
		6. Apply for Occupation Certificate	• As built drawings • Video of drain pipes • Certifications as required • Council approval	• BCA • This section of the DCP • Construction Certificate		• Video must show drainage pipes to be clean • Any unclean pipes must be cleaned before Council approves works