

MEMORANDUM

Project:	Byron Shire Council	Date:	22 June 2021
To:	Scott Moffett	From:	Mark Page
ATT:	Scott Moffett	CC:	David Sexton
Subject:	Byron Shire Council DCP Update - Stormwater Quality Management		

Introduction

The purpose of this memorandum is to present the proposed stormwater quality management chapter for a future update to the Byron Shire Development Control Plan (DCP). This DCP chapter should prescribe the required stormwater treatment measures and the development types to which the requirements should be applied.

The recommended Water Quality Objectives (WQOs) for Byron Shire Council, have been based on a benchmarked water quality review undertaken for different climatic regions within Queensland. The performance target for the South East Queensland (SEQ) Region has been recommended as this area has similar subtropical/temperate climate to Byron Shire. Also, the performance targets are adopted by neighbouring Northern Rivers Local Government (NRLG) areas like Tweed Shire and Ballina Shire.

DCP Chapter: Stormwater Quality Management

PURPOSE

The purpose of this chapter is to:

- I. Ensure that development does not cause adverse impacts to receiving waterways and water bodies, and their associated ecosystems.

OBJECTIVES

The objectives of this chapter are to:

- I. Assist applicants to ensure that development does not impact on the quality of stormwater runoff from their site or to any waterway or water body.
- II. Provide advice and direction to applicants on the adoption of appropriate stormwater quality treatment measures, commensurate to the type of development and anticipated water quality impacts.
- III. Provide water sensitive design (WSUD) principles that will assist development to meet the prescribed water quality objectives (WQO).

WATER SENSITIVE URBAN DESIGN

Byron Shire Council (BSC) is committed to improving water quality in the design of new developments by adopting integrated urban water management across the Shire. This is achieved through the adoption of several measures including the principles of Water Sensitive Urban Design (WSUD) for new developments. New developments are required to implement the principles of WSUD in its design and construction to protect receiving waters and environments. The principle aims to minimise the impacts of development upon the water cycle and achieve more sustainable forms of urban development.

APPLICATION

This specification applies to development that includes applicable land development or use which may impact on the quality of stormwater runoff discharging from the site or to any waterway or water body. It includes but is not limited to construction, operation and use of:

- a. Subdivisions
- b. Development civil works including but not limited to buildings, roads, car parks, landscaping, drainage works, etc.

This DCP section does not apply to any one of the following:

- i. development sites within an approved subdivision that has included the provision of compliant end of pipe stormwater treatment for the whole subdivision
- ii. a single dwelling-house
- iii. a dual occupancy development
- iv. a development which creates an additional impervious area of less than 300 m².

WATER QUALITY CONTROL REQUIREMENTS

Stormwater quality treatment is required for all development with a footprint greater than 2500m², which is deemed High Risk Development. Developments with footprint less than 2,500m² are deemed Low Risk Development and will need to meet the deemed to comply solutions design criteria specified within the Byron Shire Council Water Sensitive Urban Design (WSUD) Guideline, or prepare a Stormwater Management Plan (SWMP) that demonstrates how the development satisfies the water quality objective performance criteria prescribed in Table 1.

WATER QUALITY OBJECTIVES

The load reduction targets for developments are to be achieved by a sequence of treatment measures developed using MUSIC (Model for Urban Stormwater Improvement Conceptualisation) with parameters in accordance with the Water by Design MUSIC Modelling Guideline for SEQ and the BSC WSUD Guideline. It should be noted that the BSC WSUD Guideline is a separate document to the Comprehensive Guideline for Stormwater Management which relates to stormwater quantity management, however, they should both used conjunctly.

All developments must achieve the following minimum percentage reductions of the post development average annual pollutant load (TP, TSS, TN and GP) in accordance with Table 1.0. Alternatively, eligible developments may provide stormwater treatment in accordance with the deemed to comply solutions outlined in the BSC WSUD Guideline.

Table 0.0: Byron Shire Council Water Quality Objectives

Pollutants	Minimum Post Development Average Annual Load Reduction Target (%)
Total Suspended Solids (TSS)	80
Total Phosphorus (TP)	60
Total Nitrogen (TN)	45

Gross Pollutants (>5mm)	90
Total Hydrocarbon (TH)	90

In the instance where the WQO's cannot be achieved through standard WSUD measure due to site constraints and it is acknowledged by BSC, alternative measures including but not limited to tree pits, pipeless bioretention and **offset payments** could be discussed with Council.

DOCUMENTATION TO SUPPORT APPROVAL

All works subject to Development Applications (DA) and trigger water quality requirements must prepare a Stormwater Management Plan (SMP) that is conceptual at the DA stage. However, future detailed designs at the Construction Certificate stage must ensure that the objectives and performance parameters for the WSUD asset are met by submitting a Detailed Stormwater Management Plan (DSMP) which include all necessary drawings and specifications for construction, operational phase, performance monitoring, asset handover and maintenance schedules and must be included with the construction certificate application.

Where deemed to comply solutions are submitted, they must be accompanied by a completed development assessment checklist and signed by a suitably qualified professional engineer.

IMPLEMENTATION OF CONTROLS

For the implementation of stormwater treatment measures, the following guidelines needs to be referred to for guidance on design, construction, maintenance and asset handover;

- I. BSC WSUD Guideline;
- II. MUSIC Modelling Guideline;
- III. Water by Design Bioretention Technical Design Guideline;
- IV. Construction and Establishment Guideline: Swale, Bioretention Systems and Wetlands;
- V. Maintaining Vegetated Stormwater Assets;
- VI. Transferring Ownership of Vegetated Assets; and
- VII. Comprehensive Guideline for Stormwater Management.