

APPENDIX D



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NL140027

31 January 2014

Monteath & Powys Pty Ltd

Mr Darren Holloway

Suite 13, 125 Bull Street

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Dear Darren,

Re: Coffs Harbour Water Quality Guidelines Review

As requested, we have reviewed the water quality policy and guidelines, as well as riparian buffer zone requirements in Coffs Harbour City Council Local Government Area (LGA) and are writing to convey the findings and recommendations from our investigation. Contained herein is a summary of the recommendations regarding water pollution reduction targets, a discussion of water quality management devices that may be suitable for implementation within new development, as well as an outline of riparian corridor definition and management.

We understand several parcels of land within the LGA have been deferred from the current Development Control Plan (DCP) 2013 pending further advice. A plan showing the locations of the parcels of land in question is shown as an attachment to this letter. A number of these had approvals under the previous DCP and it is understood these developments will not be further encumbered by this advice.

A number of studies have been undertaken for the affected water bodies in question and these have been reviewed in conjunction with the relevant policies and guidelines, as listed below;

- Water Sensitive Urban Design Policy (Coffs Harbour City Council, 2013);
- Water Sensitive Urban Design Guideline (Coffs Harbour City Council, 2012);
- DCP 2013 – Component B7 Biodiversity Requirements (Coffs Harbour City Council, 2013);
- DCP 2013 – Component C8 Integrated (Natural) Water Cycle Management Requirements (Coffs Harbour City Council, 2013);
- Hearnese Lake Estuary Management Study and Plan (BMT WBM, 2009);
- Moonee Creek Estuary Management Plan (BMT WBM, 2008);
- Controlled Activities on Waterfront Land – Guidelines for Riparian Corridors on Waterfront Land (NSW Department of Primary Industries – Office of Water, 2012);
- Controlled Activities on Waterfront Land – Guidelines for Vegetation Management Plans on Waterfront Land (NSW Department of Primary Industries – Office of Water, 2012).

Prepared	GB	29/01/2014
Reviewed	AB	30/01/2014
Admin	KW	31/01/2014



Water quality targets currently apply to the following types of development in Coffs Harbour LGA; residential developments larger than a single dwelling, commercial, industrial and tourist developments. These targets are outlined in the **Water Sensitive Urban Design Policy** and are reproduced below in Table 1.

TSS	80%
TP	60%
TN	45%
Gross Pollutants	90%

Table 1 – Water quality reduction targets

The **Water Sensitive Urban Design Guideline** identifies high environmental stress in Moonee Creek and Double Crossing Creek and outlines specific MUSIC parameters that should be used when modelling treatment train efficiency. It also reiterates that developments should be assessed on their merits.

In line with these documents, the percentage reduction target approach is considered suitable for the deferred parcels of land. MUSIC modelling should be undertaken in accordance with these documents and their references as a means of quantitatively assessing compliance.

Water quality treatment was also considered as part of the **Moonee Creek Estuary Management Plan** and the **Hearnes Lake Estuary Management Study and Plan**. In particular, the latter suggests that targets be defined on a development by development basis and urges a “net positive environmental outcome compared to the existing conditions”.

This led to some consideration that for the Hearnes Lake locality, water quality targets should be in line with the **Neutral or Beneficial Effect on Water Quality Assessment Guideline** (Sydney Catchment Authority, 2011). This is a rigorous assessment that considers not only the mean annual pollutant loads, but the frequency of pollutant concentrations as well. For developed sites, the mean annual loads shall be less than the existing case and the concentration of pollutants shall be less than the existing case up to the 85th percentile flow.

Given that the parcels of land are small compared to the total contributing catchment, as well as the extensive degradation of the land due to agricultural endeavours further upstream, it is considered that applying these controls would not have a significant impact on receiving waters if upstream properties remained untreated. Furthermore, the size and hence maintenance cost of the treatment devices required would increase to meet the more stringent requirements. This may lead to neglect and the devices not functioning as originally intended. In any case, the money that would otherwise have been constructing and maintaining these larger treatment options may be better spent on revegetation and retrofitting water quality improvement devices upstream adjacent to some of the larger pollutant generating sites. Furthermore, we note the general concerns with long term maintenance of treatment devices, irrespective of their size of treatment target, and potential for reduced treatment efficiency over time.

It is recommended that water treatment devices suitable to the location of and type of development are implemented. The Water Sensitive Urban Design Guideline and its supporting documentation give a thorough coverage of water sensitive devices that may be used. Generally these include rainwater tanks, buffer strips, vegetated swales, permeable paving, sediment ponds, bio retention gardens and basins, ponds and artificial wetlands. Certainly this list is not exhaustive and in certain circumstances proprietary treatment devices such as Gross Pollutant Traps (GPTs) and cartridge filter pits may be more appropriate. Furthermore, certain situations may preclude the use of certain devices including a high water table, acid sulphate soils or tidal inundation. A detailed assessment of the site should be undertaken when determining the most appropriate treatment train for future developments.

Moonee Creek	100m
Skidders Creek	50m
Hearnes Lake and Double Crossing Creek	50m
SEPP 14 Wetlands	50m
Willis Creek	50m
Water Courses (stream order three or greater)	40m

First order watercourse	10m
Second order watercourse	20m
Third order watercourse	30m
Fourth order watercourse	40m

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