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Regional Development Manager  
Woolworths Limited  
PO Box 8000  
Baulkham Hills, NSW 2153

26 March 2013

**Attention: Catherine Maddox**

Dear Madam,

### **Warnervale – Stormwater Quantity Management Philosophy**

We refer to the proposed management of stormwater runoff from the Woolworths site at Warnervale and the Department of Planning's request to provide additional information to support the proposal.

The Department of Planning request is restated as follows:

- ***To determine that the stormwater arrangements will be satisfactory, additional information is required to demonstrate how much stormwater run off will be generated from the proposal, and how this can be adequately disposed of. Information to be provided should include whether the detention basin has capacity to accommodate this runoff without impacting future development of the Warnervale Town Centre site, flow specifications raised by RMS, and other measures that may be needed such as on-site detention.***

We have been advised by Landcom's engineering team that the proposed detention basin to be located in the southern catchment on Landcom land upstream of Sparks Road, shall provide for a contributing impervious percentage of 65% from the total contributing catchment area. From our calculations the total Woolworth's contributing sub catchment area draining to the detention basin is 5.7356 ha.

The southern Woolworth's precinct is proposed for early development. This strategy is based on the understanding that the proposed precinct detention facility shall be in place to coincide with the completion of the Stage 1 development of the Woolworth's Town Centre precinct.

To provide for this contribution the following strategy for managing flows from the Woolworths sub catchment is proposed:

- i) Based on a 65% impervious fraction, the total storage volume to be allocated in the proposed precinct detention facility for the Woolworth's contributing area is 1,525 m<sup>3</sup>.

This shall be proportioned as follows:

- a) 100% of Runoff from the proposed Public Domain Road network within the Woolworth's contributing catchment shall be directed to the proposed Precinct detention system.
- b) The balance of the Woolworth's allocation (up to 1,525 m<sup>3</sup>) shall be provided from the proposed private development sites within the Woolworth's precinct.
- c) Any additional storage required from the Woolworth's precinct contributing catchment shall be provided by onsite detention facilities on the private development sites within the Woolworths site. It is proposed to pro-rata this on a site area basis.

The detention requirements for the site may also be able to be catered for by providing extra storage in the pipes throughout the site. It is noted that the design of the onsite detention systems within the Woolworths site will be subject to final detailed design and final storages/layouts shall be confirmed at this stage.

We note the RMS letter of 22 August 2012 which states that *"it has been determined that the peak outflow from the drainage basin based on the water level of the basin being at 17.55 metres at time of a rain event will be 16.17 cubic metres per second and I can confirm that this peak flow rate is acceptable to RMS"*. The Woolworths site is a contributing catchment to this detention basin. The design of this basin is being undertaken by Landcom's design engineers and therefore we are unable to provide any comment on the design of this basin.

We trust this addresses the Department's request.

Yours faithfully



**Mott MacDonald Australia**

**PHIL MCBRIDE**

NSW DIVISIONAL DIRECTOR

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