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Development Consultants

Our Ref:12122BDate:26TH July 2018Your Ref:Picton East / Reeves Creek Rezoning

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Mr. Greg Kellner Director Dartanyon Pty Ltd. Suite 5, Level 1, 23 Fairwater Drive, Harrington Plaza, Harrington Park NSW 2567

Dear Greg,

Re: Picton East / Reeves Creek Rezoning Lot Layout and Limit of Rezoning Review – Stormwater Management Report

As requested, JMD have now reviewed the Stormwater Management Report prepared by Cardno and dated April 2015 with Ref: NA50613047. The report has been reviewed to confirm if the current changes to the rezoning limits and proposed lot layout will affect the results and conclusions detailed in the report.

To help reduce developed peak flows to pre-development levels Cardno had proposed that five (5) new OSD basins be installed. Four (4) of the basins were to be located in the main reaches of the creek while the fifth basin was proposed to be located upstream of the Emmett Street outlet.

To help improve water quality from stormwater flows discharging from the development, five (5) bioretention filters (raingardens) and three (3) Humes Jellyfish filters were proposed by Cardno. They are to be located at appropriate locations throughout the development.

The Cardno Report concluded that:

"This stormwater management report investigated the performance of the proposed stormwater management strategy which includes on-site detention basins, gross pollutants traps and bioretention basins to treat the stormwater runoff from the development.

The combination of the above measures and the modelling results has demonstrated the proposed stormwater management strategy has:

- Meets the water quality objectives in accordance with Wollondilly Shire Council Design Specification;
- Incorporated the WSUD principles and managing urban stormwater as outlined in the OEH General Guidelines for Strategic Planning;
- Controlled the post development peak runoff to match the pre development condition; and
- Identified the order of the existing watercourses and the associated requirements to protect and maintain them."

Since this report was issued the limits of rezoning have been reduced and under a request from Council an additional diversion drain and OSD Basin has been proposed upstream of the four (4) basins in the



main creek but located outside the Creek. The intention of these additional drainage elements was to reduce the existing flow being conveyed through Emmett Street. The additional diversion drain and OSD Basin will be designed to reduce peak flows to pre-development levels for all storm events up to and including the 1% AEP.

As the limits of the proposed development have been reduced, the site will be less impervious than originally estimated in the Cardno modelling. This will result in lower peak flows and lower levels of suspended solids and nutrients within the water runoff. As such, JMD confirm that the current changes to the rezoning limits and proposed lot layout will not affect the results and conclusions detailed in the original report.

As the additional diversion drain and OSD Basin are located outside the creek and will reduce post development flows to pre-development levels for all storm events up to and including the 1% AEP, they will have a negligible impact on the results detailed in the Cardno report.

JMD note that all sizes and locations are subject to detailed design and modelling during future DA applications.

If you have any questions or would like to discuss further please do not hesitate to contact me on (02) 4625 5055.

Yours faithfully

Terry Hams BE (Civil) MIE Aust (409949) CP Eng