



Greenfield Delivery
GPO Box 39
SYDNEY NSW 2001

Attention: Paul Robilliard

Contact Jeremy Morice
Phone 02 4224 9736
Fax 02 4224 9740
Email jeremy.morice@dpi.nsw.gov.au

Our ref ER23296 & ER22524
File No 9057307

12 December 2014

Dear Sir

Re: Leppington Draft Precinct Plan

Thankyou for providing the Office of Water an opportunity to provide further comment on the Leppington Draft Precinct Plan.

The Office of Water has reviewed the Precinct Plan and provides the following comments:

Riparian Corridor Widths

The Office of Water has provided extensive advice regarding the merit assessment and determination of watercourse stream ordering and Vegetated Riparian Zone widths for the Precinct. The primary focus of this assessment was to provide a suitable balance between riparian and development outcomes for the Precinct.

It is considered that the Biodiversity and Riparian Studies prepared by Ecological Australia is consistent with this advice and is generally in accordance with the Office of Water's Guidelines for Controlled Activities.

Flood Risk and Vegetation Densities

The Revised Water Cycle Management Report prepared by Parsons Brinckerhoff outlines conceptual design criteria for online basins and assumes a Mannings roughness of 0.06 for vegetated surfaces of swales. The Office of Water understands that the reference to swale is a reference to the main channel of watercourses within the Precinct.

It is not clear from the report as to what Mannings roughness has been used in modelling bank and overbank areas along watercourses.

Adopted Mannings values for flood modelling within the Precinct should not compromise the establishment of riparian corridors representative of Cumberland Plain and Alluvial Woodlands as specified by Biodiversity and Riparian Studies prepared by Ecological Australia.

During preparation of Vegetation Management Plans for the site it would be appropriate to concentrate more dense plantings adjacent to areas of highest stability risk ie. adjacent to banks of watercourses. Less dense plantings might then be provided in outer areas of the corridor so as not to adversely impact on flood levels. The supporting documents to the Precinct Plan should make reference to this approach.

Riparian Corridor Ownership

The Office of Water is supportive of the proposed public ownership of riparian corridors within the precinct through zoning as SP2 Infrastructure.

Future detailed design within the Precinct should ensure non riparian uses including detention basins, drainage infrastructure and public open space do not compromise riparian corridor outcomes as specified by the Office of Water's Guidelines for Controlled Activities.

Future development of the precinct will require a controlled activity approval for works on waterfront land, as defined in the *Water Management Act 2000*. Any such works should be conducted in accordance with the Office of Water's Guidelines for Controlled Activities available at www.water.nsw.gov.au/Water-Licensing/Approvals/Controlled-activities/default.aspx.

If you require further information please contact Jeremy Morice, Water Regulation Officer on (02) 4224 9736.

Yours sincerely



Mitchell Isaacs
Manager, Strategic Stakeholder Liaison