





Jordan Springs Village 5 Subdivision

Stormwater Management Strategy

October 2014
Ref: 9343-03 Village 5 SWMS 071014

Lend Lease

SUSTAINABLE CERTIFICATION
ISO9001:2008
AS/NZS 4801:2001
ISO 14001:2004
Endorsed
Integrated Management System

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1 INTRODUCTION

The purpose of this report is to provide a stormwater management strategy to support the development application (DA14/0935) for the Jordan Springs Village 5 Subdivision.

The Village 5 site drains generally in a south easterly direction and is located to the north of the East Lake. Village 5 falls within an overall catchment which drains to the East Lake.

2 EAST LAKE – TEMPORARY SEDIMENT BASIN

East Lake has been constructed as a temporary sediment basin as approved under DA13/0065. SKM (Jacobs) has prepared a Soil and Water Management Plan Report dated February 2014 to provide an erosion and sediment control strategy for all upstream subdivisions (including Village 5) for the initial development phase of the project. A copy of this report is provided as Annexure A.

3 EAST LAKE – PERMANENT WATER BODY

The existing temporary sediment basin has the form of the proposed East Lake and will be upgraded to a permanent stormwater detention basin and water quality device under a future development application.

Jacobs (SKM) has prepared a Stormwater Management Report to support the future East Lake development application, and report reference EN04189 dated 1 October 2014 is provided as Annexure B.

The Jacobs' Stormwater Management Report includes detention volume calculations to mitigate peak flow discharge volumes, as well as water quality modelling to achieve target reductions in pollutant loads in accordance with Penrith City Council's Water Sensitive Urban Design (WSUD) Policy dated December 2013. The proposed Village 5 catchment has been included in all calculations.

4 VILLAGE 5 STORMWATER DRAINAGE

Minor stormwater flows from the large catchment within the Regional Park are intercepted on the northern boundary of the proposed development and diverted around the subdivision in a 2400 x 750 RCBC located under the perimeter road. The major stormwater flows from this catchment remain overland and are also diverted around the subdivision since the perimeter road is elevated above natural ground level and protected by stacked rock walls.

All minor flows generated within the subdivision by the 1:10 year AEP design event are collected in an underground stormwater drainage event and conveyed to the East Lake. All flows pass through a gross pollutant trap before discharging into the lake for further treatment.

The major flows generated within the subdivision by the 1:100 year AEP design event are conveyed overland along the roadways and discharged into the East Lake. The major flows from a small catchment in the south eastern corner of the site (Road No 8) will bypass the East Lake and be discharged directly into the Regional Park. The bypass flow is estimated to be less than 0.55cu.m and is deemed to have a negligible impact upon the downstream drainage system.

The proposed Village 5 stormwater drainage system has been designed with the assumptions in the two aforementioned Jacobs' (SKM) stormwater management strategy report. The Stormwater Layout Plan and Catchment Plan for the subdivision are appended as Annexure C.

ANNEXURE A – Riparian Corridors (and East Lake) – Soil and Water Management Report dated February 2014 by SKM (Jacobs)