Macquarie Village

Stamford Land Corporation Ltd

18 January 2011

Integrated Water Management Plan

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Prepared for

Stamford Land Corporation Ltd

Ref

Date 18 January 2011

Prepared by Theresa Ling

Reviewed by Frank Caristo

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	18-Jan-2011	Authority Submission	Frank Caristo Associate Director	

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Table of Contents

1.0 Introduction

Stamford Land Corporation Ltd has commissioned AECOM to prepare an Integrated Water Management Plan for the proposed Residential Development: Macquarie Village, located at 110-114 Herring Road, Macquarie Park.

1.1 Description

The Macquarie Village development will incorporate the following Water Sensitive Urban Design (WSUD) principles.

- Rainwater harvesting for reuse purposes
- Gross pollutant trap
- Water efficient fixtures and fittings

2.0 Rainwater Harvesting and Gross Pollutant Trap

The rainwater will be harvested from 100% of the new roof area.

Eaves gutters, downpipes will be sized to drain up to 20 year storm event

Box gutters, downpipes will be sized to drain up to 100 year storm event

Harvested rainwater will be treated via a gross pollutant trap to remove suspended solids prior discharging into the rainwater tank.

The rainwater harvested for reuse will be further treated and reticulated via booster pumps to meet the following non-potable water demands of the proposed development.

- Toilet flushing
- Clothes Washing
- Irrigation
- Pool make up water

The rainwater tank will be located adjacent to the onsite detention tank. In the event of overflow from rainwater tank, this water will overflow to the onsite detention tank.

3.0 Water Efficient Fixtures and Fittings

Highly efficient fixtures will be used to meet BASIX requirements and GBCA targets. This will reduce mains water demand.

The following minimum WELS stars rated water efficient fixtures are being proposed to meet the BASIX requirements:

- 4 WELS stars rating dual flush toilet suites
- 4 WELS stars rating taps
- 3 WELS stars rating shower heads (9litre/min)

The following WELS stars rated water efficient fixtures are being considered to meet the GBCA targets which is to be confirmed prior to issue of construction certificate:

- 4 WELS stars rating dual flush toilet suites
- 6 WELS stars rating bathroom taps
- 5 WELS stars rating bathroom taps
- 3 WELS stars rating shower heads (7.5litre/min)

4.0 Conclusion

Based on the information presented the following conclusions can be made.

- The rainwater harvesting system will provide the benefit of reducing potable water consumption and Council supplied water.
- The rainwater harvesting tank will reduce the stormwater runoff from the proposed development and consequently reduce the environmental impact of stormwater runoff.
- Water efficient fixtures and fittings will provide the benefit of reducing potable water consumption and Council supplied water.
- Gross pollutant trap will improve the quality of rainwater discharged from site.