

HYDRAULIC & FIRE SERVICES INTEGRATED WATER MANAGEMENT REPORT

UNSW Science and Engineering Building



PROJECT #	5209001
ISSUE	02
DATE	03.05.2016
REVISION	Draft
AUTHOR	D. Power
STATUS	Current

PREPARED BY:

WARREN SMITH & PARTNERS PTY LTD

Consulting Engineers

ACN 002 197 088 **ABN** 36 300 430 126

1st Floor, 123 Clarence Street

Sydney 2000 NSW Australia

T 02 9299 1312 **F** 02 9290 1295



PREPARED FOR:

BROOKFIELD MULTIPLEX AUSTRALASIA

Level 22, 135 King Street

Sydney 2000 NSW Australia

T 02 9322 2000 **F** 02 9322 2001



Contents

1. INTRODUCTION	1
2. GENERAL	1
3. WATER EFFICIENCY	1
4. NON POTABLE WATER	1
5. WATER METERS & MONITORING	2
6. DISCHARGE TO SEWER	2
7. TRADE WASTE	2

1. INTRODUCTION

The Integrated Water Management plan provides an overview of the potable and non-potable water systems while demonstrating water sensitive and conservation design that will be implemented to the proposed Science & Engineering Building, UNSW.

2. GENERAL

- Direct connection to the existing Campus University Main via a private water meter located within the loading dock area.
- Utilisation of Campus wide bore water treatment plant to supply all non-potable systems including, water cooling towers and mechanical plant, sanitary flushing, irrigation and Plantroom hose down.
- Water storage tank to ensure a water supply (limited time period) to the Laboratory sinks should the water main fail while reducing peak demand draw off from underground mains system.
- To reduce contamination of the portable water supply backflow prevention devices will be installed as per the requirements of AS 3500.
- The installation of water saving taps and outlets to reduce water consumption will be adopted.

3. WATER EFFICIENCY

Water efficient fittings will be chosen to minimise consumption.

Flow rates for water outlets shall be controlled by flow restrictors based on WELS ratings. The following items will deliver water at the flows below:-

Shower	7.7L/m
Basin	7.7L/m
Sink	7.7L/m
Urinal	0.8 Litre flush
WC's	3/4.5 Litre flush

4. NON POTABLE WATER

The following Services shall be directly supplied from the University Campus treated bore water plant and will generally not be reliant on the mains pressure potable cold water main system.

- Cooling Towers / Chiller Plant
- Sanitary Flushing
- Landscape Watering
- Plantroom Hose Down

5. WATER METERS & MONITORING

Pulse water meters shall be installed on all major users of water and wired to the BMCS (Building Management Control System) for data collection. The meters shall be installed on the following items:-

- Cooling Towers / Chiller Plant
- Landscape watering
- Mechanical heating water top-up
- Inlet and outlet of non-potable water storage tanks
- Laboratories

6. DISCHARGE TO SEWER

The selection of sanitary fixtures and tapware to be used shall be selected to reduce water consumption against a “best practice” benchmark.

The selection of sanitary fixtures and tapware shall be undertaken in consultation with UNSW considering the required WELS ratings shall be review.

7. TRADE WASTE

All trade waste discharges shall be via pre-treatment devices prior to discharge and will meet all Sydney Water requirements.