Warren Smith & Partners

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HYDRAULIC & FIRE SERVICES INTEGRATED WATER MANAGEMENT REPORT

Gosford Health and Well Being

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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 Gosford Health and Wellbeing Project.

The Water Management Plan shall minimise the Environmental Impact issues associated with the development, meeting the requirements of S96 (1A)

The Health and Wellbeing Project consists of a multi storey carpark, health-related Administrative offices and retail spaces.

The project will incorporate the following Water Sensitive Urban Design measures;

- Rainwater harvesting for irrigation purposes
- On site detention system (OSD); controlling site runoff
- Water quality treatment devices;
- Water efficient fixtures and fittings; and
- Test drains from the fire service pumps discharging back into fire services tank.

1. On-site Detention / Rainwater Harvesting

Stormwater will be collected from the roof and plaza level of the Health and Wellbeing Precinct Stage 1 and conveyed to a combined OSD/ rainwater harvesting tank located at level 5 of the carpark.

The DCP requires that a portion of stormwater runoff is retained on site for re-use, therefore a combined tank will incorporate rainwater reuse and OSD. The tank is proposed to be fitted with a pump and pipes to allow for reuse of retained stormwater for landscape irrigation within the proposed Health and Wellbeing Project Development Area.

The on-site detention component of the tank will be sized in accordance with Council's DCP.

Stormwater discharge from the OSD tank will be controlled via an orifice to limit post development flow rates to predevelopment flow rates for all storms up to the 1 in 100 year recurrence interval. Refer to Section 3.4 of the civil Engineer's report for further detail. Discharge from the combined OSD tank will be conveyed to the Council system in Showground Road.

For more details regarding on site detention for the development, refer to the Infrastructure Management Plan prepared by ADW JOHNSON, Dated July 2016.

2. 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:-

- Main Buildings
- Retail tenancies
- Carpark

Sub meters shall include

- Mechanical Water Supply
- Landscape watering
- Rainwater reuse top up from potable mains
- Inlet to Hot Water Plant

3. WATER EFFICIENT FIXTURES AND FITTINGS

The potable water supply for the Health and Wellbeing Precinct will be supplied from the existing Gosford council water main located in Holden Street. To reduce contamination of the potable water supply, backflow prevention devices will be installed as per the requirements of AS3500.

All fittings and fixtures will be WELS star rated, the installation of water saving taps and outlets to reduce water consumption will be adopted. The following ratings are to be used:

- 4 WELS stars rated dual flush toilets
- 4 WELS stars rated tapware
- 3 WELS stars rated shower

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

4. TRADE WASTE

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

5. CONCLUSION

The water management systems proposed within this report, will minimise the environmental impact from the development as required under S96(1A).
By achieving this goal the overall water consumption for the will be reduced and the quality and quantity of stormwater runoff controlled.