



**Health**  
Infrastructure

## **Macksville Hospital Development – SSD Application** No. 9103

### **Integrated Water Management Plan**

Project No : 7824

Revision : Final Issue

Date : 21<sup>st</sup> March, 2018

[illegible]

**Note:** Revisions to the text of this specification section subsequent to Tender Issue are indicated with a vertical line and Revision number in the right margin.

eg: Provide and install pressure switches and flow switches where required to ensure correct operation of the pumps.

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## **1 INTRODUCTION**

This Integrated Water Management Plan (IWMP) has been prepared for lodgement with the State Significant Development (SSD) application No. 9103 for the new Macksville Hospital Development. The report should be read in conjunction with the stormwater management plan being developed by the Civil consultant, Bonacci Group P/L (Bonacci).

The IWMP for Macksville Hospital Development project covers the Hospital redevelopment in Section 2. The IWMP addresses the measures that will be incorporated into this development to reduce the overall water consumption and minimise the effects of the rainwater discharge from the site.

The Macksville Hospital Development consists of a new three level building, including Emergency department, Operating Theatres, Clinical Services Sterilisation Department, Medical procedures unit, Maternity Unit, Mortuary, Kitchen services, as well as associated vehicle access & car parking areas.

The new building will be connected to the Nambucca Council infrastructure extended to the site and to within the site.

## 2 MACKSVILLE HOSPITAL DEVELOPMENT

### Water Sensitive Urban Design

Macksville Hospital Development Campus will incorporate the following Water Sensitive Urban Design measures

- Water efficient fixtures and fittings
- Possible CW Solar Pre-heat Hot Water
- Fire services

The new building will be supplied from a new Watermain extension and provision by Nambucca Shire Council to the proposed new Hospital site water services connection. To reduce potential contamination of the potable water supply, backflow prevention devices will be installed as per the requirements of A.S.3500.

### Internal Stormwater

The rainwater will not be harvested for this project as the new building footprint will be drained via external down pipes and eaves gutters into the inground Stormwater drainage.

In accordance with NSW Health Engineering Services Guidelines (GL2016\_020) the eaves gutters and downpipes will be sized to drain a 1:100 year ARI event. A rainfall intensity of 318mm of a 5min/100year for the rainwater calculations is based on AS3500.3.3

### Water Efficient Fixture and Fittings

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

### Fire Services

Fire services flow switch testing will be completed using zone flow test devices. This enables the testing of the flow switches to be completed with in a closed system (no discharge of water) using a recirculated pump assembly.

### 3 CONCLUSION

Based on the information presented

- The use of water efficient tapware will provide some benefit in reducing the water consumption;
- The (possible) pre-heating of incoming Cold Water prior to HW plant will reduce the LP gas consumption.
- The recirculation of fire services water used in the monthly testing will be reduced.