

Gunnedah Hospital Redevelopment

Project Details

Project Name GUNNEDAH HOSPITAL
REDEVELOPMENT

Project Location 27 Marquis St, Gunnedah

Flood Risk Report Prepared by Northrop
Consulting Engineers

Activity Description

Guidance NOTE 1: REF Approval will not be granted to activities on land located between the Flood Planning Level (FPL) and Probable Maximum Flood (PMF) level unless the determination authority is satisfied that the activity—

- a) will not affect the safe occupation and efficient evacuation of people in the event of a flood, and
- b) incorporates appropriate measures to manage risk to life in the event of a flood, and
- c) will not adversely affect the environment in the event of a flood

Guidance NOTE 2:

- Critical infrastructure associated with HI's projects must be located above PMF level in all circumstances
- Where reasonable and feasible HI-Projects are located above PMF, and
- if it is not reasonable or feasible to locate HI-Projects above PMF, the location must be approved by the Expert Review Group/ Executive Steering Committee and outlining:
 - why compliance cannot be achieved; and
 - what Flood Mitigation Measures have been incorporated into the design to protect the project, the environment and surrounding properties.
 - how the project complies with NSW Government legislation, policy and guidance in relation to Flood planning

Executive Summary

This flood risk report provides an assessment of the flood risk to the **Gunnedah Hospital Redevelopment** located at **27 Marquis St, Gunnedah**. The purpose of this report is to:

- identify and evaluate flood risk factors that may affect the project site and surrounds and the proposed development including the potential impacts of climate change for the full range of events (i.e. up to and including the probable maximum flood (PMF) event);
- assess the impacts of the development, including any changes to flood behaviour and risk, impacts of flooding on the development and its future community and on existing community for the full range of events (**not applicable**);
- provide recommendations for mitigation measures to minimise flood risk; (**not applicable**)
- ensure that the development is consistent with NSW Policy in relation to flood impacted development (**not applicable**)

The steps needed by way of design and location to enable the infrastructure to withstand flood have been weighed against the need for the infrastructure to serve the community effectively in normal circumstances, when there is no flooding.

1. Introduction

The Gunnedah Hospital redevelopment project involves the construction of **a new building and carparking spots**. The project is located in an area that is **not** susceptible to flooding **in the 1% AEP storm event**. It is mapped as **not located in a flood prone land** under **Gunnedah Floodplain Management Plan**.

A map for the Probable Maximum Flood (PMF) is not available in the Gunnedah Shire Council website, however in the “GCFPMS – 001 – Gunnedah Inundation map” which includes the storm event 3x1% AEP, the Gunnedah Hospital site is also located outside of the inundated areas.

2. Information Sources

- **Gunnedah Shire Council DCP 2012**
- **Gunnedah Floodplain Management Plan**

3. Methodology

The flood risk assessment was conducted in accordance with **Gunnedah Floodplain Management Plan**. The following data and information were collected and analysed as part of the assessment:

- **GCFPMS – 001 - Gunnedah Floodplain Management Plan (Inundation Map)**
- **GCFPMS – 003 - Gunnedah Floodplain Management Plan (Inundation Map – Gunnedah 1% AEP)**
- **GCFPMS – 007 - Gunnedah Floodplain Management Plan (Hazard Map – Gunnedah 1% AEP)**

4. Flood Hazard Assessment

Based on the data collected and analysed, the following flood hazard assessment was conducted:

4.1 Flood Probability

Based on Gunnedah's Floodplain Management Plan – Hazard Map – Gunnedah 1% AEP, the proposed site is located outside of the high and low hazard zones and outside of the flood fringe zone.

4.2 Flood Depth

Not applicable.

4.3 Flood Velocity

Not applicable.

4.4 Flood Direction

Not applicable.

4.5 Flood Duration

Not applicable.

4.6 Flood Warning

Not applicable.

5. Flood Risk Assessment

Based on the flood hazard assessment, the following flood risk assessment was conducted:

5.1 Consequence

According to the Gunnedah Floodplain Management Plan, the proposed site is outside of the flood zone for the 1% AEP storm event. Areas closer to the Namoi River are flood affected, which may difficult access to the Gunnedah Hospital.

5.2 Vulnerability

Not applicable.

5.3 Risk

Not applicable.

6. Flood Mitigation Measures

Based on the flood risk assessment, the following flood mitigation measures are recommended to minimise flood risk and maintain operational capability during and after flood events:

6.1 Location

According to the Gunnedah Floodplain Management Plan, the proposed site is outside of the flood zone for the 1% AEP storm event.

6.2 Design

Not applicable.

6.3 Construction

Not applicable.

6.4 Flood Emergency Plan

Not applicable.