

Our Reference: 32342-CL01\_A

13/05/2021  
Central Darling Shire Council  
PO Box 165

To Whom It May Concern,

## **Re: Flood Levels, Wilcannia Health Clinic**

The proposed Health Clinic at Ross St in Wilcannia will be situated on the north bank of the Darling River. The Heath Centre's finished floor level is proposed to be 77.42 AHD. This floor level corresponds to Wilcannia Hospital in the neighbouring allotment. Contemporary anecdotal evidence from local sources suggests that the hospital, built in 1879, has not been subject to flooding from the river in the past 50 years. No account of historical flooding has been determined from a desktop study. Without knowledge of the specific 1% Annual Exceedance Probability (AEP) level at this point on the Darling River, it seems appropriate to adopt this level for the floor level of the proposed development.

As per "National Arrangements for Flood Forecasting and Warning" by the *Bureau of Meteorology*, the "minor flood" event occurs at a river height of 9.0m at Gauging Station 425008 (BOM ref 546010), located adjacent to the proposed site. The "major flood" event occurs at 10.4m. As of the date of this letter, the current river height is 9.244m, according to the Bureau of Meteorology website. This exceeds the "minor flood" level. A Central Darling Shire Council representative reported that the river level is perceived appreciably lower than the Hospital's floor level on this date. This indicates the "major flood" level is below the proposed floor level. The corresponding AHD level of the "major flood" and its correlation to the 1% AEP are unknown at this time.

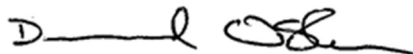
In the past 50 years, the "major flood" level has been exceeded in April 2012, March 2011, September-November 1998, June-July 1990, July-September 1983, March-May 1976, and February-March 1974. In that period, the highest water level (11.583m) was recorded on the 5<sup>th</sup> of April 1976. Anecdotal evidence suggests that this was below the Hospital's floor level. Flood data has been sourced from the Murray-Darling Basin Authority website.

The proposed Health Centre will be located on the northern bank. The floodplain at this location is located on the south bank and it is expected that the majority of flooding will occur on this side of the river. Minor flood depths and flow velocities are expected at the proposed facility during a significant flood event.

It should also be stated that the proposed development is a Health Clinic intended to provide non-emergency out-patient care that is routine or preventative. In-patient care will continue to be at the Wilcannia Hospital. As such, consideration of long-term continuous care of patients in critical condition at the facility is not applicable.

Yours faithfully,

BARNSON PTY LTD



Diarmaid J O'Shea

*B.Eng MIEAust CPEng*

Civil Engineer