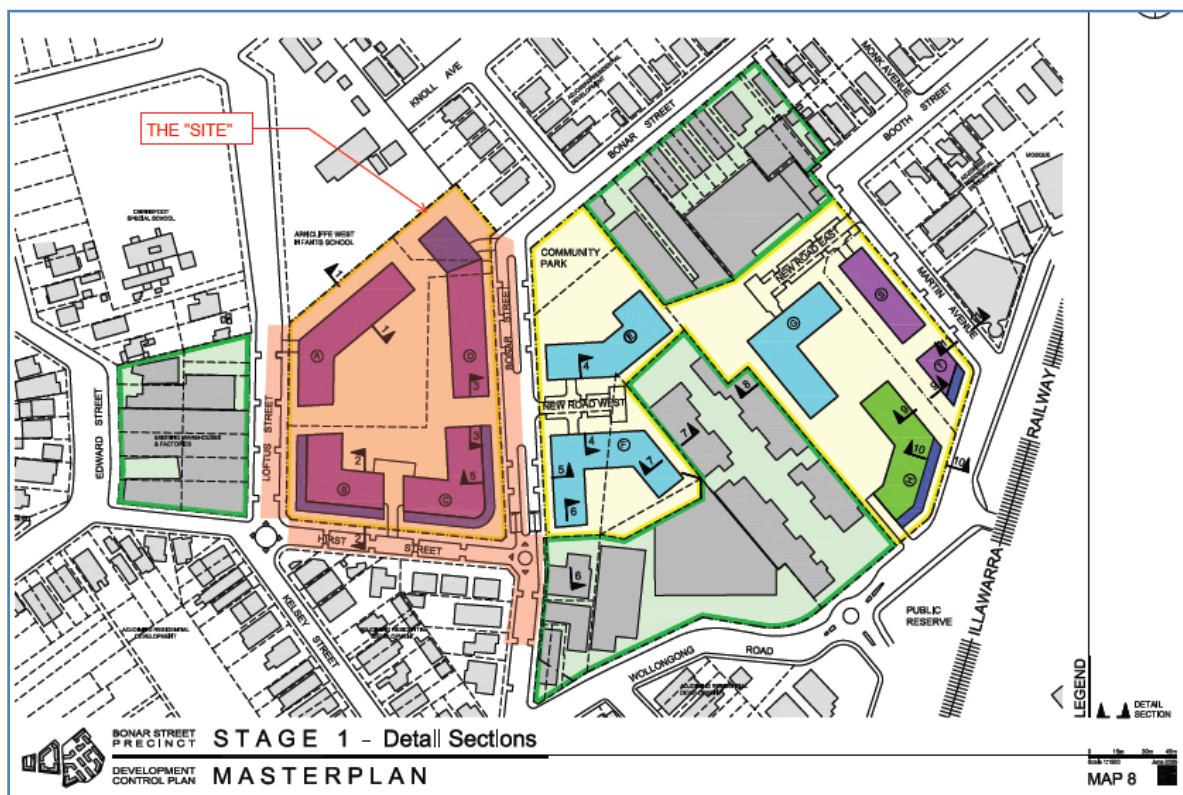


2. HYDRAULIC ASSESSMENT

2.1. Approach

Hydrologic and hydraulic modelling of study area have been undertaken as part of the “*Water Sensitive Urban Design Implementation Strategy for Bonar Street Rezoning Application, Amended June 2005*” undertaken previously by Webb McKeown & Associates (refer below).



One of the Stage 1 requirements of the above report was “*No 3: Raise Bonar Street to deflect overland flow into 45 Bonar Street while maintaining existing flood levels in 43 Bonar Street*”. The present study has addressed this issue by providing detailed hydraulic modelling in Bonar and Hirst Streets using a more sophisticated 2 Dimensional hydraulic model but with identical inflows to those used previously. The assessment has only been undertaken for the 100 year ARI event though results for more frequent events are provided in the previous report.

The overall aim of this analysis is to demonstrate that the proposed road works do not raise flood levels in Hirst and Bonar Streets and so adversely affect adjoining properties. Of particular importance is the potential for an increase in flood levels across the rear yard of 43 Bonar Street (refer photographs below). No consideration has been given to any impacts within the old bowling club as it has been assumed that the proposed works can only be undertaken in conjunction with re-development within this site (refer June 2005 report). All overland flow within the bowling club is assumed to exit the site to the north of 13-15 Wollongong Road, as it does under existing conditions. Under Stage 2 all the flow will be diverted to an upgraded culvert through 13-15 Wollongong Road.