



**CONRAD  
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WOOLLEY

Wauchope Primary School Upgrade

2 Waugh Street, Wauchope

## Stormwater Management Report

August 2017

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Project No.	CC160171
Author	AD
Checked	LW
Approved	AD

Rev No.	Status	Date	Comments
1	DA	7/07/17	

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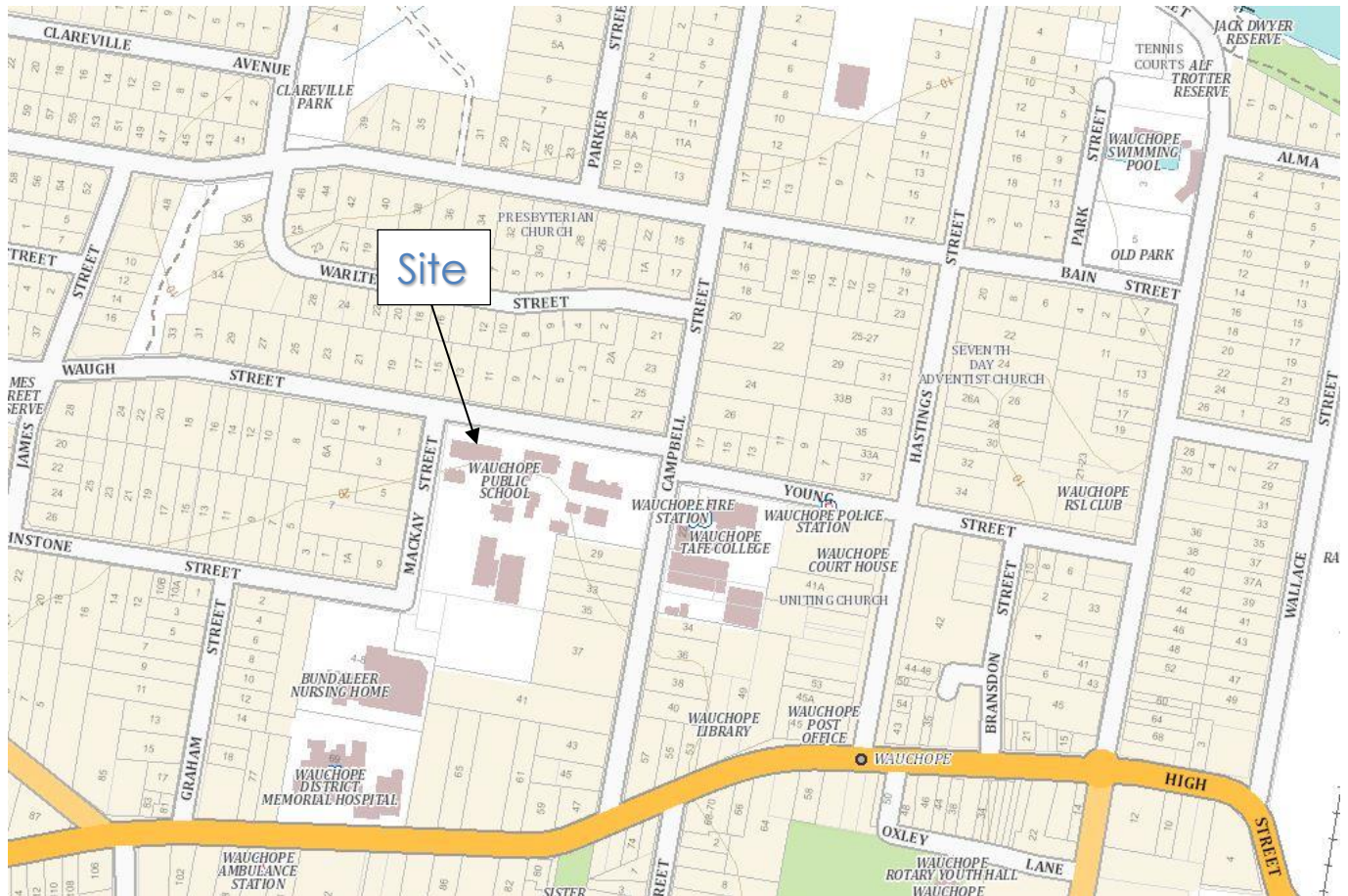
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# 1 Introduction

This report has been prepared to provide an overview of the stormwater management plans prepared in support of a development application for an upgrade of the buildings at Wauchope Primary School.

The subject site is known as Lot 1 in Deposited Plan 795186 and is located at 2 Waugh Street, Wauchope. Access to the site is from either Waugh, Mackay or Campbell Street frontages.



**Figure 1: Locality Plan**

In determining the management of stormwater on the site, this report will consider the following:

- The existing site conditions and constraints.
- Overland flow paths during the 1% Annual Exceedance Probability (AEP) storm event in the event the proposed drainage is blocked.
- Water retention and reuse.

## 2 Proposed Development

### 2.1 Existing Site Drainage

The existing site falls generally towards the intersection of Waugh and Campbell streets at an average grade of 4%. A system of stormwater drainage pits and pipes collects the roof water and site runoff and conveys the flow to the street drainage system in Campbell Street.

Four existing drainage pits and pipe line are to be demolished and removed as the proposed new building will be over them.

### 2.2 Proposed Development Drainage

It is proposed to demolish and remove one existing weatherboard building, the associated covered walkway and concrete play area and five demountable buildings from the site and replace them with a new two storey building. The new building has a covered roof area of 1,765m<sup>2</sup>. Downpipes for the new building and covered walkway have been sized for the 20yr storm event with a 5-minute intensity of 212mm/hr. The roof water will be connected to the existing stormwater drainage system in Campbell street with the addition of three new grated surface pits.

The proposed stormwater system is shown in the Stormwater Management Plan attached in Appendix A.

## 3 Retention & Reuse

The school currently has several rainwater tanks that appear to be used to irrigate the sports field and open play areas. As the existing impervious area that is to be demolished and removed is of a similar size to the roof area of the new building no further rainwater tanks are proposed with this building upgrade.

## 4 Overland flow

As the site falls generally from the rear south western boundary to the northeastern corner, at the intersection of Waugh and Campbell streets at approximately 4%, any surcharge of the roof gutters and storm water pits during storm events greater than the 1 in 20yr event will flow towards the street drainage system generally as sheet flow.

## 5 Conclusion

This report has reviewed the stormwater management configuration for the proposed school building upgrade at Wauchope Primary School.

The specific findings of the stormwater management plan are:

- The total new roof area for the building and covered walkway is 1,765m<sup>2</sup> and will generate a site discharge of 112 litres per second in a 20 year storm event.
- No additional rainwater reuse tanks are proposed with the building upgrade of this school.

It is expected that if the stormwater management measures discussed in this report are appropriately implemented, they will provide an effective means of controlling the management of stormwater on the site.

## **Appendix A – Storm Water Management Plan**

*Attached under separate cover*