

128 Western Street, Wandal 4700 (Kele Park)

Flood Statement

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/160-2024

Dated: 16 January 2025

DATE
8 November 2024

REF
R002-24-25-006

CLIENT
Brothers AFC

COMMERCIAL IN CONFIDENCE


Contact Information

McMurtrie Consulting Engineers Pty Ltd
 ABN 25 634 181 294
 Rockhampton Office
www.mcmengineers.com
 (07) 4921 1780
mail@mcmengineers.com

Document Information

Prepared for	Brothers AFC
Document Name	Flood Statement
Job Reference	R002-24-25-006
Revision	A

Document History

Revision	Date	Description of Revision	Prepared by	Approved by		
				Name	Signature	RPEQ No
A	8/11/2024	Original Issue	T. Lisle	R. Bywater		23569

This report has been prepared for the sole use of the Client. The information contained is not to be disclosed, reproduced, or copied in whole or part without written approval from McMurtrie Consulting Engineers. The use of this report by unauthorised third parties shall be at their own risk and McMurtrie Consulting Engineers accept no duty of care to any such third party. The information contained within this report is provided in good faith in the belief that no information, opinions, or recommendations made are misleading. All comments and opinions given in this report are based on information supplied by the client, their agent and third parties.

© Copyright of McMurtrie Consulting Engineers Pty Ltd

Contents

1	Introduction	4
2	Flooding Assessment.....	4
2.1	Existing Conditions	4
2.2	Flood Impact	5
2.3	Emergency Management Procedure.....	5
3	Conclusion	6
3.1	Qualifications	6

Appendices

- Appendix A: Flood Hazard Overlay Code Responses
- Appendix B: Structure Plans
- Appendix C: Flood Search Report

1 Introduction

McMurtrie Consulting Engineers (MCE) have been engaged by Brothers AFC to provide a Flood Statement report to support the proposed construction of a structure in the Flood Overlay zone. The site is located at 128 Western Street, Wandal 4700, on land described as Lot 101 on SP123574.

The proposed development includes:

- 200kL tank and booster pump; and,
- New changeroom structure with associated ramps and landscaping works (i.e. footpaths, seating etc).

2 Flooding Assessment

2.1 Existing Conditions

The site is an existing reserve (Kele Park) that provides multiple sporting fields for local clubs.

The site is located within the Flood Hazard Overlay area as defined by the Rockhampton Regional Council (RRC) Planning Scheme. Specifically, the proposed development is affected by the following overlay triggers:

- Fitzroy River Flood, H1,2,3,4
- Local Catchment Flood, Planning Area 1, Planning Area 2, Local Catchment DFE

In order to assess the existing flooding characteristics at the site, a Flood Search was requested from RRC. As the site is relatively large in area, the mechanism of reporting employed by the flood search does not provide a representative velocity or depth, and as such has been generally disregarded. In lieu of this, depth and velocity vector mapping was provided by RRC which has been interpreted as summarised in Table 1.

Table 1 - Summary of Flood Search Results

	Fitzroy River Flooding		Local Catchment Flooding	
	Max Level (m AHD)	Max Velocity (m/s)	Max Level (m AHD)	Max Velocity (m/s)
1% AEP	10.05	~0.3	9.3	~0.3

Based on the expected ground surface level at the location of the proposed development, 9.00m AHD, the expected range of flooding depths are presented in Table 2.

Table 2 - 1% AEP Flooding Depths

	Fitzroy River Flooding	Local Catchment Flooding
	Max Depth (m)	Max Depth (m)
1% AEP	1.05	0.3

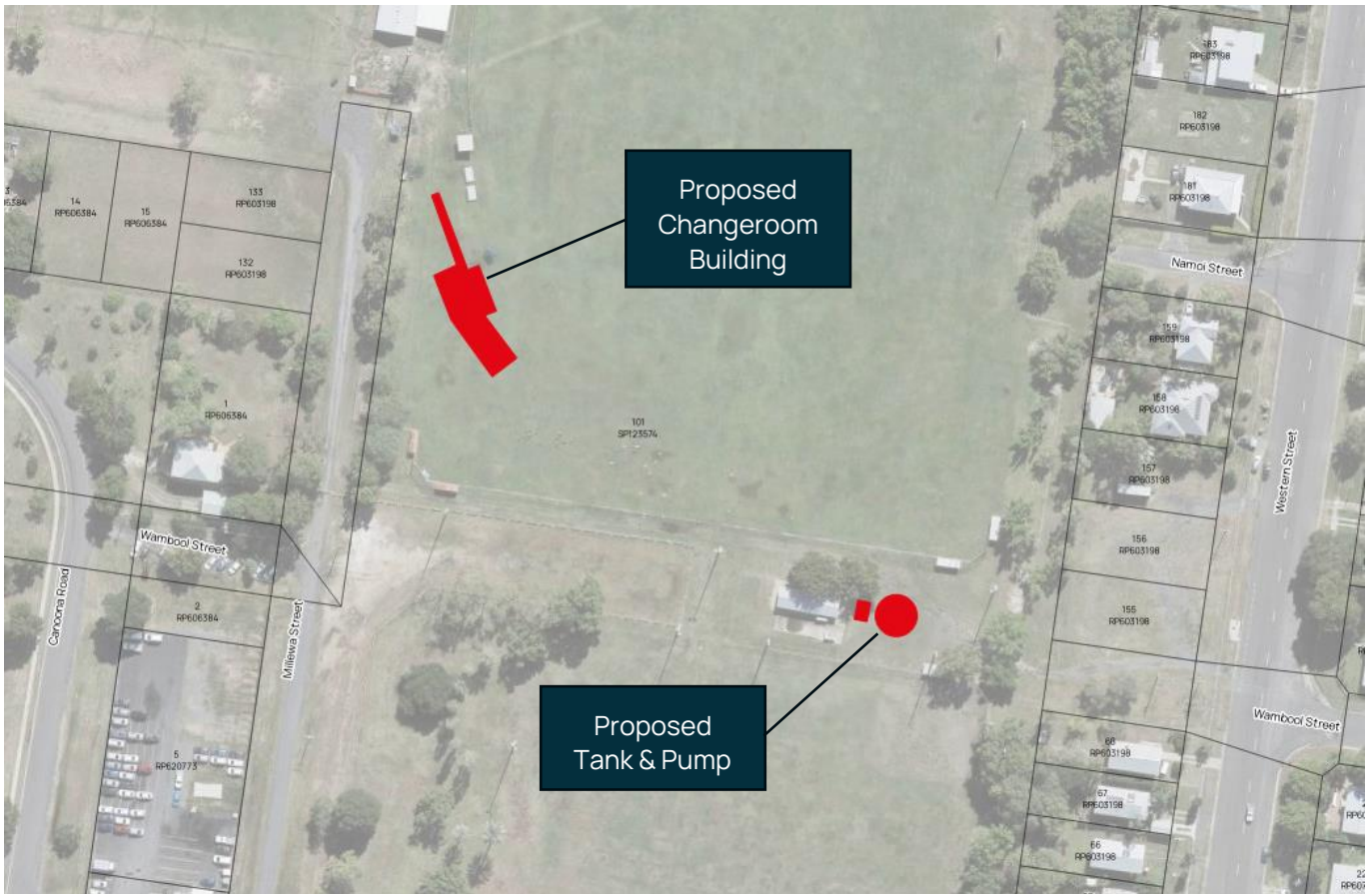


Figure 1 - Site Layout Plan

2.2 Flood Impact

The results of the flood data indicate that the riverine flooding event is slow moving and only relevant in 1% AEP events. Only some areas of the site experience flooding, with flooded parts to have an expected velocity of 0.3m/s. It is proposed that the changerooms be constructed on columns, with the floor level to be set with adequate freeboard (500mm), resulting in a floor level of 10.55m AHD. As such no afflux is expected to be generated by a loss of cross-sectional area of flow, and similarly no impacts are expected to the surrounding structures or infrastructure. It is acknowledged that the tank will be located below the flood level for both events due to the need to place it at-grade, however the actual impact of this is expected to be negligible, with approximately 37m of offset to the nearest adjacent residential lot.

With reference to the Australian Disaster Resilience Handbook *Guideline 7-3 Flood Hazard*, the flooding at the location of the proposed development would be categorised as H3 flooding, which indicates it is unsafe for vehicles, children and the elderly. It is suggested that the structure should be designed to accommodate for the structural loading that the flooding will induce.

The local catchment flood is also slow moving with even lower depths of flooding, which corresponds to a H1 category, and therefore no damage is expected from local catchment flood.

2.3 Emergency Management Procedure

Given the flooding that predominantly affects the site is riverine in nature, significant warning time can be expected due to the size of the basin catchment. While the site is also affected by local catchment flooding, it is significantly lower risk (hazard level H1, which is considered 'generally safe for people, vehicles and buildings' by *Guideline 7-3*), and therefore it is seen that the riverine emergency management considerations should govern.

The users of the facility on the site should monitor the Bureau of Meteorology website prior to and during extended rainfall events in order to ensure they are prepared to evacuate the site if needed. It is expected that

evacuation will be via Dean Street. All stored items should be moved to ground that is above the flood zone, as well as the site cleaned of debris that could otherwise impact neighbouring properties.

Following the event, the users of the facility should wait until given advice from the relevant authorities that it is safe to return to the site.

3 Conclusion

The proposed development is a new changeroom structure and tank with booster pump in the Flood Overlay zone located at 128 Western Street, Wandal 4700, on land described as Lot 101 on SP123574. The development is not expected to result in a material increase in flood level or flood hazard upstream, downstream or adjacent to the site.

3.1 Qualifications

This flood statement has been prepared by MCE to support a Building Works Assessable Against the Planning Scheme application, for a proposed structure located within the Flood Hazard Overlay zone.

The analysis and overall approach were specifically catered to the requirement of this project and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from MCE.



Pump Shed 6MT x 4MT

200 000LT Liner Tank

Total: 20.01 m

4.00 m

6.00 m

6.00 m

4.00 m

13.00 m

Total: 13.00 m

ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/160-2024
Dated: 16 January 2025