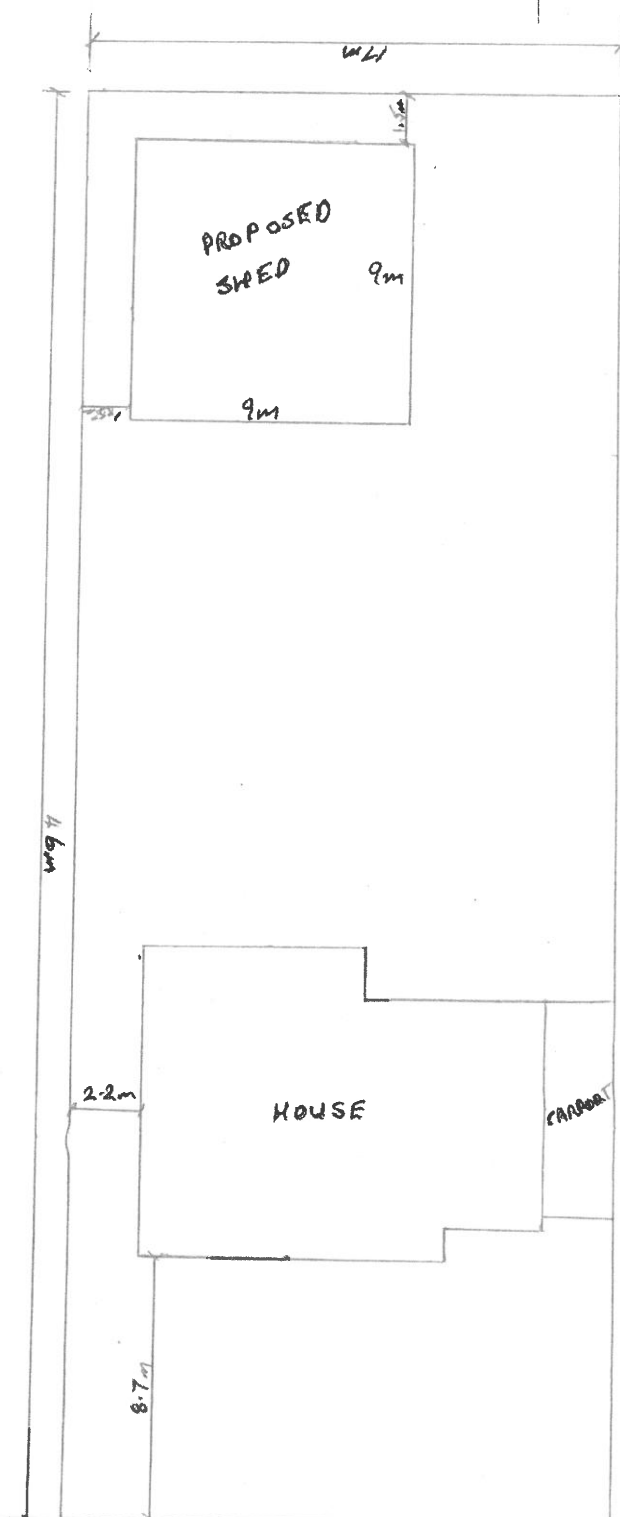


SITE PLAN

367 EAST STREET
ROCKHAMPTON.



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/107-2020

Dated: 4 February 2021

ELEVATIONS



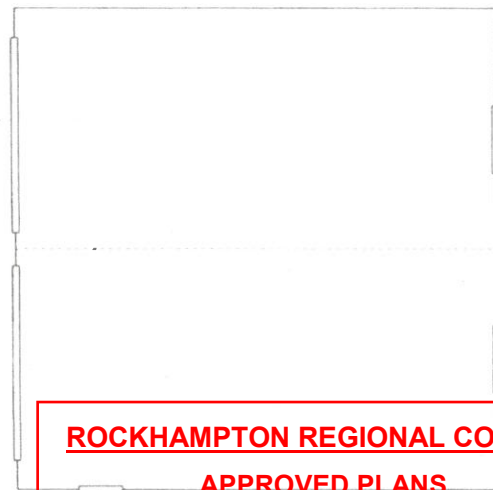
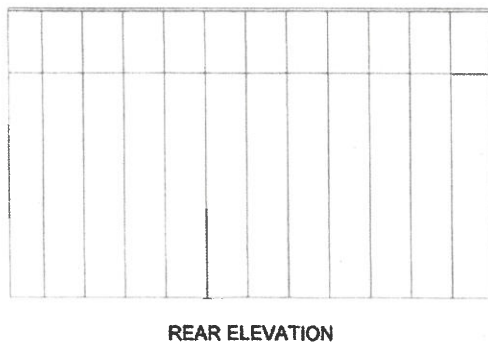
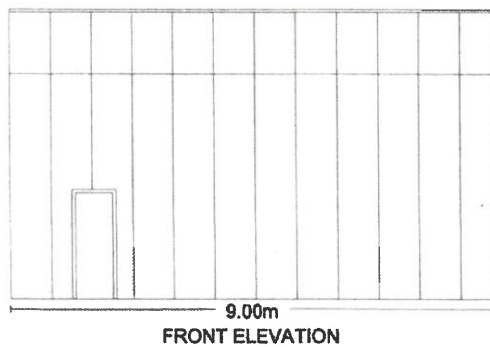
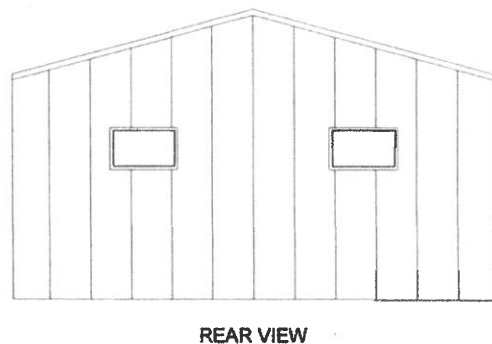
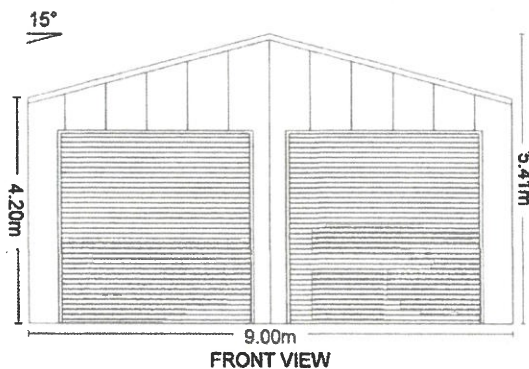
RUSSELL
QLD 4700

Quote: 278218

Date: 25/08/2020

Valid: 14 Days

Your Shed



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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Development Permit No.: D/107-2020

Dated: 4 February 2021



63 Charles Street
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Wandal Q 4701
P (07) 4921 1780
E mail@mcmengineers.com

TECHNICAL MEMORANDUM

To: R G Palmer
From: Laurence Allan
McMurtrie Consulting Engineers
Date: 21 December 2020
Project No: J20108/Lt01
Re: 367 East Street, Depot Hill, Rockhampton – Lot 1 RP602019 – Flood Statement

Introduction

A Development Application (DA) has been submitted to Rockhampton Regional Council (Council) for the site located at 367 East Street, Depot Hill (described as Lot 1 on RP602019).

The proposed development includes:

- Construction of a 9 m x 9 m panel shed in the rear of the lot, as shown in the attached reference drawings.

Council issued an Information Request (IR) dated 16 October 2020 (ref D/107-2020), for the proposed development related to the site's flood hazard:

1.0 Flood Hazard

- 1.1 Please provide an assessment against Performance Outcome 4 of the Flood Hazard Overlay Code in the Rockhampton Region Planning Scheme 2015 (version 2.1). In this regard, to demonstrate compliance, it will be necessary for a Flood Statement/Risk Assessment to be carried out by an Registered Practising Engineer of Queensland (RPEQ).

This report addresses this IR item and demonstrates compliance to Council's Planning Scheme.

Site Description

Existing

The site is located on East Street, approximately 2km from the Rockhampton CBD, as shown on Figure 1. The existing site is relatively flat with ground levels varying between 6.4 mAHD and 6.5 mAHD.

The site includes a single 'Queenslander' type dwelling, with the lower level predominately open. The remainder of the site is generally grassed.

Proposed

The proposed development to the site includes the construction of a single non-habitable 9 m x 9 m shed at the rear of the lot. The shed will be constructed of cyclone rated materials with a slab on ground foundation. The construction will require negligible earthworks to the existing ground levels within the site. The proposed shed will include two roller doors on the south-west elevation along with two windows on the north-east elevation and a doorway on the south-east elevation.

No other changes to the existing natural terrain within the site are proposed.

Flood Hazard

Site flooding from the Fitzroy River generally occurs as backwater flooding from flood waters entering the mouth of Gavial Creek near Port Curtis approximately 500 m downstream of the site. In larger Fitzroy River flood events, flood waters also overtop Wharf Street north of the site.

Peak flood levels, depths and velocities for the site are detailed in Table 1. The site exhibits a H4 flood hazard category, primarily as a result of Fitzroy River flood depths, rather than velocity.

TABLE 1 PEAK FLOOD LEVELS – 367 EAST STREET, DEPOT HILL

AEP (%)	Peak Flood Level (mAHD)	Peak Flood Depth (m)	Peak Flood Velocity (m/s)
1	7.89	1.69	0.12
2	7.55	1.34	0.10
5	7.17	0.97	0.09
10	6.25	0.12	0.01
18	-	-	-
39	-	-	-

The results in Table 1 identify that the site does not provide Fitzroy River flood conveyance rather provides flood storage only.

Flood Impact

The site is not situated within a flood conveyance area of the Fitzroy River, demonstrated by maximum velocities below 0.2 m/s within the site and surrounding areas, as such the proposed shed will result in negligible impact to flood characteristics within and external to the site.

By the nature of the design of the proposed non-habitable shed, flood waters will be able to enter the shed from voids and joints between the panels, as such the proposed shed results in no loss of flood plain storage.

Conclusion

The proposed development, being a non-habitable shed, will have negligible impact on the Fitzroy River flood characteristics and will not result in an adverse flood impact external to the site.

It is recommended during times of flood, where time permits, to remove of high value items from shed and raise them to a higher level. To minimise damage and recovery post flood, the side door should be left in the open position, to allow free flow and balance of hydrostatic forces inside and outside of the shed during the rising and falling limb of the flood event.

Data Sources

The report is based on the following information provided by others:

This report has relied on the following information, by others:

- 2015 Rockhampton LiDAR (provided by Queensland Department of Natural Resources, Mines and Energy (DNRME);
- Council Planning Scheme 2015 (v2.1);
- Fitzroy River Flood Study (Aurecon, 2011); and
- Fitzroy River hydraulic model (Aurecon, 2014); and
- NearMap aerial imagery (2020).

The accuracy of the report is dependent upon the accuracy of this information.

Qualifications

This flood statement has been prepared by MCE to support the DA of 367 East Street, Depot Hill, Rockhampton described as Lot 1 RP602019.

The analysis and overall approach was specifically catered for the particular project requirements, 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.

The report is based on the aforementioned information provided by others. The accuracy of the report is dependent upon the accuracy of this information.

Yours sincerely,



RPEQ 17118
2020.12.21 14:30:44 +10'00'

Laurence Allan
Principal Civil Engineer

Enclosed: Figures
 Reference Drawings

References

AIDR. (2017). *Australian Disaster Resilience Guideline 7-3 Flood Hazard*. Australian Institute for Disaster Resilience, Commonwealth of Australia Attorney-General's Department. Australian Institute for Disaster Resilience, on behalf of the Australian Government Attorney-General's Department.

Aurecon. (2011). *Flood Study Report Fitzroy River Flood Study*. Brisbane: Aurecon Australia Pty Ltd.

FIGURES

FIGURE 1	SITE LOCATION
FIGURE 2	1% AEP PEAK FLOOD DEPTH
FIGURE 3	1% AEP FLOOD HAZARD



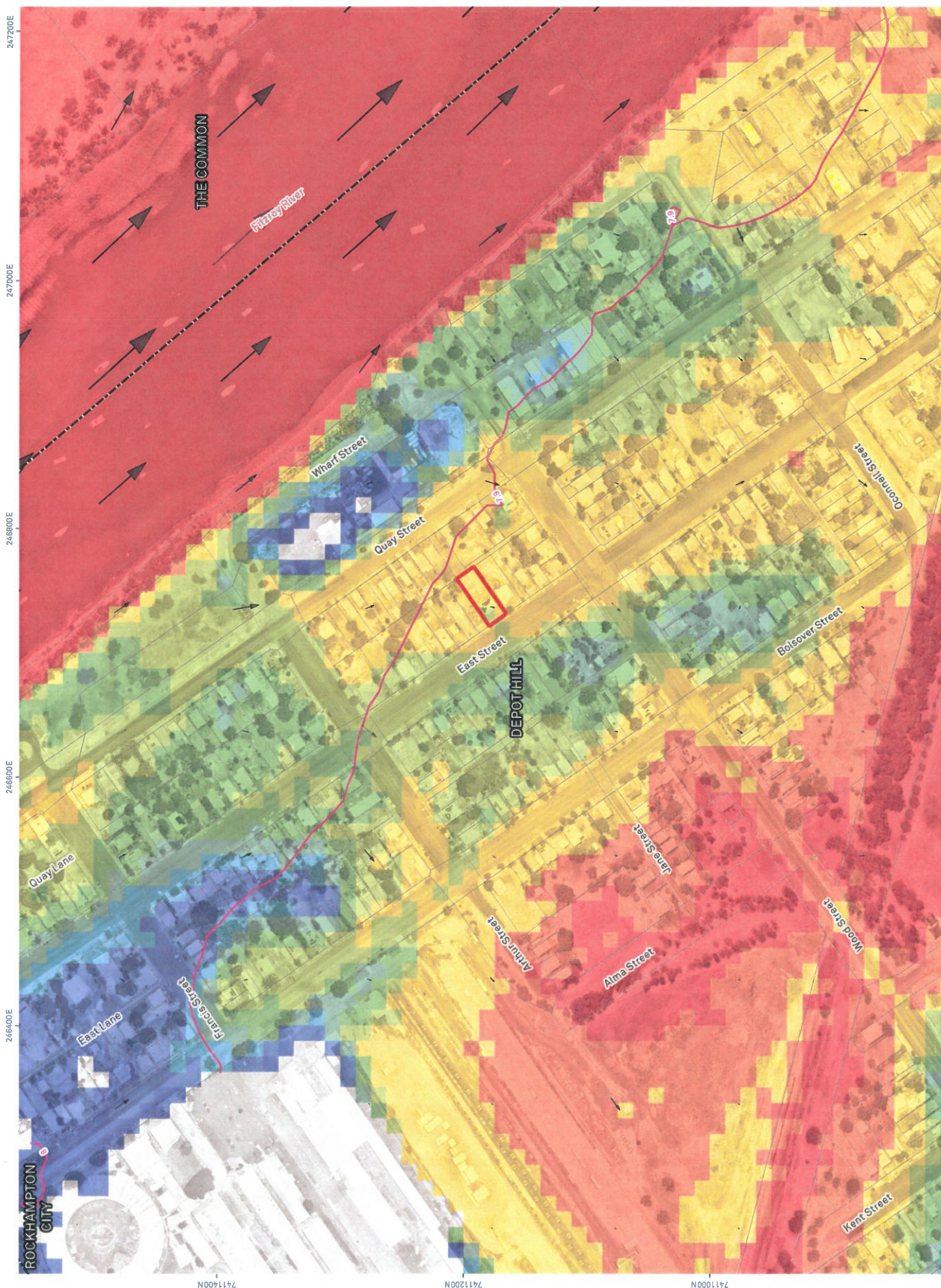
FIGURE 1
SITE LOCATION
67 East Street, Depot Hill
Flood Advice

DATE	21 December 2020	SIZE	A3
REFERENCE	J20110	SCALE	1:6.00



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- LEGEND**
- Site Boundary
 - Cadastral
 - Flood Depth (m)
 - 0.00 - 0.01
 - 0.01 - 0.25
 - 0.25 - 0.50
 - 0.50 - 0.75
 - 0.75 - 1.00
 - 1.00 - 1.25
 - 1.25 - 1.50
 - 1.50 - 2.00
 - 2.00 - 2.50
 - Above 2.50
 - Water Level Contour (mAHD)
 - Velocity Vector

FIGURE 2

FITZROY RIVER - 1% AEP PEAK FLOOD LEVEL

67 East Street, Depot Hill
Flood Advice

DATE 21 December 2020
SIZE A3

SCALE 1:3,000
0 40 80 120 160 200 m



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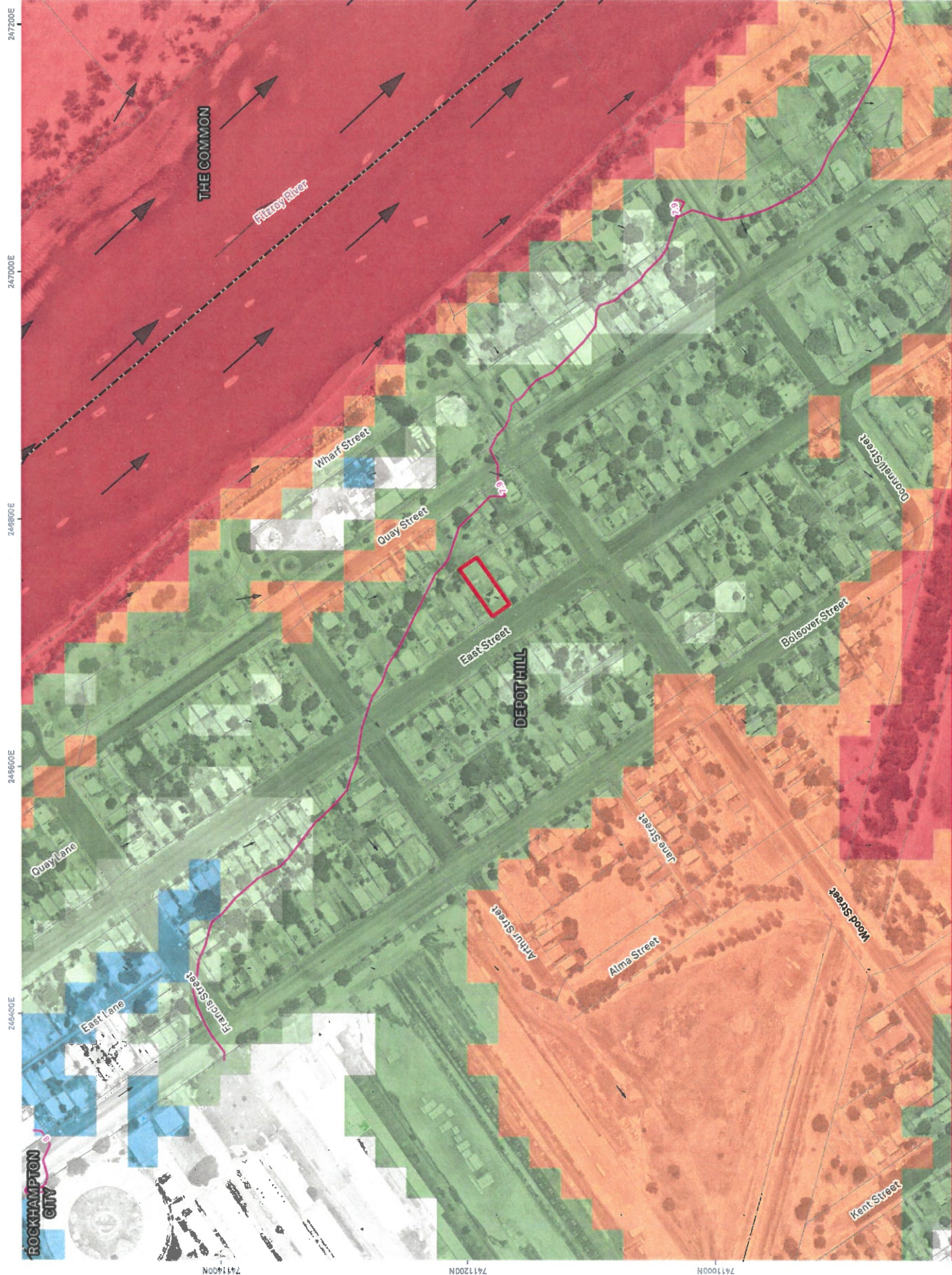


FIGURE 2
FITZROY RIVER - 1% AEP PEAK FLOOD LEVEL
67 East Street, Depot Hill
Flood Advice

DATE	21 December 2020	SIZE	A3
REFERENCE	J20110	SCALE	1:3,000



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CSES 025A-1 / HSA page 56

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REFERENCE DRAWINGS



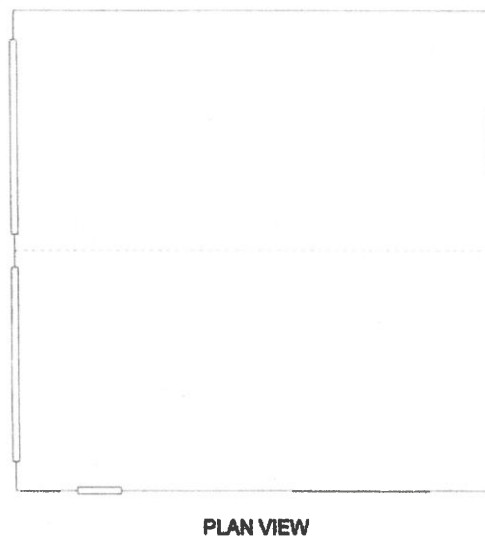
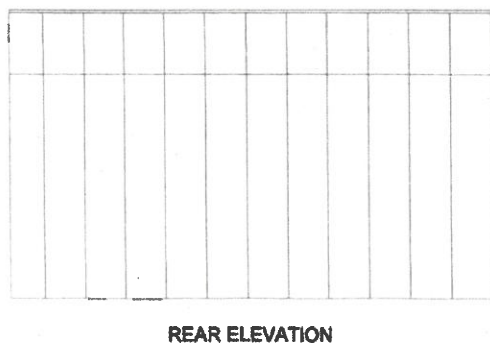
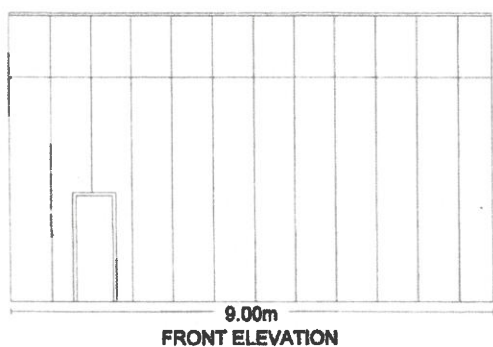
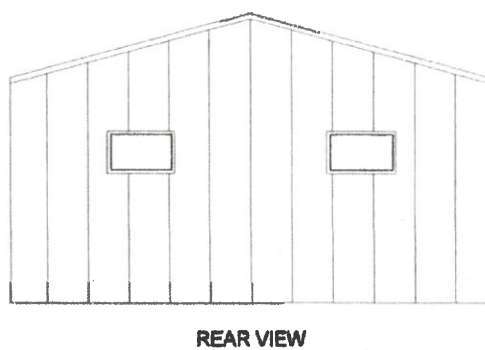
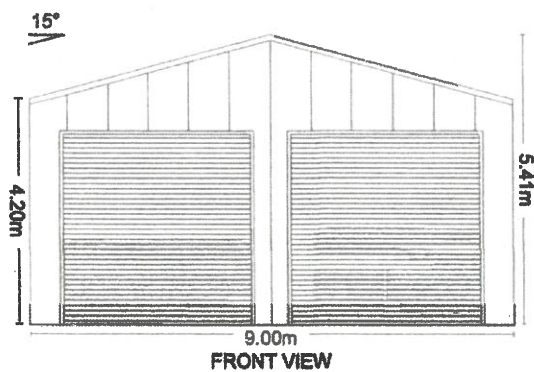
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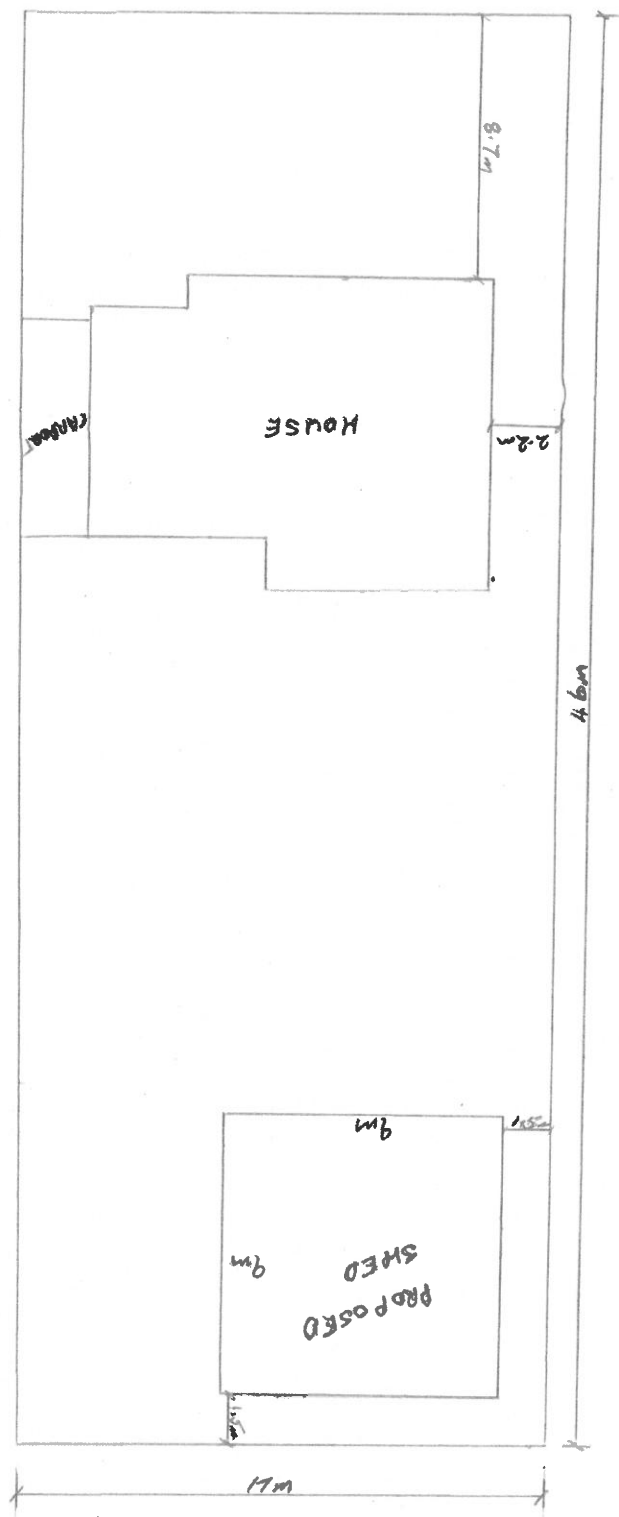
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367 EAST STREET
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