

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2020

Dated: 13 January 2021

FLOOD STATEMENT

63 Jellicoe Street Port Curtis

Rockhampton Regional Council Flood Hazard Overlay Code PO2 AO2.1 AO2.2

Author: Dan Toon
(The Hartecs Group Pty Ltd)

Date: 8 December 2020



Project No. PRJ-0153
December 2020
HARTECS NGA ENGINEERING
SUITE 8, LEVEL 1
8 ARCHER STREET
ROCKHAMPTON QLD 4700
TEL: 1300 220 195

CONTENTS

- 1.0 INTRODUCTION
 - 1.1 Background
 - 1.2 The Planning Scheme
- 2.0 EXISTING CONDITIONS
 - 2.1 Existing Surface Levels
 - 2.2 Flood Hazard Overlay Code
- 3.0 DEVELOPMENT PROPOSAL
 - 3.1 Proposed Works
 - 3.2 Assessment Against Flood Overlay Code Development Outcomes
 - 3.3 Residual Hazard – Defined Flood Event
- 4.0 REFERENCES
 - 4.1 Source of Information

5.0 AUTHORS STATEMENT

- Appendix A Locality Plan for Subject Lots
- Appendix B Site Plan & Proposed Building Details
- Appendix C RRC Flood Hazard Map
- Appendix D Defined Flood Event Surface Level & Flow Velocity

Key abbreviations used in this report:

AEP	Annual Exceedance Probability
Council	Rockhampton Regional Council
DFE	Defined Flood Event (1% AEP Flood Event)
FSL	Finished Surface Level
QUDM	Queensland Urban Drainage Manual 2018
RRC	Rockhampton Regional Council
The Planning Scheme	Rockhampton Regional Council Planning Scheme 2015 – Version 2.1

1.0 INTRODUCTION

1.1 Background

Ezylifestyle Homes engaged Hartecs Group to provide a report for 63 Jellicoe Street, Port Curtis, in response to the requirements of The Planning Scheme imposed by provisions of the Flood Hazard Overlay Code as relevant for Development in Fitzroy River Flood Areas. Ezylifestyle Homes were engaged by the property owner to design and construct a steel framed shed structure as an extension to an existing building, with the purpose of the extension nominated as secure parking for transport vehicles. Ezylifestyle Homes were directed to the pertinent provisions in the Planning Scheme by RRC Planning Staff.

Discussions with RRC Development Engineering Officers ascertained that a full flood study was not required, hence, this report is a Flood Statement which responds to SC6.10 Flood Hazard Planning Scheme Policy by interpretation of the readily available RRC technical reports in conjunction with the existing site conditions and the proposed development.

1.2 The Planning Scheme

63 Jellicoe Street is affected by the Planning Scheme Flooding Overlays as identified on Fitzroy River Flood Overlay Map OM-8A-44 (Port Curtis), with the lot affected by Hazard Zones H1, H2, H3 & H4, however, the proposed site for the development is only affected by Hazard Zone H1 as depicted in Appendix C. As a consequence, Part 8.2.8 of the Planning Scheme Overlay Codes is applicable with construction of a building for non-residential purposes being accepted development subject to satisfying the requirements of Table 8.2.8.3.1 Development outcomes for assessable development and requirements for accepted development (part).

The relevant provisions of Table 8.2.8.3.1 are;

Performance Outcome 1 (PO1)

Development (including extensions) for non-residential purposes is able to provide a safe refuge for people and for the storage of goods during times of flood inundation.

Acceptable Outcome 1.1 (AO1.1)

For non-residential development, at least thirty (30) per cent of the gross floor area of all new buildings and structures is located a minimum of 500 millimetres above the defined flood level.

Editor's note—Areas less than those nominated above may be supported where accompanied by a flood impact report in accordance with [SC6.10—Flood hazard planning scheme policy](#).

and;

Acceptable Outcome 1.2 (AO1.2)

A report from a registered professional engineer of Queensland certifies that the development in the flood area will not result in a material increase in flood level or flood hazard on upstream, downstream or adjacent properties.

The purpose of this Flood Statement is to demonstrate how the proposed development of a Class 7 building for parking freight transport vehicles, a truck, can comply with PO1, AO1.1 and AO1.2

2.0 EXISTING CONDITIONS

2.1 Existing Surface Levels

The lot surface levels vary from 7m to 8m AHD and the slab level in the existing building was recently surveyed and found to have a level of 8.5m AHD. Whilst not surveyed, it is noted the ground level adjacent to and surrounding the existing building would be in the order of 150mm lower than the slab level. These levels are consistent with the Flood Hazard Mapping attributing a rating of H1 to the existing building and the area proposed for construction of the extension.

2.2 Flood Hazard Overlay Code

The RRC Planning Unit advised that A Building Works Assessable against the Planning Scheme application is required, supported by this Flood Statement Report. The lot is located within the Rural Zone and whilst fully affected by a Flood Overlay, the site of the existing building is in the H1 Low area. DFE water surface contours obtained from RRC Flood Modelling were utilised to compare the pre and post development conditions and assess compliance with the Overlay Code Acceptable Outcomes. RRC flood modelling indicates the water surface level at the location of the existing building is 8.3m AHD, refer

to Appendix D, compared to the existing and proposed slab finished surface levels of 8.5m AHD. The implications of the Overlay Code Acceptable Outcomes are detailed by subsequent sections of this report.

3.0 DEVELOPMENT PROPOSAL

3.1 Proposed Works

The development proposed is construction of a 18.4m x 10m steel framed industrial style shed with colorbond roof and wall sheeting as an extension to an existing building. The building will have a concrete slab on ground as the floor and the finished slab level will match the level of the existing adjacent building. Access is by a roller door at each end and two PA doors. The proposed works do not require placement of fill except for minor "topping up" to under slab level.

3.2 Assessment Against Flood Overlay Code Development Outcomes

Information obtained from, primarily, RRC sources identifies the subject site has been assessed as having H1 (Low) Flood Hazard Rating. The following provides a response to the relevant Overlay Code Performance and Acceptable Outcomes Stated in Table 8.2.8.3.1.

Performance Outcome 1 (PO1)

Development (including extensions) for non-residential purposes is able to provide a safe refuge for people and for the storage of goods during times of flood inundation.

The objective of PO1 is interpreted as being most relevant in circumstances where flooding occurs quickly following rainfall and workers have little or no warning of impending inundation to remove themselves or stored goods to above the anticipated flood level. The flooding hazard at 63 Jellicoe Street arises from elevated water levels in the Fitzroy River which has a slow response time, measured in days/weeks and given the site is affected by the very top water levels of the DFE, workers engaged in any activities on the site will have a long lead time to remove themselves, and any stored goods, to another site above the flood level. In addition, the stated primary use for this building is secure parking for freight transport vehicles (truck) hence, any vehicles can simply be driven to another site above the DFE.

Acceptable Outcome 1.1 (AO1.1)

For non-residential development, at least thirty (30) per cent of the gross floor area of all new buildings and structures is located a minimum of 500 millimetres above the defined flood level.

Editor's note—Areas less than those nominated above may be supported where accompanied by a flood impact report in accordance with [SC6.10—Flood hazard planning scheme policy](#).

and;

In the location of the proposed development, the DFE water surface elevation has been determined from the results of RRC flood modelling as approximately 8.3m AHD, hence, full compliance with AO1.1 would require at least 30% of the new slab level to be at or above 8.8m AHD. The proposed building slab finished surface level has been selected to match the existing adjacent building slab level of 8.5m AHD. The following dot points provide justification to support partial compliance with 100% of the slab area being constructed 200mm above the DFE level;

- The slab level proposed would result in 100% of the area being 200mm above the DFE level. Whilst less than the nominated preferred 500mm freeboard, the stated

non-residential use as secure truck parking does not cause a risk that cannot be easily mitigated.

- Constructing the new slab 500mm above the DFE level would create a step to the existing slab and require placement of fill adjacent to the existing buildings which is not desirable.
- Constructing the new slab with 2 levels is not practical for the stated purpose of truck parking.

Acceptable Outcome 1.2 (AO1.2)

A report from a registered professional engineer of Queensland certifies that the development in the flood area will not result in a material increase in flood level or flood hazard on upstream, downstream or adjacent properties.

The existing ground level across the footprint of the proposed new building is approximately 150-200mm below the proposed finished slab level (8.5m AHD), hence, is currently at, or close to, the DFE surface level (8.3m AHD). Consequently, the flow across the natural surface of the development footprint, pre-development, would be negligible and construction of the proposed building will not displace flow or materially increase flood levels to cause any hazard to upstream, downstream or adjacent properties. This is further supported by flow velocity information obtained from RRC Flood Modelling, refer Appendix D, which indicates very low (<0.1m/s) velocity in the vicinity of the development site.

3.3 Residual Hazard – Defined Flood Event

The hazards related to inundation of the building slab, which has been set above the DFE level, can be further mitigated by removal of goods and exclusion of workers during a flooding event due to the long lead time associated with a Fitzroy River Flood. The remaining hazard is related to access to the property during a DFE. The access route via Jellicoe Street to Lower Dawson Road is impacted by H5 (Extreme) Hazard at the peak of the DFE. Consequently, it would be normal Disaster Management practice for Jellicoe Street to be closed prior to inundation from rising flood waters, hence, the risk is mitigated by actions of controlling authorities and any need for evacuation is eliminated.

4.0 REFERENCES

4.1 Source of Information

The primary source of information for preparation of this Flood Statement is The Planning Scheme and its related Flood Hazard Overlay, Overlay Mapping, Flood Hazard Planning Scheme Policy and Fitzroy River Flood Study. Ancillary information was obtained by survey of the existing ground surface levels and reference to the QUDM.

5.0 AUTHOR'S STATEMENT

My full name is Daniel Toon and I am a Registered Professional Engineer of Queensland (No 5424). I work for the Hartecs Group Pty Ltd from premises located at Suite 8, Tobruk House, 8 Archer Street, Rockhampton, Qld., 4700. I am employed as a Senior Civil Engineer for the Hartecs Group Pty Ltd which has a consulting civil engineering section based in Rockhampton, Queensland.

I am a qualified Civil Engineer with 30 years professional experience. I have practiced in various areas of Queensland in both local government and private practice, as well as the Northern Territory and for the past 25 years in Rockhampton. My experience includes stormwater hydrology and hydraulic calculations and interpretation of complex modelling outputs of relevance to provision of this flood statement.

No matters of significance which I regard as relevant to this report, to my knowledge, have been withheld.



.....

Dan Toon RPEQ No 5424

APPENDIX A LOCALITY PLAN FOR SUBJECT LOT

A4 Page scale at 1: 10,000.00



Spatial reference
GDA2020_MGA_Zone_56

Printed from RPPS on 11/12/20

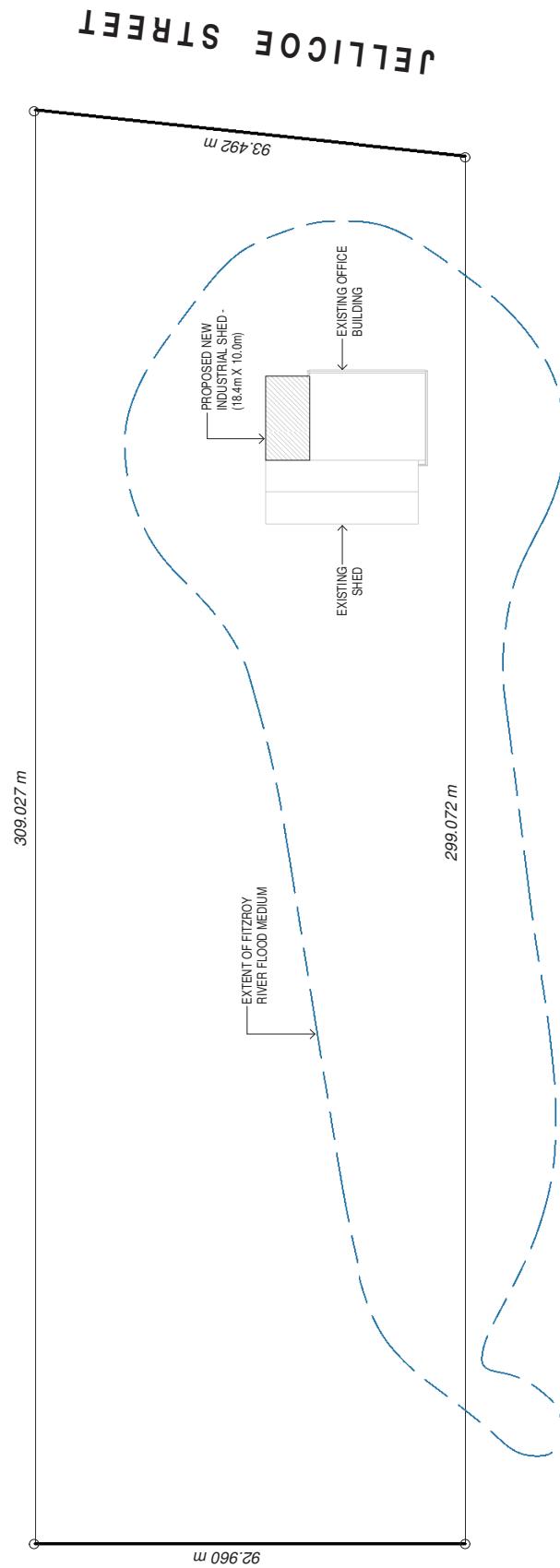
Legend

- RRC Mask
- RRC Mask
- Roads2
- Main roads
- Major council roads
- Standard council roads
- Access roads
- Private roads
- Easements
- Property Parcels
- Ocean
- CQL LGAs Boundaries
- Image
- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Image
- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Image



Copyright protects this publication. Reproduction by whatever means is prohibited without prior written permission of the Chief Executive Officer, Rockhampton Regional Council. Rockhampton Regional Council will not be held liable under any circumstances in connection with or arising out of the use of this data nor does it warrant that the data is error free. Any queries should be directed to the Customer Service Centre, Rockhampton Regional Council or telephone 1300 22 55 77. The Digital Cadastral DataBase is current as at December 2020. © The State Government of Queensland (Department of Natural Resources and Mines) 2020. All other data © Rockhampton Regional Council 2020. This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current or otherwise reliable. Rockhampton Region Planning Scheme -

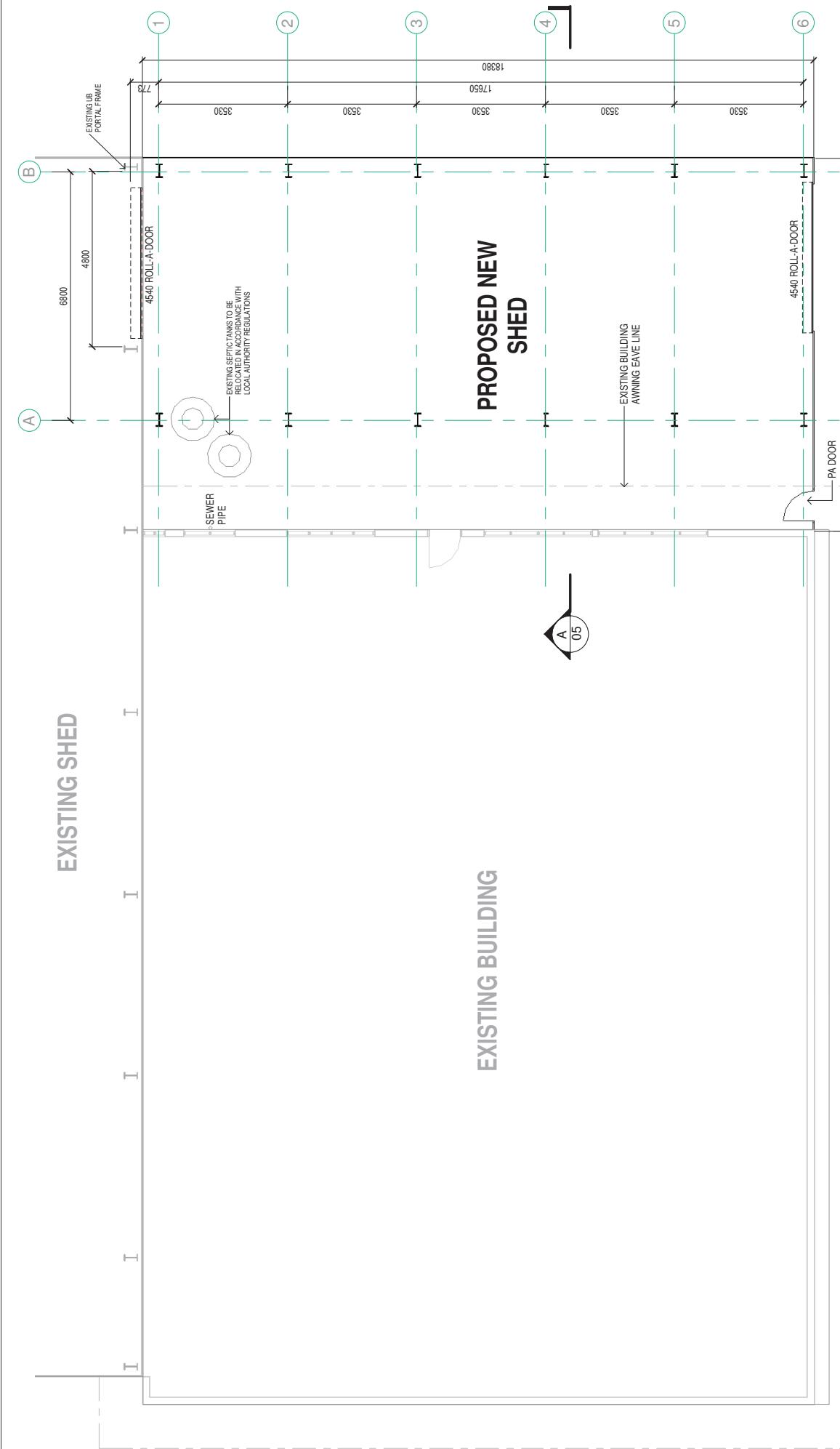




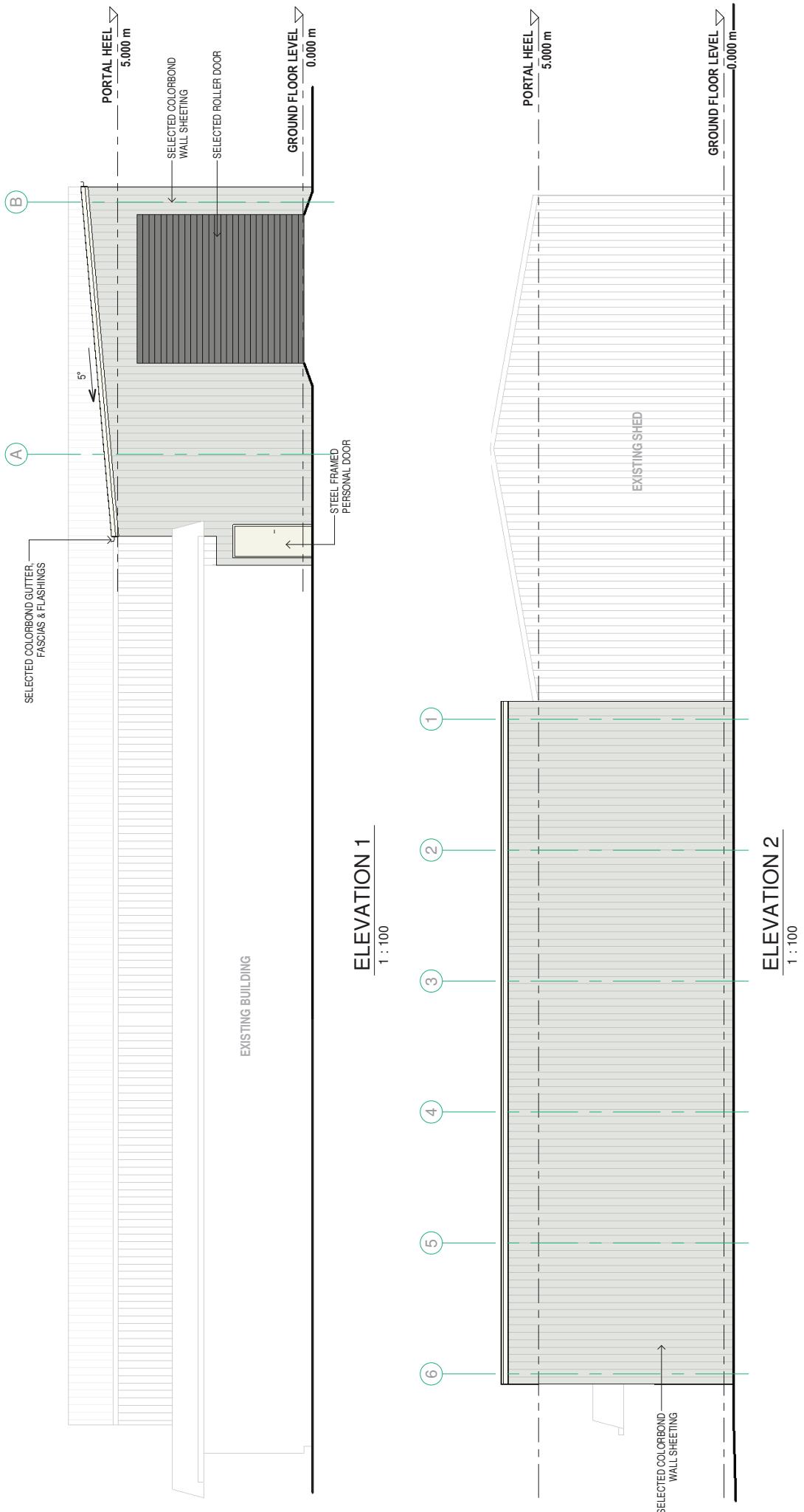
R.P.D.
LOT NUMBER: 2
REG SURVEY PLAN NO.: RP845103
PARISH:
COUNTY:
AREA:
WIND SPEED: C2

SITE PLAN		PROJECT NUMBER	
PROPOSED NEW SHED	G. McDONALD	DRAWN : N.T.L.	2009-01
	63 JELICOE STREET	CHKD : R.Q.	
	PORT CURTIS	SCALE : 1 : 1000	
		DATE : JULY 2020	
		PLAN SIZE: A3	REV. 1 2

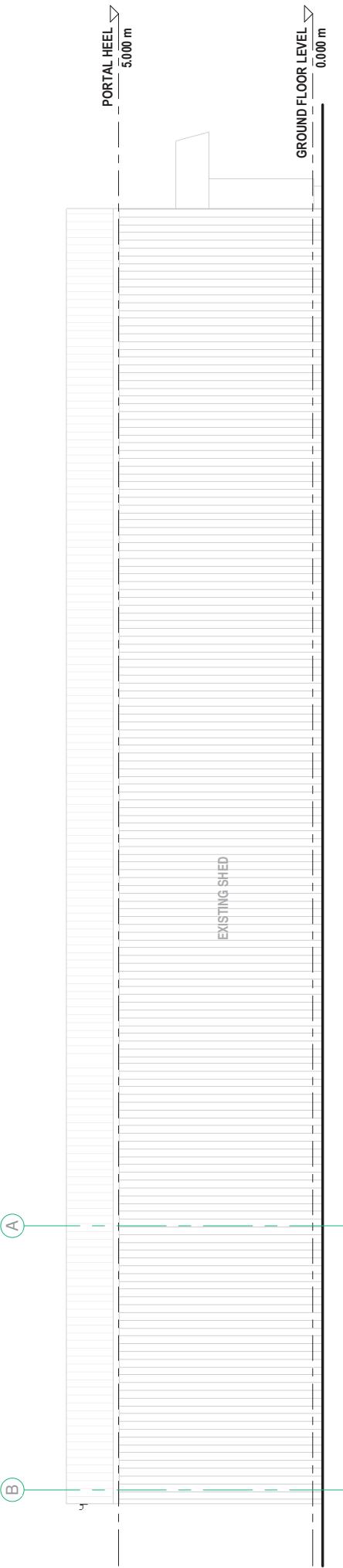
ezlifestyle HOMES
INNOVATIVE LIVING AND DESIGN
PH: 49 364 371 Copyright © This plan or any portion thereof may not be reproduced without the express written permission of Of Fair Pty Ltd QBSA 1131420



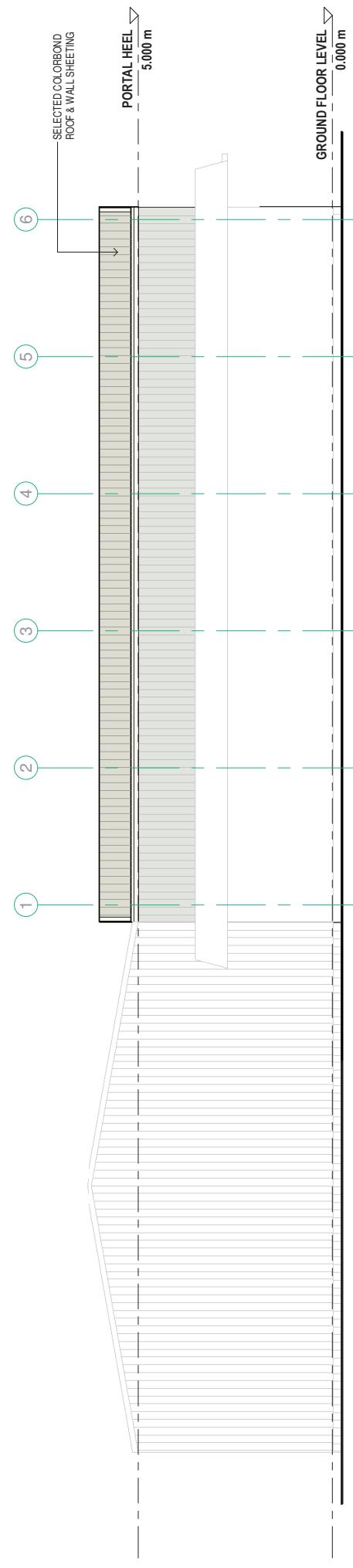
PRINT DATE : 29/09/2020 10:49:43 AM



PROPOSED NEW SHED		ELEVATIONS		DRAWN : N.T.L.		PROJECT NUMBER	
G. McDONALD		PORTAL HEEL 5.000 m PORTAL FLOOR LEVEL 0.000 m		CHKD : R.Q.		2009-03	
63 JELICOE STREET		SCALE : 1 : 100		DATE : JULY 2020		PLAN SIZE:	
PORT CURTIS		ezlifestyle HOMES INNOVATIVE LIVING AND DESIGN		A3		REV. 1 2	
2	ISSUED FOR APPROVAL	PH-49364-371	Copyright ©				
1	ISSUED FOR QUOTATION	This plan or any portion thereof may not be reproduced without the express written permission of Offair Pty Ltd OBSA 1131420					
REV.	DESCRIPTION	DATE	DATE				



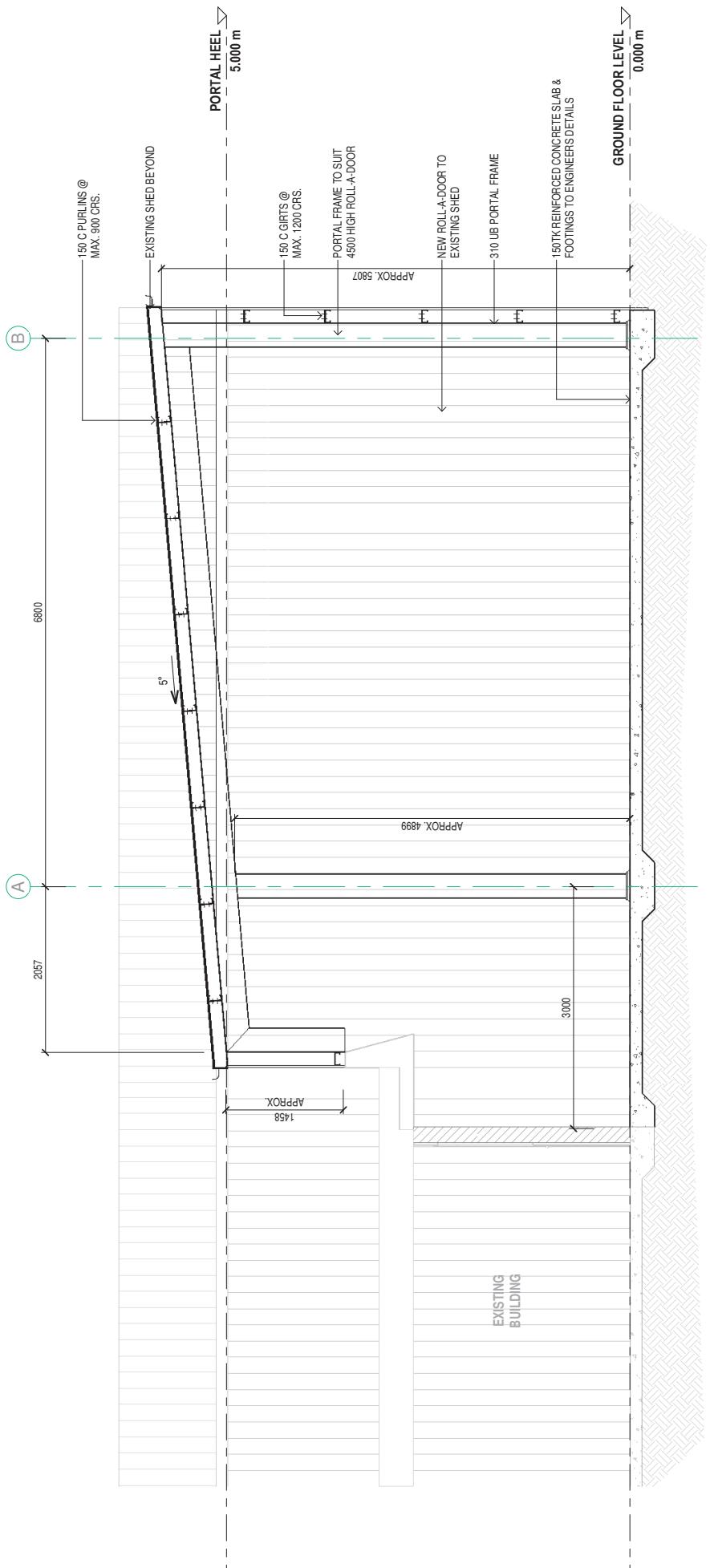
ELEVATION 3
1 : 100



ELEVATION 4
1 : 100

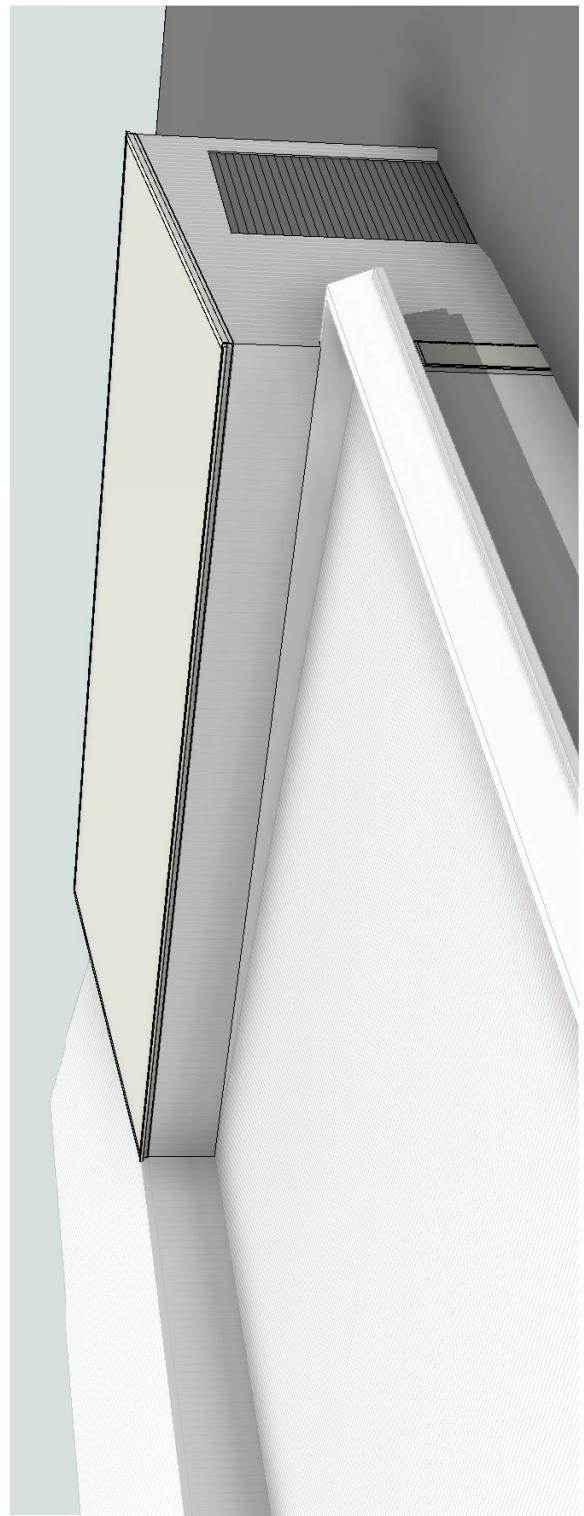
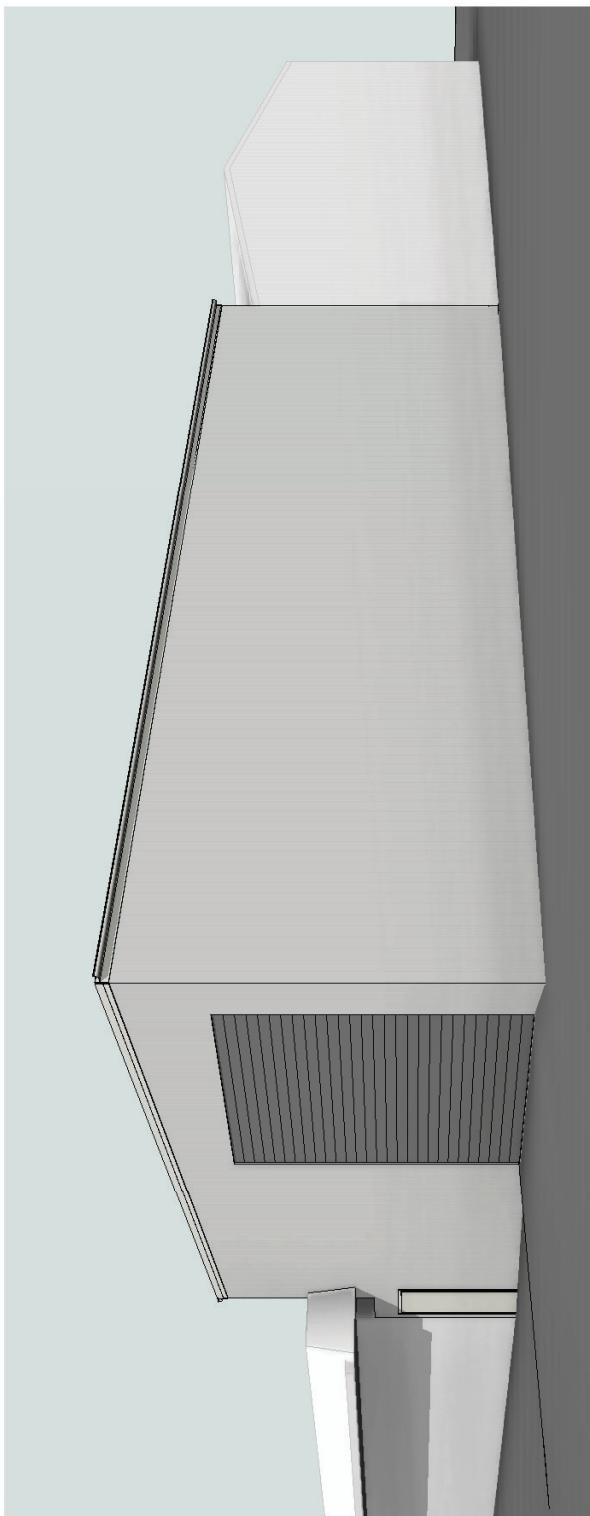
PROPOSED NEW SHED		ELEVATIONS		PROJECT NUMBER	
G. McDONALD		Copyright ©		2009-04	
63 JELICOE STREET		ezlifestyle HOMES		DRAWN : N.T.L.	
PORT CURTIS		PH-49364/371		CHKD : R.Q.	
ISSUED FOR APPROVAL	29/09/20	SCALE : 1 : 100		DATE : JULY 2020	
ISSUED FOR QUOTATION	29/08/20	REV. 1		PLAN SIZE: A3	
DESCRIPTION	DATE	2		REV. 2	
REV.					

PRINT DATE : 29/09/2020 10:49:44 AM



		PROPOSED NEW SHED		SECTION		DRAWN : N.T.L.		PROJECT NUMBER	
		G. McDONALD				CHKD : R.Q.		2009-05	
		63 JELICOE STREET				SCALE : 1 : 50			
		PORT CURTIS				DATE : JULY 2020			
2	ISSUED FOR APPROVAL	29/09/20	1	ISSUED FOR QUOTATION	29/08/20	REV.	1	2	
		DESCRIPTION				PLAN SIZE:			
		REV				A3			

ezlifestyle HOMES
INNOVATIVE LIVING AND DESIGN
PH: 49 364 371 Copyright © This plan or any portion thereof may not be reproduced without the express written permission of Of Fair Pty Ltd OBSA 1131420



PROJECT NUMBER		2009-06			
DRAWN :	N.T.L.	CHKD :	R.Q.	SCALE :	
DATE :	JULY 2020	REV.	1	1	2
PLAN SIZE:	A3	PLAN SIZE:	A3	REV.:	
ISSUED FOR APPROVAL	29/09/20	ISSUED FOR QUOTATION	29/08/20	DESCRIPTION	DATE
REV.					

PRINT DATE : 29/09/2020 10:49:45 AM

APPENDIX C RRC FLOOD HAZARD MAP

A4 Page scale at 1: 2,194,79

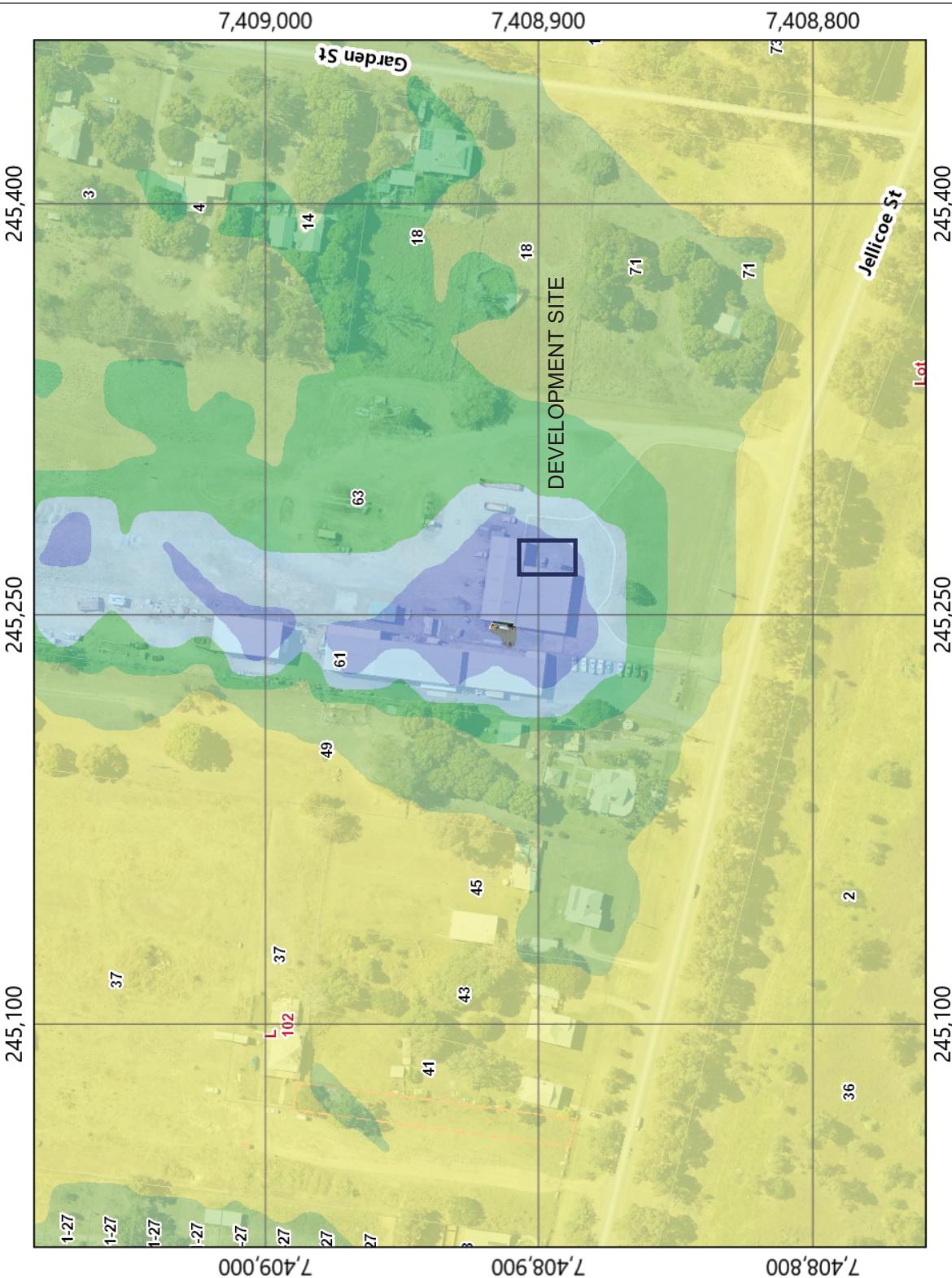


Spatial reference

GDA2020_MGA_Zone_56

Printed from RPPS on 11/12/20

Legend

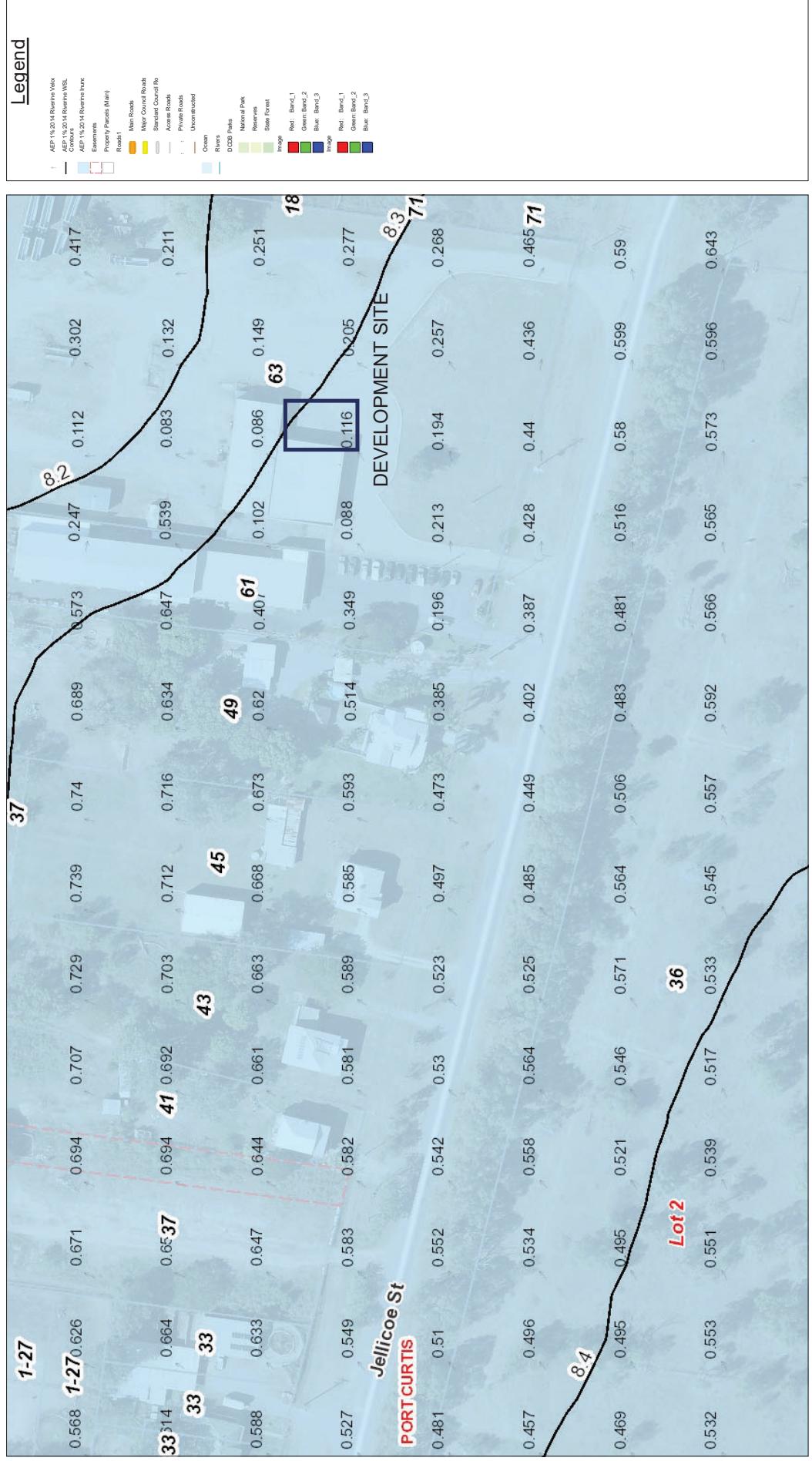


Copyright protects this publication. Reproduction by whatever means is prohibited without prior written permission of the Chief Executive Officer, Rockhampton Regional Council. Rockhampton Regional Council will not be held liable under any circumstances in connection with or arising out of the use of this data nor does it warrant that the data is error free. Any queries should be directed to the Customer Service Centre, Rockhampton Regional Council or telephone 1300 22 55 77. The Digital Cadastral DataBase is current as at December 2020. © The State Government of Queensland (Department of Natural Resources and Mines) 2020. All other data © Rockhampton Regional Council 2020. This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current or otherwise reliable. Rockhampton Region Planning Scheme -



APPENDIX D DEFINED FLOOD EVENT SURFACE LEVEL & FLOW VELOCITY

A4 Page scale at 1: 1,509.86
Printed from GeoCortex on 06/11/2020



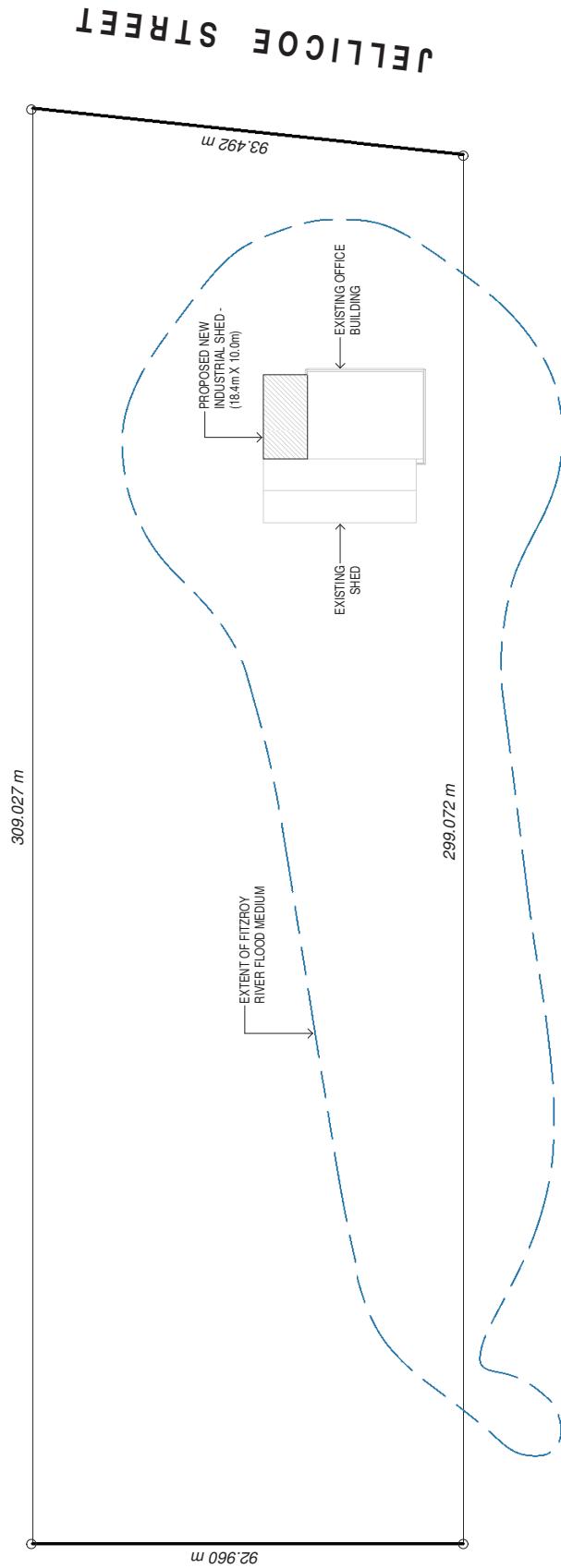
Copyright protects this publication. Reproduction by whatever means is prohibited without prior written permission of the Chief Executive Officer, Rockhampton Regional Council will not be held liable under any circumstances in connection with or arising out of the use of this data nor does it warrant that the data is error free. Any queries should be directed to the Customer Service Centre, Rockhampton Regional Council or telephone 1300 22 55 77. The Digital Cadastral DataBase is current as at November 2020. © The State Government of Queensland (Department of Natural Resources and Mines) 2020. All other data © Rockhampton Regional Council 2020. This map is a user generated static output from an internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

GDA2020



ROCKHAMPTON REGIONAL COUNCIL**APPROVED PLANS**

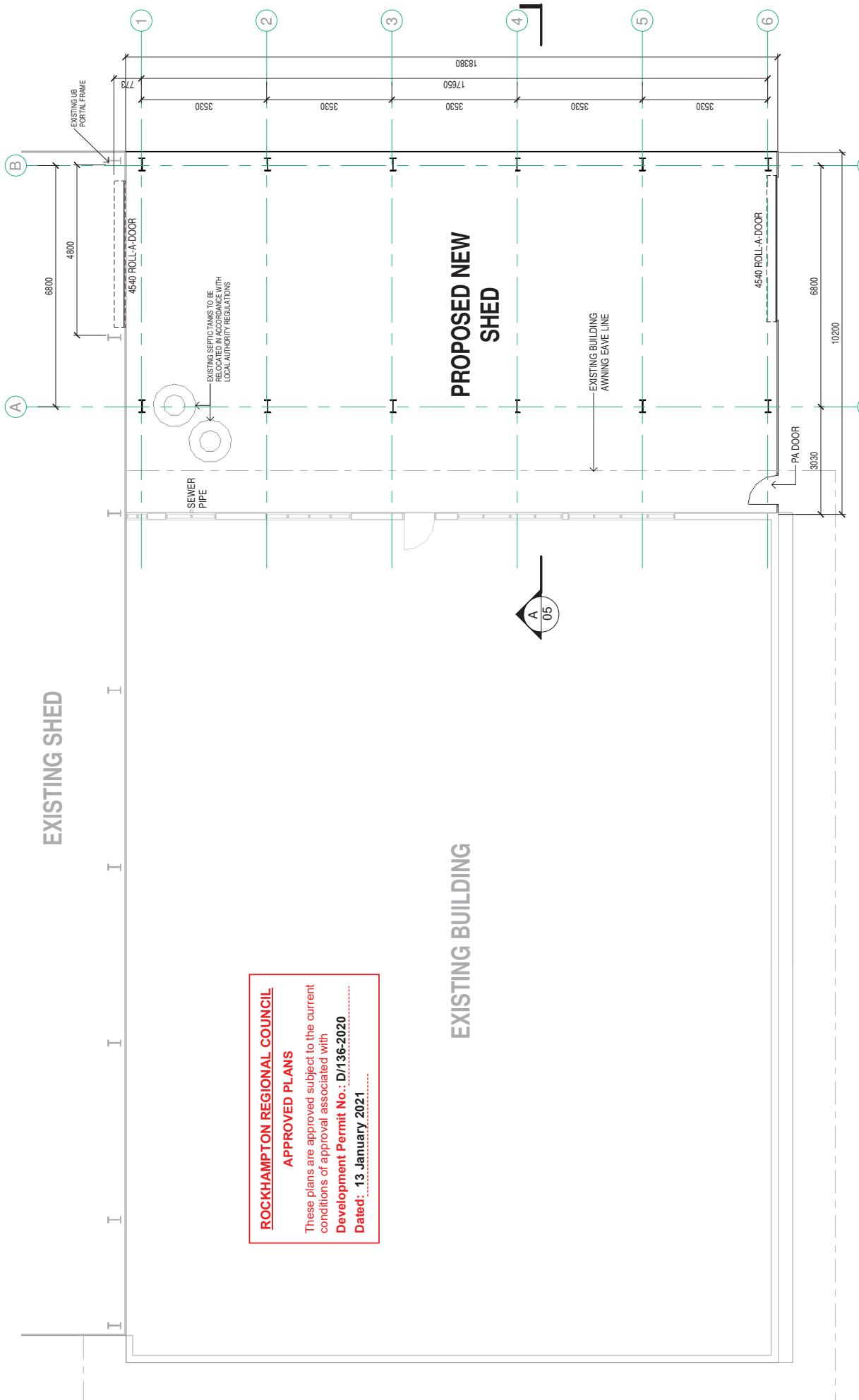
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D1/136-2020
Dated: 13 January 2021



R.P.D.
 LOT NUMBER: 2
 REG SURVEY PLAN NO.: RP845103
 PARISH:
 COUNTY:
 AREA:
 WIND SPEED : C2

		SITE PLAN		PROJECT NUMBER	
DRAWN :	N.T.L.	PROPOSED NEW SHED	G. McDONALD	2009-01	
CHKD :	R.Q.				
SCALE :	1 : 1000				
DATE :	JULY 2020				
		ezlifestyle HOMES	Copyright ©		
		INNOVATIVE LIVING AND DESIGN	This plan or any portion thereof may not be reproduced without the express written permission of Ozfair Pty Ltd OBSA 1131420		
ISSUED FOR APPROVAL	REV.	A3	1	2	
ISSUED FOR QUOTATION	DESCRIPTION	DATE			
2					
1					
REV					

EXISTING SHED



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/136-2020
Dated: 13 January 2021

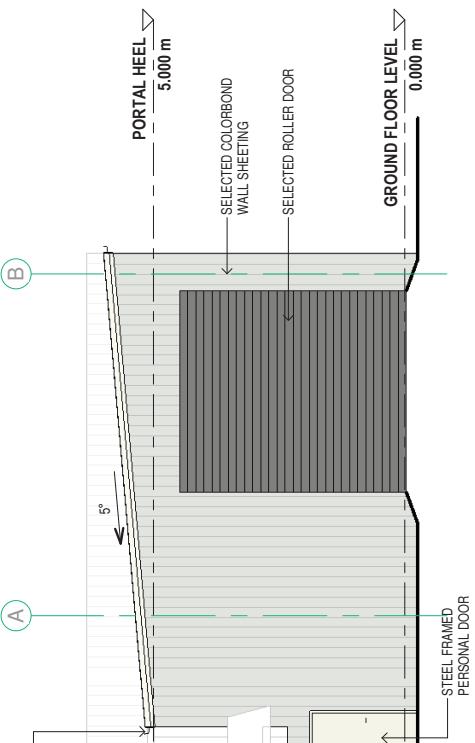
EXISTING BUILDING

PROPOSED NEW SHED

FLOOR PLAN		DRAWN : N.T.L.		PROJECT NUMBER	
		CHKD : R.Q.		2009-02	
		SCALE : 1 : 100			
PROPOSED NEW SHED	G. McDONALD	PH: 49 364 371	Copyright ©	A3	REV. 1 2
		ezlifestyle HOMES	This plan or any portion thereof may not be reproduced without the express written permission of OzFair Pty Ltd QBSA 1131420	PLAN SIZE:	
63 JELICOE STREET				JULY 2020	
PORT CURTIS				DATE	

PRINT DATE : 29/09/2020 10:49:43 AM

REV:



SELECTED COLORBOND GUTTER,
FASCIAS & FLASHINGS

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current
conditions of approval associated with
Development Permit No.: D/136/2020
Dated: 13 January 2021

ELEVATION 1
1 : 100

1

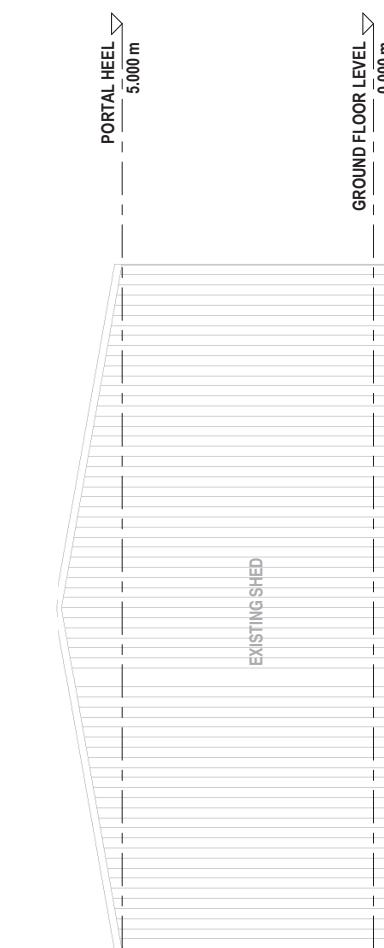
2

3

4

5

6

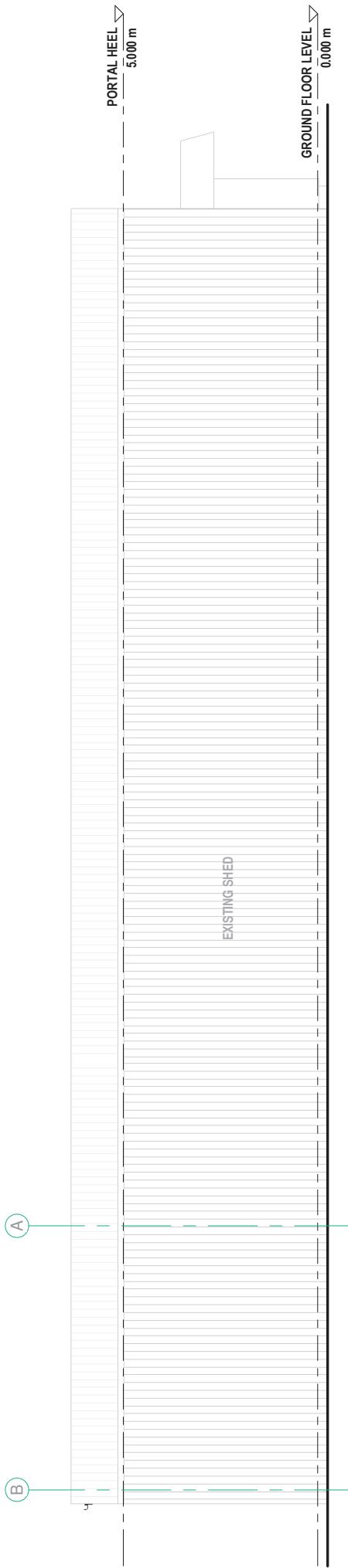


ELEVATION 2
1 : 100

SELECTED COLORBOND
WALL SHEETING

		PROPOSED NEW SHED		ELEVATIONS		DRAWN : N.T.L.		PROJECT NUMBER	
		G. McDONALD		Copyright ©		CHKD : R.Q.		2009-03	
		63 JELLICOE STREET		ezlifestyle HOMES		SCALE : 1 : 100			
		PORT CURTIS		INNOVATIVE LIVING AND DESIGN		DATE : JULY 2020			
2	ISSUED FOR APPROVAL	PH-49364/371		ezlifestyle HOMES		PLAN SIZE:		A3	REV.
1	ISSUED FOR QUOTATION	29/09/20		Copyright ©		1		1	2
REV	DESCRIPTION	29/08/20		This plan or any portion thereof may not be reproduced without the express written permission of Of Fair Pty Ltd QBSA 1131420					

PRINT DATE : 29/09/2020 10:49:43 AM

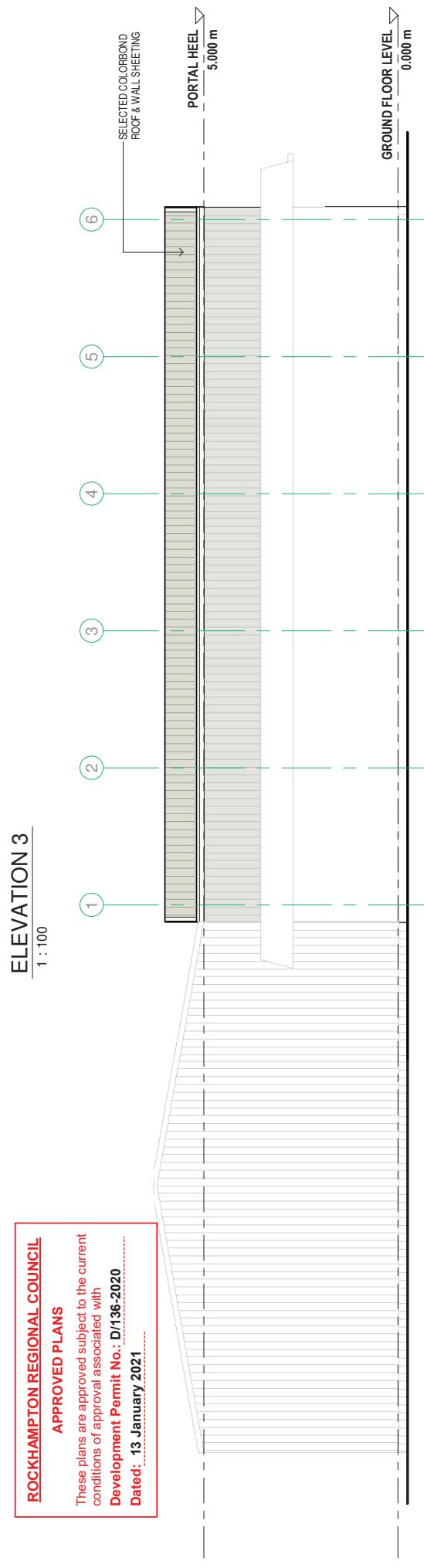


ELEVATION 3
1 : 100

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/136-2020
Dated: 13 January 2021

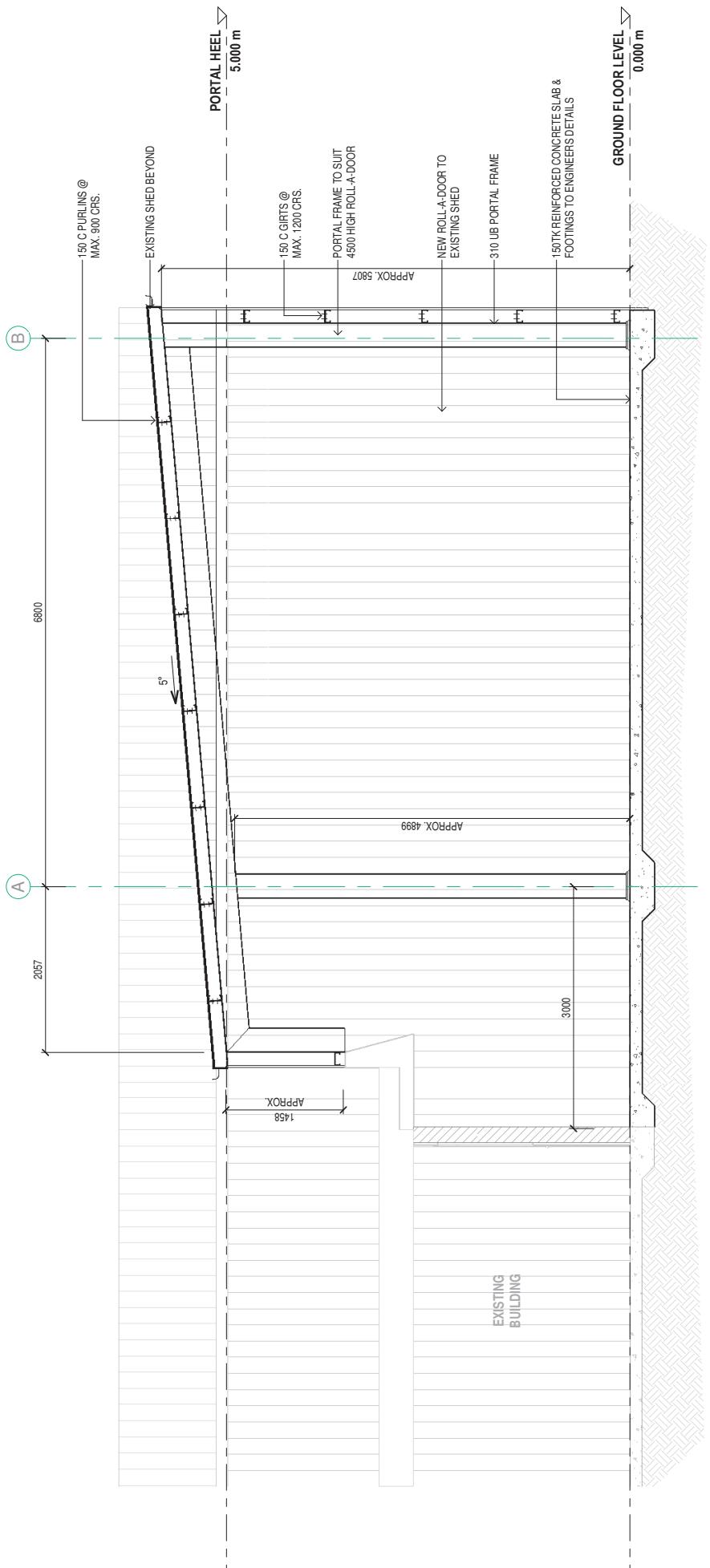


ELEVATION 4
1 : 100

		PROPOSED NEW SHED		ELEVATIONS		DRAWN : N.T.L.		PROJECT NUMBER	
		G. McDONALD				CHKD : R.Q.		2009-04	
		63 JELICOE STREET				SCALE : 1 : 100			
		PORT CURTIS				DATE : JULY 2020			
		DATE				PLAN SIZE:		A3	
1		ISSUED FOR QUOTATION		REV.		1		1	
2		ISSUED FOR APPROVAL		2		2			
REV.		DESCRIPTION							

ezlifestyle HOMES
INNOVATIVE LIVING AND DESIGN

PH-49364/371
Copyright ©
This plan or any portion thereof may not be
reproduced without the express written
permission of Of Fair Pty Ltd QBSA 1131420

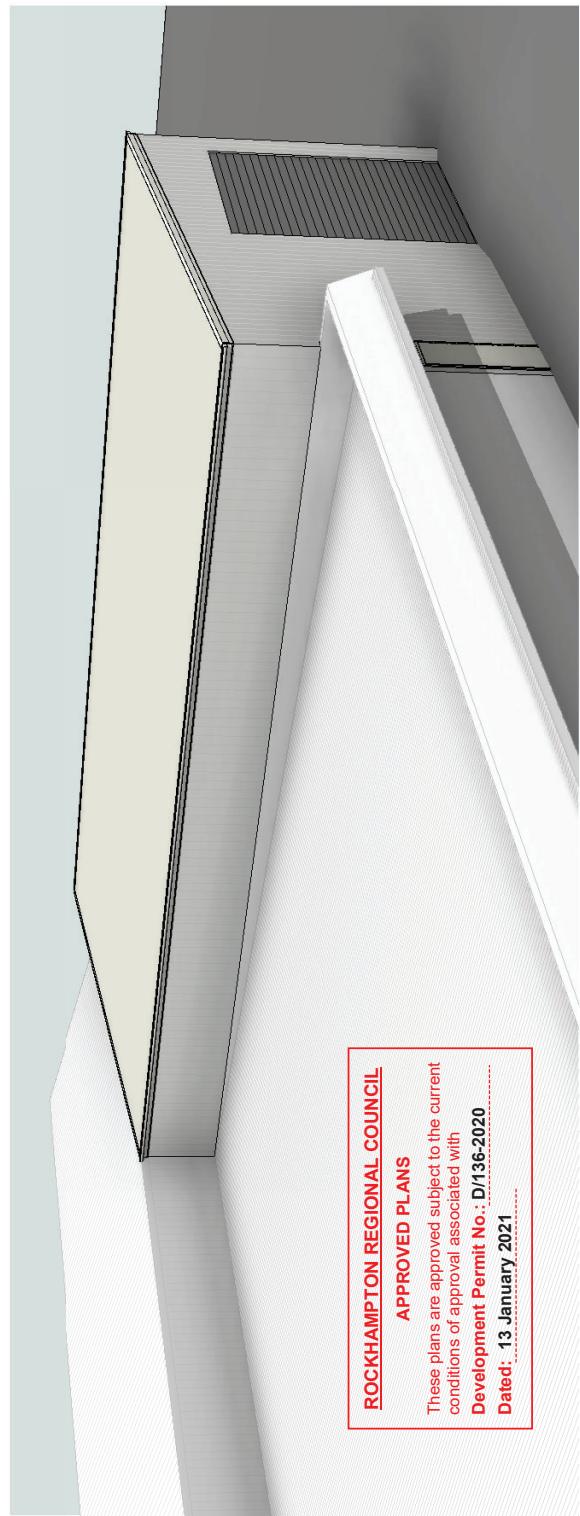
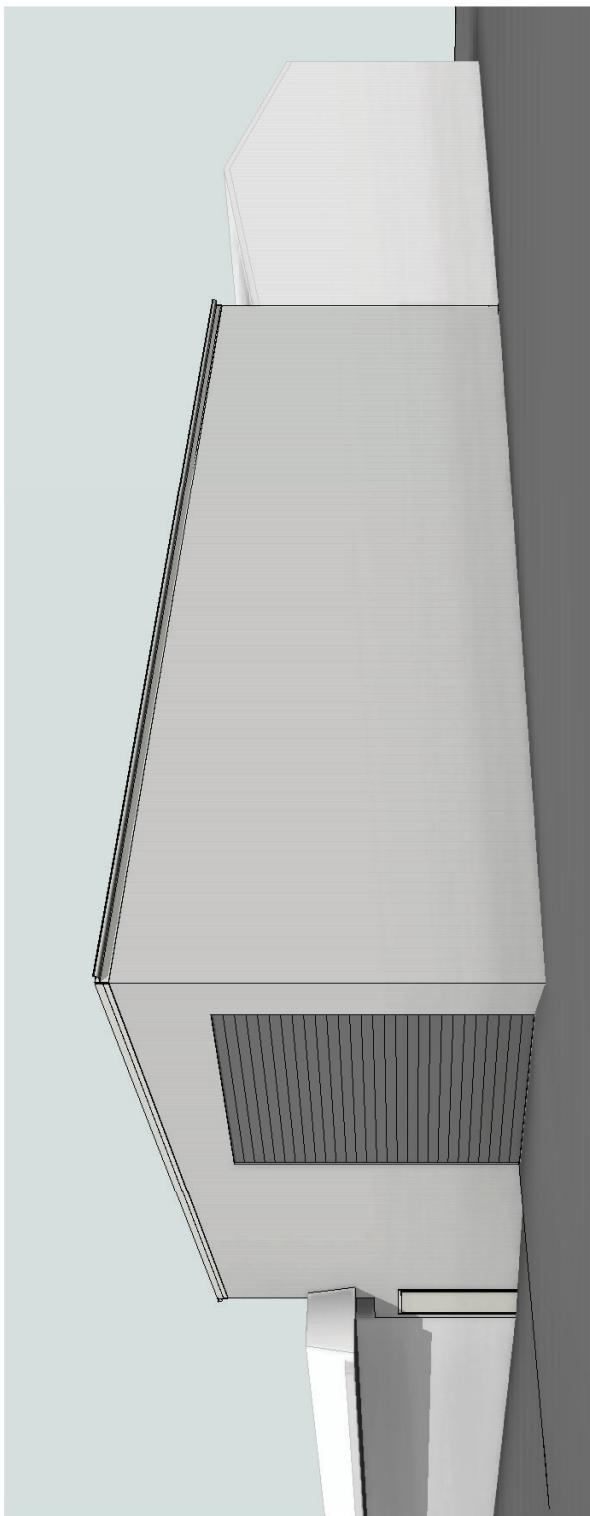


ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with
Development Permit No. D/136-2020
Dated: 13 January 2021

		PROPOSED NEW SHED		SECTION				PROJECT NUMBER	
		G. McDONALD				DRAWN : N.T.L.		2009-05	
		63 JELICOE STREET		CHKD : R.Q.		SCALE : 1 : 50			
		PORT CURTIS		DATE : JULY 2020		PLAN SIZE:		A3	
		DESCRIPTION		REV.		1		2	
2	ISSUED FOR APPROVAL	29/09/20		DATE					
1	ISSUED FOR QUOTATION	29/08/20							
REV									



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/136-2020
Dated: 13 January 2021

PROJECT NUMBER		DRAWN : N.T.L.			
		CHKD : R.Q.			
		SCALE :			
2	ISSUED FOR APPROVAL	PH-49364/371	Copyright ©	A3	1
1	ISSUED FOR QUOTATION	ezlifestyle HOMES INNOVATIVE LIVING AND DESIGN	This plan or any portion thereof may not be reproduced without the express written permission of Ozfair Pty Ltd QBSA 1131420	REV.	2
REV	DESCRIPTION	DATE	DATE	PLAN SIZE:	1

PRINT DATE : 29/09/2020 10:49:45 AM