

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/62-2021

Dated: 11 June 2021

FLOOD STATEMENT

Proposed New Shed 63 Jellicoe Street Port Curtis

**Rockhampton Regional Council
Flood Hazard Overlay Code P02 AO2.1 AO2.2**

Author: Dan Toon
(The Hartecs Group Pty Ltd)

Date: **28 April 2021**



Project No. PRJ-0153
April 2021
HARTECS NGA ENGINEERING
SUITE 8, LEVEL 1
8 ARCHER STREET
ROCKHAMPTON QLD 4700
TEL: 1300 220 195

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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 are engaged by the property owner to design and construct a standalone steel framed shed structure adjoining an existing similar building, with the purpose of the new shed nominated as secure parking for transport vehicles. Refer to Appendix B for the shed layout and dimensions. Ezylifestyle Homes were directed to the relevant provisions in the Planning Scheme by RRC Planning Officers.

Discussions with RRC Development Engineering Officers ascertained that a full flood study was not required, hence, this report is a Flood Statement responding 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 by 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, primarily trucks, 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 8.3m 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 100mm-200mm 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 new shed.

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) Hazard 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 is 8.25m AHD at the location of the proposed new shed, 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 an 18m x 25m steel framed industrial style shed with colorbond roof and wall sheeting immediately adjacent to an existing building with a shared wall along one side. 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 aligned with a central drive through, four side access roller doors 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 that the subject site has been assessed as having a 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 would 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 (trucks) 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 8.25m AHD, hence, full compliance with AO1.1 would require at least 30% of the new slab level to be at or above 8.75m 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 250mm above the DFE level;

- The slab level proposed would result in 100% of the area being 250mm 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 (8.25m 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 surrounding 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. It is 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 by 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

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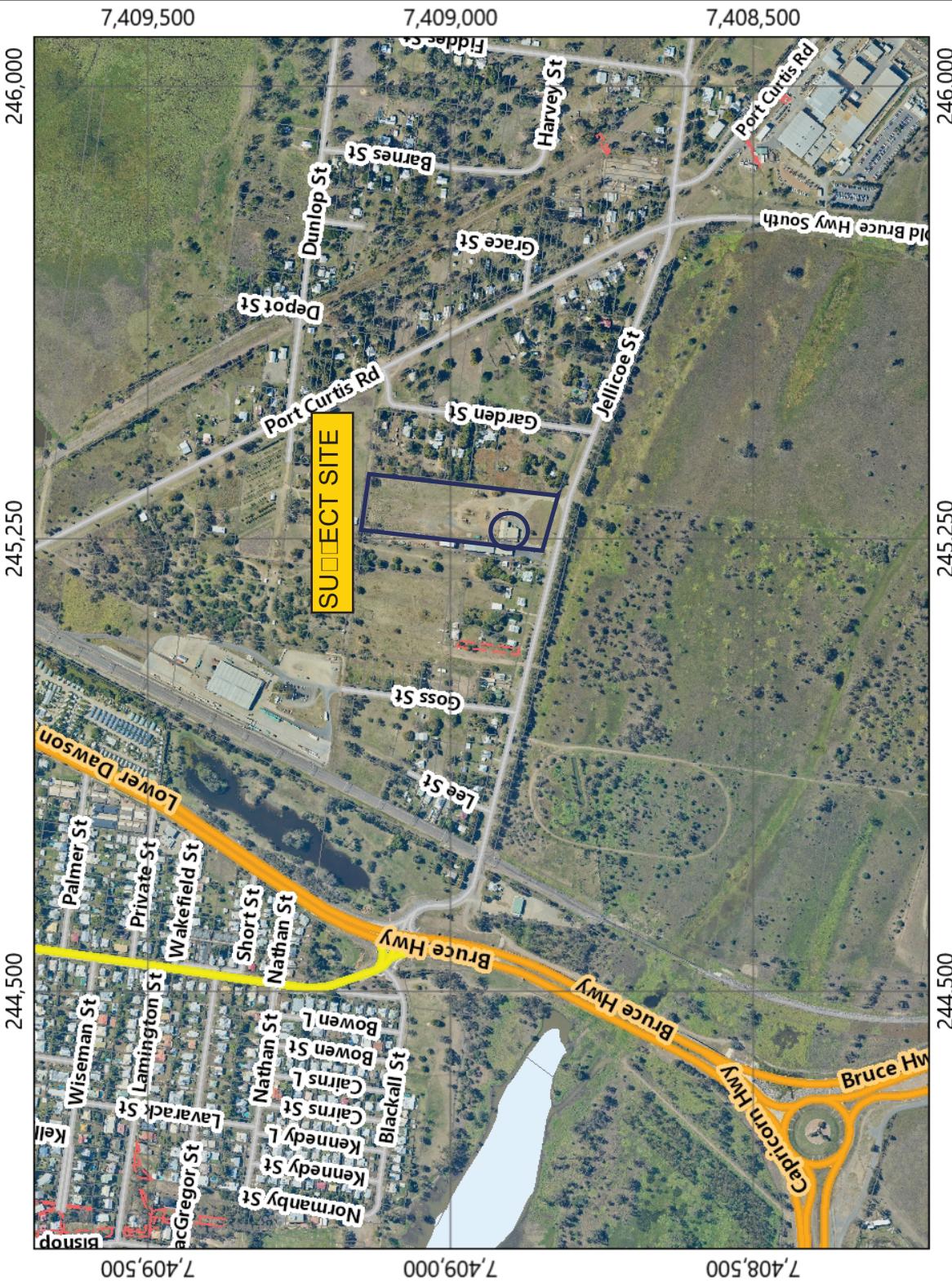


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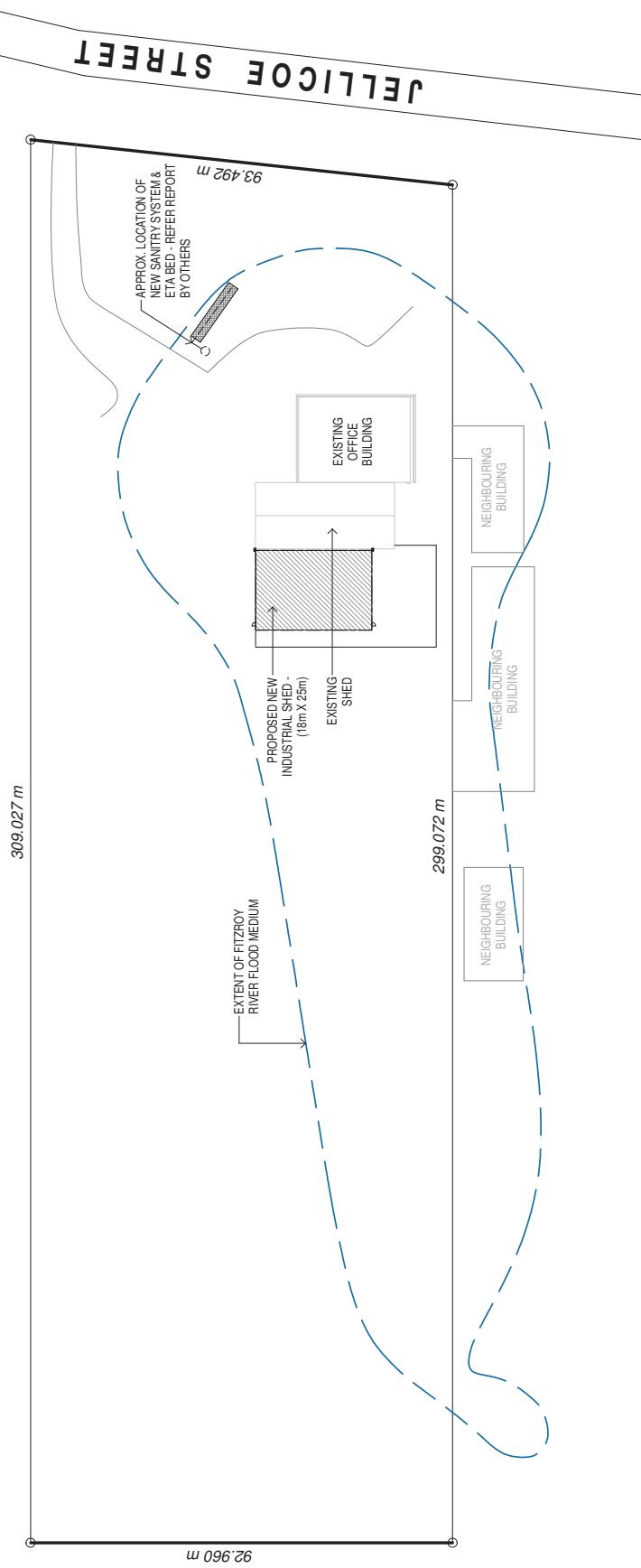
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- RRC Mask
- Roads2
- Main roads
- Standard council roads
- Access roads
- Private roads
- Easements
- Property Parcels
- Ocean
- CQLG A Boundaries
- Image
- Red: Band_1
- Green: Band_2
- Blue: Band_3
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-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



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APPENDIX □ SITE PLAN & PROPOSED □ BUILDING DETAILS



R.P.D.
LOT NUMBER : 2
REG SURVEY PLAN NO. : RP845103
PARISH : ROCKHAMPTON
COUNTY : LIVINGSTONE
AREA : 28284m²
WIND SPEED : C2

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REV. DATE

11/03/21
11/03/21

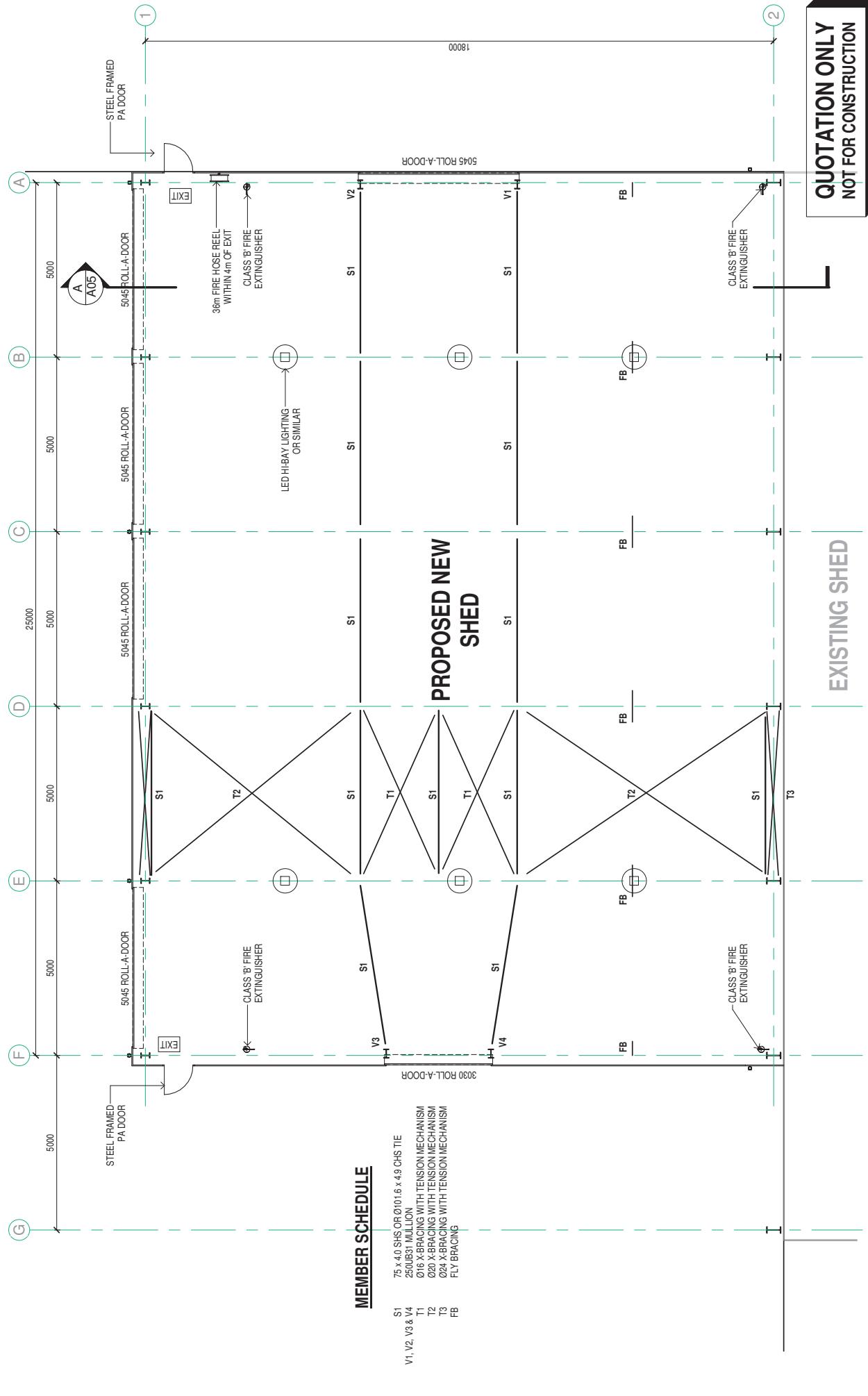
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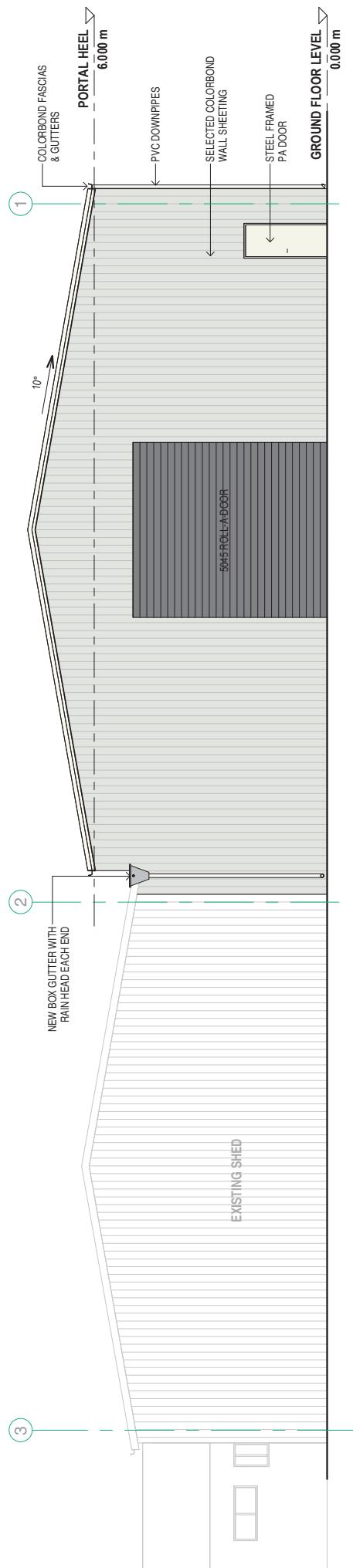
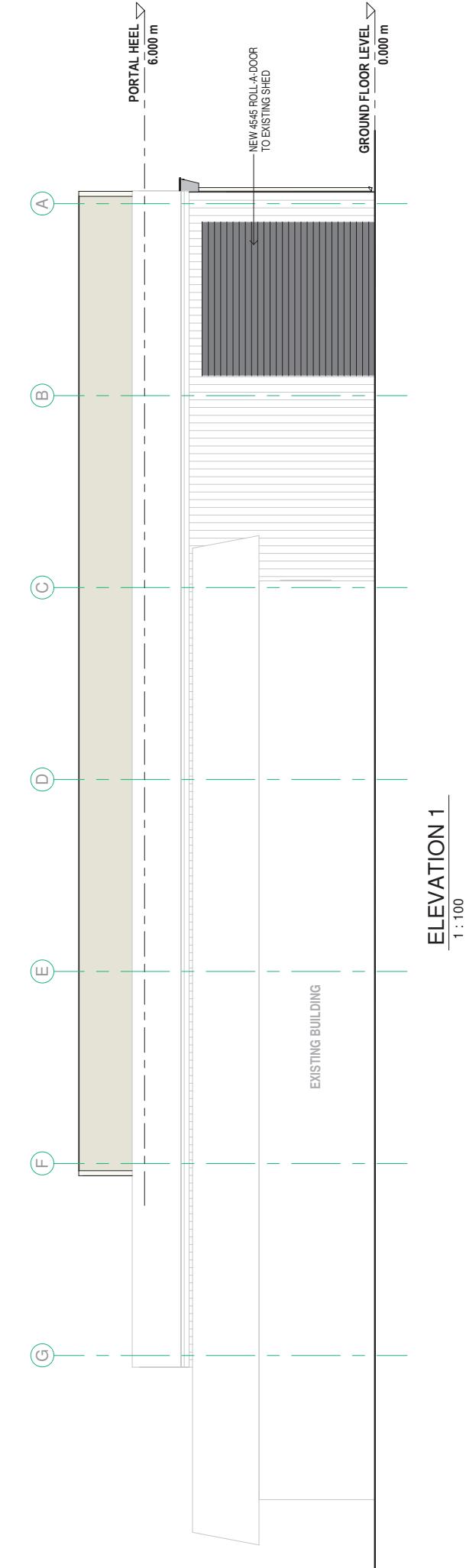
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DRAWN : N.T.L.
CHKD : R.Q.
SCALE : 1 : 1000
DATE : JULY 2020

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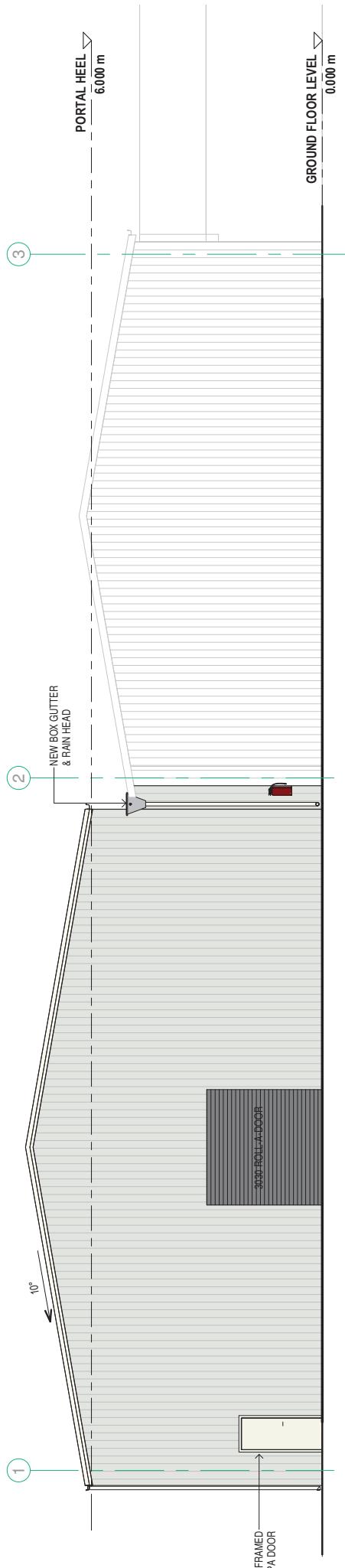
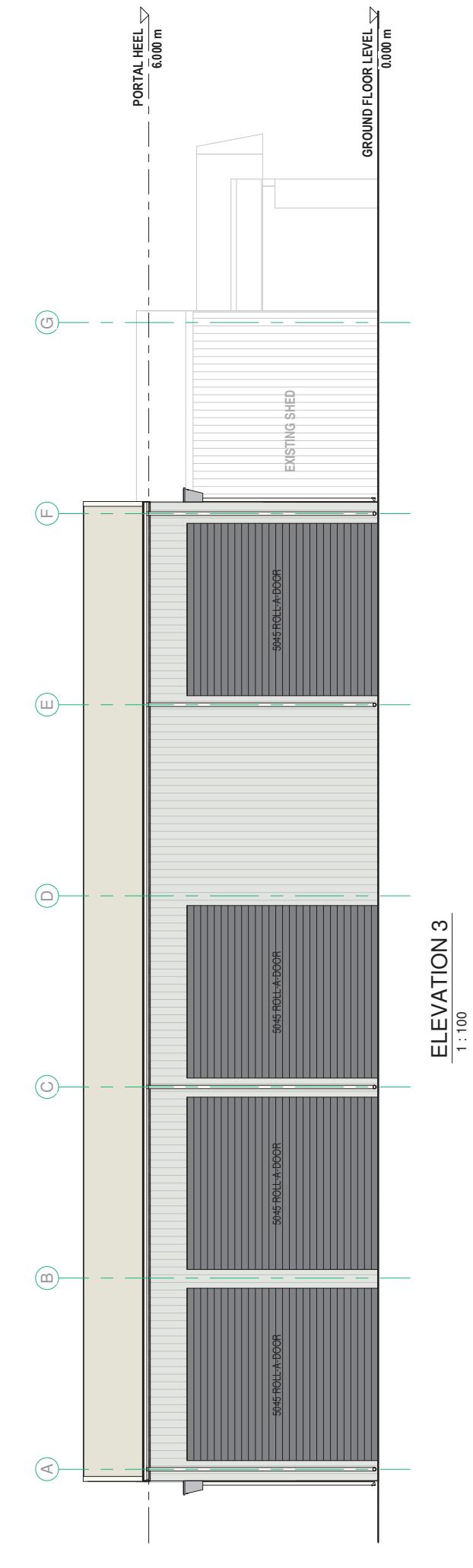


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	PORT CURTIS	DATE	
1	ISSUED FOR QUOTATION	11/03/21	
	DESCRIPTION		
REV			



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PORT CURTIS					
PH: 49 364 371	Copyright © ezlifestyle HOMES INNOVATIVE LIVING AND DESIGN				
11/03/21	This plan or any portion thereof may not be reproduced without the express written permission of Ozfair Pty Ltd QBSA 1131420				
DATE					
ISSUED FOR QUOTATION				PLAN SIZE:	
DESCRIPTION				A3	REV.
REV.				1	



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G. McDONALD		ezlifestyle HOMES	This plan or any portion thereof may not be reproduced without the express written permission of Offair Pty Ltd OBSA 1131420	PLAN SIZE:	A3
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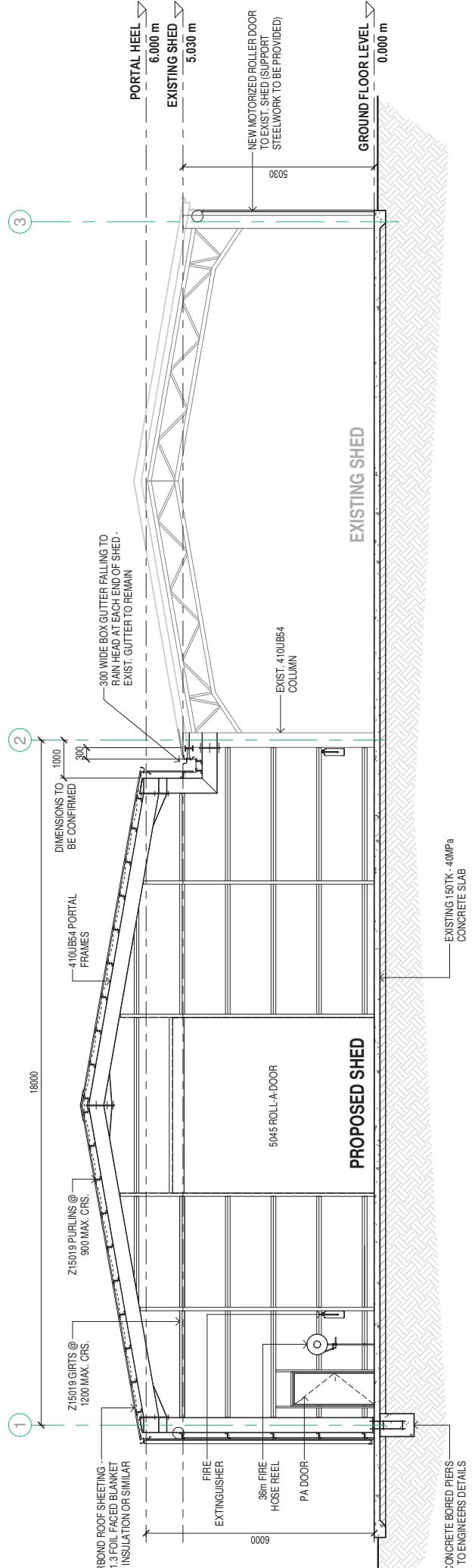
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APPENDIX C RRC FLOOD HAZARD MAP

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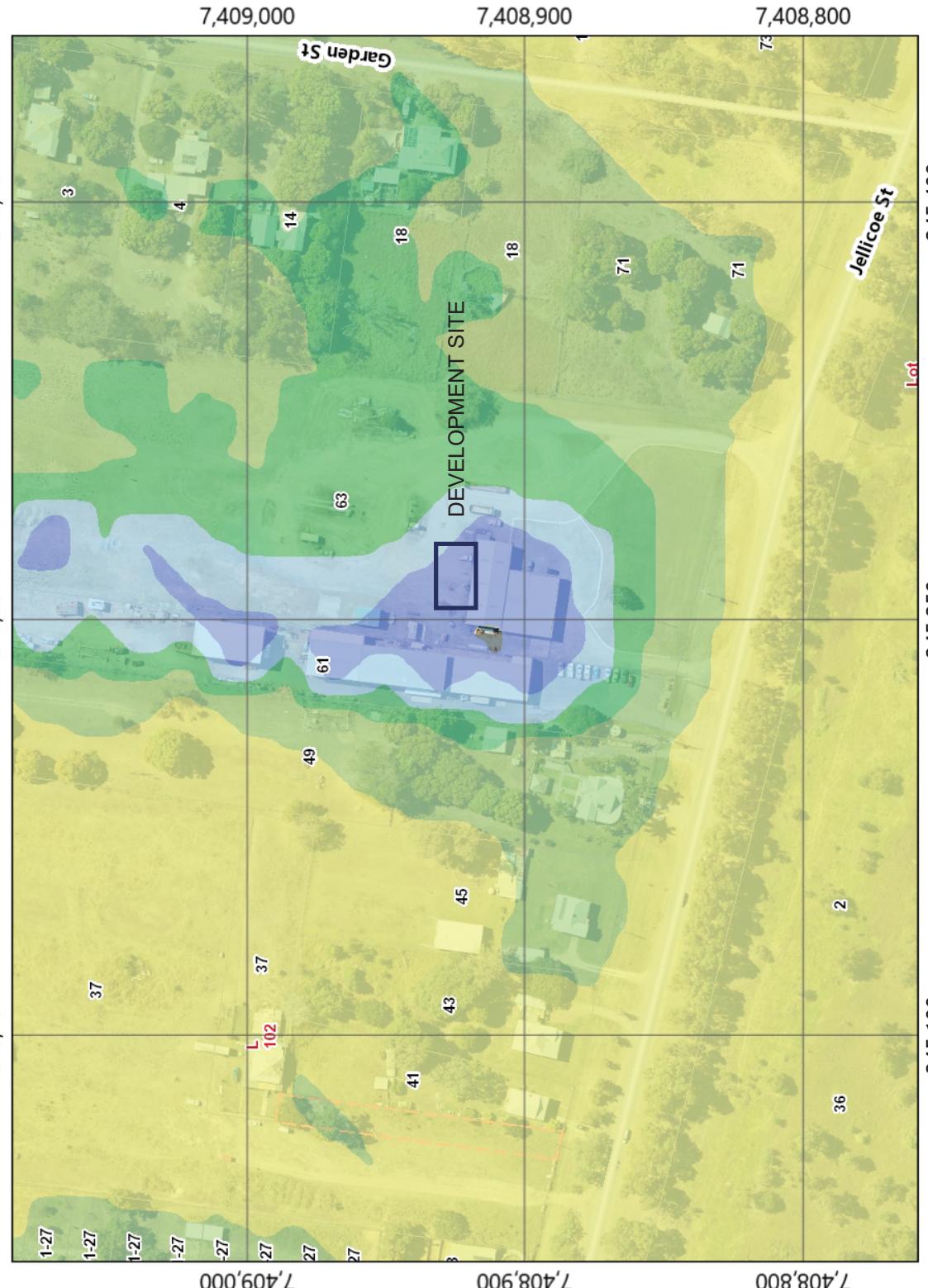
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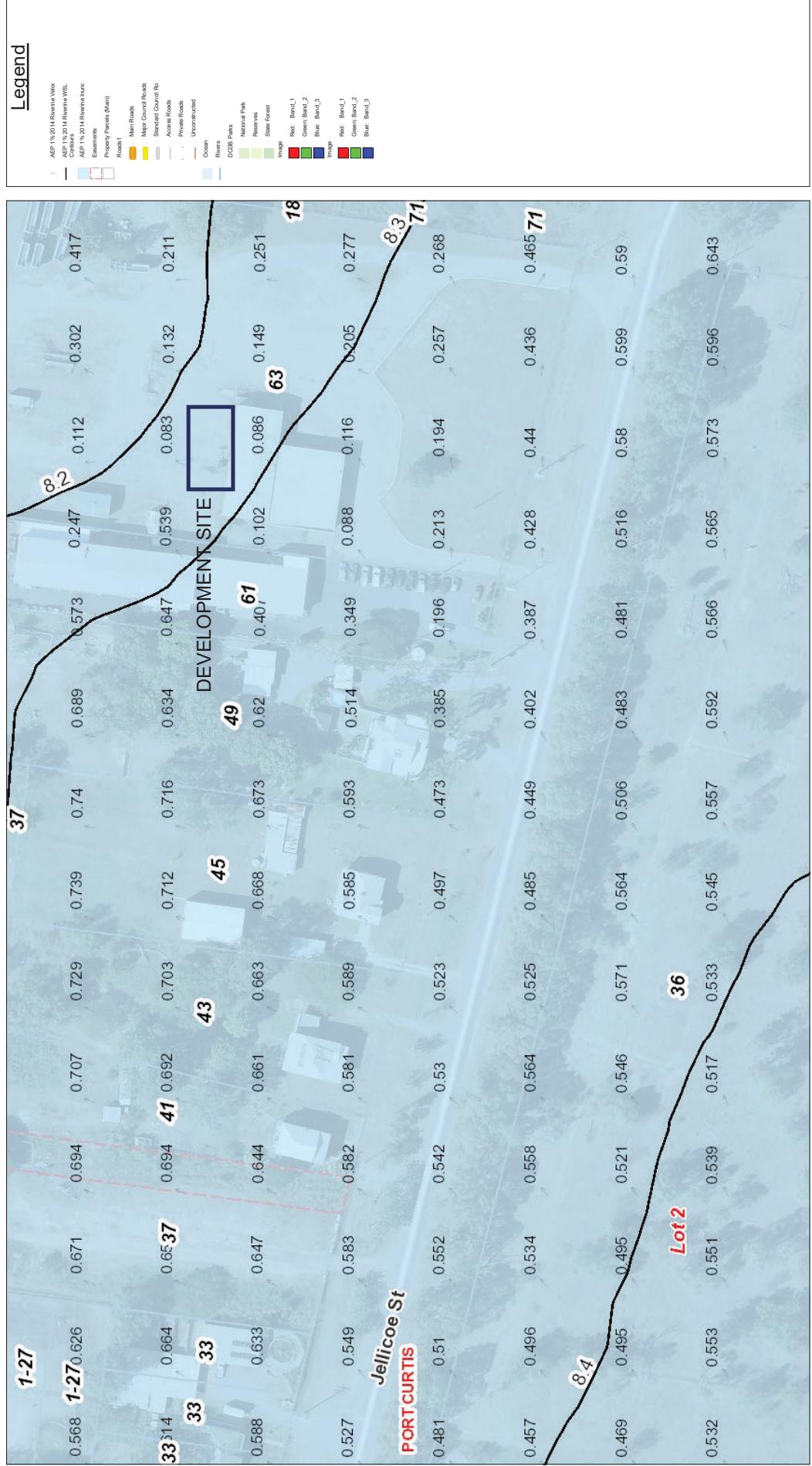
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- H2 (Medium)
- H3 (High)
- H4 (High)
- H5 (Extreme)
- H6 (Extreme)
- Floodplain Investigation Area
- Fitzroy River Defined Flood Event
- Planning Area 1
- Planning Area 2
- North Rockhampton Area
- Management Area Roads 1
- Main roads
- Major council roads
- Standard council roads
- Access roads
- Private roads
- Easements
- Property Parcels
- Ocean
- Rivers
- DCDB Parks
- CQ LGA Boundaries
- Image
- Red: Band_1
- Green: Band_2
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APPENDIX D DEFINED FLOOD EVENT SURFACE LEVEL & FLOW VELOCITY

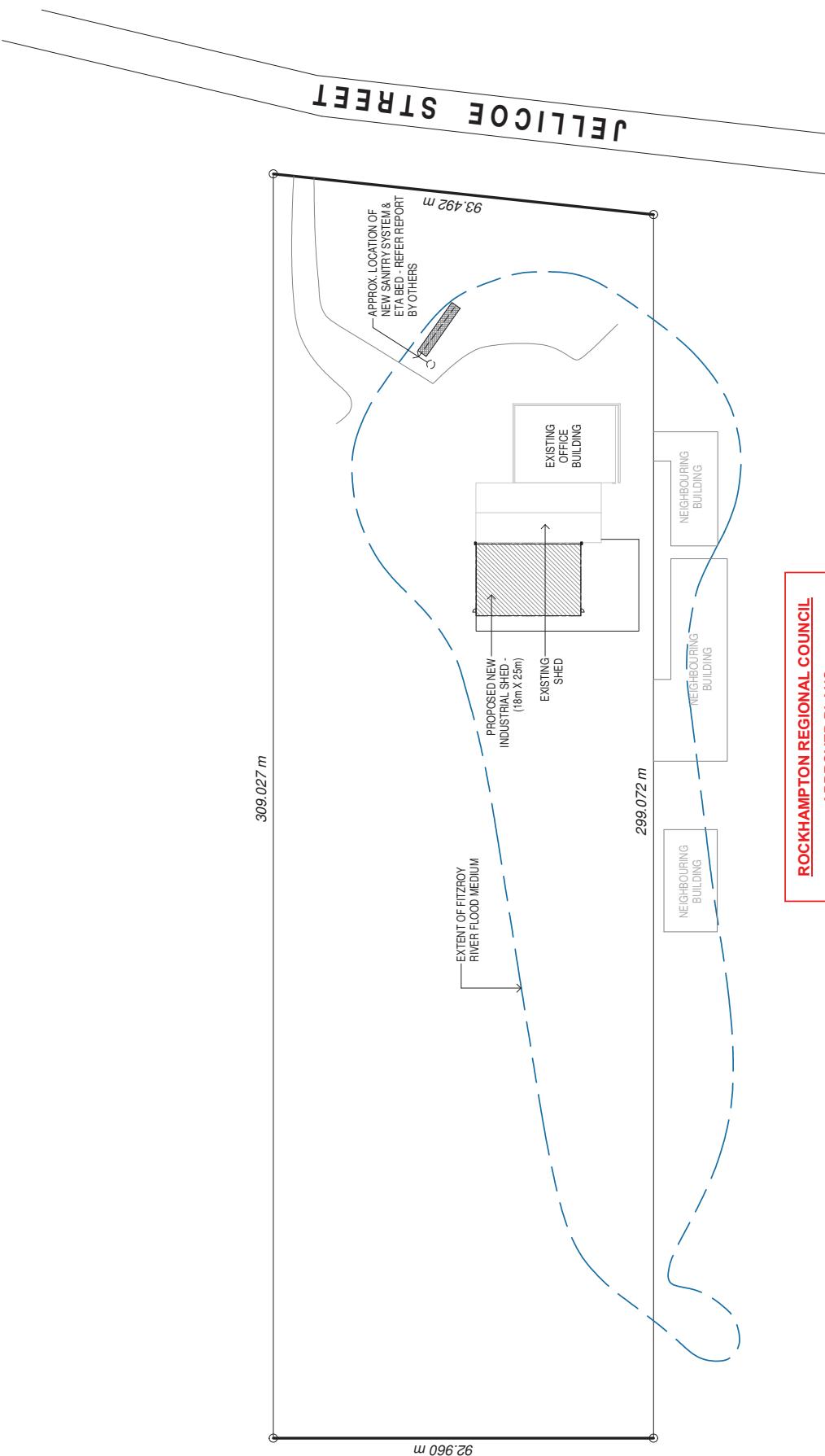
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ROCKHAMPTON REGIONAL COUNCIL

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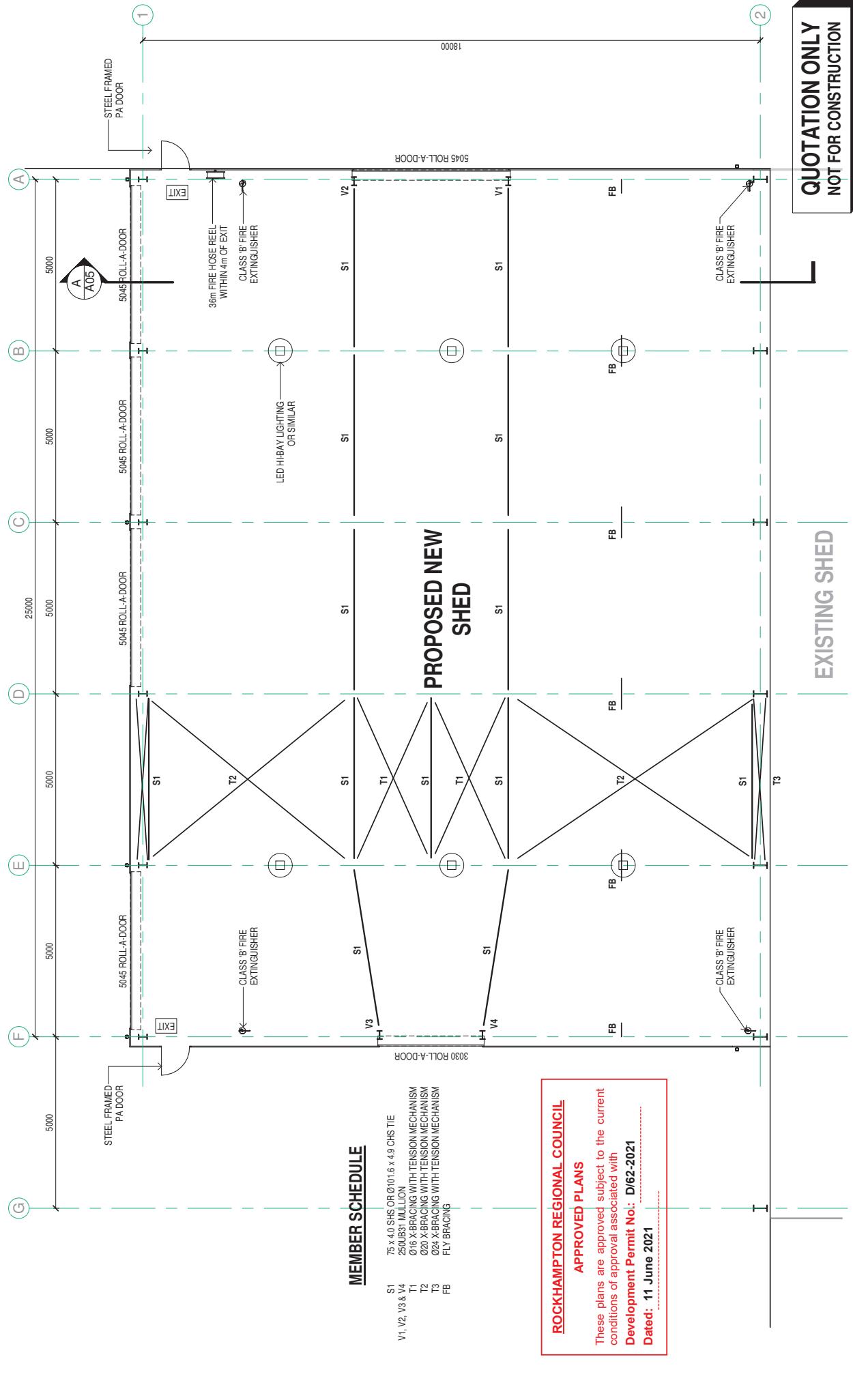
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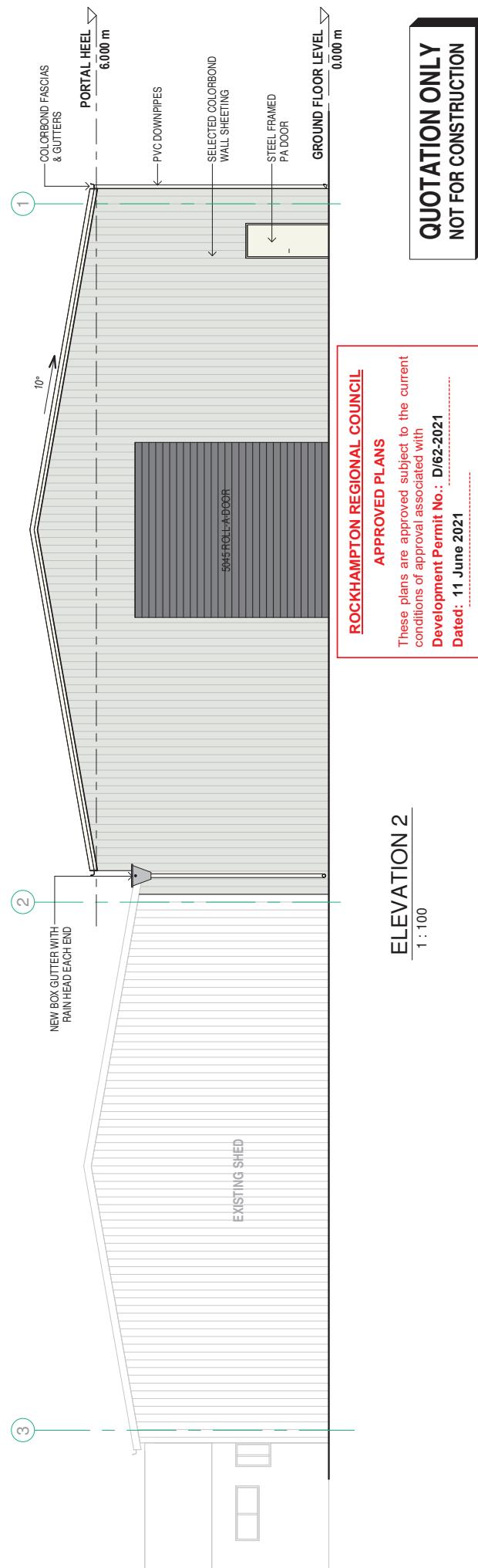
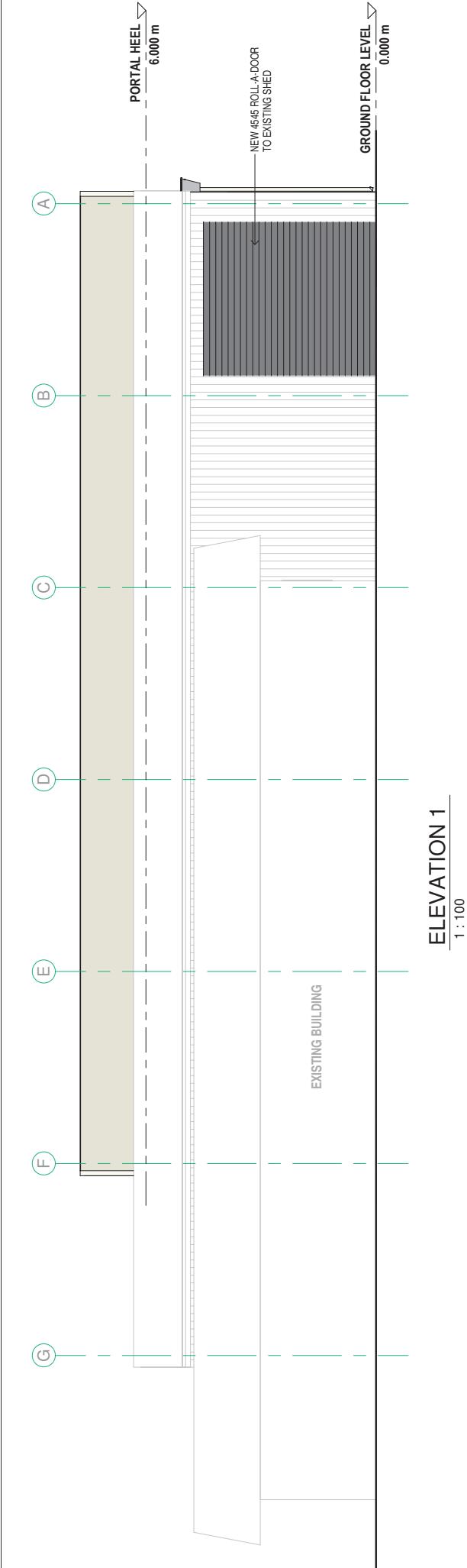
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COUNTY : LIVINGSTON
AREA : 28284m²
WIND SPEED : C2

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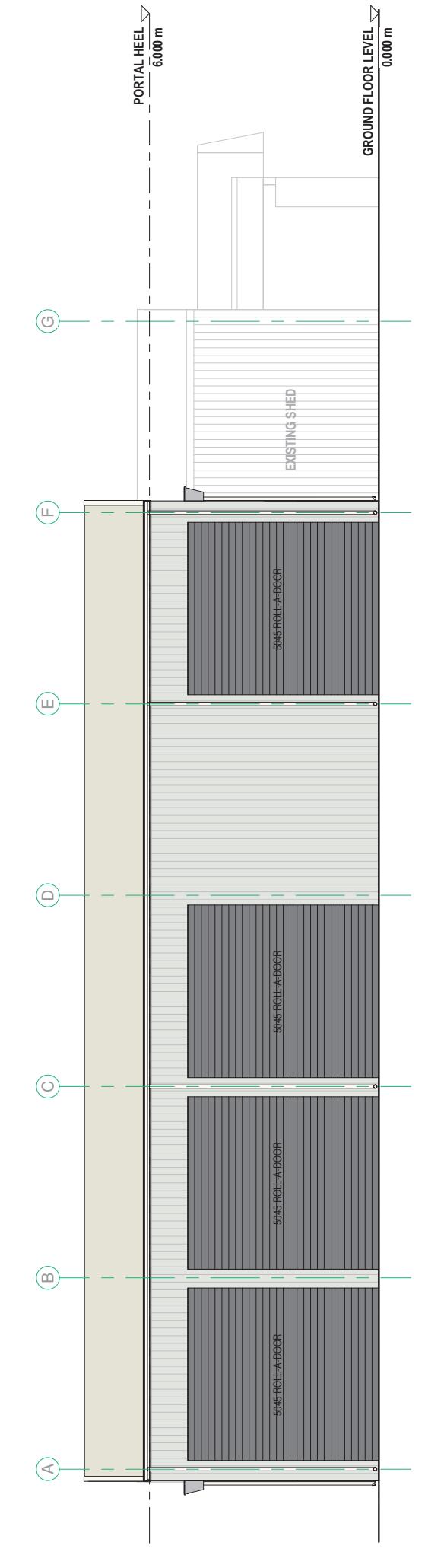
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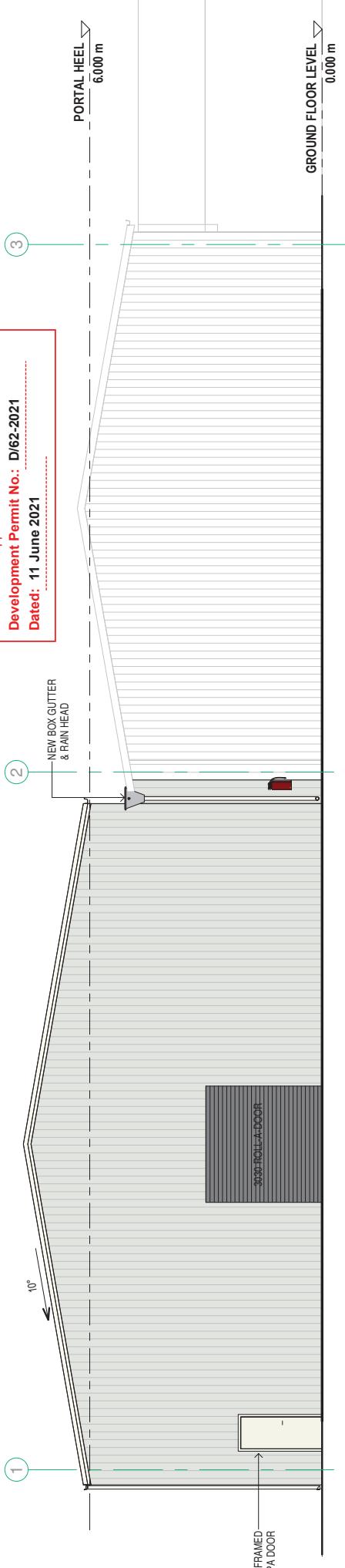
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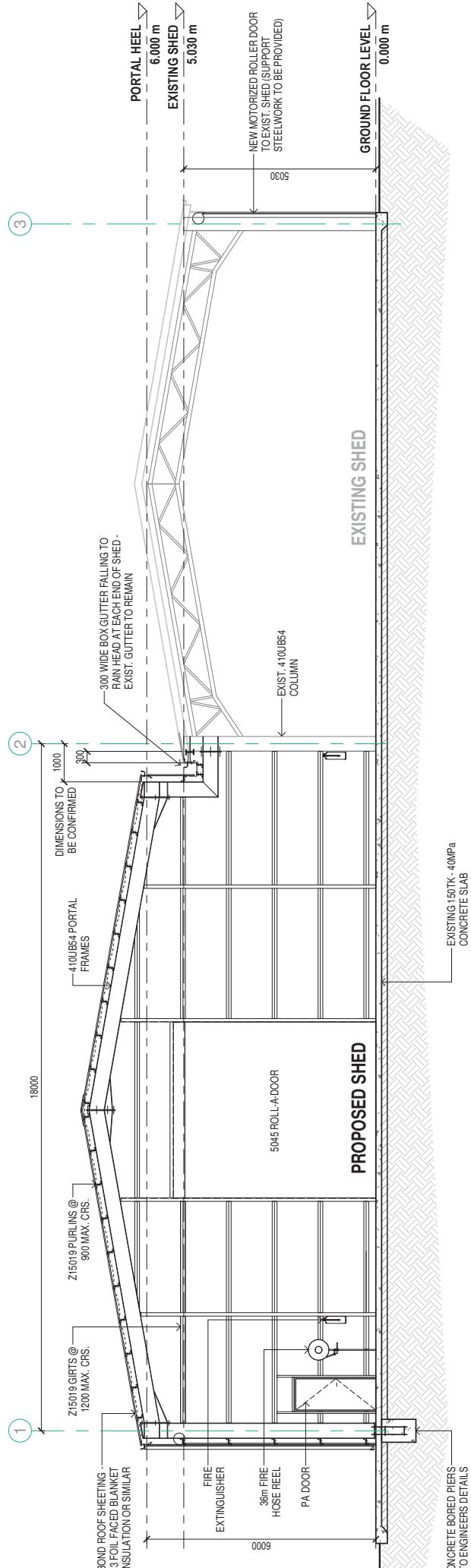
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