

1 Ingram Street Park Avenue QLD 4701

Flood Statement

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/62-2024

Dated: 28 June 2024

DATE
24 May 2024

REF
R002-23-24-023

CLIENT
Gary Green

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	Gary Green
Document Name	Flood Statement
Job Reference	R002-23-24-023
Revision	A

Document History

Revision	Date	Description of Revision	Prepared by	Approved by		
				Name	Signature	RPEO No
A	24/05/2024	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: Site Layout & Structure Plans
- Appendix C: Flood Search Report

1 Introduction

McMurtrie Consulting Engineers (MCE) have been engaged by Gary Green to provide a Flood Statement report to support the proposed construction of a structure in the Flood Overlay zone. The site is located at 1 Ingram Street Park Avenue QLD 4701, on land described as Lot 1 on R26179.

The proposed development includes:

- A 7.2m by 8m carport on the eastern side of the property

2 Flooding Assessment

2.1 Existing Conditions

The site is a single dwelling house with two sheds in the back yard.

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

- Fitzroy River Flood, category H2/H3/H4/H5

In order to assess the existing flooding characteristics at the site, a Flood Search was requested from RRC, which has been attached in Appendix C. The results of the flood search have been summarised in Table 1.

Table 1 - Summary of Flood Search Results

	Fitzroy River Flooding				Local Catchment Flooding			
	Level (m AHD)		Velocity (m/s)		Level (m AHD)		Velocity (m/s)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1% AEP	10.46	10.47	0.09	0.29	N/A	N/A	N/A	N/A
2% AEP	10.02	10.03	0.00	0.10	N/A	N/A	N/A	N/A
5% AEP	N/A	9.42	0.02	0.04	N/A	N/A	N/A	N/A
10% AEP	8.81	8.81	0.01	0.02	N/A	N/A	N/A	N/A
18% AEP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
39% AEP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Based on the expected ground surface level at the location of the proposed development, 10.00m AHD, the expected range of flooding depths are presented in Table 2.

Table 2 - 1% AEP Flooding Depths

	Fitzroy River Flooding		Local Catchment Flooding	
	Depth (m)		Depth (m)	
	Min.	Max.	Min.	Max.
1% AEP	0.46	0.47	N/A	N/A



Figure 1 - Site Layout Plan

The location and extent of the structure are more accurately represented in Appendix B.

2.2 Flood Impact

The results of the flood search indicate that the flooding event is slow moving, and typically indicative of overbank or backwater flooding. While some areas of the site experience significant depths of flooding, the location of the proposed carport is relatively shallow, being up to 0.47m in depth with an expected velocity of 0.09m/s to 0.29m/s.

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 H1-H2 flooding, which typically does not pose a risk to structures or people.

Given the proposed structure is a freestanding carport supported by four narrow steel columns over a ground level slab, the afflux generated will be negligible. There will be no increase in risk to people, structures or infrastructure as a result of the proposed development.

2.3 Emergency Management Procedure

Given the flooding that affects the site is riverine in nature, significant warning time can be expected due to the size of the basin catchment.

The occupants of the dwelling 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 Ingram Street, which remains dry during the defined flood event. 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 occupants 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 carport structure in the Flood Overlay zone located at 1 Ingram Street Park Avenue QLD 4701, on land described as Lot 1 on R26179. 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.

Appendix A: Flood Hazard Overlay Code Responses

Table 3 - RRC Flood Hazard Overlay Code Table 8.2.8.3.1

Performance Outcomes	Acceptable Outcomes	Responses
<p>Development in Fitzroy River flood areas – H1 (low hazard area) or H2 (medium hazard area) or North Rockhampton flood management area or Local catchment flood - planning area 2</p> <p>Editor's note—Refer to overlay maps OM-8A and OM-8C</p>		
<p>PO1</p> <p>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.</p>	<p>AO1.1</p> <p>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.</p>	<p>AO1.1</p> <p>Not Applicable</p>
	<p>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.</p>	
	<p>AND</p>	
	<p>AO1.2</p> <p>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.</p>	<p>AO1.2</p> <p>Complies - as provided in this document.</p>

<p>PO2 Development is located to minimise susceptibility to and potential impacts of flooding.</p>	<p>AO2.1 For residential uses the finished floor levels of all habitable rooms shall be constructed a minimum of 500 millimetres above the defined flood level.</p> <p>AND</p> <p>AO2.2 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.</p>	<p>AO2.1 Not Applicable – not for a residential use.</p>
<p>PO3 Development avoids the release of hazardous materials into floodwaters.</p>	<p>AO2.2 Editor's note—Report to be prepared in accordance with SC6.10—Flood hazard planning scheme policy.</p> <p>AO3.1 All hazardous materials and hazardous manufacturing equipment and hazardous containers are located and stored a minimum of 500 millimetres above the defined flood level.</p> <p>Editor's note—Refer to the Work Health and Safety Act 2011 and associated regulation, the Environmental Protection Act 1994 and the relevant building assessment provisions under the Building Act 1975 for requirements related to the manufacture and storage of hazardous substances.</p>	<p>AO2.2 Complies – as provided in this document.</p> <p>AO3.1 Will Comply – no hazardous materials or manufacturing equipment will be stored on the site.</p>

Table 4 - RRC Flood Hazard Overlay Code Table 8.2.8.3.1

Performance Outcomes	Acceptable Outcomes	Responses
Development in Fitzroy River flood areas – H3-H4 (high hazard areas) or H5-H6 (extreme hazard areas) or Local catchment flood - planning area 1 Editor's note—Refer to overlay maps OM-8A and OM-8C		

<p>PO4 Development does not involve the further intensification of land uses and does not increase the risk to people and property.</p> <p>Editor's Note—Flood hazard risk assessment can be undertaken in accordance with SC6.10 – Flood hazard planning scheme policy.</p>	<p>AO4.1.1 Development does not involve new buildings or structures.</p> <p>OR</p> <p>AO4.1.2 Where involving the replacement or alteration to an existing non-residential building or structure:</p> <ul style="list-style-type: none"> (a) there is no increase in the existing or previous buildings' gross floor area; and (b) the finished floor level of any replacement or alteration to an existing building is constructed a minimum of 500 millimetres above the defined flood level. <p>OR</p> <p>AO4.1.3 Where involving the replacement or alteration to an existing caretaker's accommodation, dwelling house or dwelling unit:</p> <ul style="list-style-type: none"> (a) there is no increase in the number of dwellings; (b) there is no increase in the existing or previous buildings' gross floor area; and (c) the finished floor level of all habitable rooms shall be constructed a minimum of 500 millimetres above the defined flood level. <p>AND</p> <p>AO4.1.4 Where located in the rural zone, the total floor area of class 10a buildings and structures on the site do not exceed a total of fifty (50) square metres, and</p>	<p>AO4.1.1 Complies – the proposed structure is located outside the relevant overlay area.</p> <p>AO4.1.2 Not Applicable.</p> <p>AO4.1.3 Not Applicable.</p> <p>AO4.1.4 Not Applicable – not in the rural zone.</p>
---	---	---

are set back a minimum of twenty (20) metres from all site boundaries.

AO5.1
Materials manufactured, used or stored on site are not hazardous in nature.

AO5.1
Will Comply – no hazardous materials or manufacturing equipment will be stored on the site.

Table 5 - RRC Flood Hazard Overlay Code Table 8.2.8.3.1

Performance Outcomes	Acceptable Outcomes	Responses
<p>PO5 Development avoids the release of hazardous materials into floodwaters.</p> <p>Editor's note—Refer to overlay map OM-8B</p>	<p>AO5.1 Materials manufactured, used or stored on site are not hazardous in nature.</p>	<p>AO5.1 Will Comply – no hazardous materials or manufacturing equipment will be stored on the site.</p>
<p>PO6 Development is located to minimise susceptibility to and potential impacts of flooding.</p> <p>Editor's note—The floodplain investigation area is mapping supplied by the Queensland Reconstruction Authority for possible flood affected areas, where local verification is yet to be completed. A flood hazard assessment in accordance with SC6.10 – Flood hazard planning scheme policy can be undertaken to verify the potential risk of a flood event occurring.</p>	<p>AO6.1 Development does not involve new buildings or structures.</p>	<p>AO6.1 Not applicable – not within the floodplain investigation area.</p>
<p>PO7 Development avoids the release of hazardous materials into floodwaters.</p>	<p>AO7.1 Materials manufactured, used or stored on site are not hazardous in nature.</p>	<p>AO7.1 Not applicable – not within the floodplain investigation area.</p>

Table 6 - RRC Flood Hazard Overlay Code Table 8.2.8.3.2

Performance Outcomes	Acceptable Outcomes	Responses
Development in Fitzroy River flood area - all hazard areas, North Rockhampton flood management area or Local catchment flood - all planning areas		
Editor's note—Refer to overlay maps OM-8A and OM-8C		
PO8 Development is located to minimise susceptibility to and potential impacts of flooding.	No acceptable outcome is nominated.	PO8 Complies - the proposed structure has been sited on the highest area of available ground.
PO9 Underground car parks are designed to prevent the intrusion of floodwaters.	AO9.1 Development with underground car parking is designed to prevent the intrusion of floodwaters by the incorporation of a bund or similar barrier a minimum of 500 millimetres above the defined flood level.	AO9.1 Not Applicable - no underground car parking proposed.

<p>PO10</p> <p>Development:</p> <ul style="list-style-type: none"> (a) does not result in any reduction of onsite flood storage capacity; or (b) does not result in any change to depth, duration or velocity of floodwaters within the premises; and (c) does not change flood characteristics outside the premises, including but not limited to causing: <ul style="list-style-type: none"> a. loss of flood storage; or b. loss of or changes to flow paths; or c. acceleration or retardation of flows; or d. any reduction in flood warning times elsewhere on the floodplain. <p>Editor's note—Council may require the applicant to submit a site-based flood study that investigates the impact of the development on the floodplain and demonstrates compliance with the relevant performance outcome.</p>	<p>No acceptable outcome is nominated.</p>	<p>PO10</p> <p>Complies – the proposal does not result in a loss of flood storage, increase in depth/velocity and does not change the characteristics of flooding.</p>
<p>PO11</p> <p>Essential community infrastructure and community facilities are protected from, and able to function effectively during and immediately after, a defined flood event.</p>	<p>AO11.1</p> <p>A use for a purpose listed in Table 8.2.8.3.3:</p> <ul style="list-style-type: none"> (a) is not located within the flood hazard area; and (b) has at least one (1) flood free access road. 	<p>AO11.1</p> <p>Not Applicable – not for a use listed in the table.</p>

PO12

Development provides safe and trafficable access to the local evacuation centres and evacuation services and have regard to:

- (a) evacuation time;
- (b) number of persons affected;
- (c) types of vehicles necessary for evacuation purposes;
- (d) the distance to flood free land; and
- (e) the evacuation route.

AO12.1

Trafficable access to and from the development complies with the Capricorn Municipal Guidelines.

AND

AO12.2

Trafficable access to and from the development within the local catchment planning areas are in accordance with the Queensland Urban Drainage Manual.

Note—Trafficable access for emergency services or community related uses is obtained from at least one (1) route (minor collector or higher) for emergency services purposes. The development is to ensure that safe access, to the road network between the development site and the closest centre zone, is provided.

Editor's note—Trafficable access requirements for local catchment planning areas has not been identified and reference has been made to the provisions under the Queensland Urban Drainage Manual. This is due to the short period that property may be isolated.

AO12.1

Complies – direct access to Ingram St is available.

AO12.2

Complies – direct access to Ingram St is available.

Table 7 - RRC Flood Hazard Overlay Code Table 8.2.8.3.2

Performance Outcomes	Acceptable Outcomes	Responses
<p>Development in Fitzroy River flood areas – H3-H4 (high hazard areas) or H5-H6 (extreme hazard areas), North Rockhampton flood management area or Local catchment flood – planning area 1</p> <p>Editor's note—Refer to overlay maps OM-8A and OM-8C</p>		
<p>PO13</p> <p>Development that involves temporary or moveable residential structures (for example caravan parks and camping grounds) are not located with the Fitzroy River high and extreme hazard areas, North Rockhampton flood management area and Local catchment planning area 1.</p>	<p>No acceptable outcome is nominated.</p>	<p>PO13</p> <p>Complies – does not include temporary or movable structures.</p>

Table 8 - RRC Flood Hazard Overlay Code Table 8.2.8.3.2

Performance Outcomes	Acceptable Outcomes	Responses
<p>Reconfiguring a lot</p>		
<p>Development in Fitzroy River flood area – all hazard areas, North Rockhampton flood management area or Local catchment flood - all planning areas</p> <p>Editor's note—Refer to overlay map OM-8A and OM-8C</p>		
<p>PO14</p> <p>Development does not result in the creation of additional lots.</p>	<p>AO14.1</p> <p>Reconfiguring a lot does not result in new lots.</p>	<p>AO14.1</p> <p>Not Applicable – not an ROL</p>

Table 9 - RRC Flood Hazard Overlay Code Table 8.2.8.3.2

Performance Outcomes	Acceptable Outcomes	Responses
<p>Development in floodplain investigation area</p> <p>Editor's note—Refer to overlay map OM-8B</p>		

<p>PO15 Development provides vehicle access to a road network that is sufficient to enable safe access.</p> <p>Editor's note—The floodplain investigation area is mapping supplied by the Queensland Reconstruction Authority for possible flood affected areas, where local verification is yet to be completed. A flood hazard assessment in accordance with SC6.10 – Flood hazard planning scheme policy can be undertaken to verify the potential risk of a flood event occurring.</p>	<p>No acceptable outcome is nominated.</p>	<p>PO15 Not applicable – not within the floodplain investigation area.</p>
<p>PO16 Onsite access is provided to a building envelope or fill area in which a building is to be constructed. The access is located on land classified as a low flood hazard in the defined flood event.</p>	<p>AO16.1 Onsite access is provided to a building envelope or fill area in which a building is to be constructed. The access is located on land classified as a low flood hazard in the defined flood event. Editor's note—For the purposes of the above requirements in respect of an access area or a road which provides access to the development a low flood hazard means: (a) inundation is a maximum depth of 300 millimetres during events up to and including the defined flood event; (b) inundation extends for a maximum distance of 200 metres during events up to and including the defined flood event; and (c) The product of velocities and depth does not exceed $D \cdot V = 0.4 \text{m}^2/\text{s}$.</p>	<p>AO16.1 Not applicable – not within the floodplain investigation area.</p>

Table 10 - RRC Flood Hazard Overlay Code Table 8.2.8.3.2

Performance Outcomes	Acceptable Outcomes	Responses
<p>Operational work</p> <p>PO17 Development does not materially impede the flow of floodwaters through the site or worsen flood flows external to the site.</p>	<p>AO17.1 Development does not involve:</p> <ul style="list-style-type: none"> (a) filling with a height greater than 100 millimetres; or (b) block or solid walls or fences; or (c) garden beds or other structures with a height more than 100 millimetres; or (d) the planting of dense shrub hedges. 	<p>PO17 Complies – no material impedance of flow expected or worsening of flood flows external to the site expected.</p>

Appendix B: Site Layout & Structure Plans

REFER TO ATTACHMENT



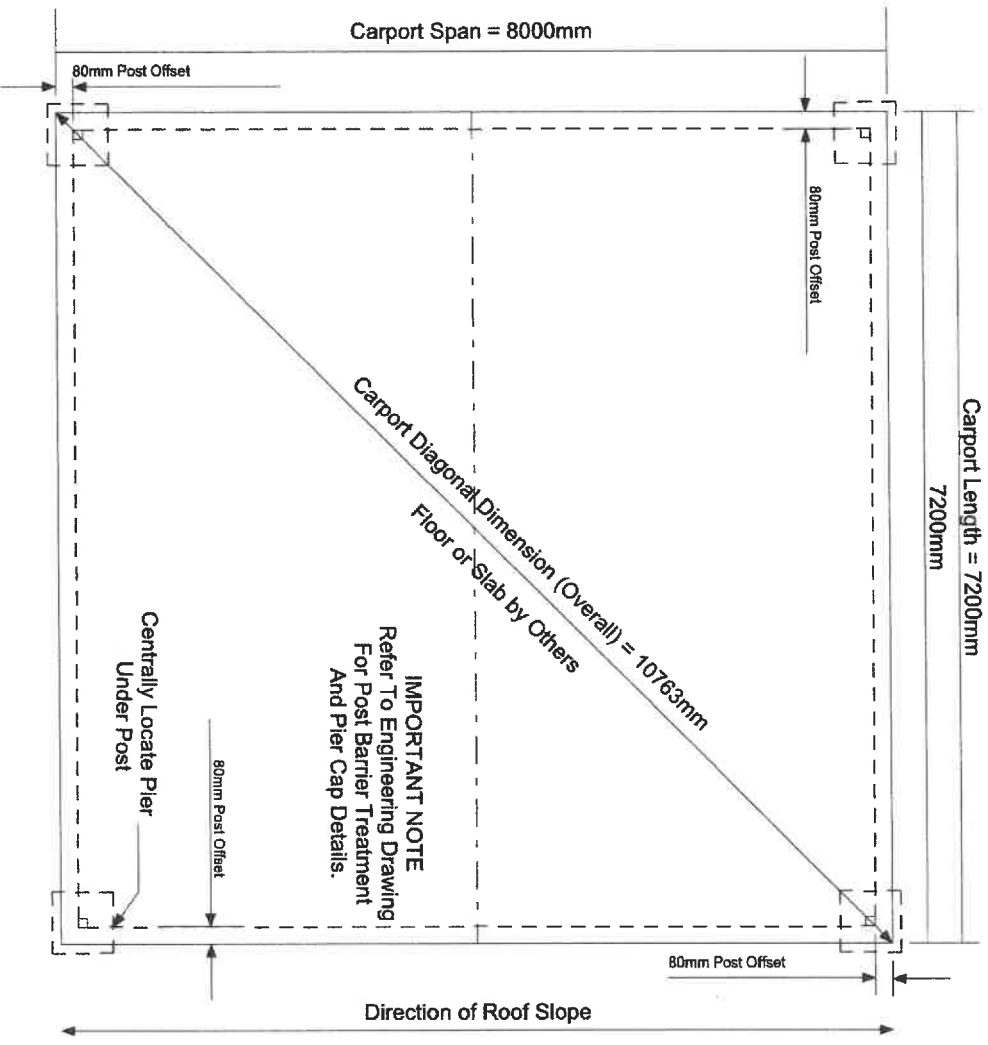
PARCEL_ID: 27124726
LOT_ID: 18934354
PLAN_NUM: R26179
PARCEL_NUM: 2
SEG_NUM: 37212
NAME:
LOCALITY: PARK AVENUE
LOCAL_CODE: 6370
GOVERNMENT: ROCKHAMPTON
REGIONAL_COUNCIL:
LONGITUDE: 180.70789090909090623004
LATITUDE: -25.5217100000000051306
COUNTY:
TYPE: FRESHLOD
PARISH:
OFF_AREA: 999
AREA: 999
COUNT: 1
TYPE_CODE: L
IND_CODE: 00
CD_CODE: B
OFF_REC: L
ADDRESS: 1 1416 PARK ST
ADDRESS: 2 PARK AVENUE QLD 4701



1416 Park St
1417 Park St
1418 Park St
1419 Park St
1420 Park St
1421 Park St
1422 Park St
1423 Park St
1424 Park St
1425 Park St
1426 Park St
1427 Park St
1428 Park St
1429 Park St
1430 Park St
1431 Park St
1432 Park St
1433 Park St
1434 Park St
1435 Park St
1436 Park St
1437 Park St
1438 Park St
1439 Park St
1440 Park St
1441 Park St
1442 Park St
1443 Park St
1444 Park St
1445 Park St
1446 Park St
1447 Park St
1448 Park St
1449 Park St
1450 Park St
1451 Park St
1452 Park St
1453 Park St
1454 Park St
1455 Park St
1456 Park St
1457 Park St
1458 Park St
1459 Park St
1460 Park St
1461 Park St
1462 Park St
1463 Park St
1464 Park St
1465 Park St
1466 Park St
1467 Park St
1468 Park St
1469 Park St
1470 Park St
1471 Park St
1472 Park St
1473 Park St
1474 Park St
1475 Park St
1476 Park St
1477 Park St
1478 Park St
1479 Park St
1480 Park St
1481 Park St
1482 Park St
1483 Park St
1484 Park St
1485 Park St
1486 Park St
1487 Park St
1488 Park St
1489 Park St
1490 Park St
1491 Park St
1492 Park St
1493 Park St
1494 Park St
1495 Park St
1496 Park St
1497 Park St
1498 Park St
1499 Park St
1500 Park St

Google Earth

Copyright © 2012 Google
10:29 AM



Copyright 2024
Lysaght Building
Solutions Pty Ltd
trading as RANBUILD

NOTES
ALL DIMENSIONS SHOULD BE CHECKED AND VERIFIED
PRIOR TO COMMENCEMENT OF ANY WORKS.
SEE ERECTION INSTRUCTIONS AND ENGINEERING FOR
SECTION & SLAB DETAILS

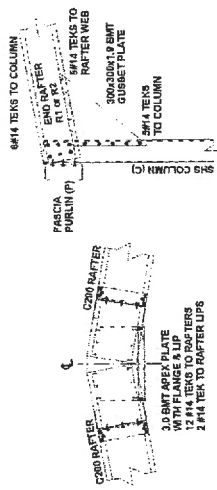
CLIENT
Garry Green

SITE
**1 Ingram Street
PARK AVENUE QLD 4701**

BUILDING
**GABLE CARPORT
8000 SPAN x 3600 EAVE x 7200 LONG**

TITLE
CARPORT POST LOCATION PLAN

SCALE NTS	DRAWING NUMBER 430520-RSP	REV A	PAGE 1/1
--------------	-------------------------------------	-----------------	--------------------

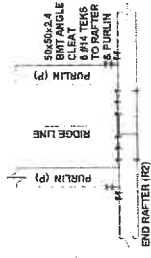


APEX CONNECTION - CA2

KNEE CONNECTION - KN1



BRIDGING BATTEN - BR2



PURLIN CONNECTION - PC2

COLUMN TO FASCIA - CF1



ROOF CLADDING
SHEAR DIAPHRAGM - RC3

Copyright 2024
Lysaght Building
Solutions Pty Ltd
trading as RANBUILD

ACCREDITED PRACTITIONER
NIEASH, CPRE, NFER, RPEQ, RRM
Level 1, 12 Beaumont St, Hamilton NSW 2303
+61 2 8952 4311
190476252

CLIENT
Garry Green
SITE
1 Ingram Street
PARK AVENUE QLD 4701

BUILDING TYPE
Gable, Caboolture
BUILDING DIMENSION
10.000 x 3.000 x 7.200
CONNECTION DETAILS

DRAWING NUMBER
ENG-46926
FOR BUILDING PERMIT STAGE
DRAWN RD3
REV A
SCALE 1:50
PAGE 3/5



CLADDING			
ITEM	PROFILE (mm)	FINISH	COLOUR
ROOF	TRIMDEK 0.42 BMT	CB	CC
WALLS			
CORNERS		CB	DO
BARGE		CB	DO
GUTTER	EMLINE		

0.35bmt=0.40lct, 0.42bmt=0.47lct, 0.46bmt=0.53lct

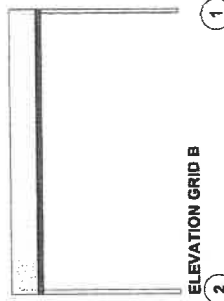
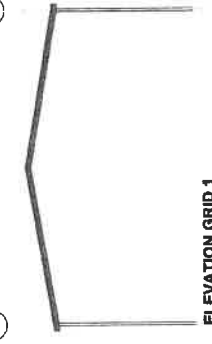
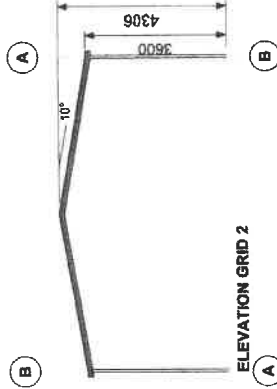
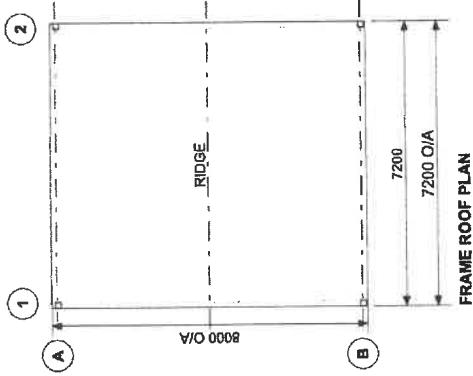
ACCESSORY SCHEDULE & LEGEND

QTY MARK DESCRIPTION

QTY	MARK	DESCRIPTION

ARCHITECTURAL DRAWING ONLY. FOR BUILDING PERMIT STAGE

CLIENT	Garry Green
SITE	1 Ingram Street PARK AVENUE QLD 4701
BUILDING	GABLE CARPORT 8000 SPAN x 3600 EAVE x 7200 LONG
ACCREDITED PRACTITIONER	Alexander Filonov RPEQ 8084 Level 1, 12 Beaumont St Hamilton NSW 2303 +61 2 4962 4311 19/04/2024
TITLE	GENERAL ARRANGEMENT
SCALE	A3 SHEET 1:125
DRAWING NUMBER	430520-GA
REV	A
PAGE	5/5



Appendix C: Flood Search Report

REFER TO ATTACHMENT





Rockhampton Office
232 Bolsover St, Rockhampton

Gracemere Office
1 Ranger St, Gracemere

Mount Morgan Office
32 Hall St, Mount Morgan

7 May 2024

Your Ref: Nil
Telephone: 07 4936 8099
Email: developmentadvice@rrc.qld.gov.au

McMurtrie Consulting Engineers
todd.lisle@mcmengineers.com

Dear Sir / Madam

**FLOOD INFORMATION REQUEST FOR 1 INGRAM STREET, PARK AVENUE QLD 4701
DESCRIBED AS LOT 1 ON R26179**

Council is in receipt of your application dated 29 May 2024 requesting flood information for 1 Ingram Street, Park Avenue QLD 4701, and more properly described as Lot 1 on R26179.

Please find attached a Flood Search Property Report for your reference. The purpose of this report is to provide flood level information to support the application of Council's planning scheme Flood Hazard overlay code, floodplain planning provisions, and applicable flood planning levels.

Council records show that the abovementioned property parcel is identified as being at risk of flood in a 1% AEP Fitzroy River flooding event. Annual Exceedance Probability (AEP) is the probability of a flood event of a given magnitude being equalled or exceeded in any one year. A 1% AEP event means there is statistically a 1% (or 1 in 100) probability that an event of that magnitude will occur or be exceeded in any year.

The design flood level information contained within this report provide water surface levels for a range of typical planning and development design standards. The flood planning level for most development in the Flood Hazard overlay area is the Defined Flood Event (DFE). Council has adopted a DFE of 1% AEP as a planning standard for the management of development in Rockhampton Region. As such, for most development types - the floodplain planning provisions of Council's planning scheme apply relative to the 1% AEP defined flood event. Exceptions apply for critical infrastructure. The Defined flood event may change as Council undertakes further flood risk analysis and profiling as part of its long-term floodplain management planning for the catchment.

The flood levels contained within this flood search report have been sourced from Council's adopted flood modelling and flood study at this location and are based on the best available information at the time of completing the study. The flood levels are measured in metres Australian Height Datum (mAHD), where mean sea level is approximately zero (0) mAHD.

Council is committed to providing residents with the most up to date flood risk information. The current flood study for this catchment area has assessed flood risk for a number of flood events including rare flood events greater than the 1%AEP flood, to provide a better understanding of the flood behaviour in the catchment. As such, the flood search report contains flood levels for flood events such as the 0.2%AEP (1 in 500-year AEP), 0.05% AEP (1 in 2000-year flood event), and the PMF (probable maximum flood). This information is being provided for completeness and may not be applicable for development assessment purposes.

Please note: All reasonable steps have been undertaken to ensure the information presented in this report is accurate at the time of generation. Changes to the topography and condition of the local creeks and waterways may have an impact on flooding. Over time, Council may also undertake further technical studies to maintain the understanding of flooding across the city and update the information available.

Should you have any queries regarding this information please contact Council's Development Engineering section using the contact information above.

Yours faithfully



Mohit Paudyal
Senior Development Engineer
Planning and Regulatory Services

Enc Flood Search Property Report and Flood Property Map

Rockhampton Regional Council Flood Search Property Report

Property Address: 1 Ingram Street, Park Avenue QLD 4701

Lot Details: Lot 1 on R26179

Date of Issue: 7 May 2024



Flood Search Property Report Overview

It is possible for one or more sources of flooding to occur, especially where a property is near a creek or waterway. These flooding sources can include riverine, creek and overland flow flooding which can each behave differently and impact how a building or development is designed. All flood hazard triggers should be considered when designing and planning with flooding in mind.

The Rockhampton Regional Council Flood Search Report is provided to support planning and development, in accordance with the current version of the Rockhampton Region Planning Scheme 2015.

This report summaries flood information for this property to inform and supplement the application of the Council's planning scheme Flood Hazard overlay code, floodplain planning provisions, and the applicable flood planning levels. The contents of this report have been derived from Council's flood studies and flood modelling and should be considered along with all other applicable planning and development requirements. Flood studies and associated modelling assist Council to better understand flooding in the Rockhampton region and implement plans to avoid and mitigate its impacts on the community.

Flood modelling of the Fitzroy River has been progressively refined over a long period of time. The flood modelling addresses riverine impacts on Rockhampton City and surrounding areas, including Alton Downs, Pink Lily, Nine Mile, Fairy Bower, Midgee and Port Curtis. Local Creek and Catchment Flood Studies provide Council with information on flood behaviour of the creeks, and how they are expected to respond during varying intensities and durations of rainfall events.

Understanding your flood risk can help you prepare for flooding at your home or business. The information provided in this report utilises information from the most up to date flood studies available to Council at the date of issue of this report. All reasonable steps have been undertaken to ensure the information presented in this report is accurate at the time of generation. Changes to the topography and condition of the local creeks and waterways may have an impact on flooding. Over time, Council may undertake further technical studies to maintain the understanding of flooding across the city and update the information available.

Copies of Council's current Flood Studies are available on Council's website at www.rrc.qld.gov.au

What is flood modelling?

Flood modelling uses sophisticated computer software to estimate how rainfall of various intensities and duration produce stormwater flows along creek and river catchments.

Flood modelling is used to estimate:

- The inundation extents of the areas that may be flooded;
- The peak depths of flood waters; and
- The hazard related to the depth of water or how quickly the water flows (velocity).

Flood modelling estimates a range of design floods based on a statistical analysis of rainfall information provided by the Bureau of Meteorology. This information is used to establish the likelihood of a rainfall or flood event.

Disclaimer

Council provides this information as a general reference source only and has taken all reasonable measures to ensure that the material in this report is as accurate as possible at the time of publication. Council makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, the Council disclaims all liability including liability in negligence, for losses and damages including indirect and consequential loss and damage, caused by or arriving from anyone using or relying on the information for any purpose.

When reading this report, please consider:

- If a property is identified as being at risk of being affected by Fitzroy River and/ or Local Creek Catchment flooding, the highest maximum flood heights should be used to establish minimum building and development levels. For large property parcels - there may be a significant difference between the minimum and maximum flood heights for a particular flood type. In these situations, you may need to seek further advice from Council regarding the flood height that is appropriate for the exact location of the proposed building or development.
- The flood maps included with this report display the flood inundation extent only. All maps generated from the Flood Studies are available on Council's website.
- The flood maps provided depict the flood inundation extents under existing climate and catchment conditions.
- If preparing a new building and/or development application, it is recommended that you confirm all flood related provisions within Council's Planning Scheme relevant to the property.

Disclaimer

Council provides this information as a general reference source only and has taken all reasonable measures to ensure that the material in this report is as accurate as possible at the time of publication. Council makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, the Council disclaims all liability including liability in negligence, for losses and damages including indirect and consequential loss and damage, caused by or arising from anyone using or relying on the information for any purpose.

Property Details

Address: 1 Ingram Street, Park Avenue QLD 4701
Lot and plan: Lot 1 on R26179

Property Ground Levels:

Property ground levels can be found on the attached property flood report. The ground level data has been sourced from Aerial LiDAR survey, and as such, these levels are approximate.

Should the extent of flooding at a property need to be more accurately predicted, then individual property level information (e.g. surveyed site levels, and building floor levels) could be utilised in conjunction with Council's flood information. Council does not undertake this level of investigation or survey on behalf of property owners.

For your information:

AHD (Australian Height Datum) is the National Mapping Datum used throughout Australia. The level of 0.0m AHD is approximately mean sea level.

Elevation Data Source: The digital elevation model used in the flood modelling is generated on a regional scale and utilises ground level elevations from aerial laser surveys performed in 2016. The survey data used to determine the extent and depth of potential inundation is captured and updated periodically and may not reflect inundation of land that has recently been modified, such as a new subdivision that has changed the existing landform.

Flood Information

Riverine Flood: Affected

The property is identified as being at risk of flooding from the Fitzroy River. A property flood report displaying the 1% AEP (Annual Exceedance Probability) flood extent on the property is attached. Planning and development must consider risk to people and property, natural floodplain characteristics, and flood free/low flood hazard access outcomes during a river flood event.

For your information:

AEP (Annual Exceedance Probability) is the probability of a flood event of a given size occurring or being exceeded in any one year. Information in relation to more or less likely floods and the full flood plain extent can be accessed on Council's website.

Local Storm / Overland Flow Flood: Not Affected

Disclaimer

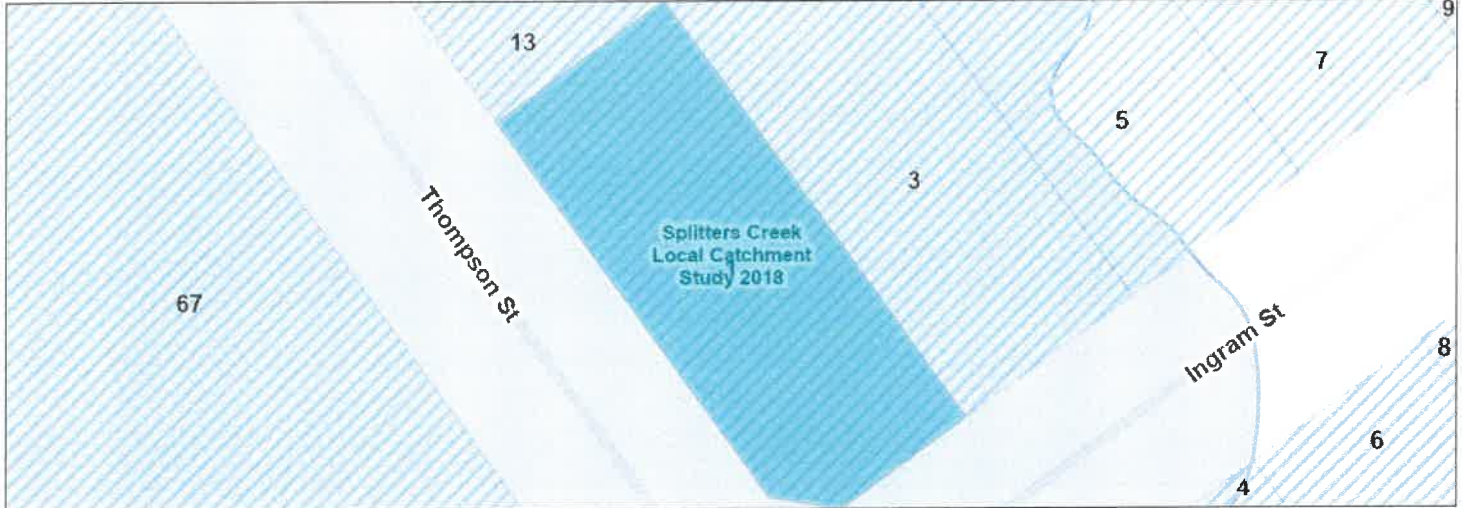
Council provides this information as a general reference source only and has taken all reasonable measures to ensure that the material in this report is as accurate as possible at the time of publication. Council makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, the Council disclaims all liability including liability in negligence, for losses and damages including indirect and consequential loss and damage, caused by or arising from anyone using or relying on the information for any purpose.

Flood Report for 1 Ingram Street Park Avenue QLD 4701

Printed from
GeoCortex on
01/05/2024

Owners: R D Morine and M D Peacock **Ratepayer Address:** 1 Ingram St PARK AVENUE QLD 4701

Parcel ID: R26179/1 **Land use:** Single Dwelling



Riverine Catchment: Fitzroy River Flood Study

Creek Catchment: Splitters Creek Local Catchment Study 2018

Mitigation Area: N/A

Horizontal Datum: MGA 56, GDA 2020 **Elevation / WSL:** mAHD **Velocity:** m/sec

Comments

N/A

Riverine

Creek \ Local Catchment

PMF WSL Min:	14.91	AEP 2% WSL Min:	10.02	PMF WSL Min:	8.89	AEP 5% WSL Min:	N/A
PMF WSL Max:	14.98	AEP 2% WSL Max:	10.03	PMF WSL Max:	8.89	AEP 5% WSL Max:	N/A
PMF Velocity Min:	0.84	AEP 2% Velocity Min:	0.00	PMF Velocity Min:	0.00	AEP 5% Velocity Min:	N/A
PMF Velocity Max:	1.06	AEP 2% Velocity Max:	0.10	PMF Velocity Max:	0.05	AEP 5% Velocity Max:	N/A
AEP 0.05% WSL Min:	12.04	AEP 5% WSL Min:	N/A	AEP 0.05% WSL Min:	N/A	AEP 10% WSL Min:	N/A
AEP 0.05% WSL Max:	12.11	AEP 5% WSL Max:	9.42	AEP 0.05% WSL Max:	N/A	AEP 10% WSL Max:	N/A
AEP 0.05% Velocity Min:	0.48	AEP 5% Velocity Min:	0.02	AEP 0.05% Velocity Min:	N/A	AEP 10% Velocity Min:	N/A
AEP 0.05% Velocity Max:	0.78	AEP 5% Velocity Max:	0.04	AEP 0.05% Velocity Max:	N/A	AEP 10% Velocity Max:	N/A
AEP 0.2% WSL Min:	11.38	AEP 10% WSL Min:	8.81	AEP 0.2% WSL Min:	N/A	AEP 18% WSL Min:	N/A
AEP 0.2% WSL Max:	11.44	AEP 10% WSL Max:	8.81	AEP 0.2% WSL Max:	N/A	AEP 18% WSL Max:	N/A
AEP 0.2% Velocity Min:	0.33	AEP 10% Velocity Min:	0.01	AEP 0.2% Velocity Min:	N/A	AEP 18% Velocity Min:	N/A
AEP 0.2% Velocity Max:	0.61	AEP 10% Velocity Max:	0.02	AEP 0.2% Velocity Max:	N/A	AEP 18% Velocity Max:	N/A
AEP 0.5% WSL Min:	10.87	AEP 18% WSL Min:	N/A	AEP 0.5% WSL Min:	N/A	AEP 39% WSL Min:	N/A
AEP 0.5% WSL Max:	10.90	AEP 18% WSL Max:	N/A	AEP 0.5% WSL Max:	N/A	AEP 39% WSL Max:	N/A
AEP 0.5% Velocity Min:	0.18	AEP 18% Velocity Max:	N/A	AEP 0.5% Velocity Min:	N/A	AEP 39% Velocity Min:	N/A
AEP 0.5% Velocity Max:	0.44	AEP 18% Velocity Max:	N/A	AEP 0.5% Velocity Max:	N/A	AEP 39% Velocity Max:	N/A
AEP 1% WSL Min:	10.46	AEP 39% WSL Min:	N/A	AEP 1% WSL Min:	N/A	AEP 63% WSL Min:	N/A
AEP 1% WSL Max:	10.47	AEP 39% WSL Max:	N/A	AEP 1% WSL Max:	N/A	AEP 63% WSL Max:	N/A
AEP 1% Velocity Min:	0.09	AEP 39% Velocity Min:	N/A	AEP 1% Velocity Min:	N/A	AEP 63% Velocity Min:	N/A
AEP 1% Velocity Max:	0.29	AEP 39% Velocity Max:	N/A	AEP 1% Velocity Max:	N/A	AEP 63% Velocity Max:	N/A

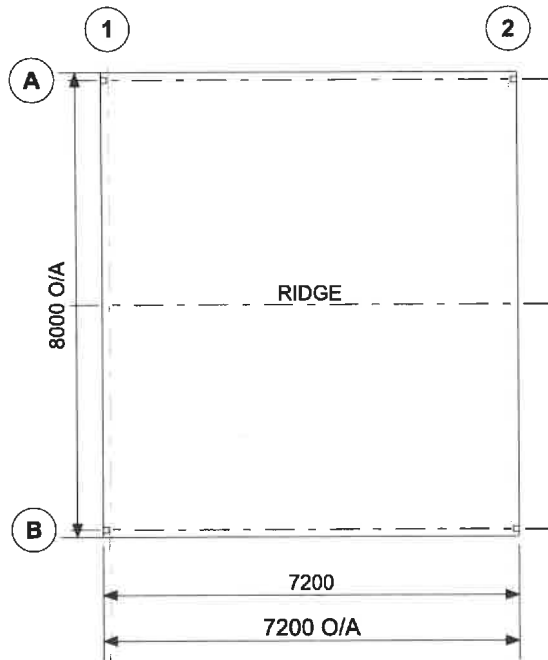
Property Elevation

Ground Elevation (Min): 8.53

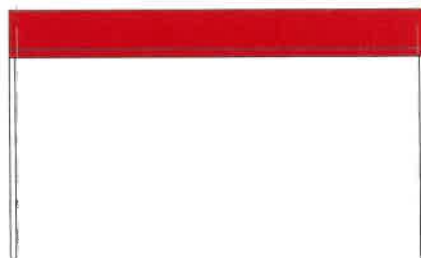
Ground Elevation (Max): 10.15

AEP 2% WSL Min:	N/A
AEP 2% WSL Max:	N/A
AEP 2% Velocity Min:	N/A
AEP 2% Velocity Max:	N/A

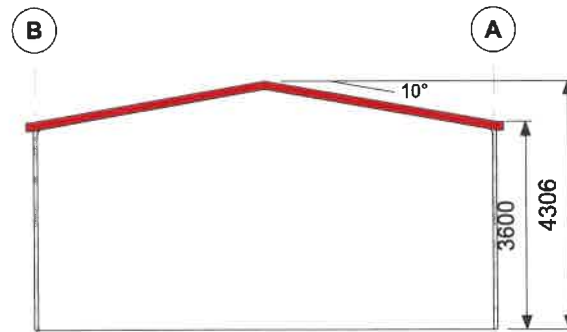
Copyright protects this publication. Reproduction by whatever means is prohibited without prior written permission of the Chief Executive Officer, Rockhampton Regional Council. Rockhampton Regional Council will not be held liable under any circumstances in connection with or arising out of the use of 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 4932 9000. The Digital Cadastral DataBase is current as at May 2024. © The State Government of Queensland (Department of Resources) 2024. All other data © Rockhampton Regional Council 2024. 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.



FRAME ROOF PLAN



ELEVATION GRID B



ELEVATION GRID 2

ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/62-2024
Dated: 28 June 2024

CLADDING

ITEM	PROFILE (min)	FINISH	COLOUR
ROOF	TRIMDEK 0.42 BMT	CB	AA
WALLS	-		
CORNERS	-		
BARGE	-	CB	AA
GUTTER	EMLINE	CB	AA

0.35bmt=0.40tct; 0.42bmt=0.47tct; 0.48bmt=0.53tct

ACCESSORY SCHEDULE & LEGEND

QTY	MARK	DESCRIPTION

ARCHITECTURAL DRAWING ONLY, NOT FOR CONSTRUCTION USE

CLIENT

Gary Green

SITE

**1 Ingram Street
PARK AVENUE QLD 4701**

BUILDING

**GABLE CARPORT
8000 SPAN x 3600 EAVE x 7200 LONG**

TITLE

FLOOR PLAN & ELEVATION

SCALE
A4 SHEET 1:125

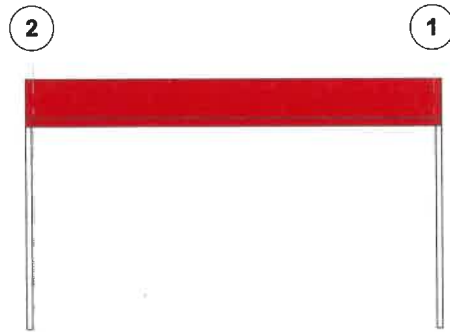
DRAWING NUMBER
ROKH02-12110

REV
A

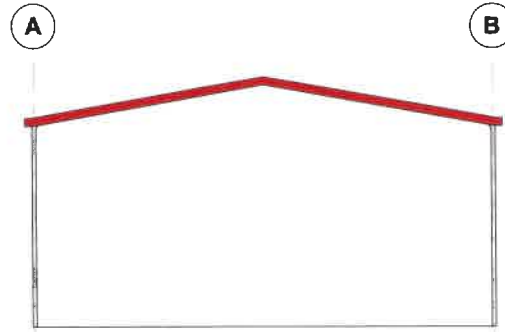
PAGE
1/2



Copyright 2024
Lysaght Building
Solutions Pty Ltd
trading as RANBUILD



ELEVATION GRID A



ELEVATION GRID 1

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/62-2024

Dated: 28 June 2024

SCALE
A4 SHEET 1:125

REV
A

DRAWING NUMBER PAGE
ROKH02-12110 2/2

SITE SPECIFIC DESIGN CRITERIA ANALYSIS



Issued:
19/04/2024

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/62-2024

Dated: 28 June 2024

Prepared for:
Garry Green
1 Ingram Street
PARK AVENUE QLD 4701

Supplier:
CQ Sheds & Concrete Pty Ltd

Assessment Ref:
BSC24042499BV

Building Details:

Span: 8
Length: 7.2
Avg. Height: 3.952

Assesment basis:

NCC 2022
AS/NZS 1170.2:2021
AS/NZS 1170.3:2003
AS1170.4:2007
AS/NZS 3500.3:2021

Certified by:

Alex Filonov



Site Location:

Geographic coordinates of
-23.35487,150.50202

The address provided for reference purpose only is:
1 Ingram Street PARK AVENUE QLD 4701

Executive Summary - Site Specific Analysis

The design analysis of the building has not been considered for each of the 4 orthogonal directions. Hence the maximum wind speed in any of the 8 cardinal directions has been used as the design wind speed. This is a conservative approach.

Each cardinal direction has been considered and the results are summarised below

Factor	N	NE	E	SE	S	SW	W	NW
Wind Region	C							
Importance level (IL)	2							
Distance from Smoothed Coastline	33.1							
Regional Wind Speed (Vr)	60.0							
Climate Change Factor (Mc)	1.05							
Terrain Category (TC)	2.57	2.95	4.24	3.12	2.86	2.53	2.5	2.5
Terrain Category Multiplier (Mz)	0.86	0.83	0.75	0.82	0.84	0.87	0.87	0.87
Shielding Multiplier (Ms)	0.9	0.84	0.87	0.86	0.9	1	0.98	0.88
Topographic Multiplier (Mt)	1	1	1	1	1	1	1	1
Wind Direction Multiplier 1 (Md1)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Site specific design wind speed (Vsite1)	44.1	39.7	37	40	42.9	49.2	48.3	43.4
Wind Direction Multiplier 2 (Md2)	1	1	1	1	1	1	1	1
Site specific design wind speed (Vsite2)	49	44.1	41.1	44.4	47.7	54.7	53.7	48.2

Design Wind Speed (Vsite1)	49.2 m/s	for the resultant forces and overturning moments on the complete building and wind actions on major structural elements.
Design Wind Speed (Vsite2)	54.7 m/s	for cladding and immediate supporting structures (Purlins and Girts)
Snow Load	Nil	
Earthquake	0.08	Hazard Design Factor (Z)
Durability Alert	Yes	It is likely that the building is subject to a Marine Influence and Industrial Influence. You should satisfy yourself that any BlueScope or other warranties specific for your site are satisfactory for your purpose. Amongst other sources, you should contact BlueScope on 1800 800 789.
Rainfall Intensity	230mm/hr	5% AEP
Rainfall Intensity	301mm/hr	1% AEP