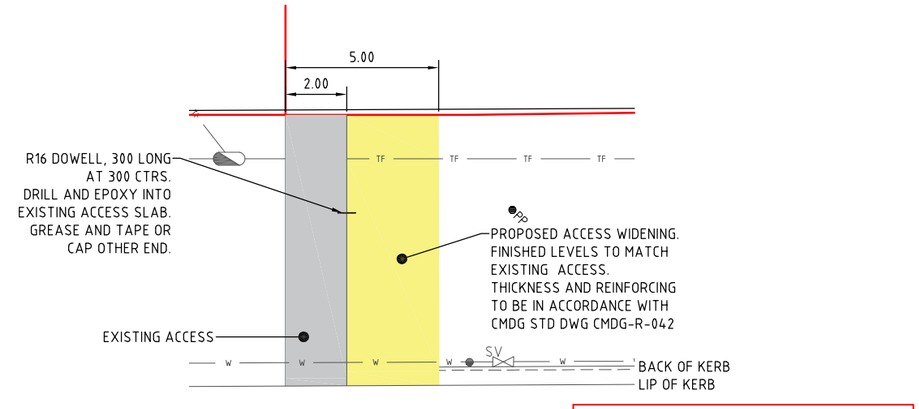
LAYOUT PLAN
SCALE 1:500

LEGEND

- PROPERTY BOUNDARY
- EXISTING NBN LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED CROSSOVER, REFER DETAIL
- EXISTING CROSSOVER
- EXISTING POWER POLE
- EXISTING NBN PIT
- EXISTING FIRE HYDRANT
- EXISTING SLUICE VALVE



ENLARGEMENT ONE
SCALE 1:200

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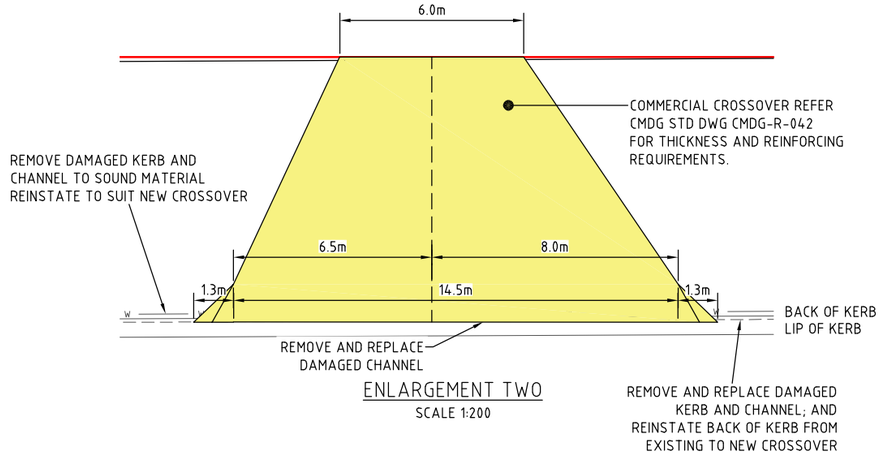
Dated: 16 June 2020



ENLARGEMENT TWO
SCALE 1:200

SCALE
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DESCRIPTION

REV	REVISION	DATE
A	PRELIMINARY	22/11/2019
B	DETAIL AND SERVICES ADDED	27/11/2019
C	AMENDED CROSSOVER DETAIL	22/04/2020
D	CHANGED NORTHERN CROSSOVER SHAPE	29/04/2020
E	CHANGED NORTHERN CROSSOVER SHAPE	01/05/2020

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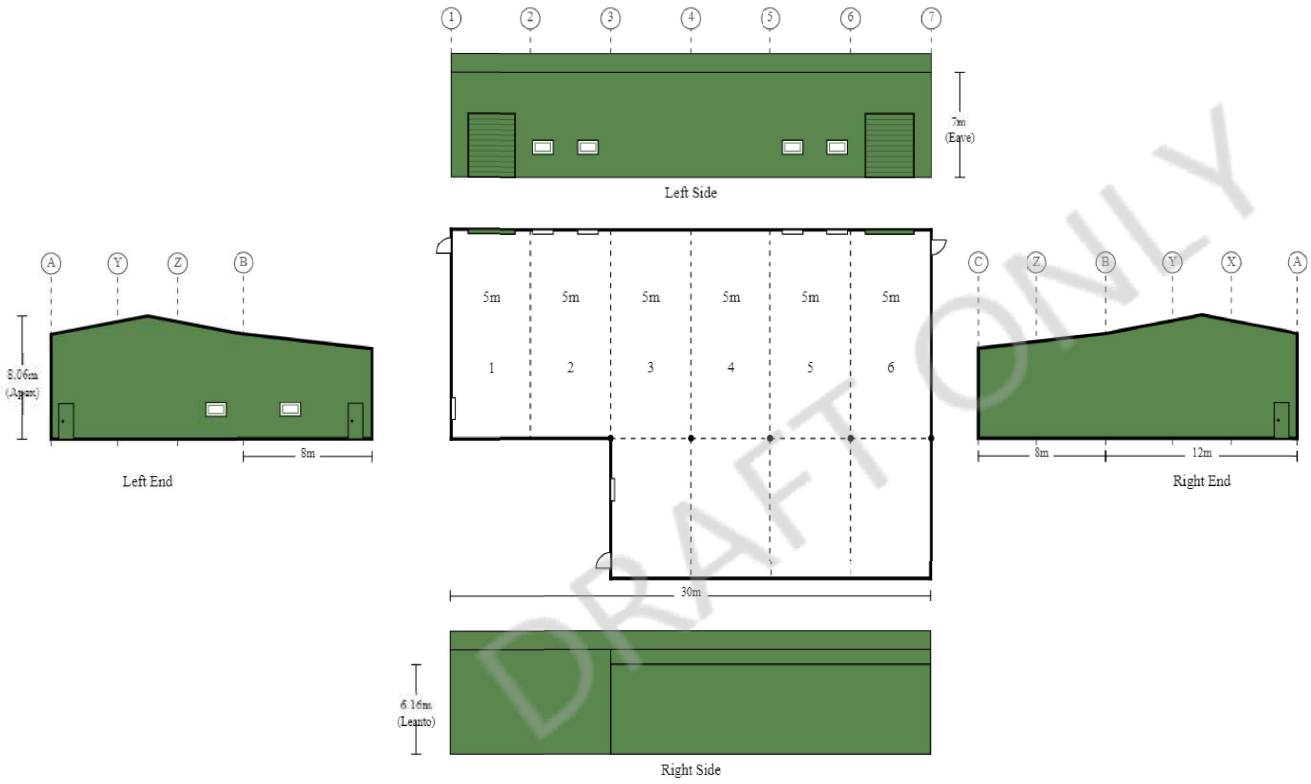
Drawn by	MH
Checked by	ACD
Approved	GLENN J. BROWN
RPEQ	RPEQ7682
Sign	

GRANULAR PRODUCTS
VEHICLE ACCESS
171 ALEXANDRA ST ROCKHAMPTON
ACCESS LAYOUT PLAN

D19.246-01

SHEET 01 OF 05

A B C D E



Purchaser Name: Granular Products		**Layout** **NOT FOR CONSTRUCTION** Not to Scale © Copyright SteelMP Pty Ltd	Seller: THE Shed Company Gladstone Name: Kit Rudolph Phone: (07) 4972 9990 Fax: Email: kit.rudolph@theshedcompany.com.au
Site Address: 171 Alexandra Street Kawana QLD 4701 Australia			
Drawing # kitr1810017-1	Print Date: 26/09/19		

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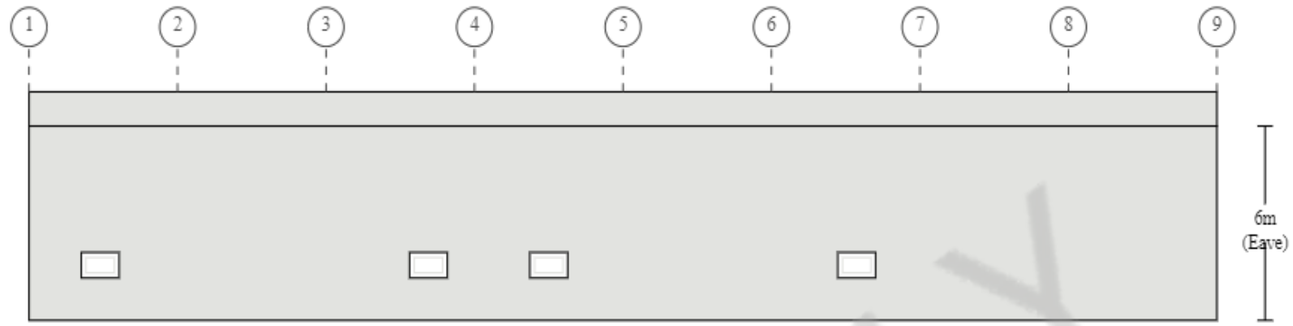
Dated: 16 June 2020



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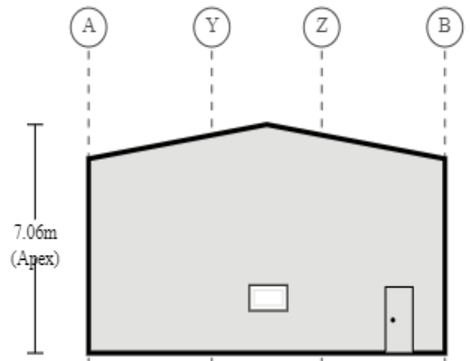

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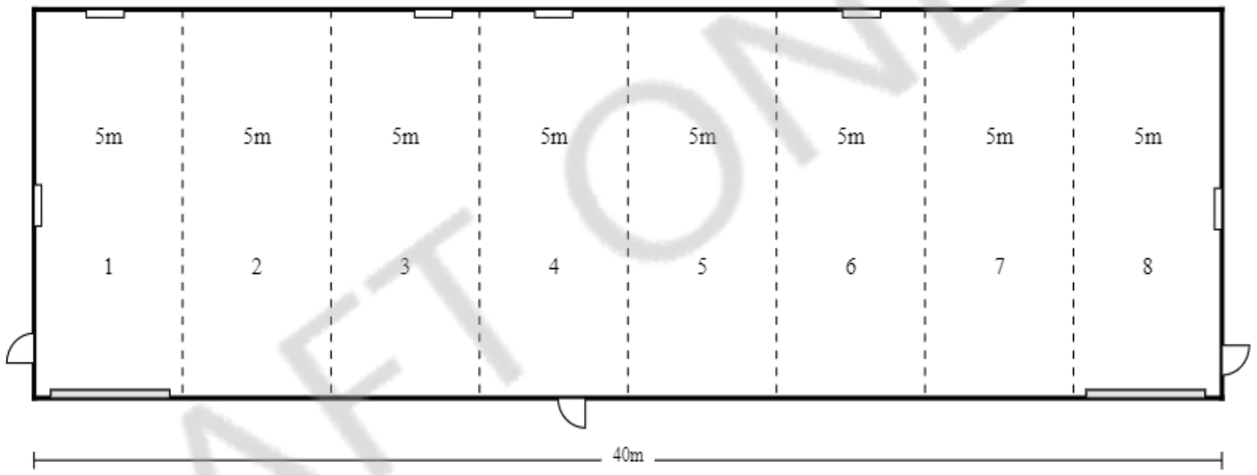

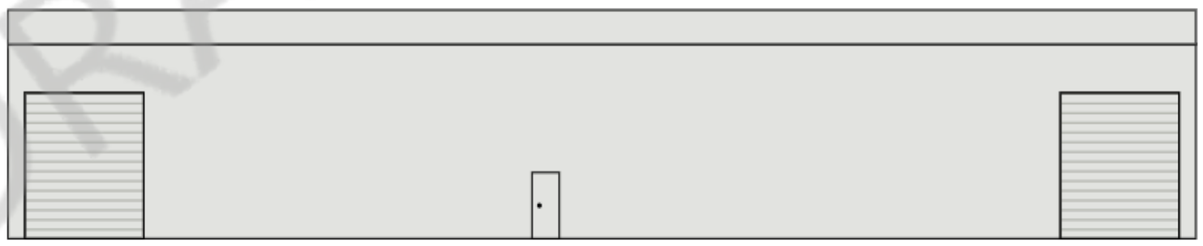

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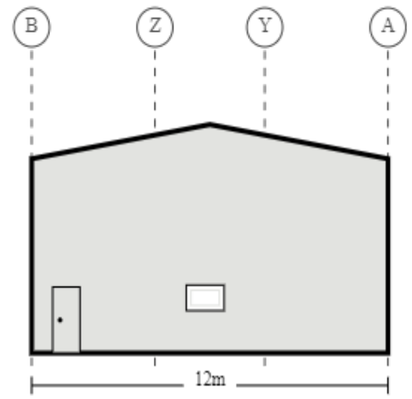

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Purchaser Name: GP Real Estate		**Layout** **NOT FOR CONSTRUCTION** Not to Scale © Copyright SteelxIP Pty Ltd	Seller: THE Shed Company Gladstone Name: Kit Rudolph Phone: (07) 4972 9990 Fax: Email: kit.rudolph@theshedcompany.com.au
Site Address: 169 Alexandra Street Kawana QLD 4701 Australia			
Drawing # DRAFT-acd96b18-8922-4df0-8063-6202a47f1463	Print Date: 23/10/19		

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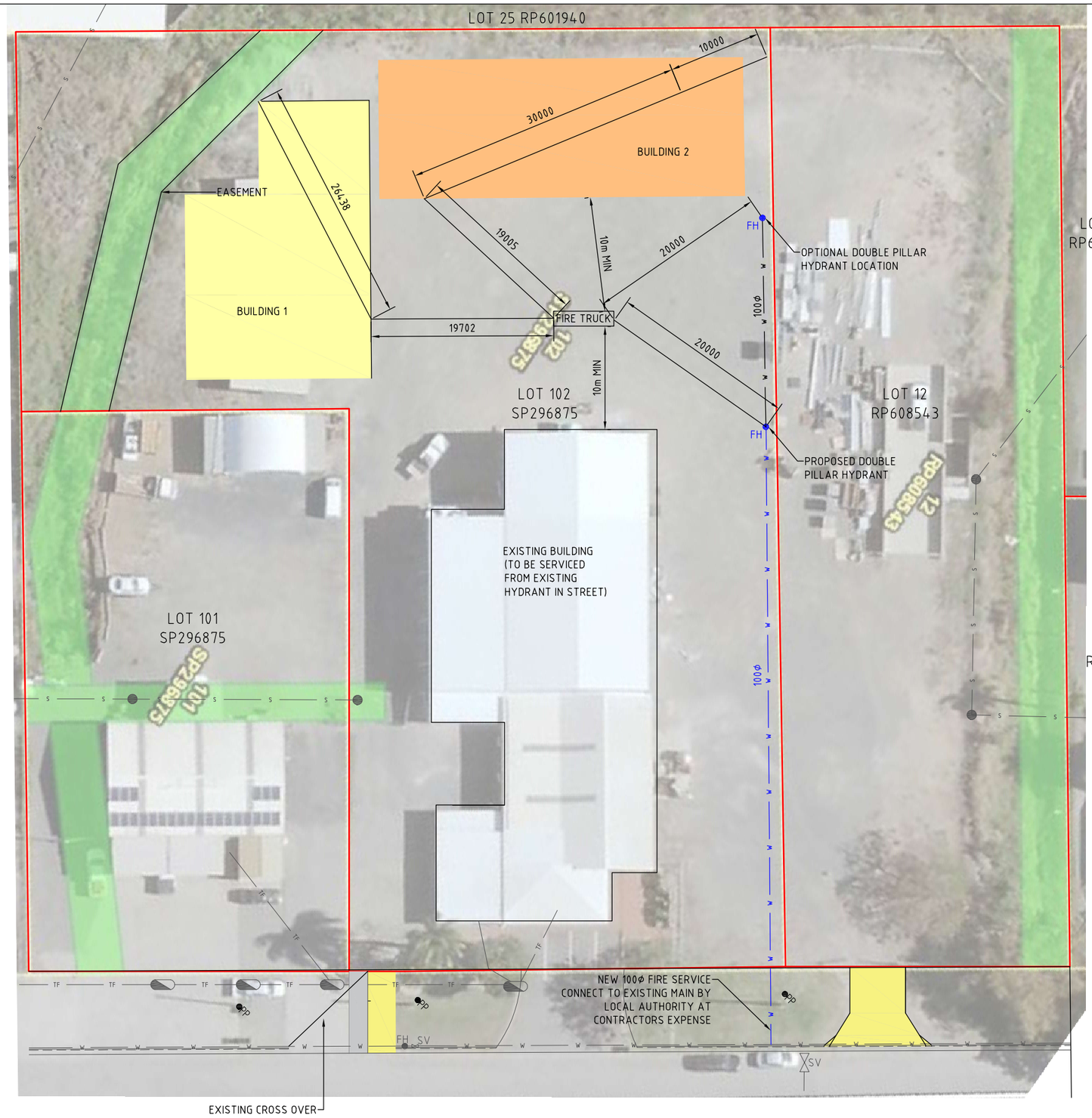
Dated: 16 June 2020



LAYOUT PLAN
SCALE 1:500

LEGEND

- PROPERTY BOUNDARY
- EXISTING NBN LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED DRIVEWAY PAVEMENT, REFER DETAIL
- EXISTING DRIVEWAY PAVEMENT
- EXISTING POWER POLE
- EXISTING NBN PIT
- EXISTING FIRE HYDRANT
- EXISTING SLUICE VALVE

FIRE SERVICE DESIGN CRITERIA

BUILDING CLASSIFICATION
BUILDING 1 : CLASS 8 (520m²)
BUILDING 2 : CLASS 8 (600m²)

MAXIMUM FIRE COMPARTMENT
SIZE < 2000m²
A.S.2419.1 – 2005
TABLE 2.1 CLASS 8 < 500m² 2 HOSE STREAMS

FIGURE 3.2.2 (PART (a)) STREET HYDRANT FEED USED AS FEEDER HYDRANT

SUMMARY
UTILISE NEW DOUBLE PILLAR HYDRANT AS FEEDER HYDRANT IN ACCORDANCE WITH AS2419.1-2005 BASED ON A MAXIMUM COMPARTMENT SIZE OF LESS THAN 2000m²

COVERAGE 20m FROM TRUCK TO DOUBLE PILLAR HYDRANT AND, 60m HOSE LENGTH WITH 10m SPRAY TO MOST DISTANT POINT OF BUILDING

EACH NEW BUILDING TO BE FITTED WITH FIRE HOSE REELS. LOCATIONS TO BE PROVIDED ON FINALISATION OF INTERNAL FLOOR LAYOUTS.

EXISTING BUILDING COVERAGE IS PROVIDED BY THE EXISTING HYDRANT IN THE ALEXANDRA STREET

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APPROVED PLANS
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Development Permit No.: D/29-2020
Dated: 16 June 2020

SCALE
0 2.5 5 7.5 10 1:500
DESCRIPTION

REV	REVISION	DATE
A	FOR MCU APPROVAL	19/02/2020

DILEIGH
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Drawn by	RE
Checked by	ACD
Approved G. BROWN	
RPEQ 7682	Sign

GRANULAR PRODUCTS
VEHICLE ACCESS
171 ALEXANDRA ST ROCKHAMPTON
FIRE SERVICES COVERAGE PLAN

D19.246-H01
SHEET 01 OF 01
A

GROSS FLOOR AREA OF PROPOPSED SHEDS

MANUFACTURING SHED

GROSS FLOOR AREA (PLANT AND EQUIPMENT)	:200 SQM
BALANCE AREA FOR PARKING,LOADING AND MANOEUVRING VEHICLES	: 320 SQM

STORAGE SHED

GROSS FLOOR AREA (RACKING AND STORAGE)	:176 SQM
BALANCE AREA FOR PARKING,LOADING AND MANOEUVRING VEHICLES	:424SQM

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Dated: 16 June 2020

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A3 DRAWING NOTED SCALES RELATE TO A3 DRAWINGS

drawing no: SK-010

project no: CO-044

project:
PROPOSED NEW SHED
drawing title:
GROSS FLOOR AREA OF PROPOSED SHEDS
location:
LOT 102 SP296875+ LOT 12 RP608543

REVISIONS

REV	DESCRIPTION	DATE
9	PRELIMINARY	23/04/2020

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abn: 80167978832
reg no. 4610
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drawn Author
rev 9

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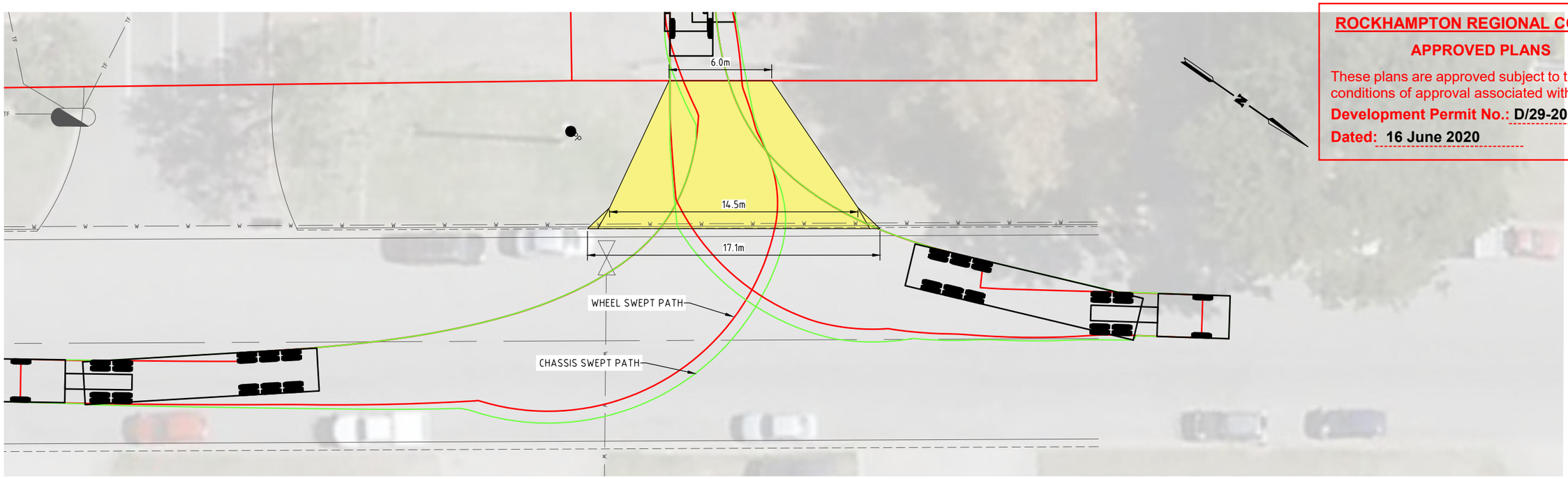
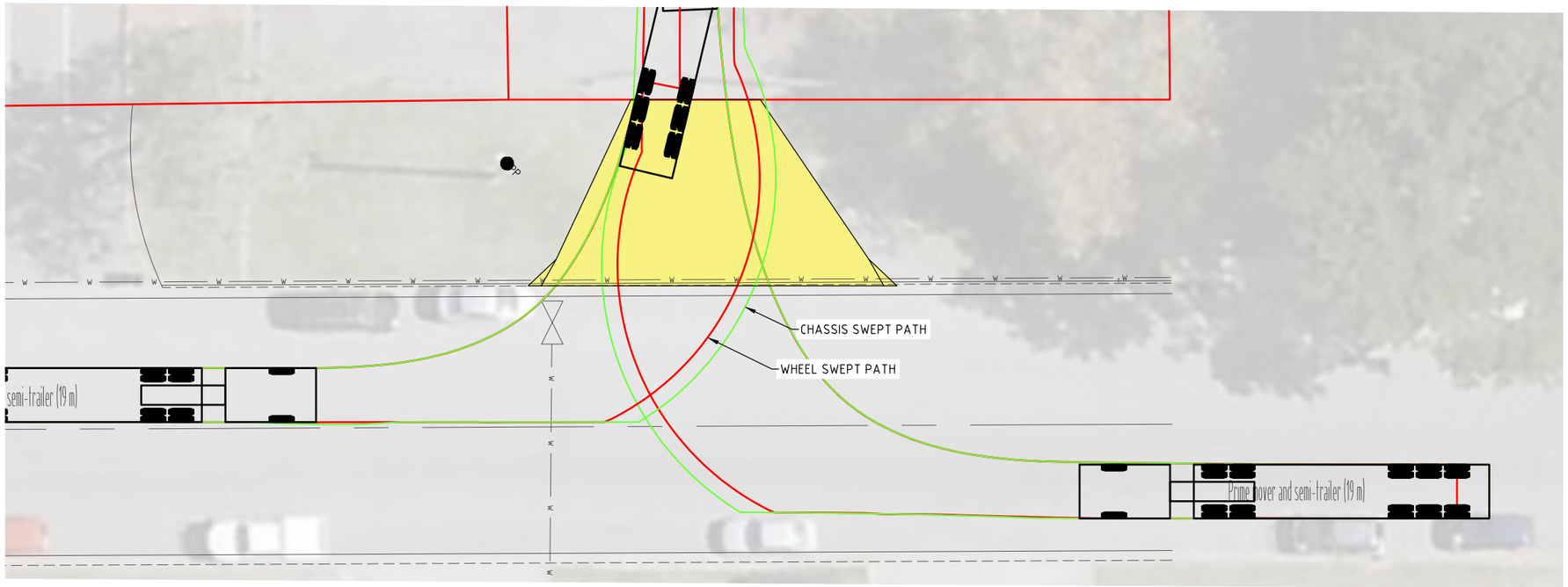
Dated: 16 June 2020



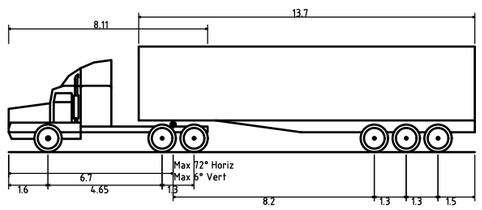
SEMI-TRAILER EXIT SWEPT PATHS



SEMI-TRAILER ENTRY SWEPT PATHS

LEGEND

- PROPERTY BOUNDARY
- EXISTING NBN LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED CROSSOVER
- EXISTING CROSSOVER
- EXISTING POWER POLE
- EXISTING NBN PIT
- EXISTING FIRE HYDRANT



Prime mover and semi-trailer (19 m)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

SCALE

0 1.25 2.5 3.75 5 1:250

DESCRIPTION

REV	REVISION	DATE
A	FOR INFORMATION	21/04/2020
B	DESIGN VEHICLE AND NORTHERN CROSSOVER CHANGED	29/04/2020
C	NORTHERN CROSSOVER SHAPE CHANGED	01/05/2020
D	SHEET TITLE CORRECTED	11/06/2020

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Drawn by	AMD
Checked by	ACD
Approved GLENN J. BROWN	
RPEQ RPEQ7682	Sign 11.06.2020

GRANULAR PRODUCTS

VEHICLE ACCESS

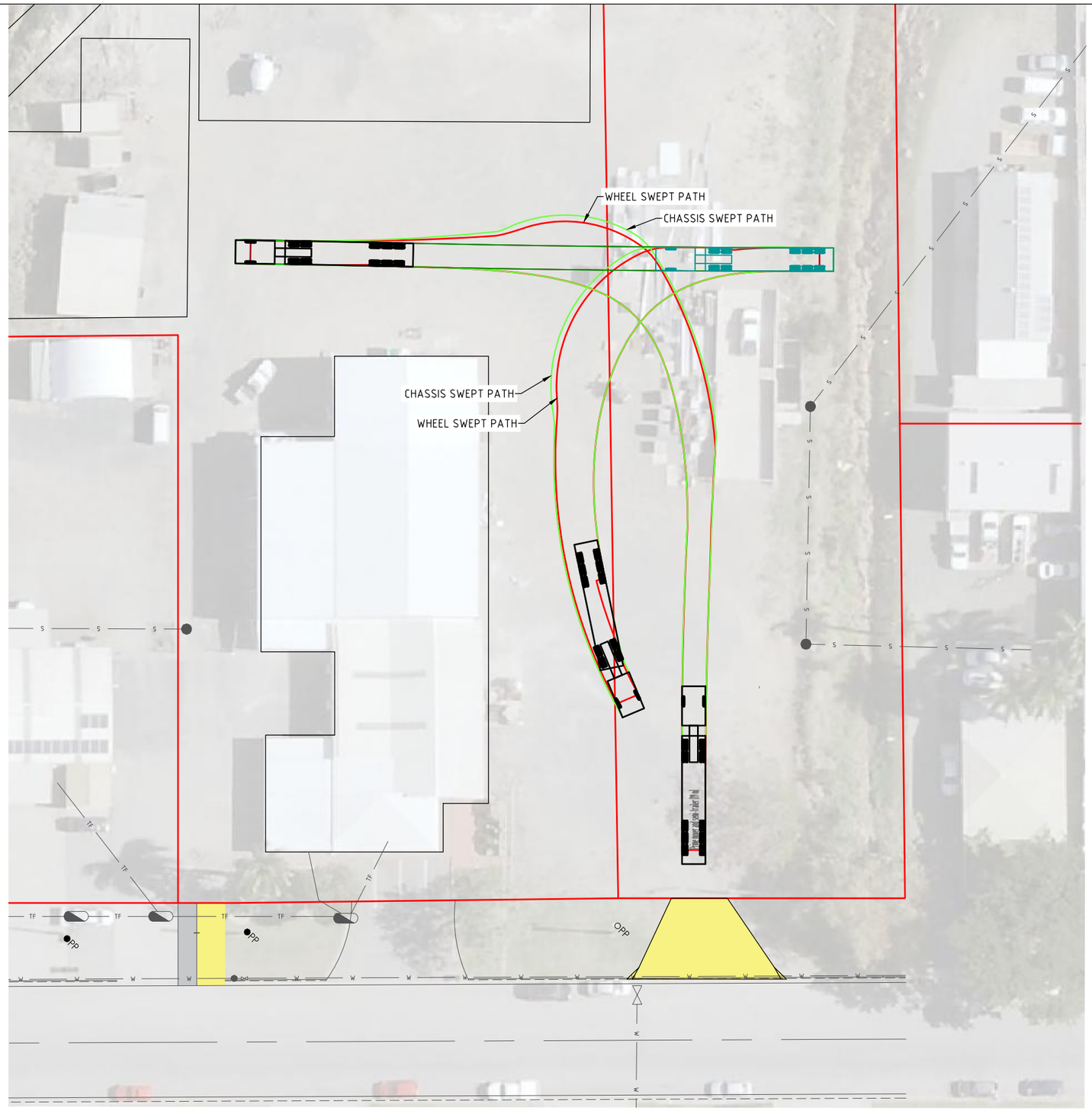
171 ALEXANDRA ST ROCKHAMPTON

SEMI-TRAILER ENTRY AND EXIT VEHICLE SWEPT PATHS - NORTHERN ACCESS

D19.246-SK-08

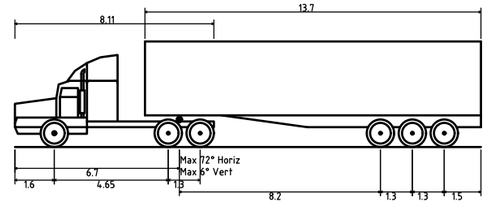
SHEET 01 OF 03

A B C D



LEGEND

- PROPERTY BOUNDARY
- EXISTING NBN LINE (TF)
- EXISTING SEWER LINE (S)
- EXISTING WATER LINE (W)
- PROPOSED CROSSOVER
- EXISTING CROSSOVER
- EXISTING POWER POLE (PP)
- EXISTING NBN PIT
- EXISTING FIRE HYDRANT (FH)



Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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Dated: 16 June 2020

SCALE

0 2.5 5 7.5 10 1:500

DESCRIPTION

REV	REVISION	DATE
A	FOR INFORMATION	21/04/2020
B	DESIGN VEHICLE AND NORTHERN CROSSOVER CHANGED	29/04/2020
C	NORTHERN CROSSOVER SHAPE CHANGED	01/05/2020
D	SHEET TITLE CORRECTED	11/06/2020

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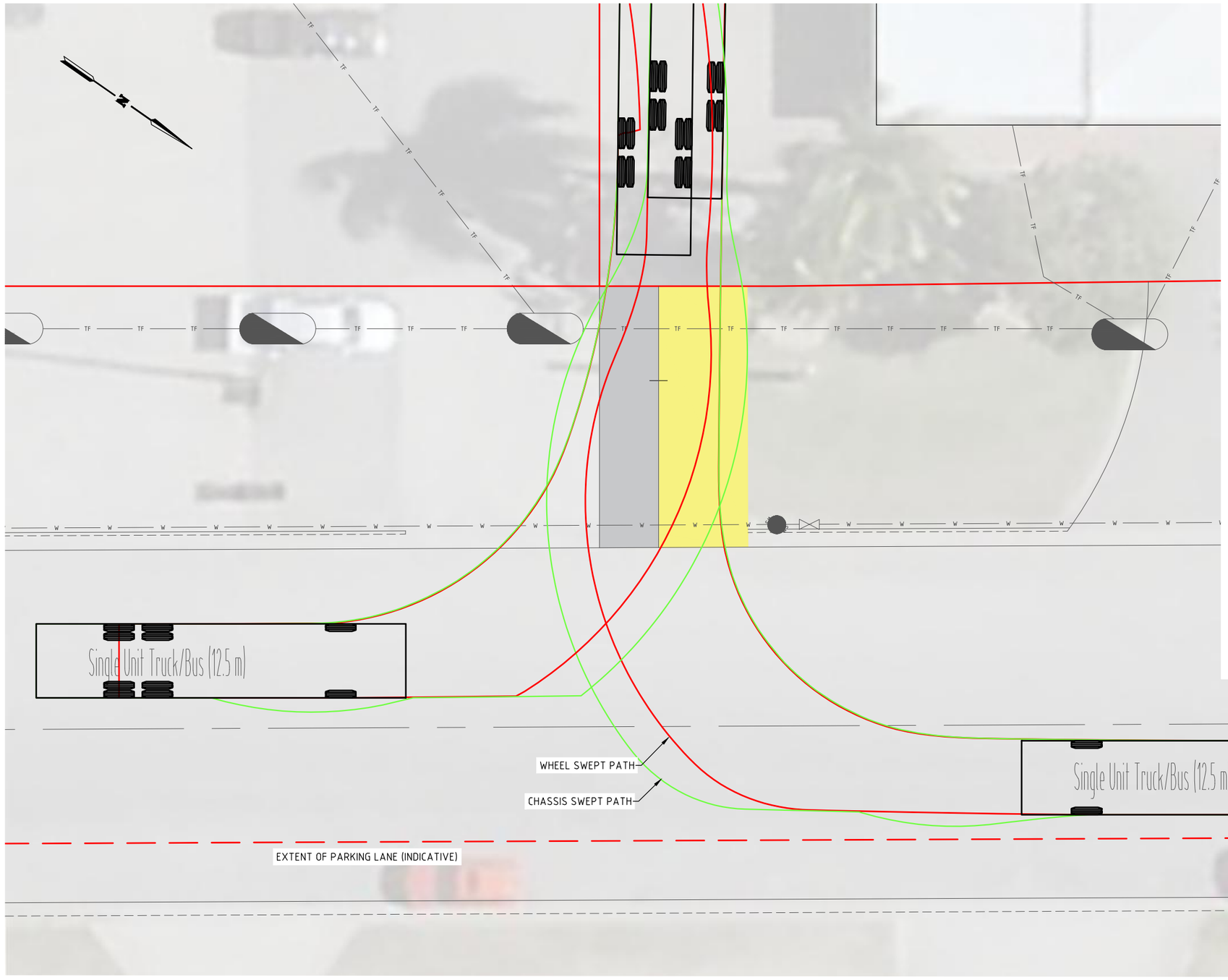
Drawn by	AMD
Checked by	ACD
Approved GLENN J. BROWN	
RPEQ RPEQ7682	Sign 11.06.2020

GRANULAR PRODUCTS
VEHICLE ACCESS
171 ALEXANDRA ST ROCKHAMPTON
SEMI-TRAILER INTERNAL VEHICLE
SWEPT PATHS

D19.246-SK-09

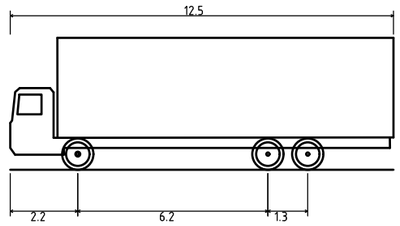
SHEET 02 OF 03

A B C D



LEGEND

- PROPERTY BOUNDARY
- EXISTING NBN LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED CROSSOVER
- EXISTING CROSSOVER
- EXISTING POWER POLE
- EXISTING NBN PIT
- EXISTING FIRE HYDRANT



Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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SCALE

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DESCRIPTION

REV	REVISION	DATE
A	FOR INFORMATION	11/06/2020

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Checked by	ACD
Approved	GLENN J. BROWN
RPEQ	RPEQ7682
Sign	11.06.2020

GRANULAR PRODUCTS
VEHICLE ACCESS
171 ALEXANDRA ST ROCKHAMPTON
HEAVY RIGID SWEPT PATHS
SOUTHERN ACCESS

D19.246-SK-10

SHEET 03 OF 03

A

AREA SCHEDULE:

TOTAL SITE AREA (LOT 102 SP296875 +LOT 12RP608543) : 9115M²

MANUFACTURING SHED : 520M²
MANUFACTURING SHED HEIGHT: 7M TO EAVE AND 8.06M TO APEX

STORAGE SHED : 600M² (40M X 15M)
STORAGE HEIGHT : 6M TO EAVE AND 7.06M TO APEX

ESTIMATE AREA OF EXISTING SHED :1120M²

TOTAL BUILDING SITE COVER (520M²+600M²+1120M²) :2240M²

TOTAL SITE COVERAGE (INCLUDING BOTH LOTS) : 2240/9115 = 24.5%

NOTE:

EASEMENT LOCATION AND BOUNDARIES ARE APPROXIMATE ONLY

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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Dated: 16 June 2020

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A3 DRAWING NOTED SCALES RELATE TO A3 DRAWINGS

drawing no: SK-002

project no: CO-044

project: PROPOSED NEW SHED

drawing title: PROPOSED SITE PLAN

location: LOT 102 SP296875+ LOT 12 RP608543

REVISIONS

REV	DESCRIPTION	DATE
1	PRELIMINARY	22/10/2019
2	PRELIMINARY	21/11/2019
3	PRELIMINARY	29/11/2019
4	PRELIMINARY	05/12/2019
5	PRELIMINARY	06/12/2019
6	PRELIMINARY	20/12/2019
7	PRELIMINARY	31/01/2020
8	PRELIMINARY	07/02/2020

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scale As indicated
date FEB 20
drawn AUTHOR
rev 8

AREA SCHEDULE:

TOTAL SITE AREA (LOT 102 SP296875 +LOT 12RP608543) : 9115M²

MANUFACTURING SHED : 520M²
MANUFACTURING SHED HEIGHT: 7M TO EAVE AND 8.06M TO APEX

STORAGE SHED : 600M² (40M X 15M)
STORAGE HEIGHT : 6M TO EAVE AND 7.06M TO APEX

ESTIMATE AREA OF EXISTING SHED :1120M²

TOTAL BUILDING SITE COVER (520M²+600M²+1120M²) :2240M²

TOTAL SITE COVERAGE (INCLUDING BOTH LOTS) : 2240/9115 = 24.5%

NOTE:

EASEMENT LOCATION AND BOUNDARIES ARE APPROXIMATE ONLY

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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Dated: 16 June 2020

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7/02/2020 4:58:57 PM

A3 DRAWING NOTED SCALES RELATE TO A3 DRAWINGS

drawing no: SK-003

project no: CO-044

project: PROPOSED NEW SHED

drawing title: PROPOSED SITE PLAN

location: LOT 102 SP296875+ LOT 12 RP608543

REVISIONS

REV	DESCRIPTION	DATE
4	PRELIMINARY	05/12/2019
5	PRELIMINARY	06/12/2019
6	PRELIMINARY	20/12/2019
7	PRELIMINARY	31/01/2020
8	PRELIMINARY	07/02/2020

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drawn Author
rev 8

2019

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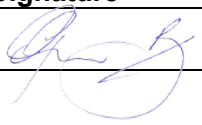
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

STORMWATER MANAGEMENT REPORT ASSOCIATED WITH A MATERIAL CHANGE OF USE
PROPOSED INDUSTRIAL SHEDS
LOT 102 ON SP296875
171 ALEXANDRA STREET, ROCKHAMPTON

Table of Contents

Document Status					
Rev No.	**Author**	**Reviewer**	**Approved For Issue**		
			Name	**Signature**	**Date**
01	A Doherty	G Brown	Glenn Brown RPEQ 7682		19.02.2020

1. Introduction

This report was prepared for Granular Products in support of a proposed development to the subject site at 171 Alexandra Street, Rockhampton. This report should be read in conjunction with the overall application relating to this project. The proponent is seeking approval to construct additional sheds on an existing developed site.

The land subject to this application is described as Lot 102 on SP296875, which has an area of 6067m^2, with frontage to Alexandra Street, Rockhampton.

2. Existing Stormwater Conditions

Lot 102 is currently developed and consists of gravel hardstand and an existing building and shed. Water is discharged from site as overland flow directed away from the existing building, predominantly draining towards the rear of the allotment to a drainage easement in the south corner and rear of the site. A small portion of the allotment drains overland to the kerb and channel in Alexandra Street. Refer Existing Site Layout Plan Appendix A.

Based on the existing development and practically flat hardstand surface of the site, an overall time of concentration (Tc) of 7 minutes has been adopted in accordance with QUDM Figure 4.4. Runoff coefficients were applied to actual site areas to determine fraction impervious in accordance with AS/NZ3500.3 as per the table below. Based on this value, a C_{10} value of 0.881 (From QUDM Table 4.5.3) was adopted.

	Area (ha)	Runoff Coefficient	Equivalent Impervious Area (ha)
Total Site Area	0.6067	-	-
Existing Roof Area	0.1230	1.0	0.1230
Existing Hardstand and Pavement	0.4161	0.9	0.3745
Vegetation	0.0674	0.7594	0.0511
		Total Impervious Area	**0.5486**
		Fraction Impervious (Total / Site Area)	**0.904**

Utilising a Tc of 7 minutes and the relevant rainfall intensities, the following discharges for a range of events was calculated where Qy=F*Cy*Iy*A for the existing site.

EXISTING SITE

Development Area 0.6067 ha

TC= 7 min

	F sq kms	**C** co eff	**I** mm/hr	**A** sq kms	**Q** m3/sec
Q2	0.278	0.749	119.0	0.00607	0.1503
Q5	0.278	0.837	158.0	0.00607	0.2230
Q10	0.278	0.881	185.0	0.00607	0.2748
Q20	0.278	0.925	212.0	0.00607	0.3307
Q50	0.278	1.000	250.0	0.00607	0.4217
Q100	0.278	1.000	279.0	0.00607	0.4706

Fi	0.904	
$^1I_{10}$	70.30	mm/hr
C_{10}	0.881	

From QUDM T4.5.3

3.0 Post Developed Site Flows

The proposed development of the site increases the fraction impervious value to a fraction impervious value of 0.920 as per the table below. Based on this value, a C_{10} value of 0.884 (From QUDM Table 4.5.3) was adopted.

	Area (ha)	Runoff Coefficient	Equivalent Impervious Area (ha)
Total Site Area	0.6067	-	-
Proposed Roof Area	0.2219	1.0	0.2219
Proposed Hardstand and Pavement	0.3173	0.9	0.2857
Vegetation	0.0674	0.7594	0.0511
Total Impervious Area			**0.5583**
Fraction Impervious (Total / Site Area)			**0.920**

Rainfall intensities were reviewed and adjusted in line with the post-development time of concentration.

Based on these revised figures, the following discharges from site were calculated:

PROPOSED DEVELOPMENT TC= 7 min

Development Area 0.6067 ha

	F sq kms	C co eff	I mm/hr	A sq kms	Q m3/sec
Q2	0.278	0.751	119.0	0.00607	0.1508
Q5	0.278	0.840	158.0	0.00607	0.2238
Q10	0.278	0.884	185.0	0.00607	0.2758
Q20	0.278	0.928	212.0	0.00607	0.3319
Q50	0.278	1.000	250.0	0.00607	0.4217
Q100	0.278	1.000	279.0	0.00607	0.4706

Fi	0.920	
$^1I_{10}$	65.10	mm/hr
C_{10}	0.884	

From QUDM T4.5.3

When compared with the pre-developed assumed industrial site discharge rate, we note a minor increase in flow for recurrence intervals up to 1 in 20 year. Refer table below:

COMPARING PRE-TREATMENT FLOWS			
EVENT ARI	**PRE-DEV**	**POST-DEV**	**CHANGE**
Q2	0.1503	0.1508	0.36%
Q5	0.2230	0.2238	0.36%
Q10	0.2748	0.2758	0.36%
Q20	0.3307	0.3319	0.36%
Q50	0.4217	0.4217	0.00%
Q100	0.4706	0.4706	0.00%

3.1 Discharge Flow Management

As the increase in post development flows are not considered significant and not required for the larger more intense storm events, it is not considered necessary to install detention tanks or other stormwater detention devices. However, since the location of the proposed sheds conflicts with existing overland flow paths, it is considered prudent to implement stormwater flow management infrastructure.

It is proposed to install a 5000L slimline tank at the rear of the 520m^2 proposed shed to capture a portion of roofwater to discharge overland to the existing drainage easement. It is further proposed to install an underground stormwater line to collect roofwater from the existing building and the remaining portion of the 520m^2 proposed shed to outlet to the existing drainage easement.

At the time of development of the future shed, it is proposed to install a separate underground stormwater line to capture roof water from the front of the building and outlet to the existing point of discharge in the rear of the site. Roofwater from the rear will discharge via downpipes across the area between the building and the boundary as sheet flow to the existing drainage channel. The hardstand at the front of the future shed may need to be reshaped to direct overland flows to the north boundary.

Implementation of the above treatments will improve the existing stormwater management conditions and reduce the impact of the site flows on adjacent allotments.

3.2 Stormwater Quality Management

Due to the pre-developed nature of the site, State Planning Policy Healthy Water had not been triggered. No other Stormwater Quality Improvement Devices (SQID's) are proposed for this site.

4.0 Conclusion

The proposed development only has a minor impact on the existing site flows. However, it is proposed to improve the existing stormwater management conditions by capturing roofwater with an underground stormwater line and detention tank at the rear of the lot, discharging to the existing drainage easement – refer drawings in Appendix A.

Ashleigh Doherty

For and On Behalf of

Dileigh Consulting Engineers Pty Ltd

Appendix A – Stormwater Management Strategy Drawings

STORMWATER MANAGEMENT PLAN ASSOC WITH AN MCU

171 ALEXANDRA STREET, ROCKHAMPTON

GRANULAR PRODUCTS PTY LTD

LOT 102 ON SP296875

D19.246-SWMP

LOCALITY PLAN
(Not To Scale)

EXISTING LEVELS AND SERVICES

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND LEVELS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES INCLUDING "DIAL BEFORE YOU DIG" PRIOR TO COMMENCING CONSTRUCTION.
2. ANY COSTS ASSOCIATED WITH REPAIRING DAMAGE TO EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING LEVELS ARE AS PER THIS DESIGN WHERE CONNECTIONS TO EXISTING INFRASTRUCTURE ARE REQUIRED. ANY DIFFERENCES TO BE NOTIFIED TO THE ENGINEER PRIOR TO ORDERING MATERIALS OR COMMENCING ANY WORKS.
4. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO CLASHES BETWEEN ANY CROSSING SERVICE OR PIPELINE. ANY CLASHES TO BE NOTIFIED TO THE ENGINEER PRIOR TO WORKS COMMENCING.
5. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY LOCATION AND DETAILS OF ALL EXISTING SERVICE CONNECTIONS TO NEW ALLOTMENTS PREVIOUSLY INSTALLED

CIVIL WORKS DRAWING INDEX

SH.	DWG. No.	DRAWING TITLE
-	D19.246-SWMP-00	TITLE SHEET
1	D19.246-SWMP-01	EXISTING SITE LAYOUT
2	D19.246-SWMP-02	PROPOSED SITE LAYOUT

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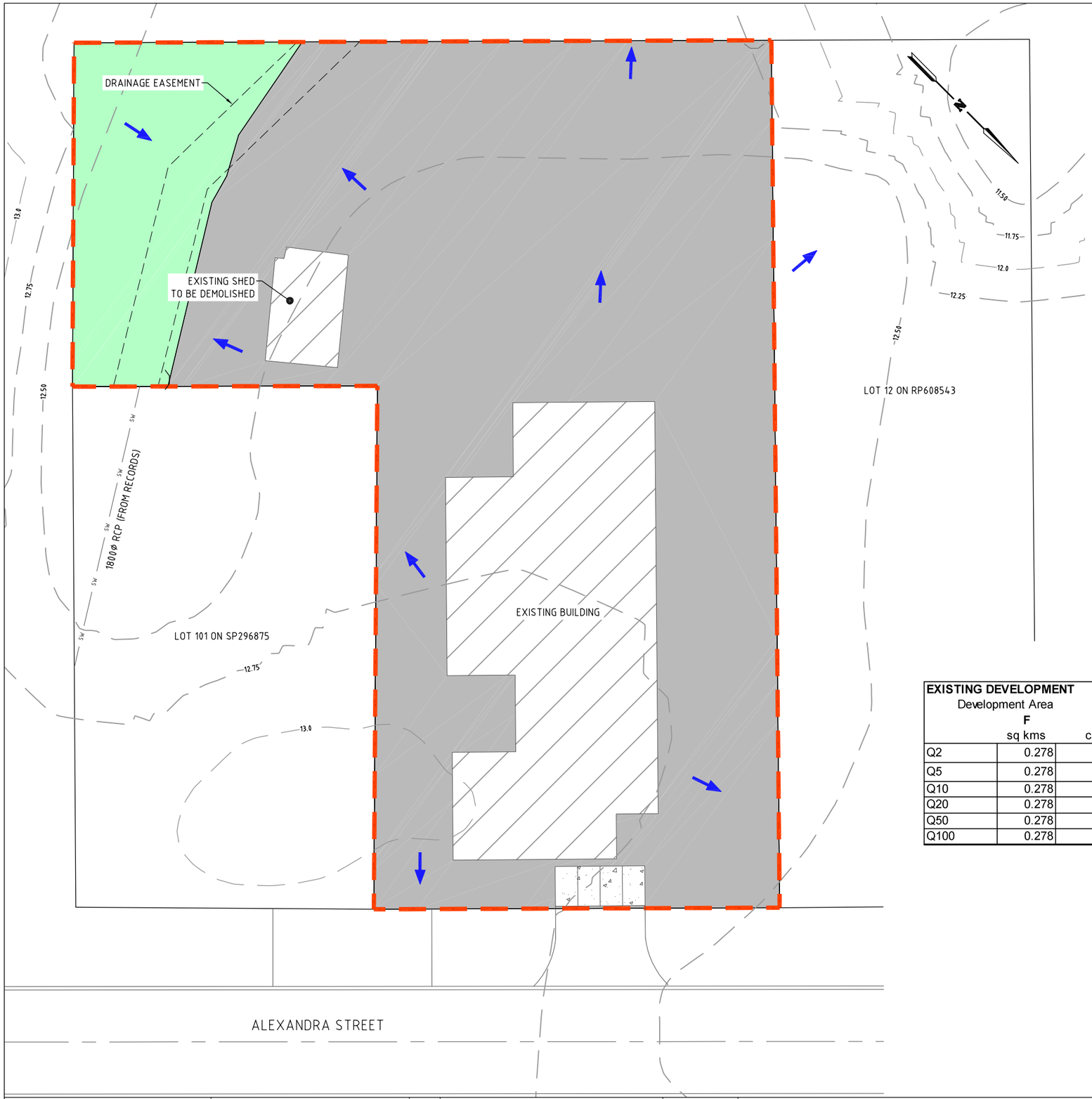

LEGEND

- 12.0 — EXISTING SURFACE CONTOUR (DCDB)
- EXISTING EASEMENT BOUNDARY
- CATCHMENT AREA
- EXISTING ROOF AREA
- EXISTING HARDSTAND
- EXISTING BITUMEN
- EXISTING VEGETATION
- OVERLAND FLOW PATH

EXISTING LEVELS AND SERVICES

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND LEVELS OF ALL EXISTING SERVICES WITH THE RELEVANT AUTHORITIES INCLUDING "DIAL BEFORE YOU DIG" PRIOR TO COMMENCING CONSTRUCTION.
2. ANY COSTS ASSOCIATED WITH REPAIRING DAMAGE TO EXISTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.
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5. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHALL VERIFY LOCATION AND DETAILS OF ALL EXISTING SERVICE CONNECTIONS TO NEW ALLOTMENTS PREVIOUSLY INSTALLED

STORMWATER MANAGEMENT NOTES

1. ALL CALCULATIONS CARRIED OUT IN ACCORDANCE WITH THE QUEENSLAND URBAN DRAINAGE MANUAL
2. TIME OF CONCENTRATION TAKEN AS 7 MINUTES FROM QUDM FIGURE 4.4 USING SHALLOW OVERLAND FLOW ON HARDSTAND TO EXISTING POINT OF DISCHARGE

EXISTING DEVELOPMENT TC= 7 min

Development Area **0.6067** ha

	F sq kms	C co eff	I mm/hr	A sq kms	Q m3/sec
Q2	0.278	0.749	119.0	0.00607	0.1503
Q5	0.278	0.837	158.0	0.00607	0.2230
Q10	0.278	0.881	185.0	0.00607	0.2748
Q20	0.278	0.925	212.0	0.00607	0.3307
Q50	0.278	1.000	250.0	0.00607	0.4217
Q100	0.278	1.000	279.0	0.00607	**0.4706**

Fi	0.904	
$^1I_{10}$	65.10	mm/hr
C_{10}	0.881	

From QUDM T4.5.3

EXISTING SITE HYDROLOGY

DRAFT ISSUE
NOT FOR CONSTRUCTION

SCALE
0 2.5 5 7.5 10 1:500
DESCRIPTION

REV	REVISION	DATE
A	FOR APPROVAL	12/02/2020

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Drawn by	AMD
Checked by	ACD
Approved	GLENN J. BROWN
RPEQ	7682
Sign	
Date	

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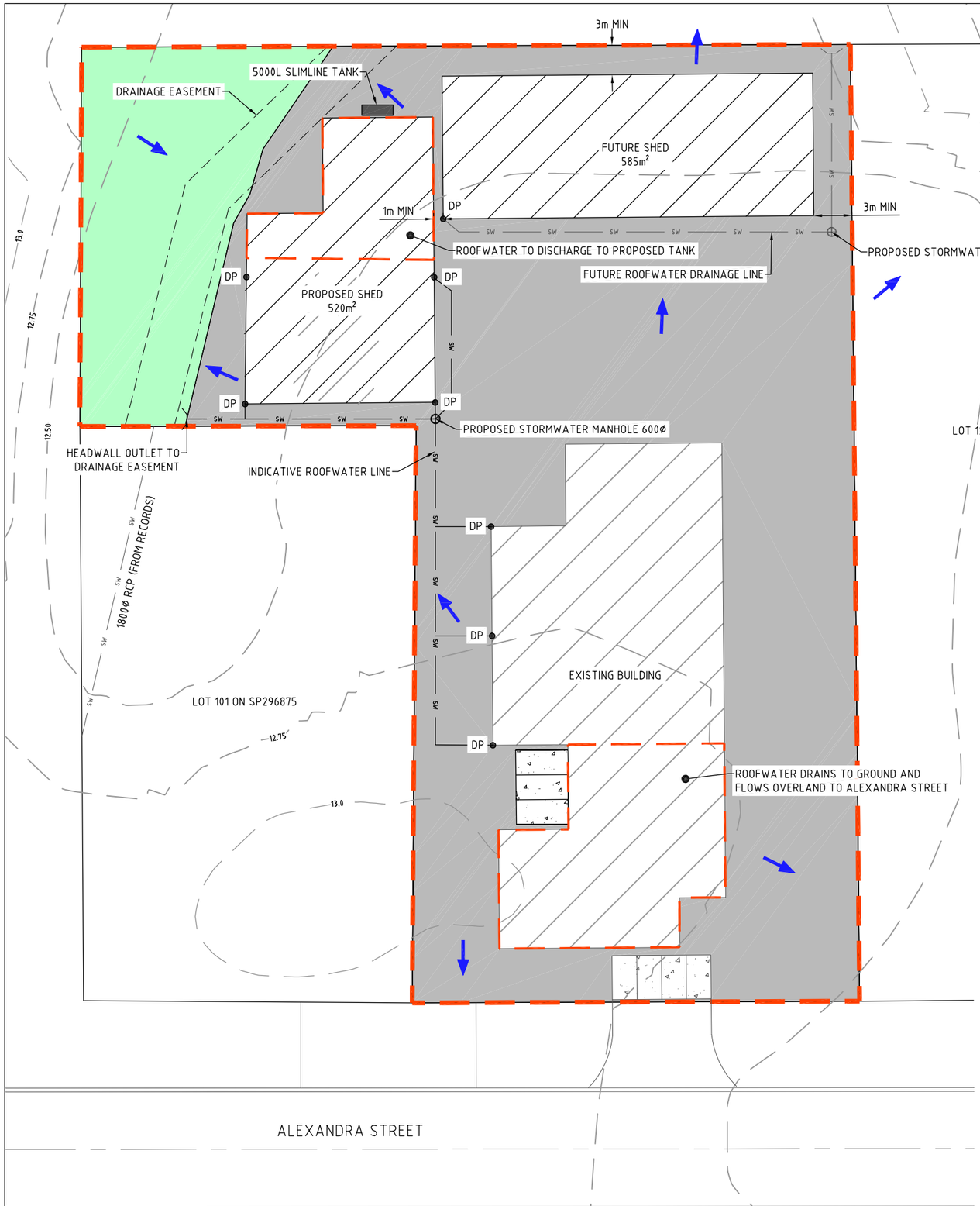
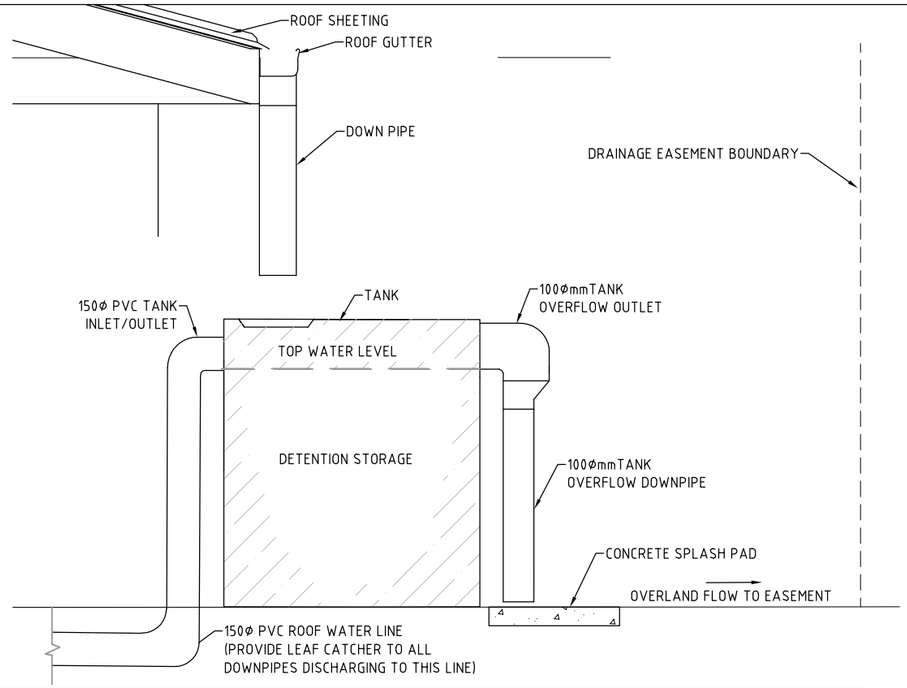
STORMWATER MANAGEMENT PLAN ASSOC WITH AN MCU
171 ALEXANDRA STREET, ROCKHAMPTON
EXISTING SITE LAYOUT

D19.246-SWMP-01
SHEET 01 OF 02
A





PROPOSED DEVELOPMENT TC= 7 min

Development Area **0.6067** ha

AreaA	F sq kms	C co eff	I mm/hr	A sq kms	Q m3/sec
Q2	0.278	0.751	119.0	0.00607	0.1508
Q5	0.278	0.840	158.0	0.00607	0.2238
Q10	0.278	0.884	185.0	0.00607	0.2758
Q20	0.278	0.928	212.0	0.00607	0.3319
Q50	0.278	1.000	250.0	0.00607	0.4217
Q100	0.278	1.000	279.0	0.00607	**0.4706**

Fi	0.920	
$^{1}I_{10}$	65.10	mm/hr
C_{10}	0.884	

From QUDM T4.5.3

PROPOSED SITE HYDROLOGY

LEGEND

- EXISTING SURFACE CONTOUR (DCDB)
- EXISTING EASEMENT BOUNDARY
- CATCHMENT AREA
- EXISTING ROOF AREA
- EXISTING HARDSTAND
- EXISTING BITUMEN
- EXISTING VEGETATION
- OVERLAND FLOW PATH
- PROPOSED ROOF AREA
- PROPOSED CONCRETE SLAB
- DP — INDICATIVE DOWNPIPE LOCATION
- SW — INDICATIVE ROOFWATER LINE AND STORMWATER MANHOLE

COMPARING PRE-TREATMENT FLOWS			
EVENT ARI	PRE-DEV	POST -DEV	CHANGE
Q2	0.1503	0.1508	0.36%
Q5	0.2230	0.2238	0.36%
Q10	0.2748	0.2758	0.36%
Q20	0.3307	0.3319	0.36%
Q50	0.4217	0.4217	0.00%
Q100	0.4706	0.4706	0.00%

STORMWATER MANAGEMENT NOTES

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2. TIME OF CONCENTRATION TAKEN AS 7 MINUTES FROM QUDM FIGURE 4.4 USING SHALLOW OVERLAND FLOW ON HARDSTAND TO EXISTING POINT OF DISCHARGE

DRAFT ISSUE
NOT FOR CONSTRUCTION

SCALE
0 2.5 5 7.5 10 1:500
DESCRIPTION

REV	REVISION	DATE
A	FOR APPROVAL	12/02/2020

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171 ALEXANDRA STREET, ROCKHAMPTON
PROPOSED SITE LAYOUT

D19.246-SWMP-02

SHEET 02 OF 02

A