ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

Existing Areas

Gross floor area

Existing to remain -	Warehouse = 696.7 sqm
Exist being demolished -	Store & Office = 194.3 sqm
Total -	Existing GFA = 891.0 sqm

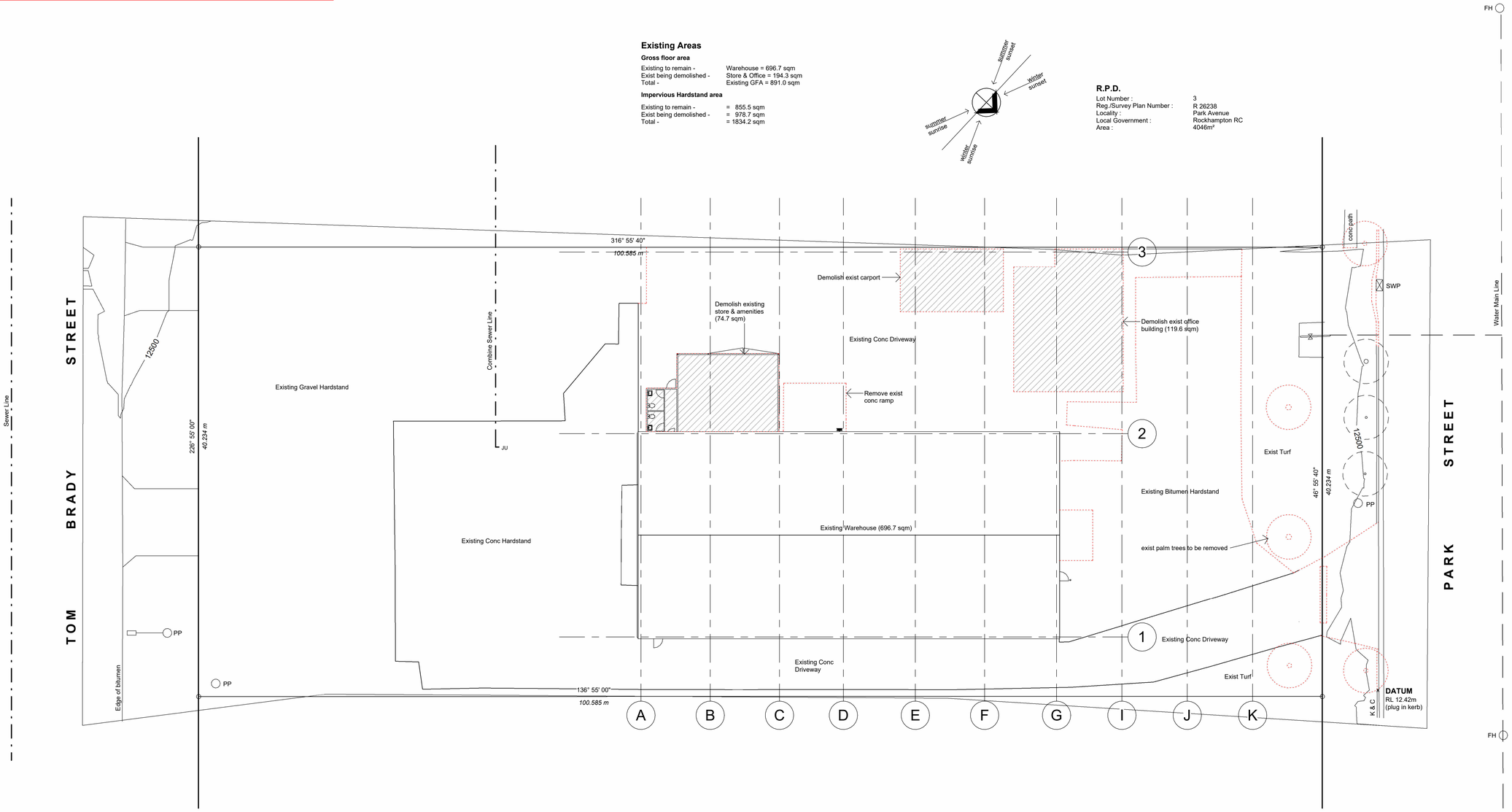
Impervious Hardstand area

Existing to remain -	= 855.5 sqm
Exist being demolished -	= 978.7 sqm
Total -	= 1834.2 sqm

summer sunset
winter sunset
summer sunrise
winter sunrise

R.P.D.

Lot Number :	3
Reg./Survey Plan Number :	R 26238
Locality :	Park Avenue
Local Government :	Rockhampton RC
Area :	4046m²



1 Site Existing/Demolition

1 : 200

PRELIM

DATE: **25/06/25**

05

NOT FOR CONSTRUCTION

REVISIONS				
NO.	DESCRIPTION	DATE		

PROPOSED LOW IMPACT INDUSTRY
EXTENSION FOR TRANSIT COURIERS
AT 33 PARK STREET
PARK AVENUE

this drawing
Existing Site & Demoition Plan

Rufus Design Group
STYLE • QUALITY • INNOVATION
MEMBER BUILDING DESIGNERS ASSOC. OF QLD INC.
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

PROJECT MANAGER : DJWebb
DRAWN : DJWebb
CHKD :

WIND SPEED C1
PLAN SIZE: A1

PROJECT NUMBER 240218 - 02
SHEET 02 OF 11 SHEETS
REVISION

PRINT DATE : 25/06/2025 12:52:31 PM

Balance Areas for Infrastructure Charges

Gross Floor Area

Grand total -	= 1748.6 sqm
Total of existing -	= 891.0 sqm
Additional GFA -	= 857.6 sqm

Impervious Hardstand Area

Grand total -	= 2173.4 sqm
Total of existing -	= 1834.2 sqm
Additional Hardstand -	= 339.2 sqm

LEGEND

FH	Street Fire hydrant
CP	Communications Pit
ET	Electrical Turret
EP	Electrical Pit
WM	Water Meter
RWT	Rain Water Tank
BO	Bollard to eng's detail
FHR	Fire Hose Reel
MB	Electrical Meter Box
SWP	Storm Water Pit
MH	Man Hole
DP	Down Pipe
HC	Hose Cock

Site Analysis

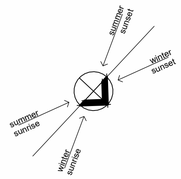
Existing Floor Area	=	891.0 sqm
Proposed Floor Area	=	1051.9 sqm
Total Building Footprint Area	=	1748.6 sqm
Total Site Coverage	=	43.2 %
Total Landscaped Area Required	=	2m to frontage
Total Landscaped Area Provided	=	155.6 sqm
Total Site Area	=	4046 sqm

Car Parking

Car parking spaces required	=	18
Total car spaces provided	=	18

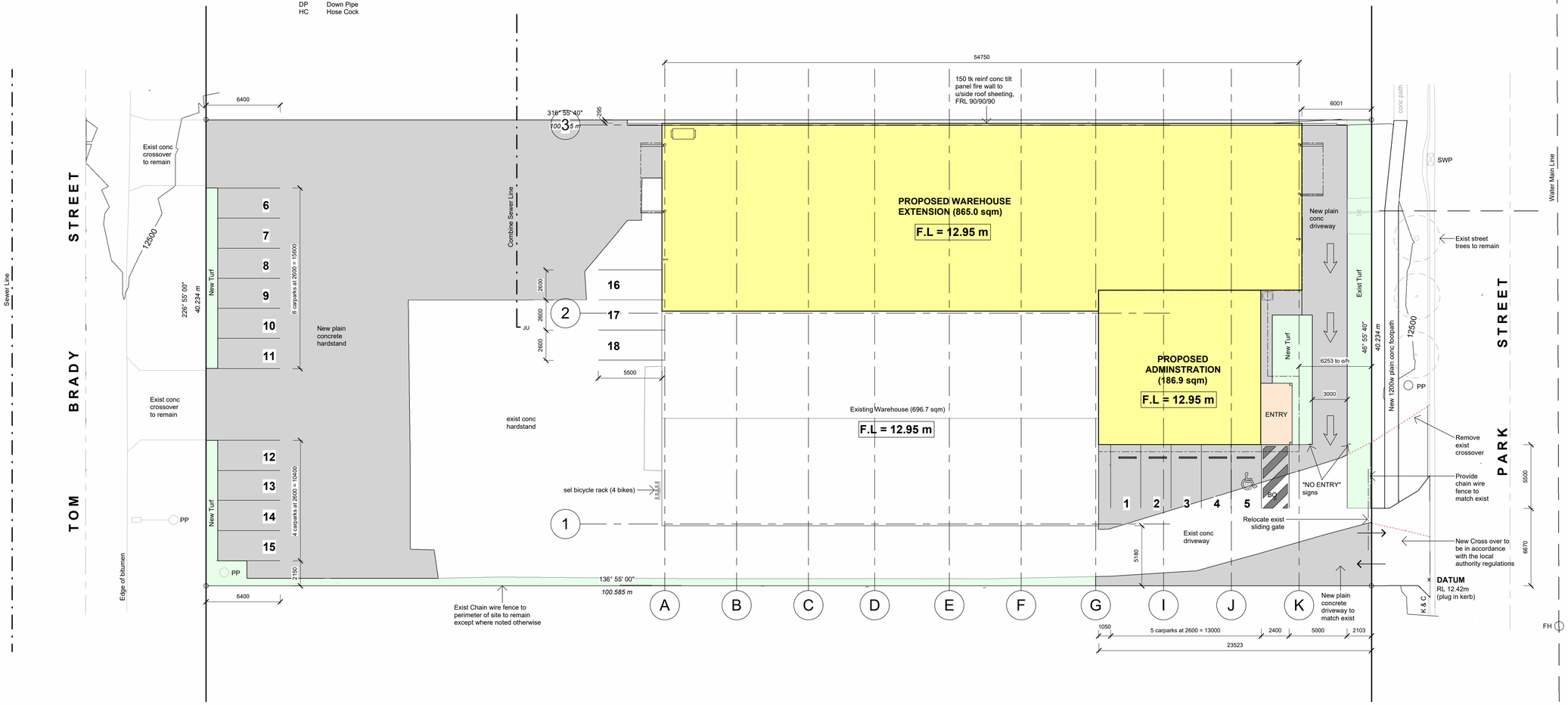
Driveways

Existing concrete driveway area	=	946.9 sqm
New concrete driveway area	=	1226.5 sqm
Total driveway area	=	2173.4 sqm



R.P.D.

Lot Number :	3
Reg./Survey Plan Number :	R 26238
Locality :	Park Avenue
Local Government :	Rockhampton RC
Area :	4046m²



1 Site Features Plan

1 : 200

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

PRELIM **05**

DATE: **25/06/25**

NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION	DATE

PROPOSED LOW IMPACT INDUSTRY EXTENSION FOR TRANSIT COURIERS AT 33 PARK STREET PARK AVENUE

this drawing: Site Features Plan

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MEMBER BUILDING DESIGNERS ASSOC. OF QLD INC.
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

PROJECT MANAGER :	DJWebb
DRAWN :	DJWebb
CHKD :	
WIND SPEED	C1
PLAN SIZE:	A1
PROJECT NUMBER	240218 - 03
SHEET	03 OF 11 SHEETS
REVISION	

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ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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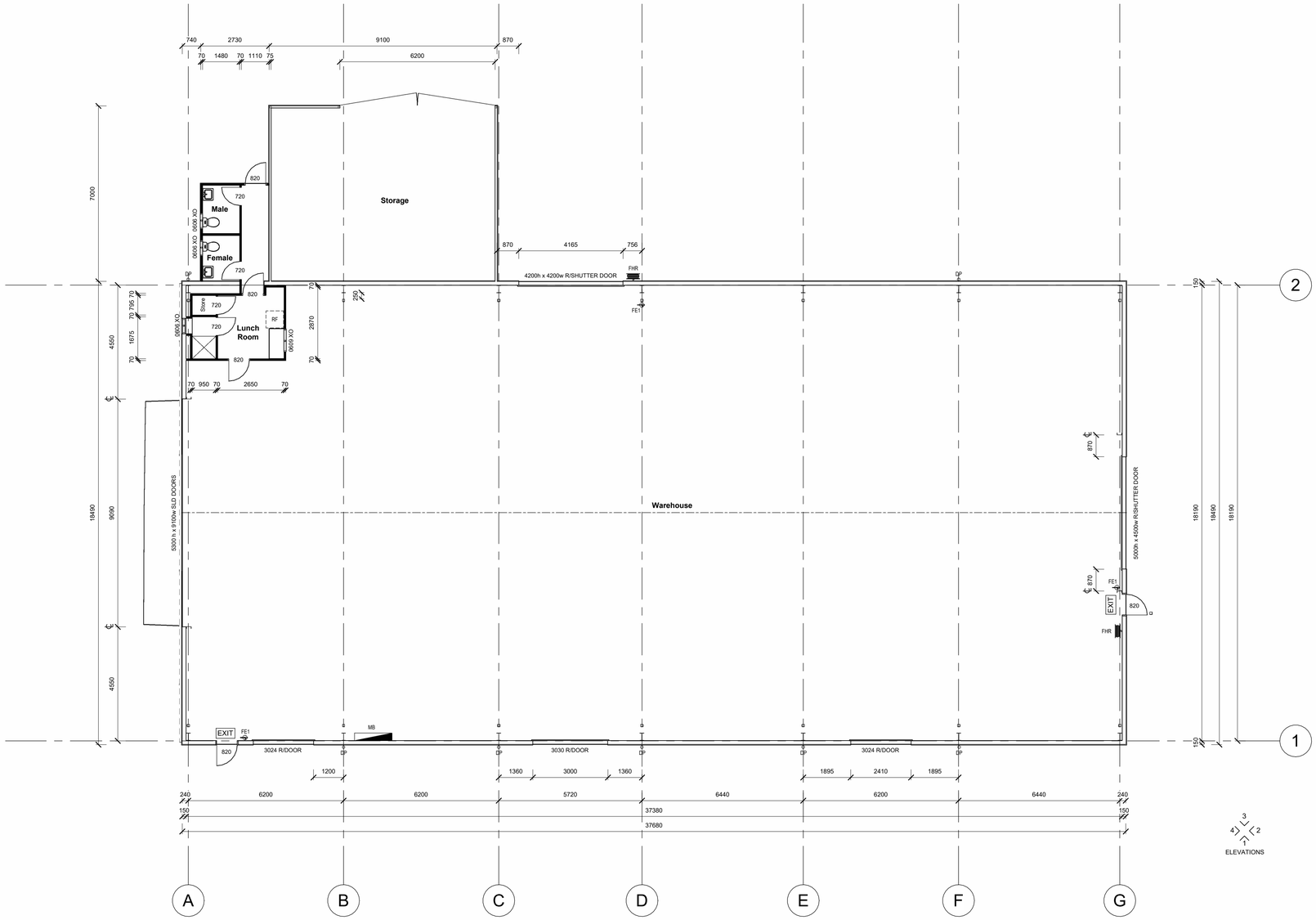
Development Permit No.: D/136-2024

Dated: 3 July 2025



1 Existing Floor Plan

1 : 100

PRELIM

DATE: **25/06/25**

05

NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION	DATE

PROPOSED LOW IMPACT INDUSTRY
EXTENSION FOR TRANSIT COURIERS
AT 33 PARK STREET
PARK AVENUE

this drawing: Existing Floor Plan & Notes

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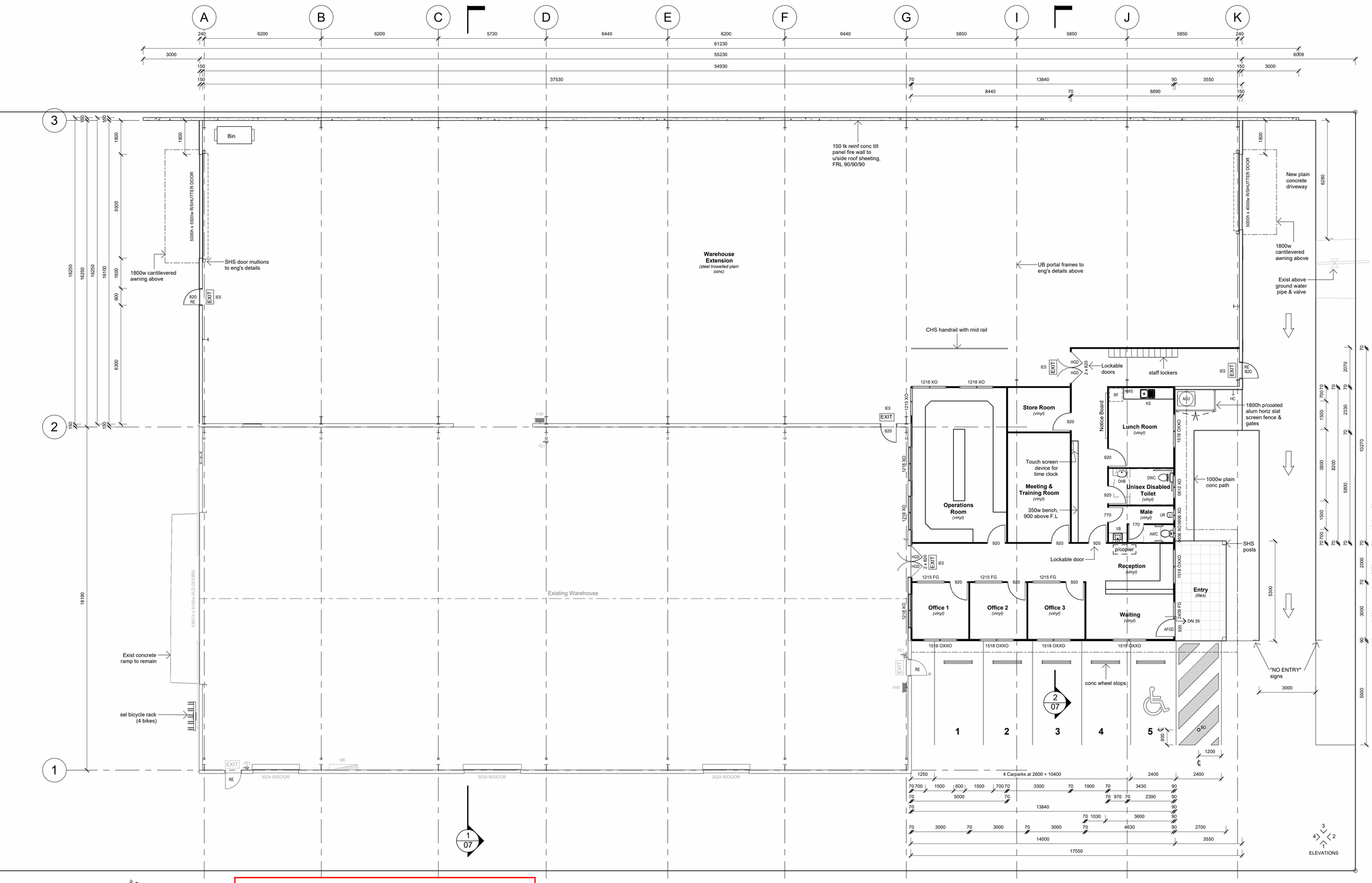
MEMBER BUILDING DESIGNERS ASSOC. OF QLD INC.
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

PROJECT MANAGER : DJWebb
DRAWN : DJWebb
CHKD :

WIND SPEED C1
PLAN SIZE: A1

PROJECT NUMBER 240218 - 04
SHEET 04 OF 11 SHEETS
REVISION

PRINT DATE : 25/06/2025 12:52:38 PM



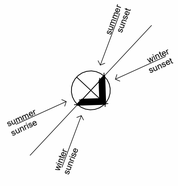
Window Legend

1218 - 1200 high x 1800 wide
XO - Sliding / Fixed
X - Sliding
O - Fixed
D - Double Hung
A - Awning
CMT - Casement
L - Louvre
FG - Fixed Glass
GSW - Gas Strut Window
Glazing to wet areas to be obscure
Refer to EE table for remainder of Glazing

Energy Efficiency Details	
Roof Colour	Light
Wall Colour	Medium
Roof Insulation	R1.8 Anticon Blanket
Ceiling Insulation	Nil
Wall Insulation	R1.0 Batts
Floor Insulation	Nil
Solar Power	Nil
Hot Water Unit	Electric instantaneous
Glazing	Alum framed, single, tinted
Downlights	Sealed LED
Floor Finishes	Refer to plan

Plan Legend	
ACU	Air Conditioner Ducted Unit
AFGD	Alum Framed Glass Door
AWC	Ambulant compliant Toilet
BO	Bollard
DHB	Disabled compliant Hand Basin
DP	Down Pipe
DWC	Disabled compliant Toilet
FE1	9kg water fire extinguisher (rating: 2A)
FHR	36m Fire Hose Reel in accord. with AS 1221 and AS 2441 (for fire fighting purposes)
HC	Hose Cock
HGD	Half Glass Door
HWS	Instantaneous Electric Hot Water System in c/board
IES	Illuminated Exit Sign
KS	Kitchen Sink
MB	Meter Box
RE	Required EXIT with lever action escape latch
RF	Refrigerator
UR	Urinal
VB	Vanity Basin

Floor Areas	
Entry	14.3 m²
Offices & Amenities	208.4 m²
Existing warehouse	696.7 m²
New warehouse extension	843.5 m²
Grand total	1762.9 m²



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

1 Floor Plan
1 : 100

PRELIM
DATE: 25/06/25

05

NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION	DATE

PROPOSED LOW IMPACT INDUSTRY
EXTENSION FOR TRANSIT COURIERS
AT 33 PARK STREET
PARK AVENUE

this drawing
Floor Plan

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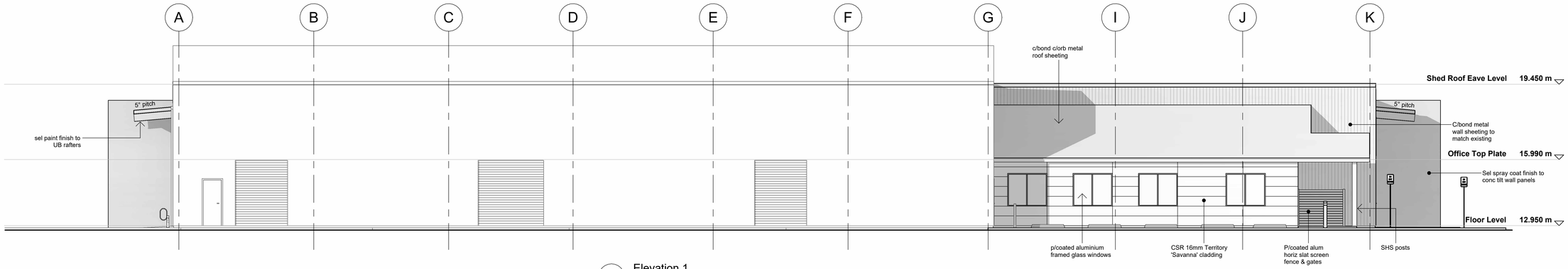
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

PROJECT MANAGER : DJWebb
DRAWN : DJWebb
CHKD :

WIND SPEED C1
PLAN SIZE: A1

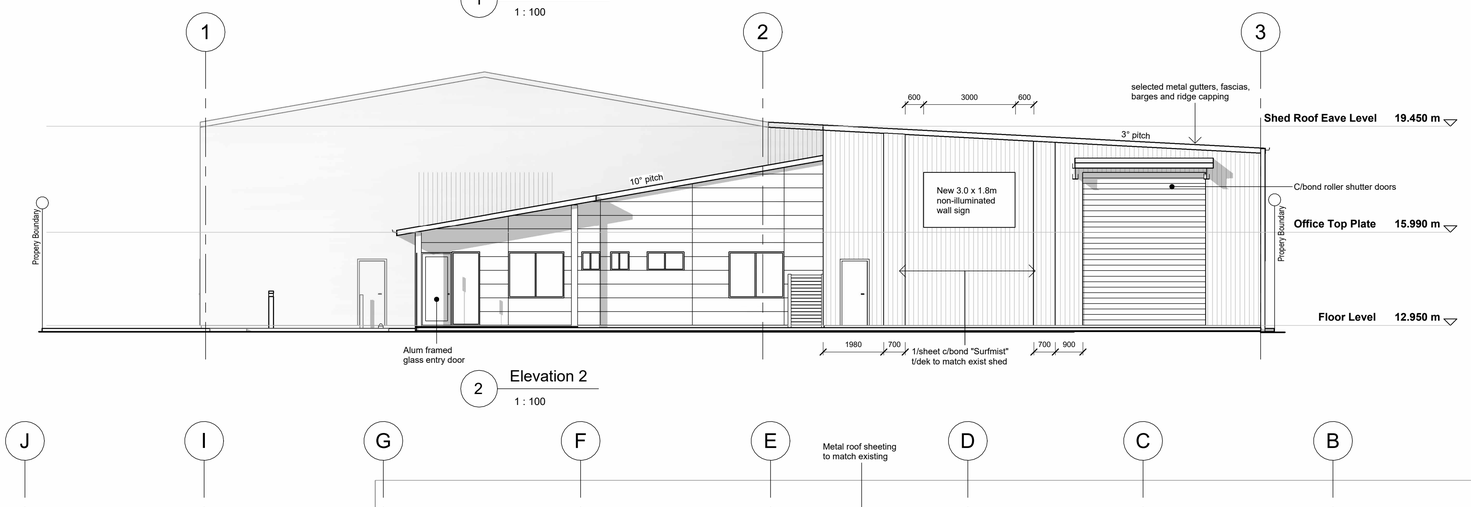
PROJECT NUMBER 240218 - 05
SHEET 05 OF 11 SHEETS
REVISION

PRINT DATE : 25/06/2025 12:52:42 PM



1 Elevation 1

1 : 100



2 Elevation 2

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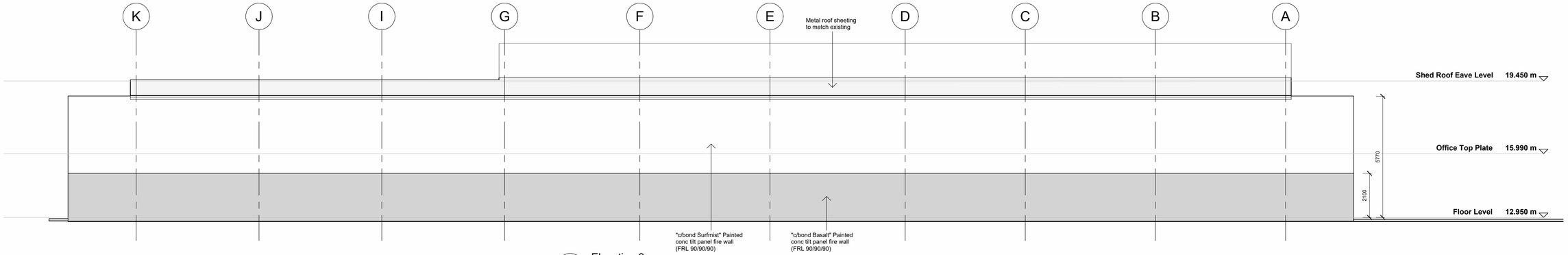
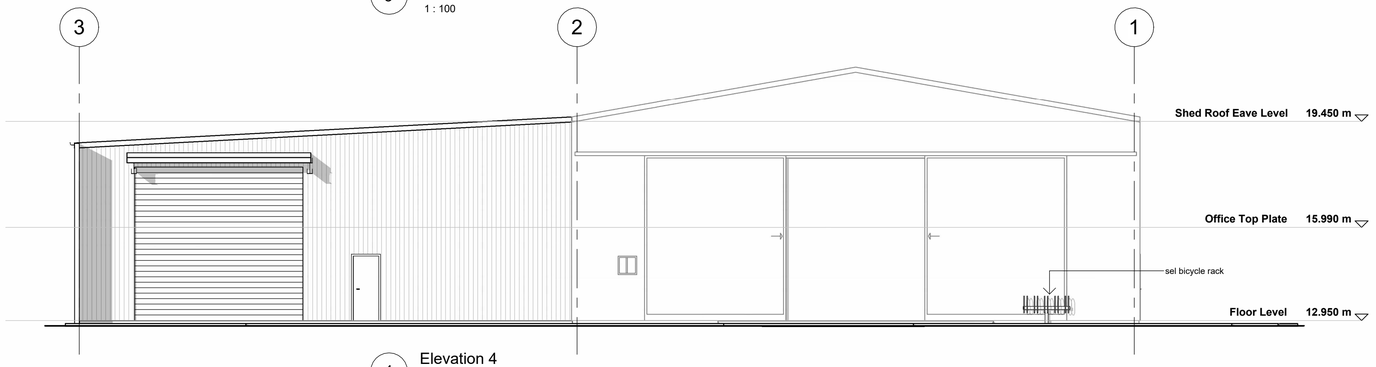


3 Elevation 3

1 : 100



4 Elevation 4

1 : 100

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

PRELIM

DATE: **25/06/25**

05

NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION	DATE

PROPOSED LOW IMPACT INDUSTRY EXTENSION FOR TRANSIT COURIERS AT 33 PARK STREET PARK AVENUE

this drawing: Elevations

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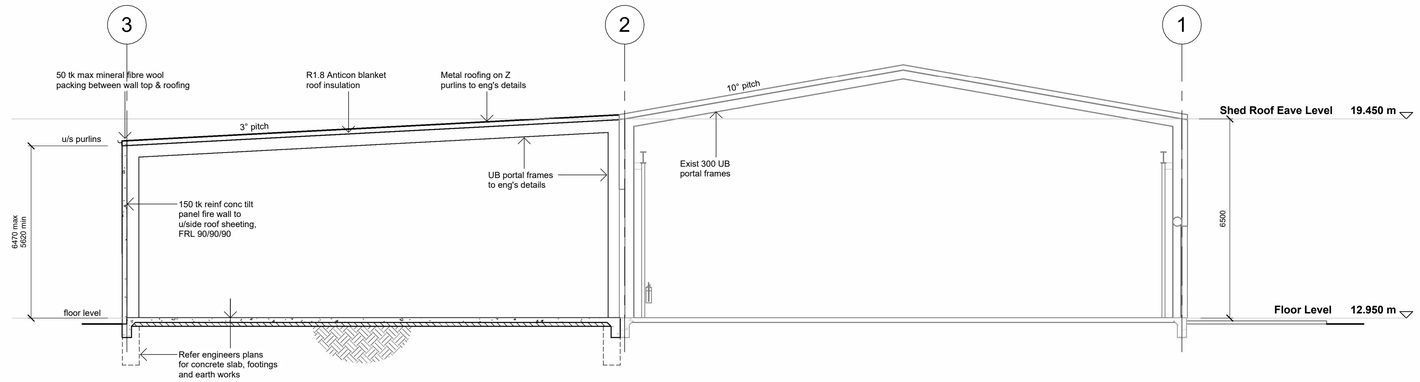
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

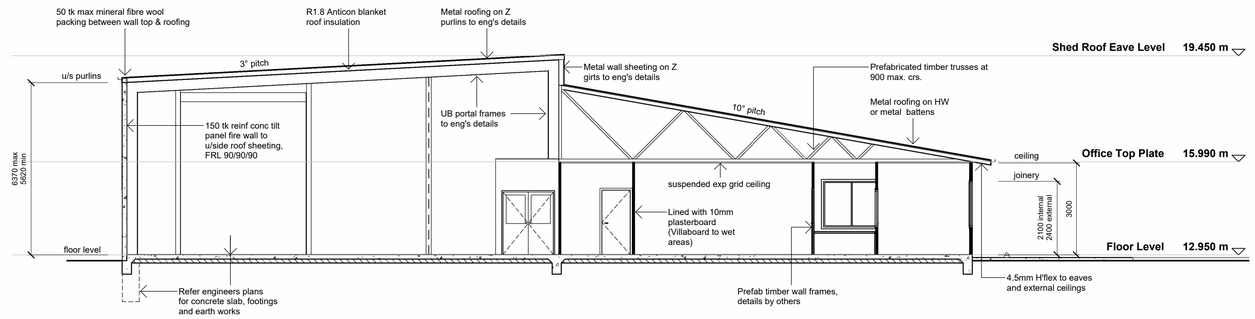
PROJECT MANAGER :	DJWebb
DRAWN :	DJWebb
CHKD :	
WIND SPEED	C1
PLAN SIZE:	A1
PROJECT NUMBER	240218 - 06
SHEET	06 OF 11 SHEETS
REVISION	

PRINT DATE : 25/06/2025 12:52:49 PM



1 Section L

1 : 100



2 Section M

1 : 100

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: **D/136-2024**

Dated: **3 July 2025**

PRELIM

DATE: **25/06/25**

05

NOT FOR CONSTRUCTION

REVISIONS

NO.	DESCRIPTION	DATE

PROPOSED LOW IMPACT INDUSTRY EXTENSION FOR TRANSIT COURIERS AT 33 PARK STREET PARK AVENUE

this drawing: Sections L & M

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MEMBER BUILDING DESIGNERS ASSOC. OF QLD INC.
Licenced under the QBCC Act Lic No. 1180286
Telephone 61 7 49288011
E-mail mailbox@rufusdesigngroup.com

PROJECT MANAGER : DJWebb

DRAWN : DJWebb

CHKD :

WIND SPEED C1

PLAN SIZE: A1

PROJECT NUMBER 240218 - 07

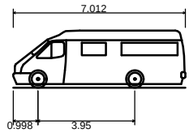
SHEET 07 OF 11 SHEETS

REVISION

PRINT DATE : 25/06/2025 12:52:52 PM

LEGEND

- CONCRETE DRIVEWAY
- BUILDINGS
- LANDSCAPING



Iveco Van Daily 35C 12/15/18 (w/b 3.95m)

Overall Length	7.012m
Overall Width	1.996m
Overall Body Height	2.335m
Min Body Ground Clearance	0.154m
Track Width	1.996m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.550m

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

DATUM: HORIZ. GDA 2020 VERT. AHD

0 2.5 5 7.5 10 LAYOUT 1:500

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE
A	ORIGINAL ISSUE	24/03/2025
B	ADDITIONAL LANDSCAPING	05/06/2025

DILEIGH CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

DRAFTED	AML
DESIGNED	AML
CHECKED	TL
APPROVED	T LAU
RPEQ 19272	SIGN
06.06.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
TRAFFIC IMPACT STATEMENT
VEHICLE SWEPT PATH - DELIVERY VAN

DWG No. D25.005-01

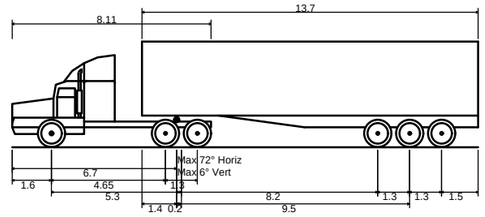
CIVIL

REVISION B

C:\Users\Ashleigh\OneDrive - DILEIGH CONSULTING ENGINEERS PTY LTD\Data\2025\D25.005_GSPC - 33 Park Street, Park Ave. Ext to Warehouse\C Draw\Civil\D25.005_Traffic.dwg, 01, 5/06/2025 2:06:59 PM, Ashleigh, ISO full bleed A3 (420.00 x 297.00 MM), 1:1

LEGEND

- CONCRETE DRIVEWAY
- BUILDINGS
- LANDSCAPING



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

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: **D/136-2024**

Dated: **3 July 2025**

DATUM: HORIZ. GDA 2020 VERT. AHD

0 2.5 5 7.5 10 1:500
LAYOUT

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE
A	ORIGINAL ISSUE	24/03/2025
B	ADDITIONAL LANDSCAPING	05/06/2025

DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

DRAFTED	AML
DESIGNED	AML
CHECKED	TL
APPROVED	T LAU
RPEQ 19272	SIGN
06.06.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
TRAFFIC IMPACT STATEMENT
VEHICLE SWEPT PATH - 19m SEMI TRAILER

DWG No. D25.005-02

CIVIL

REVISION B

C:\Users\Ashleigh\OneDrive - DILEIGH CONSULTING ENGINEERS PTY LTD\Data\2025\D25.005_GSPC - 33 Park Street, Park Ave. Ext to Warehouse\C Draw\Civil\D25.005_Traffic.dwg, 02, 5/06/2025 2:07:00 PM, Ashleigh, ISO full bleed A3 (420.00 x 297.00 MM), 1:1

DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: **D/136-2024**

Dated: **3 July 2025**

PROPOSED LOW IMPACT INDUSTRY EXTENSION
33 PARK STREET, PARK AVENUE

STORMWATER MANAGEMENT PLAN

FOR TRANSIT COURIERS

D25.005-RP01

TRANSIT COURIERS

STORMWATER MANAGEMENT PLAN

PROPOSED LOW IMPACT INDUSTRY EXTENSION
33 PARK STREET, PARK AVENUE

Document History & Status

REVISION	DATE	ISSUED TO	DESCRIPTION	BY	APPROVED
A	20/03/2025	Sunil Govind (GSCP)	Original Issue – For lodgement	AML	TL
B	01/05/2025	Sunil Govind (GSCP)	Further Advice Response	AML	TL

Prepared By

Ashleigh Lucas
Cadet Engineer

Reviewed By

Tony Lau
Senior Engineer
RPEQ 19272

Dileigh Consulting Engineers Pty Ltd
47 Normanby Street
Yeppoon QLD 4703
Australia

Telephone: +61 7 4911 2553
Facsimile: +61 7 4938 3660

Date: 1/05/2025
Reference: D25.005-RP01

1. Introduction

This report was prepared for Transit Couriers in support of a proposed upgrade to the subject site at 33 Park Street, Park Avenue. This report should be read in conjunction with the overall application relating to this project. The proponent is seeking approval to develop the site with a proposed warehouse.

The land subject to this application is described as 3 R 26238 and has an area of 4,046m^2.

Stormwater calculations were undertaken in accordance with the Rational Method as per *Queensland Urban Drainage Manual (QUDM)* 4th edition (2018).

2. Existing Stormwater Conditions

The site is currently developed with an existing warehouse and small office building. A variety of pavements were observed including an unsealed compacted hardstand, bitumen hardstand and concrete. The northern half of the site is poorly draining with no defined point of discharge. The southern half of the site generally falls towards Tom Brady Street with an average slope of 0.5%.

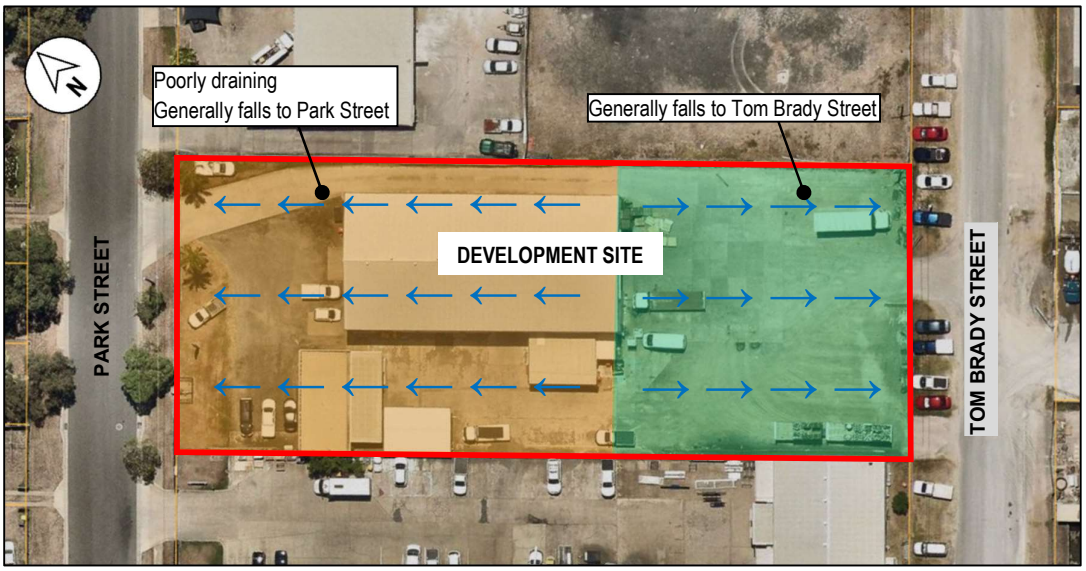


Figure 1: Site Aerial View (Nearmap, November 2024)

A Time of Concentration (Tc) of 6 minutes was adopted based on the slope and surfacing of the southern half of the site, in accordance with QUDM Equation 4.5.

Friends Equation (Eq 4.5) - Shallow overland sheet flow				
L	Surface	n	S	tc
m		Mannings	%	minutes
40	Paved	0.015	0.5	6

A fraction impervious of 0.890 was adopted based on the following actual site areas measured from detailed site survey.

Total Site	4,064 m²
Warehouse & Office	962 m²
Concrete hardstand	1,360 m²
Sealed (Asphalt) hardstand	398 m²
Gravel hardstand	490 m²*
fi	0.793

** A factor of 0.5 was applied to the actual area of 979m² to allow for permeability, at council's direction*

A corresponding C_{10} value of 0.848 was adopted in accordance with QUDM Table 4.5.3. The following discharges from site were calculated:

PRE-DEVELOPMENT SITE CONDITIONS

Development Area **0.4064** ha

Event AEP	**C**	**I**	**A**	**Q**
%	coefficient	mm/hr	ha	m³/s
63.2	0.679	111.0	0.4046	0.0847
50	0.721	123.0	0.4046	0.0997
20	0.806	164.0	0.4046	0.1485
10	0.848	192.0	0.4046	0.1831
5	0.891	220.0	0.4046	0.2202
2	0.976	259.0	0.4046	0.2840
1	1.000	289.0	0.4046	0.3248

In accordance with QUDM Eqn. 4.3

Fi	0.793
$^1I_{10}$ (mm/hr)	65.1
TC (minutes)	6
C_{10}	0.848

From QUDM Table 4.5.3

3. Post Developed Site Flows and Management

3.1 Post Developed Flows

The proposed development involves removal of some existing structures and the unsealed hardstand pavement, with subsequent extension of the existing warehouse and construction of a new office and concrete hardstand. This shall result in a fraction impervious to a value of 0.954 based on the areas tabulated below.

Total Site	4,064 m²
Existing Warehouse + Extension + New Office	1,748 m²
New & Proposed Concrete Hardstand	2,113 m²
fi	0.954

It is assumed that site levels will not be fundamentally altered, due the constraints of the existing warehouse building. Therefore, the pre-development Tc of 6 minutes is assumed to be appropriate for the post-development case. Based on this value, a C_{10} value of 0.891 (From QUDM Table 4.5.3) was adopted and the following revised discharges from site were calculated:

POST-DEVELOPMENT SITE CONDITIONS

Development Area **0.4064** ha

Event AEP	**C**	**I**	**A**	**Q**
%	coefficient	mm/hr	ha	m³/s
63.2	0.713	111.0	0.4046	0.0889
50	0.757	123.0	0.4046	0.1047
20	0.846	164.0	0.4046	0.1560
10	0.891	192.0	0.4046	0.1922
5	0.935	220.0	0.4046	0.2313
2	1.000	259.0	0.4046	0.2911
1	1.000	289.0	0.4046	0.3248

In accordance with QUDM Eqn. 4.3

Fi	0.954
$^1I_{10}$ (mm/hr)	65.1
TC (minutes)	6
C_{10}	0.891

From QUDM Table 4.5.3

When compared with the pre-developed total site flows, we note a minor increase in flow for minor recurrence intervals. Due to a coefficient of 1.0 being applied to the 1% AEP for both pre-development and post-development conditions, no theoretical change in flow is observed. Refer table below:

COMPARISON OF UNTREATED FLOWS			
Event AEP	Pre-Development (Total)	Post-Development	Change
%	m^3/s	m^3/s	%
63.2	0.0847	0.0889	5.0%
50	0.0997	0.1047	5.0%
20	0.1485	0.1560	5.0%
10	0.1831	0.1922	5.0%
5	0.2202	0.2313	5.0%
2	0.2840	0.2911	2.5%
1	0.3248	0.3248	0.0%

3.2 Discharge Flow Management

3.2.1 Quantity Mitigation

It is proposed to mitigate the minor increase in runoff with provision of on-site detention (OSD).

A 5kL tank shall be installed in the north-west garden, capturing half-roof flows from the existing warehouse and the entire roof area of the proposed extension. Two options are proposed:

1. An above ground 5kL slimline tank, discharging to back of kerb or to the existing stormwater chamber in Park Street
2. An underground 5kL tank, nominally an *Atlantis Flotank* or equivalent modular tank, discharging to the existing stormwater chamber in Park Street.

The final tank shall be nominated at detailed design at the developer's discretion. An above-ground tank in the indicative proposed location, shown on drawings in Appendix A, was confirmed to not conflict with internal vehicle movements.

If it is preferred to discharge directly to the existing stormwater chamber, it is necessary to provide a non-return valve to ensure flows in external pipes do not back up into the tank.

Provision of the tank shall result in a 2.0% reduction in minor event (20% AEP) total site flows (3.0L/s reduction compared to pre-development flows) and a 6.1% reduction in major event (1% AEP) total site flows (20.0L/s reduction compared to pre-development flows).

Refer to drawings in Appendix A for hydrographs and configuration details.

3.2.2 Conveying Site Flows

It is acknowledged that the existing warehouse slab and concrete hardstand areas, which shall remain as part of these works, limit the degree to which site levels can be altered.

Wherever possible, a minimum grade of 0.5% (1 in 200 slope) should be adopted. The mid-line of the site currently acts as a high-point and shall be maintained. In line with existing conditions, the north and south halves of the site shall discharge to Park Street and Tom Brady Street respectively as shallow overland flow.

While detailed survey information relating to the existing roofwater drainage is limited, it is proposed that the existing roofwater configuration for the eastern half of the existing warehouse shall remain if practicable. The proposed office shall be provided with a roofwater

line discharging to back of kerb. The western half of the existing warehouse and proposed extension shall be captured in a suitably sized gutter (by others) or a nominal 225mm diameter line mounted to the exterior wall, and discharge to OSD as described in Section 3.2.1.

With the introduction of a roof water line for the new warehouse and office structures, the volume of overland runoff discharging from the site shall be decreased and therefore the risk of downstream nuisance shall be reduced.

It is considered impractical to introduce surface pits to capture overland runoff given the significant extent of concrete that shall remain as part of the upgrade works.

Overland flows at the rear of the site shall continue to discharge to Tom Brady Street as shallow sheet flows. There is no kerb and channel in Tom Brady Street, and it is considered impractical to discharge to the existing underground stormwater pipe in the road due to a lack of available stormwater pits in proximity to the site.

3.3 Stormwater Quality Management

Due to the size of the development (>2500m^2), State Planning Policy (SPP) Healthy Water would have been triggered.

It is noted that the existing site use appears to have been constructed sometime between 2005 and 2010 prior to the introduction of SPP. The intent of *"Table B: Post construction phase – stormwater management design objectives"* is to reduce the loading of pollutants in runoff from new works associated with a material change of use (MCU) or reconfiguring of a lot (ROL). It is understood that it does not apply to minor upgrades to or intensification of an existing use which do not result in a significant increase in impervious area, or as a guide to retrofit stormwater quality improvement devices (SQIDs) to an existing site.

Although the proposed development requires an MCU application, the existing site is already almost fully impervious and shall be subject to a 20% increase in impervious area. The post-development use shall be consistent with existing conditions and the stormwater discharge regime is subject to minimal alterations.

Additionally, as noted previously, it is impractical to introduce surface pits given the nature of the proposed upgrade works, so installation or in-line SQIDs is not feasible. While a SQID could be provided at the nominated OSD, it would only be treating roof water and would be largely ineffectual in reducing overall site pollutant loads. There is also inadequate space to introduce a bio-retention basin or similar surface capture SQIDs that captures all or most of the runoff from the site.

Dileigh is of the opinion that it is not necessary to implement a water quality treatment train based on the fact that the site use is not being altered, the upgrades to the site result in stormwater conditions generally consistent with existing, and there is no practical manner in which SQIDs could be introduced.

The provision of turf and landscaping will provide some minor improvement to water quality.

4. Conclusion

The proposed development will result in a minor increase in runoff. It is proposed to provide a 5kL tank, either above ground or below ground, capturing and detaining partial roof flows prior to releasing to either back of kerb or existing underground infrastructure in Park Street. Post-development site levels should be designed to have a minimum fall of 0.5% wherever possible, noting that the existing concrete slabs and hardstand are a constraint. Due to the nature of the proposed upgrade works, stormwater quality improvement is considered impractical and Dileigh is of the opinion that it is not required.

Ashleigh Lucas
For and On Behalf of
Dileigh Consulting Engineers Pty Ltd

Appendix A – Site Hydrology Drawings

PROPOSED WAREHOUSE EXTENSION

STORMWATER MANAGEMENT PLAN

33 PARK STREET, PARK AVENUE

TRANSIT COURIERS

D25.005

CIVIL DESIGN

LOCALITY PLAN
(Not To Scale)

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

DESIGN DRAWING LIST INDEX

SHEET NUMBER	SHEET TITLE
CIVIL: STORMWATER MANAGEMENT	
00	TITLE PAGE
01	EXISTING SITE HYDROLOGY
02	PROPOSED SITE HYDROLOGY
03	DETENTION TANK DETAILS
04	DETENTION TANK HYDROGRAPHS
CIVIL: ENVIRONMENTAL MANAGEMENT	
05	EROSION AND SEDIMENT CONTROL PLAN
06	EROSION AND SEDIMENT CONTROL NOTES

DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

PRELIMINARY ISSUE

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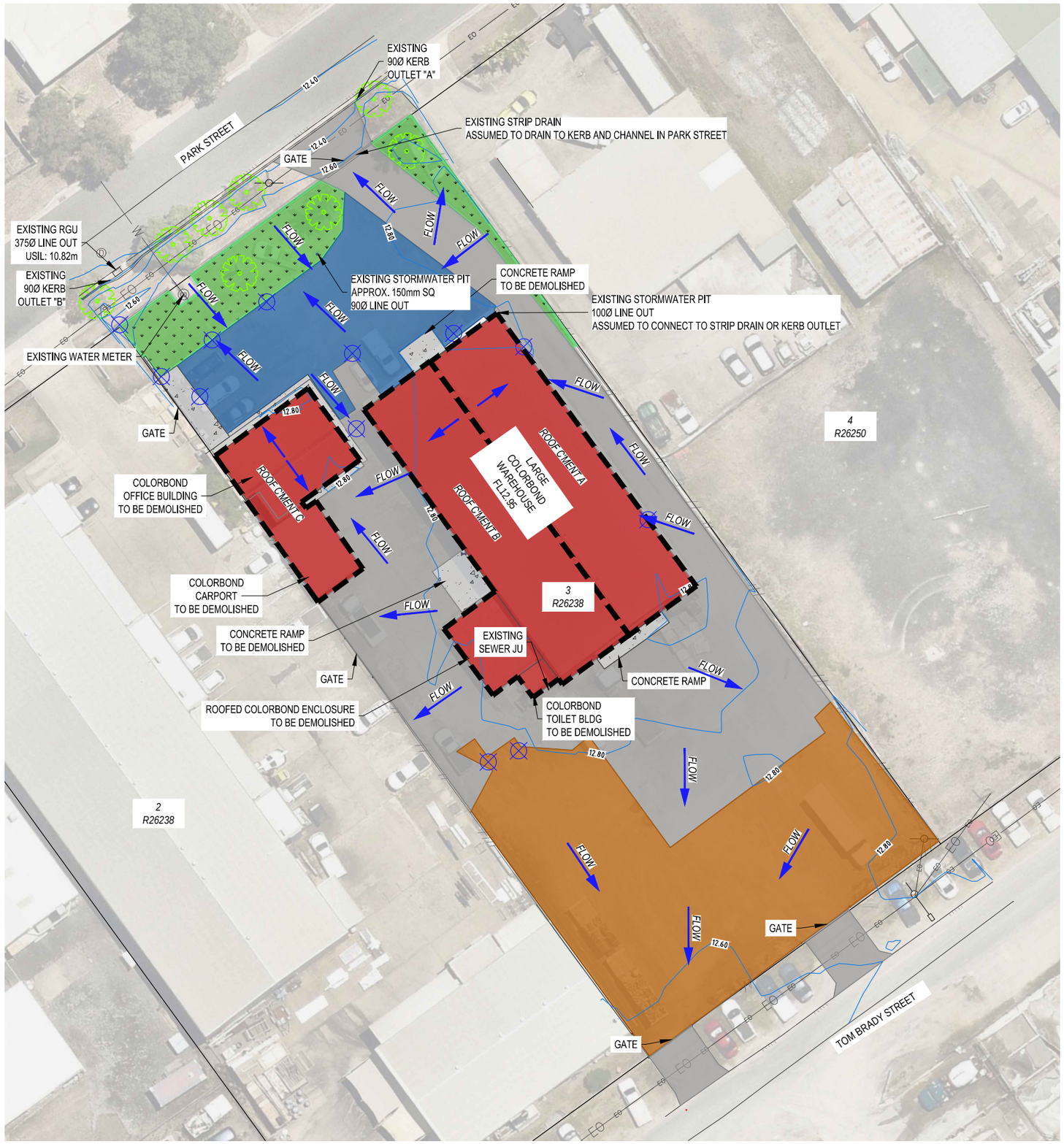

LEGEND

- EO — EXISTING OVERHEAD ELECTRICAL
- W — EXISTING WATER MAIN
- EXISTING KERB AND CHANNEL
- 10.0 — EXISTING SURFACE CONTOUR
- EXISTING BUILDING
- EXISTING CONCRETE DRIVEWAY
- EXISTING CONCRETE SLAB
- EXISTING SEALED PAVEMENT
- EXISTING UNSEALED GRAVEL PAVEMENT
- EXISTING GRASS / LANDSCAPING
- EXISTING SURFACE DEPRESSION
- FLOW — EXISTING OVERLAND FLOW DIRECTION
- ROOF WATER CATCHMENT

N

EXISTING ROOFWATER CATCHMENTS	
CATCHMENT NAME	ASSUMED DISCHARGE POINT
A	KERB OUTLET "A", VIA UNDERGROUND LINE DIRECT TO KERB OR TO STRIP DRAIN
B	KERB OUTLET "B", VIA UNDERGROUND LINE. DOWNPIPES DISCHARGING TO GROUND WERE NOT OBSERVED
C	

ROOFWATER NOTE

THE ALIGNMENT OF UNDERGROUND ROOFWATER / STORMWATER LINES FOR THE EXISTING SITE WERE NOT IDENTIFIED ON SURVEY DRAWINGS PROVIDED TO DILEIGH. EXISTING ROOFWATER DISCHARGE POINTS ARE ESTIMATED BASED ON OBSERVATIONS AND THE INFORMATION MADE AVAILABLE ON CAPRICORN SURVEY GROUP DRAWING 9307-01-DTL DATED 15-05-2024.

PRE-DEVELOPMENT SITE CONDITIONS

Development Area **0.4046** ha

Event AEP	C	I	A	Q
%	coefficient	mm/hr	ha	m^3/s
63.2	0.679	111.0	0.4046	0.0847
50	0.721	123.0	0.4046	0.0997
20	0.806	164.0	0.4046	0.1485
10	0.848	192.0	0.4046	0.1831
5	0.891	220.0	0.4046	0.2202
2	0.976	259.0	0.4046	0.2840
1	1.000	289.0	0.4046	0.3248

Fi	0.793
$^1I_{10}$ (mm/hr)	65.1
TC (minutes)	6
C_{10}	0.848

From QUDM Table 4.5.3

In accordance with QUDM Eqn. 4.3

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

DATUM: HORIZ. GDA 2020 VERT. AHD

0 2.5 5 7.5 10 LAYOUT 1:500

SCALES m. FULL SIZE A3

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DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT
ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703
Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

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01.05.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
EXISTING SITE HYDROLOGY

DWG No. D25.005-01
CIVIL
REVISION B

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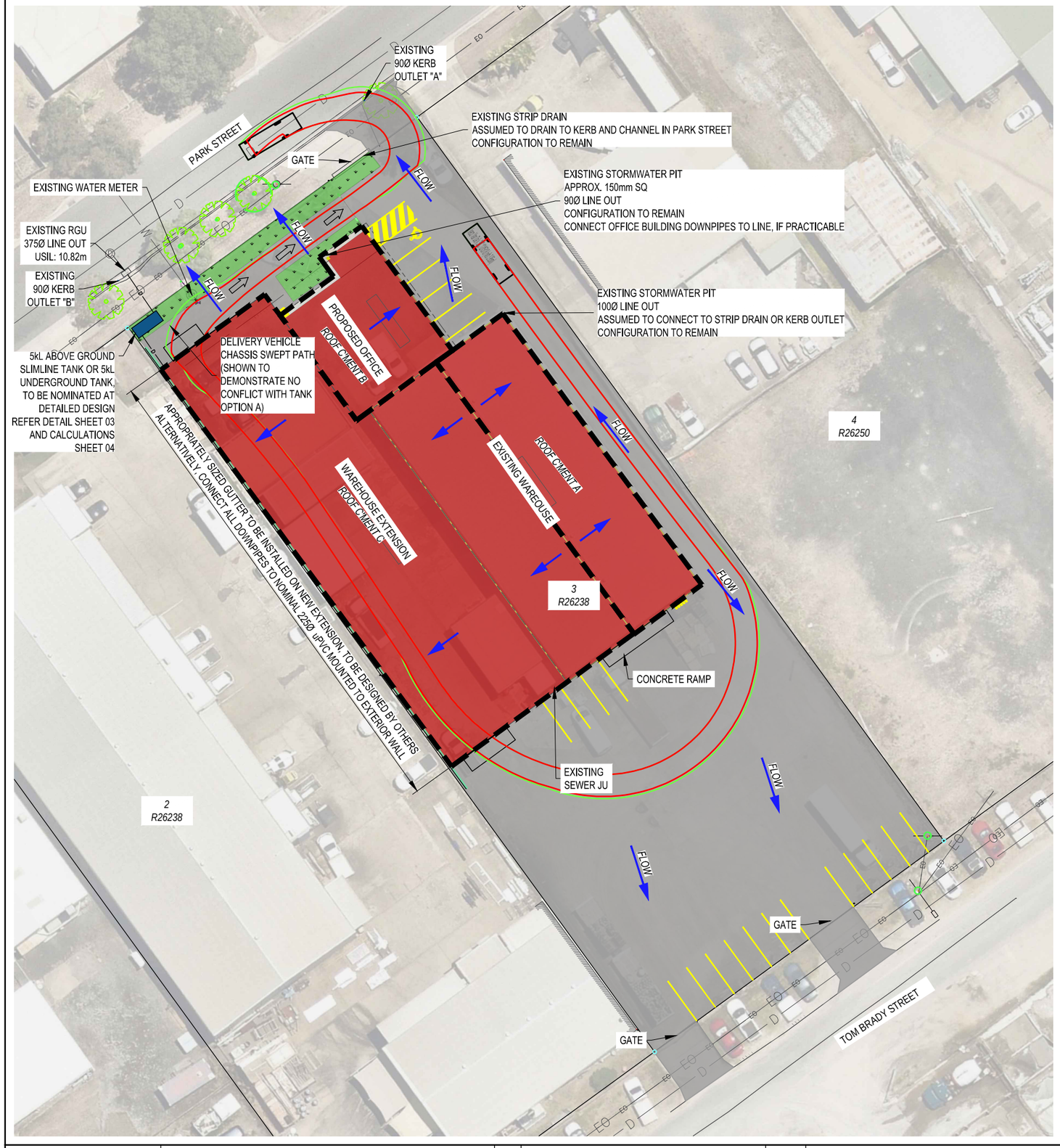

LEGEND

- EO — EXISTING OVERHEAD ELECTRICAL
- W — EXISTING WATER MAIN
- EXISTING KERB AND CHANNEL
- FINAL BUILDING EXTENTS
- FINAL CONCRETE DRIVEWAY EXTENTS
- PROPOSED GRASS / LANDSCAPING
- D — PROPOSED DRAINAGE LINE (INDICATIVE)
- FLOW — INDICATIVE OVERLAND FLOW DIRECTION
- ROOF WATER CATCHMENT

N

PROPOSED ROOFWATER CATCHMENTS	
CATCHMENT NAME	ASSUMED DISCHARGE POINT
A	KERB OUTLET "A", VIA UNDERGROUND LINE DIRECT TO KERB OR TO STRIP DRAIN
B	KERB OUTLET "B", VIA UNDERGROUND LINE. CONNECT TO EXISTING STORMWATER PIT, IF CONFIRMED TO BE PART OF THE EXISTING ROOFWATER DRAINAGE LINE.
C	COLLECT IN SUITABLY SIZED GUTTER OR EXTERIOR MOUNTED PIPE. DISCHARGE TO 5kL DETENTION TANK, WHICH DRAINS TO KERB VIA 100mm KERB ADAPTOR (FOR ABOVE GROUND TANK) OR BREAK INTO EXISTING CHAMBER (FOR ABOVE GROUND OR BELOW GROUND TANK)

POST-DEVELOPMENT SITE CONDITIONS

Development Area **0.4046** ha

Event AEP	C	I	A	Q
%	coefficient	mm/hr	ha	m^3/s
63.2	0.713	111.0	0.4046	0.0889
50	0.757	123.0	0.4046	0.1047
20	0.846	164.0	0.4046	0.1560
10	0.891	192.0	0.4046	0.1922
5	0.935	220.0	0.4046	0.2313
2	1.000	259.0	0.4046	0.2911
1	1.000	289.0	0.4046	0.3248

Fi	0.954
$^1I_{10}$ (mm/hr)	65.1
TC (minutes)	6
C_{10}	0.891

From QUDM Table 4.5.3

In accordance with QUDM Eqn. 4.3

COMPARISON OF UNTREATED FLOWS			
Event AEP	Pre-Development	Post-Development	Change
%	m^3/s	m^3/s	%
63.2	0.0847	0.0889	5.0%
50	0.0997	0.1047	5.0%
20	0.1485	0.1560	5.0%
10	0.1831	0.1922	5.0%
5	0.2202	0.2313	5.0%
2	0.2840	0.2911	2.5%
1	0.3248	0.3248	0.0%

DATUM: HORIZ. GDA 2020 VERT. AHD

0 2.5 5 7.5 10 LAYOUT 1:500

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

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ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

DRAFTED	AN
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TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
PROPOSED SITE HYDROLOGY

DWG No. D25.005-02

CIVIL

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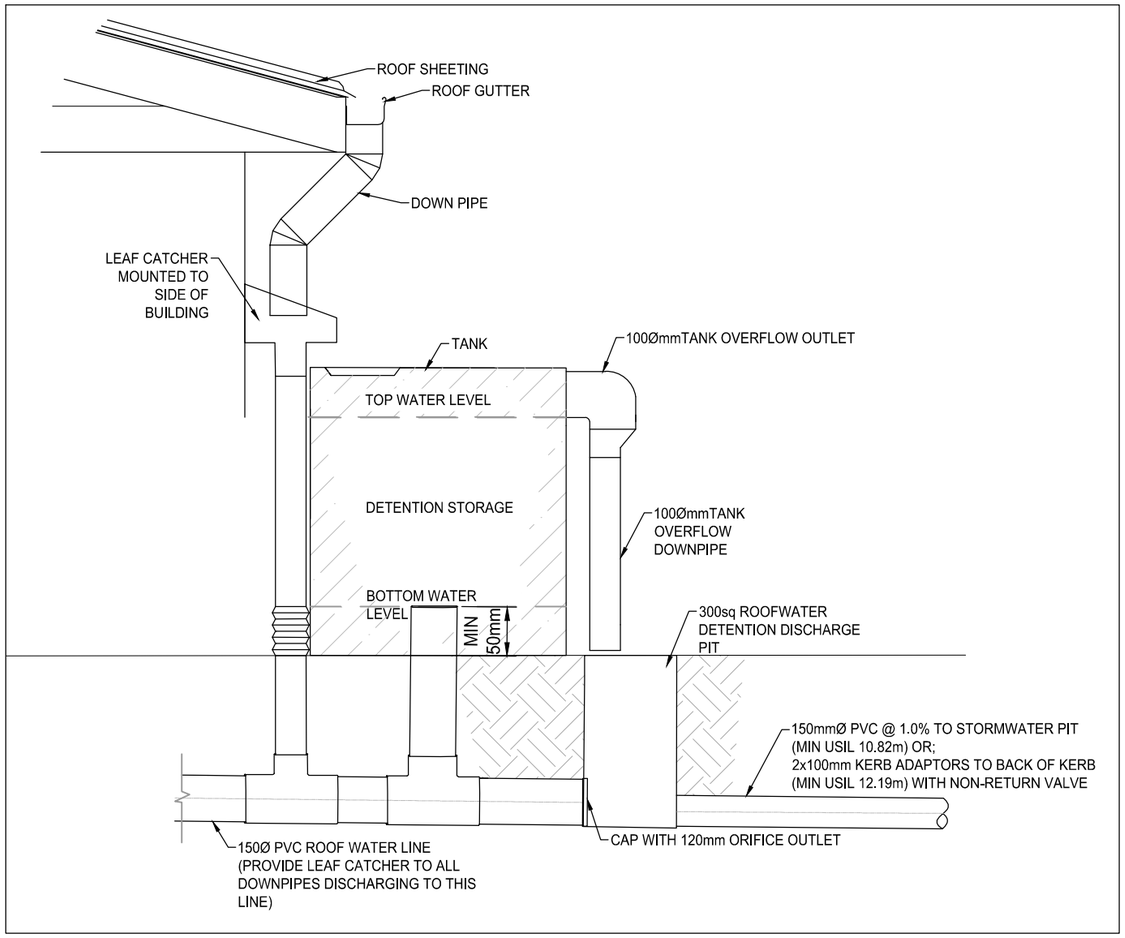
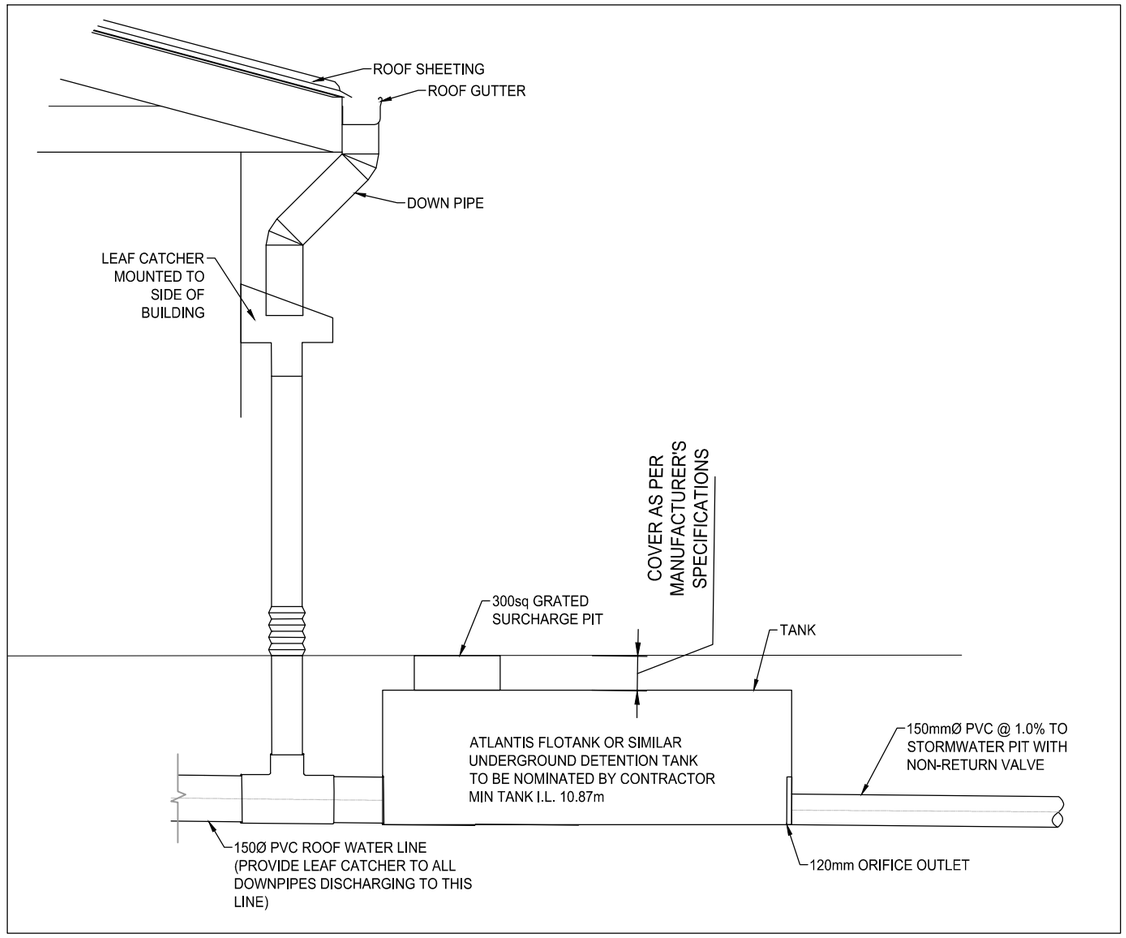


TANK CONFIGURATION A - ABOVE GROUND TANK



TANK CONFIGURATION B - UNDERGROUND TANK

DATUM: HORIZ. GDA 2020 VERT. AHD

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

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ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

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TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
DETENTION TANK DETAILS

DWG No. D25.005-03

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OSD INFLOW CATCHMENT

Development Area **0.1209** ha

Event AEP	C	I	A	Q
%	coefficient	mm/hr	ha	m^3/s
63.2	0.720	115.0	0.1209	0.0278
50	0.765	128.0	0.1209	0.0329
20	0.855	170.0	0.1209	0.0488
10	0.900	200.0	0.1209	0.0605
5	0.945	229.0	0.1209	0.0727
2	1.000	268.0	0.1209	0.0900
1	1.000	300.0	0.1209	0.1008

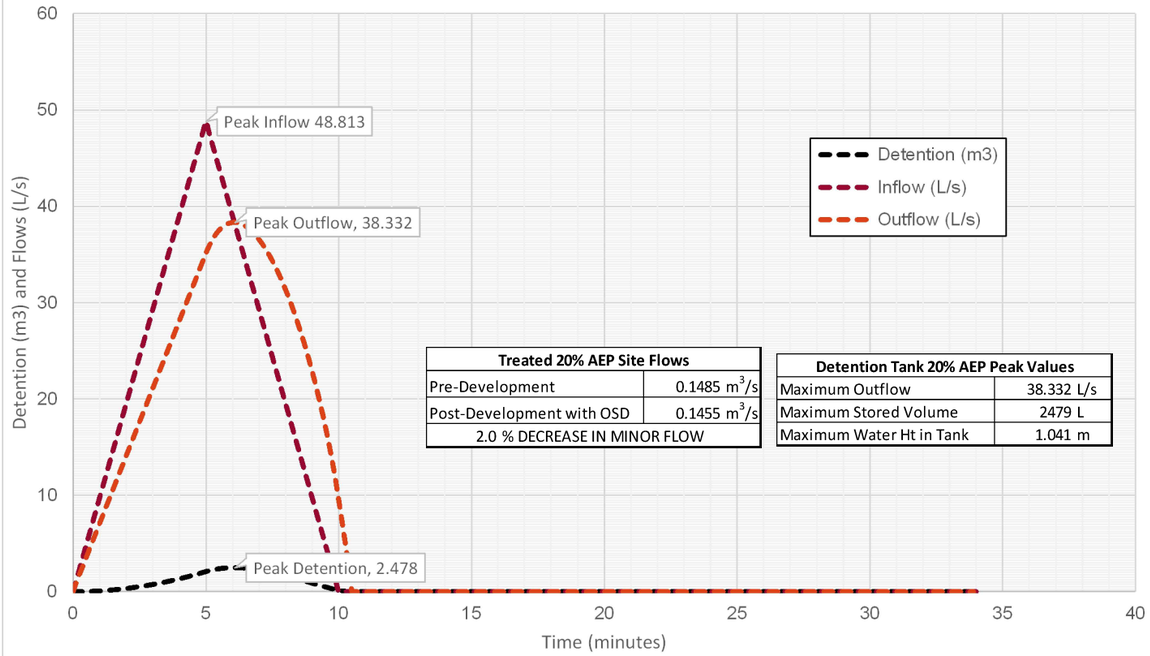
72.6760125

In accordance with QUDM Eqn. 4.3

Fi	1.0
$^1I_{10}$ (mm/hr)	65.1
TC (minutes)	5
C_{10}	0.900

From QUDM Table 4.5.3

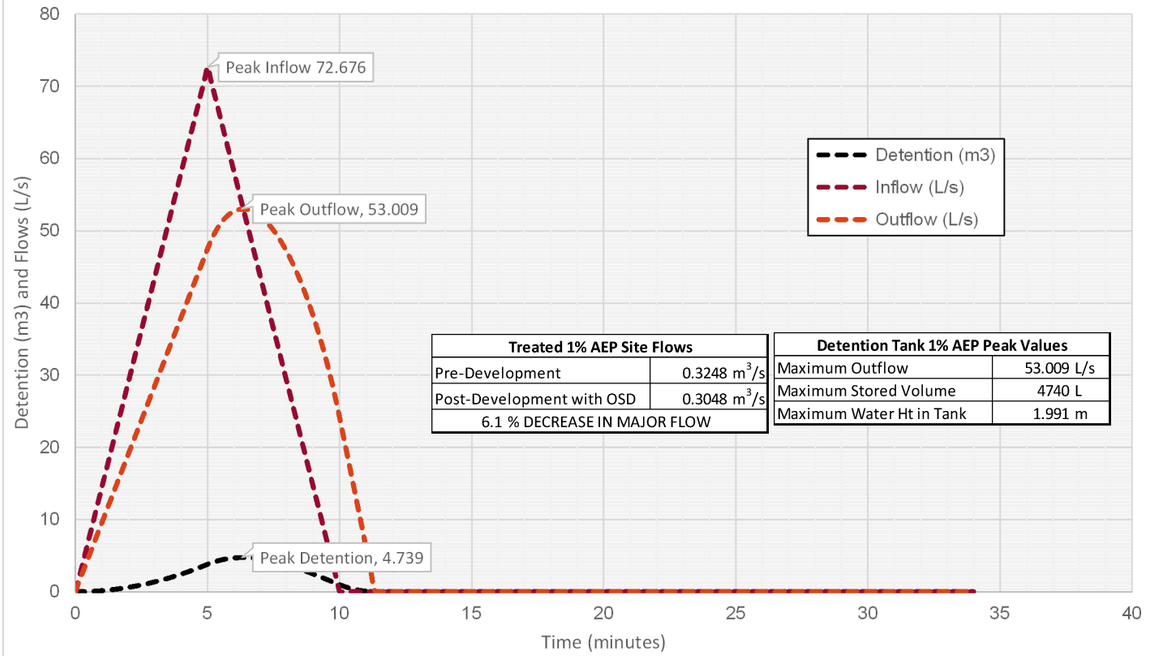
20% AEP Hydrograph for 1x 5,000L Tank with 120mm Orifice



Treated 20% AEP Site Flows	
Pre-Development	0.1485 m^3/s
Post-Development with OSD	0.1455 m^3/s
2.0 % DECREASE IN MINOR FLOW	

Detention Tank 20% AEP Peak Values	
Maximum Outflow	38.332 L/s
Maximum Stored Volume	2479 L
Maximum Water Ht in Tank	1.041 m

1% AEP Hydrograph for 1x 5,000L Tank with 120mm Orifice



Treated 1% AEP Site Flows	
Pre-Development	0.3248 m^3/s
Post-Development with OSD	0.3048 m^3/s
6.1 % DECREASE IN MAJOR FLOW	

Detention Tank 1% AEP Peak Values	
Maximum Outflow	53.009 L/s
Maximum Stored Volume	4740 L
Maximum Water Ht in Tank	1.991 m

HYDROGRAPH NOTE

MAXIMUM WATER HEIGHT IS RELEVANT TO ABOVE-GROUND 5kL SLIMLINE TANK ONLY.
UNDERGROUND TANK INTERNAL HEIGHT IS LIKELY TO VARY DEPENDING ON FINAL TANK DIMENSIONS

DATUM: HORIZ. GDA 2020 VERT. AHD

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

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DILEIGH
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ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

DRAFTED	AN
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TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
DETENTION TANK CALCULATIONS

DWG No. D25.005-04

CIVIL

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LEGEND

- EO — EXISTING OVERHEAD ELECTRICAL
- W — EXISTING WATER MAIN
- EXISTING KERB AND CHANNEL
- FINAL BUILDING EXTENTS
- FINAL CONCRETE DRIVEWAY EXTENTS
- PROPOSED GRASS / LANDSCAPING
- D — PROPOSED DRAINAGE LINE (INDICATIVE)
- PROPOSED SEDIMENT FENCE
- PROPOSED FIELD OR KERB INLET TRAP AS PER CMDG STD DWG CMDG-D-051

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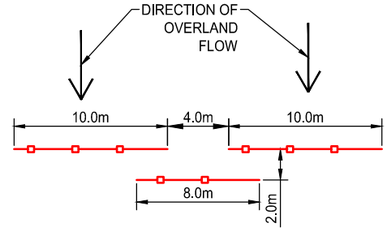
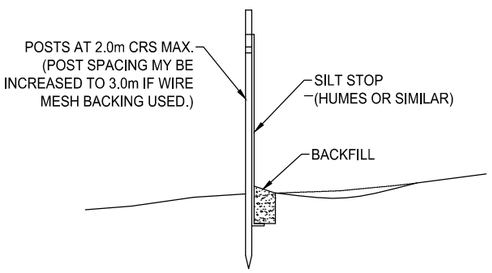


SEDIMENT FENCE DETAIL

N,T,S



SEDIMENT FENCE ARRANGEMENT

N,T,S

DATUM: HORIZ. GDA 2020 VERT. AHD

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SCALES m, FULL SIZE A3

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Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

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TRANSIT COURIERS
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33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
EROSION AND SEDIMENT CONTROL PLAN

DWG No. D25.005-05

CIVIL

REVISION A

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ENVIRONMENTAL MANAGEMENT NOTES:

1. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, TOPSOIL SHALL BE STRIPPED AND STOCKPILED FROM SELECT AREAS ONLY FOR RE-SPREADING OVER DISTURBED AREAS PRIOR TO REVEGETATION AND LANDSCAPING.
2. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS ALL SEDIMENT CONTROL DEVICES WILL BE ERECTED WHERE SHOWN ON THE DRAWINGS OR OTHERWISE DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS ON-SITE AND IN ROAD RESERVE WILL BE RE-TOPSOILED, TURFED OR LANDSCAPED.
4. ALL SOIL CONSERVATION AND ENVIRONMENTAL PROTECTION MEASURES SHALL BE MONITORED BY THE CONTRACTOR AT REGULAR INTERVALS DURING CONSTRUCTION. SEDIMENT CONTROL DEVICES WILL BE MONITORED AFTER RAIN EVENTS AND MADE GOOD WHERE NECESSARY. THIS WILL ALSO BE CARRIED OUT DURING THE DEFECTS LIABILITY PERIOD.
5. SILT FENCES SHALL BE INSTALLED ON THE LOW SIDE OF ALL STOCKPILES WHERE REQUIRED.
6. SILT FENCES SHALL REMAIN ON SITE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THERE IS 90% VEGETATION COVERAGE OF PROPOSED LANDSCAPED AREAS.

NOISE MANAGEMENT:

1. WORKING HOURS - WORKING HOURS FOR THE SITE ARE TO BE 6.30am TO 6.30pm MONDAY TO SATURDAY. NO WORK TO BE UNDERTAKEN OUTSIDE OF TIMES SPECIFIED UNDER ANY CIRCUMSTANCES.
2. NOISE MINIMISATION METHODS - NOISE WILL BE MINIMISED USING THE FOLLOWING METHODS:-
   - 2.1. RESTRICTED WORKING HOURS AS DETAILED ABOVE
   - 2.2. NOISE GENERATING MACHINERY TO OPERATED ONLY WHEN NECESSARY TO UNDERTAKE WORKS - VEHICLES AND MACHINERY ARE NOT TO BE LEFT 'IDLING' WHEN NOT IN USE.
   - 2.3. NOISE SHIELDING ON PLANT TO BE INSPECTED PRIOR TO COMMENCEMENT OF WORKS AND MADE GOOD WHERE FOUND TO BE FAULTY.
   - 2.4. VEHICLES AND MACHINERY TO BE REGULARLY MAINTAINED TO REDUCE ENGINE NOISE THROUGH INFREQUENT MAINTENANCE.

DUST MANAGEMENT:

1. MINIMISING DUST GENERATION - THE FOLLOWING WORK PRACTICES WILL BE USED TO MINIMISE DUST GENERATION:-
   - 1.1. WIND CONDITIONS ON SITE ARE TO BE MONITORED AND SITE WORKS STOPPED IF WIND STRENGTH IS SUCH THAT EFFORTS TO MINIMISE AND/OR SUPPRESS DUST ARE INEFFECTIVE.
   - 1.2. SOIL STABILISATION OF BATTERS (THROUGH TOPSOILING AND REVEGETATION) TO BE UNDERTAKEN IMMEDIATELY AFTER FINAL TRIM TO MINIMISE EXPOSURE OF BARE EARTH.
   - 1.3. STOCKPILES INTENDING TO BE LEFT IN PLACE FOR 28 DAYS OR GREATER SHALL BE GRASS SEEDED.
2. DUST SUPPRESSION -
   - 2.1. WET DOWN DUST GENERATING SURFACES DAILY PRIOR TO COMMENCEMENT OF WORK USING WATER TRUCKS, SPRINKLERS AND HOSE WATERING BY HAND.
   - 2.2. ADDITIONAL WETTING DOWN OF SITE AREAS IS TO BE UNDERTAKEN AS NEEDED DURING THE COURSE OF THE DAY WHERE WORK AREAS HAVE DRIED AND ARE GENERATING DUST.

WEED MANAGEMENT:

1. MOVEMENT OF SOIL - EXISTING TOP SOIL IS TO BE STOCKPILED AND RE-USED ON SITE AFTER SITE WORKS ARE COMPLETE, ANY ADDITIONAL TOP SOIL REQUIRED IS TO BE FREE OF PLANT SEEDS PRIOR TO SPREADING ON SITE.
2. FILL MATERIAL - FILL MATERIAL TO BE IMPORTED ON SITE IS TO BE 'CLEAN FILL' AND FREE FROM ANY ORGANIC MATTER OR MATERIALS.

EMERGENCY VEHICLE ACCESS:

1. MAINTAIN CLEAR ACCESS TO SITE FOR EMERGENCY VEHICLES AT ALL TIMES

WASTE MANAGEMENT:

1. ALL LITTER AND WASTE TO BE CONTAINED ON SITE IN CONTAINERS PROVIDED FOR THAT PURPOSE.
2. ALL WASTE TO BE FURTHER DISPOSED OFF SITE IN A RESPONSIBLE MANNER.
3. WHERE POSSIBLE MINIMISE WASTE THROUGH WASTE MINIMIZATION AND RE-USE.

EROSION AND SEDIMENT MANAGEMENT:

DRAINAGE MANAGEMENT - WHERE POSSIBLE, RAINWATER DISCHARGE FROM UPSTREAM PROPERTIES IS TO BE DIRECTED AWAY FROM WORKS THROUGH TEMPORARY BUNDING.

1. SOIL STABILISATION -
   - 1.1. EXPOSED EARTH SHALL BE TOPSOILED, VEGETATED, AND LANDSCAPED AS SOON AS POSSIBLE AFTER TRIMMING.
   - 1.2. RE-VEGETATED AND LANDSCAPED AREAS SHALL BE REGULARLY WATERED TO ASSIST ESTABLISHMENT OF COVER.
   - 1.3. ALL BANKS AND BATTERS ARE TO BE REGULARLY INSPECTED TO IDENTIFY AREAS OF EROSION AND RESHAPED TO PREVENT FURTHER EROSION IF NECESSARY - RECTIFICATION WORKS ARE TO BE RE-VEGETATED IMMEDIATELY.
2. STOCKPILE PROTECTION -
   - 2.1. STOCKPILES ARE TO BE SITUATED SUCH THAT THEY ARE NOT IN ANY STORMWATER FLOW PATHS.
   - 2.2. SILT FENCING IS TO BE INSTALLED TO DOWNSTREAM SIDE OF STOCKPILE AREAS PRIOR TO THEIR USE.
   - 2.3. STOCKPILES INTENDING TO BE LEFT IN PLACE FOR 28 DAYS OR GREATER SHALL BE GRASS SEEDED.
   - 2.4. STOCKPILES TO HAVE A MAXIMUM SLOPE OF 2H:1V.
3. SEDIMENT TRAPS -
   - 3.1. SILT FENCING & SEDIMENT TRAPS TO BE INSTALLED AT AREAS OF SITE DISCHARGE AS SHOWN ON PLAN.
   - 3.2. SILT FENCING TO BE INSTALLED TO DOWNSTREAM SIDE OF STOCKPILE AREAS, STRIPPED AREAS, AND ANY OTHER AREAS OF BARE EARTH WHERE SILT LADEN RUNOFF CAN BE GENERATED.
   - 3.3. SEDIMENT FENCING TO BE INSTALLED IN ACCORDANCE WITH SEDIMENT FENCE DETAILS ON THIS SHEET.
   - 3.4. SEDIMENT FENCE LAYOUT SHALL CONFORM TO "TYPICAL LAYOUT ACROSS GRADE" AS DETAILED ON STANDARD DRAWING CMDG-D-050.
   - 3.5. SILT FENCES AND SEDIMENT TRAPS SHALL REMAIN ON SITE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE AND THERE IS 90% VEGETATION COVERAGE OF PROPOSED LANDSCAPED AREAS.
4. VEHICLE AND ROAD MANAGEMENT:-
   - 4.1. VEHICLES AND PLANT ARE TO ONLY ACCESS THE SITE FROM TOM BRADY STREET SITE ACCESS TO BE OVER A SHAKER ACCESS PAD OR RUMBLE GRID IN ACCORDANCE WITH STANDARD DWG CMDG-D-050.
   - 4.2. VEHICLE OPERATOR TO ASSESS MATERIAL ON VEHICLE PRIOR TO EXITING SITE AND REMOVE EXCESS WITH SHOVEL OR BRUSH.
   - 4.3. TOM BRADY STREET TO BE INSPECTED AT END OF EACH DAY AND ANY DEPOSITED MATERIAL IS TO BE REMOVED.

ACID SULFATE SOILS:

1. DUE TO THE ELEVATION AND SITE GEOLOGY IT IS UNLIKELY THAT A.S.S. WILL BE ENCOUNTERED ON THIS SITE.
2. IF A.S.S. ARE ENCOUNTERED ON THE SITE DURING CONSTRUCTION ENGAGE A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT TO PRODUCE AN A.S.S. MANAGEMENT PLAN FOR IT.

FAUNA MANAGEMENT:

1. ANY CLEARING OF REMNANT VEGETATION WILL REQUIRE A FAUNA SPOTTER / CATCHER TO BE IN ATTENDANCE.

VEGETATION MANAGEMENT:

1. WHERE VEGETATION COVENANT EXISTS ON SITE. THIS AREA TO BE CLEARLY PEGGED AND FLAGGED OR FENCED PRIOR TO WORK COMMENCING ON SITE TO PREVENT ANY CLEARING IN THIS AREA.

BUSH FIRE MANAGEMENT:

1. THE SITE IS PREDOMINANTLY CLEARED AND NOT IN A BUSH FIRE HAZARD ZONE (BUT STILL MAY BE SUBJECT TO BUSH FIRES)
2. ANY CLEARED VEGETATION TO BE MULCHED AND USED ON SITE.
3. MULCHED STOCK PILES TO BE NO MORE THAN 2.0m HIGH AND WET DOWN DAILY.
4. REMOVE MULCH FROM SITE IF SAFE TO DO SO SHOULD BUSHFIRES THREATEN THE AREA.

DATUM: HORIZ. GDA 2020 VERT. AHD

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE
A	ORIGINAL ISSUE	

DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

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DESIGNED	AML
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APPROVED	T LAU
RPEQ 19272	SIGN
01.05.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
STORMWATER MANAGEMENT PLAN
EROSION AND SEDIMENT CONTROL NOTES

DWG No. D25.005-06

CIVIL

REVISION A

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2025

DILEIGH

CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

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

Development Permit No.: D/136-2024

Dated: 3 July 2025

PROPOSED LOW IMPACT INDUSTRY EXTENSION
33 PARK STREET, PARK AVENUE

TRAFFIC IMPACT STATEMENT

TRANSIT COURIERS

D25.005-RP02

TRANSIT COURIERS

TRAFFIC IMPACT STATEMENT

PROPOSED LOW IMPACT INDUSTRY EXTENSION
33 PARK STREET, PARK AVENUE

Document History & Status

REVISION	DATE	ISSUED TO	DESCRIPTION	BY	APPROVED
A	20/03/2025	Sunil Govind (GSCP)	Original Issue – For lodgement	AML	TL

Prepared By

Ashleigh Lucas
Cadet Engineer

Reviewed By

Tony Lau
Senior Engineer
RPEQ 19272

Dileigh Consulting Engineers Pty Ltd
47 Normanby Street
Yeppoon QLD 4703
Australia

Telephone: +61 7 4911 2553
Email: reception@dileigh.com.au

Date: 20/03/2025
Reference: D25.005-RP02

1. Introduction

This report was prepared for Transit Couriers in support of a proposed development at 33 Park Street, Park Avenue. This report should be read in conjunction with the overall application relating to this project. The proponent is seeking approval to upgrade the existing site with a warehouse extension, administration building and additional carparking.

The land subject to this application is described as 3 R26238 which has a total area of 4,046m^2.

2. Existing Traffic Conditions

2.1 Site Access

The site currently has three access points:

- A 5.5m gravel driveway on Tom Brady Street, which appears to be facilitating movements in all directions;
- A 6.0m gravel driveway on Tom Brady Street, which is signed “NO ENTRY EXIT ONLY” and appears to not be in use; and
- A 7.0m concrete driveway on Park Street, which appears to be facilitating movements in all directions.

The Park Street driveway connects to an internal concrete driveway providing access alongside the shed. The Tom Brady Street access appears to generally be utilized by heavy vehicles only.

Figure 1: Site aerial view – November 2024 (Nearmap)

2.2 Traffic Volumes

Existing traffic volumes were not available at the time of this report and new tube counts were not undertaken.

Noting that there are limited routes to and from Park Street and Tom Brady Street, and that they are each expected to generally be subject to local traffic only, daily traffic volumes can be estimated based on the surrounding catchment and the relevant traffic generation rates for each land use. The relevant properties were included for each road, with street and aerial imagery utilised to determine the access road.

For the residential dwellings and service station, standard daily and peak hour rates were applied as prescribed in *RTA Guide to Traffic Generating Developments.* Since the uses of the industry sites are varied or unknown, and there is no standard rate for a generic industry use, an average of the 'Factory' and 'Warehouse' traffic generation rates were applied. Both uses result in similar daily trips, but factories produce double the peak hour vehicles that warehouses do.

Floor areas were approximated from aerial imagery.

Park Street

Traffic volumes for industry sites 4 (the subject site) 5 and 6 were estimated with **a factor of 0.5**, since they have dual access to both Park Street and Tom Brady Street.

Additionally, the service station on the corner of Glenmore Road and Park Street has access to both roads and would be expected to receive a higher proportion of traffic from Glenmore Road. Assuming 80% of movements are to/from Glenmore Road, **a factor of 0.2** has been applied to the traffic generation rates.

The estimated traffic volumes to Park Street are summarized in Table 1 below.

Figure 2: Park Street traffic catchment

Land Use	Unit Daily Rate	Unit Peak Hour Rate	Source	# Units	Estimated AADT (vpd)	Estimated Peak Hour Volume (vph)
Residential	9 vpd / dwelling	0.85 vph / dwelling	RTA Guide to Traffic Generating Developments	14	126	12
Service Station	**0.2 x** (Approx. 17 x peak hour rate)	**0.2 x** (0.04vpd / Site A + 0.3vpd / Store A)		1707m² site & 135m² Store GFA (Approx)	367	22
Industry *(access Park St only)*	4.5 vpd / 100m² GFA	0.75 vpd / 100m² GFA		Approx 4,000m² GFA	180	30
Industry *(Lots 4, 5 & 6 - dual access)*	**0.5 x** (4.5 vpd / 100m² GFA)	**0.5 x** (0.75 vpd / 100m² GFA)		Approx 2,500m² GFA	56	9
				Total	**729**	**73**

Table 1: Park Street existing traffic volumes estimated

Tom Brady Street

The remaining volumes for sites 4, 5 and 6 were applied to Tom Brady Street.

All relevant industry sites on the south site of Tom Brady Street (sites 8, 9 & 10) all have a secondary access on either Dooley Street or Robinson Street. As such, traffic volumes for these sites were also estimated with **a factor of 0.5**.

Site 10 is a concrete batching plant, which does not have a prescribed traffic generation rate. The current site occupants were contacted. They advised that typically they have:

- Six (6) concrete agitator trucks, making 20 movements per day, and;
- Six (6) staff, making 12 light vehicle movements per day.

This equates to a total of 32 vehicles per day. Assuming worst case to be all staff arriving and all concrete agitator trucks departing site during a one-hour period, the peak hour traffic shall be taken as 12 vehicles per hour.

The estimated traffic volumes to Tom Brady Street are summarized in Table 2 below.

Figure 3: Tom Brady Street traffic catchment

Land Use	Unit Daily Rate	Unit Peak Hour Rate	Source	# Units	Estimated AADT (vpd)	Estimated Peak Hour Volume (vph)
Industry *(Lots 8 & 9 – dual access)*	**0.5 x** (4.5 vpd / 100m² GFA)	**0.5 x** (0.75 vpd / 100m² GFA)	RTA Guide to Traffic Generating Developments	Approx 6,200m² GFA	140	23
Industry *(Lots 4, 5 & 6 - dual access)*				Approx 2,500m² GFA	56	9
Concrete batching plant	**0.5 x** 32 vpd	**0.5 x** 12 vpd	Occupant advice	-	16	6
				Total	**212**	**38**

Table 2: Tom Brady Street existing traffic volumes estimated

3. Development Traffic Generation

The occupant of the development site advised the following expected traffic movements for the site following the proposed extension:

- Four (4) to five (5) trucks, making ten (10) heavy vehicle movements per day; and
- Six (6) staff, making 16 light vehicle movements per day.

This equates to a total of 26 vehicle movements per day. Assuming worst case to be all staff arriving and all trucks departing site during a one-hour period, the peak hour traffic corresponding to the occupants' daily traffic advice shall be taken as 11 vehicles per hour.

As per RTA *Guide to Traffic Generating Developments Issue 2.2*, daily and peak hour traffic generation rates for a warehouse is 4 per 100m^2 of GFA and 0.5 per 100m^2 of GFA respectively. This shall be applied to the proposed warehouse extension GFA for checking purposes.

Additionally, the daily and peak hour traffic generation rates for an office are 10 per 100m^2 of GFA and 2 per 100m^2 of GFA respectively. This shall be applied to the proposed administration GFA for checking purposes.

Based on the above, development traffic has been estimated in Table 3 below.

Site Area	Unit Daily Rate	Unit Peak Hour Rate	Source	# Units	Estimated AADT (vpd)	Estimated Peak Hour Volume (vph)
Existing Warehouse *(to remain)*	4 vpd / 100m^2 GFA	0.5 vph / 100m^2 GFA	RTA Guide to Traffic Generating Developments	696.7m^2 GFA	28	3
Existing Office Building *(to be demolished)*	10 vpd / 100m^2 GFA	2 vph / 100m^2 GFA		120.6m^2 GFA	12	2
				Existing Total	**40**	**5**
Proposed Warehouse Extension	4 vpd / 100m^2 GFA	0.5 vph / 100m^2 GFA	RTA Guide to Traffic Generating Developments	865.0m^2 GFA	35	4
Proposed Administration	10 vpd / 100m^2 GFA	2 vph / 100m^2 GFA		186.9m^2 GFA	19	4
				Proposed Sub-Total A	**54**	**8**
Entire Site	-	-	Occupant Advice	-	26	11
				Proposed Sub-Total B	**26**	**11**

Table 3: Post-development traffic volumes estimated

The total estimated traffic movements provided by the site occupant (26 vpd) are significantly lower than as prescribed by RTA generation rates (63 vpd), particularly due to the warehouse GFA. It is considered appropriate to adopt the warehouse volumes based on the RTA generation rates, allowing for future expansion of site operations facilitated by the warehouse extension.

Administration / office traffic is similar between RTA-generated traffic and assumptions based on site occupant advice.

Total post-development traffic shall be based on Existing Warehouse + Proposed Warehouse + Proposed Administration volumes. Based on the above, the adopted post-development traffic volumes shall be **82 vehicles per day** and **11 vehicles per hour during AM and PM peak hours**.

This equates to an increase in traffic of **42 vehicles per day** and **6 vehicles per hour during AM and PM peak hours**.

4. Development Traffic Distribution

Noting that access and egress is possible and intended via both Park Street and Tom Brady Street for both light and heavy vehicles, it is appropriate to assume a 50/50 split of development traffic to each street, which corresponds to an increase on each road of **21 vehicles per day** and **3 vehicles per hour during AM and PM peak hours**.

5. Development Traffic on External Network

The increase in development traffic on the external network is summarised in the table below.

Road Name	Existing AADT	Post-Dev AADT	Increase	Existing Peak Hour Volume	Post-Dev Peak Hour Volume	Increase
Park Street	729	750	3%	73	76	4%
Tom Brady Street	212	233	10%	38	41	8%

Table 4: Change in traffic due to the proposed development

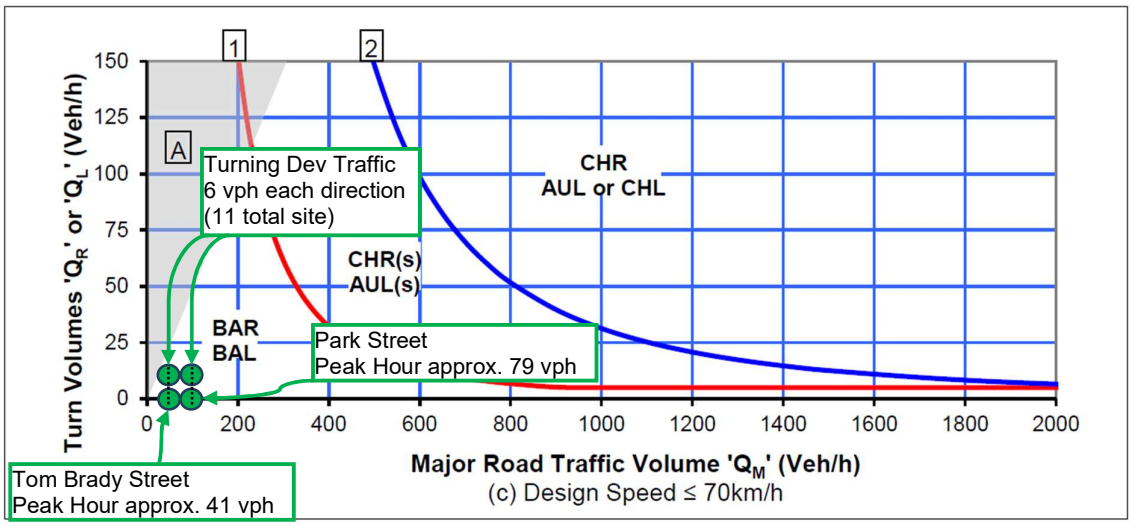
The additional traffic from the development is anticipated to result in a less than 5% increase in traffic on Park Street, so impacts to the performance and safety of the road are negligible.

The additional traffic from the development is anticipated to result in a greater than 5% increase in traffic on Tom Brady Street. However, it is highlighted that background volumes are estimated only, so it is possible that impacts to Tom Brady Street will be lower than demonstrated above.

If accurate traffic survey data is made available in future, it is recommended that further analysis be undertaken.

Given the overall anticipated low volumes of all relevant surrounding roads, it is not expected that intersections in the surrounding area (both priority and signal controlled) will not experience any significant worsening in delay, queueing or saturation. Dileigh is of the opinion that a detailed Traffic Impact Assessment is not required.

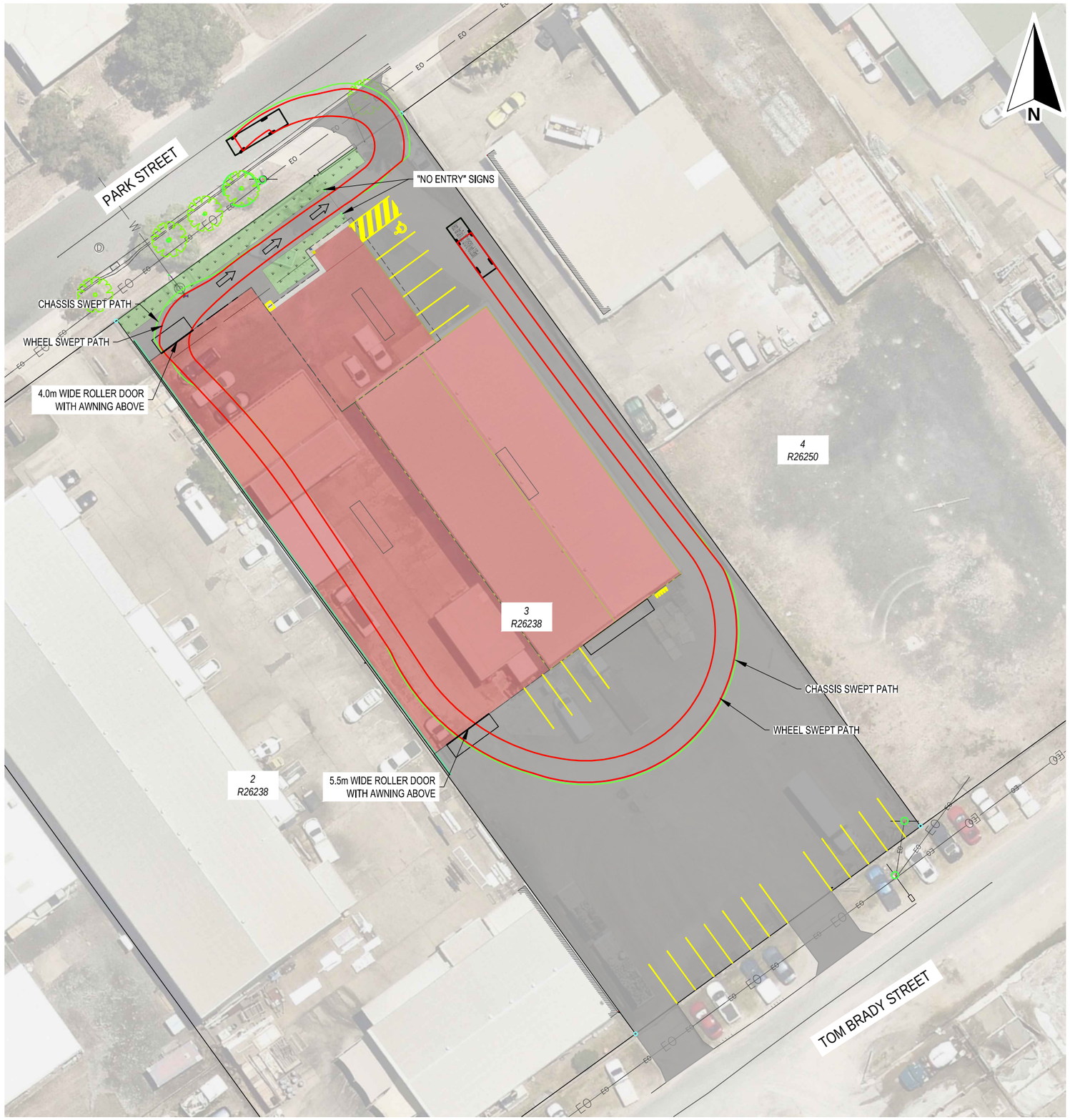
A turn warrant assessment, based on *Austroads Guide to Traffic Management Part 6 Figure 3.25,* indicates that provision of dedicated turn lanes are not required.



6. Conclusion

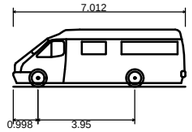
The proposed development at 33 Park Street, Park Avenue is not expected to have a significant impact on the surrounding road network. It is recommended to undertake further analysis if detailed traffic survey information becomes available in the future. No external road works are considered necessary to facilitate the increased site traffic associated with the proposed extension.

Ashleigh Lucas
For and On Behalf of
Dileigh Consulting Engineers Pty Ltd



LEGEND

- CONCRETE DRIVEWAY
- BUILDINGS
- LANDSCAPING



Iveco Van Daily 35C 12/15/18 (w/b 3.95m)

Overall Length	7.012m
Overall Width	1.996m
Overall Body Height	2.335m
Min Body Ground Clearance	0.154m
Track Width	1.996m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	6.550m

DATUM: HORIZ. GDA 2020 VERT. AHD

0 2.5 5 7.5 10 LAYOUT 1:500

SCALES m. FULL SIZE A3

PRELIMINARY ISSUE

NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE
A	ORIGINAL ISSUE	24/03/2025

DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

DRAFTED	AML
DESIGNED	AML
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APPROVED	T LAU
RPEQ 19272	SIGN
24.03.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
TRAFFIC IMPACT STATEMENT
VEHICLE SWEPT PATH - DELIVERY VAN

DWG No. D25.005-01

CIVIL

REVISION A

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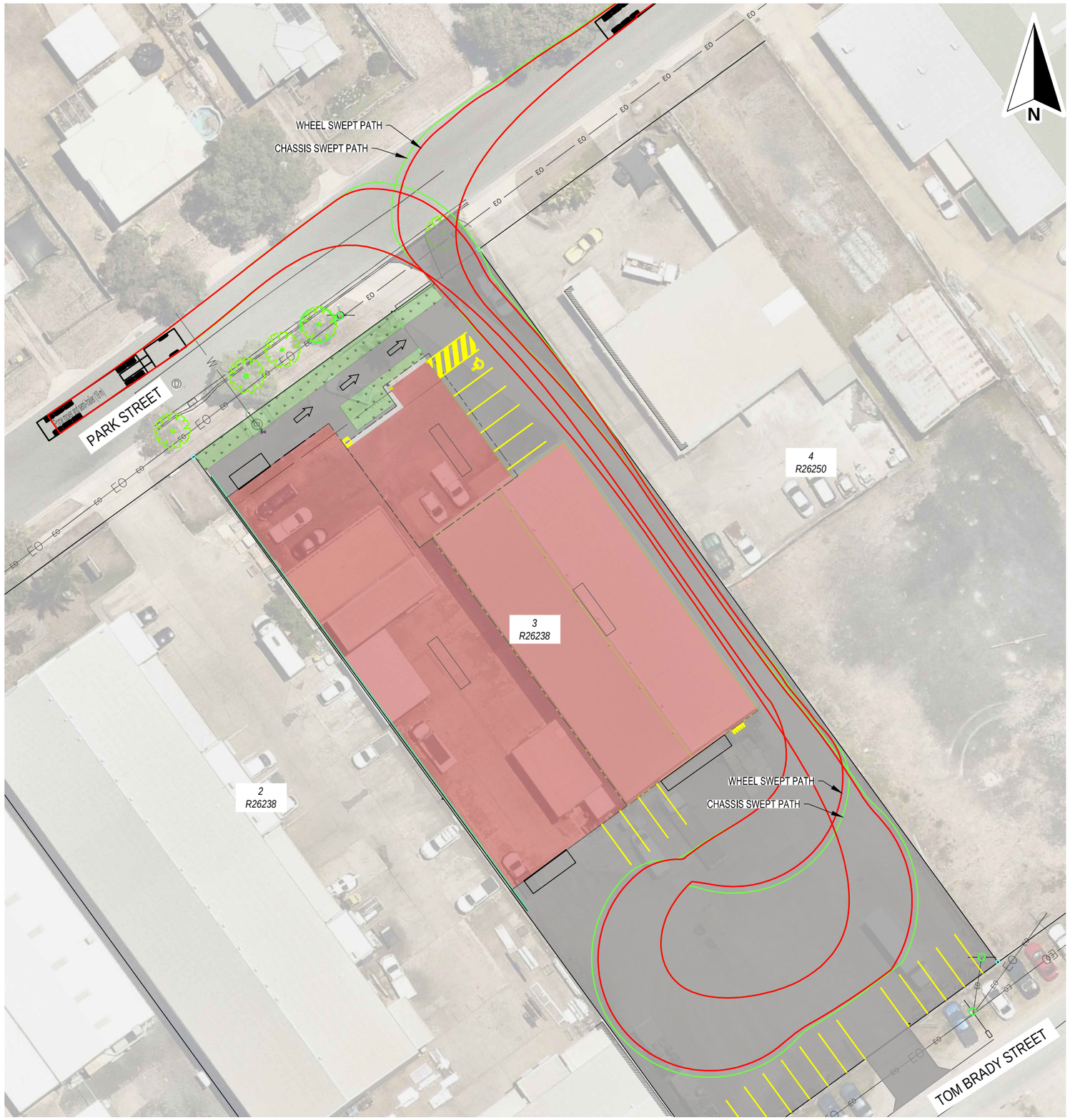
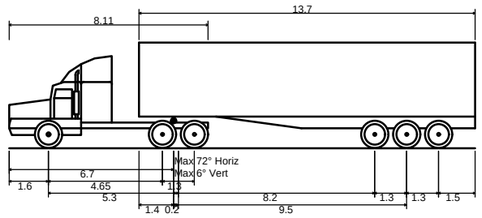


LEGEND

- CONCRETE DRIVEWAY
- BUILDINGS
- LANDSCAPING



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

DATUM: HORIZ. GDA 2020 VERT. AHD

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SCALES m. FULL SIZE A3

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DILEIGH
CIVIL / STRUCTURAL DESIGN & PROJECT MANAGEMENT

ACN 121 309 171
47 Normanby Street
Yeppoon, Queensland 4703

Phone: 07 49112553
Fax: 07 49383660
Email: admin@dileigh.com.au

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24.03.2025	

TRANSIT COURIERS
PROPOSED WAREHOUSE EXTENSION
33 PARK STREET, PARK AVENUE
TRAFFIC IMPACT STATEMENT
VEHICLE SWEPT PATH - 19m SEMI TRAILER

DWG No. D25.005-02

CIVIL

REVISION A

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