



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2024/1576

Date: 17 April 2025



STORMWATER MANAGEMENT PLAN

PROPOSED SELF-STORAGE FACILITY 69-77 OLD PUB LANE, GREENBANK

AMENDED IN RED

By: Demi Ebrahimi

Date: 10 April 2025



PREPARED FOR SWIFT STORAGE
C24032AR002



HURLEY

CONSULTING ENGINEERS

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Revision	Date	Author	Verifier	Approver
A	22/01/2025	RW	MB	CH
B	17/03/2025	RW	MB	CH

Approved for issue for and on behalf of Hurley Consulting Engineers Pty Ltd



Craig Hurley BE(Civil) MIEAust CPEng RPEQ 15957
Director & Principal Engineer

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1 INTRODUCTION

Hurley Consulting Engineers has been commissioned by Swift Storage to prepare a Stormwater Management Plan for a self-storage facility at 69-77 Old Pub Lane, Greenbank. The development will involve a self-storage facility as shown on the proposed architectural plans prepared by Bruac Design enclosed in **Appendix A**.

The intent of this report is to consider potential impacts that the proposed development will have on stormwater runoff in the vicinity of the site and, if required, propose strategies to manage any impacts for both quantity and quality. This report will address the stormwater drainage requirements of the EDQ Greater Flagstone Priority Development Area scheme requirements, Queensland Urban Drainage Manual, and the State Planning Policy (July 2017).

2 SITE DESCRIPTION

The subject site is located at 69-77 Old Pub Lane, Greenbank, on land described as Lot 3 on SP328307. The lot has a total area of approximately 9,997m² and is located within the Logan City Council local government area and the Economic Development Queensland (EDQ) Greater Flagstone Priority Development Area (PDA). The proposed development is confined to the eastern portion of the existing lot, with an area of approximately 5,770m² as shown in **Figure 2.1-1**.

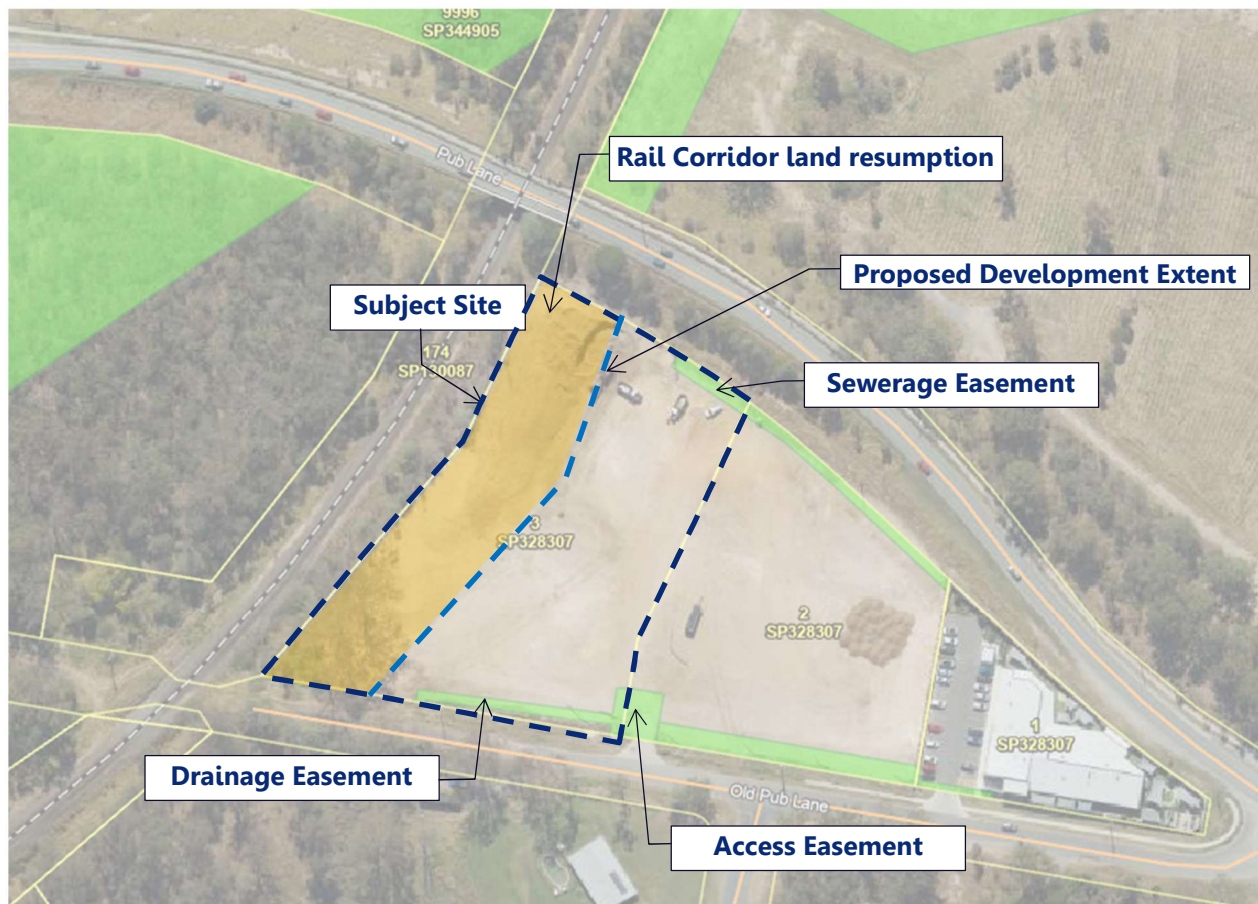


Figure 2.1-1 – Locality Plan

Image Source: QLD Globe 2025

The site is surrounded by Pub Lane to the north, railway corridor land to the west, industrial properties to the east and Old Pub Lane to the south. The site is currently vacant and has been cleared of vegetation. Provision for future widening of the railway corridor has been allowed along the western portion of the site.

The site forms part of a previous EDQ development approval under DEV2019/1042, which resulted in the creation of Lots 1-3 on SP328307. The site contains a sewerage easement along the northern boundary, a drainage easement along the southern boundary, and an access easement at the south-eastern corner of the site as shown in **Figure 2.1-1**.

3 STORMWATER QUANTITY

3.1 Introduction

The site currently flows overland generally south towards an existing stormwater field inlet pit located within a drainage easement at the southern portion of the site, and eventually discharging to Old Pub Lane via a stormwater headwall. The catchment from the site appears to be at the top of a tributary, that conveys flows to the south-east through private properties, ultimately contributing to the Logan River.

Logan City Council online mapping indicates the subject site does not trigger the flood hazard overlay code as it is not located within a designated flood affected area.

There is existing drainage infrastructure that runs along the southern portion of the site, within the existing drainage easement that was recently constructed as part of a previous EDQ approval DEV2019/1042.

The development proposes to connect directly to the Council stormwater drainage that runs along the southern boundary of the site. This has been identified as the lawful point of discharge for the site.

The increase in site imperviousness is expected to increase the peak discharge from the site at the lawful point of discharge. A stormwater quantity analysis was undertaken for the development to manage potential impacts downstream.

3.2 Existing Site Runoff

A DRAINS model was developed to assess the impact of the development on peak runoff at the lawful point of discharge. It is noted that the rail corridor resumption area within the site has not been included in the model because no changes are proposed.

Existing peak runoff rates were assessed by building an Initial Loss – Continuing Loss (IL-CL) model for the site using DRAINS. The catchment parameters used in the DRAINS model, IL-CL model inputs and DRAINS model schematic are shown in **Table 3.2-1**, **Table 3.2-2**, and **Figure 3.2-1** respectively.

Impervious Area IL	Impervious Area CL	Pervious Area IL	Pervious Area CL	Overland Flow Equation
0 mm	0 mm/hr	25 mm	1.1 mm/hr	Kinematic Wave

Table 3.2-1 – DRAINS Model Parameters

Catchment	Existing Site		
Area	0.5770 ha		
Decription	EIA	RIA	PA
Percentage of Area	-	-	100%
Abbreviated Time of Concentration (mins)			
Additional Time (mins)	-	-	0
Flow Path Length (m)	-	-	121.5
Slow Path Slope (%)	-	-	5.6
Retardance Coefficient n*	-	-	0.15

Note: EIA = Effective Impervious Area, RIA = Remaining Impervious Area & PA = Pervious Area easement has been omitted from the model

Table 3.2-2 – Existing Catchment Parameters

Storm events were modelled in DRAINS using the full ensemble of AR&R 2019 storms, with frequencies from 0.5 Each Year (0.5EY) (Q2) to 1% AEP (Annual Exceedance Probability) (Q100) and durations from five minutes to two hours.

The modelled pre-developed peak runoff rates are shown below in **Table 3.2-3**, alongside rational method calculation results for an order of magnitude check for modelling discrepancies.

Storm Event	DRAINS Peak Runoff	Rational Peak Runoff	Difference
0.5 EY (Q ₂)	59 L/s	69 L/s	-10 L/s
0.2 EY (Q ₅)	99 L/s	98 L/s	+1 L/s
10% AEP (Q ₁₀)	146 L/s	120 L/s	+26 L/s
5% AEP (Q ₂₀)	188 L/s	145 L/s	+43 L/s
2% AEP (Q ₅₀)	239 L/s	185 L/s	+54 L/s
1% AEP (Q ₁₀₀)	274 L/s	214 L/s	+60 L/s

Table 3.2-3 – Existing DRAINS Model & Rational Method Results

The above results show that the DRAINS model correlates reasonably well with rational method calculations. The DRAINS model is therefore considered to be satisfactory for this investigation.

3.3 Post-Developed Site Stormwater Management Plan

A new internal drainage network will capture and convey minor flows from the site to the existing piped drainage system within the drainage easement along the southern boundary of the site.

The private drainage system will be designed to capture flows from the site up to a 10% AEP design storm event. There is a portion of landscaped area near the south-western corner of the site which is unable to be captured and will bypass treatment.

The catchment parameters for the post-developed scenario used in the DRAINS model are shown in **Table 3.3.1**.

Catchment	Area	% EIA	EIA t'c	% RIA	RIA t'c	% PIA	PIA t'c
Post-Developed	5555 m ²	95%	5 mins	-	-	5%	5 mins
Bypass Catchment	217 m ²	-	-	-	-	100%	5 mins

Note: EIA = Effective Impervious Area, RIA = Remaining Impervious Area & PA = Pervious Area

Table 3.3.1 – Post-Developed Catchment Parameters

Figure 3.2-1 shows the DRAINS model set up.

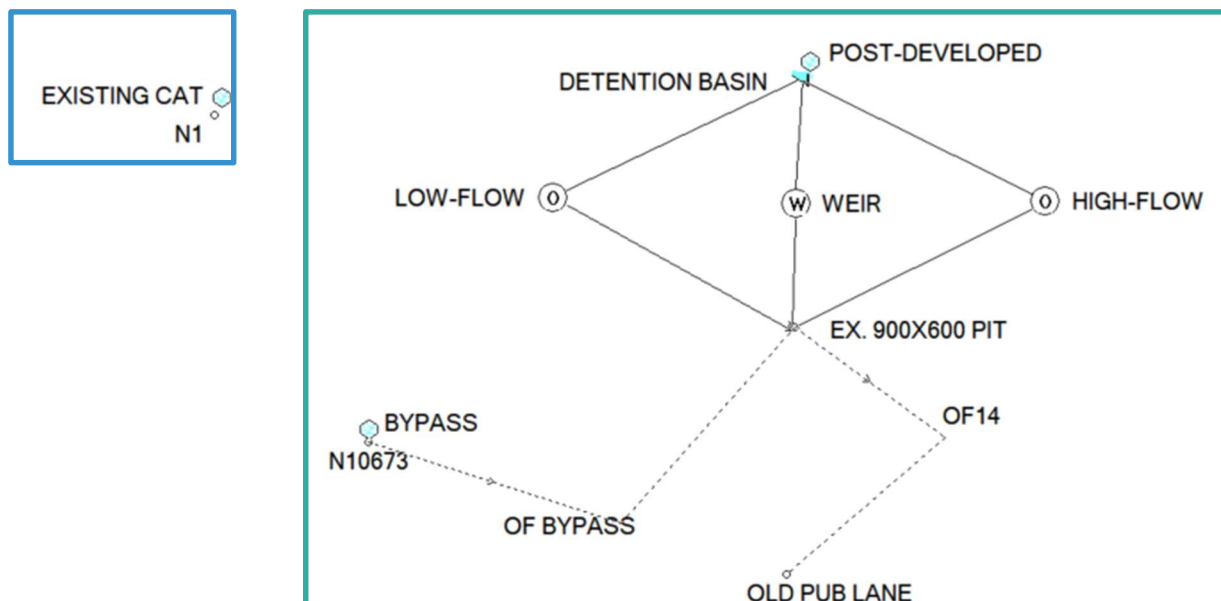


Figure 3.2-1 – DRAINS Model Schematic

Stormwater detention is proposed to offset the impacts to peak flows downstream within Old Pub Lane. Post-developed flows captured by the internal drainage system will be detained and slowly released to ensure peak flows match pre-developed peak flow rates. The post-developed model incorporated a detention tank with parameters as shown in **Table 3.3-2**.

Parameter	Value
Base of Detention Storage	RL 58.00m AHD
Area at Base of Detention Storage	100 m ²
Surface Level above Detention Tank	RL 60.20m AHD
Depth of Detention Tank	1.70 m
Outlet Details - Low-flow Orifice @ IL 58.00m AHD - High-flow Orifice @ IL 59.20m AHD - Internal Weir @ IL 59.65m AHD	150mm Diameter 300mm Diameter 3.0m Wide Weir
1% AEP Storage Level	RL 59.70 AHD
1% AEP Storage Volume	170 m ³

Table 3.3-2 – Detention Tank Parameters

The modelled developed results for each sub-catchment are compared against the modelled existing peak runoff rates in **Table 3.3-3**.

Storm Event	Existing Peak Runoff	Detained Peak Runoff	Difference
0.5 EY (Q ₂)	59 L/s	51 L/s	-8 L/s
0.2 EY (Q ₅)	99 L/s	92 L/s	-7 L/s
10% AEP (Q ₁₀)	146 L/s	140 L/s	-6 L/s
5% AEP (Q ₂₀)	188 L/s	172 L/s	-16 L/s
2% AEP (Q ₅₀)	239 L/s	206 L/s	-33 L/s
1% AEP (Q ₁₀₀)	274 L/s	272 L/s	-2 L/s

Table 3.3-3 – Existing vs Detained Peak Runoff Rates

It is evident from the modelling results in the above tables that a drainage strategy with on-site detention will result in a reduction of peak flows compared to existing conditions for the site. On that basis, the proposed detention tank is considered acceptably designed to achieve lawful points of discharge and is suitable for approval by EDQ. The preliminary sizing and arrangement of the detention tank is subject to detailed design.

4 STORMWATER QUALITY

4.1 Introduction

This section of the report aims to identify the requirements for stormwater quality treatment for the operational phase of the proposed development, and to identify suitable stormwater treatment devices to comply with Logan City Council planning scheme requirements.

4.2 Water Quality Objectives and Methodology

The proposed development is within the south-east Queensland region and must demonstrate compliance with the design objectives stated in **Table 4.2-1** in accordance with the Queensland State Planning Policy.

Pollutant	Minimum Reduction in Mean Load (%)
Total Suspended Solids	80
Total Phosphorus	60
Total Nitrogen	45
Gross Pollutants	90

Table 4.2-1 – Water Quality Objectives

To design and assess the achievement of these stormwater quality objectives the Model for Urban Stormwater Improvement Conceptualisation (MUSICX) has been used to size suitable stormwater quality improvement devices as described in the following sections.

4.3 Catchment Areas & Source Nodes

The catchment areas used for the water quality assessment are limited to the subject site and reflect the proposed lawful point of discharge arrangement. The subject site has been separated into pollutant source nodes for MUSICX modelling using the “split catchment” approach as shown in **Table 4.3-1**.

Catchment	Sub-catchment	Area	Imperviousness
Proposed development	Roof	0.2746 ha	100%
	Road	0.272 ha	100%
	Landscape	0.0085 ha	0%
	Bypass	0.0217 ha	0%
	Total	0.5770 ha	

Table 4.3-1 – MUSICX Modelling Split Catchments



Figure 4.3-1 - MUSICX Land Use Catchment

4.4 Recorded Rainfall Data

Rainfall data for the site was taken from the Logan City Council (west) (ID 40659) between 01/01/1980 and 31/12/1989 in accordance with the Water by Design – MUSIC Modelling Guidelines (2010). Rainfall over this period was modelled using MUSICX and a 6-minute time step to calculate the pollutant generation and treatment effectiveness of the proposed treatment system.

4.5 Rainfall-Runoff Parameters

Rainfall-runoff parameters were taken in accordance with the Water by Design – MUSIC Modelling Guidelines (2010) using Industrial land use parameters, as tabulated in **Table 4.5-1** below:

Parameter	Value
Rainfall threshold (mm)	1
Soil storage capacity (mm)	18
Initial storage (%)	10
Field capacity (mm)	80
Infiltration capacity coefficient a	243
Infiltration capacity exponent b	0.6
Initial depth (mm)	50
Daily recharge rate (%)	0
Daily baseflow rate (%)	31
Daily deep seepage rate	0

Table 4.5-1 – Rainfall-Runoff Parameters

4.6 Pollutant Export Parameters

Pollutant export parameters were taken in accordance with Water by Design – MUSIC Modelling Guidelines (2010) using Industrial Urban land use parameters. The split catchment approach was utilised for each surface type, with the input parameters shown in **Table 4.6-1**.

Source	Land Use	Residential			Commercial			Industrial		
		Roof	Road	Ground	Roof	Road	Ground	Roof	Road	Ground
TSS	Flow Type									
	Baseflow	N/A	1.00	1.00	N/A	0.78	0.78	N/A	0.78	0.78
	St. Dev	N/A	0.34	0.34	N/A	0.39	0.39	N/A	0.45	0.45
	Stormflow	1.30	2.43	2.18	1.30	2.43	2.16	1.30	2.43	1.92
TP	St. Dev	0.39	0.39	0.39	0.38	0.38	0.38	0.44	0.44	0.44
	Baseflow	N/A	-0.97	-0.97	N/A	-0.60	-0.60	N/A	-1.11	-1.11
	St. Dev	N/A	0.31	0.31	N/A	0.50	0.50	N/A	0.48	0.48
	Stormflow	-0.89	-0.30	-0.47	-0.89	-0.30	-0.39	-0.89	-0.30	-0.59
TN	St. Dev	0.31	0.31	0.31	0.34	0.34	0.34	0.36	0.36	0.36
	Baseflow	N/A	0.20	0.20	N/A	0.32	0.32	N/A	0.14	0.14
	St. Dev	N/A	0.20	0.20	N/A	0.30	0.30	N/A	0.20	0.20
	Stormflow	0.26	0.26	0.26	0.37	0.37	0.37	0.25	0.25	0.25
	St. Dev	0.23	0.23	0.23	0.34	0.34	0.34	0.32	0.32	0.32

Table 4.6-1 – Pollutant Export Parameters

4.7 Proposed Treatment Device Details

The proposed stormwater quality treatment system will include Atlan StormSack filters within inlet pits and AtlanFilter cartridges that are to be placed within the proposed AtlanVault stormwater quality and detention tanks. The following stormwater quality treatment devices are proposed for the site:

- Seven (7) x StormSack filters (this is a minimum – all inlet pits to be fitted with StormSack filters)
- Six (6) x full height (860mm) AtlanFilter cartridge systems within an underground AtlanVault stormwater quality tank (or equivalent tank)

The performance of the StormSacks and AtlanFilter cartridges in reducing pollutants has been modelled using MUSICX in accordance with the Water by Design MUSIC Modelling Guidelines (2010). Refer to **Appendix D** for StormSacks filters and AtlanFilter cartridges details provided by Atlan.

4.8 MUSIC Model Diagram

A diagrammatic layout of the MUSICX model interface used to model the proposed development with the proposed treatment devices incorporated is presented in **Figure 4.8-1**.

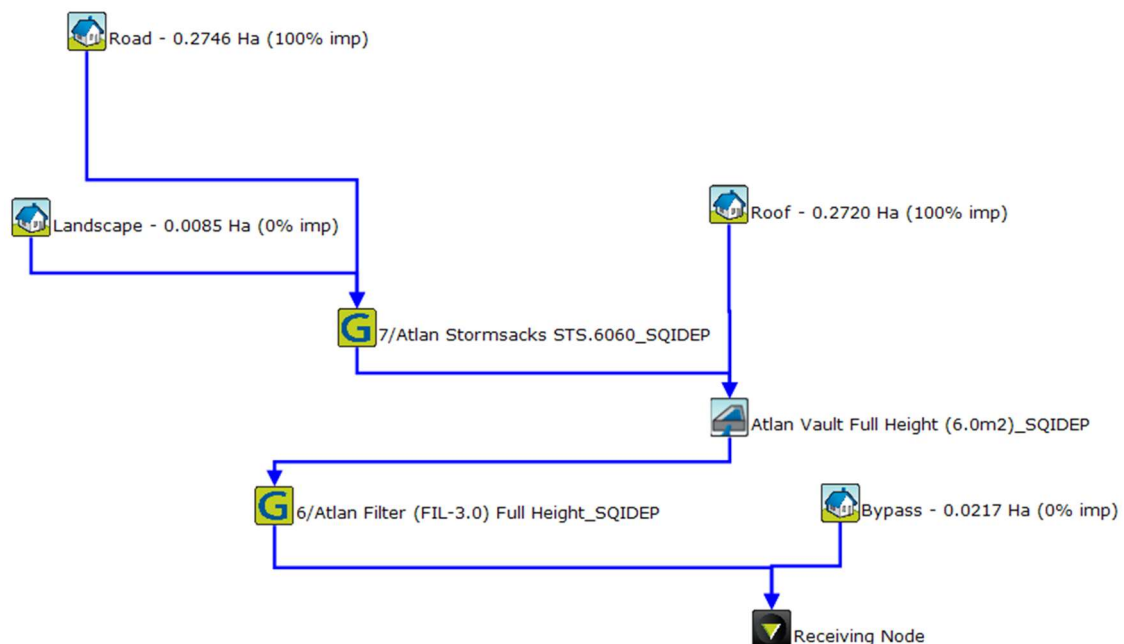


Figure 4.8-1 - MUSICX Model Schematic

4.9 MUSIC Modelling Results

MUSIC was used to model the treatment train effectiveness in terms of the percentage of pollutants being removed from the system using the proposed treatment devices. The results of the MUSICX modelling compared to the stated Water Quality Objectives (WQO's) are presented in **Table 4.9-1**.

Pollutant	Minimum Reduction in Mean Load (%)	MUSICX Results (% Reduction)
Total Suspended Solids	80	82.1
Total Phosphorus	60	74.46
Total Nitrogen	45	53.62
Gross Pollutants	90	100

Table 4.9-1 – Water Quality Modelling Results

The results indicate that the proposed treatment devices will achieve the water quality objectives and exceed the minimum required pollutant reduction targets.

5 CONCLUSION

Hurley Consulting Engineers has been commissioned by Swift Storage to prepare a Stormwater Management Plan for a self-storage facility at 69-77 Old Pub Lane, Greenbank. The development will involve a self-storage facility as shown on the proposed architectural plans prepared by Bruac Design enclosed in **Appendix A**.

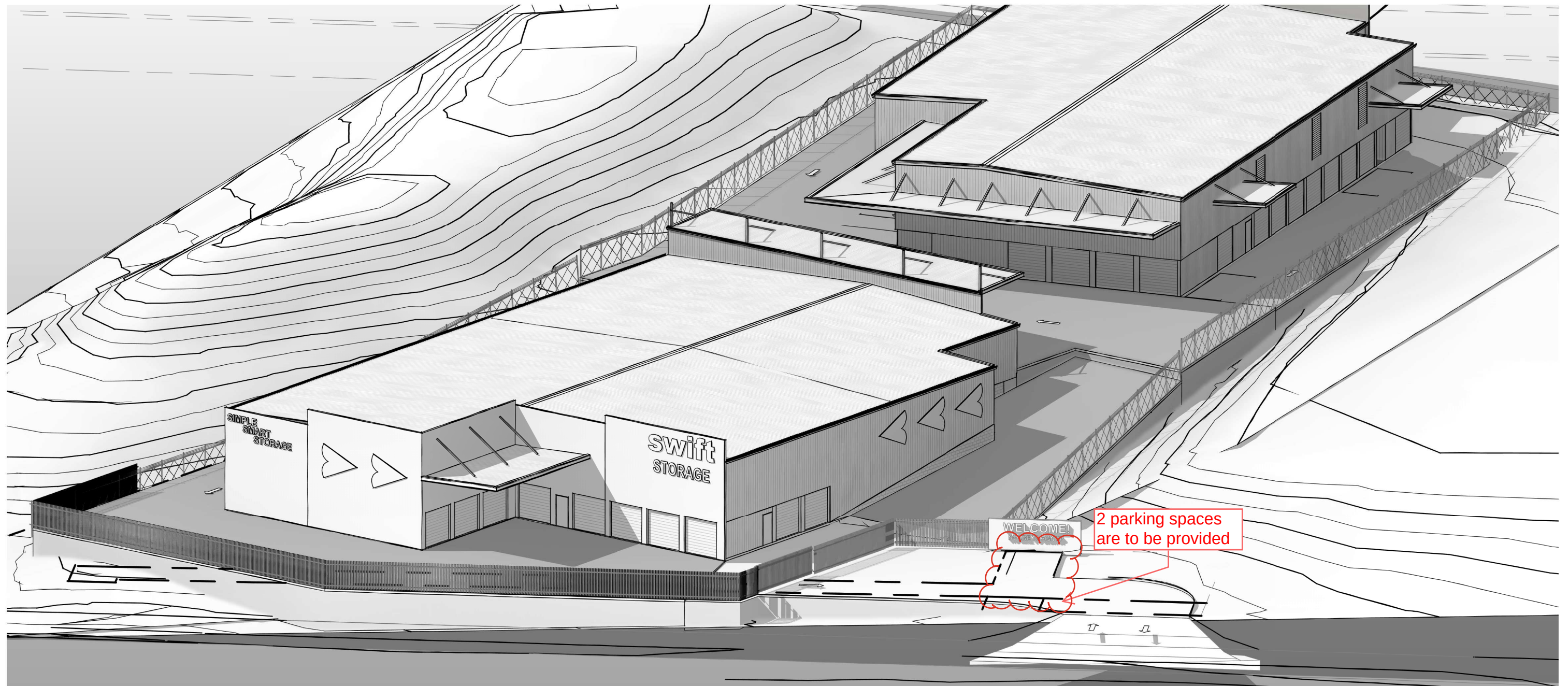
The proposed development will manage stormwater quality and quantity by incorporating on-site detention and stormwater quality treatment devices. The development can achieve the lawful point of stormwater discharge for the development in accordance with the EDQ Greater Flagstone Priority Development Area scheme requirements. The internal and external stormwater drainage network is shown on the concept civil servicing plan C24032A-SK-C100 enclosed in **Appendix B**.

Operational phase stormwater quality treatment can be readily managed by Atlan filter baskets within inlet pits and AtlanFilter cartridge systems that are to be placed within the proposed detention / stormwater quality tank as discussed in **Section 4.7** of this report. Provision of these stormwater quality treatment devices as detailed in this report will satisfy the operational phase requirements of the EDQ Greater Flagstone Priority Development Area scheme requirements.

Construction phase stormwater quality can be managed by implementing appropriate erosion and sediment control techniques during the construction phase. Erosion and sediment control guidance is given in the International Erosion Control Association (IECA) Australasia Best Practice Erosion and Sediment Control (BPESC) document. The IECA BPESC documents are available for download from the IECA website.

This report has reviewed stormwater drainage impacts associated with the proposed development for both quantity and quality. The development can comply with the EDQ Greater Flagstone Priority Development Area scheme and QUDM requirements, and no stormwater drainage constraints have been identified that, in our opinion, would preclude approval of the proposed development with reasonable and relevant conditions.

Appendix A - Architectural Plans



PROPOSED NEW SELF STORAGE FACILITY AT OLD PUB LANE, GREENBANK, QLD

AMENDED IN RED

By: Demi Ebrahimi

Date: 10 April 2025



SWIFT STORAGE

OLD PUB LANE, GREENBANK, QLD

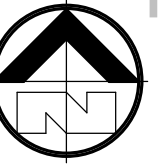
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DWG N° BD025-DA00-H by MB

2025.03.14



BUILDING DESIGN
0416 352 057



PUB LANE

OLD PUB LANE

LOT 3

LOT 2

LOT 1

SITE PLAN - EXISTING

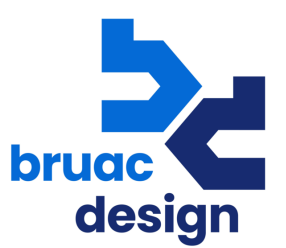
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SWIFT STORAGE

OLD PUB LANE, GREENBANK, QLD

EXISTING CONDITIONS

DWG N° BD025-DA01-G by MB
2025.03.14



BUILDING DESIGN
0416 352 057



Minimum 6m
setback to Pub
Lane to be
provided.



SUBJECT SITE

SITE LOCATION ARIEL

NOT TO SCALE

SWIFT STORAGE
OLD PUB LANE, GREENBANK, QLD

SITE LOCATION PLAN

1: 600

SITE LOCATION PLAN

DWG N° BD025-DA02-I by MB
2025.03.14

AREA SCHEDULE

SITE DATA
LOT 3
LOCAL GOVERNMENT - LOGAN CITY COUNCIL

SITE AREA 9 997m²
PROPOSED SITE COVER 2 324m² (23.25%)

PROPOSED SELF-STORAGE

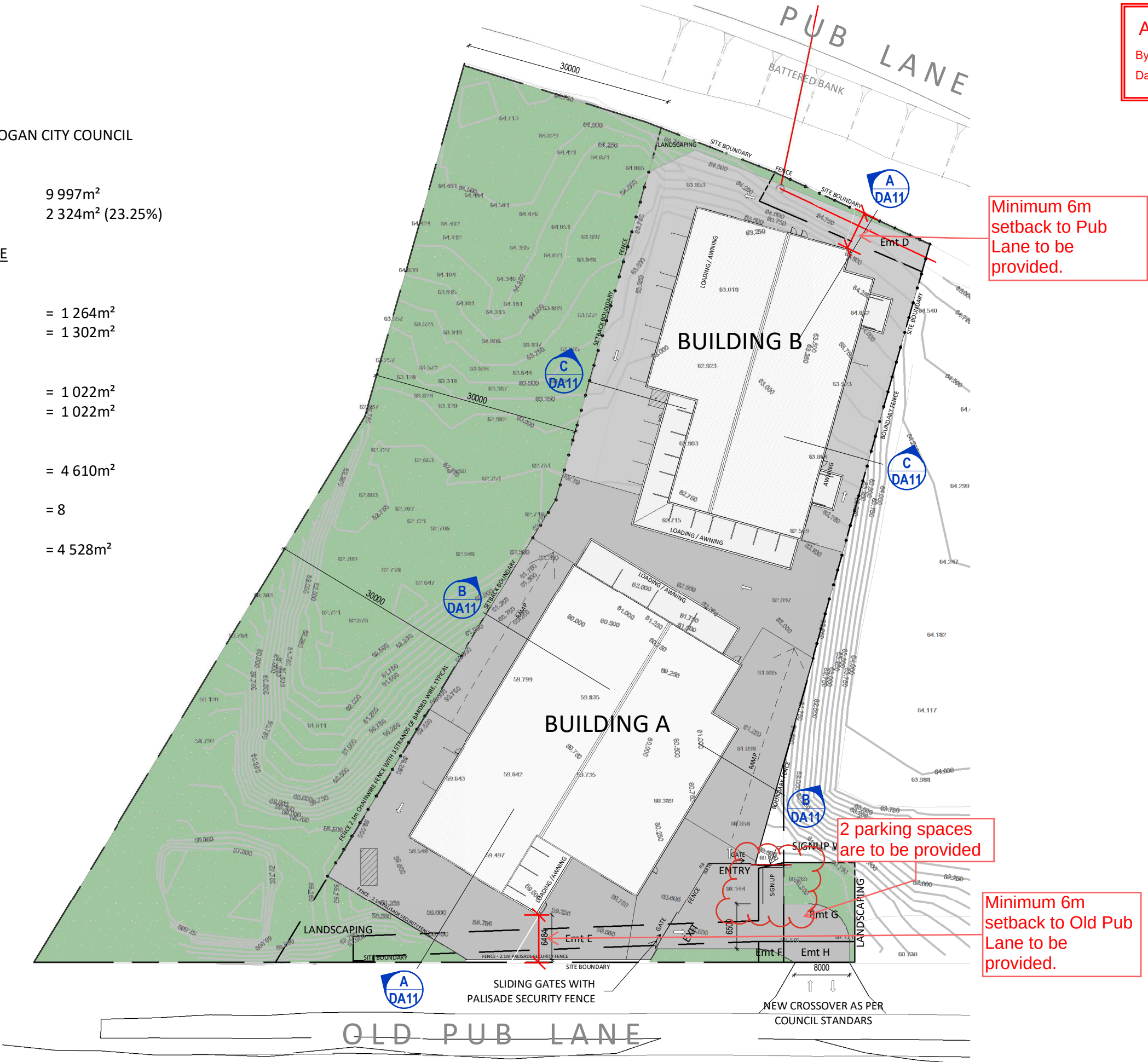
BUILDING A
GF SELF-STORAGE = 1 264m²
L1 = 1 302m²

BUILDING B
GF SELF-STORAGE = 1 022m²
L1 = 1 022m²

TOTAL GFA = 4 610m²

PARKING = 8

LANDSCAPING = 4 528m²



AMENDED IN RED

By: Demi Ebrahimi
Date: 10 April 2025



Minimum 6m
setback to Pub
Lane to be
provided.

2 parking spaces
are to be provided

Minimum 6m
setback to Old Pub
Lane to be
provided.

SWIFT STORAGE

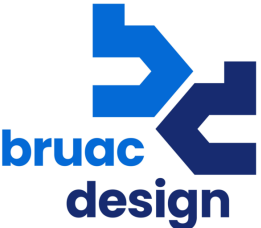
OLD PUB LANE, GREENBANK, QLD

SITE PLAN

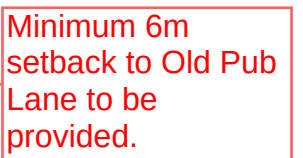
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PROPOSED SITE PLAN

DWG N° BD025-DA03-I by MB
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BUILDING DESIGN
0416 352 057



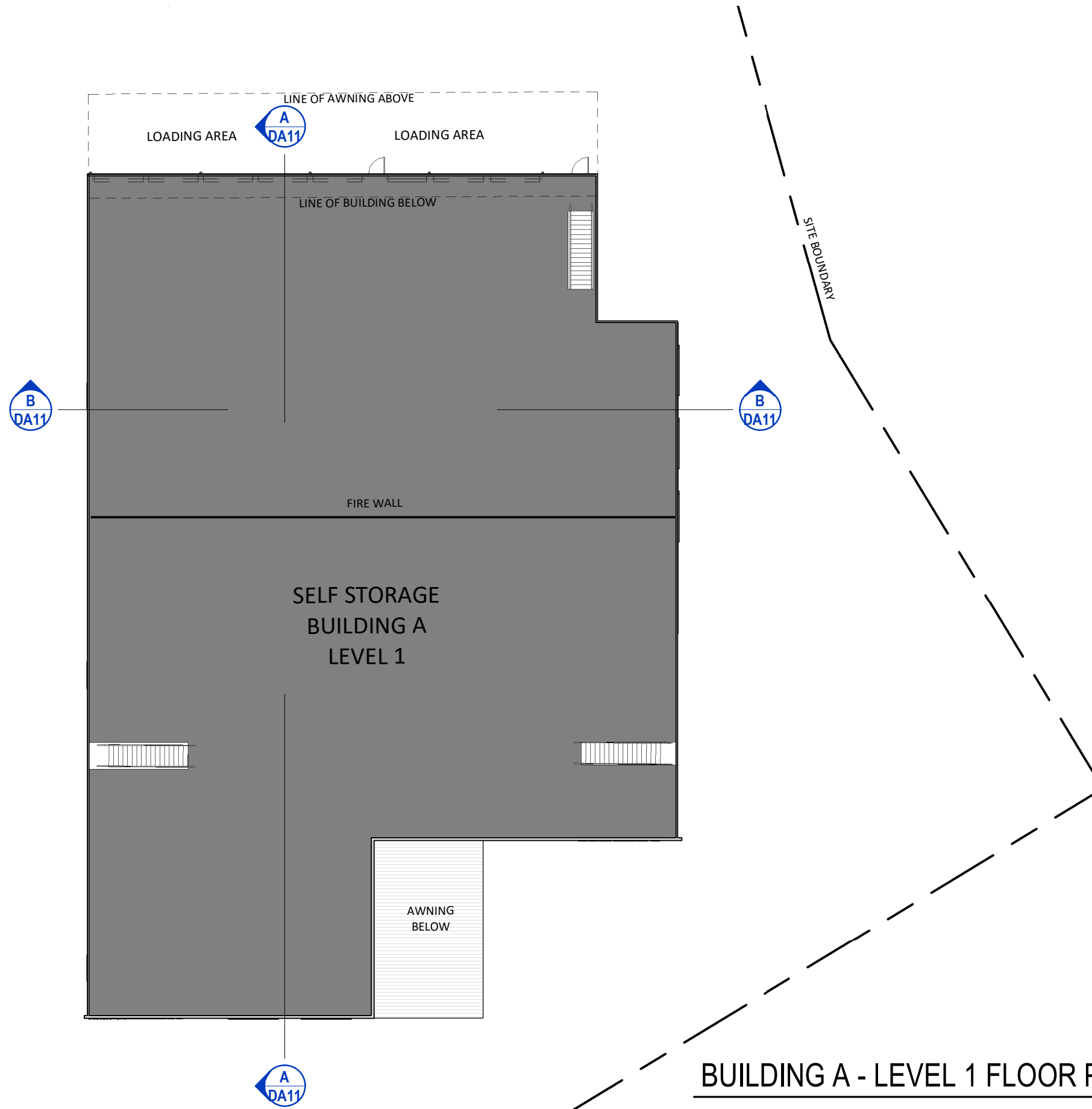
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SWIFT STORAGE

OLD PUB LANE, GREENBANK, QLD

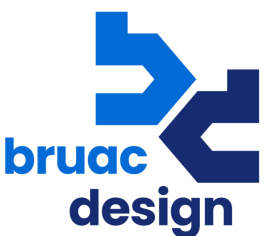


BUILDING A - LEVEL 1 FLOOR PLAN

1 : 250

BUILDING A - LEVEL 1 FLOOR PLAN

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2025.03.14



BUILDING DESIGN
0416 352 057



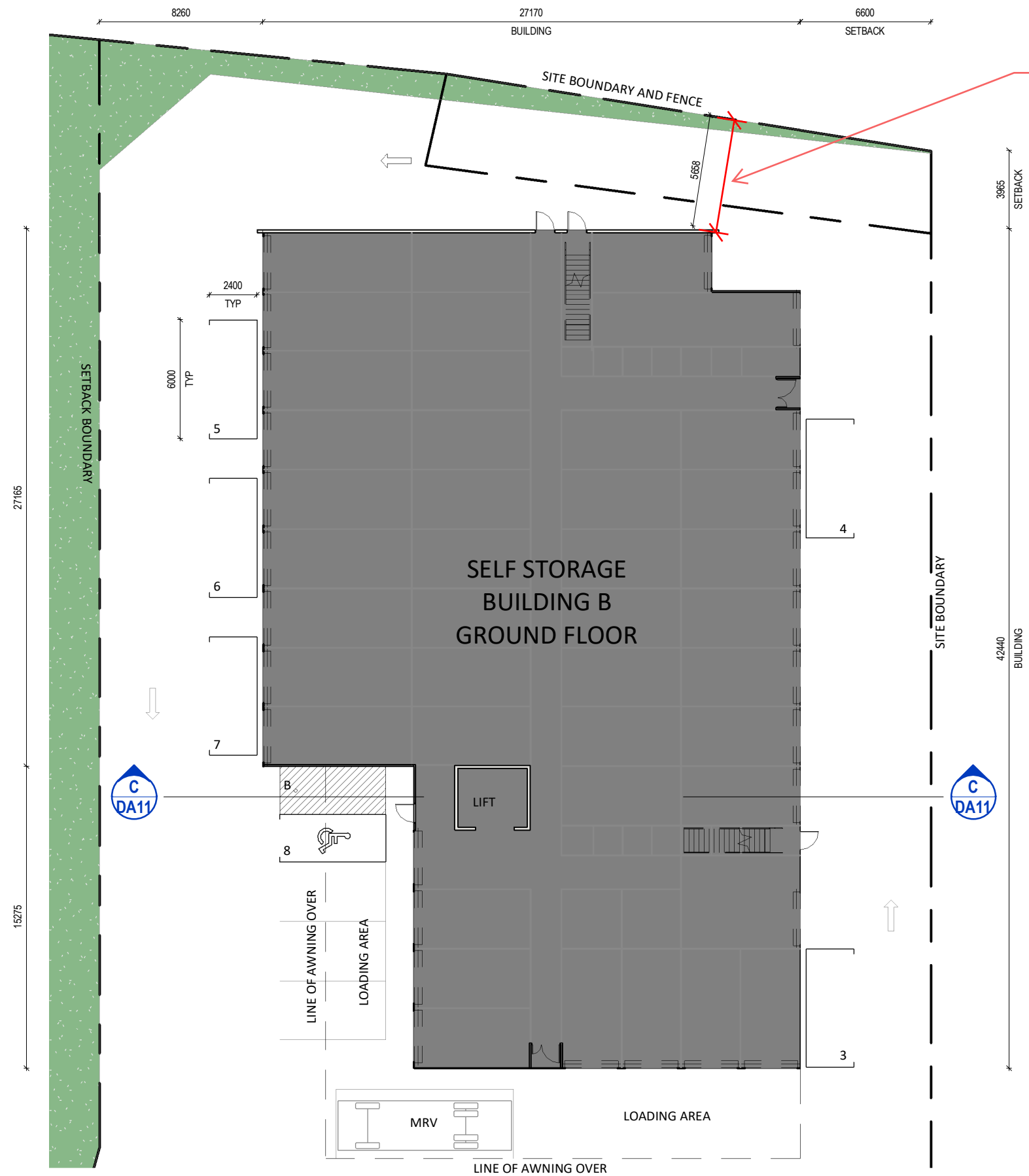
AMENDED IN RED

By: Demi Ebrahimi

Date: 10 April 2025



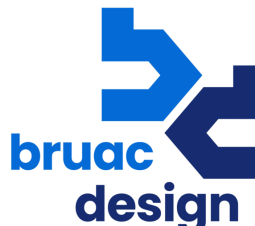
Queensland
Government



SWIFT STORAGE
OLD PUB LANE, GREENBANK, QLD

BUILDING B - GROUND FLOOR PLAN
1 : 250

BUILDING B - GROUND FLOOR PLAN
DWG N° BD025-DA06-G by MB
2025.03.14



bruac
design

BUILDING DESIGN
0416 352 057



SWIFT STORAGE

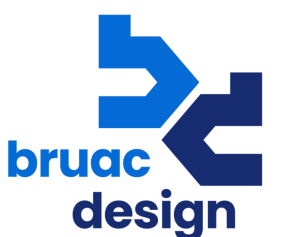
OLD PUB LANE, GREENBANK, QLD

BUILDING B - LEVEL 1 PLAN

1 : 250

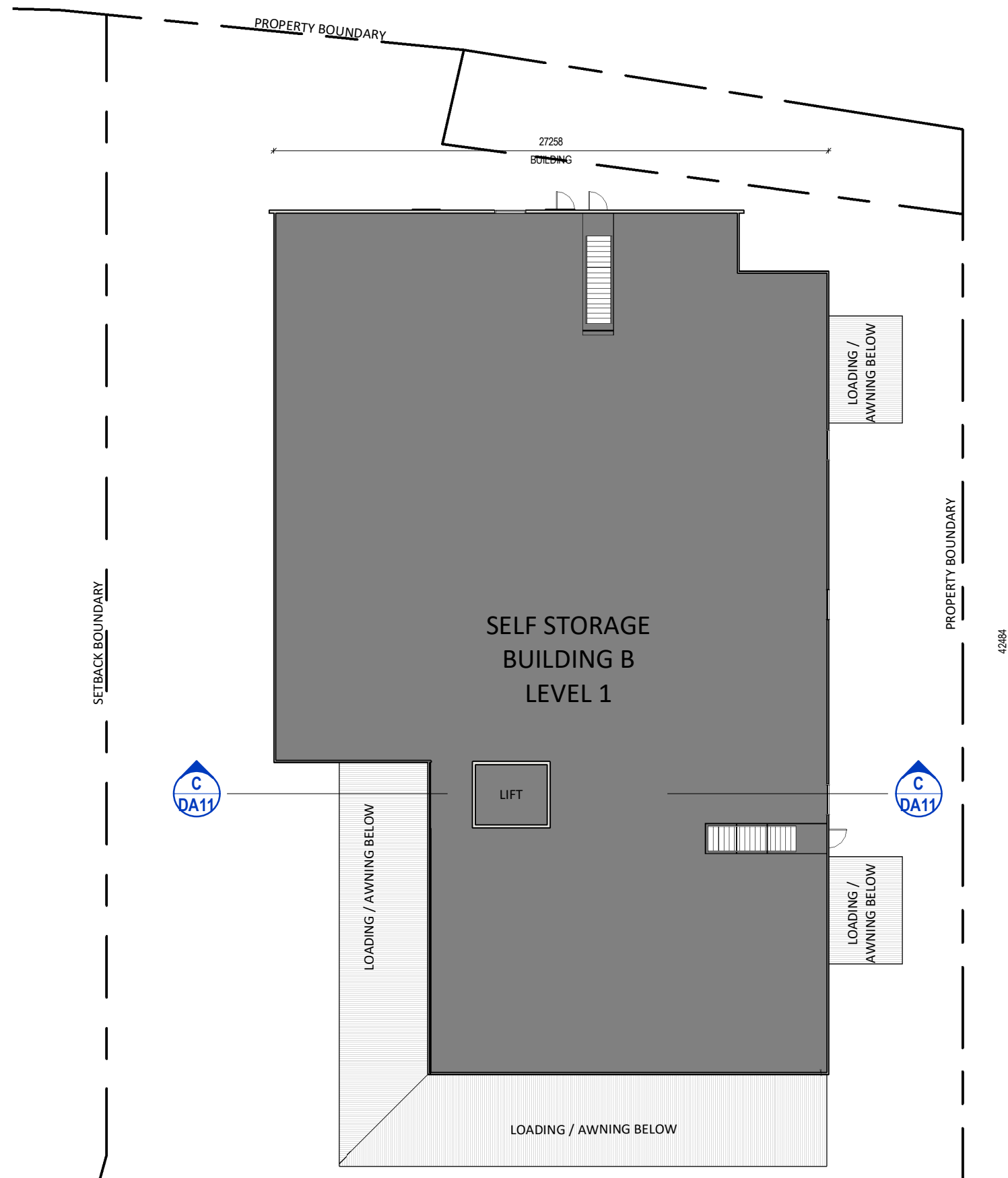
BUILDING B - LEVEL 1 FLOOR PLAN

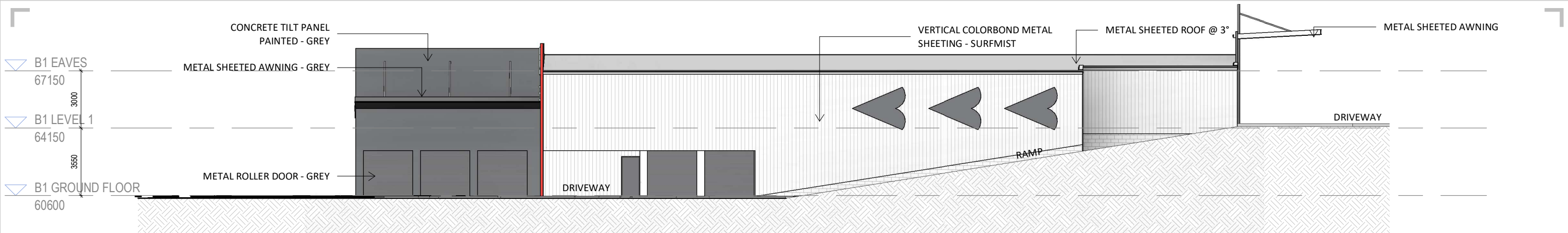
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BUILDING DESIGN
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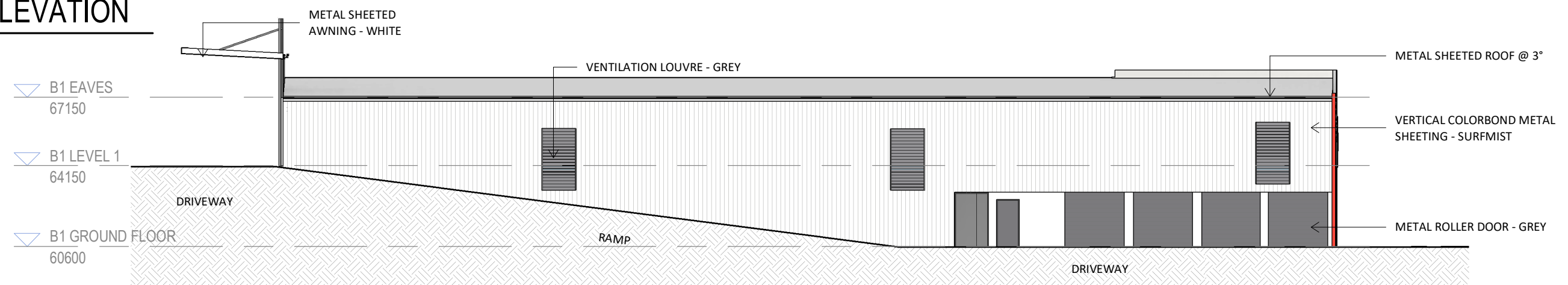
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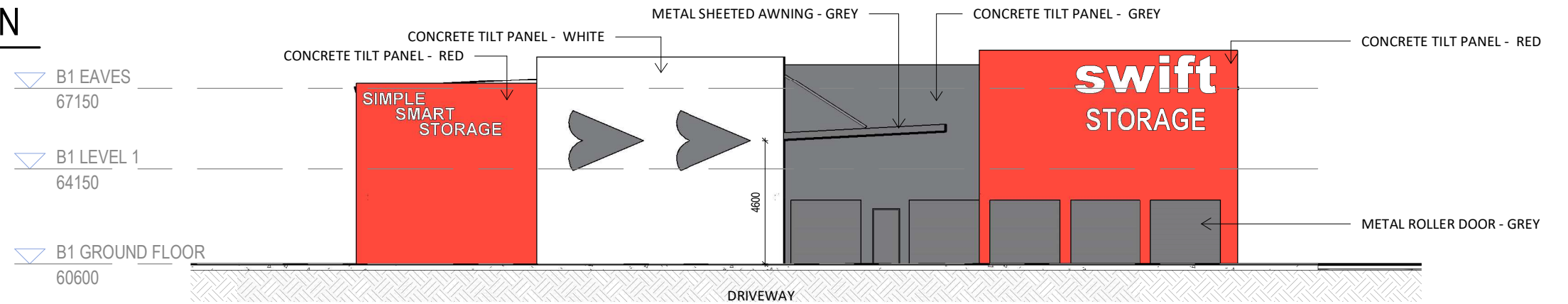
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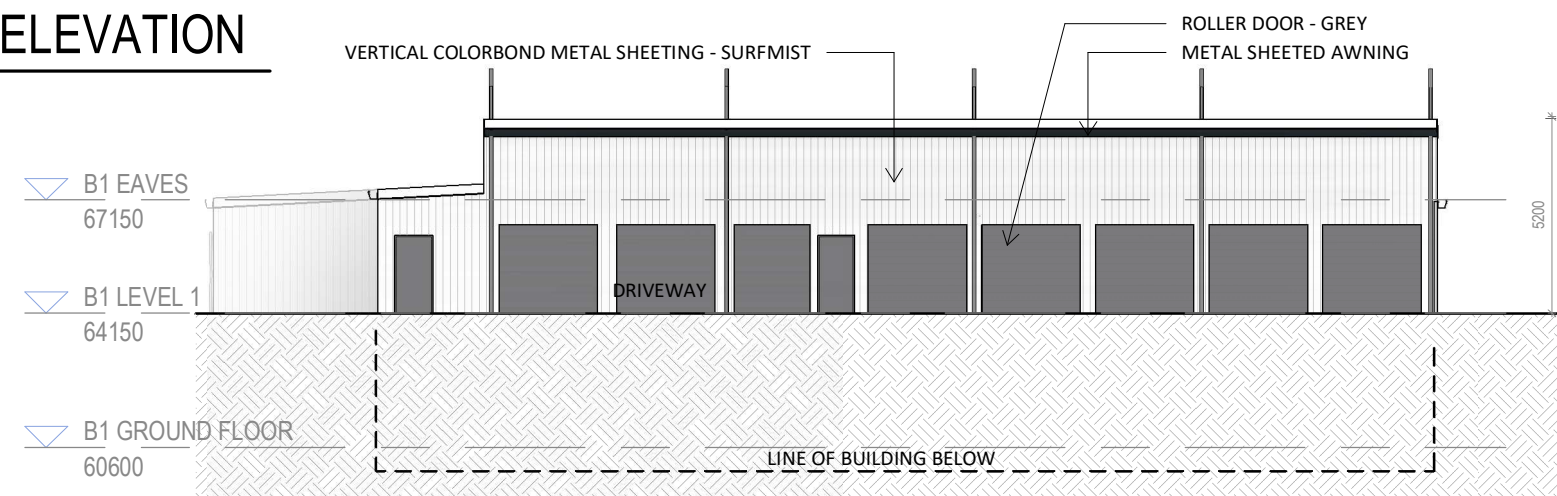
BUILDING A - WEST ELEVATION

1 : 200



BUILDING A - SOUTH ELEVATION

1 : 200



BUILDING A - NORTH ELEVATION

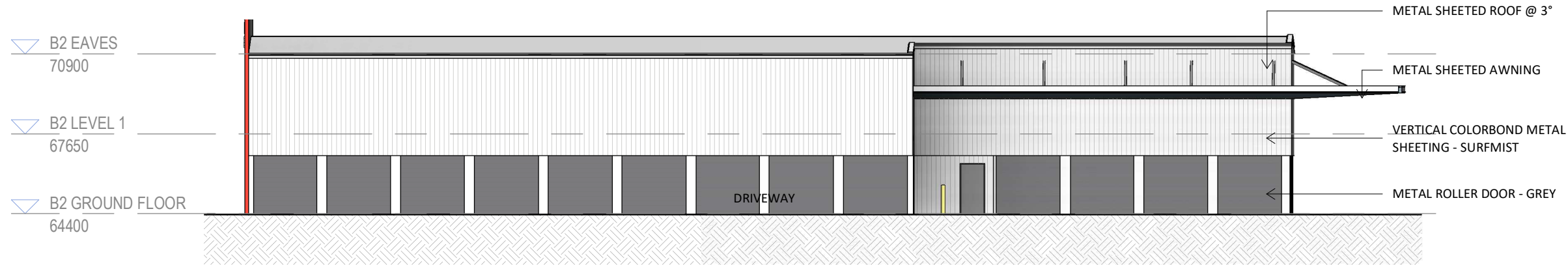
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SWIFT STORAGE

OLD PUB LANE, GREENBANK, QLD

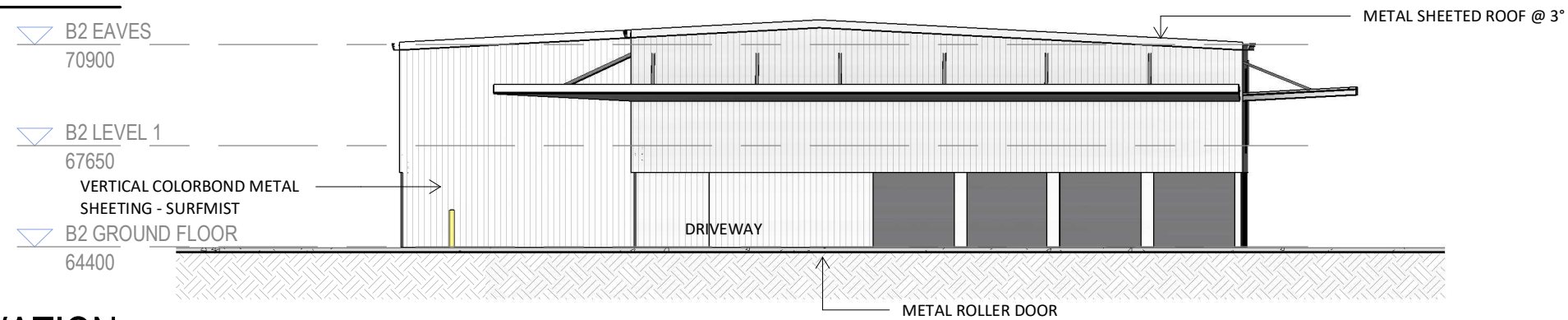
ELEVATIONS - BUILDING A

DWG N° BD025-DA08-I by MB
2025.03.14



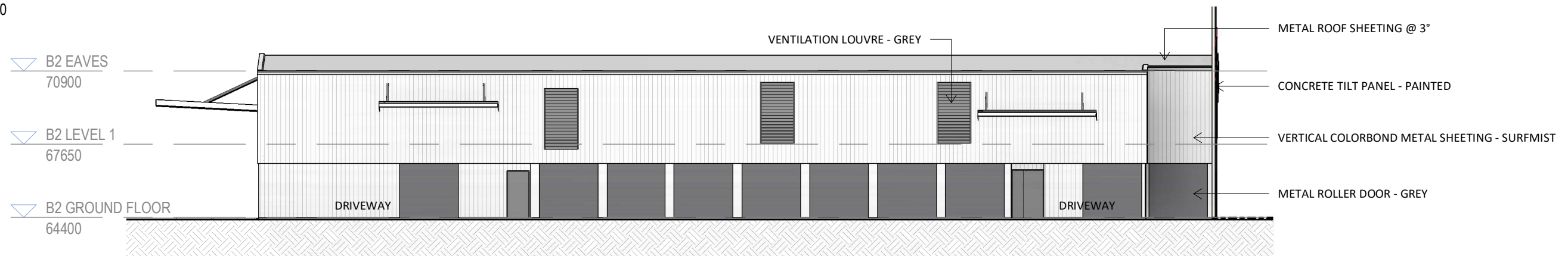
BUILDING B - WEST ELEVATION

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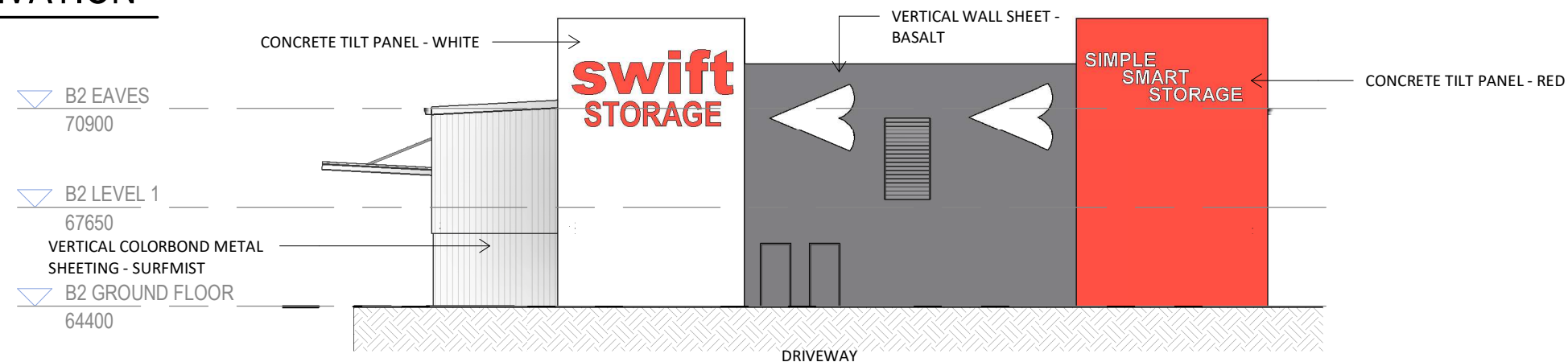
BUILDING B - SOUTH ELEVATION

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BUILDING B - EAST ELEVATION

1 : 200



SWIFT STORAGE

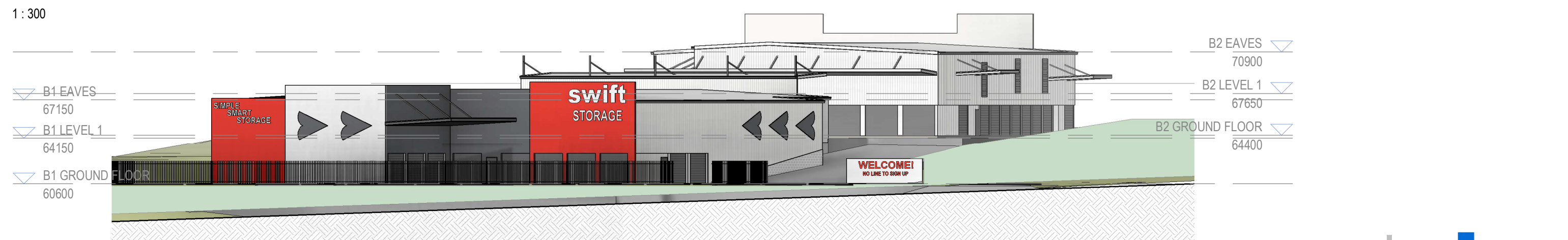
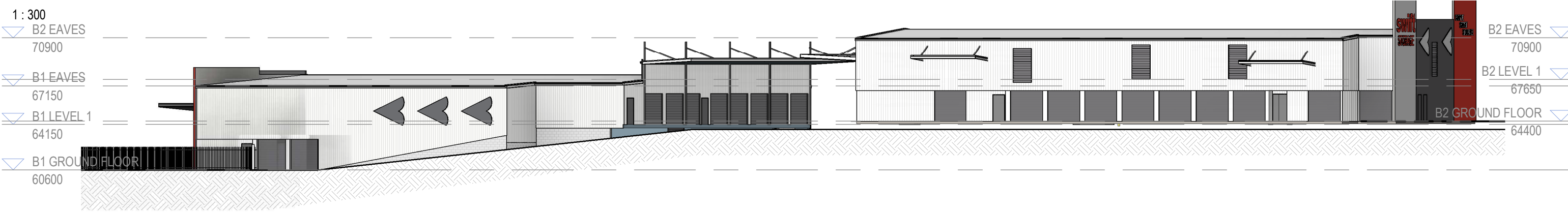
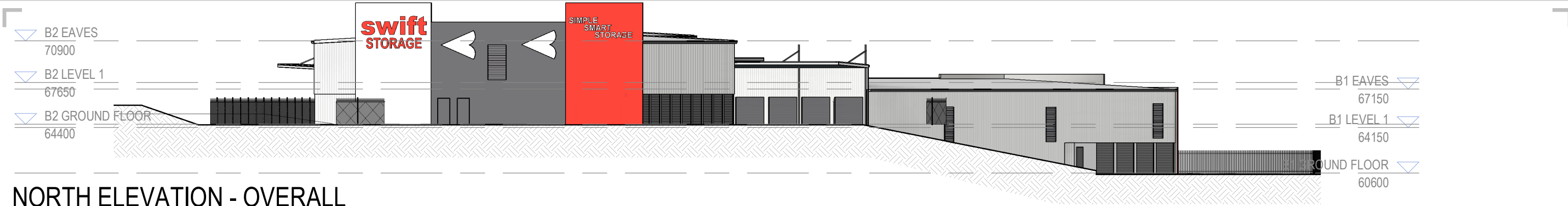
OLD PUB LANE, GREENBANK, QLD

BUILDING B - NORTH ELEVATION

1 : 200

ELEVATIONS - BUILDING B

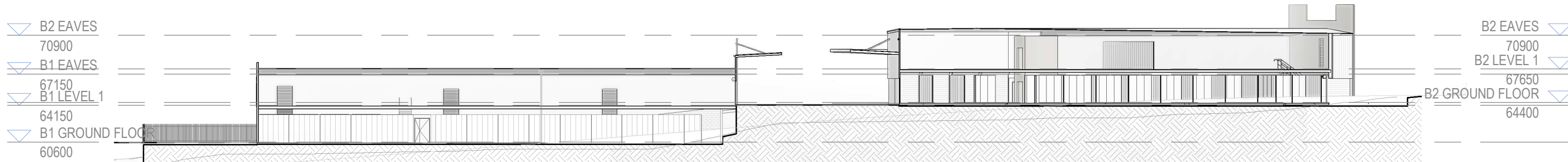
DWG N° BD025-DA09-I by MB
2025.03.14



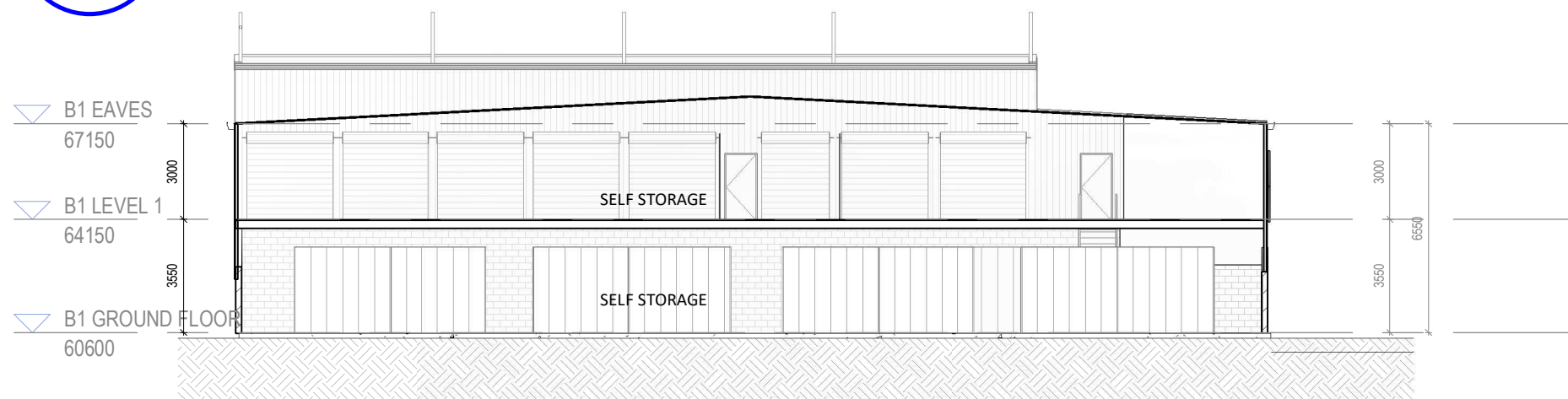
SWIFT STORAGE
OLD PUB LANE, GREENBANK, QLD

ELEVATIONS OVERALL
DWG N° BD025-DA10-I by MB
2025.03.14

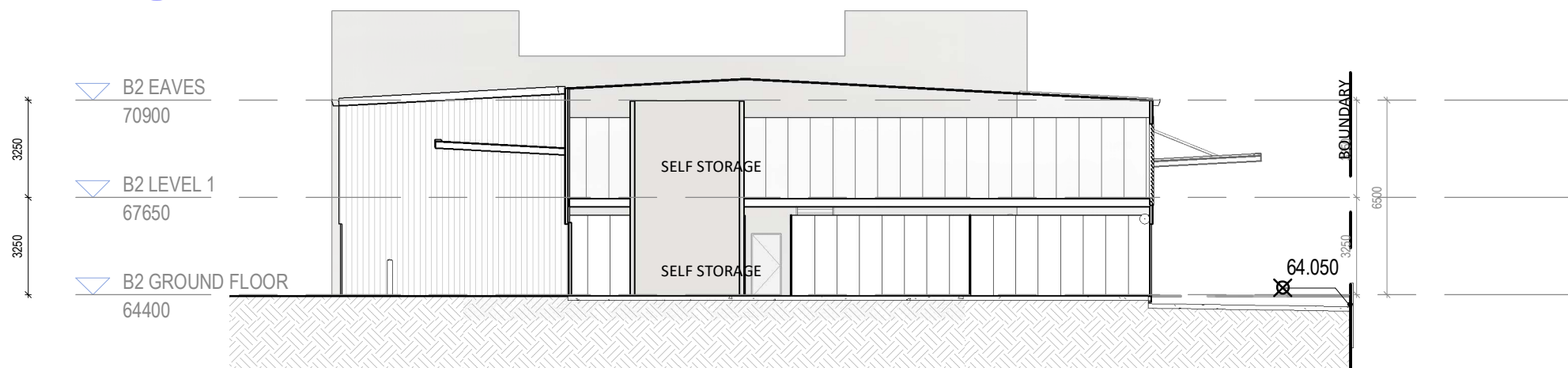




A SITE SECTION
DA03 (A1) 1:400



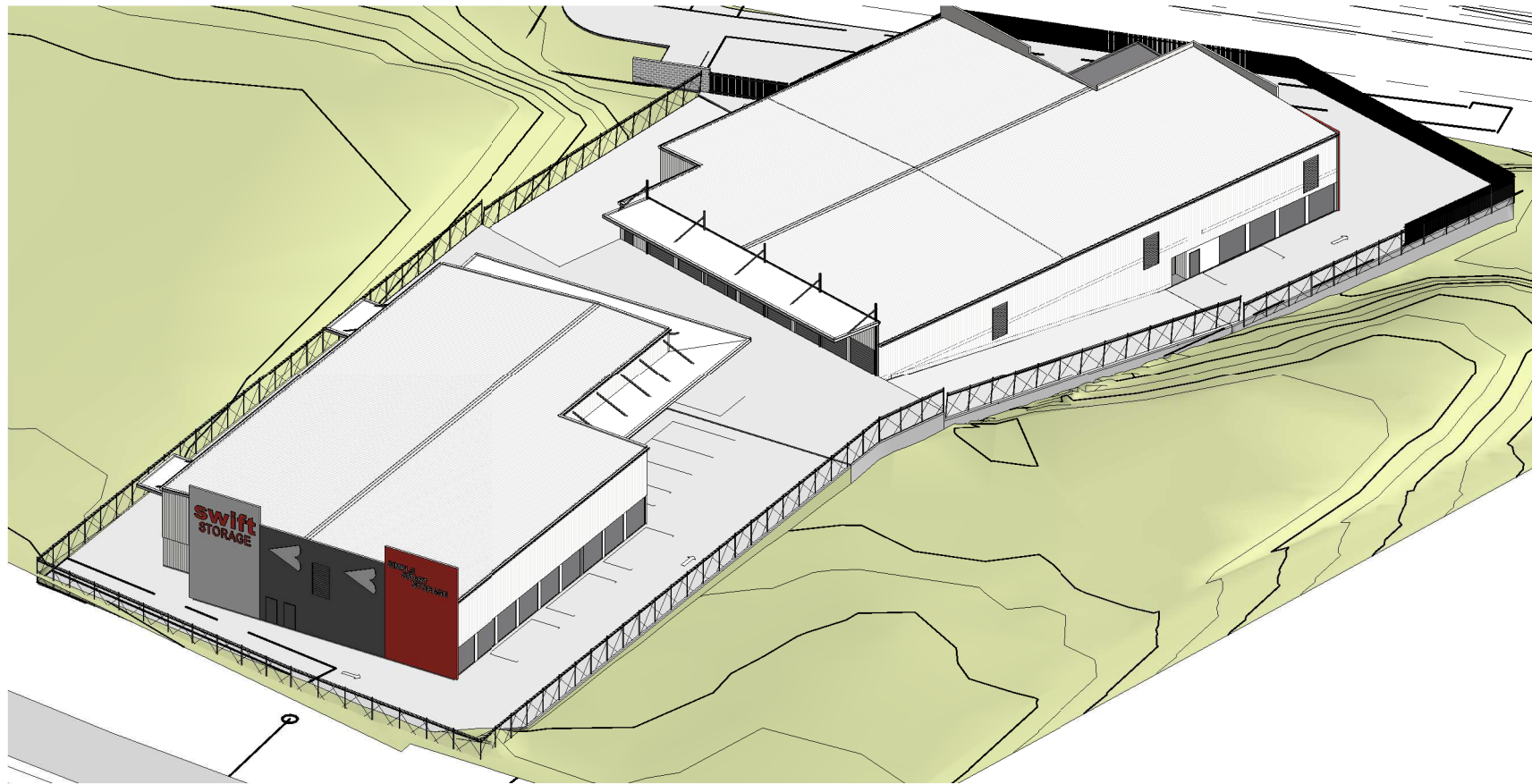
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DA04 (A1) 1:200



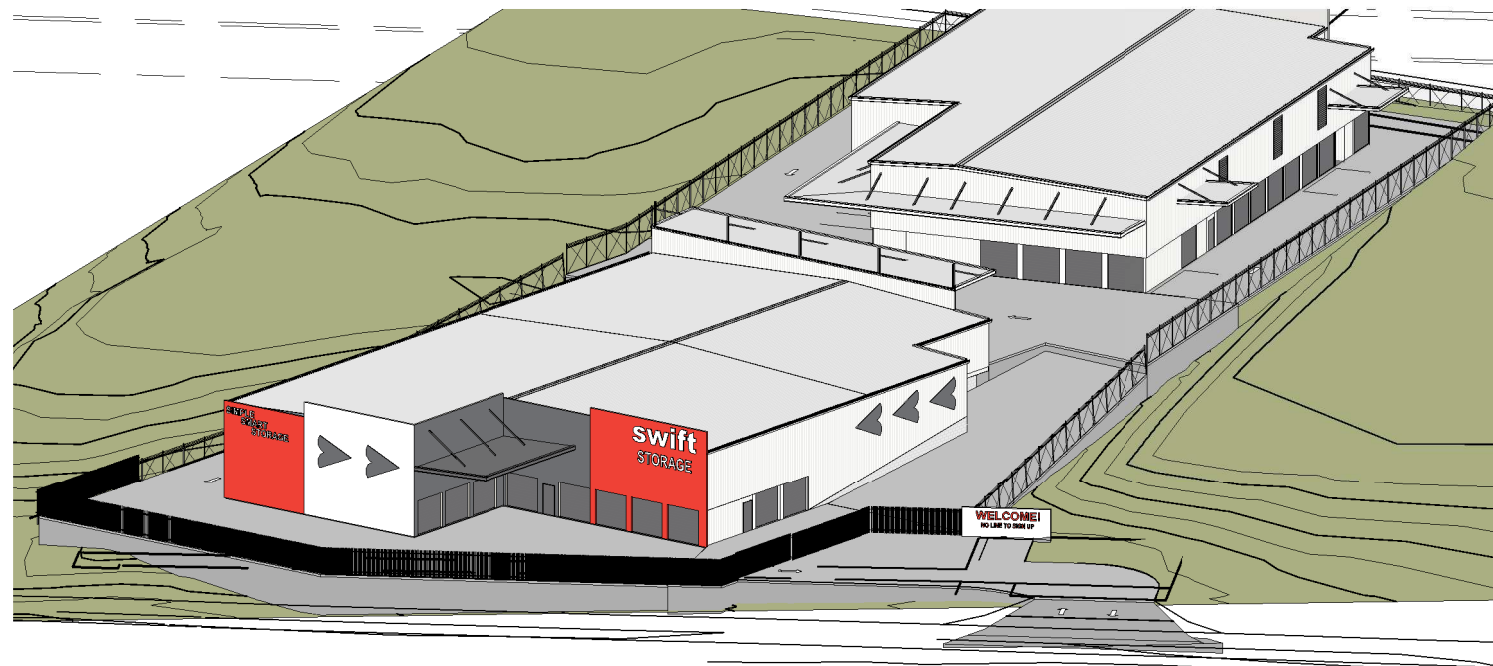
C BUILDING B - SECTION
DA03 (A1) 1:200

SWIFT STORAGE
 OLD PUB LANE, GREENBANK, QLD

SECTIONS
 DWG N° BD025-DA11-I by MB
 2025.03.14



NORTH WEST VIEW 1



SOUTH EAST VIEW 1

SWIFT STORAGE

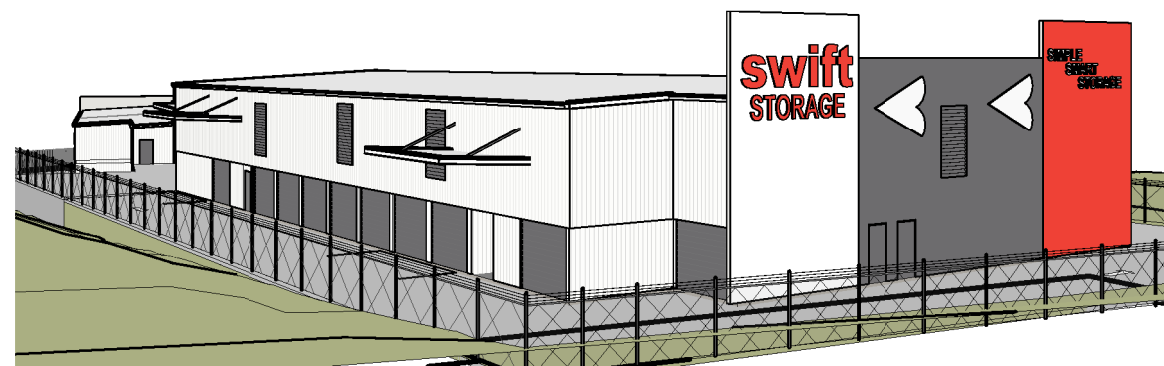
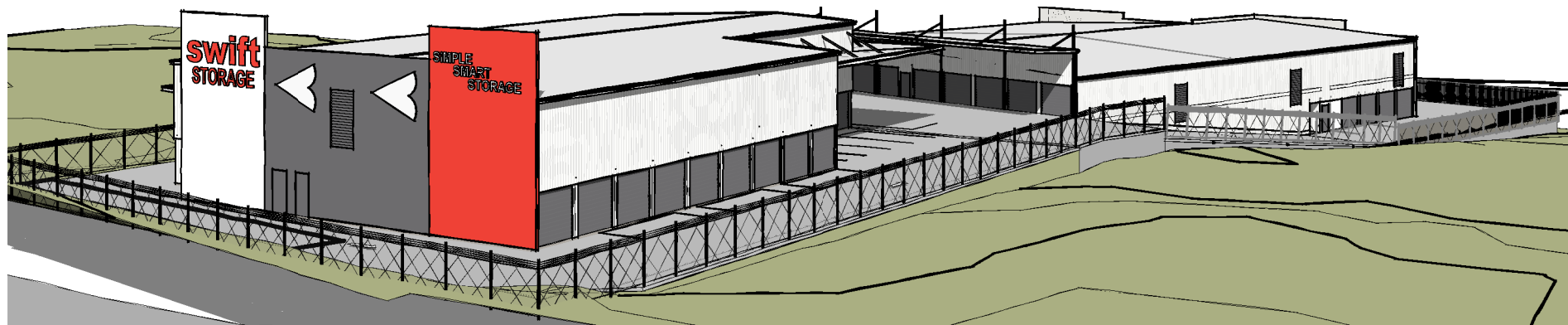
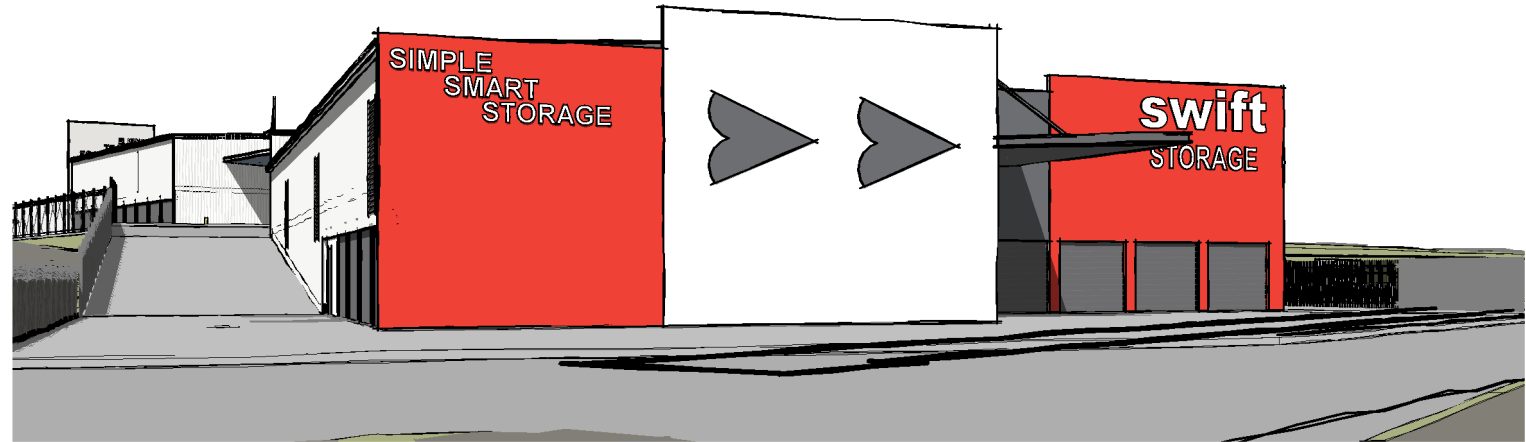
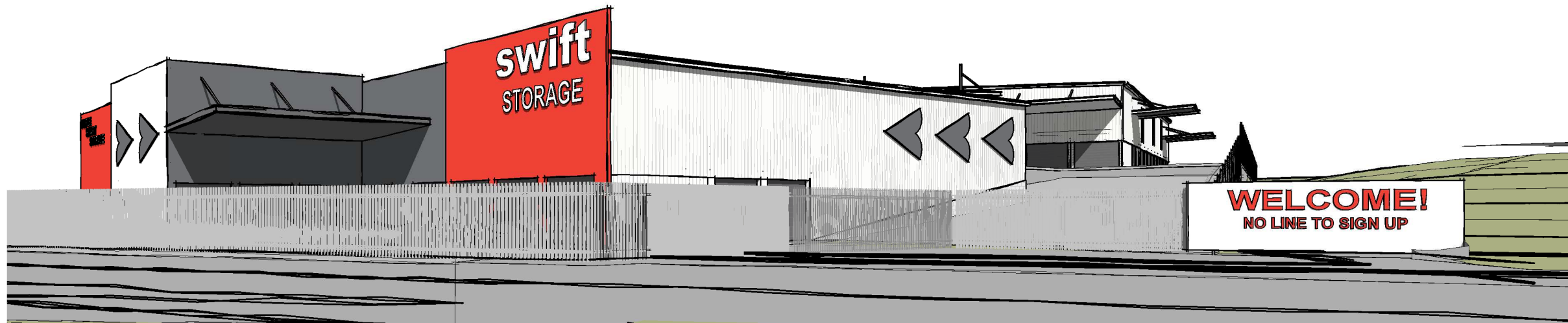
OLD PUB LANE, GREENBANK, QLD

PERSPECTIVE VIEWS

DWG N° BD025-DA12-I by MB
2025.03.14



BUILDING DESIGN
0416 352 057

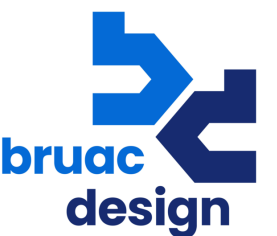


SWIFT STORAGE

OLD PUB LANE, GREENBANK, QLD

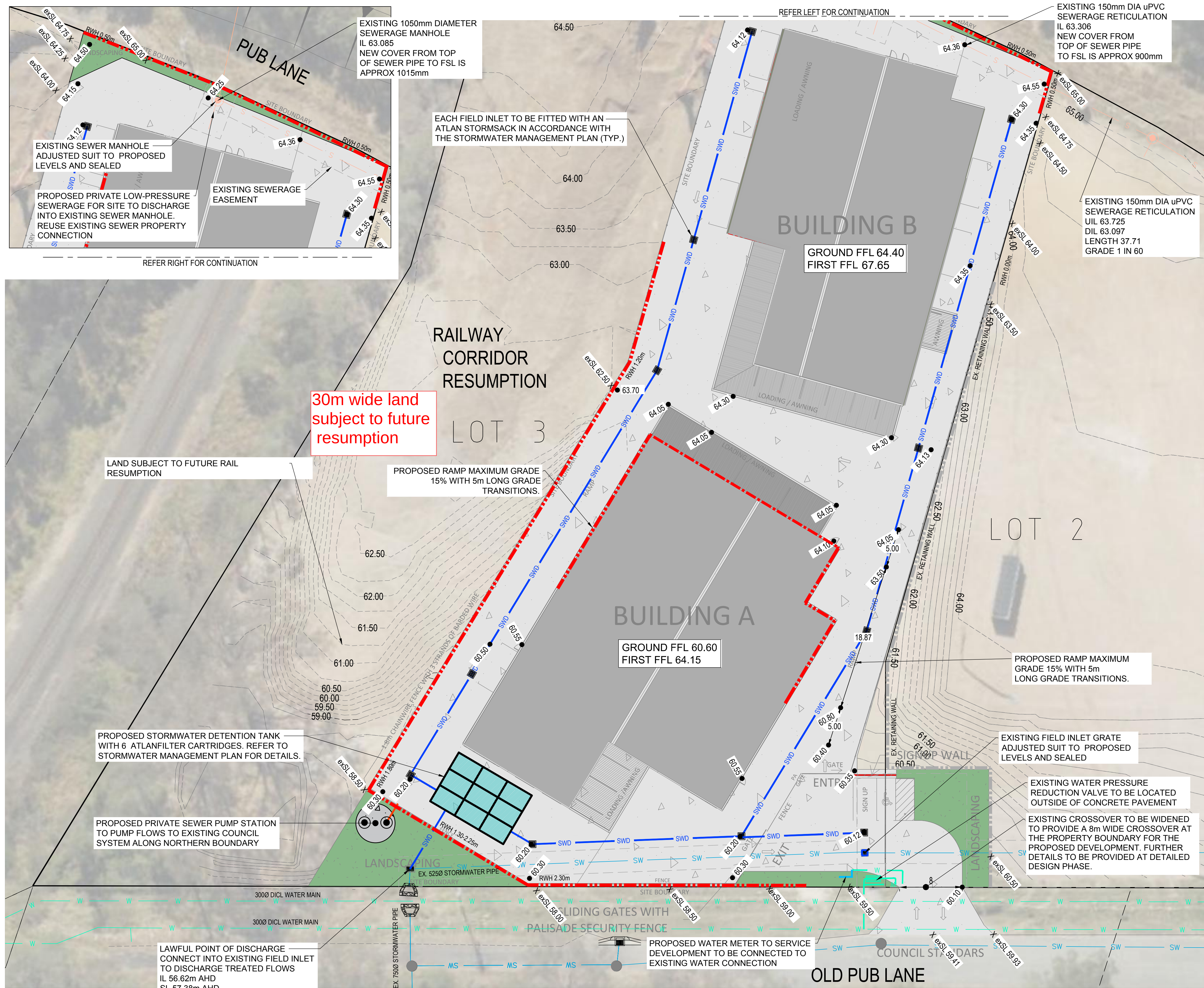
PERSPECTIVE VIEWS

DWG N° BD025-DA13-I by MB
2025.03.14



BUILDING DESIGN
0416 352 057

Appendix B - Conceptual Civil Plans



PROPOSED LEGEND

PROPOSED CONCRETE CARPARK

PROPOSED STORMWATER DETENTION TANK

PROPOSED STORMWATER DRAINAGE

PROPOSED SPOT LEVEL

PROPOSED BUILDING FLOOR LEVEL

CONCRETE SLEEPER RETAINING WALL

EXIST. CONCRETE SLEEPER RETAINING WALL

PROPOSED WATER SERVICE

EXISTING LEGEND

EXISTING STORMWATER PIPE

EXISTING TELSTRA

EXISTING ELECTRICITY

EXISTING SEWER MAIN

EXISTING WATER MIAN

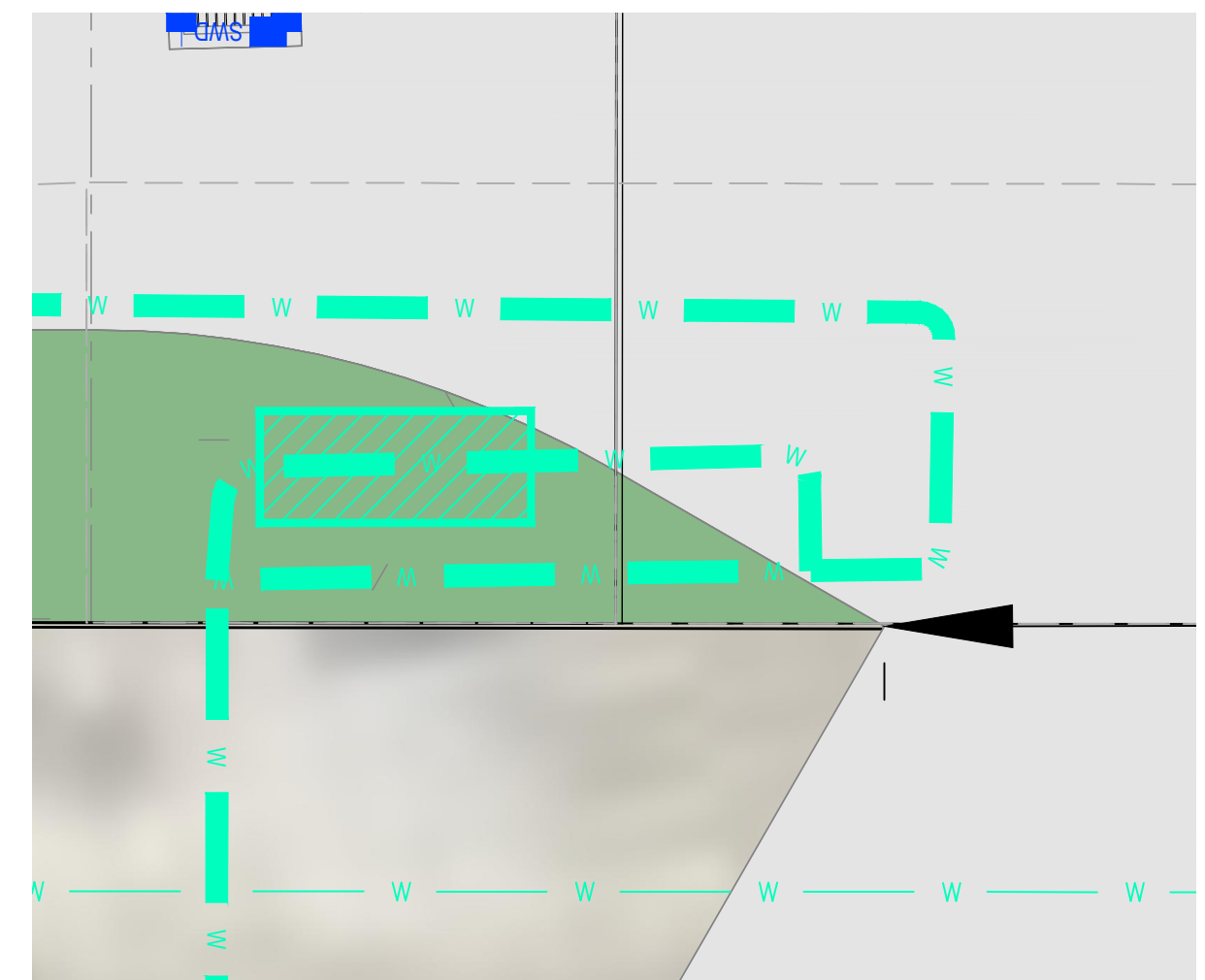
EXIST. SURFACE CONTOUR MINOR

EXISTING EDGE OF BITUMEN

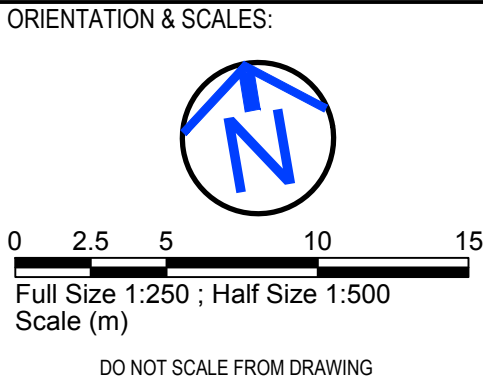
EXIST. SURFACE CONTOUR MAJOR

EXIST. SURFACE LEVEL

EXISTING BACK OF BARRIER KERB



REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK
A	ISSUE FOR APPROVAL	22/01/25	MB	RW	CH
B	EDQ INFORMATION REQUEST	14/03/25	MB	RW	CH



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HURLEY
CONSULTING ENGINEERS

PO BOX 417
CARINA QLD 4152

TELEPHONE: 0432 418 815
EMAIL: mail@hurleyce.com

PROJECT:
PROPOSED SELF STORAGE DEVELOPMENT
AT 69-77 OLD PUB LANE, GREENBANK

CLIENT:
SWIFT STORAGE

DRAWING TITLE:
CONCEPT CIVIL SERVICES LAYOUT PLAN

LOCAL GOVERNMENT AUTHORITY AND DEVELOPMENT APPLICATION NO:
ECONOMIC DEVELOPMENT QUEENSLAND

ORIGINAL SIZE:
A1

DRAWING No.:
C24032A-SK-C100

AMENDED IN RED
By: Demi Ebrahimi
Date: 10 April 2025

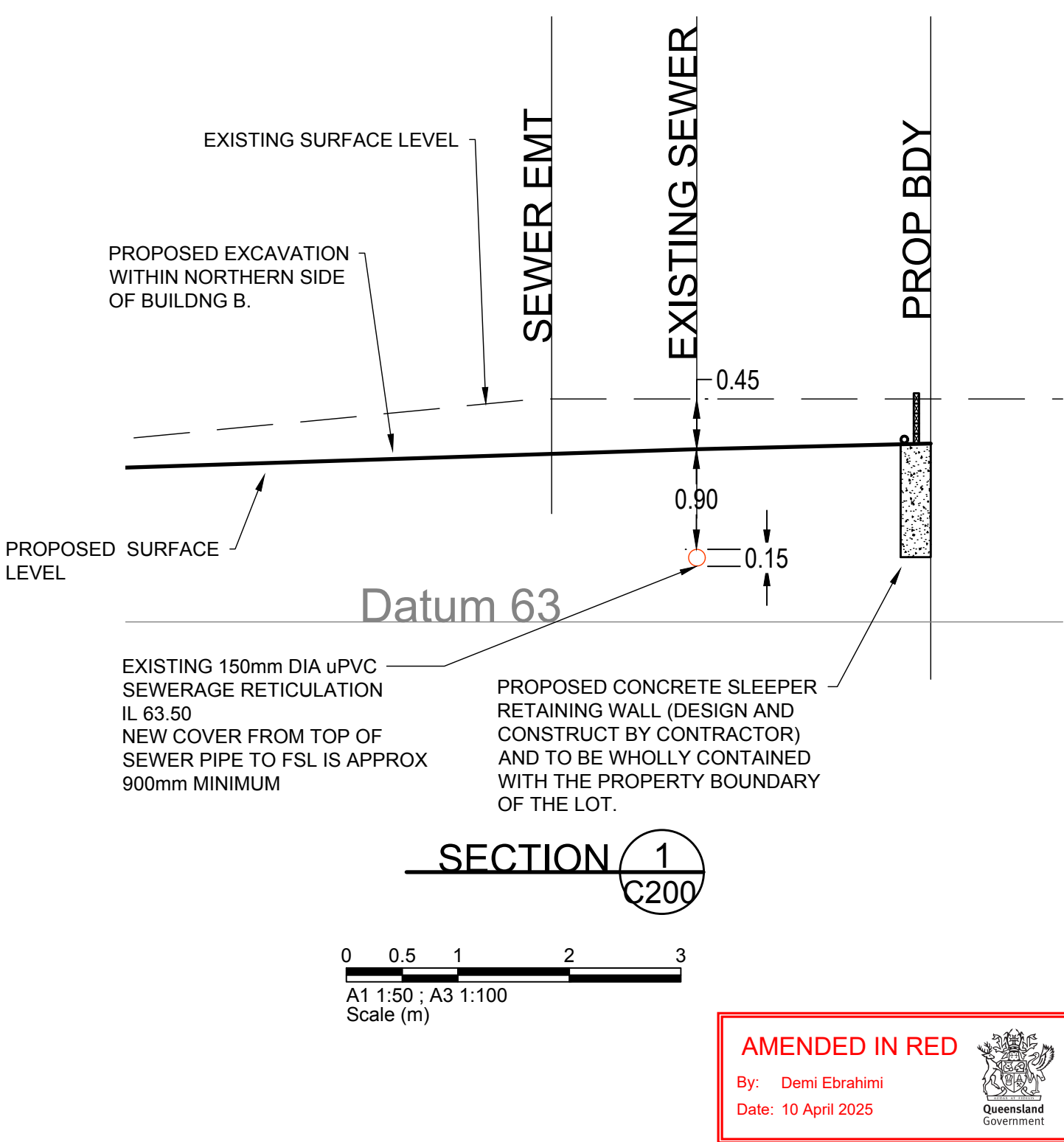


PROPOSED LEGEND

- EXTENT OF EARTHWORKS IN CUT
- EXTENT OF EARTHWORKS IN FILL
- PROPOSED ATLAN SPEL VAULT TANK
- PROPOSED STORMWATER DRAINAGE
- PROPOSED SPOT LEVEL
- PROPOSED BUILDING FLOOR LEVEL
- CONCRETE SLEEPER RETAINING WALL
- EXIST. CONCRETE SLEEPER RETAINING WALL

EXISTING LEGEND

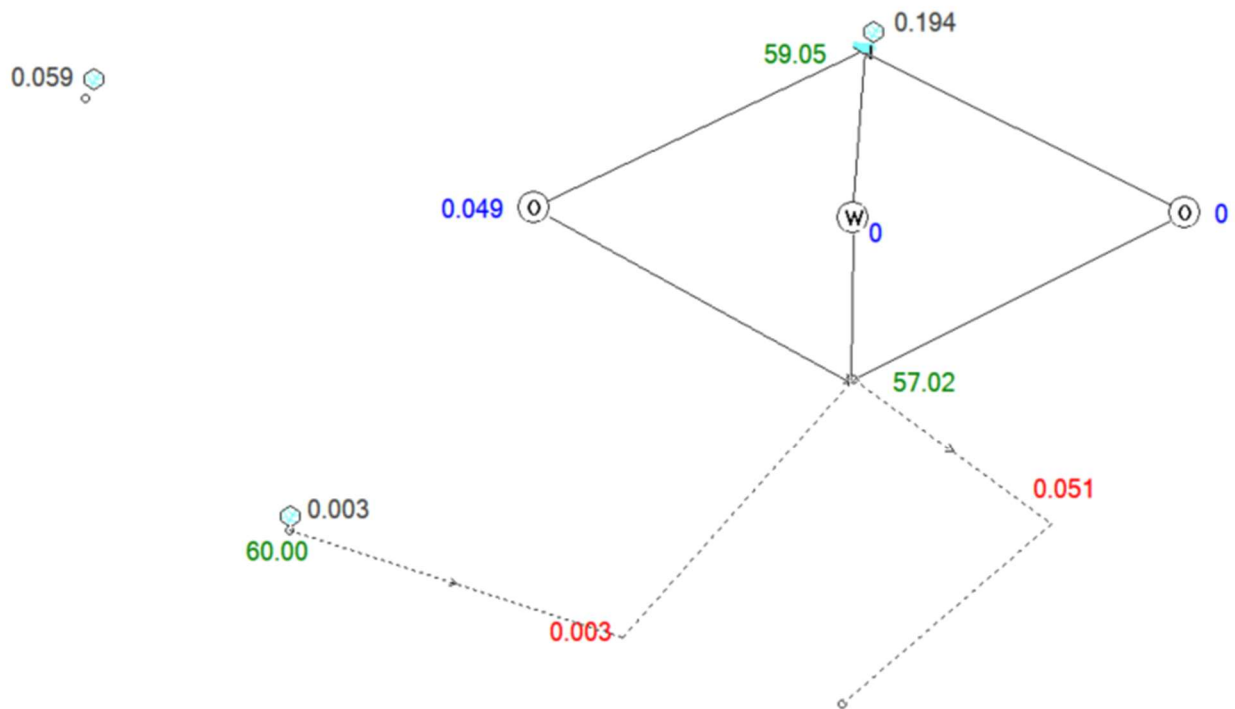
- EXISTING STORMWATER PIPE
- EXISTING TELSTRA
- EXISTING ELECTRICITY
- EXISTING SEWER MAIN
- EXISTING WATER MIAN
- EXIST. SURFACE CONTOUR MINOR
- EXISTING EDGE OF BITUMEN
- EXIST. SURFACE CONTOUR MAJOR
- EXIST. SURFACE LEVEL
- EXISTING BACK OF BARRIER KERB



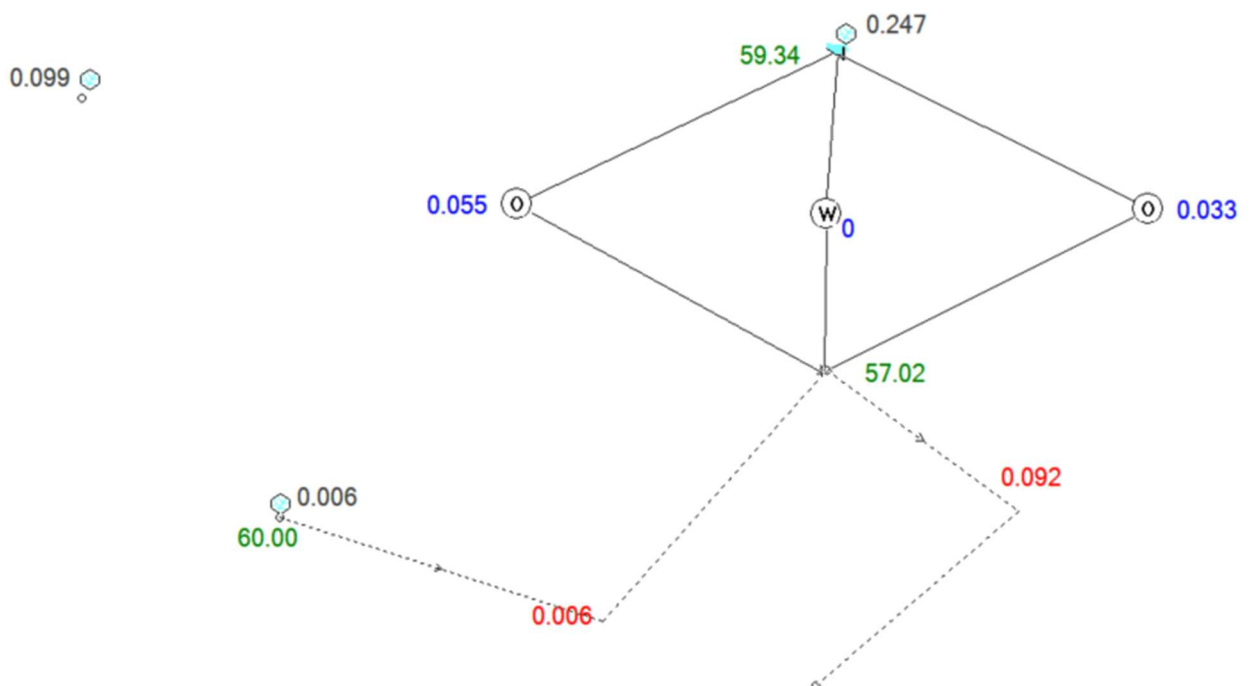
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A	ISSUE FOR APPROVAL	22/01/25	MB	RW	CH	
B	EDQ INFORMATION REQUEST	14/03/25	MB	RW	CH	
						APPROVED FOR AND ON BEHALF OF HURLEY CONSULTING ENGINEERS PTY LTD:
						NAME: CRAIG HURLEY RPEQ NO.: 15957
ORIENTATION & SCALES:  Full Size 1:250 ; Half Size 1:500 Scale (m) DO NOT SCALE FROM DRAWING						
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			PROJECT: PROPOSED SELF STORAGE DEVELOPMENT AT 69-77 OLD PUB LANE, GREENBANK			
PO BOX 417 CARINA QLD 4152			TELEPHONE: 0432 418 815 EMAIL: mail@hurleyce.com			
CLIENT: SWIFT STORAGE			DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN			
			LOCAL GOVERNMENT AUTHORITY AND DEVELOPMENT APPLICATION NO: ECONOMIC DEVELOPMENT QUEENSLAND			
			ORIGINAL SIZE: A1 DRAWING No.: C24032A-SK-C200			

Appendix C - DRAINS Model & Results

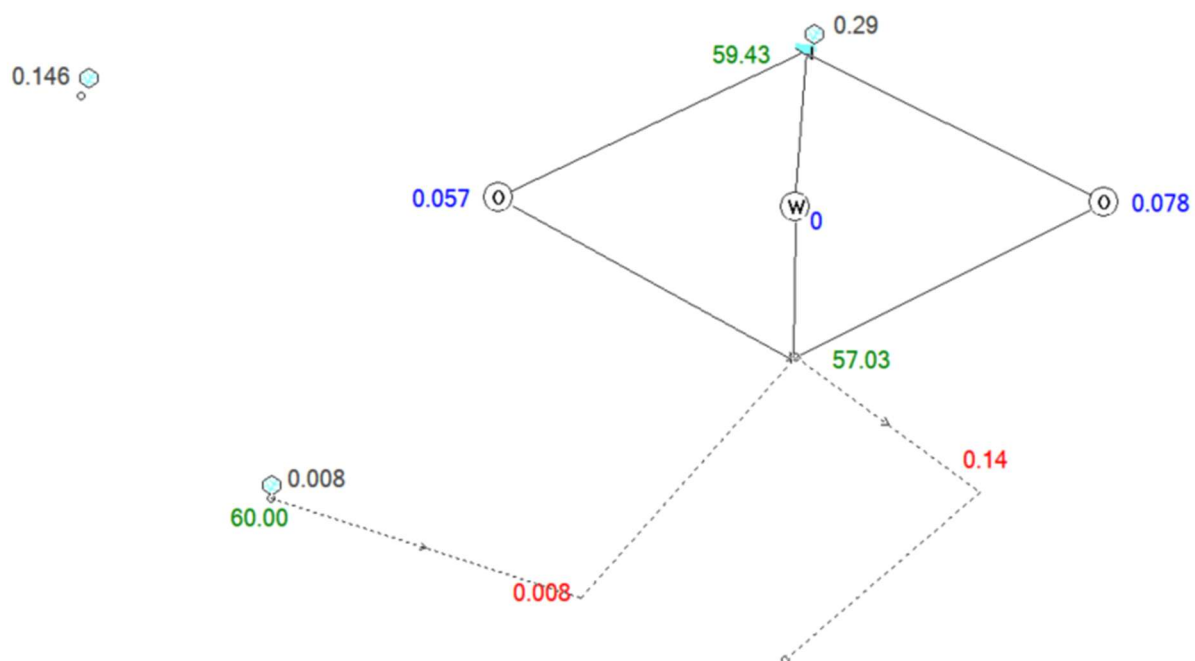
Results for median storm in critical 0.5EY ensembles using Full Unsteady hydraulic model.



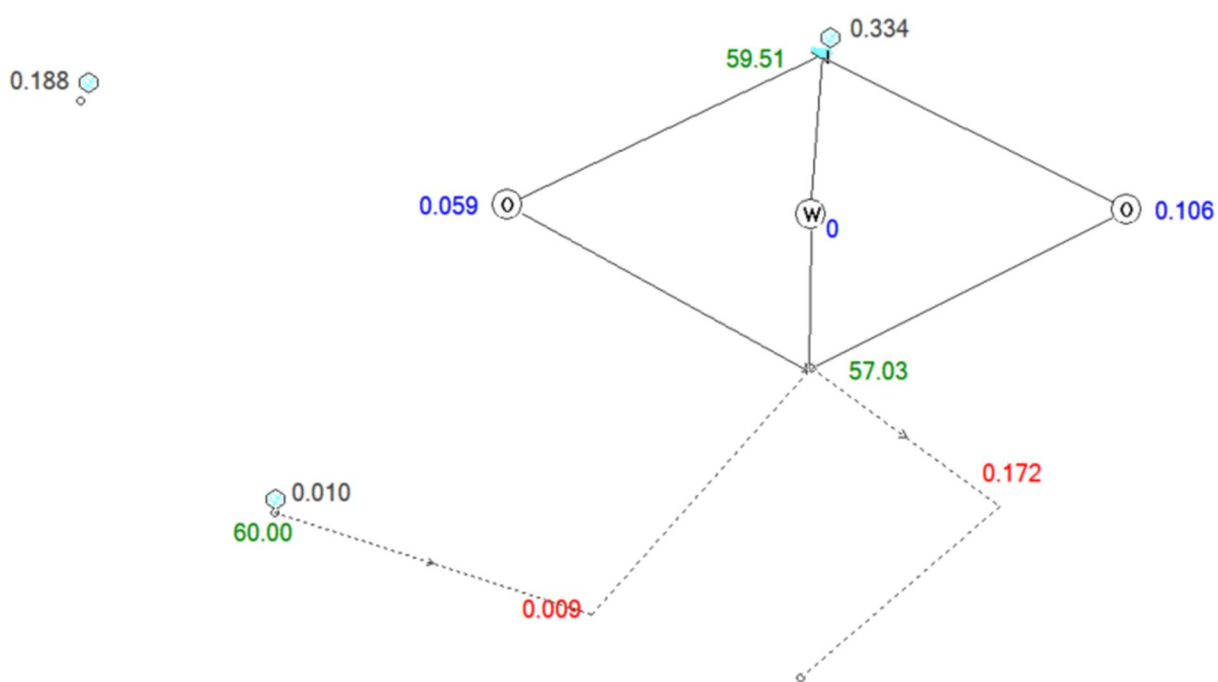
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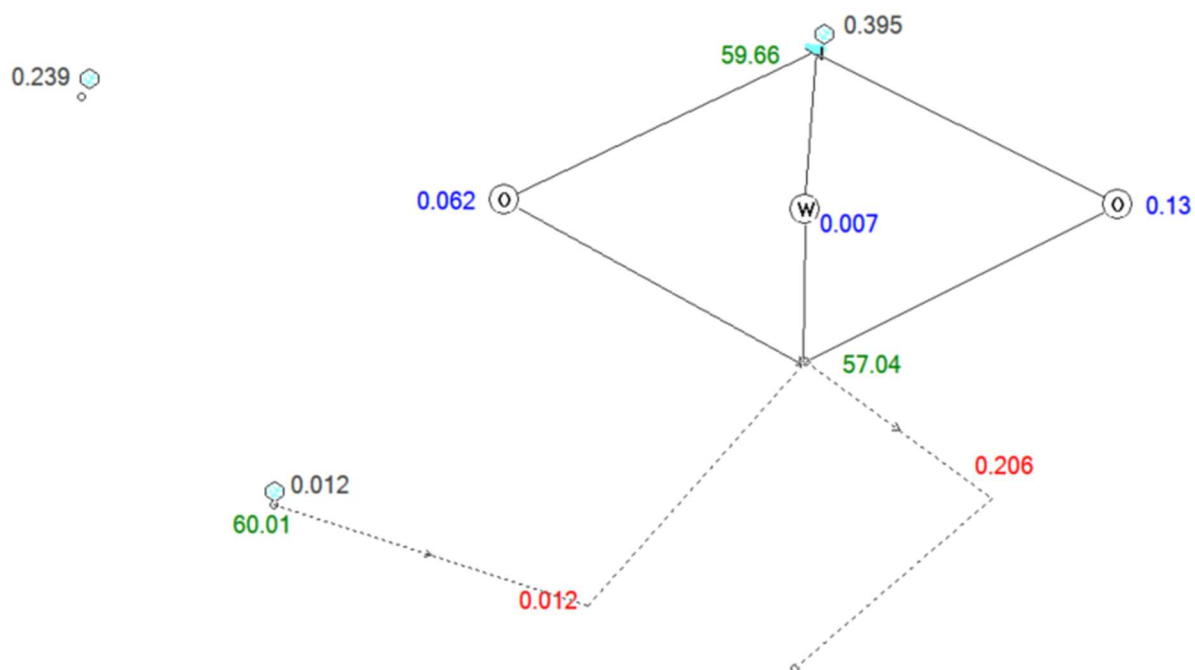
Results for median storm in critical 10% AEP ensembles using Full Unsteady hydraulic model.



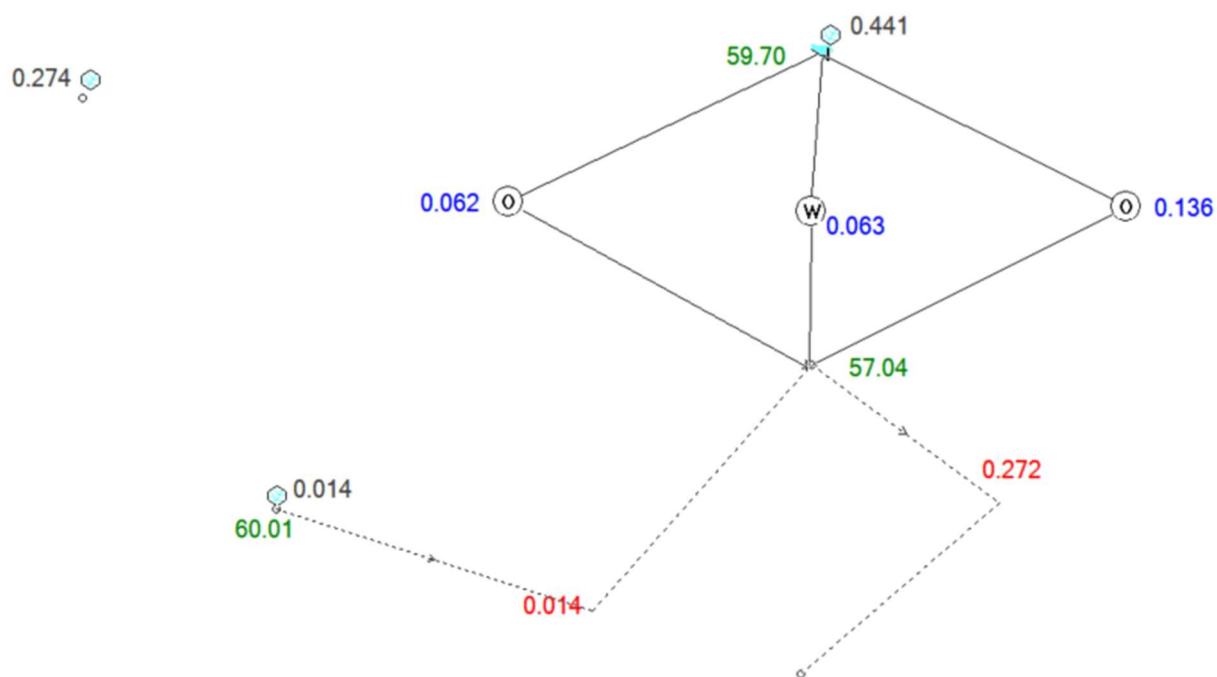
Results for median storm in critical 5% AEP ensembles using Full Unsteady hydraulic model.



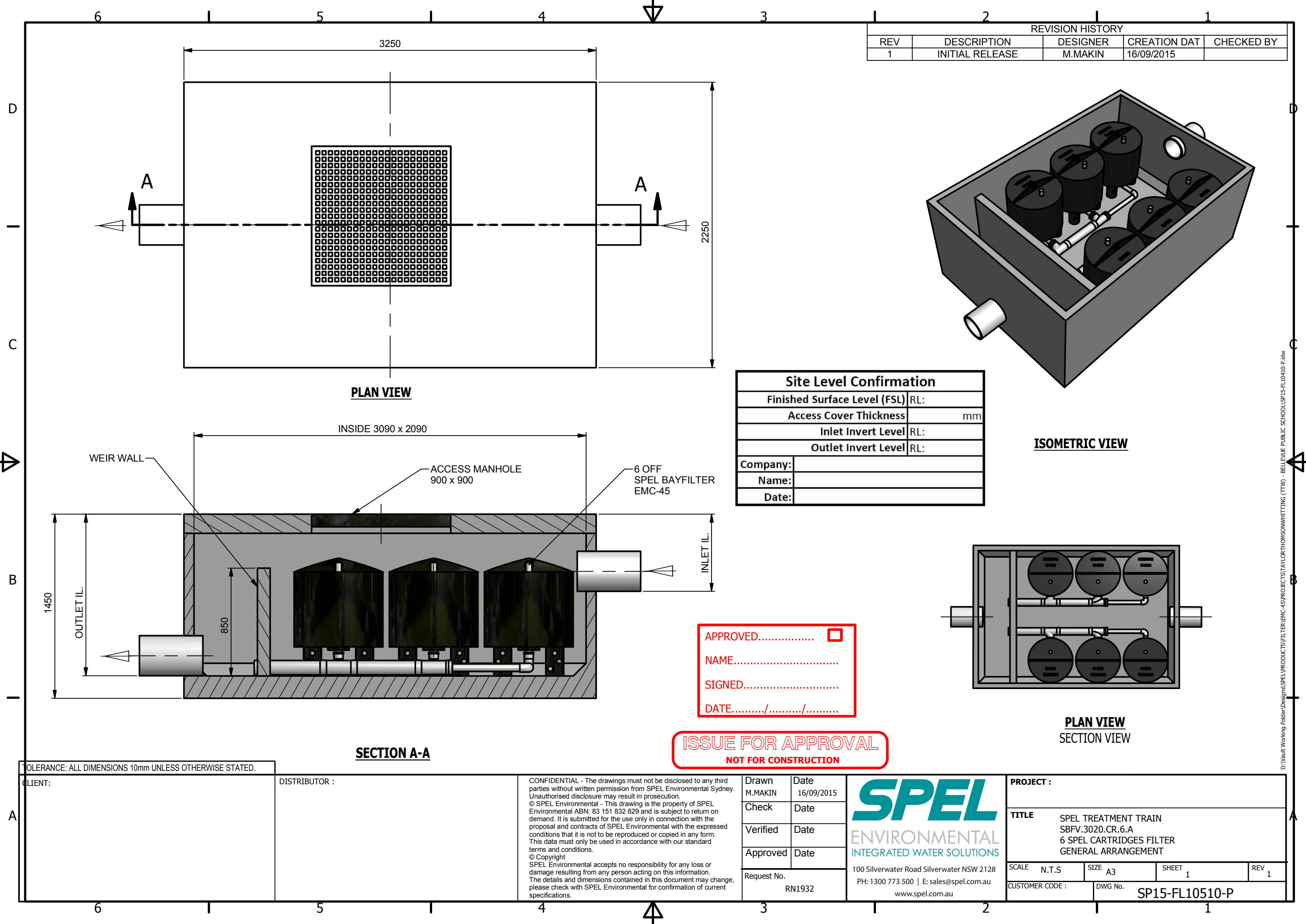
Results for median storm in critical 2% AEP ensembles
using Full Unsteady hydraulic model.



Results for median storm in critical 1% AEP ensembles
using Full Unsteady hydraulic model.



Appendix D - Atlan Stormwater Quality Details



REVISION HISTORY				
REV	DESCRIPTION	DESIGNER	CREATION DAT	CHECKED BY
1	INITIAL RELEASE	M.MAKIN	16/09/2015	

Site Level Confirmation	
Finished Surface Level (FSL)	RL:
Access Cover Thickness	mm
Inlet Invert Level	RL:
Outlet Invert Level	RL:
Company:	
Name:	
Date:	

APPROVED..... ☐

NAME.....

SIGNED.....

DATE...../...../.....

ISSUE FOR APPROVAL
NOT FOR CONSTRUCTION

TOLERANCE: ALL DIMENSIONS 10mm UNLESS OTHERWISE STATED.

CLIENT:

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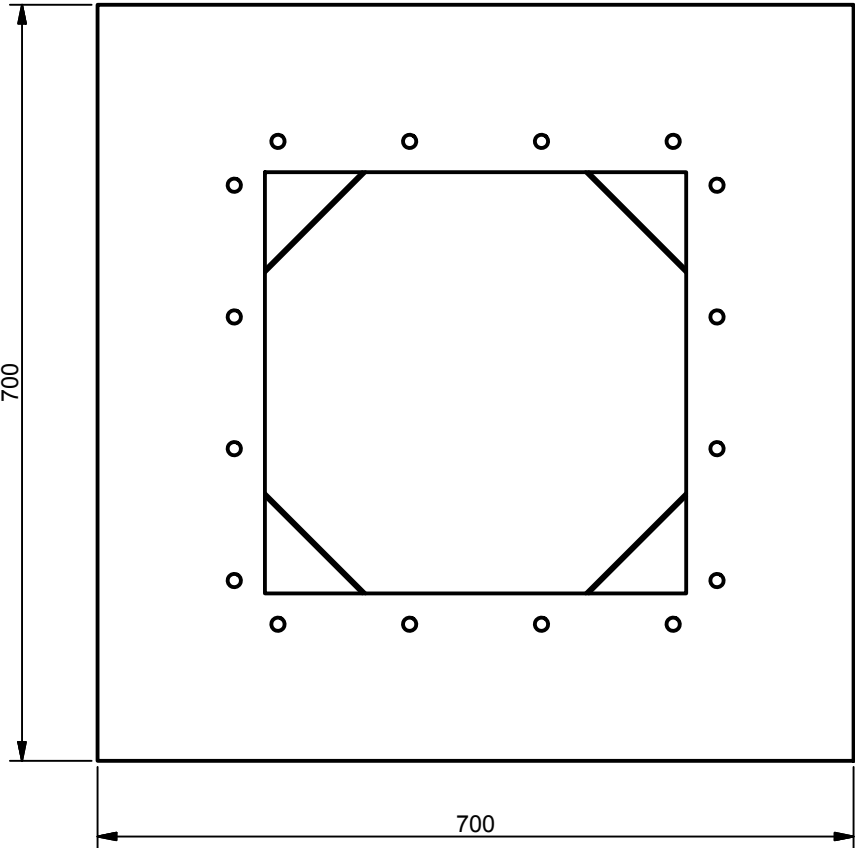
Drawn	Date
M.MAKIN	16/09/2015
Check	Date
Verified	Date
Approved	Date
Request No.	
RN1932	

SPEL
ENVIRONMENTAL
INTEGRATED WATER SOLUTIONS

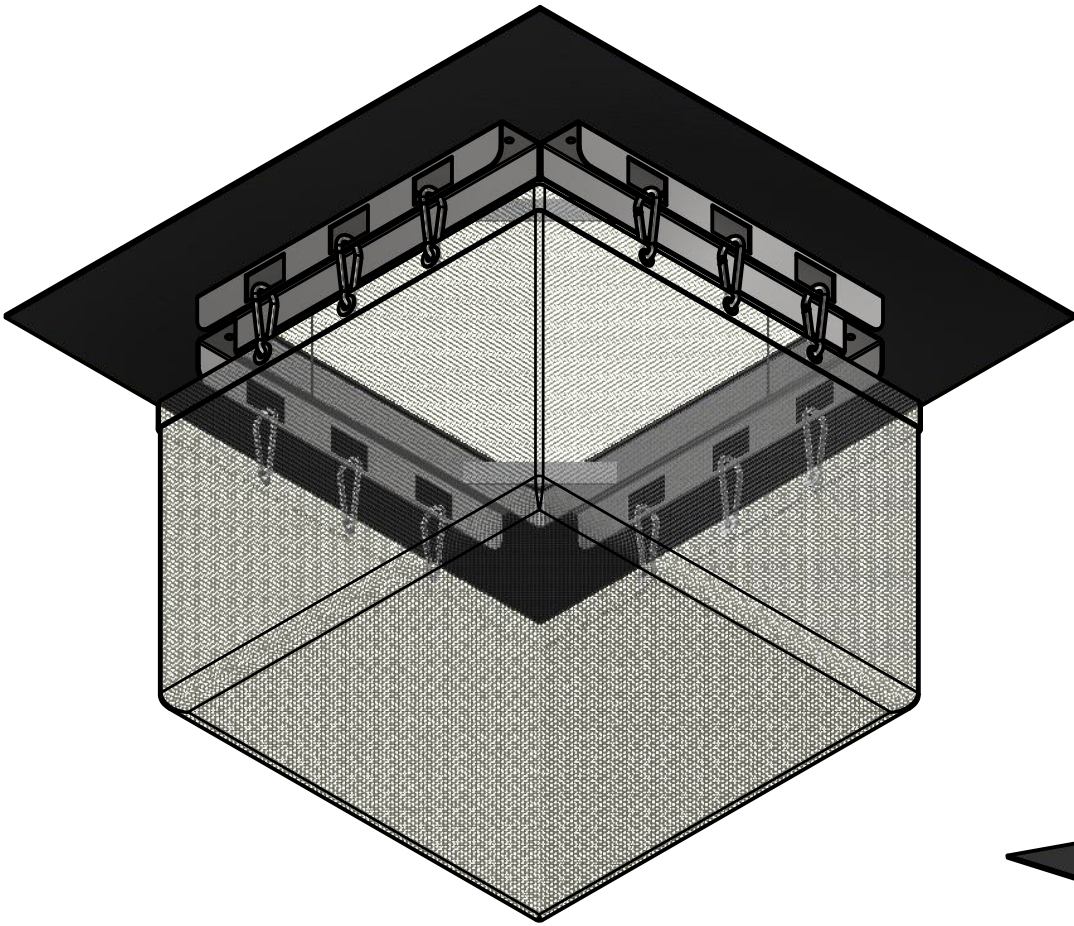
100 Silverwater Road Silverwater NSW 2128
PH: 1300 773 500 | E: sales@spel.com.au
www.spel.com.au

PROJECT :			
TITLE			
SPEL TREATMENT TRAIN SBFV.3020.CR.6.A 6 SPEL CARTRIDGES FILTER GENERAL ARRANGEMENT			
SCALE	N.T.S	SIZE	A3
SHEET	1	REV	1
CUSTOMER CODE :		DWG No.	
		SP15-FL10510-P	

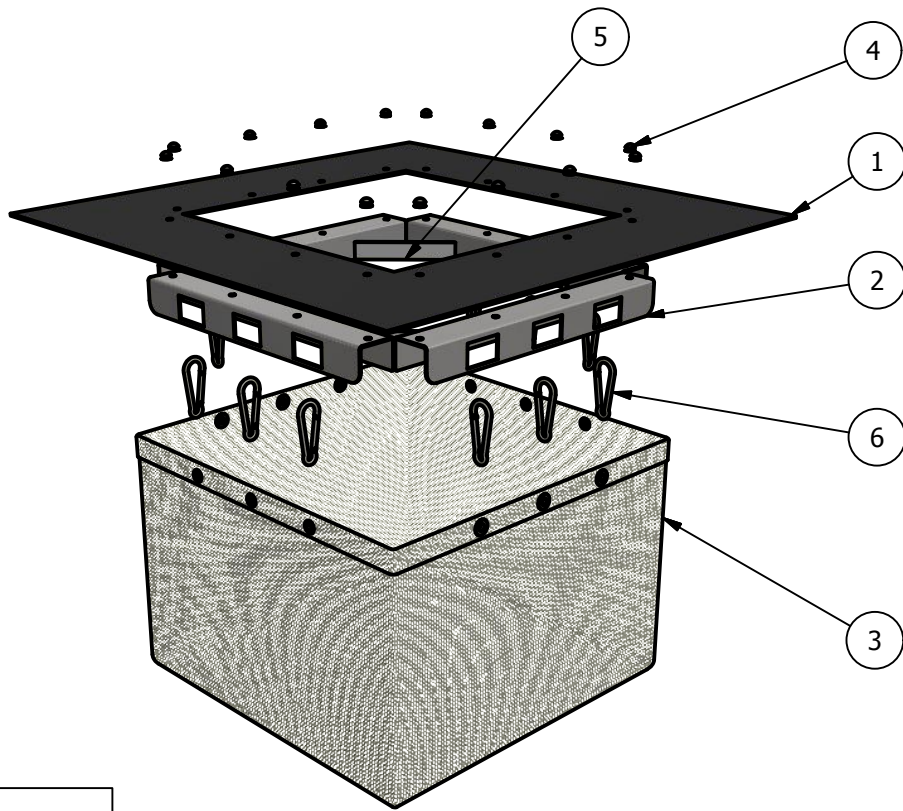
REVISION HISTORY				
REV	DESCRIPTION	DESIGNER	DATE	CHECKED BY
1	INITIAL RELEASE	M.M	25/03/2015	



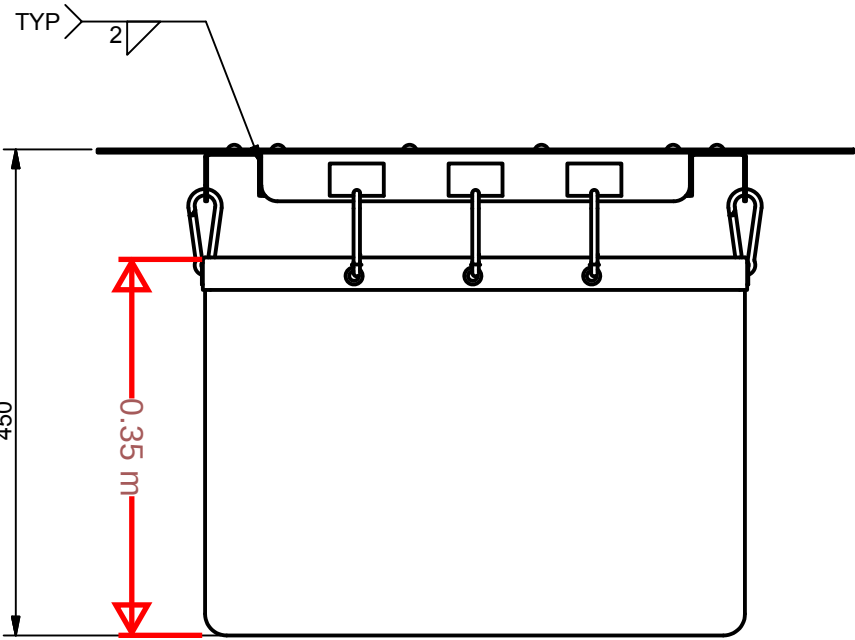
PLAN VIEW



ISOMETRIC VIEW
BOTTOM VIEW



ISOMETRIC VIEW
EXPLOSION



ELEVATION VIEW

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PLASTIC SHEETING	HDPE
2	4	SHEET METAL BENDING	STAINLESS STEEL 304
3	1	TEXTILE FABRIC & MESH LINER	HDPE
4	16	BLIND RIVIT 7 DIA.	STAINLESS STEEL 304
5	4	CORNER ESTIFFENER - FLAT BAR 25 x 2 - 141 LG	STAINLESS STEEL 304
6	12	CARABINER CLIP 6	ALUMINIUM

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M.M

Date

25/03/2015

CHECKED BY

Date

Verified

Date

Approved

Date

Customer Code :

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TITLE

SPEL STOMSACK
FRAME 600 x 600
BASKET MOUNTING ASSEMBLY DRAWING

REQUEST No.

D20194

SIZE

A3

SHEET

1

REV

1

SCALE

N.T.S

DWG No.

SP15-BB4610-S