ATLAS ENGINEERS

Engineering Services Report

3850-3858 Mount Lindesay Highway, Park Ridge

Cheema Farms Pty Ltd

Email: Civil@atlasengineers.com.au
Phone: 0449 998 966
Website: Atlasengineers.com.au

Internal Ref: AE0040-003
Revision: 1.0
Date: 16 March 2026

Document Control Sheet

Report Title	Engineering Services Report
Atlas Reference	AE0040-003
Street Address	3850-3858 Mount Lindesay Highway, Park Ridge
RP Description	Lot 3 SL 6300
Client	Cheema Farms Pty Ltd

Version Control

Version	Revision	Date	Author	Reviewed	Approved	Signature
1.0	Original Issue	16/03/2026	Thai Long	Thai Long	Thai Long RPEQ 33762	

Table of Contents

Table of Figures

Table of Appendices

1.0 Introduction

Atlas Engineers have been engaged by Cheema Farms Pty Ltd to prepare a Engineering Services Report to support a Development Approval to Logan City Council (LCC) for the proposed industrial development at 3850-3858 Mount Lindesay Highway, Park Ridge.

The purpose of this report is to address the municipal engineering services components of the development and identify at a conceptual level the works required to facilitate the development.

2.0 Site

2.1 Existing Site and Land Use

The subject site is located at 3850-3858 Mount Lindesay Highway, Park Ridge (Lot 3 SL 6300). The site fronts East Service Road to the West.

The site covers a total combined area of 10,800 m^2 and currently consists of multiple sheds with n existing residential dwelling with a mixture of gravel and asphalt sealed hardstand. An aerial image of the site can be seen in **Figure 1** below.

The catchment grades from the south to the west generally grades at approximately 1.7%, with the levels ranging from 74.65m to 73.04m AHD.

Refer to **Appendix A** for the Detailed Site Survey.

Figure: Subject Site (QLD Globe – Accessed March. 2026)

2.2 Proposed Development

It is proposed to demolish the existing buildings and sheds and construct an industrial development consisting of 4 buildings with internal access driveways with a new crossover to East Service Road. **Figure 2** below provides a preview of the architectural concept.

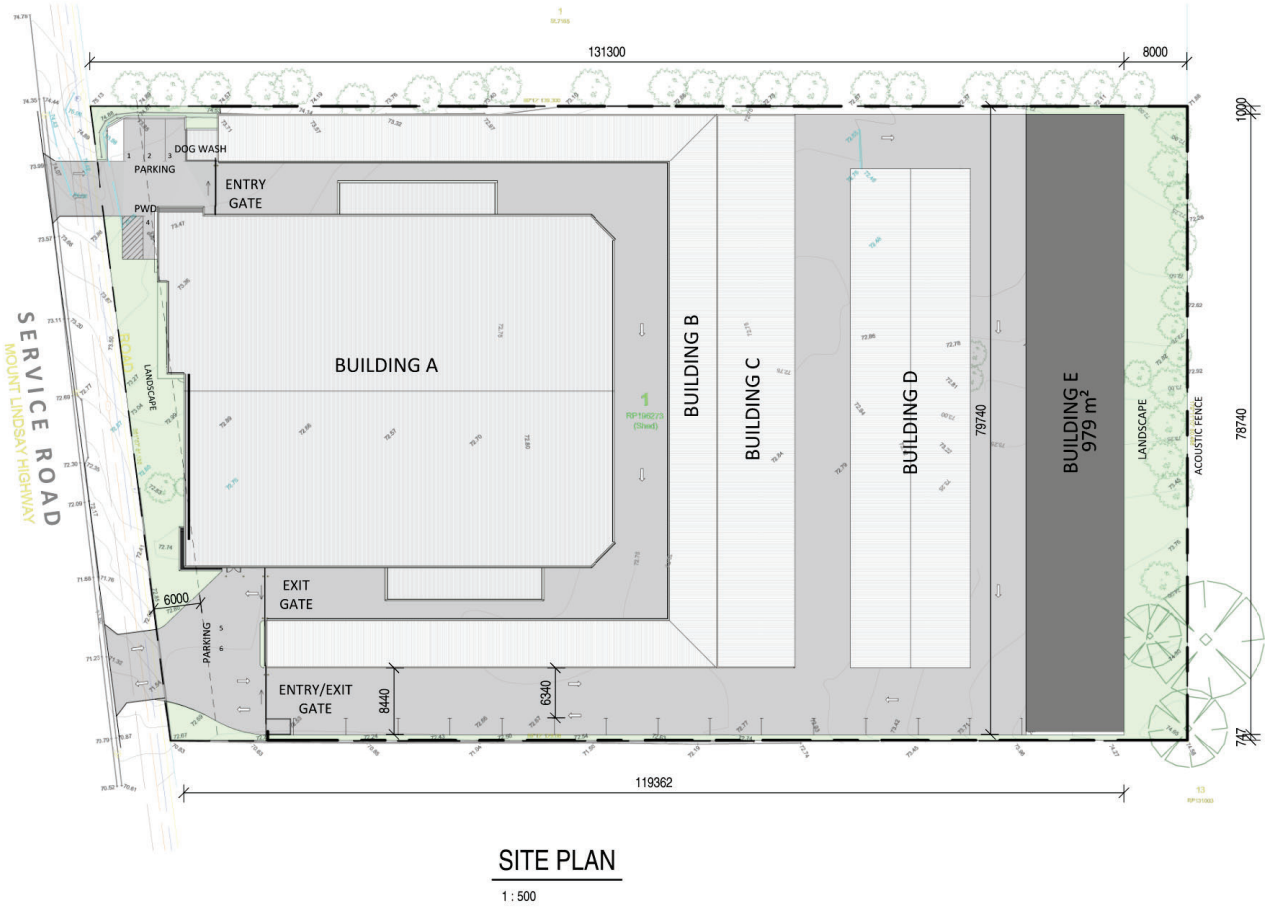


Figure 1: Architectural Site Plan (Bruac Design – PROPOSED SITE PLAN – BD072-SK01-C – Dated 12/02/2026)

Architectural Drawings can be found in **Appendix B**.

3.0 Stormwater

A Stormwater management plan has been completed as a standalone report by Atlas Engineers - Stormwater Management Plan (AE0040-002).

The lawful point of discharge for the proposed development is to be the existing gully pit within the road reserve East Service Road. To address stormwater quantity for the proposed development an underground onsite detention tank (OSD) is proposed to mitigate flows. To address stormwater quality and to comply with Council, a proprietary stormwater quality improvement device is to be implemented.

4.0 Earthworks

Earthworks will be required to facilitate the development, earthworks will be required for the building pad, internal driveway and stormwater devices. Retaining walls will be required, proposed walls are to be less than 2m in height.

All design and construction of earthworks are to be completed in accordance with AS3798 and Logan City Council guidelines.

As the site is located above 5.0 AHD, it is not expected for the site to be subject to soils containing acid sulfate.

For further details, refer to **Appendix C.**

Refer to **Appendix D** for the responses to Logan City Council – Works, services and infrastructure code.

5.0 Roadworks

The site is currently accessed by a 7.5m and 9m wide crossover to East Service Road. It is proposed to remove the existing crossovers and reinstate the existing kerb and channel and verge.

To service the proposed development, two new driveway crossovers are proposed off East Service Road to the northern and southern frontage of the site with respective proposed widths of 7m and 9m wide.

Internal driveways are to be provided to service the site, further detail is to be provided at detailed design stage.

For further details, refer to **Appendix C.**

Refer to **Appendix D** for the responses to Sunshine Coast Council – Works, services and infrastructure code.

6.0 Sewer

The site is not currently sewered, a sewer connection cannot feasible provided to site as the surrounding area does not contain a gravity sewer which is able to be connected.

As a gravity sewerage system is not able to be utilised, it is proposed to use an onsite sewer treatment system such as BioCycle (or approved otherwise). As the sewer demand for the site is limited an onsite sewerage treatment system should be deemed acceptable. The development to the south located at 3872-3890 Mount Lindesay Highway, Park Ridge (MCUI/61/2023) has utilise the proposed method for sewer.

BioCycle self-description from the website reads as follows: BioCycle® aerobic wastewater treatment systems are the modern, environment-friendly alternative to old-fashioned septic tanks. BioCycle® wastewater treatment systems digest solid wastes and use controlled natural processes to purify wastewater. This clean, odourless, disinfected water is then recycled through garden drippers or sprinklers or through sub surface irrigation systems.

Along the western boundary of the development is the landscape area of approximately 285m^2 it is proposed to utilise this area as the irrigation area. The site of the irrigation area and tank selection is to be determined at

detailed design stage following a geotechnical investigation. Design and documentation of the system is to be completed by an experienced and qualified practitioner.

For further details, refer to **Appendix C.**

Refer to **Appendix D** for the responses to Logan City Council – Works, services and infrastructure code.

7.0 Water

An existing water main is located within the easter verge of East Service Road, the site is currently serviced by this water main. It is proposed to remove this existing connection and provide a new water connection and meter to service the proposed development. The water connection and meter size will be determined at detailed design stage by the hydraulic consultant.

For further details, refer to **Appendix C.**

Refer to **Appendix D** for the responses to Logan City Council – Works, services and infrastructure code.

8.0 Electrical and Telecommunication

Electrical and telecommunication services are available within the verge of East Service Road. Load requirements and any required upgrades to service the developments will need to be investigated by a suitably qualified electrical consultant as part of detailed design.

Refer to **Appendix D** for the responses to Logan City Council – Works, services and infrastructure code.

9.0 Conclusion

Atlas Engineers have been engaged by Cheema Farms Pty Ltd to prepare an Engineering Services Report (ESR) to support a Development Approval to Logan City Council (LCC) for the proposed industrial development at 3850-3858 Mount Lindesay Highway, Park Ridge.

The site covers an area of 10,800m^2, The site fronts East Service Road to the west.

This ESR provides advice on engineering services strategy for the proposed Childcare and engineering planning issues associated with the development application. The servicing strategy for the proposed development is summarised below:

- **Stormwater** – A standalone stormwater management plan has been prepared by Atlas Engineers (AE00140-002 dated 12/03/2026). Managed via a lawful point of discharge to East Service Road, incorporating an underground onsite detention tank for flow mitigation and proprietary stormwater quality improvement devices.
- **Earthworks** – Earthworks required for for building pad, driveway, carpark, and stormwater systems, with retaining walls less than 2m in height as required.
- **Roadworks/site access** - Existing 7.5m and 9m crossover to East Service Road to be removed and kerb and channel to be reinstated. Two crossovers are proposed to service the site with the northern crossover to be 7m wide and southern crossover is proposed to be 9m wide.
- **Sewer** – a gravity connection to a sewer reticulation system is not feasible for the site. It is proposed to utilise an onsite sewer treatment system such as BioCycle, as previously approved as part of MCUI/61/2023.
- **Water** – An existing water main is located in the eastern verge of East Service Road. A new connection and meter to replace existing service, final sizing to be confirmed during detailed design.
- **Electrical and Telecommunication** Connection to the existing electrical infrastructure surrounding the site to be confirmed by an electrical consultant.

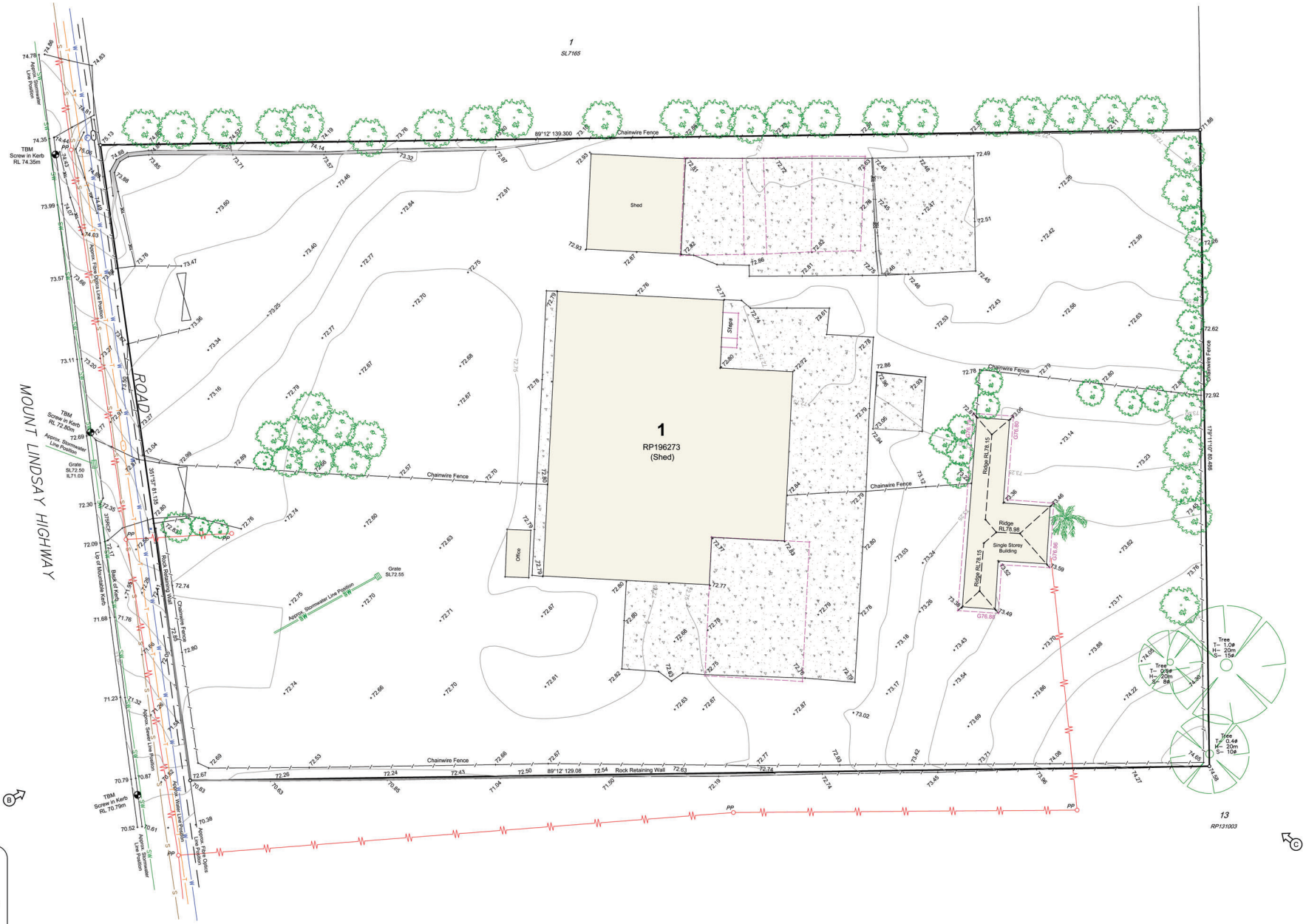
Appendix A: Site Survey

N

PHOTO A

PHOTO B

PHOTO C



LEGEND

- TLO TRAFFIC LIGHT
- LIGHT POLE
- PP POWER POLE
- POWER BOX
- O/H ELECTRICAL LINE
- U/G POWER LINE
- TELSTRA PIT
- NBN PIT
- TELSTRA LINE
- GAS MARKER
- GAS LINE
- SEWER MANHOLE
- SEWER LINE
- TEMPORARY BENCH MARK
- PERMANENT SURVEY MARK
- ORIGINAL PEG
- LOCATOR POTHOLE
- PHOTO NUMBER & DIRECTION
- GUTTER HEIGHT
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- WATER LINE
- STORMWATER MANHOLE
- GULLY GRATE
- ROOFWATER PIT
- STORMWATER LINE
- KERB ADAPTOR
- ROCK RETAINING WALL
- TIMBER RETAINING WALL
- BLOCK RETAINING WALL
- TOP OF BANK
- BOTTOM/TOE OF BANK
- FENCE
- SIGN
- SURVEYED CONTOUR 0.25
- NATURAL CONTOUR (BCC BIMAP 2002)

Note that the underground location of services is indicative only and has been derived from records obtained from DBYD. This location has not been verified.
It is recommended that physical location of these services is carried out prior to construction.

Note: Identification Survey is recommended prior to Construction due to missing original pegs at corners.

Scale 1:250 – Lengths are in Metres.

2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36

Revision Notes

Rev	Date	Notes
A	14/01/2026	Original Issue
B	05/03/2026	Additional Stormwater information added

Note: The location of Boundary features, including Retaining Walls and Fences are indicative only and are not a true representation of the actual Property Boundaries. An Identification Survey is recommended to determine the accurate location of the Property Boundaries, and the accuracy of any existing Boundary Pegs onsite.

Horizontal Datum: SL6300
Vertical Datum: AHDD (SmartNet Aus) GPS

Detail Survey

Address: 3850 Mount Lindsay Highway, Park Ridge
Real Property Description: Lot 3 on SL6300
Local Government: Logan City Council

Scale @ A1: 1/250 | Surveyed: 13/01/2026 | Drafted: 14/01/2026

Client: Cheema Farms Pty Ltd

Survey 360 Pty Ltd
www.Survey360.com.au Tel: (07) 3202-8978
Email: admin@survey360.com.au

Drawing Number: 251050 | Rev: B | Surveyed by: AL | Drawn By: AL

survey360

Appendix B: Architectural Drawings

Proposed Self-Storage Facility at 3850 Mt Lindsay Hwy, Park Ridge QLD

PROPOSED SELF STORAGE

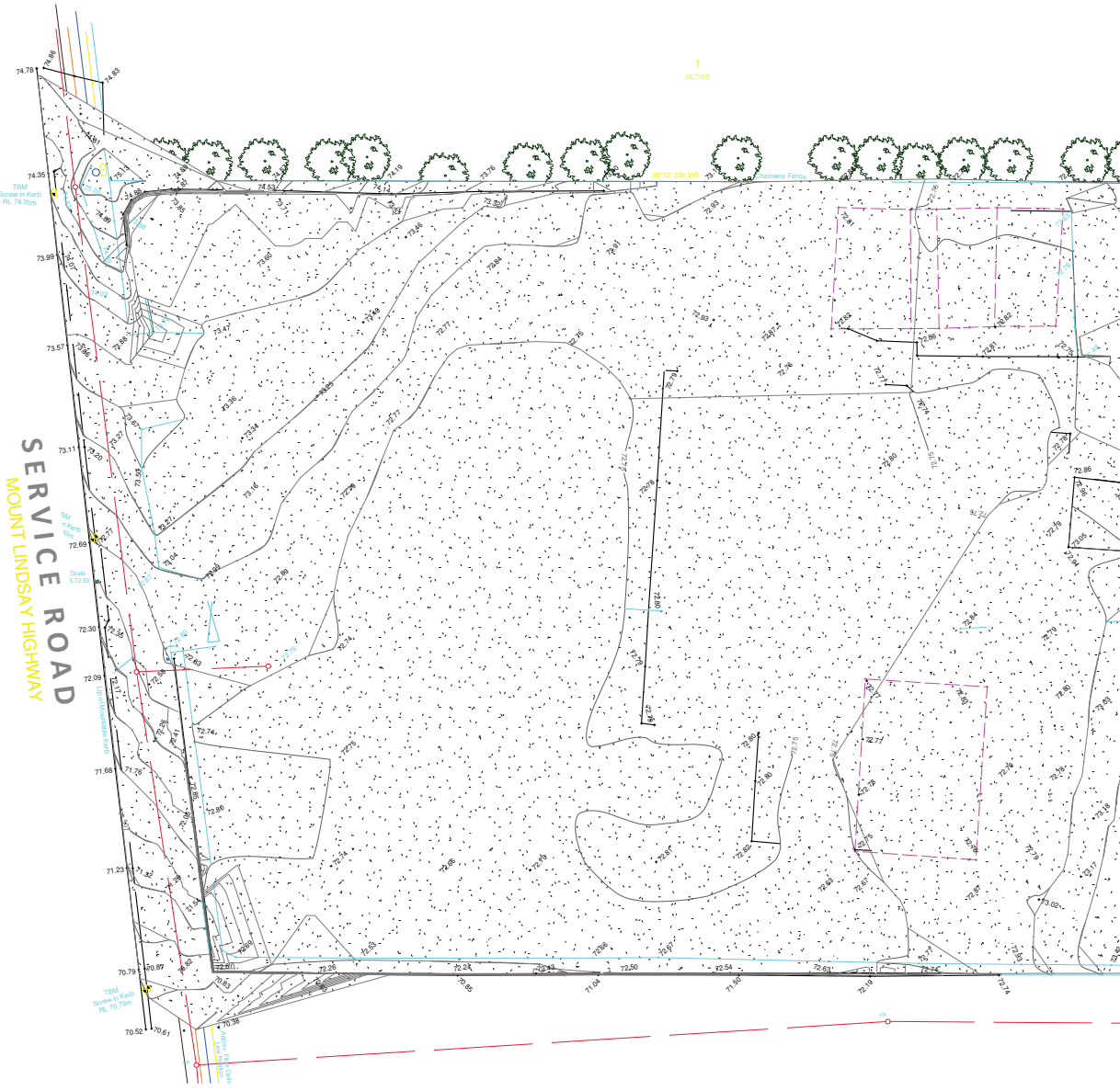
3850 MT LINDSEY HWY, PARK RIDGE, QLD

COVER PAGE

DWG N° BD072-DA00-C by MB

DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057

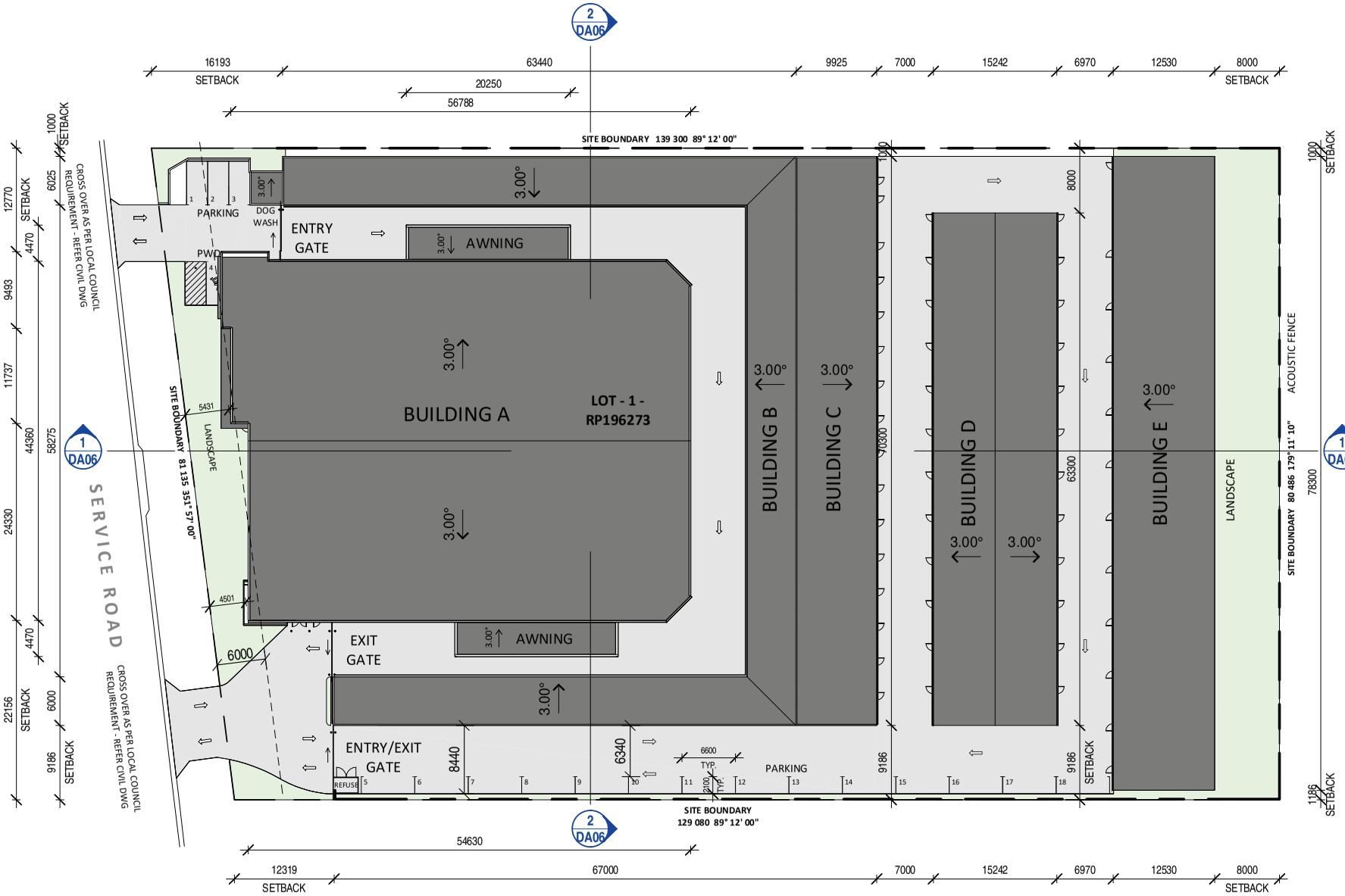


SITE PLAN - EXISTING

1 : 500

PROPOSED SELF STORAGE

3850 MT LINDSEY HWY, PARK RIDGE, QLD



SITE DATA

LOT - 1 - RP196273
LOCAL GOVERNMENT - LOGAN CITY COUNCIL

AREA SCHEDULE

SITE AREA	10,800m² tbc
PROPOSED SITE COVER	6,177m² (57%)
BUILDING GFA	
KIOSK & WORKSPACE	195m²
GF STORAGE	3,338m²
WORKSTORES	2,643m²
L1 STORAGE	2,457m²
L2 STORAGE	2,457m²
GFA TOTAL	11,090m²
LANDSCAPING	1,210m²

SITE PLAN

1 : 500

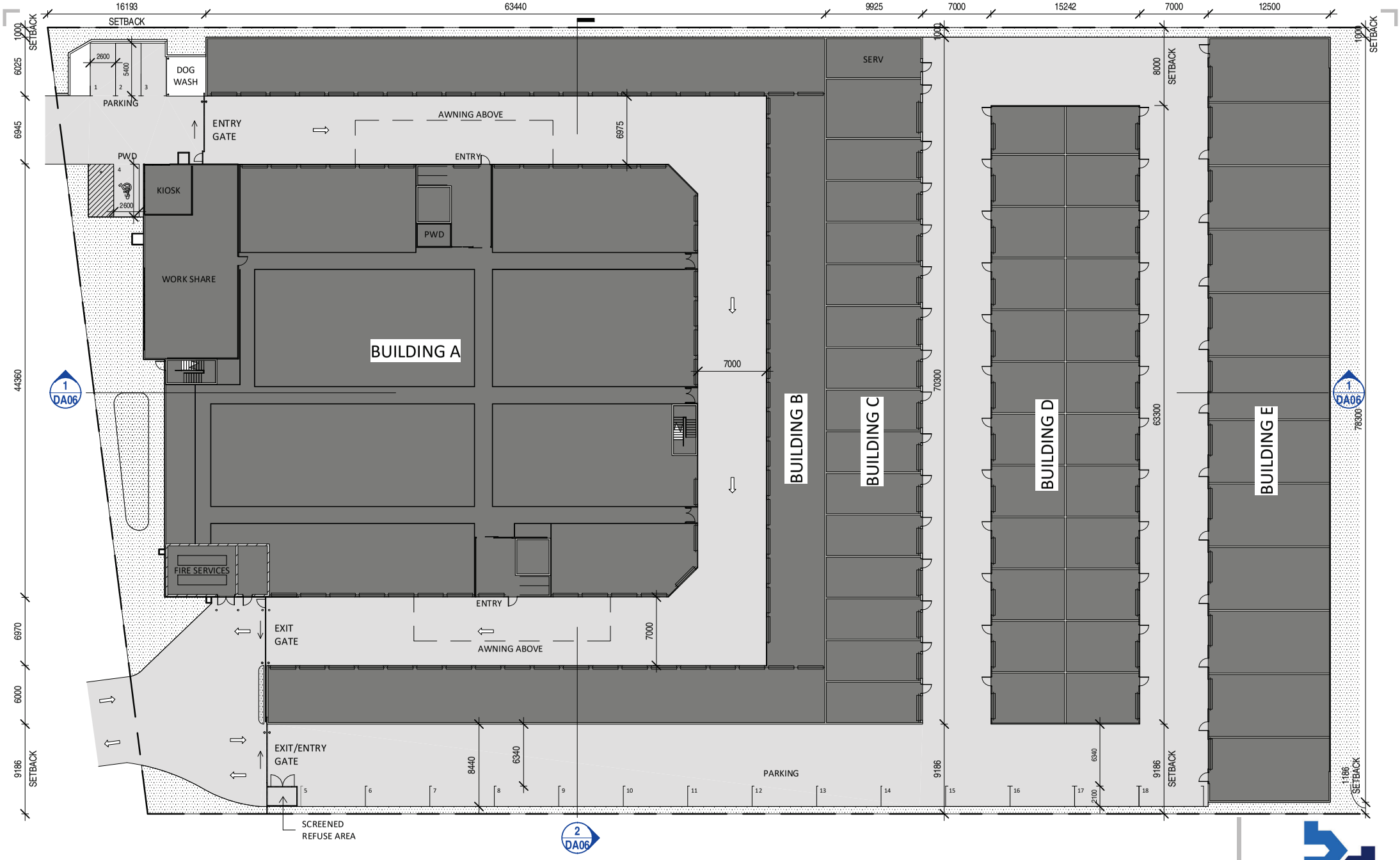
PROPOSED SELF STORAGE

3850 MT LINDSEY HWY, PARK RIDGE, QLD

PROPOSED SITE PLAN

DWG N° BD072-DA02-D by MB
DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057



GROUND FLOOR PLAN

1 : 350

PROPOSED SELF STORAGE

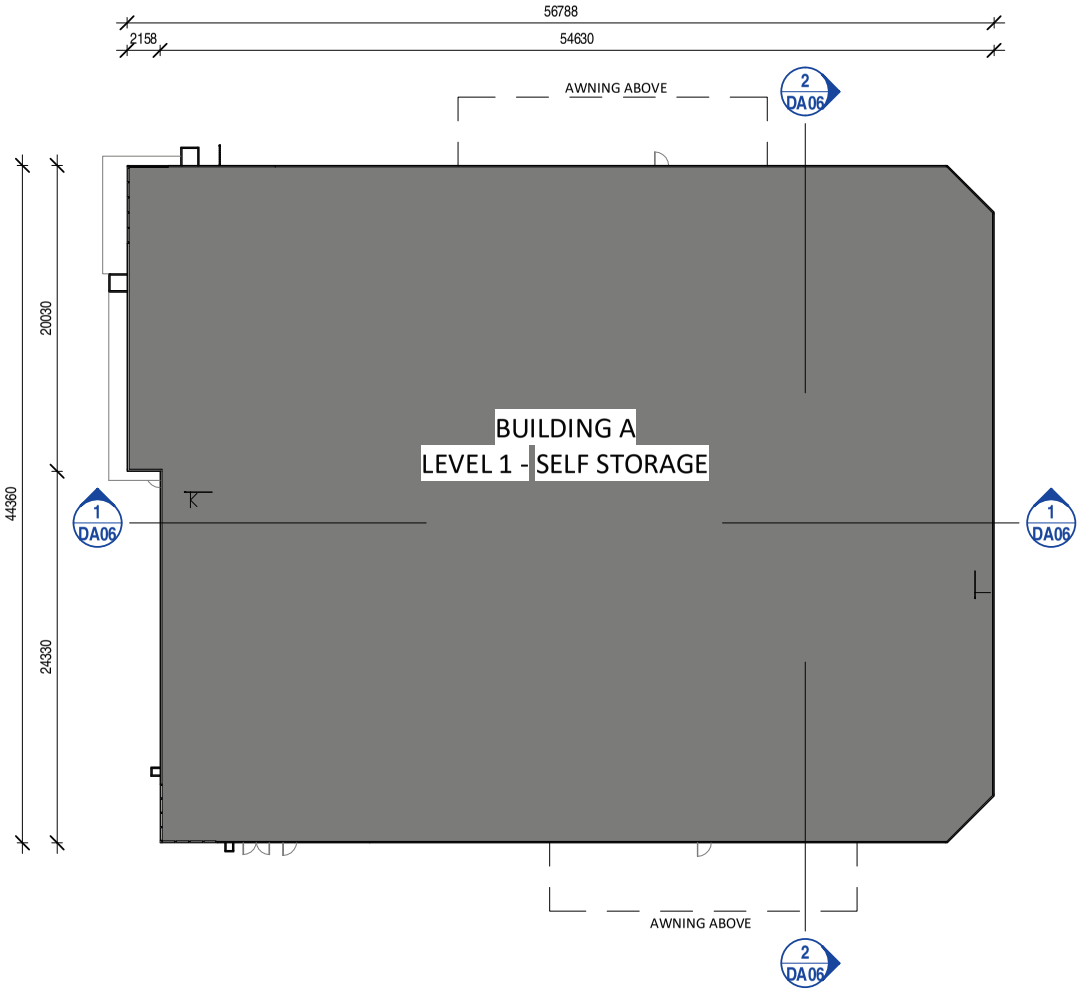
3850 MT LINDSEY HWY, PARK RIDGE, QLD

PROPOSED GROUND FLOOR

DWG N° BD072-DA03-C by MB

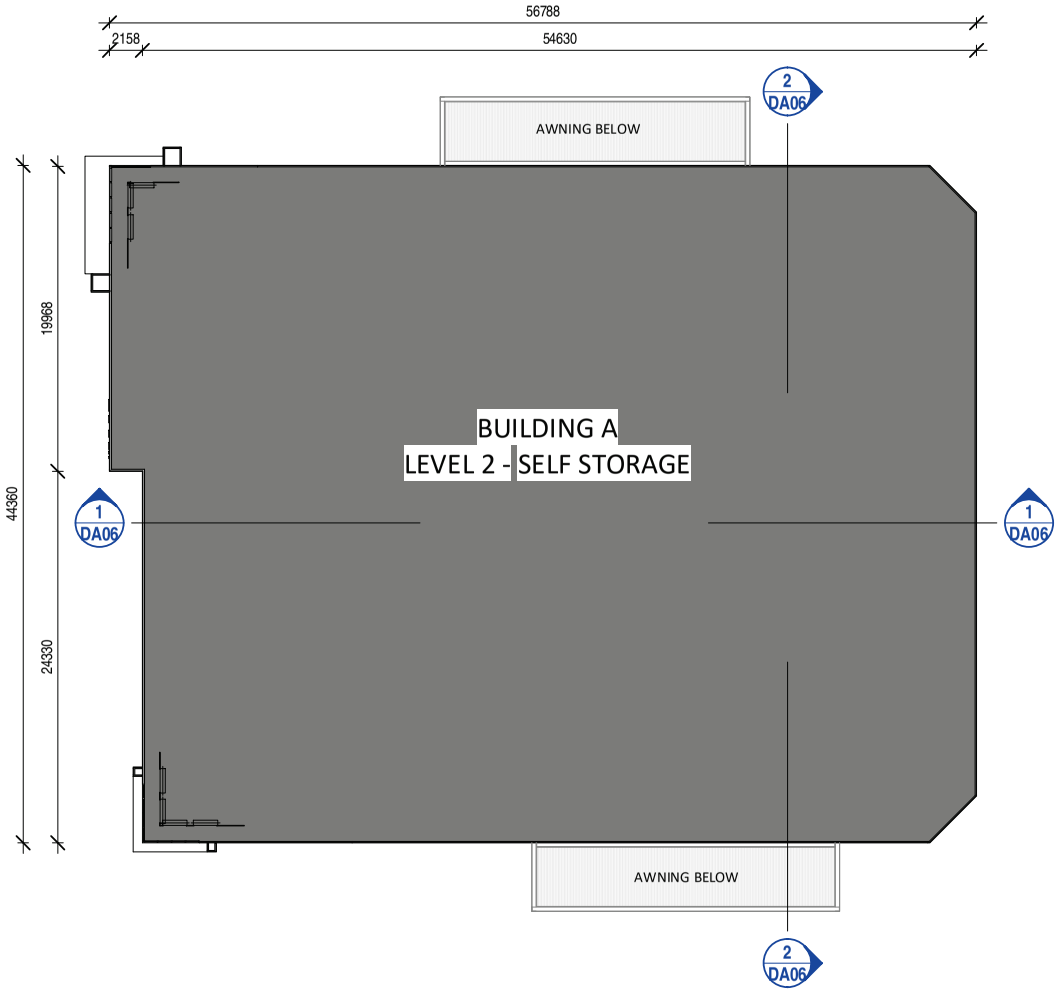
DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057



LEVEL 1 FLOOR PLAN

1 : 350



LEVEL 2 FLOOR PLAN

1 : 350

PROPOSED SELF STORAGE

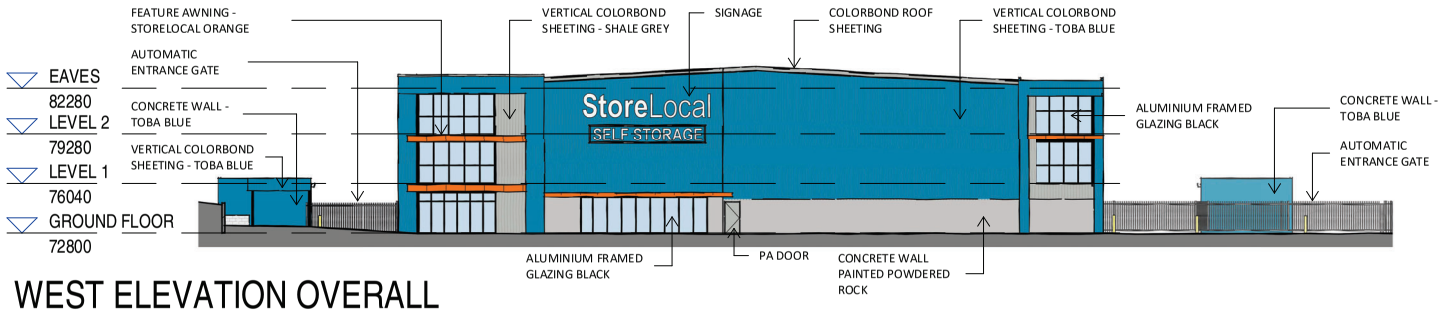
3850 MT LINDSEY HWY, PARK RIDGE, QLD

PROPOSED LEVEL 1 & 2 FLOOR PLANS

DWG N° BD072-DA04-B by MB

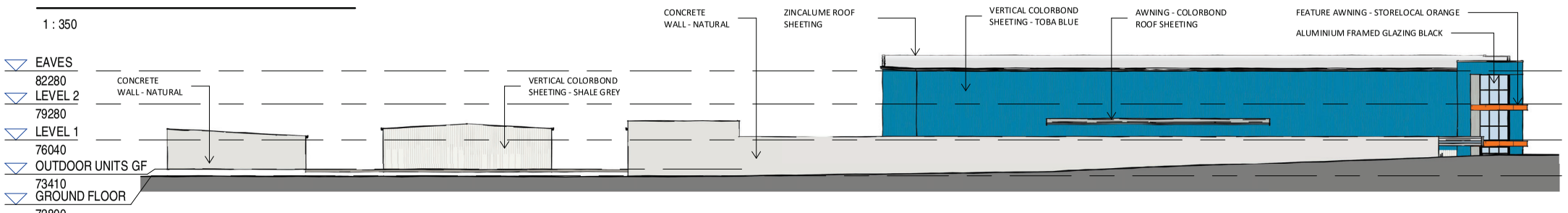
DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057



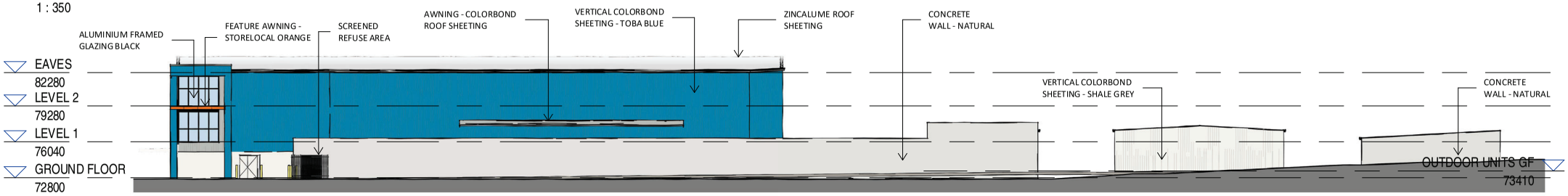
WEST ELEVATION OVERALL

1 : 350



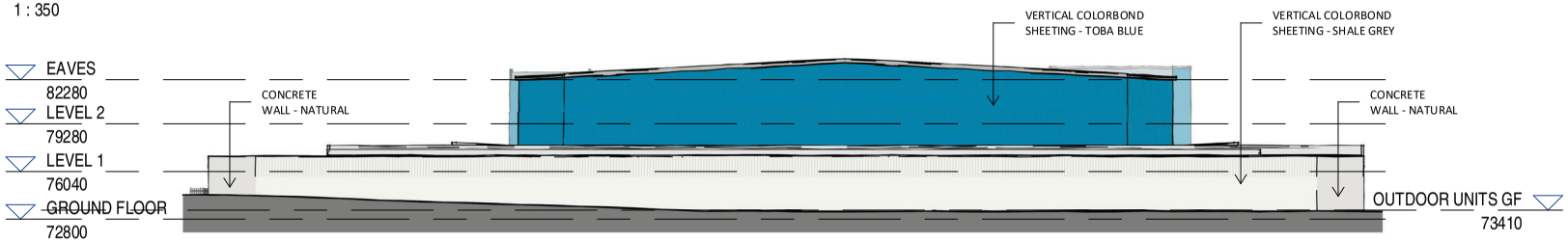
NORTH ELEVATION OVERALL

1 : 350



SOUTH ELEVATION OVERALL

1 : 350



EAST ELEVATION OVERALL

1 : 350

PROPOSED SELF STORAGE

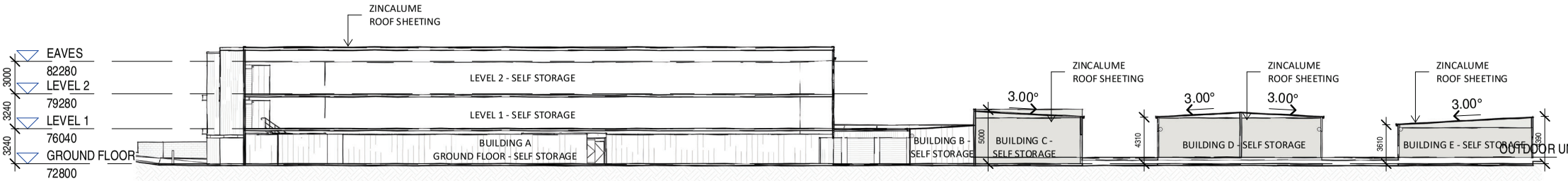
3850 MT LINDSEY HWY, PARK RIDGE, QLD

ELEVATIONS

DWG N° BD072-DA05-C by MB

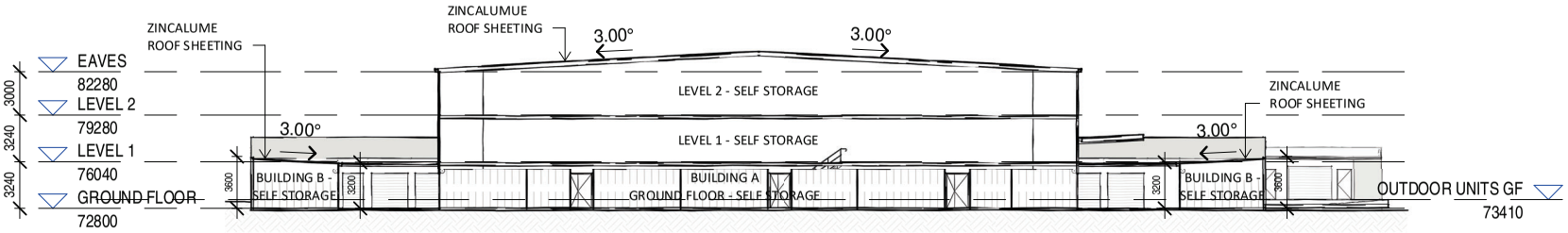
DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057



1 / DA02 SECTION

(A1) 1 : 350



2 / DA02 SECTION

(A1) 1 : 350

PROPOSED SELF STORAGE

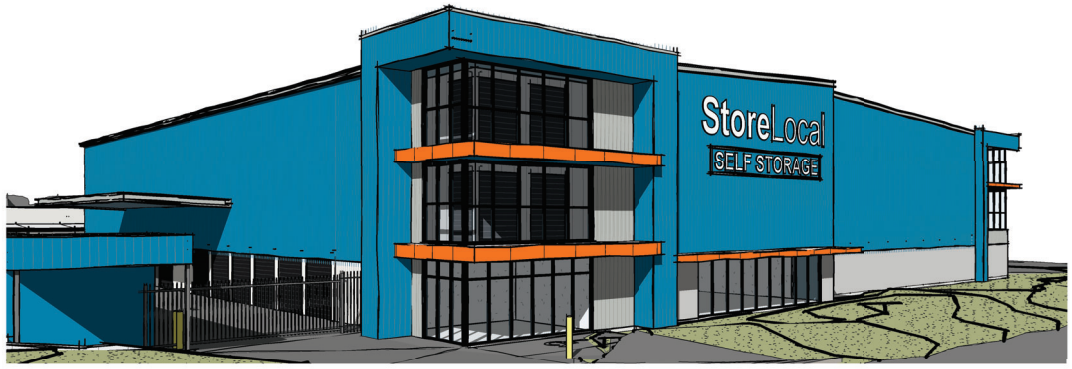
3850 MT LINDSEY HWY, PARK RIDGE, QLD

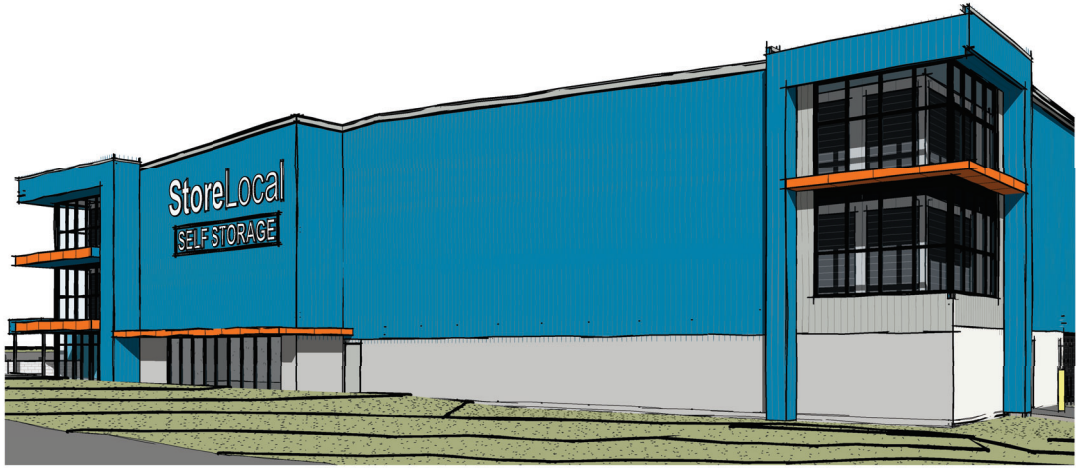
SECTIONS

DWG N° BD072-DA06-A by MB

DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057





PROPOSED SELF STORAGE

3850 MT LINDSEY HWY, PARK RIDGE, QLD

PERSPECTIVE VIEWS

DWG N° BD072-DA07-C by MB
DATE 12.03.2026

bruac design
BUILDING DESIGN
0416 352 057

Appendix C: Atlas Engineer – Conceptual Engineering Plans

LEGEND

- PROPOSED SITE BOUNDARY
- 38.0 DESIGN SURFACE CONTOURS (0.05m INTERVAL)
- 38.0 EXISTING SURFACE CONTOURS (0.20m INTERVAL)
- PROPOSED RETAINING WALL
- PROPOSED SWALE DRAIN
- SWD EXISTING STORMWATER PIPE
- S EXISTING SEWER RISING MAIN
- W EXISTING WATER MAIN
- E-O/H EXISTING OVERHEAD ELECTRICAL
- / EXISTING FENCE
- SWD EXISTING STORMWATER PIPE
- T EXISTING TELSTRA
- EXISTING RETAINING WALL
- 73.00 PROPOSED SPOT LEVELS

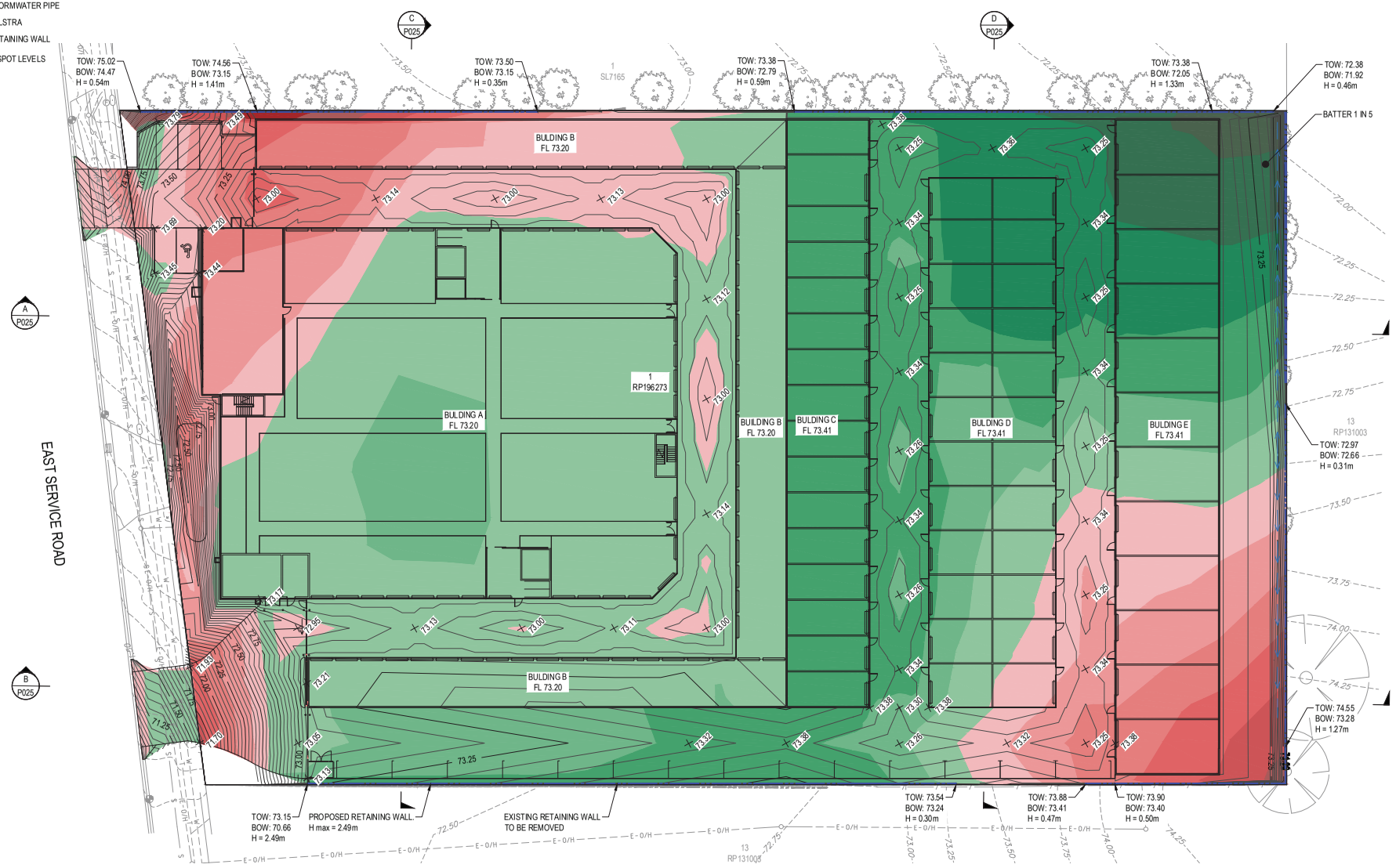
BULK EARTHWORKS VOLUMES (NET EXCL. BULKING)

ITEM	VOLUME (m^3)
CUT	984
FILL	2945
BALANCE	+1961 (+IMPORT) (-EXPORT)

CUT & FILL LEGEND

EXCAVATION	FILLING
0.01m - 0.25m	0.01m - 0.25m
0.25m - 0.50m	0.25m - 0.50m
0.50m - 0.75m	0.50m - 0.75m
0.75m - 1.00m	0.75m - 1.00m
1.00m - 1.25m	1.00m - 1.25m
1.25m - 1.50m	1.25m - 1.50m

NOTE:
- CUT AND FILL IS PROVIDED FOR GUIDANCE ONLY AND DENOTES DIFFERENCE BETWEEN FINISHED SURFACE AND EXISTING SURFACE.
- FINAL EXTENTS OF CUT/FILL ARE TO BE DETERMINED BY THE CONTRACTOR ON SITE IN CONJUNCTION WITH THE EARTHWORKS DESIGN.
- EARTHWORKS DESIGN AND QUANTITIES SUBJECT TO FURTHER CHANGE FOLLOWING RECEIPT OF GEOTECHNICAL INFORMATION.



REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L
THAI LONG
RPEQ No.
SIGNED
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

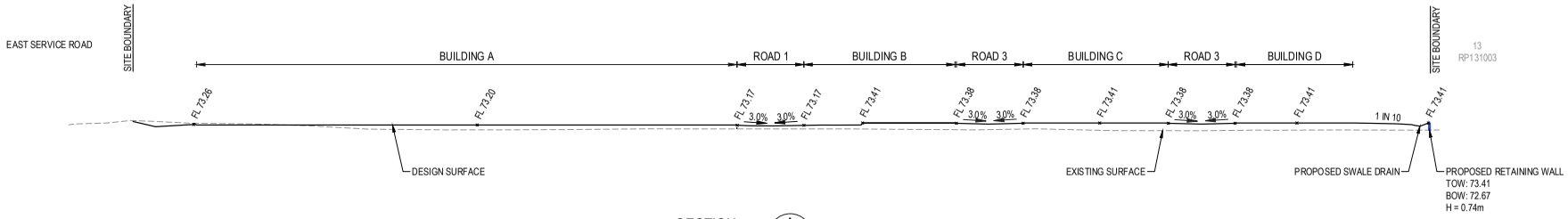
SCALE:
1:250 AT A1 0 5 10m
1:500 AT A3
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT AT 3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

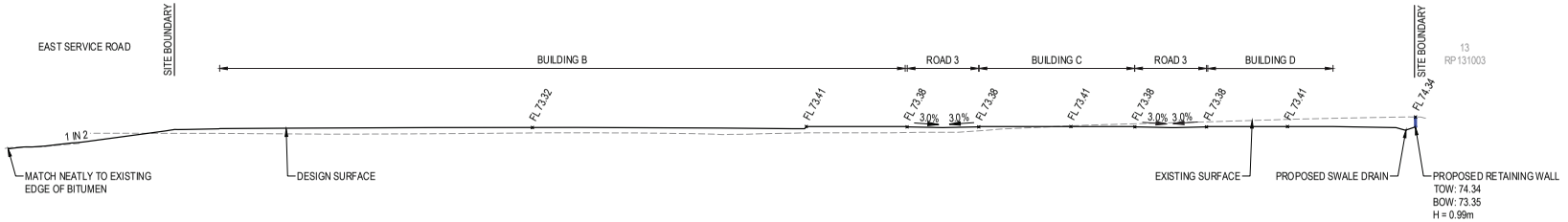
DRAWING TITLE: PRELIMINARY BULK EARTHWORKS PLAN

FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

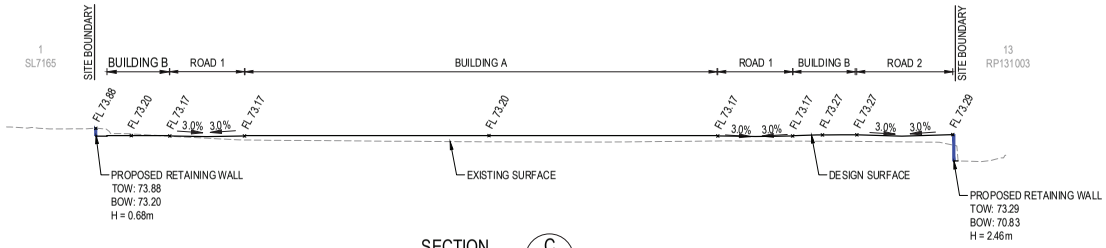
PROJECT	DRAWING NUMBER	REV
AE0040	P020	A



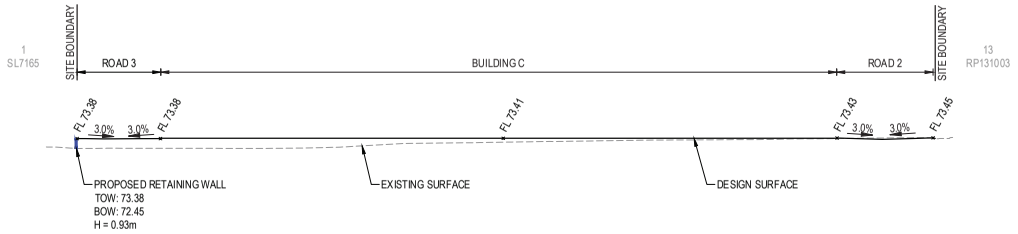
SECTION A
1:250 (A1)
P020



SECTION B
1:250 (A1)
P020



SECTION C
1:250 (A1)
P020



SECTION D
1:250 (A1)
P020

REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L
THAI LONG
RPEQ No.
SIGNED
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

SCALE:
1:250 AT A1 0 5 10m
1:500 AT A3
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT AT 3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

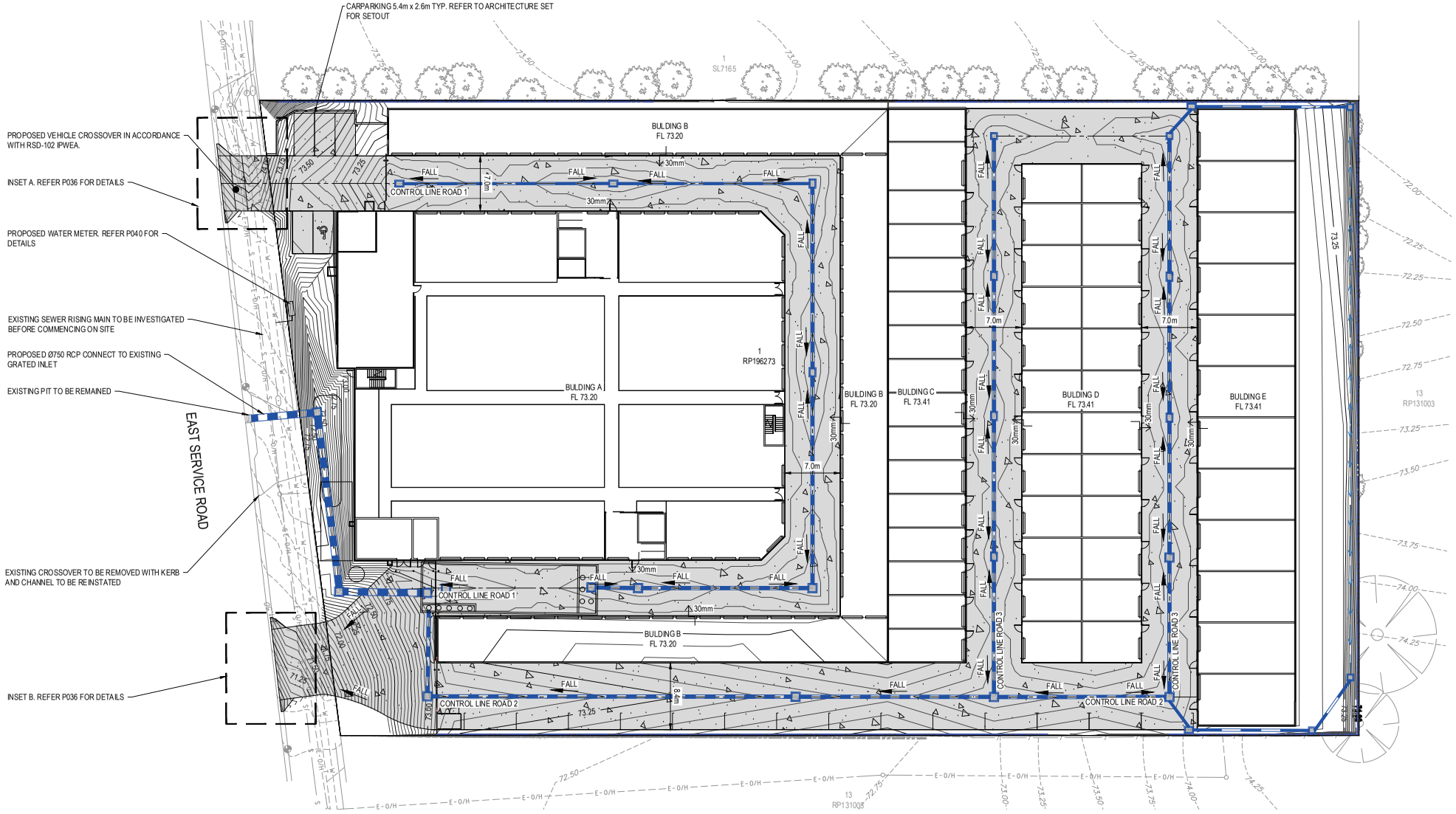
DRAWING TITLE: PRELIMINARY BULK EARTHWORKS SITE SECTIONS

FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

PROJECT	DRAWING NUMBER	REV
AE0040	P025	A

LEGEND

- PROPOSED SITE BOUNDARY
- 38.0 — DESIGN SURFACE CONTOURS (0.05m INTERVAL)
- 38.0 — EXISTING SURFACE CONTOURS (0.25m INTERVAL)
- PROPOSED RETAINING WALL
- W — PROPOSED WATER CONNECTION
- PROPOSED SWALE DRAIN
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED CONCRETE DRIVEWAY
- W — EXISTING WATER MAIN
- S — EXISTING SEWER RISING MAIN
- E - O/H — EXISTING OVERHEAD ELECTRICAL
- SWD — EXISTING STORMWATER PIPE
- T — EXISTING TELSTRA
- EXISTING FENCE
- EXISTING RETAINING WALL



REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L
THAI LONG
RPEQ No.
SIGNED
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

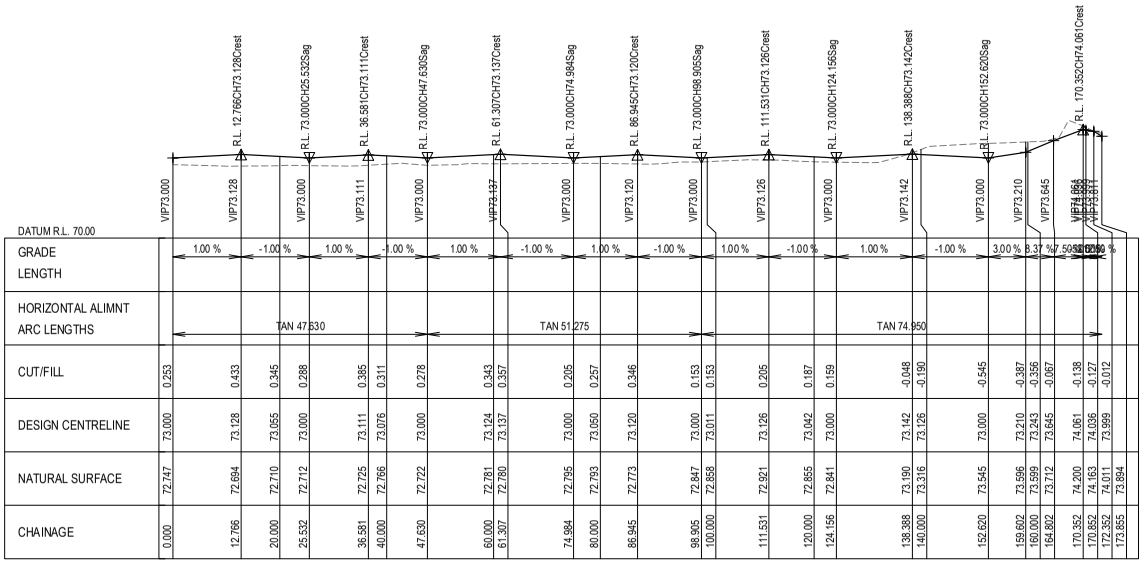
SCALE: 1:250 AT A1 (0 5 10m) 1:500 AT A3
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT AT 3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

DRAWING TITLE: PRELIMINARY ROADWORKS PLAN

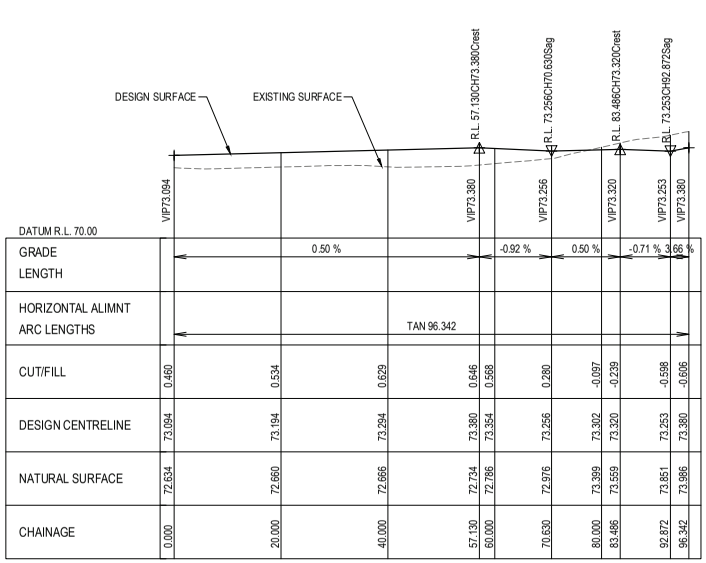
FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

PROJECT	DRAWING NUMBER	REV
AE0040	P030	A



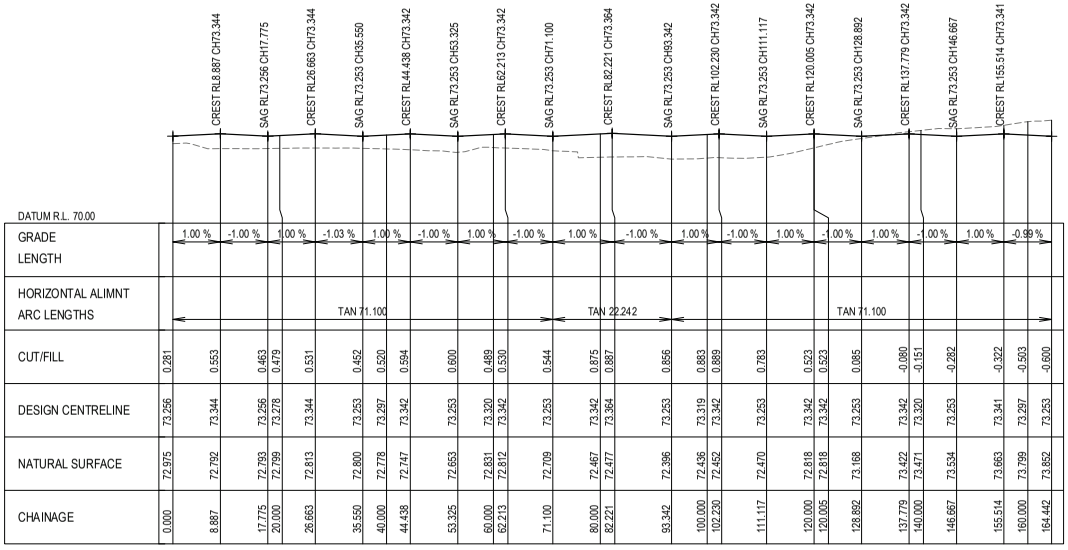
ROAD 01 LONGITUDINAL SECTION

SCALE: 1:500 (A1) HORZ,1:100 (A1) VERT.



ROAD 02 LONGITUDINAL SECTION

SCALE: 1:500 (A1) HORZ,1:100 (A1) VERT.



ROAD 03 LONGITUDINAL SECTION

SCALE: 1:500 (A1) HORZ,1:100 (A1) VERT.

REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L
THAI LONG RPEQ No.
SIGNED ----
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

SCALE:
1:50 AT A1 1:100 AT A3
1:1000 AT A1 (1:2000 AT A3) 0 20 40m HOR
1:100 AT A1 (1:200 AT A3) 0 2 4m VERT
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT: PROPOSED INDUSTRIAL DEVELOPMENT AT 3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

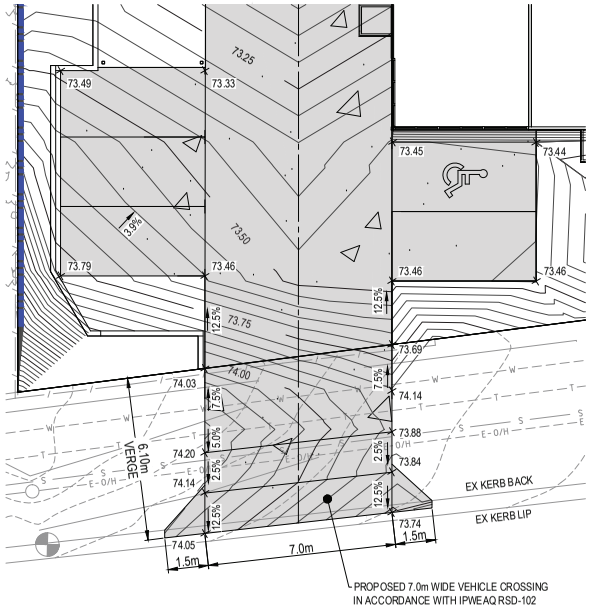
DRAWING TITLE: ROADWORK LONGITUDINAL SECTIONS

FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

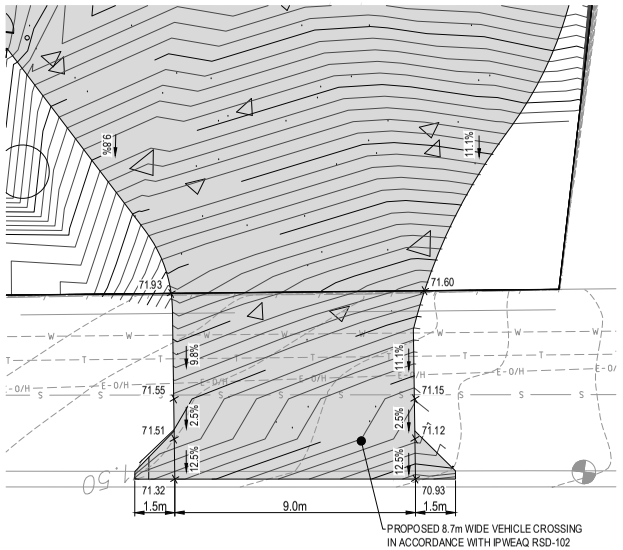
PROJECT	DRAWING NUMBER	REV
AE0040	P035	A

LEGEND

- PROPOSED SITE BOUNDARY
- DESIGN SURFACE CONTOURS (0.05m INTERVAL)
- EXISTING SURFACE CONTOURS (0.25m INTERVAL)
- PROPOSED RETAINING WALL
- PROPOSED CONCRETE DRIVEWAY
- EXISTING WATER MAIN
- EXISTING SEWER RISING MAIN
- EXISTING OVERHEAD ELECTRICAL
- EXISTING STORMWATER PIPE
- EXISTING TELSTRA
- EXISTING FENCE
- EXISTING RETAINING WALL



INSET A
SCALE 1:100



INSET B
SCALE 1:100

REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L
THAI LONG
RPEQ No.
SIGNED
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

SCALE:
1:100 AT A1
1:200 AT A3
0 2 4m
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT:
PROPOSED INDUSTRIAL DEVELOPMENT AT
3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

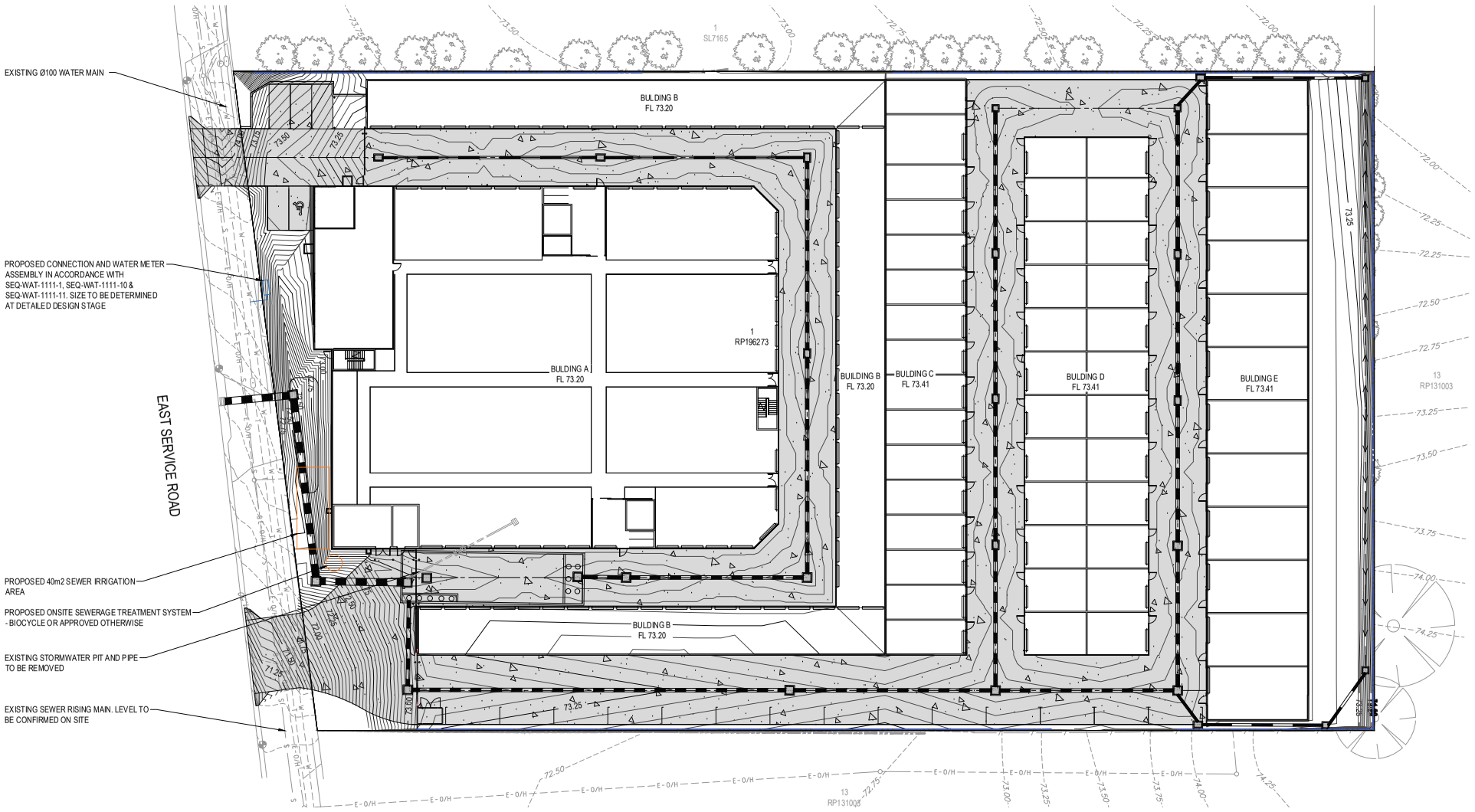
DRAWING TITLE:
VEHICLE CROSSING DETAILS

FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

PROJECT	DRAWING NUMBER	REV
AE0040	P036	A

LEGEND

- PROPOSED SITE BOUNDARY
- DESIGN SURFACE CONTOURS (0.05m INTERVAL)
- EXISTING SURFACE CONTOURS (0.25m INTERVAL)
- PROPOSED RETAINING WALL
- PROPOSED WATER CONNECTION
- PROPOSED SWALE DRAIN
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED CONCRETE DRIVEWAY
- EXISTING WATER MAIN
- EXISTING SEWER RISING MAIN
- EXISTING OVERHEAD ELECTRICAL
- EXISTING STORMWATER PIPE
- EXISTING TELSTRA
- EXISTING FENCE
- EXISTING RETAINING WALL



REV	DESCRIPTION	DRAWN	DATE
A	REPORT ISSUE	H.A	13.03.26

DESIGNER: H.A
CHECKED: T.L
APPROVED: T.L

THAI LONG
RPEQ No.
SIGNED
DATE

ATLAS ENGINEERS

CLIENT: CHEEMA FARMS PTY LTD

SCALE:
1:250 AT A1 0 5 10m
1:500 AT A3
DRAWING IS NOT TO BE SCALED - USE DIMENSIONS PROVIDED

PROJECT:
PROPOSED INDUSTRIAL DEVELOPMENT AT
3850 MOUNT LINDSAY HIGHWAY, PARK RIDGE

DRAWING TITLE:
PRELIMINARY SERVICES PLAN

FOR APPROVAL
NOT FOR CONSTRUCTION
DRAWING TO BE PRINTED IN COLOUR

PROJECT	DRAWING NUMBER	REV
AE0040	P040	A

Appendix D: Response to Logan City Council – Works, services and infrastructure code

9.4.2 Filling and excavation code

9.4.2.1 Application

1. This code applies to:
    a. material change of use:
        i. that is accepted development (subject to requirements) or code assessable and for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use in Part 5 - Tables of assessment;
        ii. that is made impact assessment in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use or section 5.9 - Categories of development and assessment - local plans in Part 5 - Tables of assessment;
    b. reconfiguring a lot:
        i. that is code assessable and for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
        ii. that is impact assessable in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
    c. operational work that is accepted development (subject to requirements) and code assessable operational work - filling or excavation for which the Filling and excavation code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.8.1 - Operational work.
2. When using this code, reference should be made to section 5.3.2 - Determining the category of development and category of assessment and, where applicable, section 5.3.3 - Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5 - Tables of assessment.

9.4.2.2 Purpose

1. The purpose of the code is to protect premises, people and natural processes from adverse impacts associated with filling or excavation.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. development protects:
        i. natural physical processes and ecosystems;
        ii. existing and planned infrastructure;
        iii. personal health and safety and premises;

iv. visual amenity.

9.4.2.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A - Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.2.3.1 - Filling and excavation code: accepted development (subject to requirements) and assessable development

Performance outcomes	Acceptable outcomes	Comments
For accepted development (subject to requirements) and assessable development		
Protection of natural processes and ecosystems		
PO1 The discharge of sediments and pollutants from filling or excavation does not adversely affect a waterway or the stormwater network.	**AO1** The discharge of sediments and pollutants to a waterway or stormwater network complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply
PO2 Topsoil and spoil stockpiled on the premises do not adversely affect natural processes and ecosystems.	**AO2** Topsoil and spoil is stockpiled to comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply
PO3 Filling is carried out using stable, solid and clean earth, free of organic and putrescible waste, rubbish and refuse material.	**AO3** Filling complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply
Protection of existing and planned infrastructure		
PO4 Filling or excavation works do not adversely affect	**AO4** Filling or excavation works comply with part 3.3 -	Development to comply

infrastructure, including any services.	Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	
Protection and enhancement of personal health and safety and premises		
PO5 Filling or excavation works do not adversely affect personal health and safety.	**AO5** Filling or excavation works comply with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply
Surface water flow		
PO6 Surface water drainage does not cause any of the following: a. ponding on any premises; or b. a hazard or adversely affect personal health and safety and premises; or c. diversion or concentration of flow from or onto adjoining premises or infrastructure.	**AO6** Surface water drainage complies with part 3.3 - Filling or excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply
Batters		
PO7 A batter: a. does not adversely affect the natural physical processes and ecosystems; b. protects existing and planned infrastructure; c. is safe, stable and easily maintained; d. is landscaped to enhance visual amenity.	**AO7** A batter is designed and constructed to comply with the standards specified in 3.3.6 - Batters and retaining walls in Planning scheme policy 5 - Infrastructure.	Development to comply
Retaining walls		
PO8 A retaining wall:	**AO8** A retaining wall is designed and constructed to	Development to comply

a. is not constructed of timber and is not located on existing or proposed lot boundaries, or movement networks; b. does not adversely affect the natural physical processes and ecosystems; c. is located to avoid conflict with adjoining premises; d. is located such that existing and planned infrastructure is not adversely affected; e. protects the visual amenity of adjoining premises or a public open space; f. is located within the premises that is being filled; g. is located within the premises that is cut and is designed to take any surcharge loading allowable on the uphill lot; h. is safe and stable; i. enables easy access for maintenance.	comply with the standards specified in section 3.3.6.2 - Retaining walls in Planning scheme policy 5 - Infrastructure.	
Filling of a dam		
PO9 The filling of a dam: a. does not adversely affect the natural physical processes and ecosystems; b. creates a safe and stable surface; c. is integrated into the landscape.	**AO9** The filling of a dam complies with part 3.3 - Filling and excavation standards in Planning scheme policy 5 - Infrastructure.	Development to comply

9.4.3 Infrastructure code

9.4.3.1 Application

1. This code applies to:
    a. material change of use:
        i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use in Part 5 - Tables of assessment;
        ii. that is made impact assessment in a table of assessment in section 5.5 - Categories of development and assessment - Material change of use or section 5.9 - Categories of development and assessment - Local plans in Part 5 - Tables of assessment;
    b. reconfiguring a lot:
        i. that is code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
        ii. made impact assessment in Table 5.6.1 - Reconfiguring a lot in Part 5 - Tables of assessment;
    c. operational work that is infrastructure work:
        i. that is accepted development (subject to requirements) or code assessable and for which the Infrastructure code is identified in the 'assessment benchmarks for assessable development and requirements for accepted development' column Table 5.8.1 - Operational work in Part 5 - Tables of assessment.
2. When using this code, reference should be made to section 5.3.2 - Determining the category of development and category of assessment and, where applicable, section 5.3.3 - Determining the 'assessment benchmarks for assessable development and requirements for accepted development' located in Part 5 - Tables of assessment.

9.4.3.2 Purpose

1. The purpose of the code is to ensure that infrastructure is provided to service development.
2. The purpose of the code will be achieved through the following overall outcomes:
    a. development protects the existing infrastructure and planned infrastructure networks being the:
        i. movement network;
        ii. park network;

iii. water network;
iv. sewerage network;
v. stormwater network;
vi. other networks including electricity, gas and telecommunications;
vii. land for community facilities network;

b. development other than operational work provides infrastructure that is necessary to service the development, including elements of:
i. a safe, efficient and legible road network;
ii. a safe, efficient and legible public transport network;
iii. a safe, efficient and legible cycle network;
iv. a safe, efficient and legible pedestrian network;
v. a safe, efficient and legible parks network;
vi. a safe and efficient water network;
vii. a safe and efficient sewerage network;
viii. a safe and efficient stormwater network;
ix. safe and efficient other networks including electricity, gas and telecommunications;
x. a safe and efficient road lighting network;
xi. land for a community facilities network;

c. development integrates with existing and planned infrastructure networks;
d. infrastructure is designed and constructed to deliver a standard of service that is efficient and equitable;
e. the cost to the community for the life of the infrastructure is minimised by providing for a suitable design life, ease of maintenance and ease of replacement;
f. development appropriately manages refuse and recycling storage and collection;
g. infrastructure protects personal health and safety and premises;
h. infrastructure protects environmental values.

9.4.3.3 Assessment benchmarks for assessable development and requirements for accepted development

Part A - Requirements for accepted development (subject to requirements) and assessment benchmarks for assessable development

Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development

Performance outcomes	Acceptable outcomes	Comments

For accepted development (subject to requirements) and assessable development		
Provision, design, construction and location of infrastructure		
PO1 Development is demonstrated to be capable of being serviced by necessary infrastructure.	**AO1** Reports, plans and drawings are provided in accordance with part 2 of Planning scheme policy 5 - Infrastructure.	Development to comply – refer to engineering services report by Atlas Engineers
PO2 Development: a. provides necessary infrastructure to service the development; b. provides that the design, construction and location of necessary infrastructure: i. protects existing and planned infrastructure networks; ii. services proposed development; iii. integrates with existing and planned infrastructure networks; iv. delivers a standard of service that is efficient and equitable; v. minimises the cost to the community for the life of the infrastructure by providing a suitable design life, ease of maintenance and ease of replacement; vi. protects personal health, safety and premises; vii. protects environmental values.	**AO2** Development: a. in a water supply service area connects to the water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; b. not in a water supply service area provides a tank with a minimum storage capacity of 45,000 litres; c. in a sewerage supply service area connects to the waste water network in accordance with the SEQ Water Supply and Sewerage Design and Construction Code; d. not in a sewerage supply service area complies with part 1 of the Queensland Plumbing and Wastewater Code; e. provides stormwater infrastructure in accordance with part 3.6 of Planning scheme policy 5 - Infrastructure; f. provides a movement network infrastructure in accordance with part 3.4 of Planning scheme policy 5 - Infrastructure; g. provides parks in accordance with part 3.12 of Planning scheme policy 5 -	Development to comply

	Infrastructure; h. provides road lighting in accordance with part 3.5 of Planning scheme policy 5 - Infrastructure; i. provides electricity reticulation in accordance with part 3.8 of Planning scheme policy 5 - Infrastructure; j. provides gas and telecommunications reticulation in accordance with part 3.9 of Planning scheme policy 5 - Infrastructure. k. is consistent with the general planning layouts in part 7.2 of Planning scheme policy 5 - Infrastructure. Editor's note - The delivery of any part of a network identified in the plans for trunk infrastructure is governed by Part 4 - Local government infrastructure plan.	
Location of development		
PO3 Development is located to protect trunk infrastructure networks.	**AO3** Development is located outside a network identified in Local government infrastructure plan map LGIP-03.00 to 08.00 Plans for trunk infrastructure in Schedule 3 - Local government infrastructure plan mapping and tables.	Development to comply
Fire fighting		
PO4 Development in a water service area accessed by common private title provides: a. fire hydrant infrastructure; b. unimpeded access for emergency services vehicles. Editor's note - The term common private title refers to areas such as access roads in community title developments or	**AO4** Development in a water service area involving a material change of use or reconfiguring a lot where, or to be, accessed by common private title ensures that fire hydrant placement and technical requirements for streets and access ways are in accordance with:	Development to comply

strata title unit access, which are private and under group or body corporate control.	a. Australian Standard (AS) 2419.1 - 2005 *Fire hydrant installations*; b. QFES: *Fire Hydrant and vehicle access guidelines for residential, commercial and industrial lots*.	
PO5 Development not in a water service area provides sufficient water storage with adequate pressure, volume and flow to service development for fire fighting purposes.	**AO5** Development: a. is connected to a reticulated water supply scheme that has sufficient flow and pressure characteristics for fire fighting purposes at all times with a minimum pressure and flow of 10 litres per second at 200kPa; or b. has on-site water storage in accordance with Table 9.4.3.3.2 - Water storage for fire fighting, dedicated or retained for fire fighting purposes that is made of fire resistant materials and is: i. a separate tank; or ii. a reserve section in the bottom part of the main water supply tankwater tank. Editor's note - The requirement in AO5 is: - in addition to the requirement for potable water supply/storage in AO2 in Table 9.4.3.3.1 - Infrastructure code: accepted development (subject to requirements) and assessable development; - reflected in AO5 in Table 8.2.3.3.1 - Bushfire hazard overlay code: accepted development (subject to requirements) and assessable development.	Development to comply – to be determined by fire engineer at detailed design stage
Waste management		
PO6 Development provides refuse and recycling	**AO6.1** Development provides refuse and recycling	Development to comply

collection and storage facilities that are located and managed so that adverse impacts on building occupants, neighbouring properties and the public realm are minimised.	collection and storage facilities in accordance with Planning scheme policy 9 - Waste management. **AO6.2** Development ensures that the location and design of refuse and recycling collection and storage facilities does not have any adverse impact including odour, noise or visual impacts on the amenity of land uses within or adjoining the development. Note - Planning scheme policy 9 - Waste management provides guidance on how to achieve this outcome.	
Disposal of trade waste		
PO7 The disposal of trade waste in a sewerage supply service area does not adversely affect the sewerage network.	**AO7** The disposal of trade waste in a sewerage supply service area complies with the sewer admission standards in section 3.2.6 - Sewer admission standards in Planning scheme policy 3 - Environmental management.	Not applicable
Roof water drainage and surface water drainage		
PO8 Development provides stormwater infrastructure for the drainage of the premises so as not to cause any of the following: a. ponding of stormwater on the premises; b. a hazard to personal health and safety; c. damage to premises; d. an increased risk of flooding to premises within the catchment.	**AO8** Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	Development to comply
Natural flow of surface water		

PO9 Development provides that the natural flow of surface water is: a. not altered so as to cause a risk to personal health and safety or damage to property; b. not increased in intensity, velocity or frequency; c. not concentrated onto adjoining premises.	**AO9** Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	Development to comply – refer to stormwater management plan from Atlas Engineers
Water sensitive urban design		
PO10 Development which provides stormwater infrastructure incorporates water sensitive urban design principles having regard to: a. protecting existing natural features and ecological processes; b. protecting the natural hydrologic behaviour of catchments; c. protecting the existing natural flow and water quality regimes of waterways; d. protecting water quality of surface and ground waters; e. minimising demand on the water network; f. minimising sewage discharges to the natural environment; g. integrating water into the landscape to enhance visual and ecological values.	**AO10** Development complies with the standards for stormwater infrastructure specified in part 3.6 of Planning scheme policy 5 - Infrastructure.	Development to comply
Movement network		
PO11 The projected traffic levels for a use do not adversely affect the planned standards of service	**AO11** Development does not cause or contribute to projected traffic levels:	Development to comply

for a road or intersection.	a. exceeding the maximum vehicle trips per day in Table 3.4.1.4.2 in Planning scheme policy 5 - Infrastructure; or b. exceeding the maximum control delays through intersections in peak periods in Table 3.4.1.4.3 in Planning scheme policy 5 - Infrastructure.	
Integrated movement concept report		
PO12 Development which generates more than 3,000 vehicle trips per average weekday is designed to integrate the movement network to minimise the transportation costs required to service the use.	**AO12** Development which generates more than 3,000 vehicle trips per average weekday provides an integrated movement concept report which integrates the planning of the movement network in accordance with part 2 and 3 of Planning scheme policy 5 - Infrastructure.	Not applicable
For assessable development only		
Land use and transport integration		
PO13 Development within 400 metres of existing or future public passenger transport facilities where the total site area is 5,000m^2 or more: a. supports a road hierarchy which facilitates efficient, safe and accessible bus services connecting to existing and future public passenger transport facilities; b. enhances connectivity between existing and future public passenger transport facilities and other transport modes; c. optimises the walkable catchment to existing and future public passenger	**AO13** No acceptable outcome provided.	Not applicable

transport facilities; d. provides for direct and safe access to and use of existing or future public passenger transport facilities. Note - SPP code: Land use and transport integration in Appendix 4 of the state planning policy provides guidance to achieve this outcome.		

Table 9.4.3.3.2 - Water storage for fire fighting

Column 1 Lot size / use type	Column 2 Water requirement
For each residential lot:	
a. less than 1,000m^2	5,000 litres
b. between 1,000m^2 and less than 1 hectare	10,000 litres
c. greater than 1 hectare	20,000 litres
Multiple dwelling	5,000 litres per dwelling up to a maximum of 20,000 litres
A use other than Multiple dwelling	5,000 litres or the prevailing rural fire brigade standard