Established 1994

Suite 502, Level 5, 282 Victoria Avenue Chatswood NSW 2067 T (02) 9411 5660 | F (02) 9904 5622 E info@ttpa.com.au | ttpa.com.au



# **Lennox Village**

Proposed Alterations and Additions to an Existing ALDI Store Assessment of Traffic and Parking Implications

Ref: 20093

Date: June 2020

# **Table of Contents**

1.0	INTRODUCTION 1				
2.0	PRO	PROPOSED DEVELOPMENT			
	2.1 2.2	Site, Context and Existing Use  Proposed Development			
3.0	EXIS	STING ROAD NETWORK AND TRAFFIC CONDITIONS	4		
	3.1 3.2 3.3	Road NetworkTraffic ConditionsTransport Services	4		
4.0	PAR	KING	6		
5.0	4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	2018 (Pre-COVID Restriction) Car Parking Demand	6 7 7 8 8 9		
	5.1 5.2 5.3	Traffic Generation	0		
6.0	ACC	ESS, INTERNAL CIRCULATION AND SERVICING 1	2		
	6.1 6.2 6.3	Access	3		
7.0	CON	ICLUSION 1	6		

## List of Figures

Figure 1	Location
Figure 2	Site

Figure 3 Road Network

## List of Appendices

Appendix A Architectural Plans

Appendix B Public Transport Services
Appendix C Turning Path Assessment

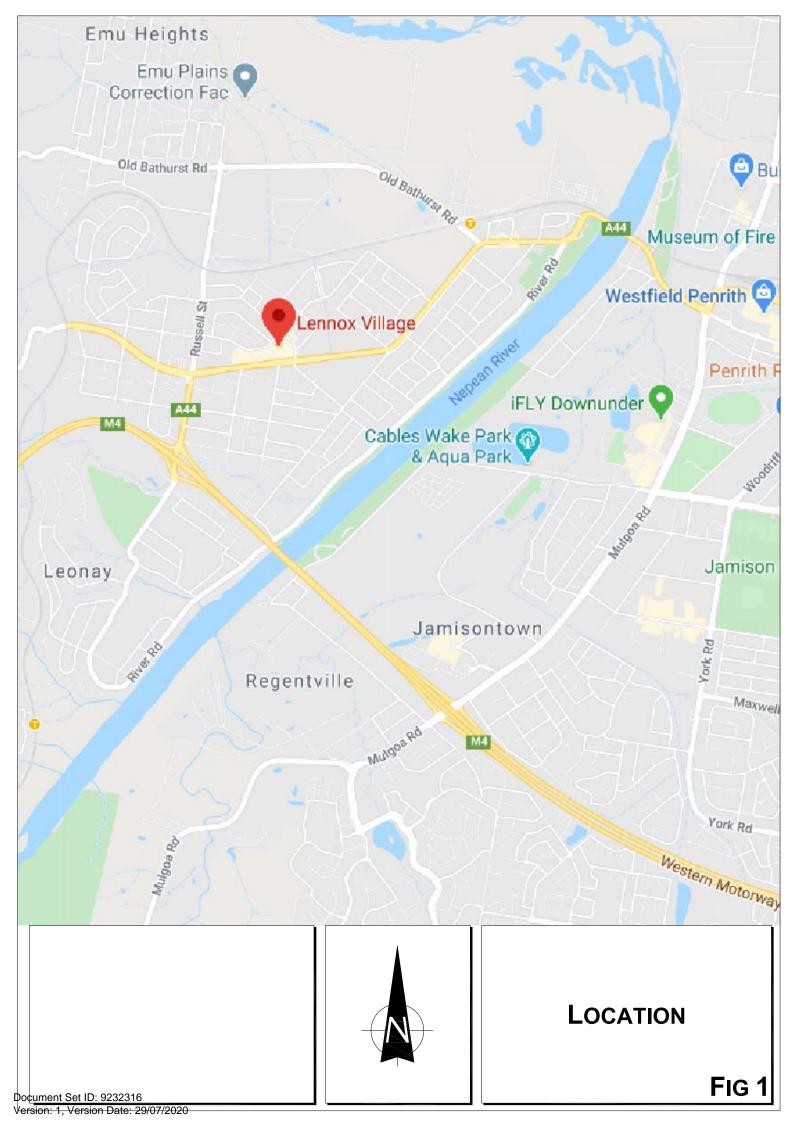
### 1.0 Introduction

This report has been prepared to accompany a Development Application to Penrith City Council for proposed alterations and additions to an existing ALDI store located at Lennox Village Shopping Centre (Centre), Emu Plains (Figure 1).

Lennox Village Shopping Centre is a successful, established retail centre located adjacent to the Great Western Highway which services extensive surrounding residential precincts. The popularity of the ALDI store at the Centre has generated a demand for more retail facilities. As such, it is proposed to undertake some modifications to the existing store and an extension towards the north of the store to attain additional retail space and car parking for improved customer experience and facilitation.

The purpose of this report is to:

- \* describe the site and the proposed development scheme
- \* describe the existing road network and traffic circumstances
- \* assess the suitability of the proposed vehicle access arrangements
- \* assess the potential traffic implications
- \* assess the adequacy of the proposed on-site parking provision
- \* assess the appropriateness of the proposed vehicle circulation and servicing arrangements.



2.0 Proposed Development

2.1 Site, Context and Existing Use

The existing ALDI store is located on the north-eastern section of the Lennox Village

Shopping Centre (Figure 2) within Lot 1, DP610862, Emu Plans, 52km west of the

Sydney CBD within the Penrith Local Government Area (LGA). Lennox Village

Shopping Centre comprises a single-storey neighbourhood centre of 40 specialty

shops as well as the major anchor tenants: ALDI and Woolworths. The site has three

main frontages of 278m to Water Street, 213m to Pyramid Street and 349m to Great

Western Highway.

The Centre occupies an irregular shaped area of 3,371m<sup>2</sup> and is located on the corner

of Great Western Highway and Pyramid Road. The existing ALDI store has a gross

leasable area (GLA) of 1,469m<sup>2</sup>.

Parking for the Centre has access from the Great Western Highway, Waters Street

and Pyramid Street. The access off the Great Western Highway is a left turn entry

into the central and western parking areas.

The area surrounding the site is generally zoned R2 - Low-Density Residential and R3

- Medium Density Residential except for an aged care development - Edinglassie

Village located opposite the Great Western Highway.

2.2 Proposed Development

The development scheme comprises of the alterations and additions of an existing ALDI

store and associated car parking area (an additional 16 car parking spaces) to facilitate

the expanded store. The proposed redevelopment comprises a total 1,703m<sup>2</sup> GLA,

which represents a minor increase of 16% (of 234m<sup>2</sup>) over the existing site of 1,469m<sup>2</sup>.

The proposed development comprises:

Ref. 20093





SITE

FIG 2

Document Set ID: 9232316

Version: 1, Version Date: 29/07/2020

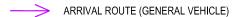
	Component	<u>GLA</u>
-	existing ALDI store	1,469m <sup>2</sup>
-	demolished ALDI store	201m <sup>2</sup>
-	proposed ALDI extension	435m <sup>2</sup>
	Total Proposed ALDI	1,703m <sup>2</sup>

The proposed development will be accessible from all existing 4 carpark access points (See Figures 3 and 4) consistent with the existing arrangement. The proposed development will operate between 8.30~am-8~pm seven days a week, consistent with the existing hours.

Details of the proposed alterations and additions are provided on the plans prepared by i2C, which are reproduced in Appendix A.







ARRIVAL ROUTE (SERVICE VEHICLE)



### **EXISTING VEHICLE INGRESS**

Fig 3



DEPARTURE ROUTE (GENERAL VEHICLE)

DEPARTURE ROUTE (SERVICE VEHICLE)



EXISTING VEHICLE EGRESS

FIG 4

## 3.0 Existing Road Network and Traffic Conditions

#### 3.1 Road Network

The road network serving the site (Figure 3) comprises:

- \* The Great Western Highway is a state road managed by Roads and Maritime Services (RMS) and is the nearest major road to the site. The highway connects to Center via left-in only access and Pyramid Street at a stop-controlled intersection as well as forms a signalised intersection with Russell Street. The highway provides a connection to other state roads, such as the M4 Motorway via Russell Street. Near to the site, the road contains two lanes in each direction (generally one lane in nearby areas) and has a speed limit of 60 km/hr.
- \* Water Street, Russell Street and Pyramid Street are local roads providing the main frontage to the site. Pyramid Street and Russell Street connect to the Great Western Highway in the south and residential and industrial areas in the north. The roads are two-way roads with a single lane in each direction. Parking is generally provided on both sides of the streets. The speed limit is 50 km/hr.

#### 3.2 Traffic Conditions

An indication of traffic conditions on the road network in the vicinity of the site is provided by data published by RMS. The data published by RMS is expressed in terms of Annual Average Daily Traffic (AADT) and the most recent published data is provided in the following:

	AADT	Peak Hour
Great Western Highway, 110m West of	22,332 vpd	5,800 – 6,400 vpd
High Street, Penrith		

Observations of traffic activity in the vicinity of the development site during morning and afternoon peak periods reveal some queuing occurs at times along the Great Western Highway, Water Street and Pyramid Street as a consequence of the arterial traffic flows

along the Great Western Highway and the retail/commercial traffic in and out of the

Centre.

Past the intersections of Pyramid Street/Water Street and Russell Street/Jamieson

Street, traffic flows along Pyramid Street and Russell Street are generally free-flowing.

Access/circulation on the road system is facilitated by the various priority-controlled

and signalised facilities.

3.3 Transport Services

Bus stations are situated along the Great Western Highway, Pyramid Street and Short

Street. Stops along both approaches are located approximately 170 metres from the

site entrances. Bus services are operated by Blue Mountains Transit. The site is

advantaged by the local bus services routes 688, 1688, 689, 690P and 691, which

provide interconnecting service between the site and Penrith to Emu Heights, Penrith,

Leonay, Emu Heights, Springwood and Mount Riverview.

The nearest train station to the site is Emu Plains Station. The stations are serviced

by the T1 (Western) and Blue Mountains lines. The station is located approximately

1.8 kilometres or 22 minutes' walk from the site. Buses along the Great Western

Highway, Pyramid Street and Short Street also provide connections to the railway

station.

Details of the public transport services are provided in Appendix B.

Ref. 20093

## 4.0 Parking

#### 4.1 2018 (Pre-COVID Restriction) Car Parking Demand

The Centre provides some 421 parking spaces. Colston Budd Rogers & Kafes completed a parking survey on Thursday 6 September 2018 and Saturday 8 September 2018. The surveys indicated:

- the highest number of vehicles parked in the car park was 290, at 12:00 pm on Thursday
- the highest number of vehicles parked was 375, at 12:00 pm on Saturday
- a minimum of 131 and 46 spaces was available in the car park on Thursday and Saturday, respectively.

Based on the above survey findings, it can be established that the existing carpark remains under-utilised under the existing Centre's demand.

#### 4.2 2020 (Post-COVID Restriction) Car Parking Demand

The existing off-street parking spaces were surveyed on Saturday, 13 June 2020 and Thursday, 18 June 2020. The surveys were completed to provide an indication of their utilisation during the Centre's peak periods post COVID restrictions lift.

The surveys indicated:

- the highest number of vehicles parked in the car park was 276, at 12:00 pm on Thursday
- the highest number of vehicles parked was 342, at 12:00 pm on Saturday
- a minimum of 145 and 79 spaces was available in the car park on Thursday and Saturday, respectively.

Based on the above, it is clear that the parking demand in 2020 remains lower than the

parking demand in 2018, due to the fact of the social distancing factor and the feelings

of fear and anxiety among patrons of a potential second wave of COVID.

To provide a conservative assessment, the parking availability based on the 2018 data

has been adopted in this report.

4.3 Council's DCP Parking Requirement

Council's parking code indicates a required provision for supermarket use of 1 space

per 10m<sup>2</sup> of floor area that is to be used for retailing activities. Application of this

requirement to the proposed additional GLA of 234m<sup>2</sup> would indicate the following:

234m<sup>2</sup> @ 1 space per 10m<sup>2</sup> - 24 spaces

4.4 Parking Provision

The development will demolish the existing 12 parking spaces and loading area (which

can accommodate up to 2 SRVs) and proposes 28 new car parking spaces (including

2 loading spaces which can accommodate B99/ute/van. This results in a net increase

of 16 car parking spaces.

4.5 Adequacy of Parking Provision

As discussed, there was a minimum parking vacancy of 46 spaces during peak hours.

With the additional 16 car spaces, the overall Centre will have a revised car parking

capacity of 437 spaces and a minimum peak hour availability of 62 car spaces.

While the proposed development represents a minor shortfall of 8 spaces when

assessed against the DCP criteria, it is apparent that the additional car parking demand

associated with the proposed development can be accommodated within the expanded

carpark. It should be noted that a majority of the customers of the proposed

development are expected to be people already visiting the shopping centre or the

existing ALDI store.

Ref. 20093

The existing 12 disabled car parking spaces within the existing at-grade car park

remains in accordance with BCA requirements.

4.6 Council's DCP Disabled Parking Requirement

DCP states that:

Provision of parking spaces for disabled persons should be in accordance with the

Access to Premises Standards, the Building Code of Australia and AS2890.

The BCA requires that disabled spaces be provided at a rate of one space for every

50 car parking spaces for up to 1,000 car parking spaces. Based on 437 spaces, 9

spaces are required to be provided as disabled spaces.

4.7 Service Vehicle Parking

Council's DCP specifies a minimum service vehicle requirement for commercial and

industrial developments between 1,500m<sup>2</sup> and 4,000m<sup>2</sup> to be a 12.5m HRV.

The RMS guidelines indicate the following loading requirements:

Supermarkets, shops and restaurants

1 space per 400m<sup>2</sup> GFA

Based on the above, the proposed development is required to provide 3 loading

spaces.

The development provides the following 3 loading spaces as follows in accordance

with Council's and RMS requirements:

\* an existing loading dock to the northwest of the store, which can accommodate up

to 1 19m semi. The existing loading dock is accessible via Water Street.

\* new 90-degree loading spaces along the store's north-eastern frontage, which can

accommodate up to 2 utes/vans/B99 cars. The new loading spaces are accessible

via the Great Western Highway, Pyramid Street and Water Street.

Ref. 20093

4.8 Bicycle Parking

Council's DCP specifies the following requirements:

For commercial developments providing employment for 20 people or more, bicycle

parking is to be in secure and accessible locations and provided with weather

protection. The following associated facilities are to be provided: i) Change and shower

for cyclists and are to be conveniently located close to the bicycle storage areas. ii)

Where the building is to be strata-titled, the bicycle storage facilities and shower/

change facilities are to be made available to all occupants of the building. Bicycle

parking in accordance with the suggested bicycle parking provision rates for different

land use types in the document 'Planning Guidelines for Walking and Cycling' (NSW

Government 2004). Bicycle parking spaces should comply with AS2890.3:1993

Bicycle Parking Facilities.

The Australian Bureau of Statistics (ABS) 2016 Census of Population and Housing -

Place of Residence and Employment by Method of Travel (NSW) data provides the most

robust indication of existing residents and staff travel patterns for the Emu Plains locality.

The data indicates that only 0.3% of staff and residents cycle.

Given the negligible usage of bicycle in the area, bicycle parking is not required at this

stage.

Ref. 20093

### 5.0 Traffic

#### 5.1 Traffic Generation

The RMS Guide to Traffic Generating Developments provides trip generation rates for shopping centres that include land uses such as supermarket, specialty shops, office, medical and other associated trades. For this assessment, the traffic generation rate specific for supermarket has been used to ascertain the additional traffic generation to and from the site:

Thursday peak: 155 trips per 1,000m<sup>2</sup> of the supermarket GFA

- Saturday peak: 147 trips per 1,000m<sup>2</sup> of the supermarket GFA

Based on the RMS traffic generation rate, the proposed extended development of 234m<sup>2</sup> could generate up to:

- Thursday peak: an additional 37 trips during the evening peak hour

Saturday peak: an additional 35 trips during the evening peak hour

The guidelines indicate that an extension to an existing shopping centre is not likely to result in a pro-rata increase in traffic generation (or parking demand) and this is a factor dealt with in the RMS Development Guidelines, which suggests a discount of 25%.

Thus, the projected peak traffic generation of the additional 234m<sup>2</sup> of retail floorspace would be:

- Thursday peak: an additional 28 trips during the evening peak hour

Saturday peak: an additional 27 trips during the midday peak hour

#### 5.2 Traffic Distribution

The above traffic will be spread over the 3 access points. If these movements are distributed in the same proportion as the existing access movements, the outcome will be:

Ref. 20093

	Thursday's Peak	
	IN	OUT
The Great Western Access (left-in)	14	-
Pyramid Street Access	10	27
Water Street Access (eastern)	4	-
Water Street Access (western)	-	
Total	28	27

#### 5.3 Traffic Impact

It is apparent that:

- \* the potential increased traffic generation (of 1 vehicle trip every 2-3 minutes) would be spread over the 3 access points and will only represent a minor increase to the existing access movements
- \* the potential increased traffic movements will be imperceptible so far as the total traffic movements in the area are concerned.

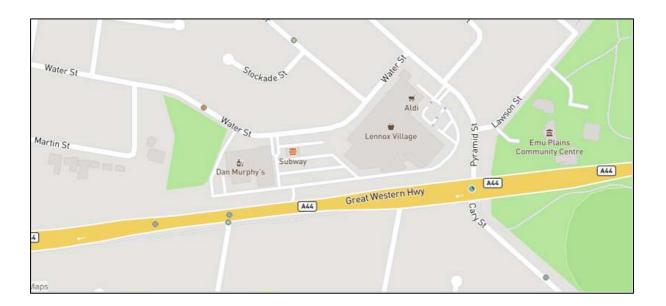
## 6.0 Access, Internal Circulation and Servicing

#### 6.1 Access

#### **Vehicle**

The existing 4 general vehicle accesses off the Great Western Highway, Water Street and Pyramid Street will be retained as part of the proposed development. These driveways have been designed in accordance to AS2890.1 and 2, with minimum sight distances provided.

Crash data for roads around the Centre has been obtained from TfNSW Centre for Road Safety – Crash and Casualty statistics LGA view. The data relates to the five-year period to December 2018.



During this period, no crashes were recorded in the vicinity of the Centre. The data indicates that there are no vehicle and pedestrian hazards/risks the site accesses.

Minor kerb modification will be completed at the site access off Pyramid Street to accommodate the manoeuvring of a 9.1m medium rigid by private contractor's waste vehicle (MRV) in and out of the relocated compactor's access lane.

**Pedestrian** 

Pedestrian walkways to the western and southern frontages of the carpark will be

provided to ensure pedestrian movements are safe, accessible, and free from vehicle

conflict. Marked pedestrian crossing will be provided between the proposed store and

the footpath opposite to ensure safe pedestrian access to/from the bus stop on

Pyramid Street.

**Summary** 

In summary, the proposed development maintain the existing arrangement in terms of

vehicular and pedestrian movements within the car parking area, with these

movements shown in Appendix A.

6.2 Internal Circulation

**Proposed Carpark** 

Design provisions for the car parking access and circulation (including pedestrian

access and access for mobility impaired), car parking, clearances from obstructions

(walls, columns and landscaping), headroom, grades, sight distances, driveways and

circulation roadways, manoeuvring areas, and vehicle swept path manoeuvring), are

satisfactory to the requirements of AS2890.1,2 and 6 as well as Council's

Development Control Plans.

New 90-degree parking spaces are designed at 2.7m x 5.4 metres with aisle widths of

6.2m while new 60-degree parking spaces are designed at 2.6m x 5.1 metres with

aisle widths of 5.1m. The above parking provisions have been designed in accordance

to AS2890.1 criteria for user class 3A.

The proposed car parking layout will be satisfactory as confirmed by the turning path

assessment for a B99 car in and out of the site which is provided in Appendix D.

Overall, the proposed carpark is laid out in a clear and simple manner, with one-way

counter-clockwise circulation, consistent with the existing arrangement. Such

provision allows for safety as well as easy understanding and movements by all users.

In addition, directional and internal line-marking, pavement arrow signages will be

Ref. 20093

provided to assist vehicle movements through the site, as shown in figure overleaf.

All vehicles can enter and exit the site in a forward direction.

6.3 Servicing

**Proposed Compactor Access (Consistent with Existing Arrangement)** 

The servicing arrangement will remain unchanged with the relocated compactor and

proposed access lane and be consistent with the existing servicing arrangement. The

garbage collection will be completed twice a week while the card box will be emptied

once every fortnight, by private contractor's waste vehicles (up to 9.1m MRV - see

specifications overleaf).

The waste collection will take place outside the store's operating periods. The truck

will enter the site via Pyramid Street in a forward direction and reverse into the access

lane on arrival, consistent with the existing arrangement.

The truck will exit the access lane via Pyramid Street in a forward direction on

departure.

It is noted that proposed servicing layout is an improved configuration in terms of

operation and safety than the existing arrangement, which involves a truck reversing

and standing within the 12-car parking aisle to access the compactor.

The proposed truck standing area will not impede access to any existing or proposed

car spaces as well as pedestrian access to the Village as well as the pedestrian

crossing.

It is also noted that the reversing manoeuvre by the truck has operated without any

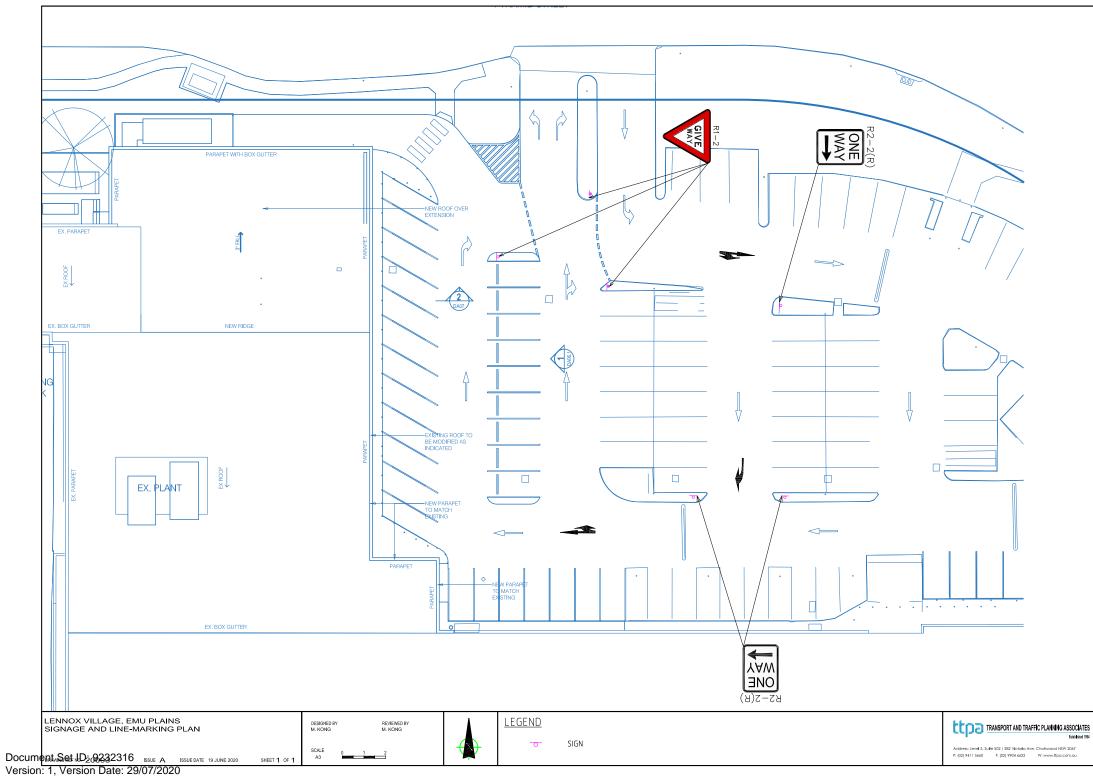
safety concerns for more than 10 years. This is due to the fact that the truck arrives

and departs outside of the peak and operating hours when traffic and pedestrian

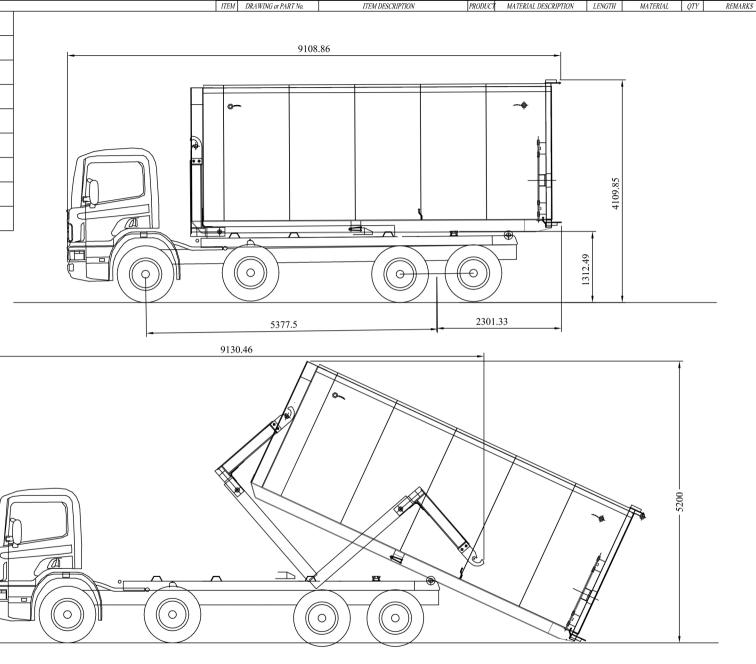
activities are minimal or non-existing.

The attached swept path assessment indicate a 9.1m will be able to reverse in and

Ref. 20093



8 X 4 HOOK TRUCK				
TURNING RADII -	KERB TO KERB	11.4 M		
	WALL TO WALL	12.0 M		
MAX WORKING HEI	5.2 M			
MAX TRAVELLING	4.3 M			
MAX TIPPING HEIGHT		7.0 M		
MAX OPERATING W	27.5 TONNE			



forward out to exit. The minimum 3.6m wide laneway is in accordance with AS2890.2

which requires only 3.5m on a straight section. Two-way movements will not be

required for the access laneway given that no more than 1 truck will arrive and depart

at any one time.

**Existing Loading Dock Access** 

The existing loading dock currently accommodates up to 2 deliveries by 19m semi

daily. With the removal of the loading spaces to the front of the store, the servicing by

6.4m small rigid vehicles for bread deliveries (of up to 2 deliveries a day) will be

relocated to the rear loading dock.

The existing loading dock and associated driveway off Water Street will remain

unchanged and have been designed in accordance to AS2890.1 and 2. These

facilities have also operated satisfactorily for many years with no incidents recorded.

The low frequency of deliveries, the timing outside of store peak hours, driver training

and fitment of reverse cameras, warning beepers and wide-angle rear vision mirrors

facilitate a safe operating environment.

Any requirements for smaller service vehicles (i.e., deliveries, courier activity,

maintenance, etc.), which typically involves van, utes, etc. will be able to use the

proposed 2 loading spaces along the site's north-east frontage.

The servicing occurs out of peak hours and given that the ALDI loading dock does not

require any staff for delivery operations with the truck driver undertaking deliveries into

the building, it can occur outside the store's operating hours when traffic generation of

the store is low. As such, the risk of conflict with other vehicles is very low.

Ref. 20093

## 7.0 Conclusion

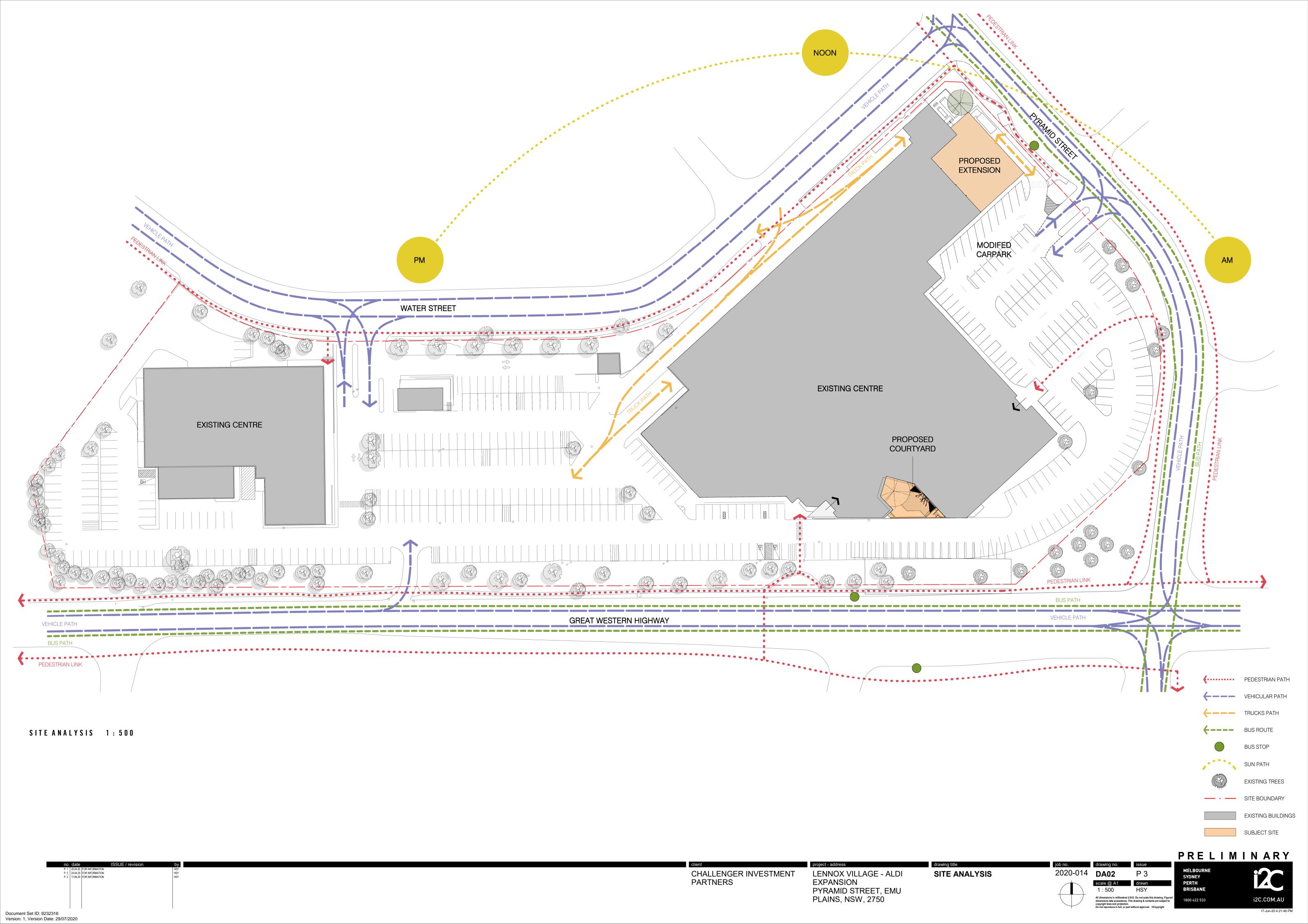
A Development Application is to be submitted to Penrith City Council for proposed alterations and additions to an existing ALDI store located at Lennox Village, Emu Plains. The traffic, transport and parking assessment provided in this report confirm that:

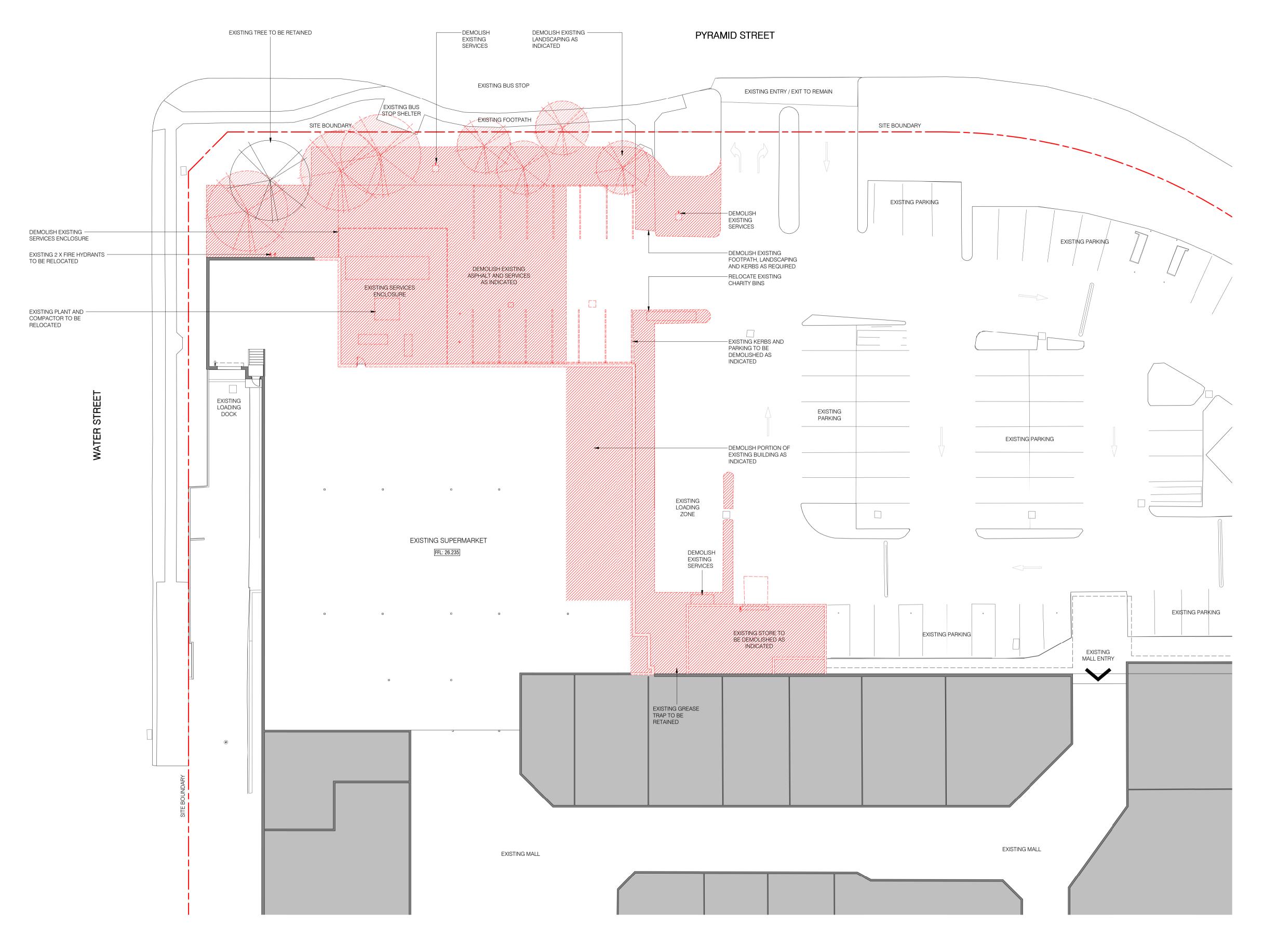
- the traffic generation of the proposed development will not present any adverse traffic implications and traffic-related environmental impacts
- the proposed parking provision in combination with the existing available parking within the Centre will be adequate to accommodate the parking demand in parallel to the development's increase of GFA
- the existing vehicular and service access remains suitable and appropriate
- the proposed servicing provisions will be satisfactory
- the proposed internal circulation will be in accordance with the current AS2890.1 design criteria

# Appendix A

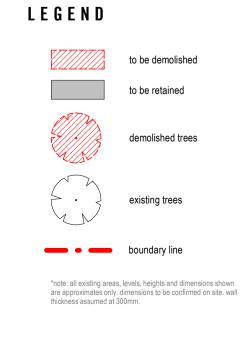
# **Architectural Plans**







EXISTING / DEMO GROUND FLOOR PLAN - SUPERMARKET 1: 200

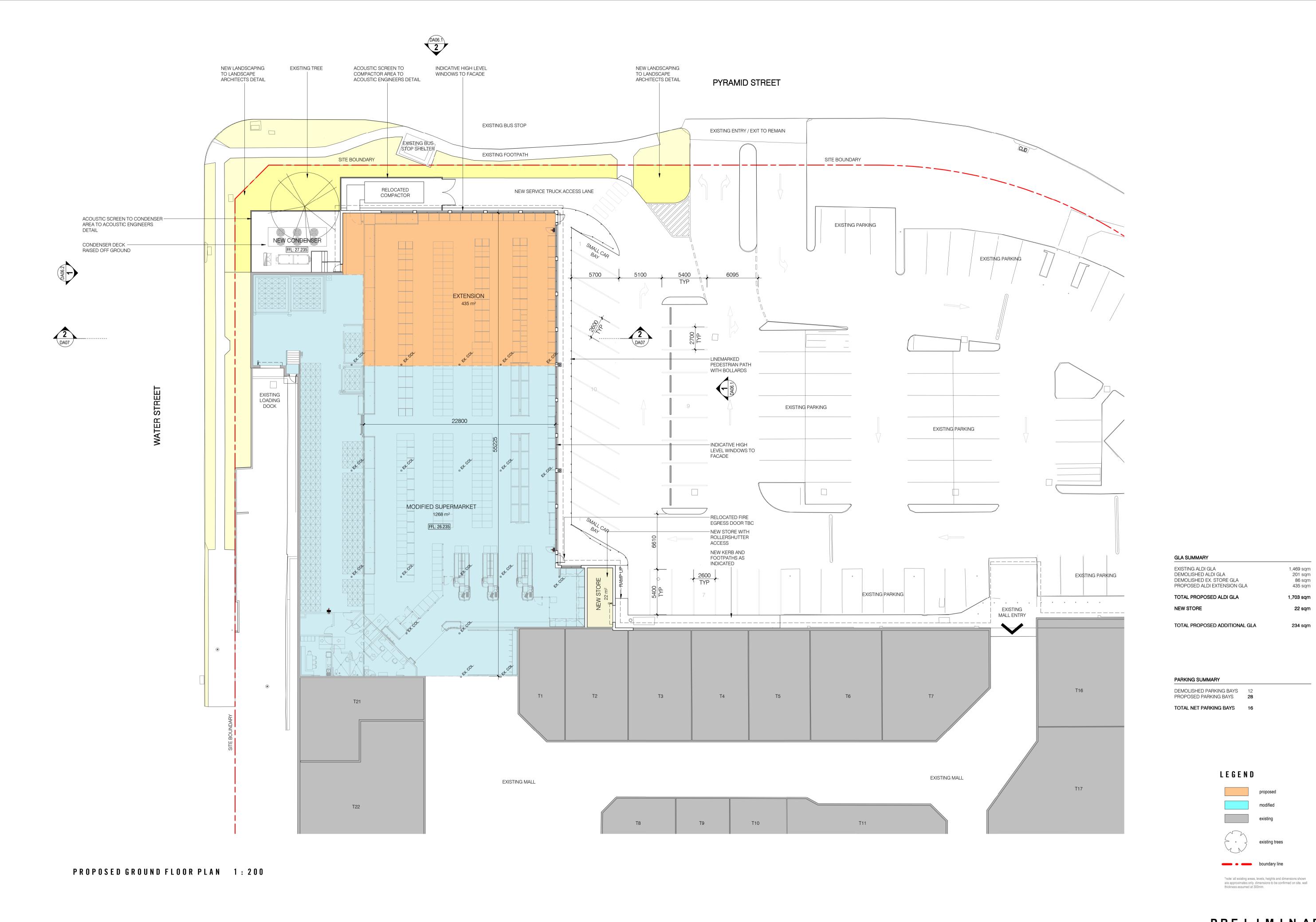


 no. date
 ISSUE / revision
 by

 P 1
 20.04.20 FOR INFORMATION
 HSY

 P 2
 29.05.20 FOR INFORMATION
 HSY

 P 3
 31.05.20 FOR INFORMATION
 HSY

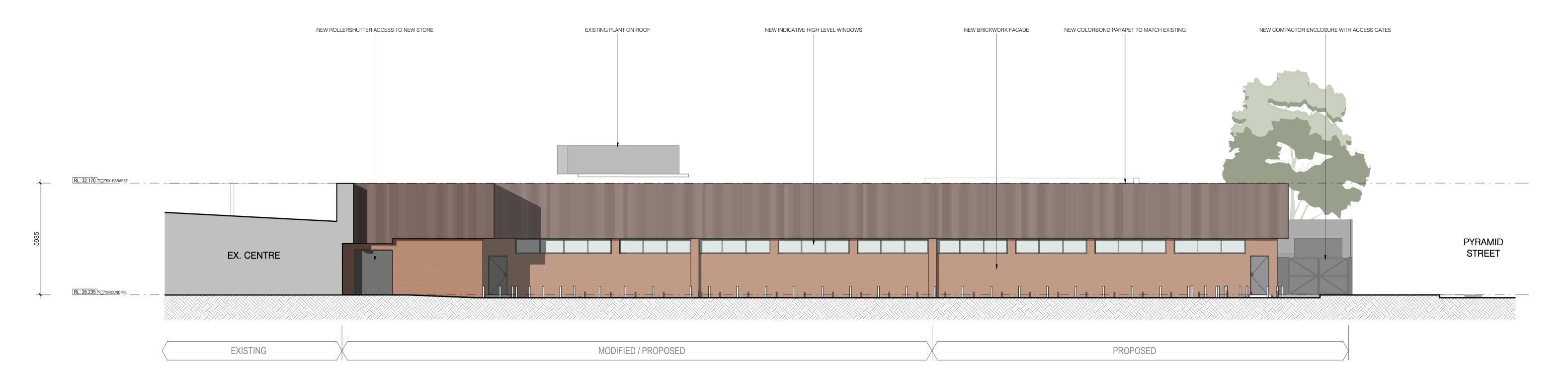


86 sqm

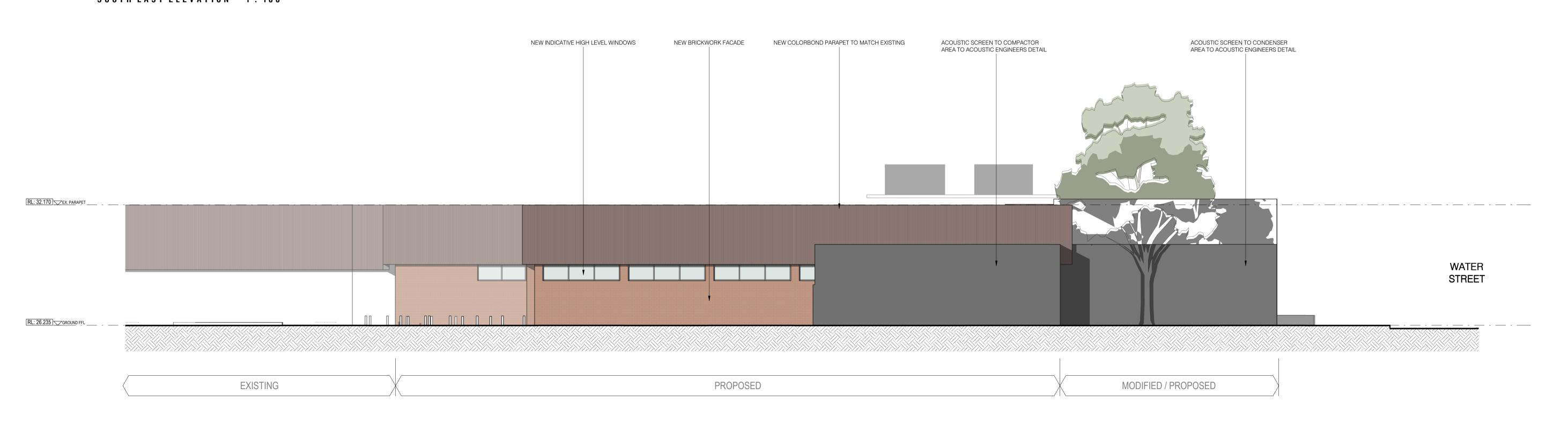
22 sqm

P 3 01.05.20 FOR INFORMATION P 4 15.05.20 FOR INFORMATION

P 5 03.06.20 FOR INFORMATION P 6 10.06.20 FOR INFORMATION P 7 17.06.20 FOR INFORMATION



### SOUTH EAST ELEVATION 1:100



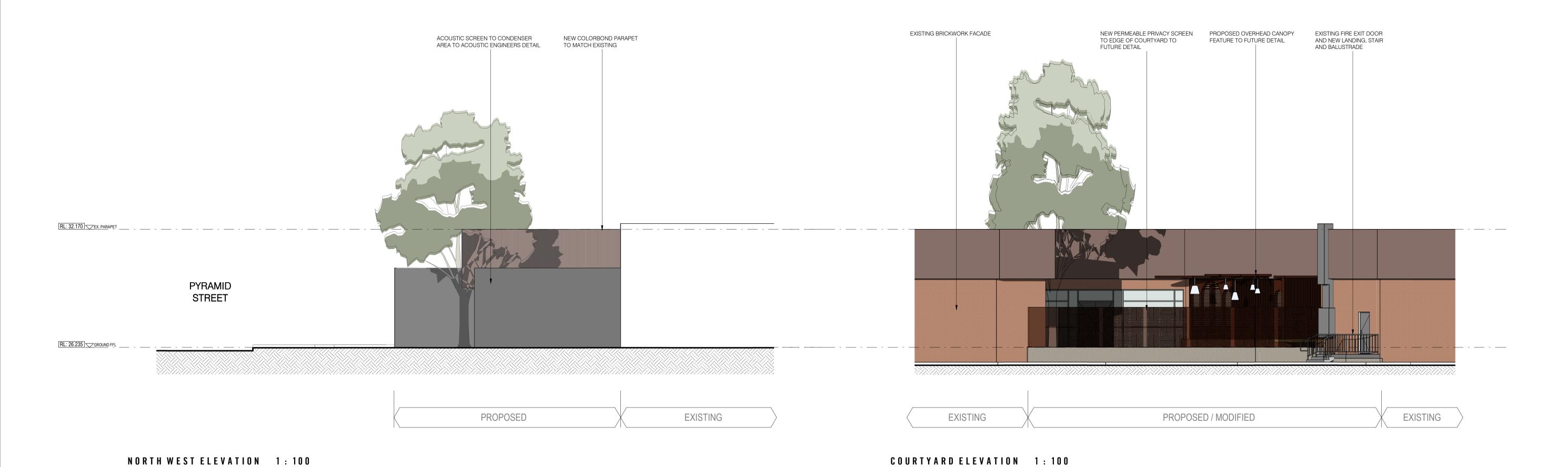
NORTH EAST ELEVATION 1:100

i2C.COM.AU

 no.
 date
 ISSUE / revision
 by

 P 1
 20,04.20 POR INFORMATION
 HSY

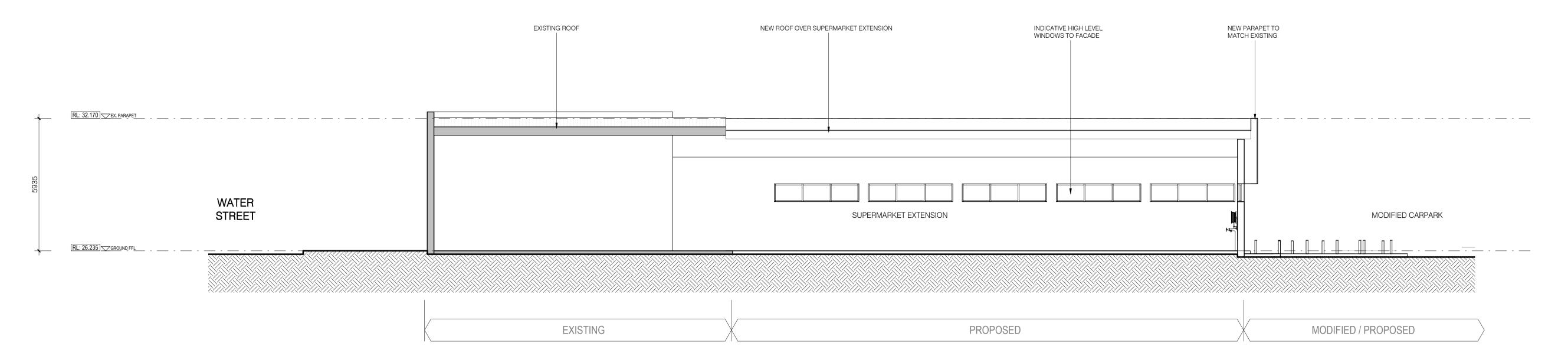
 P 2
 17.06.20 FOR INFORMATION
 HSY



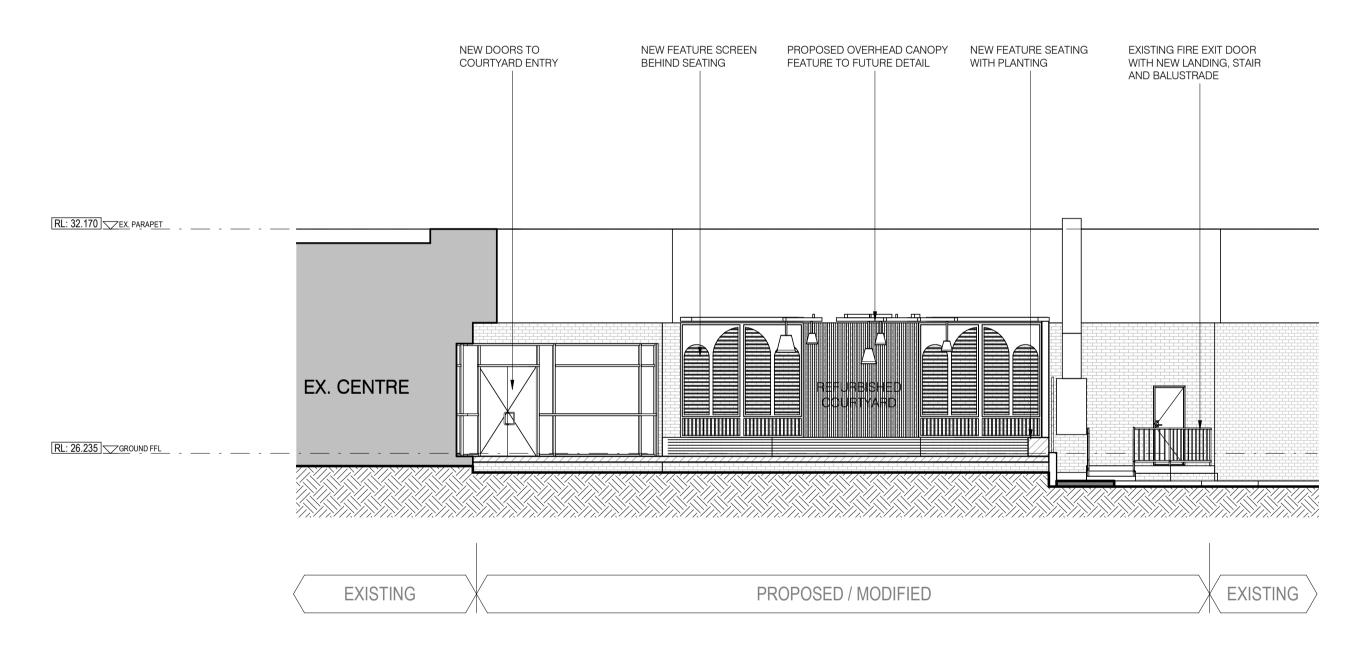
PRE L I M I N ARY job no. drawing no. issue

project - address

no. date ISSUE / revision by



#### PROPOSED SUPERMARKET SECTION 1:100



PROPOSED COURTYARD SECTION 1:100

i2C.COM.AU

LENNOX VILLAGE - ALDI

PYRAMID STREET, EMU PLAINS, NSW, 2750

EXPANSION

no. date ISSUE / revision by

Appendix B

**Public Transport Services** 



# Sydney rail network









Sydney metro and train lines



Chatswood Tallawong



North Shore



Inner West Leppington City

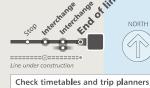




Eastern Suburbs & Illawarra Line Eastern Suburbs Illawarra Cronulla



Northern Line



for train services and connections

Visit transportnsw.info







Olympic Park Lidcombe



# Intercity Trains Network NSW ATransport







# Appendix C

**Turning Path Assessment** 



