



# Major Development Application

## Name of Development Submission

**Tell us what you think about the following aspects of the Amendment to the DR.**

*Submissions will be made publicly available and would be included in the proponent's Response Document (that will be released for public information at a later date). Please indicate below if you object to your submission being made available in this way.*

Name: .....Address: .....

Telephone: .....Email: .....

**Overall, what do you think about the proposed amendment to the Plympton Mixed Use development?**

--

**Do you have any specific comments on the amendment?**

--

### Further information

Call – 1800 PLANNING – press option 1

Visit – [sa.gov.au/planning/majordevelopments](http://sa.gov.au/planning/majordevelopments)

Email – [scapreps@sa.gov.au](mailto:scapreps@sa.gov.au)



**Government of South Australia**

Department of Planning,  
Transport and Infrastructure



# Major Development Application Name of Development Submission

Please indicate your preference below:

☐

Please make my submission public

☐

Please *do not* make my submission public

Written submissions commenting on the DR are invited until 5pm Wednesday 12 December 2018 addressed to:

Minister for Planning  
c/- Robert Kleeman  
Unit Manager, Policy and Strategic Assessment  
Department of Planning, Transport and Infrastructure  
GPO Box 1815  
ADELAIDE SA 5000

or via email to: [scapreps@sa.gov.au](mailto:scapreps@sa.gov.au)

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**Government of South Australia**

Department of Planning,  
Transport and Infrastructure





## Government of South Australia

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Department of Planning,  
Transport and Infrastructure

### DEVELOPMENT ACT 1993

#### PROPOSED PLYMPTON MIXED USE DEVELOPMENT CORNER OF ANZAC HIGHWAY AND MARION ROAD PLYMPTON

#### RELEASE OF A SECOND AMENDMENT TO THE DEVELOPMENT REPORT FOR PUBLIC COMMENT

On 24 May 2007 pursuant to Section 46 of the *Development Act 1993* the Minister for Planning (Minister) declared that a proposal to develop a shopping centre and residential apartments at Anzac Highway/Marion Road, Plympton would be assessed using the major development provisions of the *Development Act 1993*.

A Development Application for the proposed development was received from the Palmer Group in July 2007. The application was referred to the then Development Assessment Commission (DAC) for examination in accordance with the requirements of the Act.

The then DAC determined that the Palmer Group should prepare a **Development Report (DR)** regarding the proposal, and issued formal Guidelines outlining the environmental, social and economic issues the DR had to address. A Development Report (DR) was prepared by the Palmer Group and released for public exhibition for a period between July and August 2009. The overall development was approved by the Governor December 2013.

An amendment to the DR was approved by the Minister for Planning on 21 June 2018.

The delegate for the Minister advises that the Palmer Group has now prepared a further amendment to the DR, which, by way of this notice, is released for public comment for a period of 15 business days from Wednesday 21 November 2018 until Wednesday 12 December 2018. The Amendment to the DR can be obtained at the locations indicated below.

#### **Obtaining a copy of the Amendment to the DR**

The DR document is available online, without cost, via the following link:

[https://www.saplanningcommission.sa.gov.au/scap/public\\_notices](https://www.saplanningcommission.sa.gov.au/scap/public_notices)

From Wednesday 21 November 2018, the DR will be available for viewing at the following locations (where normal business hours apply):

Department of Planning, Transport and Infrastructure (DPTI)  
Level 5, 50 Flinders Street, Adelaide

City of West Torrens  
165 Sir Donald Bradman Drive  
HILTON SA 5033

Hard copies of the Amendment to the DR may be purchased at a cost of \$27.50 per copy from the addresses above, or by mail order for an extra \$6 (includes GST and postage) from DPTI, telephone (08) 7109 7018. An electronic copy will also be available free of charge.

### **Submissions**

Written submissions on the Amendment to the DR are invited until 5pm on **Wednesday 12 December 2018** and should be addressed to:

Minister for Planning

Attention: Robert Kleeman, Unit Manager Policy and Strategic Assessment

Planning & Development, Development Division

Department of Planning, Transport and Infrastructure (DPTI)

GPO Box 1815 ADELAIDE SA 5000 or via email to: [scapreps@sa.gov.au](mailto:scapreps@sa.gov.au)

Submissions may be made available for public inspection and will be included in the proponent's Response Document (to be released for public information at a later date).

Adelaide Advertiser: 21 November 2018

Coast City Weekly: 21 November 2018



PROPERTY &  
CONSULTING  
AUSTRALIA

# PLYMPTON MIXED USE DEVELOPMENT - STAGE 2

## AMENDMENT TO THE DEVELOPMENT REPORT

PALMER GROUP

NOVEMBER 2018

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# 1. INTRODUCTION

This application, which is in response to the vagaries of the supply and demand fundamentals of the market, seeks to vary an authorisation previously given under Section 48 of the Development Act 1993, as amended to assist with the timely delivery of Stage 2 of the Plympton Mixed Use Development. The proponent, the Palmer Group, is the owner of several contiguous allotments located adjacent to the Highway Hotel at the intersection of Anzac Highway and Marion Road, Plympton.

Pursuant to Section 46 of the *Development Act* 1993, as amended, the Minister for Planning may declare a proposed development as a 'Major Development' if the Minister considers that such a declaration is warranted for the proper assessment of a development. This development was first declared as a Major Development in May of 2007 and the development application to construct a mixed residential and commercial retail complex was lodged on 2 July 2007.

In January 2009, the Major Development declaration was varied to include an additional property. The total site covers approximately 18,000m<sup>2</sup> and is bounded by Elizabeth Avenue to the south, Anzac Highway to the northwest and Marion Road to the east.

In December 2013, the Governor granted provisional development authorisation reserving his decision on a number of specified matters. The Governor delegated certain powers to the Minister for Planning including the power of permit any variation associated with the development authorisation.

The Minister approved variations in June 2014 and 2018. Stage 1 (West Tower) has been completed and is now fully occupied.

Due to market conditions and opportunities, the approved plans for Stage 2 were amended by the proponent and development authorisation for the varied plans was Gazetted on 21 June 2018. However, due to delays in receiving the development authorisation, the anchor tenant failed to complete.

A new anchor tenant has been secured and as a result of their built form needs, a new variation to the Gazetted development authorisation is being sought.

Overall, the amended plans significantly reduce the size and scale of Stage 2 with the removal of roof deck carparking, basement carparking and a smaller retail footprint. Many of these changes also bring the amended plans into line with desires expressed by the Department.

Stage 2 incorporates the East Tower, another five-storey residential building with 28 apartments at-grade undercroft carparking, a retail space consisting of a full line supermarket and a speciality retail outlet with appropriate on-site loading and services facilities, seven townhouses located on Elizabeth Avenue, with a total of 264 car parks.

A summary table of the response to Reserved Matters, Conditions and Notes to Proponent is contained within Section 5 of this report.

## 2. SITE AND LOCALITY

The subject land is located in the south western quadrant of the intersection of ANZAC Highway and Marion Road and is bounded by ANZAC Highway to the North, Marion Road to the East and Elizabeth Avenue to the South and commercial/residential properties to the west.

The land has frontages of approximately 162 meters, 182 meters and 125 meters to ANZAC Highway, Marion Road and Elizabeth Avenue respectively and an overall area of approximately 18,000 square meters. The Highway Hotel, Thirsty Camel Drive-in Bottle Shop and the recently completed West Tower are existing on the land.

The locality has a mixed character. The four quadrants of the intersection are commercial in nature and include a Coles Supermarket, an integrated service station complex, dental clinic, restaurants, banks, a veterinary clinic, post office, real estate agencies and vehicle rental agency. Further afield the land use is primarily residential noting the St. John Baptist Catholic Primary School to the west and the Southern Adelaide Christadelphian Hall directly opposite the subject land on the southern side of Elizabeth Avenue.



### 3. PROPOSED VARIATIONS

Stage 2 of the Plympton Mixed Use Development is generally a combination of the original major development approval for Stages 2 and 3.

The completed Stage 1 (West Tower) had minimal variations to the approved scheme with the inclusion of one additional car park, moving the total from the approved 23 car parks to 24 car parks in the amended scheme.

Moreover, the approved Stage 4 (North Tower), which encompasses 42 apartments, is not included in the current plans and will become the future Stage 3 proposed to commence July 2022.

The proposed variations, which in our opinion, remain within the ambit of the previous authorisations, may be summarised as follows:

- > A reduction in area of specialty shops and reconfiguration (579 square metres).
- > A reduction in supermarket floor area (1,739 square metres).
- > Removal of retail first floor car park (reduction of 202 car parks).
- > Removal of retail basement storage.
- > Addition of new townhouse product.
- > The East Tower is now a stand alone building comprising 28 apartments.
- > Corresponding alterations to the car parking layout.

The proposed variations are more detailed in the set of plans are contained within Appendix A.

#### 3.1 STAGE 2 APARTMENTS AND TOWNHOUSES

Displayed in Table 1 are proposed variations to apartments in Stage 2, identifying a maintenance of the number of apartments along with the addition of new townhouse product, noting that previous scheme had removed the approved serviced apartments product. The addition of townhouse product is as a result of the reduction in overall retail space and is on land already zoned residential.

Table 1: Stage 2 Apartment and Townhouse Changes

	REVISED APPRVED SCHEME (21/06/18)	PROPOSED AMENDED SCHEME (CURRENT)	CHANGES FROM RECENTLY APPROVED SCHEME
EAST TOWER	28	28	0
TOWNHOUSES	0	7	+7
TOTAL	28	35	+7

### 3.2 STAGE 2 CAR PARKING

Displayed in Table 2 are the car parking changes in Stage 2 between the scheme that was previously approved, and the proposed scheme. Overall, there will be a total of 253 car parks in Stage 2 with a total reduction of 106 car parks.

Table 2: Stage 2 Car parking Changes

	ORIGINAL APPROVED SCHEME (21/12/15)	REVISED APPROVED SCHEME (21/06/18)	PROPOSED AMENDED SCHEME (CURRENT)	CHANGES FROM RECENTLY APPROVED SCHEME
<b>GROUND LEVEL</b>	122	155	264	+109
<b>FIRST FLOOR</b>	133	202	0	-202
<b>BASEMENT</b>	170	0	0	0
<b>TOTAL</b>	425	357	264	-93

### 3.3 STAGE 2 AREAS

There have been several amendments to the area sizes of various elements in Stage 2, with an overall reduction of 9,419 m<sup>2</sup> of built form. As indicated in the car parking section above the area for first floor car parking has been completely removed.

Moreover, the amended scheme shows a reduction in the allocated supermarket space and a reduction in space for specialty retail.

Table 3: Stage 2 Area Changes

	ORIGINAL APPROVED SCHEME (21/12/15)	REVISED APPROVED SCHEME (21/06/18)	PROPOSED AMENDED SCHEME (CURRENT)	CHANGES FROM RECENTLY APPROVED SCHEME
<b>SUPERMARKET</b>	3,086 m <sup>2</sup>	3,313 m <sup>2</sup>	1,703 m <sup>2</sup>	-1,610 m <sup>2</sup>
<b>BASEMENT STORAGE</b>	0 m <sup>2</sup>	982 m <sup>2</sup>	0 m <sup>2</sup>	-982 m <sup>2</sup>
<b>BASEMENT CAR PARKING</b>	5,280 m <sup>2</sup>	0 m <sup>2</sup>	0 m <sup>2</sup>	0 m <sup>2</sup>
<b>GROUND FLOOR SPECIALTY</b>	1,994 m <sup>2</sup>	962 m <sup>2</sup>	365 m <sup>2</sup>	-597 m <sup>2</sup>
<b>COMMERCIAL FIRST FLOOR</b>	878 m <sup>2</sup>	0 m <sup>2</sup>	0 m <sup>2</sup>	0 m <sup>2</sup>
<b>FIRST FLOOR CAR PARK</b>	3,410 m <sup>2</sup>	6,230 m <sup>2</sup>	0 m <sup>2</sup>	-6,230 m <sup>2</sup>
<b>TOTAL</b>	14,648 m <sup>2</sup>	11,487 m <sup>2</sup>	2,068 m <sup>2</sup>	-9,419 m <sup>2</sup>

# 4. ASSESSMENT

Pursuant to Section 48 (5) (a) of the Development Act 1993, as amended, the Governor, or delegate, must have regard to the provision of the appropriate Development Plan to the extent that they are relevant.

In this instance, the following provisions of the West Torrens Council Development Plan, consolidated 12 July 2018 have been taken into consideration in the preparation of this report.

## ***General Section***

### Advertisements

Objectives: 1, 2 and 3

PDC's: 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15, 16, 17, 18, 22 and 23

### Building near Airfields

Objective: 1

PDC's: 1, 2, 3 and 4

### Crime Prevention

Objective: 1

PDC's: 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10

### Design and Appearance

Objective: 1 and 2

PDC's: 1, 2, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 19 and 23

### Energy Efficiency

Objective: 1 and 2

PDC's: 1, 2, 3 and 4

### Hazards

Objective: 8 and 9

PDC: 13

### Infrastructure

Objective: 1, 2 and 3

PDC's: 1, 2, 3, 4, 5, 6, 7, 8, 10, 12 and 13

Landscaping, Fences and Walls

Objective: 1 and 2

PDC's: 1, 2, 3, 4, 5 and 6

Medium and High-Rise Development (3 or more Storeys)

Objective: 1, 2, 3, 4 and 5

PDC's: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 19, 23, 24, 25, 26, 27 and 28

Residential Development

Objective: 1, 2, 3, 4 and 5

PDC's: 1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31, 23 and 33

Transport and Access

Objective: 2

PDC's: 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 17, 20, 20, 21, 23, 24, 26, 27, 28, 30, 32, 34, 35, 36, 37, 39, 40, 41, 42, 44 and 45

Waste

Objective: 1 and 2

PDC's: 1, 2, 3, 4, 5, 6, 7, 10 and 11

Noting that this is Stage 2 of a previously authorised development and in consideration of all of the above, the following have been identified as the primary issues to be addressed:

- > Land Use and Zoning;
- > Advertisements;
- > Design and Appearance;
- > Site Contamination;
- > Interface between Land Uses;
- > Orderly and Sustainable Development;
- > Transportation and Access; and
- > Waste.

## 4.1 LAND USE AND ZONING

It is important to keep in mind that the Development Plan is a practical document calling for practical application and it is well established that the zoning intentions and existing character of a locality are to be properly balanced and a proposed development must be judged in its historical and factual context. A conclusion that a proposed development is not consistent with the overall intent and desired character of a zone is not necessarily decisive of the matter. There may be other relevant factors.

In this instance, and as noted above, the project has been granted 'Major Development' status and Stage 1, being the West Tower, is now completed and fully occupied.

The subject land straddles the Urban Corridor Zone, Boulevard Policy Area 34 and the Residential Zone, Medium Density Policy Area 18. Approximately 75% of the site is within the Urban Corridor Zone and 25% in the Residential Zone. The Highway Hotel which occupies approximately 60% of the land is wholly within the Urban Corridor Zone and to some degree limits development opportunities.

Whilst it is readily acknowledged that the proposed development does not necessarily meet the letter of the respective zone provisions we say that it respects the spirit or intent in that:

- > a genuine land use mix, comprising a range of compatible non-residential and medium density residential land uses orientated towards a high frequency public transport corridor, as envisaged in the Urban Corridor Zone, is achieved;
- > residential development has now been introduced to the Elizabeth Avenue frontage of the site which is within the Residential Zone replacing what was formally the 'back of house' of the supermarket;
- > buildings of 3 or more storeys are the predominant built form;
- > overlooking, overshadowing and noise impacts have been moderated by way of design; and
- > the car parking area has been appropriately reconfigured.

## 4.2 ADVERTISEMENTS

Two freestanding signs are proposed, one at the entry to the car park off ANZAC Highway and the other approximately 35 metres south of the new vehicular access/egress crossover to Marion Road.

The ANZAC Highway sign is of a painted steel column design with an overall height of 10 metres and the Marion Road sign is a timber clad blade wall sign with an overall height of 8.5 metres. The contents of the signs will be limited to information relating to the legitimate use of the associated land and the proponent accepts the previous condition of consent that no element of LED or LCD will be included. Both signs will be erected wholly within the boundaries of the subject land.

Overall it is considered that the proposed signage is appropriate to the proposed development and not likely to detract from the amenity of the locality or cause any undue distraction to the travelling public.

## 4.3 DESIGN AND APPEARANCE

The proposal has been consciously designed and sited to have due regard to the opportunities and constraints presented by the site.

As previously reported the adopted architectural theme creates an identity and focal point for this prominent but otherwise underutilised site. The development reflects the desired character of the locality, incorporating contemporary designs that have due regard to building height, mass and proportion, external materials and finishes, roof form and pitch and articulation and modelling.

The design and location of buildings minimise overshadowing and overlooking.

The East Tower presents an interesting streetscape incorporating vertical and horizontal elements and green walls which provide visual interest and minimises perceived massing.

Buildings, landscaping, paving and signage have a coordinated appearance and areas of uninterrupted walling have been avoided. Pedestrian entry points will be readily distinguished with direct access proposed from the public realm and car park area.

The introduction of the townhouse development to the Elizabeth Avenue frontage presents a transition down in scale and intensity to the prevailing context of the Residential Zone, providing a safe, comfortable and appealing street environment as would otherwise be the case.

All relevant crime prevention techniques have been adopted.

A pedestrian and wayfinding plan depicting the safe, accessible and logical pathways between the various elements of the project has been included in the documentation.

#### 4.4 SITE CONTAMINATION

The Environmental Site Assessment, August 2017 report prepared by Greencap outlines the groundwater investigation at the site. Three groundwater wells (MW01, MW02 and MW03) have been installed at the site. MW01 and MW02 were installed to target any potential contamination moving onto the site from the existing and former service station sites and MW03 was installed within the proposed basement area to assess the depth to groundwater.

No contamination indicators (such as hydrocarbon odours or sheens) were noted in any of the monitoring wells during the well installation, development or sampling.

Additionally, the groundwater showed no elevated results when compared with the water quality criteria nominated in the South Australian Environment Protection (Water Quality) Policy 2003 (EPP) for any of the analytes tested.

Greencap noted that the samples collected from the groundwater monitoring wells MW01 to MW03 did however report elevated concentrations above the laboratory's limit of reporting for a number of volatile halogenated compounds. Based on the available historical information, the likelihood of the use of solvents at the site is considered to be low.

However, due to the elevated solvents reported above background concentrations, the SA EPA has been notified in accordance with Section 83A of the Environment Protection Act.

As the area of the East Tower is changing use to a more sensitive use, an Environmental Auditor is currently preparing an audit of the area in accordance with EPA guidance.

The Proponent is actively engaging with the EPA with regards to the CEMMP, Waste Management Plans, Stormwater Management Plan and site contamination.

#### 4.5 INTERFACE BETWEEN LAND USES

The Development Plan speaks in various ways of minimising adverse impacts and conflict between land uses. In this regard, we say that the proposal satisfies, to an acceptable level, those provisions intended to ensure that, all things being equal, the new development sits comfortably within and responds appropriately to its context having due regard to its neighbours and the locality in general.

#### 4.6 ORDERLY AND SUSTAINABLE DEVELOPMENT

The Development Plan recognises that demographic change will see increased demands for development opportunities at various densities to address such issues as increased housing demand, efficient and effective use of infrastructure, population change and an increased mix in the range and number of dwelling types available, noting that the Plan calls for increased dwelling densities in close proximity to centres, public transport routes and public open space.

The present proposal respects this policy intent and contributes to the ongoing development of the City in an orderly and sustainable manner in that:

- > it creates a safe, convenient and pleasant environment in which to live, work and socialise;
- > it maximises the efficient and effective provision of infrastructure and services;
- > it does not jeopardise the continuance of adjoining authorised land uses;
- > it does not prejudice the attainment of the provisions of the Development Plan;
- > it does not prejudice the development of the respective zones for their intended purposes; and
- > it provides for the development of underutilised land in an efficient and coordinated manner without hindering the orderly development of adjacent land.

In this sense it is concluded that the proposed development is orderly and sustainable.

## 4.7 TRANSPORTATION AND ACCESS

A revised Traffic Impact and Parking Assessment, prepared by CIRQA, recognised and suitably qualified experts in this field, accompanies the application.

The Assessment contained within Appendix B demonstrates that the new scheme meets the car parking requirements and appropriately addresses DPTI's concerns with regards to entry and exiting from the site on ANZAC Highway, Marion Road and Elizabeth Avenue.

It is important to note that servicing of retail uses and waste collection will occur through the site (entry off ANZAC Highway) rather than via the Western internal circulation road as indicated in the previous scheme.

It is proposed that delivery hours for the retail uses will be unrestricted however waste collection will be limited to the hours between 7am and 7pm and 9am and 7pm on a Sunday or Public Holiday.

The townhouses on Elizabeth Avenue have been acoustically designed to accommodate these hours of delivery.

Predicated on the previous scheme, a Reserved Matter was included that required a review of the two-way access adjacent the bottle shop after six months of operation. CIRQA has noted that:

*Since the previous site layout was proposed, the access and parking provisions near the bottleshop ingress have been altered to improve queuing area and minimise conflict points in this area. Given the improved layout, it is considered that the requirement for specific monitoring of this access is no longer required.*

Overall, CIRQA determined that the traffic impacts associated with the new scheme will be significantly reduced compared to the previously approved development.

In addition, the Proponent has actively engaged with Paul Bennett and George Morias in DPTI's Transport Assessment and Policy Reform area regarding the proposed required works on ANZAC Highway and Marion Road. The works outlined in the Reserved Matters and Conditions have been agreed by the Proponent and are no longer required to be listed as either Reserved Matters or Conditions.

### 4.7.1 LOADING DOCK

Please refer to the Traffic and Parking Assessment contain in Appendix B and drawing SK118 in Appendix A.

The supermarket tenancy has been amended to incorporate deliveries and waste collection vehicle access through the middle of the site with entry from ANZAC Highway.

The site has been designed to accommodate 13.8m semi-trailers (largest vehicle anticipated) for deliveries on a 24-hour basis and 11m long rigid trucks for refuse collection for both the retail and residential tower.

### 4.7.2 CAR PARKING

Based on the proposed provision of 264 parking spaces, the proposal will exceed the minimum requirements identified in the Development Plan (including consideration of the existing hotel and bottle shop uses).

### 4.7.3 SECURE CAR PARKS

There are 27 secure car parks provided for the East Tower and 7 secure car parks provided for the town houses. This doesn't preclude apartment parking and visitor parking in the general parking areas and the proposed development provides sufficient on-site car parks for the anticipated demand of all uses proposed, please refer to the parking assessment undertaken by CIRQA (Appendix B).

## 4.8 WASTE

Waste storage and collection areas for each of the proposed uses are identified in the CIRQA Report contained with Appendix B. The hotel has an existing waste storage and collection area located in the south eastern corner of the hotel complex and serviced by an existing loading area. The existing bottle shop has a storage area located south and adjacent to the neighbouring proposed specialty retail tenancy. This area has been expanded to allow storage for the proposed western specialty retail tenancy and is serviced by the internal circulation road on the western side of the site.

The waste storage area for the supermarket tenancy is located adjacent west of the associated loading dock and will be serviced through the site. The residential waste from the eastern tower is to be stored, at grade on the western side of the tower.

Waste collection for the residential apartments will be undertaken at grade with vehicles entering the site from ANZAC Highway. The area for collection has been designed to accommodate small rigid vehicles up to 7.2 m in length. Such provisions will allow for a range of refuse collection vehicles to be utilised. For instance, Veolia and Cleanaway waste collection contractors have a variety of small refuse collection vehicles between 6.4 m and 7.2 m in length which could be utilised to service the site.

The Waste Management Plans are contained within Appendix C and should be read in conjunction with the Traffic and Parking Assessment contained within Appendix B.



## 5. CONCLUSION

Having due regard to the nature of the site and its historical and factual context and the relevant provisions of the appropriate Development Plan, it is concluded that the proposed development is not seriously at variance with the provisions of the Plan and is a reasonable form of development that:

- > It is orderly and economic;
- > Is well designed and sited and responds in an appropriate manner to its setting and locality;
- > Will not detract from the value and setting of surrounding development;
- > Has due regard to its neighbours;
- > Will enhance the visual amenity of the locality; and
- > Adopts appropriate energy efficiency and crime prevention measures.

In summary the proposal has sufficient merit to warrant development authorisation.

## 6. ADDITIONAL INFORMATION

### 6.1 PROACTIVE CONSULTATION

Recognising the large number of Reserved Matters, Conditions and Notes to Proponent – many of which are duplicated one or more times – the Proponent has sought to actively engage with all appropriate referral stakeholders including the EPA, DPTI's Transport Assessment and Policy Reform area and the City of West Torrens. Overall the response from each organisation has been positive.

### 6.2 PLAN AMENDEMENTS

The plans and elevations contained within Appendix A have been amended to ensure accuracy and consistency and reflect the proposed scheme for the site.

### 6.3 STAGING

The originally approved staging is to be amended to reflect the following timeframes:

- > Stage 2 is to be completed by January 2020.
- > Stage 3 is proposed to commence July 2022.

The final concept design for Stage 3 will be completed post construction of Stage 2. It is acknowledged that Stage 3 will require the appropriate provision of additional on-site car parking and this will be incorporated into the design accordingly.

### 6.4 CRIME PREVENTION THROUGH URBAN DESIGN

Crime Prevention Through Environmental Design principles will be adopted throughout the development consistent with that originally approved. In addition to existing carpark surveillance, it is also anticipated that the end user of the supermarket tenancy will provide further surveillance and security monitoring.

### 6.5 ENERGY EFFICIENCY

The design incorporates several passive design solutions and energy efficiencies such as through the use of north/south orientation, shading and high-performance glazing. Western facing apartments will be equipped with shading devices over windows.

Please refer to the Ecologically Sustainable Design Intent Report prepared by Bestec located in Appendix D.

### 6.6 LANDSCAPING

Please refer to drawing SK104 and SK105 in Appendix A and The Precinct Landscaping Report at Appendix I which contains the landscaping plan and schedule prepared by Folland Panozzo Architects with advice from a landscape architect.

### 6.7 SHADOW DIAGRAMS

Please refer to drawing SK120 contained within Appendix A.

### 6.8 AFFORDABLE HOUSING

The applicant will enter into a Land Management Agreement to meet the affordable housing requirements and a draft Land Management Agreement is contained within Appendix E.

## 6.9 HOURS OF OPERATION

The anticipated hours of operation for the supermarket are:

Monday to Wednesday:	8.30am to 8.00pm
Thursday:	8.30am to 9.00pm
Friday:	8.30am to 8.00pm
Saturday:	8.00am to 5.00pm
Sunday:	11.00am to 5.00pm

## 6.10 ELIZABETH AVENUE FRONTAGE TREATMENT

Please refer to the attached set of proposal plans and elevations within Appendix A. The corner of Elizabeth Avenue and Marion Road frontage has been amended to incorporate landscaping to help soften the appearance of the proposal and improve the interface with the residential development to the south.

The properties located on the southern side of Elizabeth Avenue consists of two-unit blocks fronting an internal driveway and the South Adelaide Christadelphian Hall. There are no dwellings that directly front the site of the Stage 2 development.

Further, the amended proposal removes the approved retail interface and replaces it with seven town houses which will soften the interface of the overall development to Elizabeth Avenue.

## 6.11 JOBS CREATION AND SOCIAL AND ECONOMIC VALUE

### 6.11.1 JOB CREATION

In addition to the estimated 72 jobs created during the construction phase, it is estimated that the new scheme proposal would directly support approximately 180 direct and indirect jobs across different fields of employment.

### 6.11.2 SOCIAL AND ECONOMIC VALUE

The development has the capacity to generate a range of direct and indirect economic benefits (including increased public revenues at both Local and State Government level in the form of rates, land tax and stamp duty.)

The increase residential density and retail component is predicted to grow the overall patronage of the suburb and will result in community benefits such as improved safety. The mixed-use component should also benefit consumers through the increase competition between retailers. The surrounding retail tenancies will also benefit from the increased patronage including nearby banking institutions, laundrette, cafes, hairdresser, dentist, dress shop, supermarket, post office, newsagency, chemist and a service station.

Furthermore, the development supports the Transit Oriented Developments ('TOD') principles, defined in the *30-Year Plan for Greater Adelaide*, as the site is located with proximity to public transport options along key arterial roads encouraging patronage of the public transport system and further increases in population density and retail development in the area.

It is anticipated that the development of the site will set a positive example for future urban regeneration within the locality.

## 7. RESPONSE TO PREVIOUS APPROVAL CONDITIONS

This Response Report is prepared in respect to the Reserved Matters, Conditions and Notes to Proponent included in the Gazetted Development Authorisation dated 21 June 2018. This should be read in conjunction with the amended plans, other supporting information and relevant specialist advice.

The table below summarises the Conditions, Reserved Matters and Notes to Proponent along with the Proponent's response describes any resultant action arising.

## RESERVED MATTERS

(a)	This Reserved Matter should be deleted as all detailed design plans and drawing for all structures are included at Appendix A.
(b)	This Reserved Matter should be deleted as it is addressed in Appendix D. In addition, references to Green Star Rating Tool are not appropriate for this type of development as previously recognised by DPTI.
(c)	This Reserved Matter should be amended to a Condition and a draft Land Management Agreement can be found at Appendix E.
(d)	This Reserved Matter should be deleted as Waste Management Plans for each component of the development have been included at Appendix C. The Waste Management Plans have been provided to the EPA and West Torrens Council for review.
(e)	The Proponent has provided the Department with documentation agreeing to works required under the new scheme. This matter has been appropriately addressed and should be deleted with the requirement for a Developer Agreement to be a Condition of approval rather than a Reserved Matter.
(f)	A Traffic and Parking Management Plan will be prepared post approval. This should be a Condition rather than a Reserved Matter.
(g)	This Reserved Matter should be deleted as al detailed car parking design and layout is included at Appendix A.
(h)	This Reserved Matter should be deleted as it is un-necessary for the development.
(i)	This Reserved Matter should be deleted as a detailed Landscaping Plan for each component of the project is included at Appendix A. In particular (i) and (iii) are no longer relevant in this scheme.
(j)	A detailed Stormwater Management Plan has been prepared and is being reviewed by the EPA and the City of West Torrens. This should be a Condition rather than a Reserved Matter.

(k)	A Construction Environmental Management and Monitoring Plan has been prepared and is being reviewed by the EPA and the City of West Torrens. This should be a Condition rather than a Reserved Matter.
<b>CONDITIONS</b>	
1	The Proponent contends that all appropriate Reserved Matters have been addressed and appropriately managed and assessed. Therefore, this Condition can be deleted.
1(a)	This Condition refers to Reports and proposals that are no longer relevant for the proposed Scheme. This Condition should be deleted.
2	The Proponent will adhere to this Condition.
3	The Proponent will adhere to this Condition.
4	The Proponent will adhere to this Condition.
5	The Proponent will adhere to this Condition.
6	The Proponent will adhere to this Condition.
7	The West Tower has been built and occupied. This Condition is not relevant to this variation application.
8	The proposed retail tenant utilises coin operated trolleys and an appropriate storage bay has been provided to the East of the retail area. The use of coin operated trolleys should resolve any Council concerns regarding storage of trolley's overnight. This Condition should be removed.
9	An Acoustic Report has been prepared by SONUS for the East Tower and townhouses. The Proponent will adhere to this Condition.
10	This Condition is not relevant for the revised scheme and should be removed.

11	The Proponent will adhere to this Condition.
12	This Condition should be updated to reflect the most recent Stormwater Management Report.
13	The Proponent will adhere to this Condition.
14	The Proponent will adhere to this Condition.
15	The site is well located with public transport routes that are easily apparent. This Condition should be removed.
16	The Proponent will adhere to this Condition.
17	The Proponent will adhere to this Condition.
18	The Proponent will adhere to this Condition.
19	The Proponent will adhere to this Condition.
20	The Proponent will adhere to this Condition.
21	The Proponent will adhere to this Condition.
22	The Proponent will adhere to waste disposal vehicle access being limited to the hours of 7am and 7 pm, Monday to Saturday inclusive and shall only load or unload within the confines of the subject land.
23	The Proponent will adhere to this Condition.
24	The Proponent will adhere to this Condition.
25	As a result of the amended scheme, this Condition is no longer relevant and should be removed.
26	As a result of the amended scheme, this Condition is no longer relevant and should be removed.

27	As a result of the amended scheme, service and delivery vehicles will move through the centre of the site. As a result of this change which reduces/removes concerns about acoustic issues on the West Tower interface in conjunction with the retail tenant's service/delivery requirements, it is proposed that no restrictions be applied to service and delivery vehicles associated with the site – that is 24-hour delivery.
28	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
29(i)	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
29(ii)	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
30	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
31	This Condition has been considered in the CIRQA Report at Appendix B and their recommendation is for no change to the bus stop or taxi rank based upon appropriateness of location and safety. This Condition should be removed.
32	<p>This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.</p> <p>In addition, DPTI have previously advised that there is no cost implication of any change to the phasing of the intersection.</p>
33	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
34	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
35	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
36	This is a replication of a Reserved Matter and has already been agreed. This Condition should be removed.
37	As previously indicated, the Proponent will adhere to this Condition



38	As a result of the amended scheme, it is anticipated that the largest delivery vehicle will be 13.8m semi-trailers. This Condition should be amended to reflect 13.8m semi-trailers.
39	A full set of plans for car parking are included at Appendix A – supported by the CIRQA Report at Appendix B, this Condition should be removed.
40	<p>The CIRQA Report at Appendix B, notes that “Since the previous site layout was proposed, the access and parking provisions near the bottleshop ingress have been altered to improve queuing area and minimise conflict points in this area. Given the improved layout, it is considered that the requirement for specific monitoring of this access is no longer required.”</p> <p>This Condition should be removed.</p>
41	The Proponent will adhere to this Condition.
42	As a result of the amended scheme, this Condition is no longer relevant and should be removed.
43	The Proponent will adhere to this Condition.
44	The Proponent will adhere to this Condition.
45	The Proponent will adhere to this Condition.
46	The Proponent will adhere to this Condition.
47	The Proponent will adhere to this Condition.
48	The Proponent will adhere to this Condition.
49	As a result of the amended scheme, it is anticipated that the largest delivery vehicle will be 13.8m semi-trailers. This Condition should be amended to reflect 13.8m semi-trailers.

50	This is a replication of Condition 40 and should be removed.
51	The Proponent will adhere to this Condition.
52	The Proponent will adhere to this Condition.
53	As a result of the amended scheme, this Condition is no longer relevant and should be removed.
54	As a result of the amended scheme, this Condition is no longer relevant and should be removed.
55	The Proponent will adhere to this Condition.
56	The Proponent will adhere to this Condition.
57	The Proponent will adhere to this Condition.
58	The Stormwater Management Plan has been provided to the EPA and West Torrens Council. This Condition should be removed.
59	The Proponent will adhere to this Condition.
60	The Proponent will adhere to this Condition.
61	The Proponent will adhere to this Condition.
62	The Proponent will adhere to this Condition.
63	The Proponent will adhere to this Condition.
64	The Proponent will adhere to this Condition.

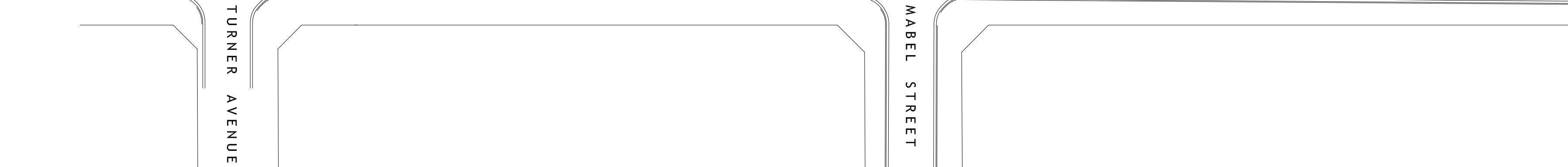
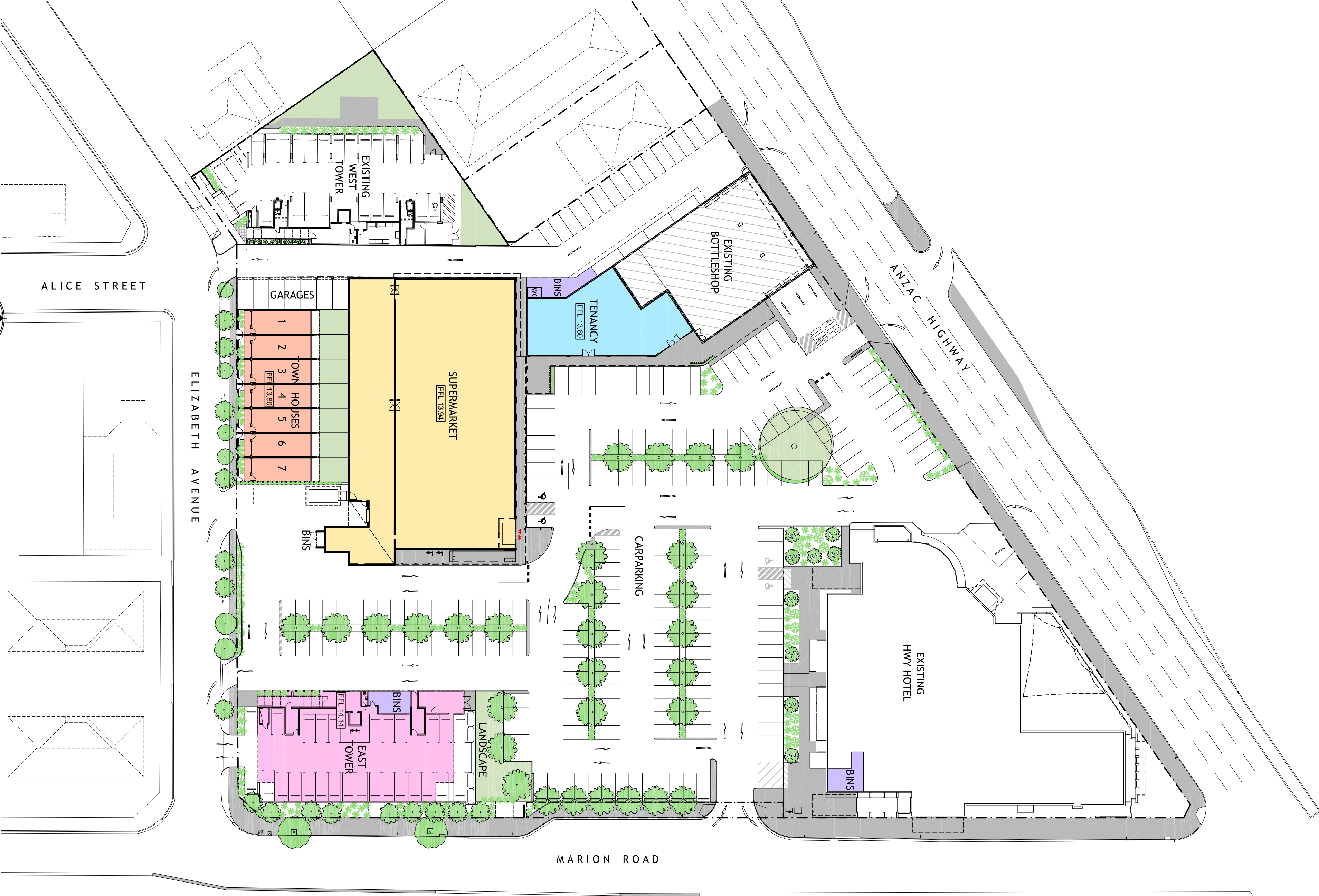
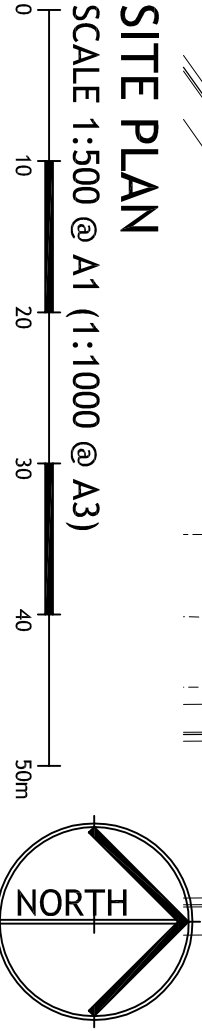
## NOTES TO PROPONENT

1(a)	The Proponent acknowledges this Note.
1(b)	The Proponent acknowledges this Note and requests references to roof top car park, basement and basement car park be removed to reflect the updated scheme.
1(c)	The Proponent requests this Note be deleted as a report on Ecologically Sustainable development is included at Appendix D as well as noting that Serviced Apartment is no longer a proposed land use and the GBCA's Green Star tool is not appropriate this this style of development.
1(d)	The Proponent acknowledges this Note.
1(e)(a)	The Proponent acknowledges this Note and requests references to basement car parking and end of trip facilities be removed to reflect the amended scheme.
1(e)(b)	The Proponent acknowledges this Note and requests that dot point 7 be removed as DPTI has previously acknowledged that due to the location of The Highway Hotel on the boundary of the site that this precludes the need for this dot point.
1(f)	A detailed Landscaping Plan has been provided at Appendix A, this Note should be removed.
1(g)	The Proponent acknowledges this Note and requests that dot point 3 be removed as the proponent is already engaged with the EPA and the City of West Torrens regarding the Stormwater Management Plan.
1(h)	The Proponent acknowledges this Note and following discussions with the EPA has engaged a Site Contamination Auditor to prepare an audit for the land relating to the East Tower where there is a change of land use to a more sensitive use as requested by the EPA.
2	The Proponent acknowledges this Note.
3	The Proponent acknowledges this Note.

4	DPTI has acknowledged that as a consequence of The Highway Hotel building being located on the site boundary at the corner of ANZAC Highway and Marion Road that this Note is redundant. This Note should be removed.
5	The Proponent acknowledges this Note.
6	The EPA has advised the Proponent that this Note is not required.
7	The Proponent acknowledges this Note.
8	The Proponent acknowledges this Note.
9	The Proponent acknowledges this Note.
10	The Proponent acknowledges this Note.
11	The Proponent acknowledges this Note.
12	The Proponent acknowledges this Note.
13	As previously addressed, the site is well located and additional way finding signage is not required. This Note should be deleted.
14	The Proponent acknowledges this Note.
15	The Proponent acknowledges this Note.
16	The Proponent acknowledges this Note.

# APPENDIX A – PLANS AND ELEVATIONS





**APARTMENT SCHEDULE**

West Tower (completed Stage 1)	7 per floor x 4 levels 2 bed apartments = 24 1 bed apartments = 4	28 Apartments
East Tower	7 per floor x 4 levels 2 bed apartments = 24 1 bed apartments = 4	28 Apartments
		<b>TOTAL 56 Apartments</b>

**LANDSCAPE SCHEDULE** - refer sheets sk06-sk08

**TREES** - STREET & CARPARK  
Platanus - (Ornamental / London Plane)  
Pyrus - (Ornamental Pear)

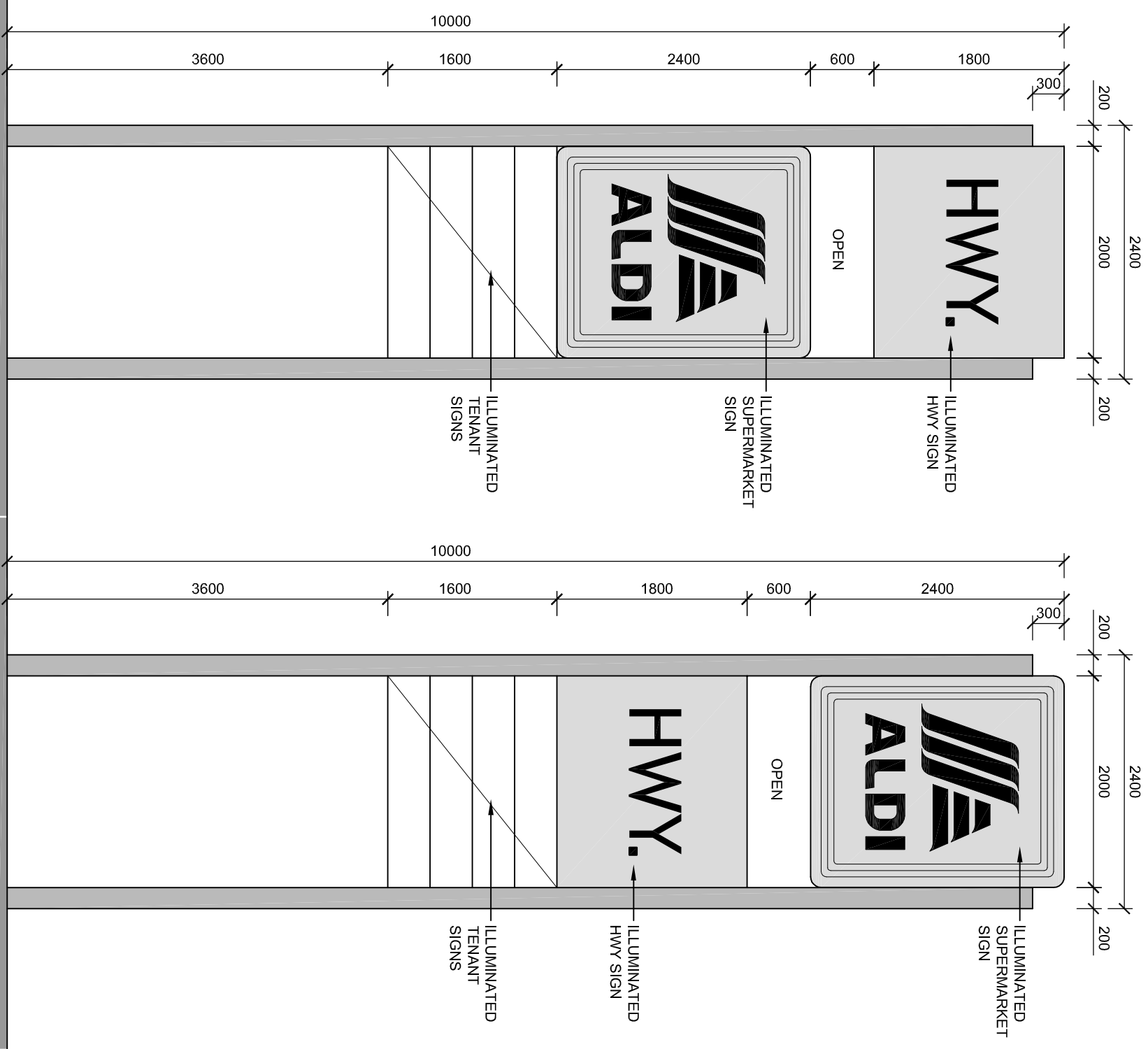
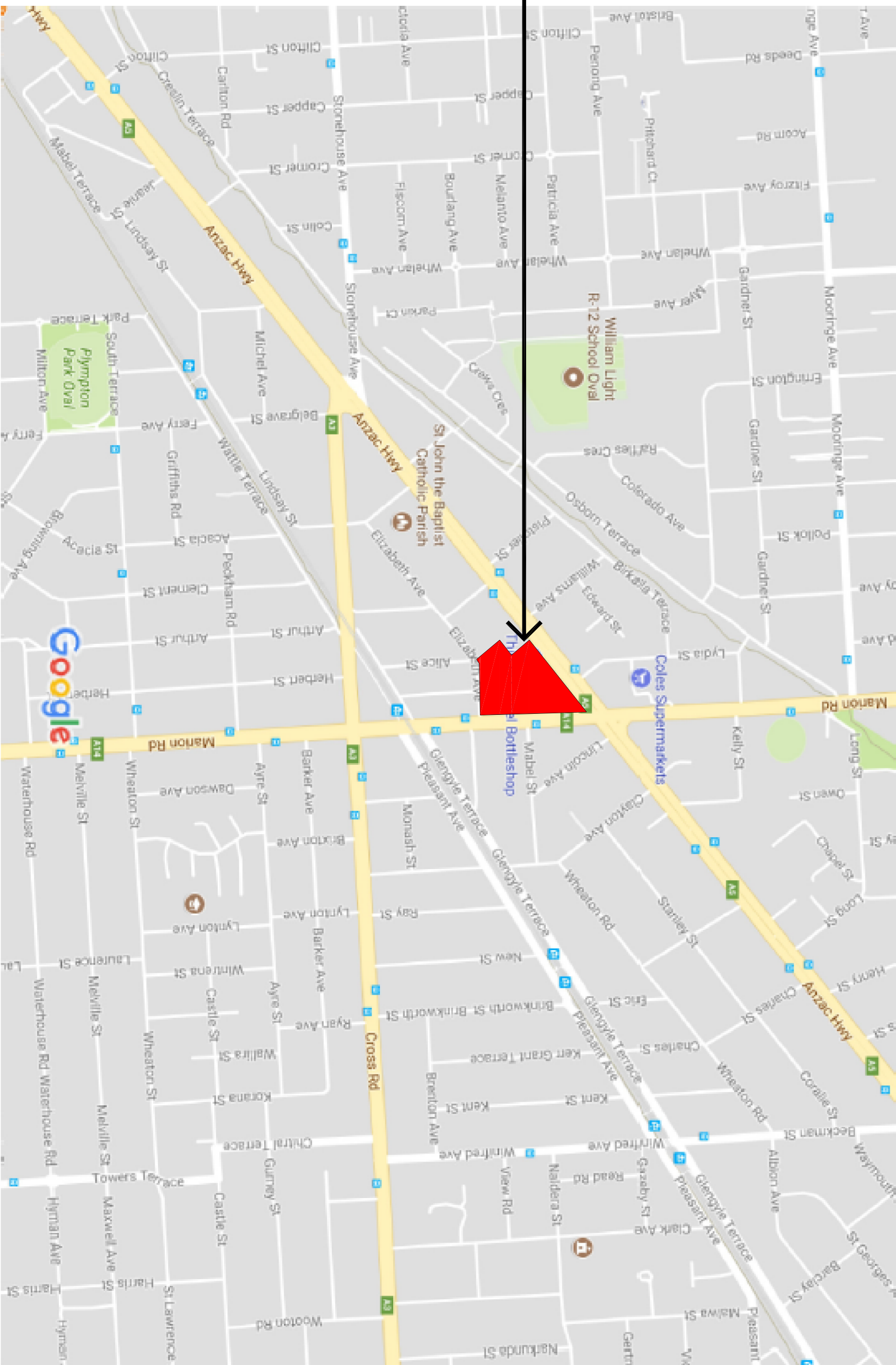
**DRYLAND GARDEN BEDS & GROUND COVERS**  
Cycadates - (Cycad)  
Viburnum  
Dianella Revoluta - (Black-Anther Flax Lily)  
Calostemma Purpureum - (Garland Lily)  
Ficinia Nodosa - (Knobby Clubrush)

**VERTICAL GARDENS**  
Hardenbergia - (Happy Wanderer - Creeper)  
Ficus Pumila Minima - (Small Leaf Ficus - Creeper)

**PARKING SCHEDULE** (excludes West Tower Apartment)

Type	Level	Number
Retail	Ground	230
Townhouses	Ground	7
Apartments (East)	Ground	27
		<b>TOTAL 264</b>

**LOCATION PLAN**  
N.T.S.



**PYLON SIGNS (DOUBLE SIDED, TYP.)**  
SCALE 1:50 @ A1 (1:100 @ A3, TYP.)

**foland architects**  
**panozzo**

269 brampton road  
somerton park sa 5044  
p (08) 8376 8888  
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ABN 56 100 862 879

**HIGHWAY DEVELOPMENT**  
**STAGE 2**  
**ANZAC HIGHWAY**  
**PLYMPTON, SA**

project

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somerton park sa 5044  
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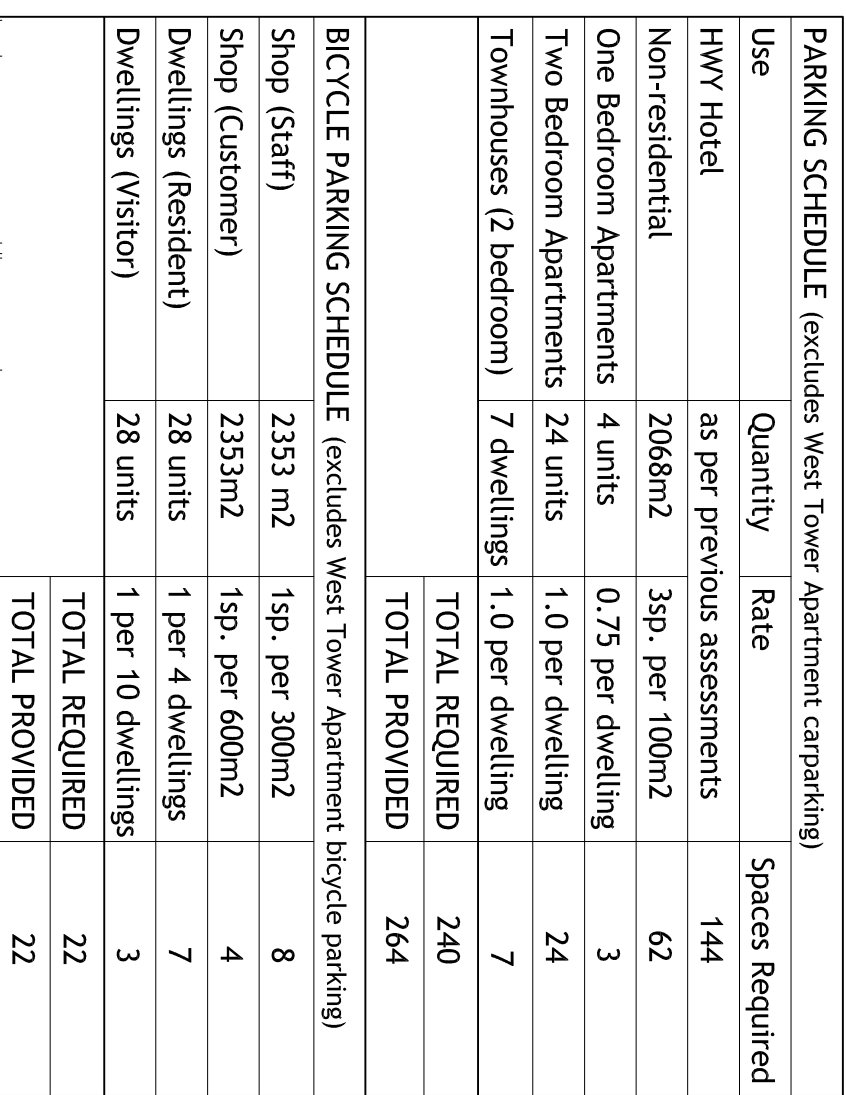
drawing title

site plan & pylon signs

job #	2015 1510	dwg #	SK 100	issue #	F
date	06/11/18	scales	1:500	drawn by	am

BLINDERS AND CONTRASTORS ARE TO REMAIN ALL DIMENSIONS AND SHOWN DRAWINGS. IF IN DOUBT ASK FOR CLARIFICATION.





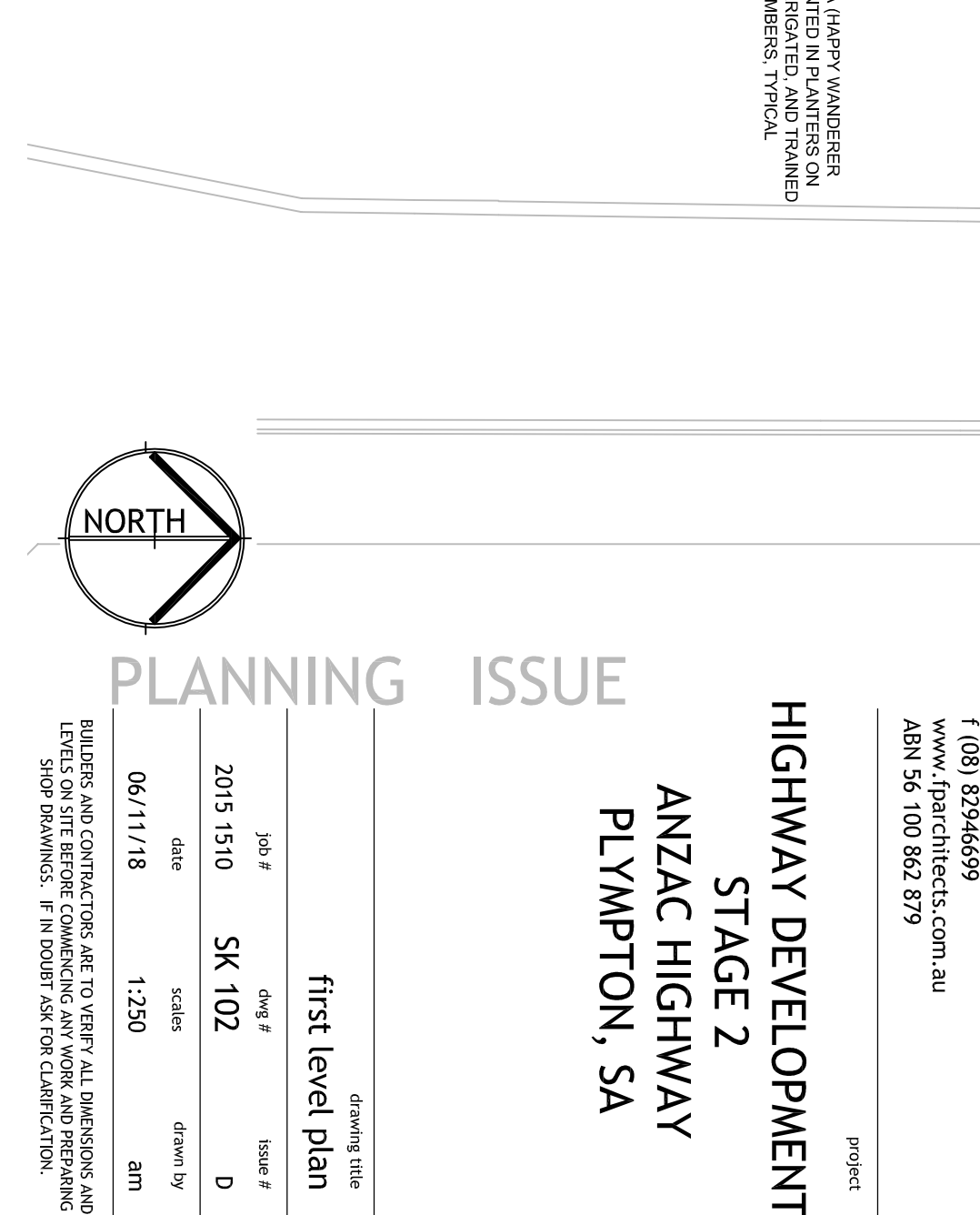
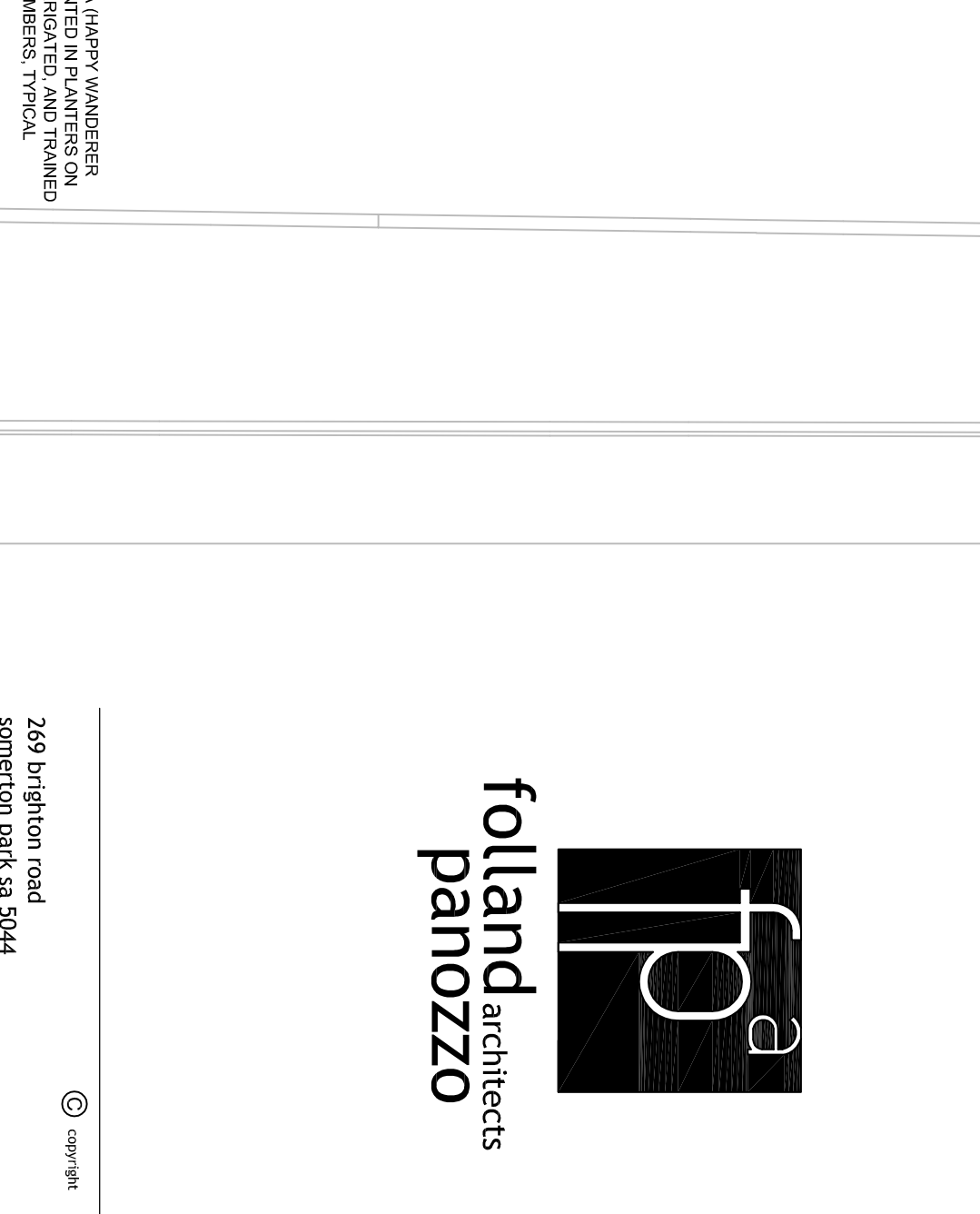
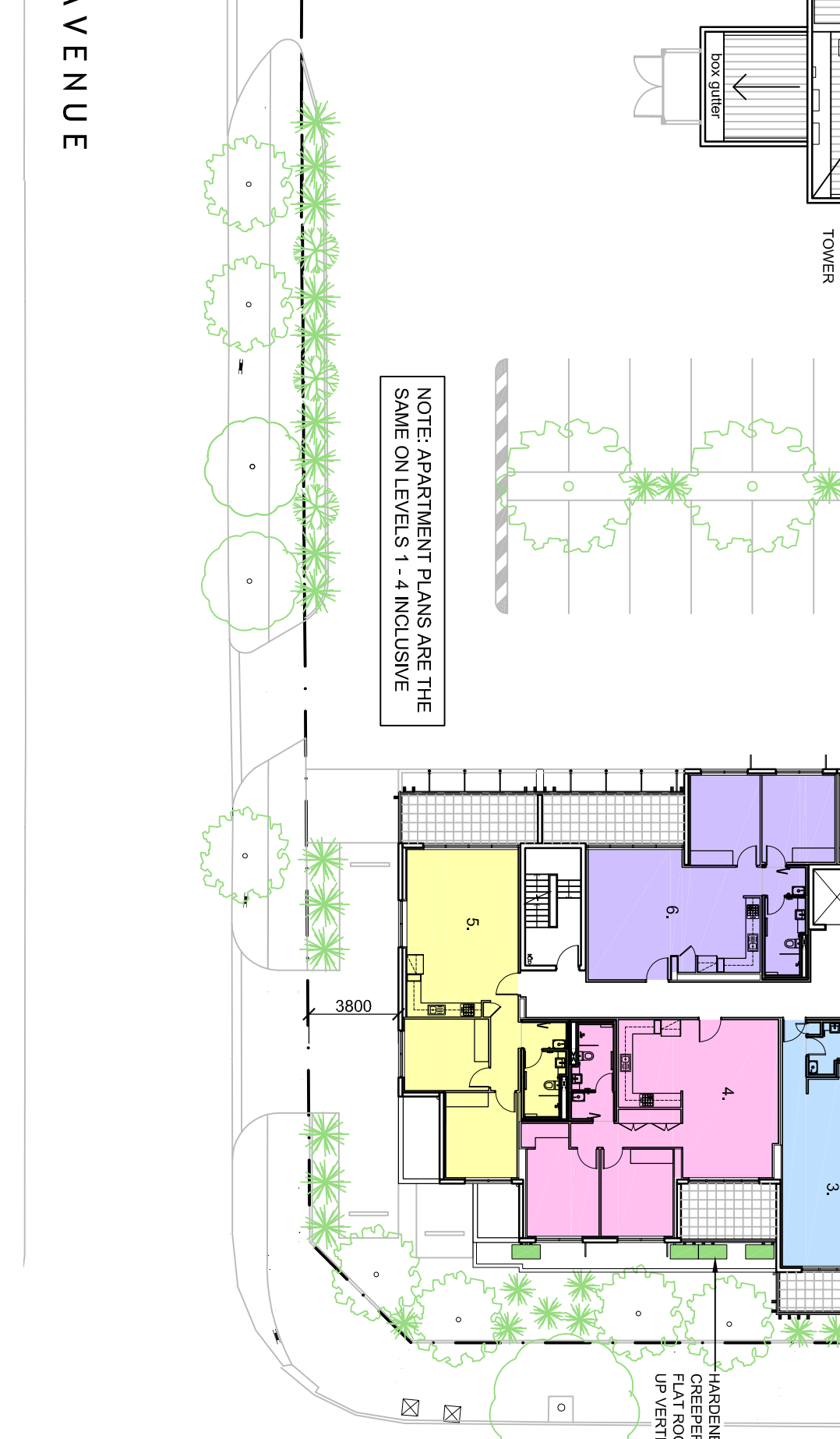
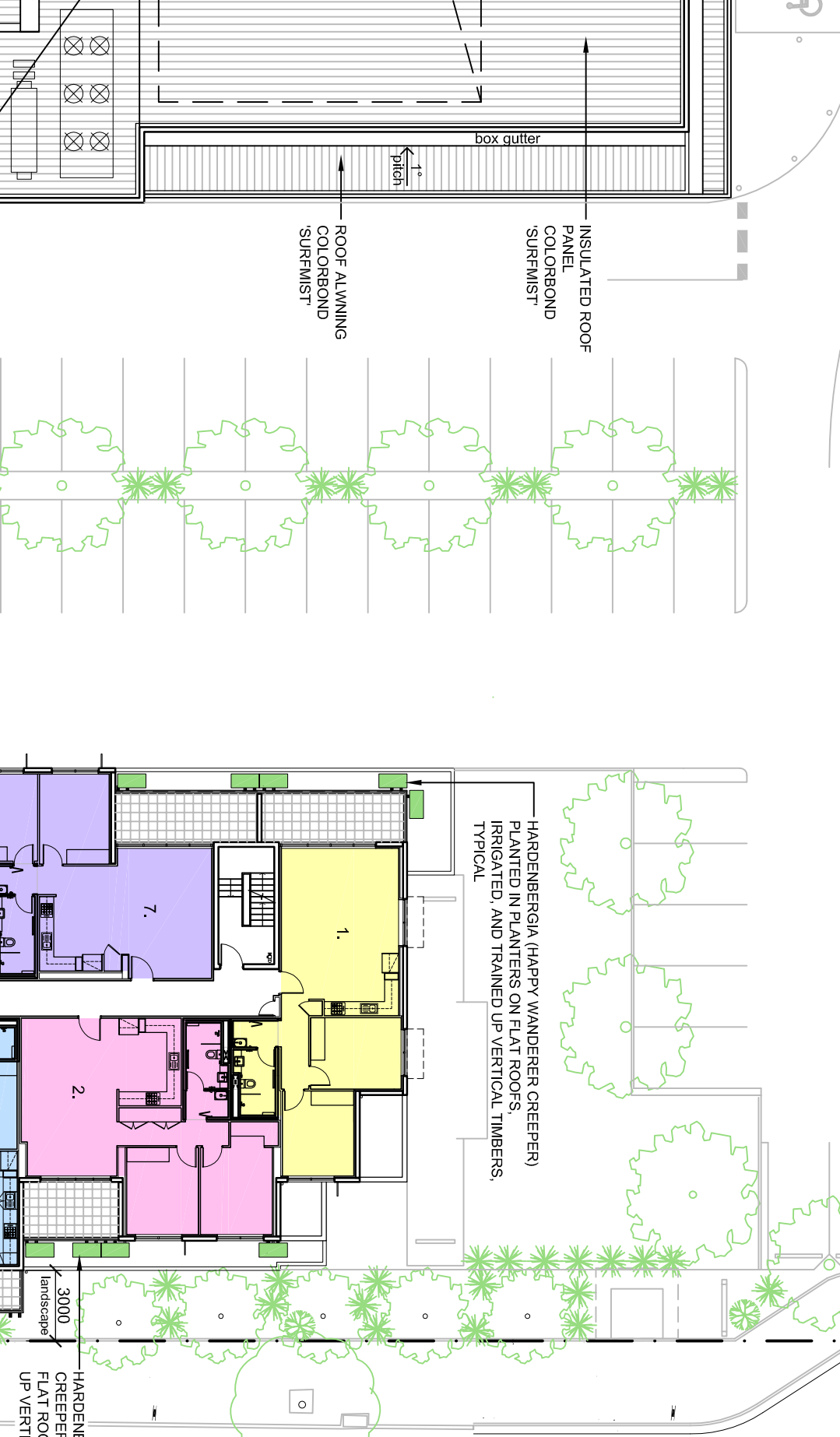
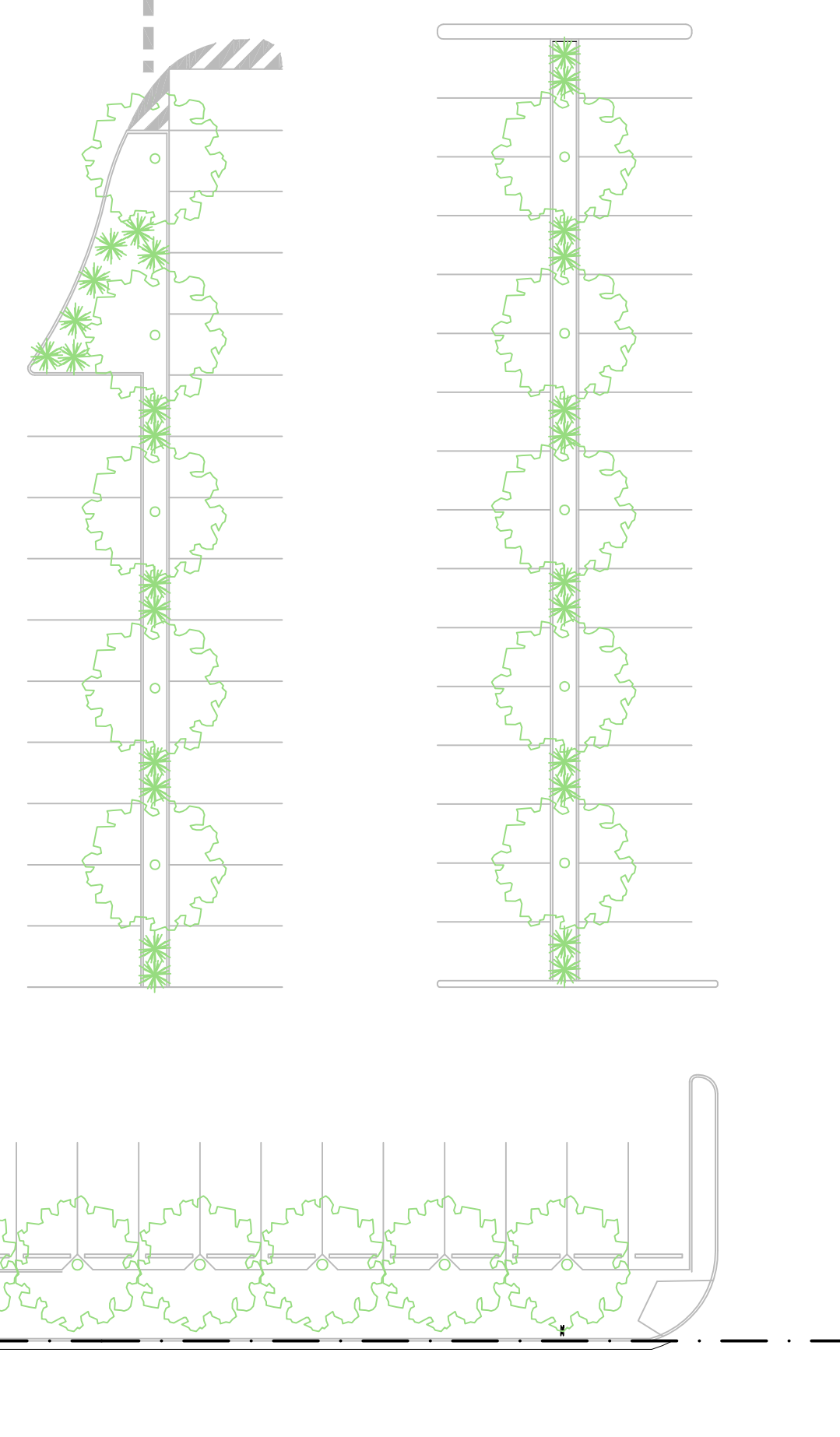
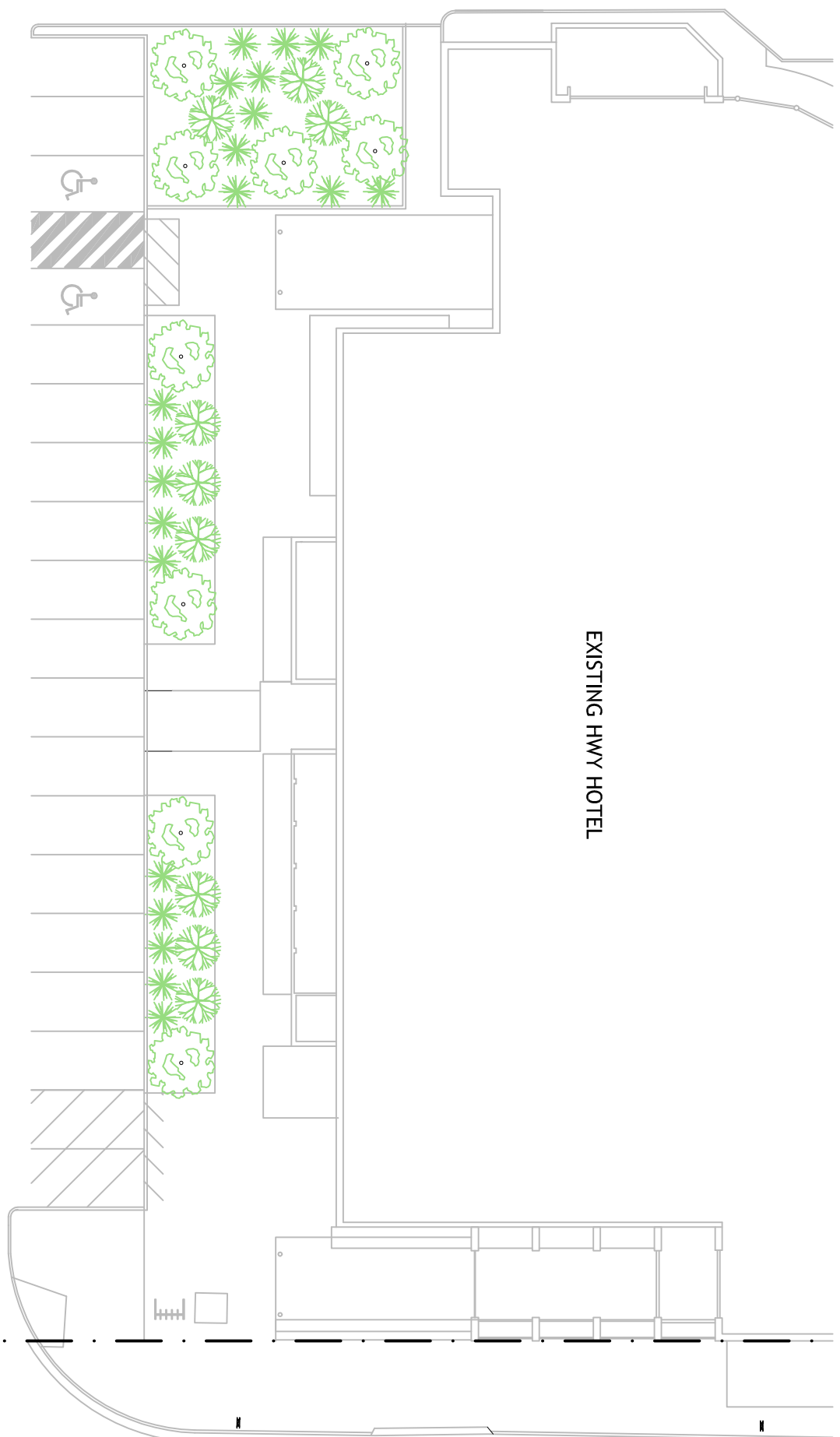
**folland**  
architects  
**panozzo**

# HIGHWAY DEVELOPMENT STAGE 2 ANZAC HIGHWAY PLYMPTON, SA

drawing title			
ground level plan			
job #	dwg #	issue #	
2015 1510	SK 101	F	
date	scales	drawn by	
06/11/18	1:250	am	

SHOP DRAWINGS. IF IN DOUBT ASK FOR CLARIFICATION  
LEVELS ON SITE BEFORE COMMENCING ANY WORK AND PREPARING  
COLLECTOR AND CONTINUATION PILES TO VERIFY ALL DIMENSIONS AND





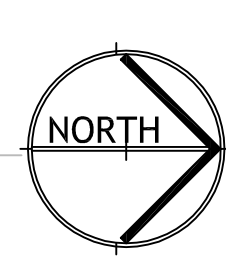
row #	date	description



**HIGHWAY DEVELOPMENT**  
**STAGE 2**  
**ANZAC HIGHWAY**  
**PLYMPTON, SA**

drawing title			
job #	date	scale	drawn by
2015 1510	06/11/18	1:250	am
SK 102			
D			

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PLANNING ISSUE

BLUES AND CONTRASTS ARE TO REPRESENT BUILDINGS AND LANDSCAPE. ALL OTHERS ARE TO REPRESENT LANDSCAPE AND BUILDINGS. IF IN DOUBT ASK FOR CLARIFICATION.

FIRST LEVEL  
SCALE 1:250 @ A1 (1:500 @ A3)



ELIZABETH AVENUE

MARION ROAD

ANZAC HIGHWAY



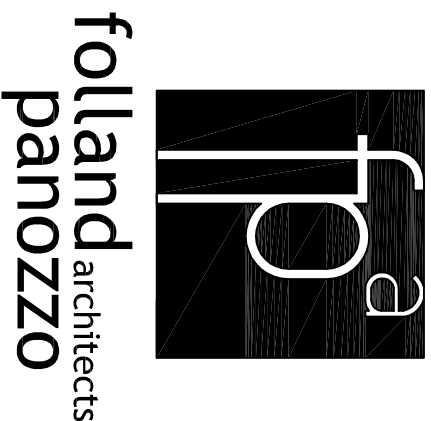




LANDSCAPE SCHEDULE	
TREES - STREET & CARPARK	
Platanus - (Ornamental / London Plane)	
Pyrus - (Ornamental Pear)	
DRIPLAND GARDEN BEDS & GROUND COVERS	
Cycadales - (Cycad)	
Viburnum	
Dianella Revoluta - (Black-Anther Flax Lily)	
Calostemma Purpureum - (Garland Lily)	
Ficinia Nodosa - (Knobby Clubrush)	
VERTICAL GARDENS	
Hardenbergia - (Happy Wanderer - Creeper)	
Ficus Pumila Minima - (Small Leaf Ficus - Creeper)	

MABEL STREET

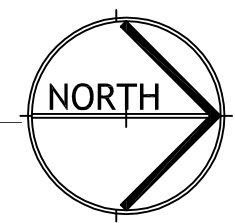
row #	date	description



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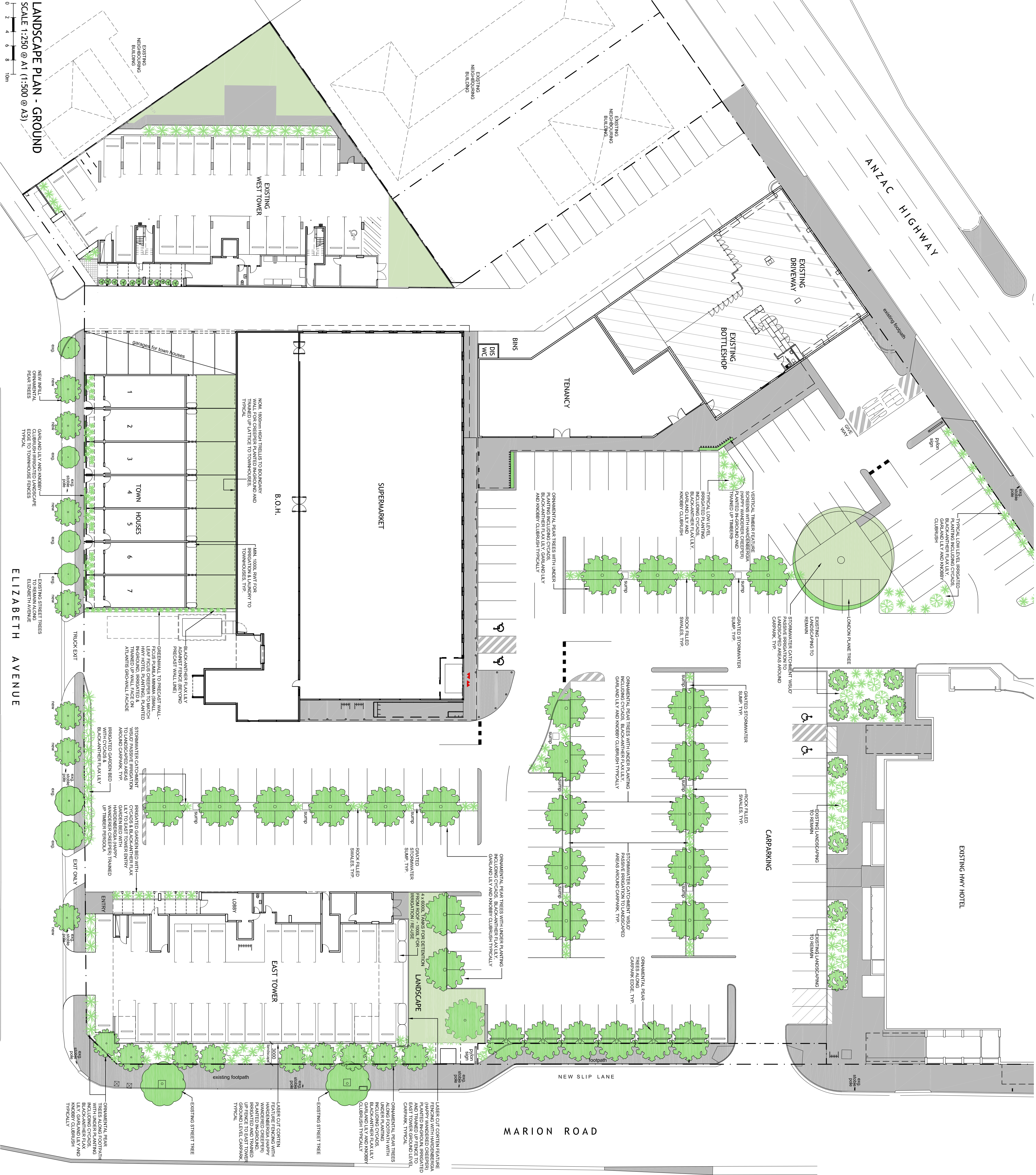
HIGHWAY DEVELOPMENT  
STAGE 2  
ANZAC HIGHWAY  
PLYMPTON, SA

landscape plan - ground	drawing title
2015 1510	SK 104
06/11/18	1:250
am	am



PLANNING ISSUE

BLINDERS AND CONTRASTORS ARE TO VERIFY ALL DIMENSIONS AND LAYOUT DRAWINGS. IF IN DOUBT ASK FOR CLARIFICATION.



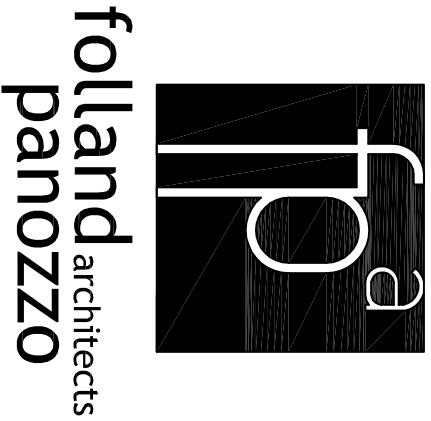
LANDSCAPE PLAN - GROUND  
SCALE 1:250 @ A1 (1:500 @ A3)

ELIZABETH AVENUE



LANDSCAPE SCHEDULE		
TREES - STREET & CARPARK		
Platanus - (Ornamental / London Plane)		
Pyrus - (Ornamental Pear)		
DRYLAND GARDEN BEDS & GROUND COVERS		
Cycadates - (Cycad)		
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Calotestemma Purpureum - (Garland Lily)		
Ficnea Nodosa - (Knobby Clubrush)		
VERTICAL GARDENS		
Hardenbergia - (Happy Wanderer - Creeper)		
Ficus Pumila Minima - (Small Leaf Ficus - Creeper)		

row #	date	description



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ABN 56 100 862 879

HIGHWAY DEVELOPMENT  
STAGE 2  
ANZAC HIGHWAY  
PLYMPTON, SA

drawing title			
landscape plan - first			
job #	dwg #	issue #	
2015 1510	SK 105	C	
date	scales	drawn by	
06/11/18	1:250	am	

BLINDERS AND CONTRASTORS ARE TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING AND PROPOSED LANDSCAPE ELEMENTS AND SHED DRAWINGS. IF IN DOUBT ASK FOR CLARIFICATION.

MABEL STREET

MARION ROAD

EXISTING HWY HOTEL

ANZAC HIGHWAY

EXISTING BOTTLESOP PLANT ON ROOF PLATFORM

EXISTING NEIGHBOURING BUILDING

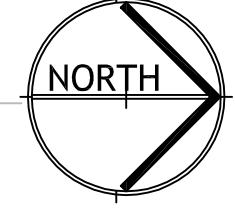
EXISTING NEIGHBOURING BUILDING

EXISTING NEIGHBOURING BUILDING

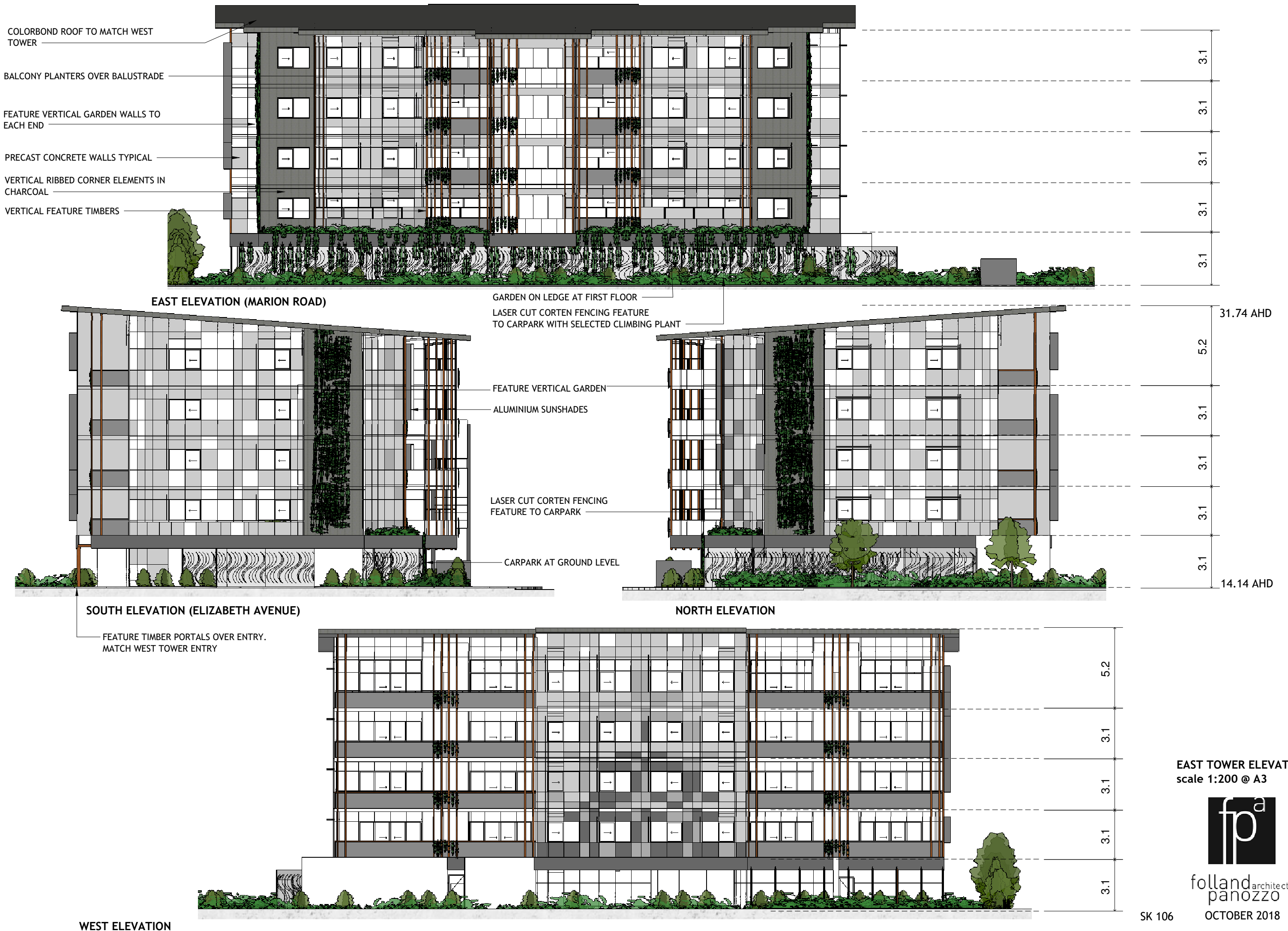
EXISTING WEST TOWER  
28 Apartments  
STAGE 1  
COMPLETED

LANDSCAPE PLAN - FIRST  
SCALE 1:250 @ A1 (1:500 @ A3)

ELIZABETH AVENUE







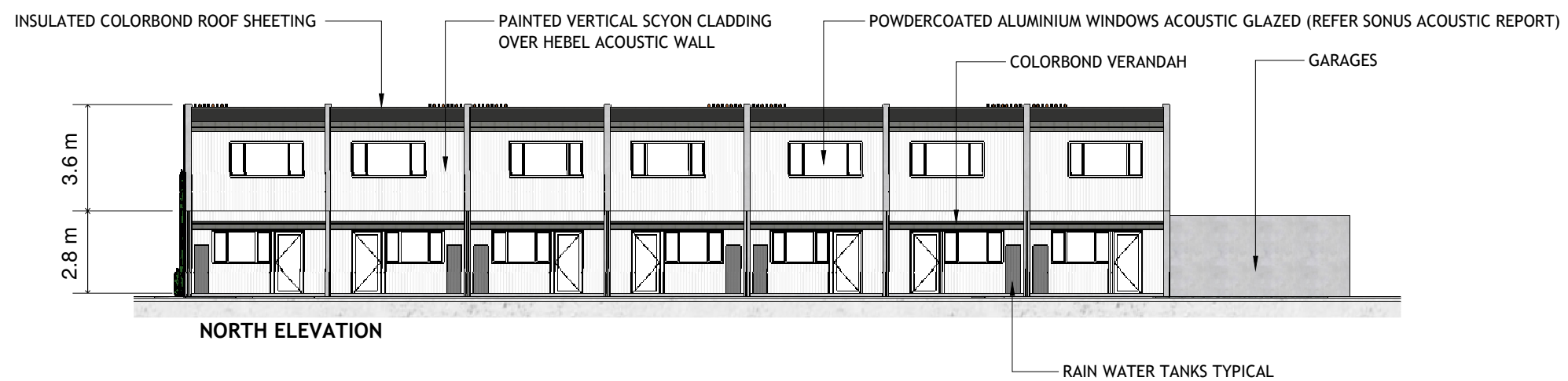
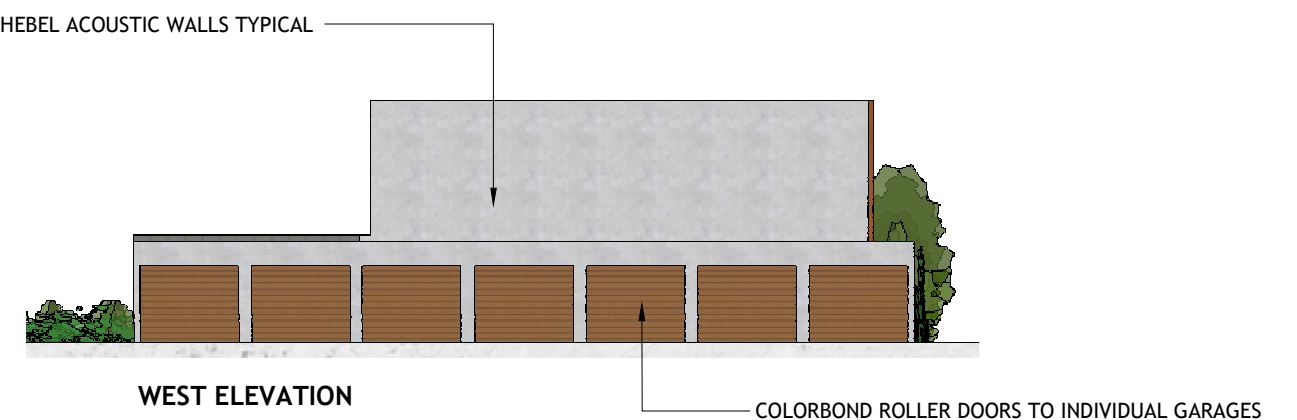
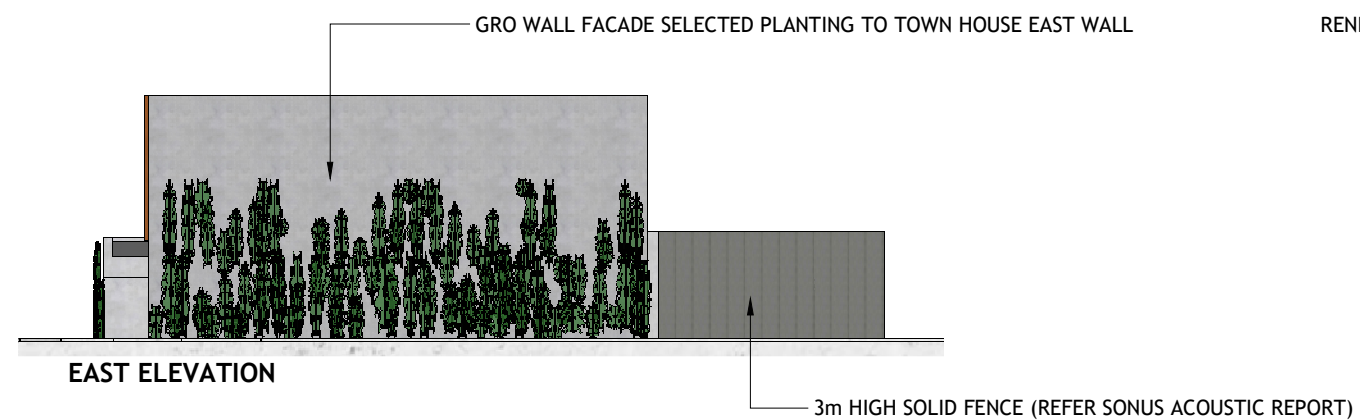
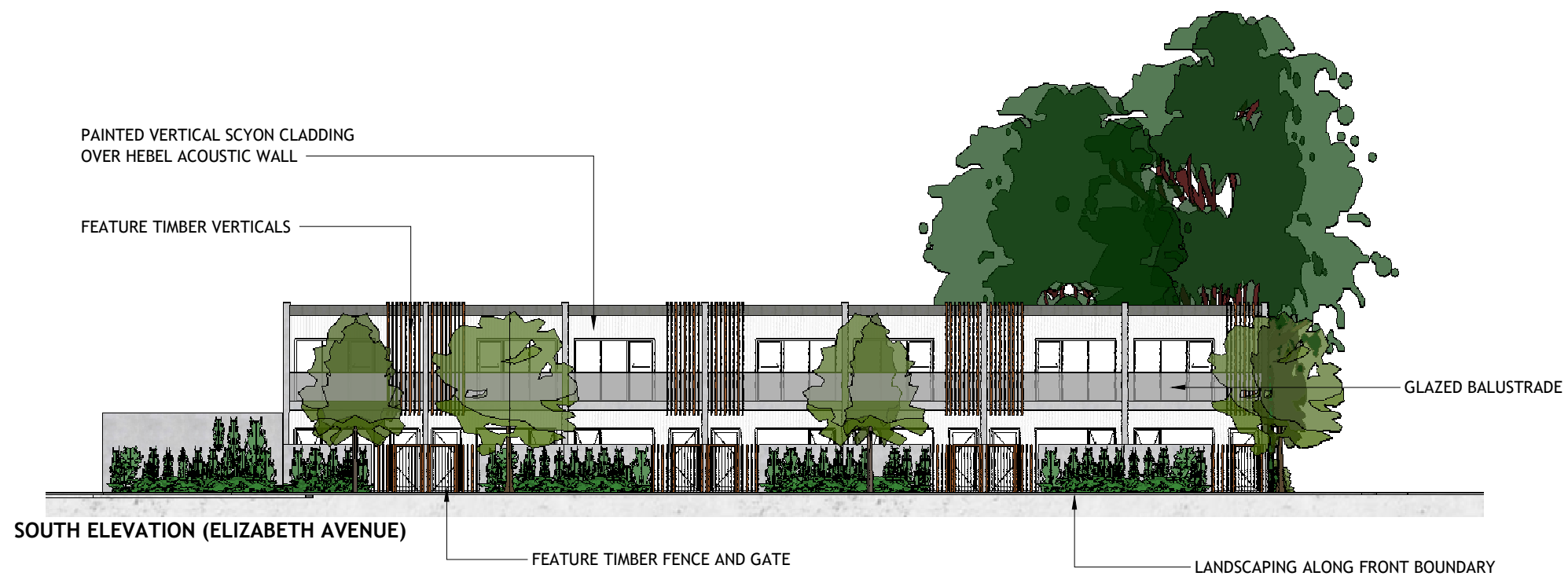
EAST TOWER ELEVATIONS  
scale 1:200 @ A3



folland  
panozzo  
architects

SK 106

OCTOBER 2018



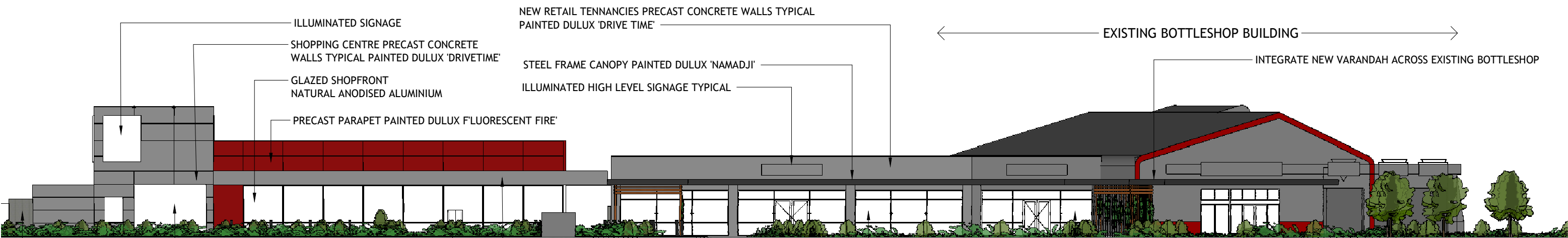
TOWNHOUSE ELEVATIONS  
scale 1:200 @ A3



folland  
panozzo architects

SK 107

OCTOBER 2018



EAST ELEVATION

ILLUMINATED SIGNAGE  
SHOPPING CENTRE PRECAST CONCRETE WALLS TYPICAL PAINTED DULUX 'DRIVETIME'  
GLAZED SHOPFRONT NATURAL ANODISED ALUMINIUM  
PRECAST PARAPET PAINTED DULUX 'FLUORESCENT FIRE'  
COMPRESSED FC FASCIA TO AWNING PAINTED DULUX 'DRIVE TIME'  
NON ILLUMINATED SIGNAGE  
BIN ENCLOSURE  
ILLUMINATED SIGNAGE

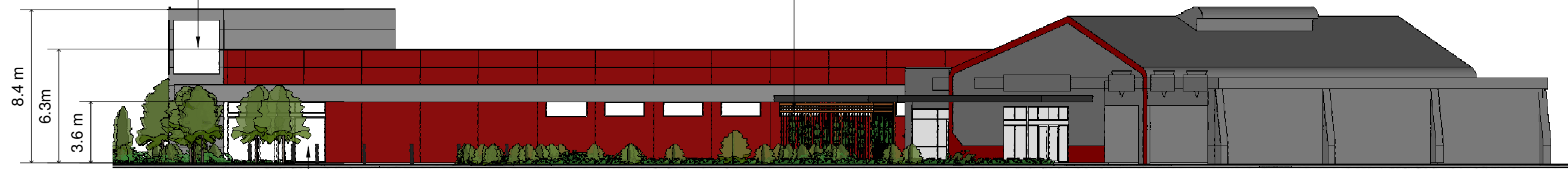
NEW RETAIL TENNANCIES PRECAST CONCRETE WALLS TYPICAL PAINTED DULUX 'DRIVE TIME'  
STEEL FRAME CANOPY PAINTED DULUX 'NAMADJI'  
ILLUMINATED HIGH LEVEL SIGNAGE TYPICAL

EXISTING BOTTLESHOP BUILDING

INTEGRATE NEW VARANDAH ACROSS EXISTING BOTTLESHOP

GLAZED SHOPFRONTS

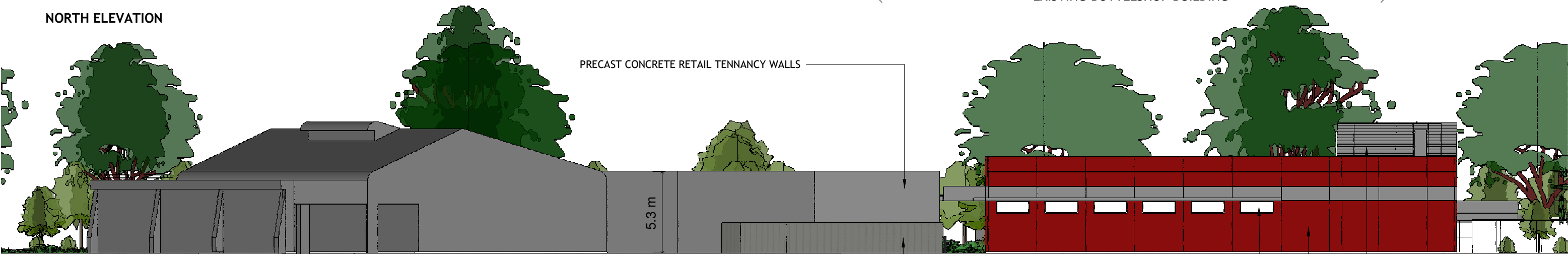
FEATURE TIMBER SCREENS WITH SELECTED CLIMBING PLANTS TO WALKWAY



NORTH ELEVATION

AUTO SLIDING ENTRY DOORS NATURAL ANODISED ALUMINIUM

EXISTING BOTTLESHOP BUILDING



WEST ELEVATION

EXISTING BOTTLESHOP BUILDING

COLORBOND FENCING TO BIN ENCLOSURE

HIGH LEVEL WINDOWS AND SUNSHADES

PRECAST CONCRETE SHOPPING CENTRE WALLS PAINTED FINISH

PLANT DECK POWDER COATED LOUVRES DULUX BASALT



SOUTH ELEVATION (ELIZABETH AVENUE)

SUPERMARKER PRECAST CONCRETE WALL TO AMENITIES TOWER (PLANT CONTAINED WITHIN)  
ILLUMINATED SIGNAGE

SUPERMARKET LOADING DOCK WITH ROLLER SHUTTER

SUPERMARKET COMPACTOR

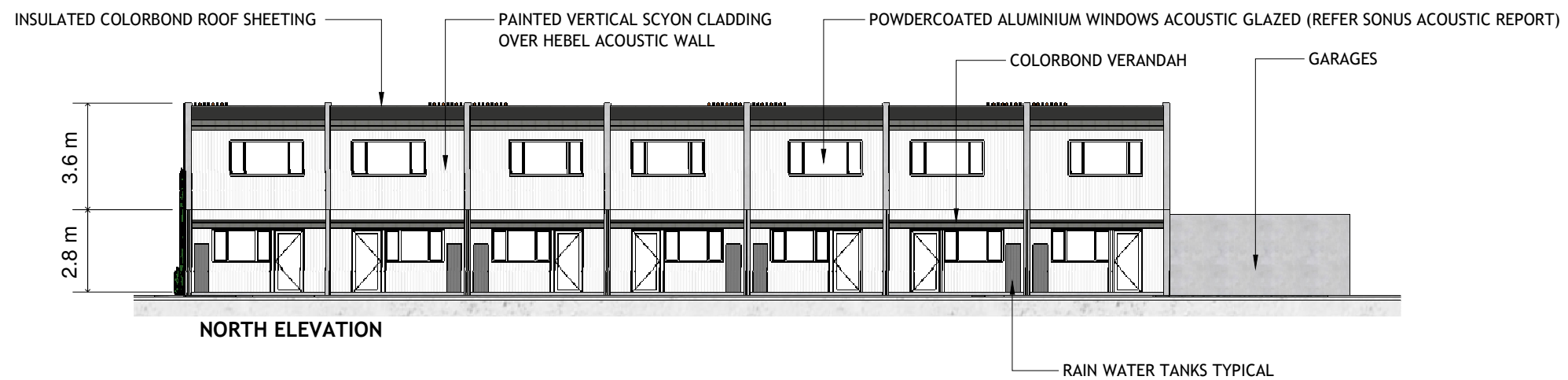
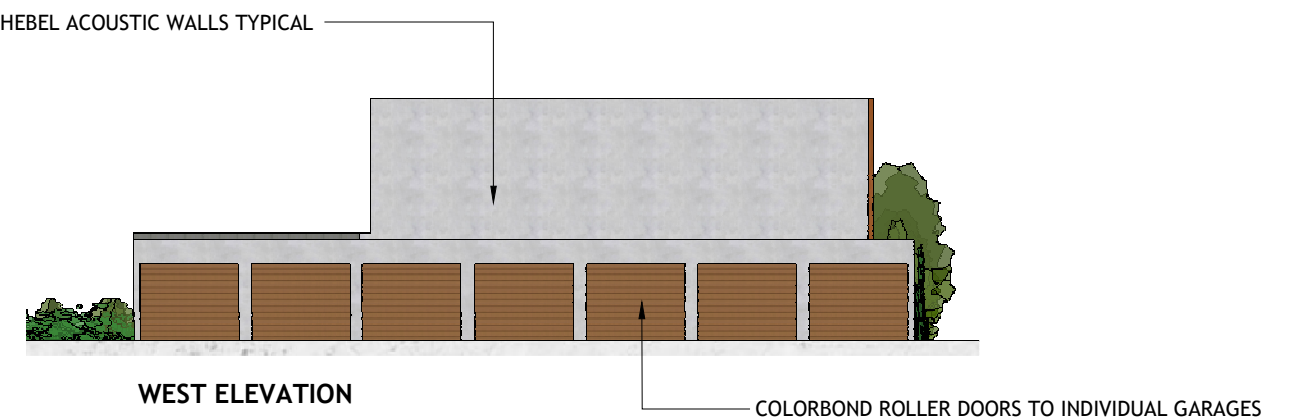
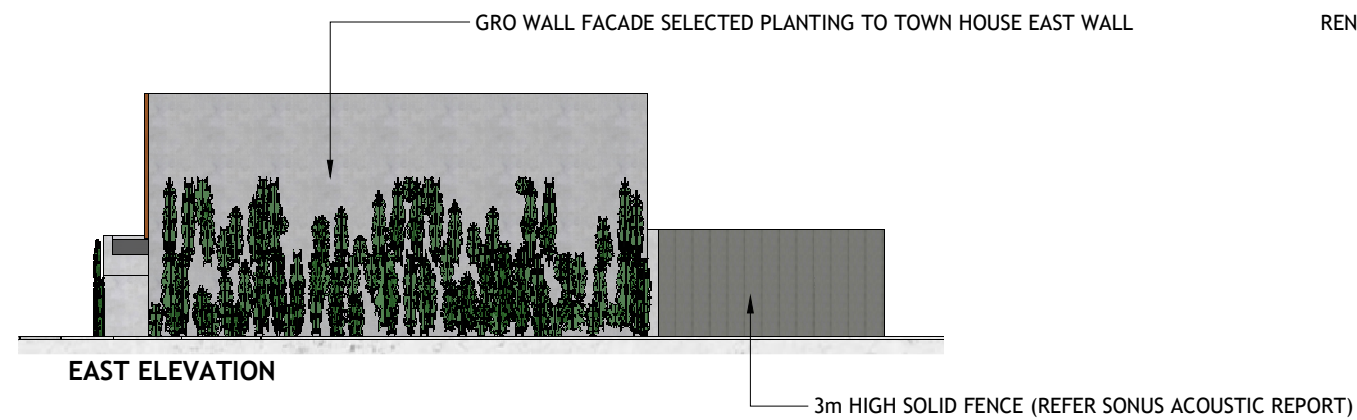
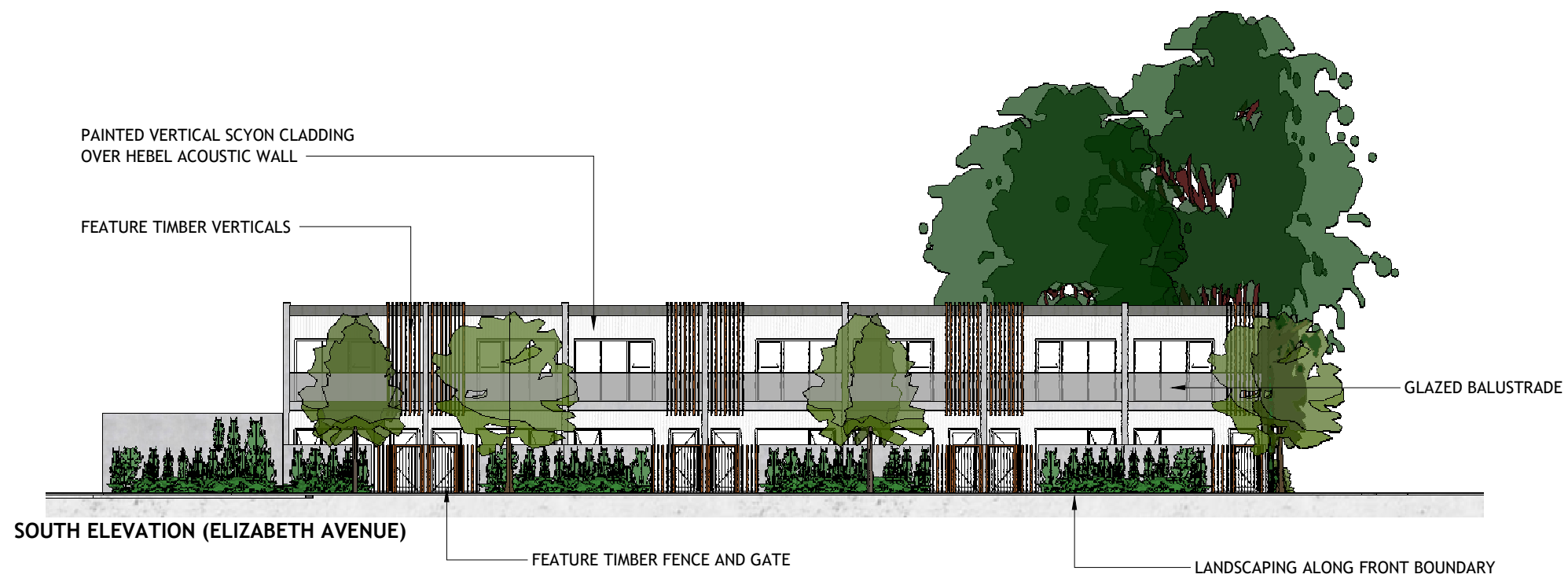
SUPERMARKET BIN AREA

SUPERMARKET AND  
RETAIL ELEVATIONS  
scale 1:250 @ A3



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TOWNHOUSE ELEVATIONS  
scale 1:200 @ A3

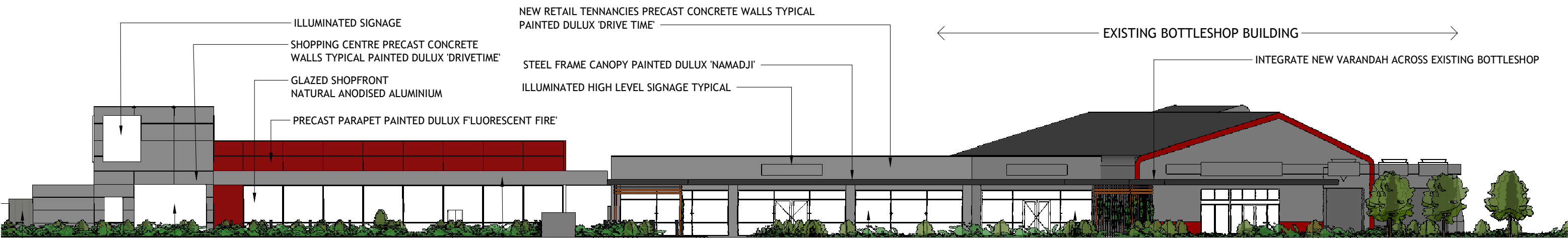


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SK 107

OCTOBER 2018



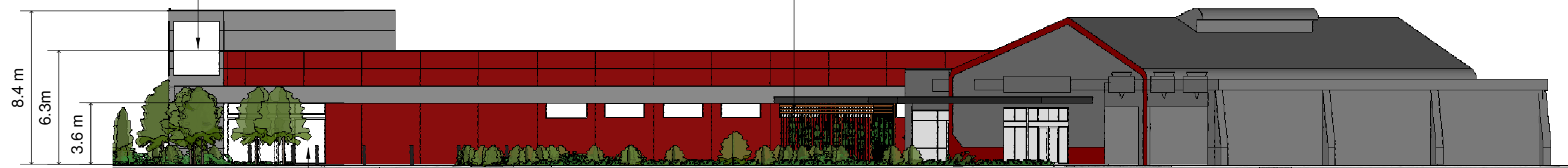


EAST ELEVATION

COMPRESSED FC FASCIA TO AWNING  
PAINTED DULUX 'DRIVE TIME'  
NON ILLUMINATED SIGNAGE  
BIN ENCLOSURE  
ILLUMINATED SIGNAGE

GLAZED SHOPFRONTS

FEATURE TIMBER SCREENS WITH  
SELECTED CLIMBING PLANTS TO WALKWAY



NORTH ELEVATION

AUTO SLIDING ENTRY DOORS NATURAL ANODISED ALUMINIUM

EXISTING BOTTLESHOP BUILDING

PRECAST CONCRETE RETAIL TENNANCY WALLS

5.3 m

COLORBOND FENCING TO BIN ENCLOSURE

WEST ELEVATION

EXISTING BOTTLESHOP BUILDING

HIGH LEVEL WINDOWS AND SUNSHADES

PRECAST CONCRETE SHOPPING CENTRE WALLS PAINTED FINISH

PLANT DECK POWDER COATED LOUVRES DULUX BASALT

TOWNHOUSES REFER TO PAGE SK107



SOUTH ELEVATION (ELIZABETH AVENUE)

SUPERMARKET AND  
RETAIL ELEVATIONS  
scale 1:250 @ A3



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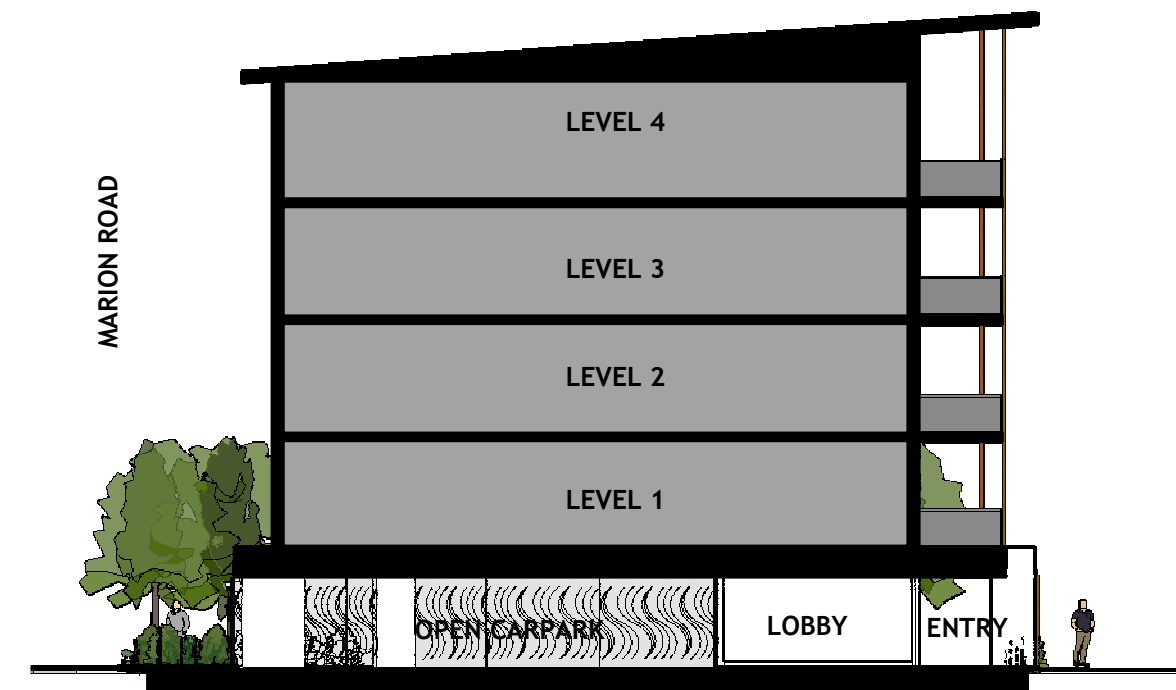
SK 108

OCTOBER 2018



EAST TOWER SECTION - ADJACENT MARION ROAD

OPEN CARPARK AT GROUND LEVEL TYPICAL



EAST TOWER SECTION - ADJACENT ELIZABETH AVENUE



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EAST TOWER ENTRY ELIZABETH AVENUE



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OCTOBER 2018





EAST TOWER MARION ROAD



CORNER OF ELIZABETH AND MARION



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ELIZABETH AVENUE TOWNHOUSES



ELIZABETH AVENUE TOWNHOUSES



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SK 111

OCTOBER 2018





SUPERMARKET



SUPERMARKET







CENTRAL CARPARK

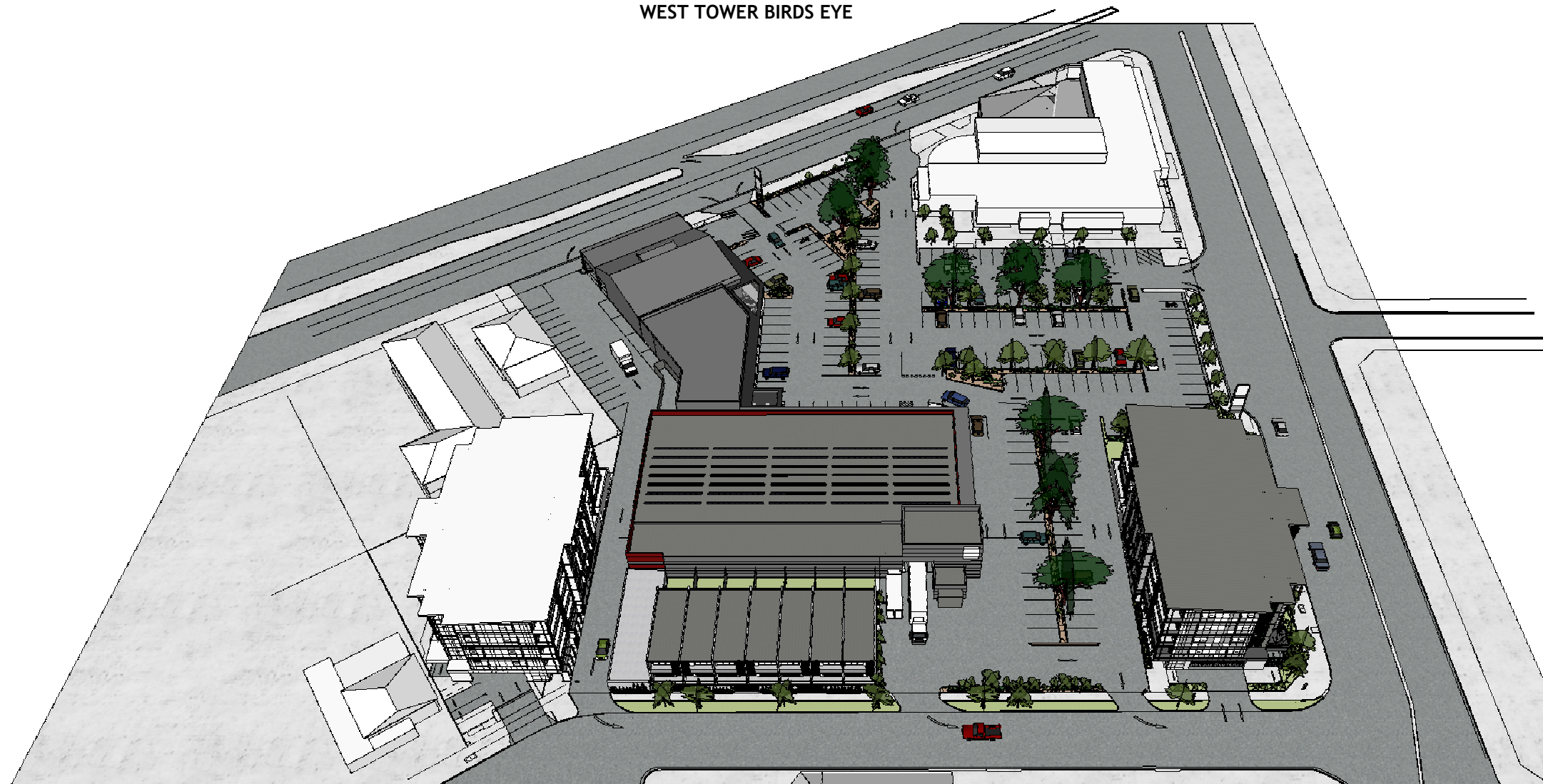


RETAIL TENNANCIES





WEST TOWER BIRDS EYE



BIRDS EYE ELIZABETH



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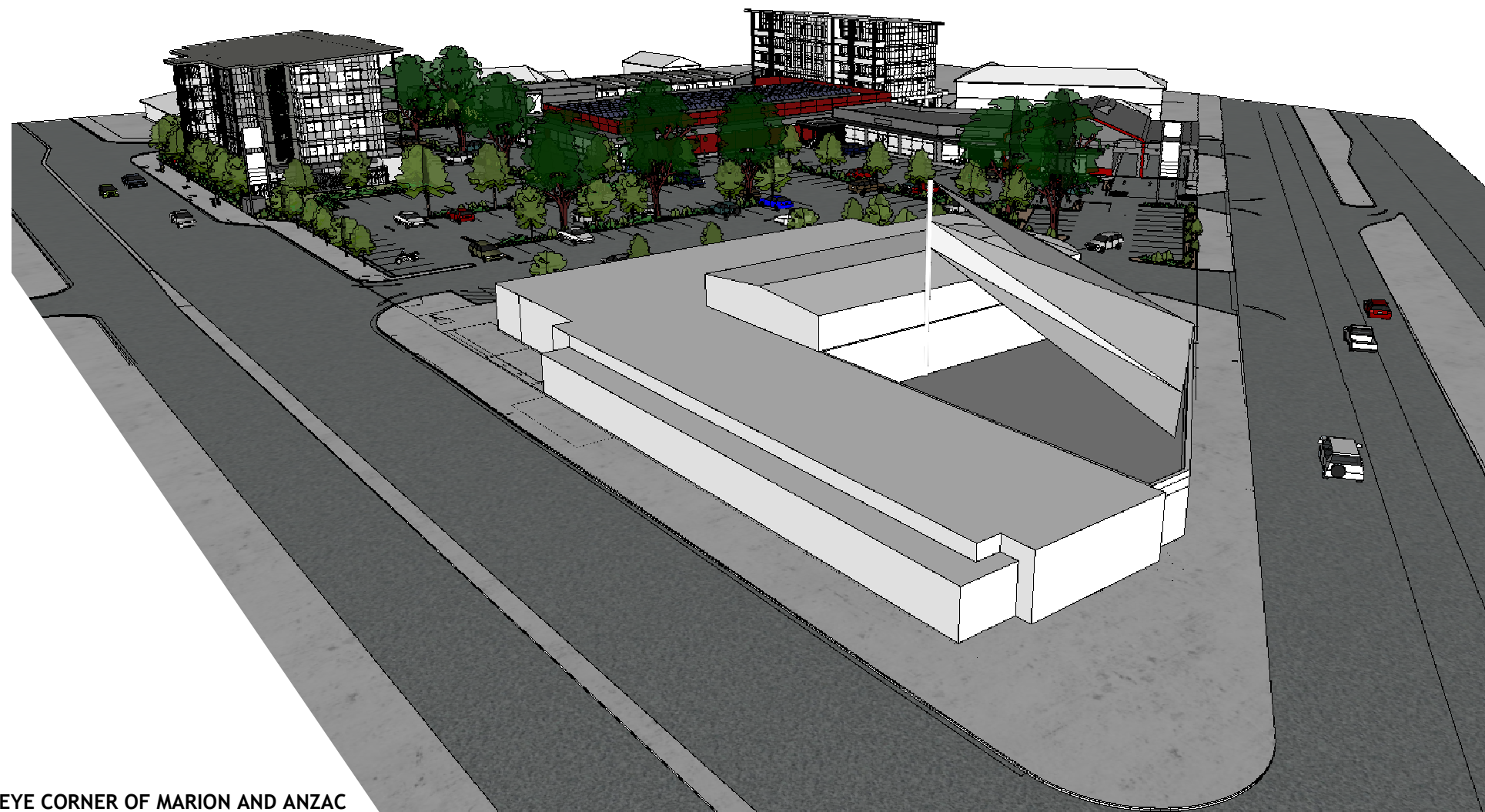
SK 114

OCTOBER 2018





ANZAC HIGHWAY BIRDS EYE



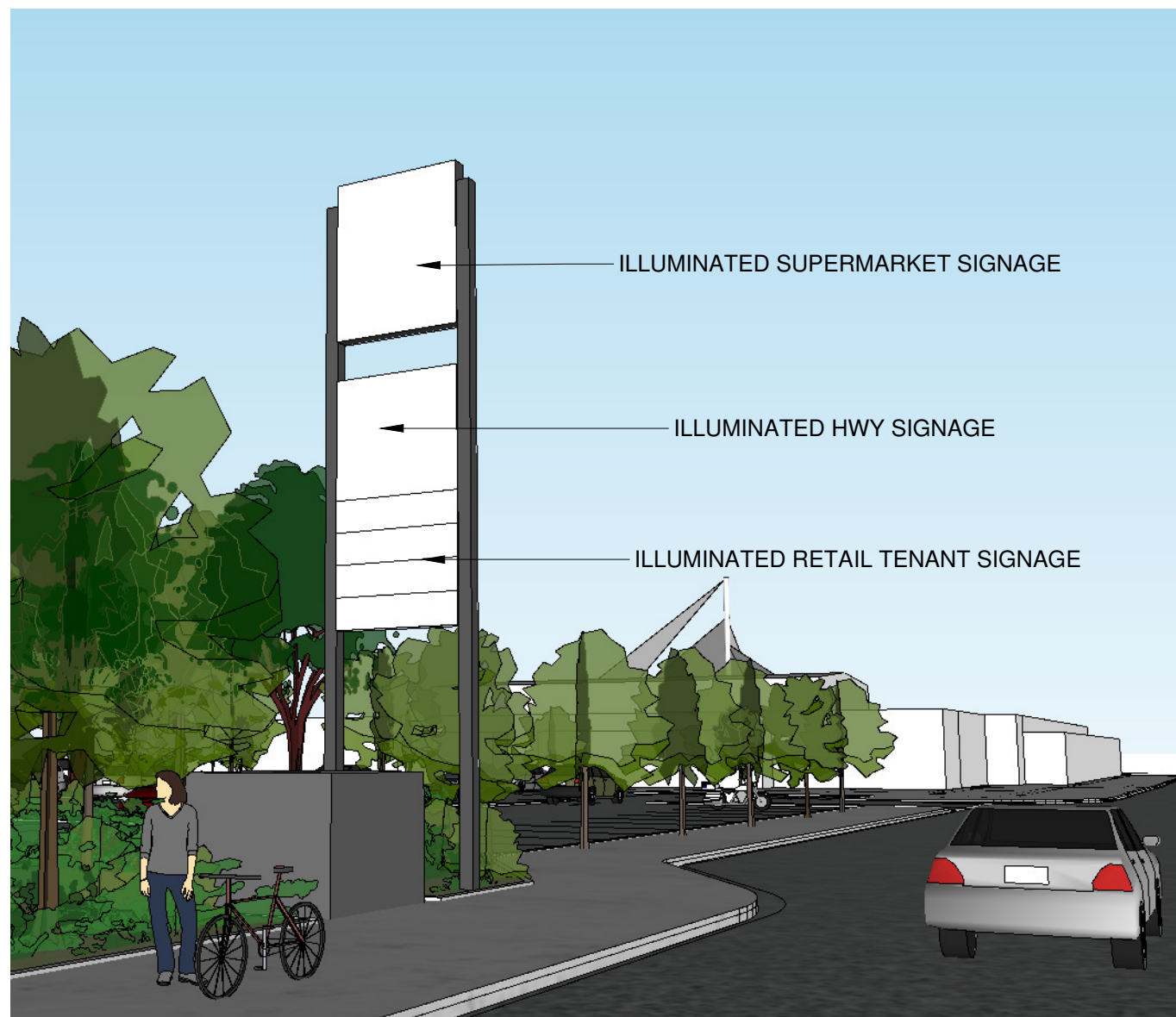
BIRDS EYE CORNER OF MARION AND ANZAC



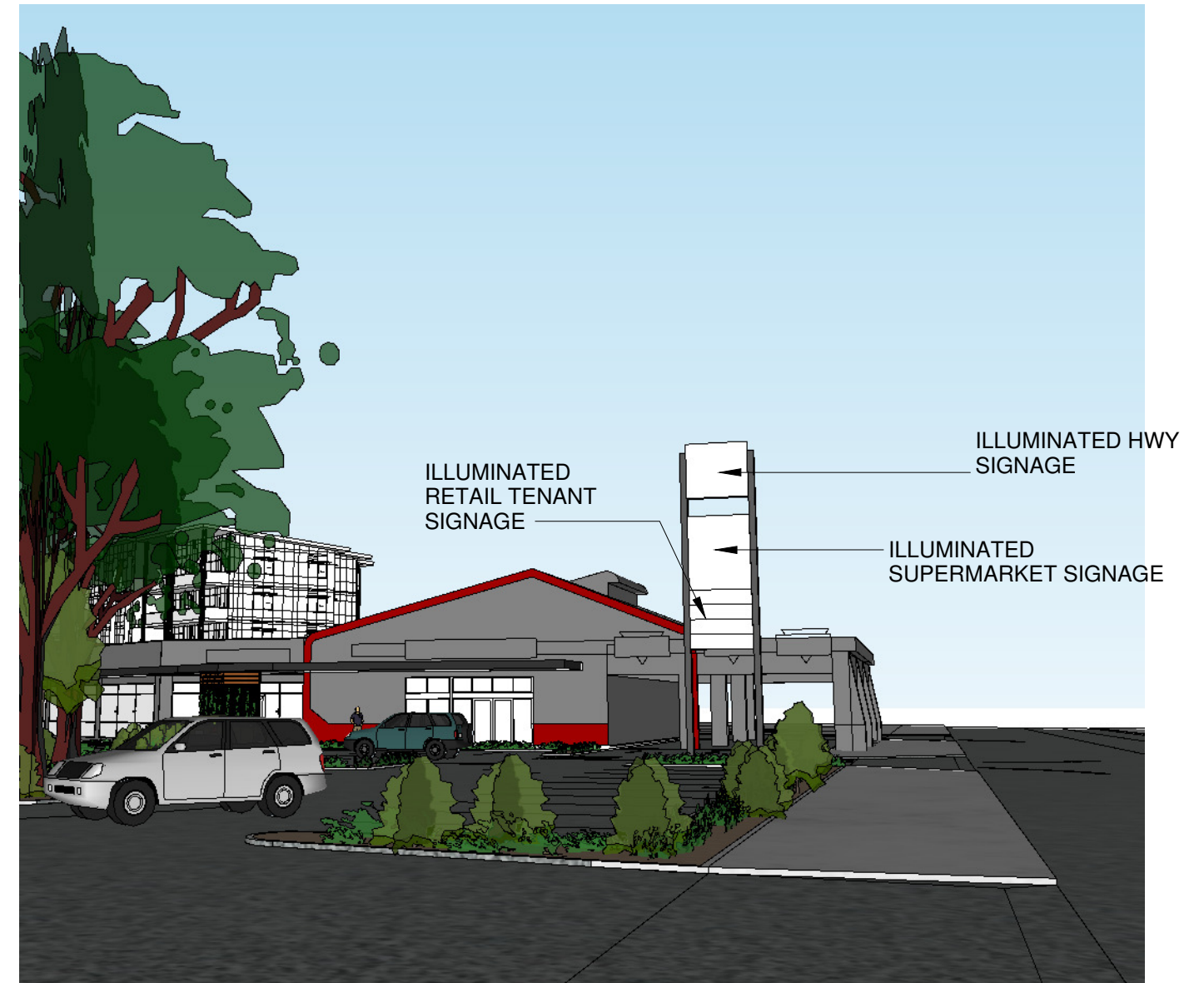
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SK 115

OCTOBER 2018



MARION ROAD



ANZAC HIGHWAY

PYLON SIGNAGE

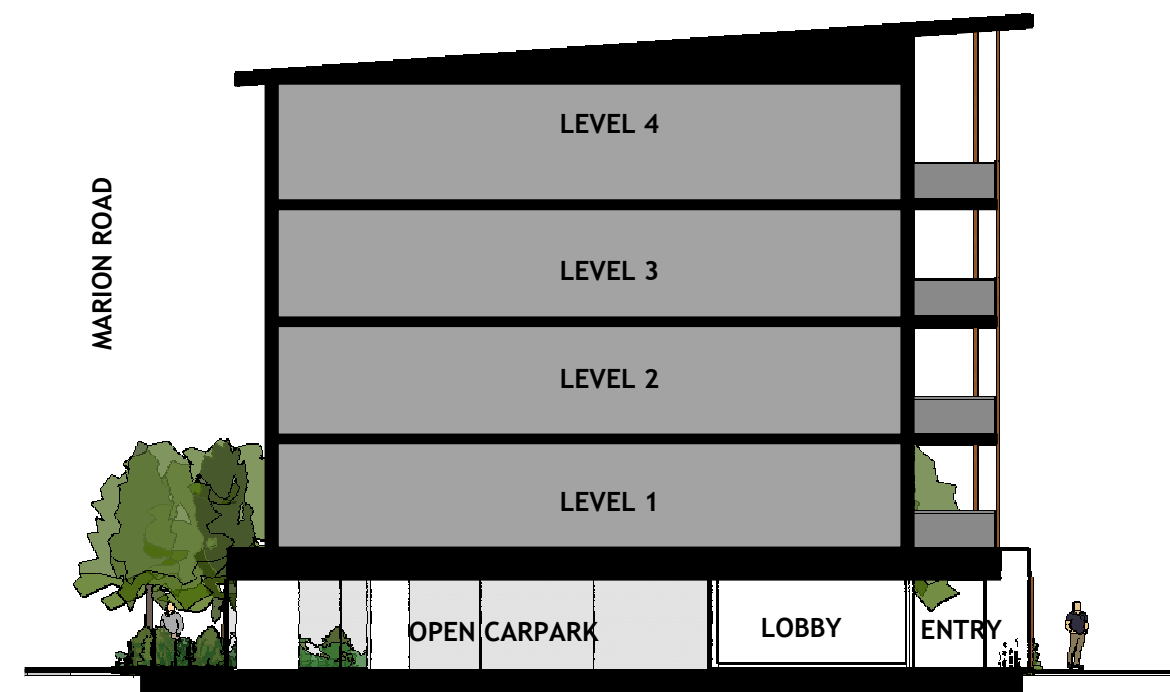


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EAST TOWER SECTION - ADJACENT MARION ROAD

OPEN CARPARK AT GROUND LEVEL TYPICAL



EAST TOWER SECTION - ADJACENT ELIZABETH AVENUE

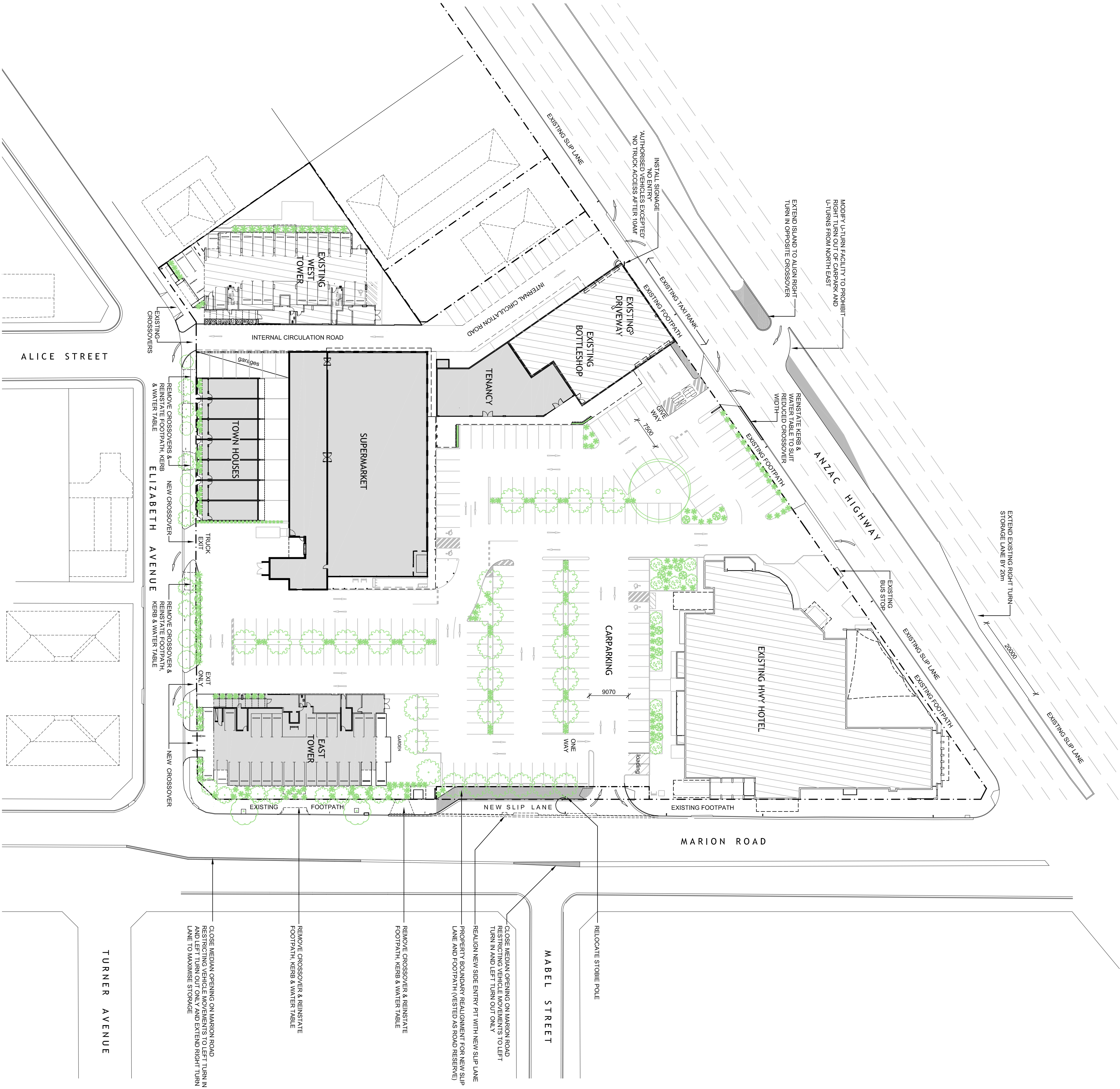


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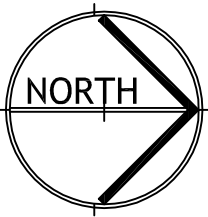
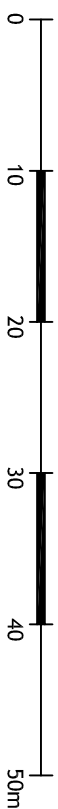
SK 117

OCTOBER 2018





ROAD WORKS PLAN  
SCALE 1:500 @ A1 (1:1000 @ A3)

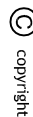


PLANNING ISSUE

HIGHWAY DEVELOPMENT  
STAGE 2  
ANZAC HIGHWAY  
PLYMPTON, SA



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Somerton park sa 5044  
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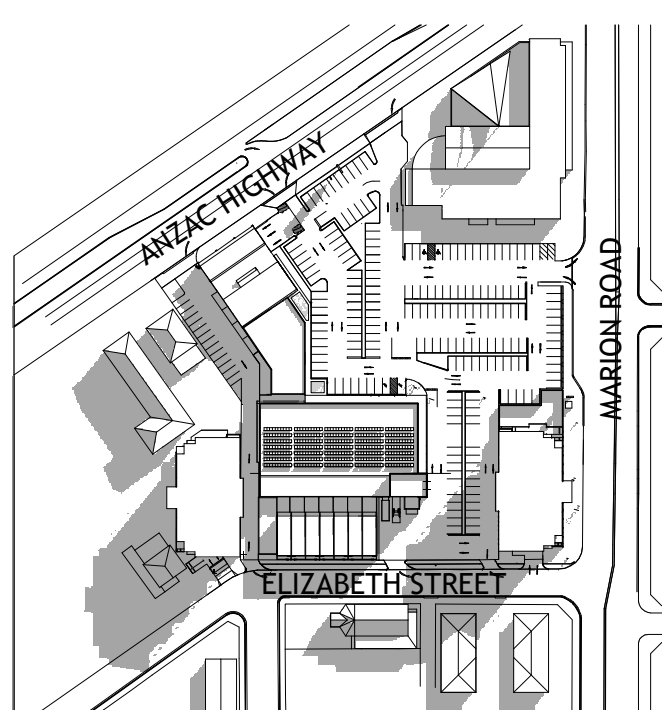
Project

Drawing title  
road works plan

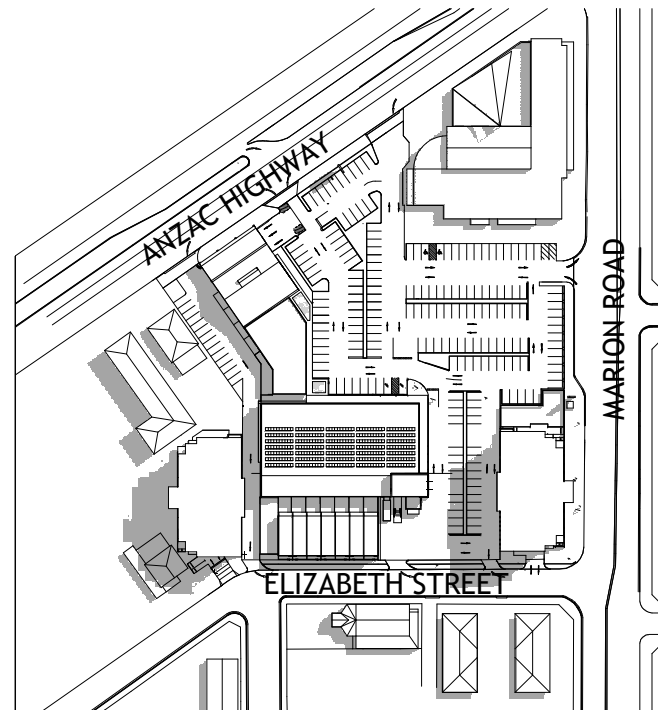
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2015 1510	SK 118	B
date	scales	drawn by
06/11/18	1:500	am

BUILDERS AND CONTRACTORS ARE TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING AND PROPOSED STRUCTURES AND UTILITIES BEFORE COMMENCING WORK. THIS DRAWING IS FOR CLARIFICATION. IF IN DOUBT ASK FOR CLARIFICATION.

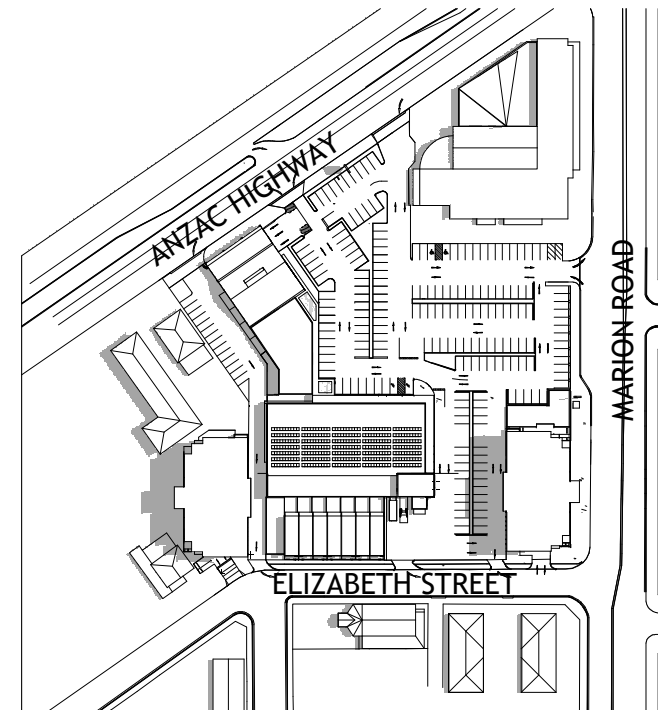
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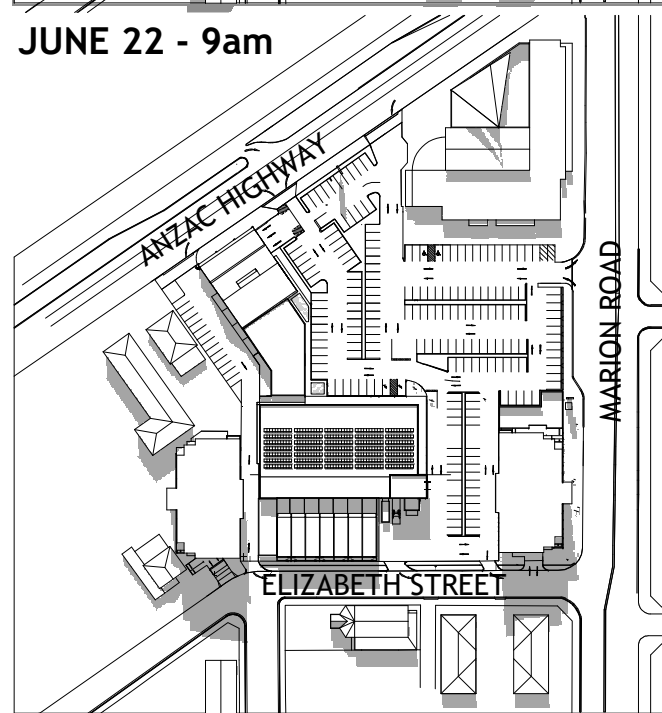
JUNE 22 - 9am



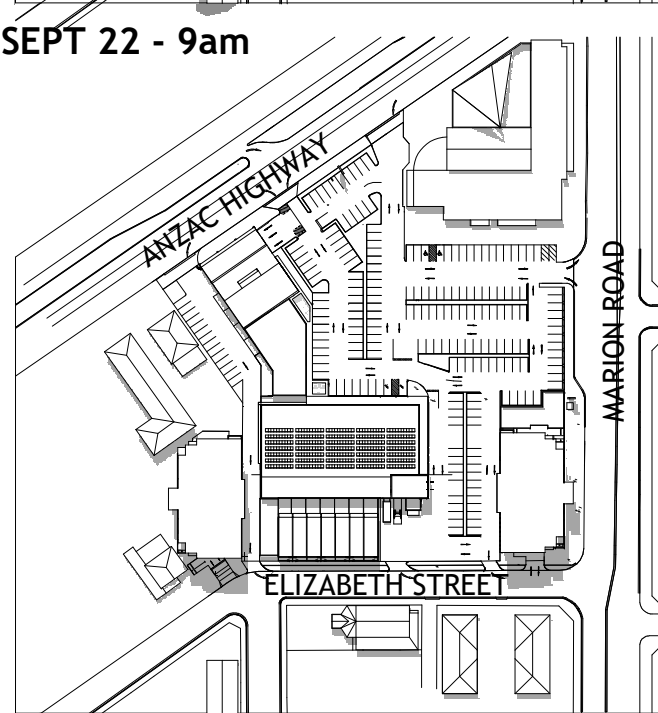
SEPT 22 - 9am



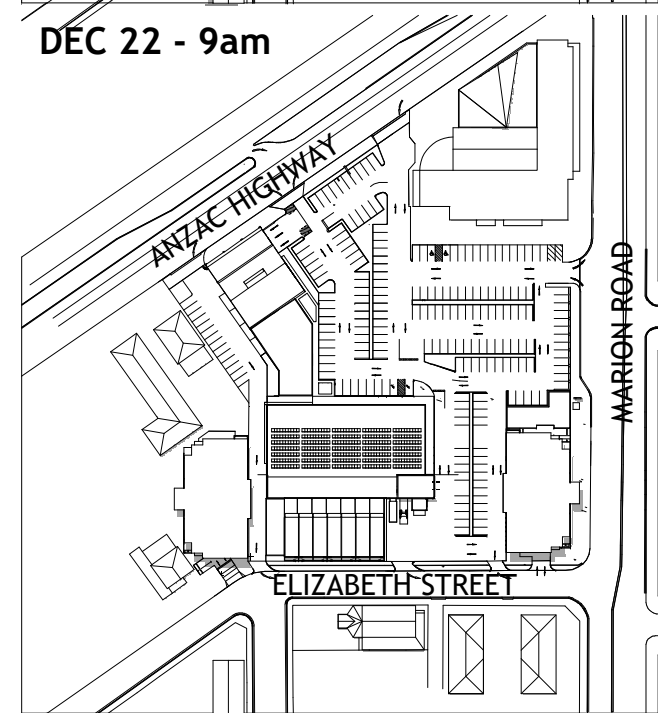
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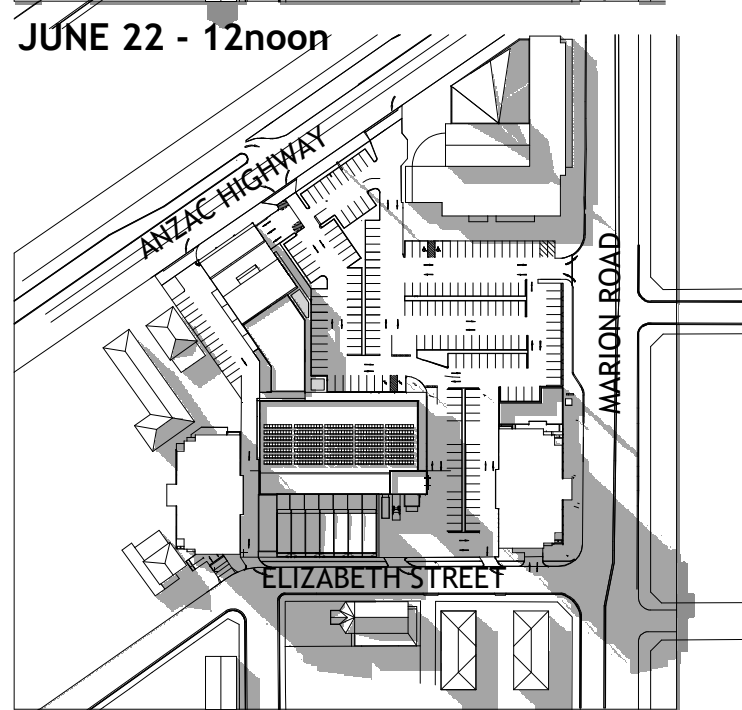
JUNE 22 - 12noon



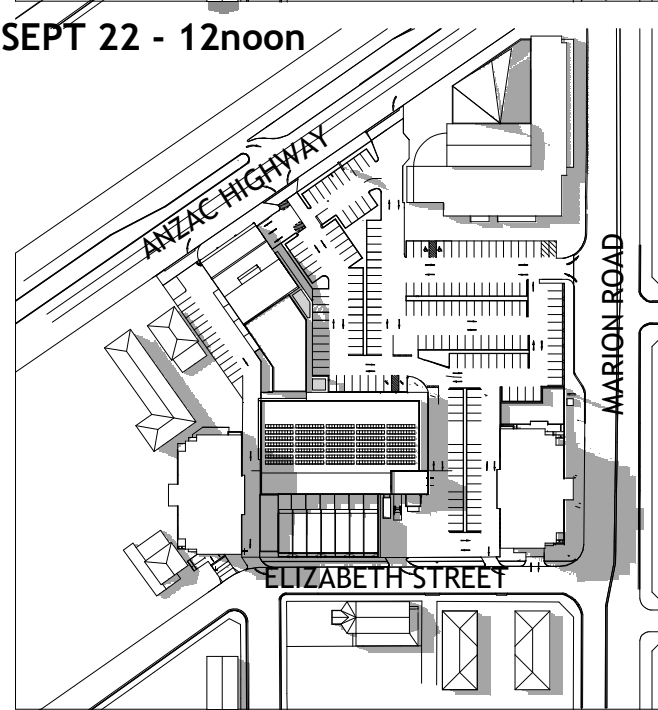
SEPT 22 - 12noon



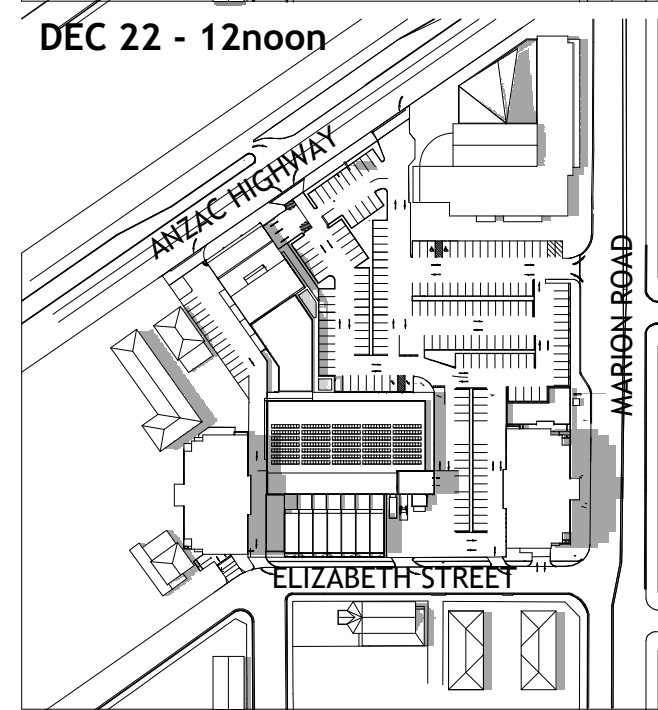
DEC 22 - 12noon



JUNE 22 - 3pm



SEPT 22 - 3pm



DEC 22 - 3pm



SUNSHADING DIAGRAMS  
SCALE 1:2500 @ A3



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# APPENDIX B – TRAFFIC AND PARKING ASSESSMENT

**Ref: 18206|BNW**

30 October 2018

Mr Nathan Paine  
Property & Consulting Australia  
GPO Box 2405  
ADELAIDE SA 5001

Dear Nathan,

## **HIGHWAY REDEVELOPMENT — STAGE 2**

I refer to the proposed Stage 2 of the HWY redevelopment at Plympton. As requested, I have prepared an updated traffic and parking assessment based on the revised development proposal (as outlined in this letter).

### **BACKGROUND**

CIRQA has previously provided traffic and parking advice for the subject redevelopment, including a detailed assessment report and subsequent supplementary letters. The previously proposed development was approved. However, since the previous assessments and approval, the proposal has been revised and a lesser development yield is now proposed. Specifically, the proposal now comprises:

- 28 residential apartments (4 x one-bedroom apartments and 24 x two-bedroom apartments);
- a supermarket comprising 1,703 m<sup>2</sup> of gross floor area;
- specialty retail tenancies totalling 650 m<sup>2</sup> of gross floor area (which includes the existing 285 m<sup>2</sup> bottleshop); and
- seven townhouses with separate single-car garages;

In addition to the above, the proposed car park and access layout has been altered. The revised car park will comprise 264 parking spaces (all at-grade and including the single car garages for the townhouses). This excludes parking associated the Stage 1 apartments already completed. The previously proposed first floor parking area (and associated ramping) is no longer proposed (given the reduction in retail floor area).

## ACCESS AND PARKING DESIGN

The Stage 2 site (and existing hotel and bottleshop) will be serviced by 264 parking spaces. Car parking will comply with the *"Australian/New Zealand Standard for Parking Facilities – Part 1: Off-Street Car Parking"* (AS/NZS 2890.1:2004) in that:

- new angled spaces associated with retail or hotel use will be at least 2.6 m wide and 5.4 m long with an adjacent aisle width of at least 6.6 m (with the exception of spaces for use by persons with disabilities which will be 2.4 m wide);
- angled parking spaces associated with residential and staff use will be at least 2.4 m wide and 5.4 m long with an adjacent aisle width of at least 5.8 m;
- garaged (townhouse) parking will have internal widths of 3.0 m with door openings of 2.7 m and an adjacent apron width of 6.3 m.

Four parking spaces (included within the above total) will be provided for use by persons with disabilities. These spaces (and the adjacent shared areas) will comply with the *"Australian/New Zealand Standard for Parking Facilities – Part 6: Off-street Parking for People with Disabilities"* (AS/NZS 2890.6:2009).

The access arrangements will remain similar to the previous proposal, however the northern section of the car park layout will be altered to provide impact safety and flow in the vicinity of the Anzac Highway access points and the bottleshop access. Access via Elizabeth Avenue will be slightly altered from the previous proposal in that in addition to the one-way egress and two-way apartment access previously proposed, two egress points are also proposed. One of these will accommodate forward-out egress movements by commercial vehicles associated with the supermarket's loading area. The loading and car park egress points on Elizabeth Avenue will be restricted to left-out movements only (with angling of the crossovers and associated 'All Traffic Turn Left' signs) to direct drivers to Marion Road rather than the adjacent local street network.

Loading for the supermarket will be accommodated at its south-eastern corner (as opposed to the previous proposal which was accessed via the western one-way internal circulation road). The site has been designed to accommodate forward-in/forward out access for 13.8 m Semi-Trailers which will be utilised to service the site (largest vehicle anticipated) as well as 10.0 m rigid vehicles utilised to service the compactor. Figures 1 and 2 illustrate the associated turning movements for these vehicles. Loading arrangements for the specialty tenancies will remain as per the previous proposal (i.e. via the western one-way internal connection).







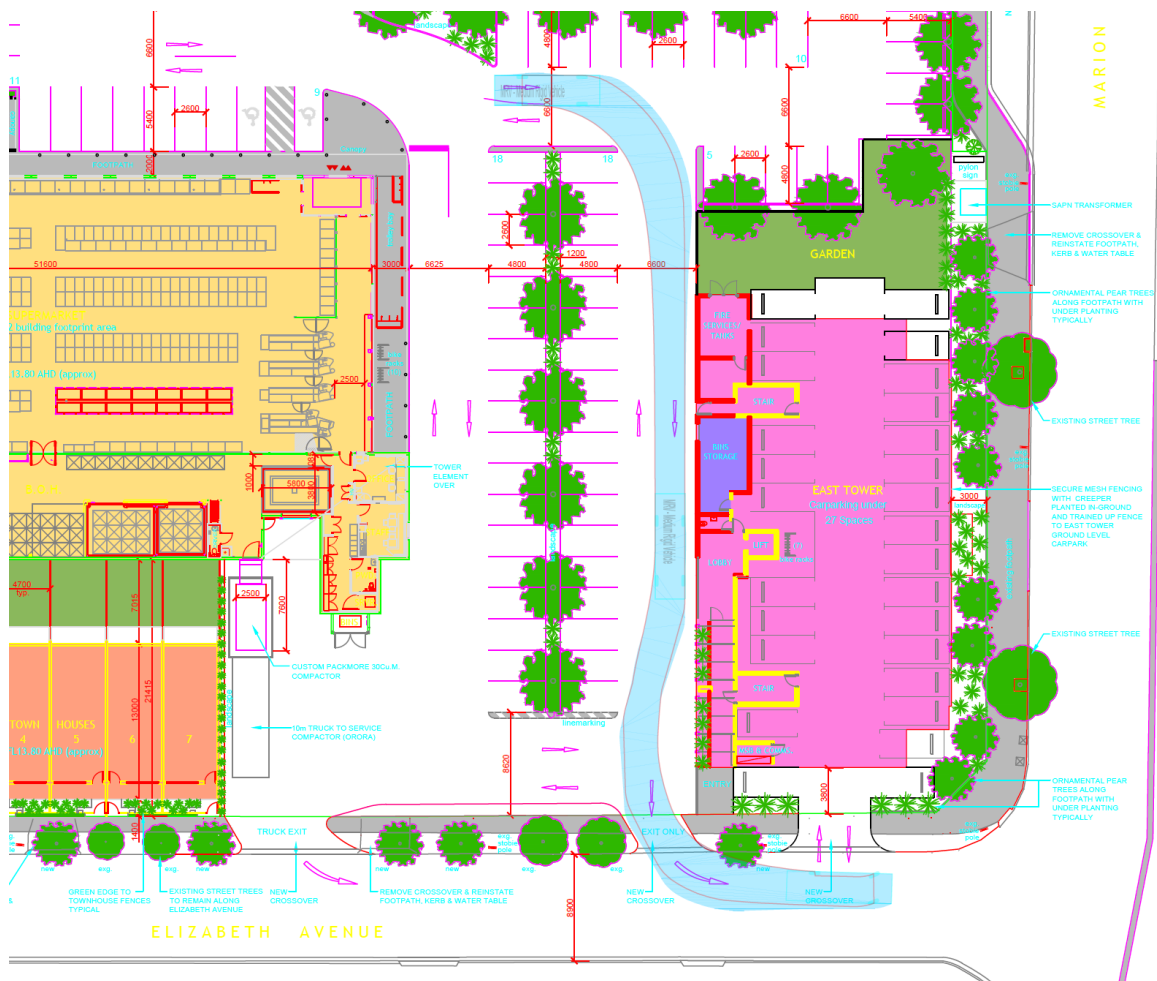


Figure 4 - Medium Rigid Vehicle access movements for the apartment building

## PARKING PROVISIONS

The City of West Torrens' Development Plan identifies the following vehicle parking rates for development within the Urban Corridor Zone:

- **non-residential development** (excluding tourist accommodation) – 3 to 5 spaces per 100 m<sup>2</sup> of gross leasable floor area;
- **residential flat buildings** – 0.75 spaces per one-bedroom dwelling and 1.0 space per two-bedroom dwelling plus 0.25 visitor spaces per dwelling; and
- **row, semi-detached, group and detached dwellings** – 1 space per two-bedroom dwelling.

It is noted that a proportion of the site (namely the allotments fronting Elizabeth Avenue) are within a Residential Zone (not the Urban Corridor Zone). However, given the same high level of proximity to active and sustainable transport facilities/services and retail services will apply to this section of the site, the application of the Urban Corridor Zone

rates to the full extent of the proposal is considered appropriate. Such an approach was undertaken and accepted for the previously approved proposals.

On the basis of the above, Table 1 summarises the parking assessment associated with the current proposal.

**Table 1 – Minimum parking requirement associated with the Stage 2 proposal**

Use	Quantity	Rate	Spaces required
Hotel and bottleshop	as per previous assessments		144
Non-Residential*	2,068 m <sup>2</sup>	3 sp. per 100 m <sup>2</sup>	62
One Bedroom Apartments	4 units	0.75 per dwelling	3
Two-Bedroom Apartments	24 units	1.0 per dwelling	24
Townhouses (Two-Bed)	7 dwellings	1.0 per dwelling	7
* excludes the existing bottleshop and hotel			
<b>Total required</b>			<b>240 spaces</b>

The proposal includes 264 parking spaces. Such a provision will exceed the minimum provisions associated with the Urban Corridor Zone rates. It is therefore considered that the revised proposal includes sufficient parking to accommodate peak demands associated with the overall site.

In relation to bicycle parking, Council's Development Plan identifies the following rates relevant to the subject development:

- **residential** – one bicycle parking space for every four dwellings for residents plus one visitor space for every ten dwellings for visitors; and
- **shop** – one bicycle parking space for every 300 m<sup>2</sup> of gross leasable floor area for employees, plus one visitor space for every 600 m<sup>2</sup> of gross leasable floor area for shoppers.

Table 2 summarises the bicycle parking requirements associated with the proposed uses (including the existing bottleshop). The townhouses have been excluded from the calculation as bicycles will be stored within the townhouses or their garages and not require separate bicycle rails.

**Table 2 – Bicycle parking requirements based on the Development Plan**

Use	Quantity	Rate	Spaces required
Shop (Staff)*	2,353 m <sup>2</sup>	1 sp. per 300 m <sup>2</sup>	8
Shop (Customer)*	2,353 m <sup>2</sup>	1 sp. per 600 m <sup>2</sup>	4
Dwellings (Resident)	28 units	1 per 4 dwellings	7
Dwellings (Visitor)	28 units	1 per 10 dwellings	3
* includes the existing bottleshop			
<b>Total required</b>			<b>22 spaces</b>



It is proposed to provide 22 bicycle parking spaces across the site. Such a provision will meet the requirements of the Development Plan.

## TRAFFIC IMPACTS

Table 3 summarises the forecast peak hour traffic generation associated with the proposal based on the rates adopted (and accepted) for the previous assessments.

*Table 3 – Updated traffic generation assessment*

Use	Quantity	Rate	AM Trips	PM Trips
Supermarket	1,703 m <sup>2</sup>	13.1	55	220
Specialty Retail	450 m <sup>2</sup>	4	5	18
Dwellings	35	0.5	18	18
<b>Total</b>			<b>78 trips</b>	<b>256 trips</b>

The forecast traffic volumes associated with the revised proposal are less than half of the forecast for the previously approved proposal. The traffic impacts will therefore be less than previously identified. Given the reduction in traffic volumes, further detailed assessment of traffic impacts is not considered warranted. The proposal would not result in any additional infrastructure requirements above that previously identified.

## TRAFFIC INFRASTRUCTURE PROVISIONS

A number of traffic infrastructure requirements were identified as part of Reserve Matters associated with the previous approval. The following dot points summarise the infrastructure requirements and provide further commentary in relation to the proposed treatments for them. The treatments are identified on the attached “Road Works Plan” prepared by Folland Panozzo Architects and have been discussed with DPTI representatives.

- **Marion Road left-turn deceleration lane** – the site plan identifies that a left-turn deceleration lane will be provided on Marion Road. The property boundary and footpath will be realigned to accommodate the left turn facility. Further liaison with DPTI will be undertaken in relation to the treatment as part of the detailed design process;
- **Closure of Marion Road median openings** – as part of the previous agreements, the median openings on Marion Road at the intersections with Elizabeth Avenue and Mabel Street were required to be closed. This will result in these intersections becoming left-in/left-out only;
- **Anzac Highway right-turn lane extension** – the right-turn storage lane on the south-western approach of Anzac Highway to Marion Road will be extended by 20 m. The detailed design of the treatment shall conform with the requirements of the relevant Austroads’ guides (which can easily be achieved);

- **Modification of Anzac Highway median opening** – the existing median opening opposite the bottleshop access will be altered to prevent right-out movements from the subject site and also remove the U-turn facility for drivers approaching from the north-west. The proposed adjustments will result in a right-in only median opening (with left-in/left-out movements also accommodated at the site's adjacent access point). The alterations are considered appropriate and will safely and efficiently accommodate right turns into the site;
- **Redundant crossovers** – disused crossovers will be removed and kerbing/water table and footpaths will be reinstated;
- **Anzac Highway bus stop and taxi rank** – DPTI has queried whether the existing bus stop and taxi rank should be relocated. Given the access arrangements on Anzac Highway will be improved compared to the current situation, it is considered that the existing locations for these facilities are acceptable. While they could be relocated there appears to be little benefit to do so. In particular, location of the bus stop between the two main access points would be considered less desirable than its current location. It is considered preferable to maintain the existing locations and, if any alteration was undertaken to parking control on Anzac Highway, it is recommended that consideration be given to restricting parking (via No Stopping controls) between the two main access points on Anzac Highway; and
- **Monitoring of access adjacent bottleshop** – a Reserve Matter for the previous approval noted a requirement for monitoring of the two-way access adjacent the bottleshop for six months to consider its operation. Since the previous site layout was proposed, the access and parking provisions near the bottleshop ingress have been altered to improve queuing area and minimise conflict points in this area. Given the improved layout, it is considered that the requirement for specific monitoring of this access is no longer required.

## SUMMARY

A revised proposal has been prepared for the redevelopment of the HWY site at Plympton. The updated proposal results in a significantly reduced development yield (primarily reduced retail floor area) compared to the previous proposal.

The updated proposal will be serviced by 264 parking spaces (excluding parking associated with the Stage 1 apartments already completed). Such a parking provision will meet (and exceed) the Development Plan's Urban Corridor Zone requirements. The associated access and parking design has been prepared in accordance with the relevant Australian Standards.

The traffic impacts associated with the proposal will be significantly reduced compared to the previously approved development. Nevertheless, the previous identified traffic infrastructure interventions on the adjacent arterial roads will still be undertaken. This includes alterations to median opening treatments on both Anzac Highway and Marion

Road as well as provision of a left-turn deceleration lane on Marion Road for the site. The detailed design of these works shall be undertaken in accordance with relevant Austroads' guides and DPTI requirements.

Please feel free to contact me on (08) 7078 1801 should you require any additional information.

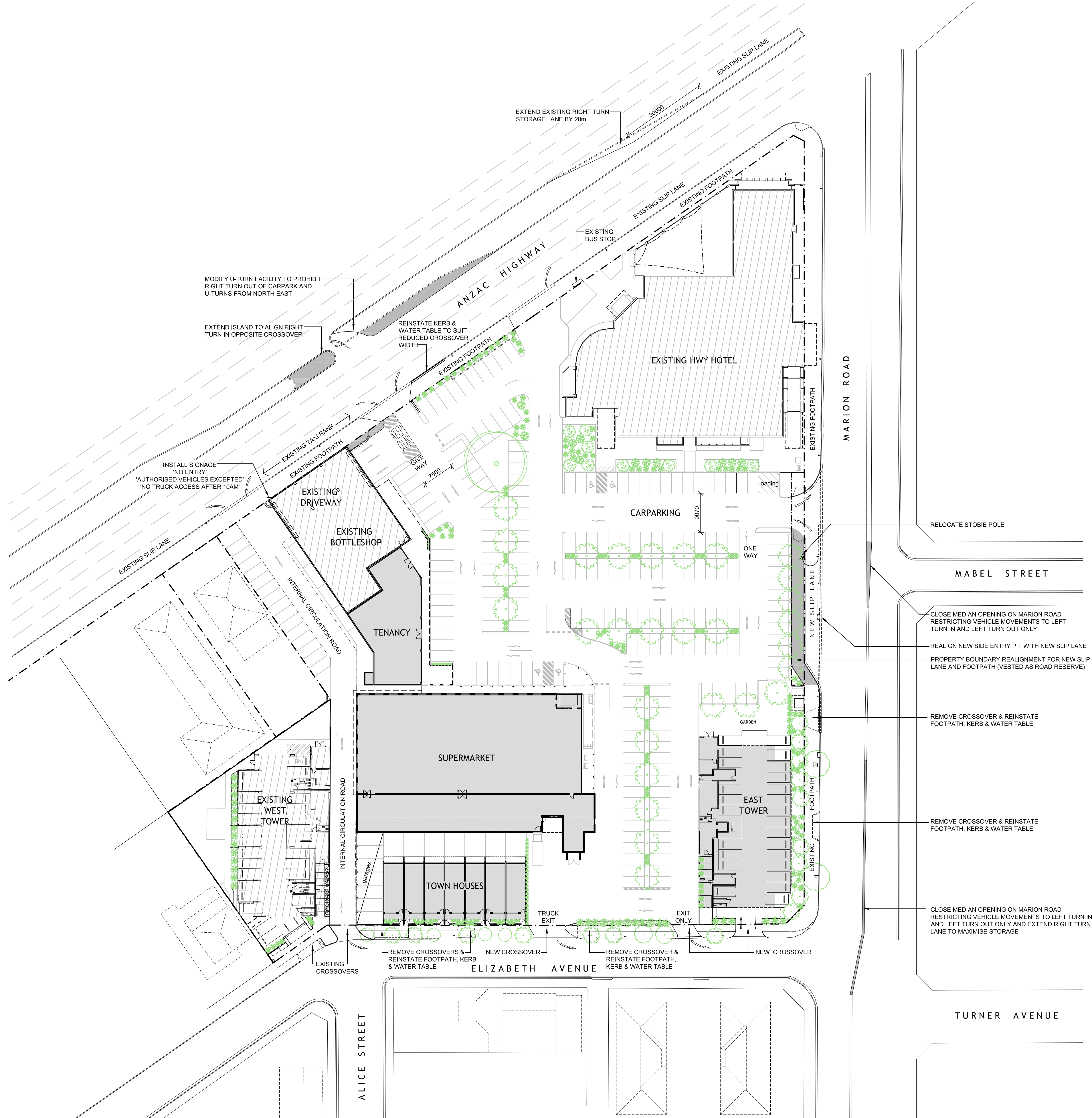
Yours sincerely,



**BEN WILSON**

Director | CIRQA Pty Ltd

Encl. - Road Works Plan, prepared by Folland Panozzo Architects



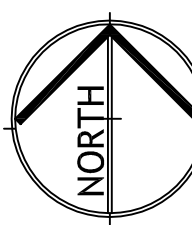
ROAD WORKS PLAN  
SCALE 1:500 @ A1 (1:1000 @ A3)

rev #	date	description



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ABN 56 100 862 879

HIGHWAY DEVELOPMENT  
STAGE 2  
ANZAC HIGHWAY  
PLYMPTON, SA



drawing title		
road works plan		
job #	dwg #	issue #
2015 1510	SK 118	B
date	scales	drawn by
30/10/18	1:500	am

BUILDERS AND CONTRACTORS ARE TO VERIFY ALL DIMENSIONS AND LEVELS ON SITE BEFORE COMMENCING ANY WORK AND PREPARING SHOP DRAWINGS. IF IN DOUBT ASK FOR CLARIFICATION.



# APPENDIX C1 – WASTE MANAGEMENT PLANS

22<sup>nd</sup> October 2018

Folland Panozzo Architects Pty Ltd  
269 Brighton Road  
Somerton Park SA 5044  
Attention: Mr Mark Folland

Dear Mark,

I would like to thank Folland Panozzo Architects for giving RR Commercial Consultants the opportunity to assist with your waste management, environmental, budgetary and compliance goals for the Highway redevelopment including the proposed East tower, proposed retail outlets and the existing hotel and bottle shop.

RR Commercial Consultants are an independent South Australian based company that works only for our customers and has no affiliation with any service supplier that we may recommend or employ.

Our extensive industry knowledge and significant supplier network allows us to achieve Environmental and cost savings by identifying our clients specific waste collection needs and sourcing suppliers that match these requirements. These services are then purchased at reduced cost with the savings passed directly to our clients.

### **Recommendations:**

"This Waste Management Plan for the Highway Apartment tower redevelopment has been prepared in the context of the Zero Waste SA, Property Council and Renewal SA, South Australia Better Practice Guide for Waste Management for Residential and Mixed-Use Developments."

RR Commercial's recommendations have addressed the following:

- Maximised collection and reuse of recyclable items
- Minimised collection of waste to landfill items
- Tenants ability to reduce contamination with clear signage and images to assist non English-speaking tenants
- Service time frames that comply with EPA and local council regulations
- Tenant waste separation and collection education
- Bin cleaning, to ensure the waste bins are free of odour

### **Proposed services:**

#### **Retail, existing hotel and bottle shop:**

Waste type	Details	Cost
General waste	1 x 3m <sup>3</sup> bin, serviced 3 x per week	As per Palmer Hotel Group rate

<b>Cardboard recycling</b>	1 x 3m <sup>3</sup> bin, serviced 2 x per week	As per Palmer Hotel Group rate
<b>Organic recycling</b>	2 x 660 ltr bins, serviced weekly	As per Palmer Hotel Group rate
<b>Bio degradable bin liners</b>	80ltr or 100ltr bags as required	As per Palmer Hotel Group rate
<b>Bottles &amp; can recycling</b>	1 x 1 cubic meter crate, serviced on call	As per Palmer Hotel Group rate
<b>Bin cleaning</b>	Bin cleaning of 660ltr, monthly	As per Palmer Hotel Group rate

## **Service summary:**

### **General waste**

It is recommended that 1 x 3m<sup>3</sup> front lift compaction bin be supplied for the collection of general waste and to be serviced 3 x per week however, if waste volumes increase these bins can be serviced up to 6 days per week or more bins can be introduced to ensure waste volume requirements are met. *Please note: no extra bins are required as existing bins will be suitable unless volumes exceed expected waste volumes.*

These bins will be serviced between 7.30am and 9am Monday to Friday and 8am to 10am on Saturdays. Sunday servicing can be arranged if required (extra service charges may apply).

### **Cardboard recycling**

It is recommended that 1 x 3m<sup>3</sup> front lift compaction bin be supplied for the collection of cardboard for recycling and to be serviced 2 x per week however, if waste volumes increase these bins can be serviced up to 6 days per week or more bins can be introduced to ensure waste volume requirements are met. *Please note: no extra bins are required as existing bins will be suitable unless volumes exceed expected waste volumes.*

These bins will be serviced between 7.30am and 9am Monday to Friday and 8am to 10am on Saturdays. Sunday servicing can be arranged if required (extra service charges may apply).

### **Organic recycling**

It is recommended that 2 x 660ltr MGB's are supplied for the collection of food waste (recycled) and be serviced once per week however, if waste volumes increase these bins can be serviced up to 5 x per week Monday to Friday or more bins be introduced to ensure waste volume requirements are met.

These bins will be serviced between 7.30am and 9am Monday to Friday.

### **Bottle & can recycling**

It is recommended that a one cubic meter crate be supplied for the collection of bottles and cans. This crate can be serviced on call with 24 hours' notice required. Service timeframes are between 7.30am and 9am Monday to Friday.

## **Proposed services:**

### **East Tower:**

<b>Waste type</b>	<b>Details</b>	<b>Cost</b>
<b>General waste</b>	4 x 1100ltr bins, serviced weekly	As per Palmer Hotel Group rate
<b>Organic recycling</b>	2 x 240ltr bins, serviced weekly	As per Palmer Hotel Group rate
<b>Kitchen tidy</b>	1 x 6ltr kitchen tidy, 1 x bin per annum	As per Palmer Hotel Group rate
<b>Bio degradable bin liners</b>	1 x box of 100/6ltr bags	As per Palmer Hotel Group rate
<b>Bottles &amp; can recycling</b>	1 x 1 cubic meter crate, serviced on call	As per Palmer Hotel Group rate
<b>Bin cleaning</b>	Bin cleaning of either 660ltr or 240 ltr, monthly	As per Palmer Hotel Group rate

#### **General waste**

It is recommended that 4 x 1100ltr MGB's (mobile garbage bins) are supplied for the collection of general waste (landfill) and to be serviced once per week however, if waste volumes increase these bins can be serviced up to 6 days per week or more bins can be introduced to ensure waste volume requirements are met.

These bins will be serviced between 7.30am and 9am Monday to Friday and 8am to 10am on Saturdays. Sunday servicing can be arranged if required (extra service charges may apply).

#### **Organic recycling**

It is recommended that 2 x 240ltr MGB's are supplied for the collection of food waste (recycled) and be serviced once per week however, if waste volumes increase these bins can be serviced up to 5 x per week Monday to Friday or more bins be introduced to ensure waste volume requirements are met.

These bins will be serviced between 7.30am and 9am Monday to Friday.

To assist the tenants with the hygienic collection and transportation of food waste, the introduction of food collection kitchen tidy's and bio degradable bin liners are recommended. This enables the tenant to collect food waste in food preparation areas and transport the full bags to the organic recycling bins in the waste collection area.

#### **Bottle & can recycling**

It is recommended that a one cubic meter crate be supplied for the collection of bottles and cans. This crate can be serviced on call with 24 hours' notice required. Service timeframes are between 7.30am and 9am Monday to Friday.



**Signage**

RR Commercial will supply signage that will be located within the waste collection area. Signage will list all waste services provided to the site and have clear images of waste items that are commonly disposed within an apartment environment. Signage will also have RR Commercial's contact details for tenants to contact for advice on waste items that require specialised disposal options.

All bins supplied will also have clear signage to ensure reduced contamination and increased recycling.

**Tenant education**

To ensure landfill items are minimised and recycling items are maximised, RR Commercial will provide educational packages and group training sessions for tenants. These details should be included in the tenant's occupation documentation. Packages and training sessions will be developed in conjunction the management of the Highway redevelopment.

RR Commercial will ensure that the waste collection area is user friendly and supply service alternatives as they become available.

**Bin cleaning**

To avoid odours within the waste collection area it is recommended that all bins be cleaned on a monthly basis. Cleaning the bins will not only eliminate odours it will reduce the build-up of bacteria.

**Suppliers and disposal locations**

All suppliers and disposal locations that RR Commercial employ to complete the recommended services comply with all State and Federal operational regulations and are Quality Endorsed companies.

**Other services provided by RR Commercial**

RR Commercial will also supply on request, Environmental reporting, updates on new waste disposal options or technologies as well as continued cost reviews to ensure the best possible rate for service is ongoing.

**Service Methodology**

Please see attached.

If you have any questions regarding our recommendations, please contact me on the details below.

Yours faithfully,

Trent Kotz *Dip EnvSc*

**General Manager**

**RR Commercial Consultants**



**ALDI Stores**

(A Limited Partnership)  
ABN 90 196 565 019

84 Gallipoli Drive, Regency Park SA 5010

**SOUTH AUSTRALIA**

Tuesday, 6 November 2018

PO Box 82  
Enfield Plaza SA 5085  
Tel: (08) 8249 8000  
Fax: (08) 8249 8053

Mr Martin Palmer  
The Palmer Group  
290 Anzac Highway  
Plympton SA

Dear Martin

**Re: ALDI Food Stores - Waste Management Overview & Management Proposed ALDI Plympton (The Highway)" Store**

ALDI Stores (ALDI) is committed to improving sustainability. ALDI strives to sustain its local and global environment, organisational health and ability to create a positive, viable future. ALDI includes environmental sustainability principles and targets in all aspects of its decision-making.

In order to plan sustainable and effective waste and recycling programs, ALDI receives data on current recycling services from our appointed waste and recycling contractors, these include audits of quantities from different waste streams, rates of contamination and weights of each collection. Analysis of this data results in improvements being communicated and implemented to further improve ongoing initiatives and develop others as required.

ALDI's in store operation is considerably different when compared with other supermarkets. All products ALDI retails are delivered pre-packaged. ALDI do not undertake the preparation of food for sale on site, we do not have an in store delicatessen, butcher, bakery or green grocer. This results in the waste streams and quantities of waste generated being a small proportion of that generated by a conventional supermarket.

The waste generated by an ALDI store is limited to four key areas and is managed and disposed as outlined further below;

- |            |  |
|------------|--|
| General:   | Waste disposed of in the general/waste bin is limited to waste generated by staff on their lunch breaks (food packaging) and office based waste. All the waste is collected in and disposed in sealed/tied heavy duty plastic rubbish bags prior to being placed in the external bin for collection  |
| Organic:   | Organic waste which is generated by fruit/vegetables and meat that does not meet the strict quality controls that ALDI require and/or are nearing/past the products best before date. This waste stream is very minimal. In line with our corporate responsibly policy we have partnered with two companies, Foodbank and SecondBite. SecondBite collect from each of our stores every day, they collect 99% of the organic waste referred to above. Foodbank collect from our distribution centre |
| Cardboard: | Cardboard waste is generated from used cardboard packaging - waste cardboard is to be collected and stored in an onsite compactor within our back of house store   |

area and collected and returned by ALDI transport to our Distribution Centre for recycling

Plastic: Plastic wrapping is collected by ALDI transport and recycled at the ALDI distribution centre.

Bin size: Each store is supplied with a single 1.5 cubic metre bin. The bins are fully contained and equipped with a hinged lid and contained in the Bin Enclosure in the loading dock.

Bin location: Each store bin is located within a secure enclosure, as per the attached photos of our Victor Harbor store.

Collection frequency: The collection of the bin is undertaken by a third party contractor. The contractor will attend the store on average three times per week to collect the contents of the bin. The collection will be managed at ALDI's request at specified times and coordinated to avoid any conflict with ALDI Transport deliveries.

Collection duration: The third party contractor will be on site for approximately 3 minutes.

Truck size: 10.5m front load truck

Please refer to the included pictures for your reference and reassurance.

Should you require any further information or seek to clarify the contents of this please contact me

Yours sincerely,

**ALDI Stores**



**Nigel Uren**  
**Property Director**



*Example of standard bin enclosure (ALDI Victor Harbor)*



*Example of 10.5m front load truck*



# APPENDIX C2 – CONSTRUCTION MANAGEMENT PLAN

## WASTE MANAGEMENT PLAN

### HIGHWAY STAGE 2 DEVELOPMENT

ELIZABETH AVE, PLYMPTON

#### OVERVIEW

This construction waste management plan was developed by Cook Building and Development in regards to the reserved matters, part D as set out in the gazette issued 21/12/2015 addressed to The Palmer Group. This plan will be managed by Cook Building and Development staff as project managers and site managers and adhered too by all contractors, sub-contractors and other site personnel through the entire construction phase of this project. Project managers and site managers will oversee this waste management plan as well as regularly discussing goals and issues with subcontractors during meetings and site inductions which will be compulsory for each individual working on the project providing workers with all the information necessary to successfully undertake this plan in its entirety.

#### DESCRIPTION OF PROJECT

The construction of 4 buildings with a 3,140sq/m footprint consisting a supermarket, a retail tenancy, a block of seven townhouses and four storeys of apartments (28 total) plus ground level car parking to be built on Elizabeth Avenue, South Plympton.

#### PROJECT GOALS

The overall goal of the project is to recycle a minimum of 90% of all waste created on site and minimize the amount of waste that is returned to landfill. All of the building waste shall be separated from general waste and disposed into three separate bins that will be arranged by Cook Building and Development to be picked up by private contractors with monthly and an overall reports provided which include a precise breakdown of all waste taken off site.

#### IMPLEMENTATION

The Waste Management Hierarchy as described in the Zero Waste SA Act 2004 refers to the following order of priority;(a) Avoidance of the production of waste; and

- (b) Minimisation of the production of waste; and
- (c) Reuse of waste; and
- (d) Recycling of waste; and
- (e) Recovery of energy and other resources from waste; and
- (f) Treatment of waste to reduce potentially degrading impacts; and
- (g) Disposal of waste in an environmentally sound manner,

are pursued in order with, first, avoidance of the production of waste, and second, to the extent that avoidance is not reasonably practicable, minimisation of the production of waste, and third, to the extent that minimisation is not reasonably practicable, reuse of waste, and so on.

## IMPLEMENTATION cont.

The waste management plan will be distributed to all outside parties undertaking work on the site through a hard copy by way as formalizing part of the written contract between Cook Building and Development and all sub-contractors. As mentioned previously it will also formalize part of all induction and regular site meetings which is where the project goals and the necessary process to obtain these goals will be reiterated to all workers on the site. The basis of this discussion will include, but not limited to the following:

- Waste Management Plan Requirements
- Review of the Waste Management Plan process
- Locations of all the bins
- Bin labelling and the correct segregation of materials into the corresponding bin
- Discussion regarding the importance of placing waste into the correct bin
- Reminder of contractual obligation in regards to waste and recycling

## WASTE MINIMISATION

The following measures will be taken to ensure the minimal amount of waste is created on site.

- All concrete precast walls and columns have been planned to be manufactured off site, therefore reducing site waste.
- All Delta core floor system to be manufactured off site, therefore reducing site waste
- All structural steel fabrication will be off site, therefore reducing site waste.
- Any materials identified on site as reusable will be stored until they can be used again or until they are deemed no longer reusable in which case they will be disposed of correctly by following the proceeding process.
- Left over delivery pallets will be donated to local charity wood working hobby groups.

## PROCESS

1. Provided on site will be three bins labelled "Masonry", "Cardboard and Paper", and "Steel and Metal". See 'diagram 1' for the breakdown of each bins eligible contents.
2. As the ground floor is constructed these bins will be accessible by foot to all workers and the contents will be monitored by the Project and Site Management Staff.
3. As the higher levels are constructed and bins are hard to access via foot a hoist will be provided making the separation of the products simple and time effective from each floor.
4. All workers on site will be required to eat in the designated lunch room provided so general waste, or domestic waste will be restricted to the one area where green wheelie bins will be provided. Part 5.3.2 of the Waste Minimisation and Recycling Services document as part of West Torrens Council Policy states, "While it is not a core responsibility of Council to collect waste generated by the activities of business, industrial and commercial properties, a limited kerbside waste and recycling collection service will be provided to encourage correct disposal and recycling of domestic-type waste (e.g. from staff lunchrooms)". With this in mind, the pickup of general or domestic waste as part of Waste Management Plan would be undertaken by the West Torrens Council.
5. All eligible ten cent refundable containers will also be kept separate and taken to a recycling depot.

6. Additional to the three bins provided for the separation of building waste will be another bin for gyprock offcuts alone. Cook Building and Development will undertake talks with Jefferies Soil and Mulch about the pickup of this bin with its contents to be recycled and used in garden mulch.
7. The three bins labelled "Masonry", "Cardboard and Paper", and "Steel and Metal" will be arranged to be picked up by private contractors on a necessity basis therefore a scheduled pickup will not be arranged.
8. Issues arising and progress discussions will formalise part of the daily site start up meetings held between Project & Site Management and workers.

## REPORTING

As part of the removal process by the private contractors we will be receiving monthly and annual reports as to the amounts of waste (weight) which has been taken off site and recycled as opposed to being taken to landfill.

Diagram 1.

METAL & STEEL	MASONRY	CARDBOARD & PAPER
Rebar	Concrete	Wood
Metal Roofing/Flashings	Bricks	Cardboard Boxes
Formwork Offcuts	Tiles	Paper
Pipe & Tube Offcuts and Waste		Recyclable Plastic

Dean Shmith

Project Manager



# APPENDIX D – ECOLOGICALLY SUSTAINABLE DESIGN INTENT REPORT



# BESTEC<sup>®</sup>

BRINGING BUILDINGS TO LIFE

HIGHWAY DEVELOPMENT  
STAGE 2

ECOLOGICALLY SUSTAINABLE  
DESIGN INTENT REPORT

MECHANICAL, ELECTRICAL,  
VERTICAL TRANSPORTATION AND  
HYDRAULIC SERVICES

REPORT ISSUE REGISTER

REVISION	DATE	REVISION DESCRIPTION
01	14.12.17	Final Issue

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## **Introduction**

The following report outlines the proposed Ecologically Sustainable Design (ESD) design initiatives for consideration for the above development.

The proposed building and all associated services will be designed to achieve high outcomes in relation to Ecological Sustainable Development. These will incorporate emphasis on the reduction of energy through passive and active design initiatives, reduction of potable water use, high indoor environment quality, low VOC materials and finishes, access to natural light and provision of natural ventilation opportunities.

---

## **Ecologically Sustainable Design**

The following Ecologically Sustainable Design (ESD) Initiatives are proposed for incorporation into the building design and into the Mechanical, Electrical, Vertical Transportation and Hydraulic Services design for the development.

### **Built Form**

Initiatives include:-

- Optimising building orientation within the limitations of the site geometry to take advantage of daylighting opportunities, winter sun penetration and shading opportunities.
- High thermal performance glazing that responds directly to the building orientation and addresses solar heat gain on orientations subject to direct sunlight and controls conduction heat gains and losses on all orientations.
- Glazing selection with high glare control characteristics to minimise glare and harmful UV radiation while maximising natural daylighting of the internal spaces.
- High thermal performance building envelope (walls, suspended floors above unconditioned spaces and roofs) incorporating high levels of insulation to meet the requirements of the Building Code of Australia, Section J Energy Efficiency, as a minimum.

### **Environmental and Waste Management**

Initiatives include:-

- Performing comprehensive commissioning and building tuning to ensure the building operates as intended by the design team to maximise optimum occupant comfort and reduce of carbon emissions through effective use of energy throughout the building's lifecycle.
- Implementing an effective environment management plan for construction phase activities to minimise noise and dust pollution, manage any latent contamination conditions or accidental contamination caused during construction and manage stormwater runoff during construction.
- Implementing an effective Construction Waste Management plan to minimise construction and demolition waste sent to landfill and maximise re-use and recycling of construction waste.

### **Indoor Environment Quality**

Initiatives include:-

- Facade design that encourages a high levels of day light penetration into the space while mitigating solar heat gain and glare in summer through the use of external shading.
- Façade design aimed at minimising thermal discomfort caused by variable radiant heating or cooling of façade envelope.
- Appropriate acoustic design to maintain acoustic privacy and prevent unnecessary ingress of external noise.
- Selection of paints, sealants and finishes with low Volatile Organic Compound (VOC) content to minimise off-gassing and associated potential adverse health effects.
- Selection of composite engineered wood products with low formaldehyde content, again to minimise off-gassing and associated potential adverse health effects.

## **Transport**

Initiatives include:-

- Provision of bicycle storage facilities to encourage and promote the use of bicycles as a mode of transport for the retail component employees.

## **Water**

Initiatives include:-

- Landscape design incorporating plants requiring minimal water after establishment.
- Provision of water efficient sanitary and tap ware fixtures and fittings in accordance with Water Efficiency Labelling Scheme (WELS).

## **Materials**

Initiatives include:-

- Provision of dedicated recycling waste storage area for the segregation of waste products to maximise recycling opportunities and minimise waste sent to landfill.
- Utilising flyash as a Portland cement substitute to minimise greenhouse gas emissions associated with the production of Portland cement. The use of flyash is however dependent on its availability in at the time of construction. Flyash use also lengthens the curing time of concrete and this could adversely impact on construction durations.
- Use of structural steel products manufactured in low energy furnaces and containing recycled content to reduce embodied energy and resource depletion.
- Selection of timber materials sourced from certified environmentally responsible managed forests.

## **Emissions**

Initiatives include:-

- The use of refrigerants with zero ODP to minimise impact on the ozone layer through accidental leakage
- The use of insulants manufactured from processes and products with zero ODP.
- Reducing peak stormwater flows and contamination of the waterways through the introduction of pollutant traps and flow management practices.
- Reducing light pollution by avoiding the use of light sources which are directed towards the sky and spill into adjacent areas surrounding the site.

## **Acoustic Comfort**

Initiatives include:-

- Acoustic assessment of the building to ensure maintenance of indoor noise levels that are no more than 5dB(A) above “satisfactory” levels in AS/NZS 2107:2000.
- Acoustic assessment of the building to ensure maintenance of reverberation times that do not exceed the maximum levels in AS/NZS 2107:2000.
- Acoustic assessment of the building to ensure partitions between independent living units, common areas, lobbies and the like achieve a weighted sound reduction index of at least 45.

## **Energy BCA Section J Compliance**

Initiatives include:-

- Apartments designed to achieve individual 5 star energy efficiency ACCURATE rating and average 6 star energy efficiency collectively.
- Provision of energy efficient glazing.

## **Building Services**

The following Mechanical, Electrical, Vertical Transportation and Hydraulic Services initiatives are proposed for incorporation into the building design for the development.

### **Mechanical Services**

Initiatives include:-

- High efficiency inverter type reverse cycle air conditioning systems to serve each apartment.

### **Electrical Services**

Initiatives include:-

- Provision of a high efficiency LED lighting throughout all areas.
- Building lighting control system to provide motion detection controls to luminaires within common area corridors and back of house plant areas. Lighting circuits to be zoned to suit functional spaces and incorporate time scheduling.
- External lighting systems controlled by time clock and photocell and incorporating high efficiency luminaires (>65 lumens/watt).

### **Vertical Transportation Services**

Initiatives include:-

- Permanent magnetic synchronous motors with solid state variable speed drives to minimise energy consumption.
- Regenerative drives to recover energy during braking and return it to the building's power grid for use elsewhere.
- Timer systems on lift car lights and fans to shut them off when the lifts are idle.



- LED lighting in the lift cars to minimise energy consumption.

### **Hydraulic Services**

Initiatives include:-

- Provision of water efficient sanitary and tap ware fixtures and fittings in accordance with Water Efficiency Labelling Scheme (WELS).
- Provision of 4.5/3 litre dual flush water efficient WC suites
- Individual instantaneous natural gas fired, domestic hot water units to each individual apartment.
- Water sub-metering to all units and to base building plant and equipment for water and energy consumption management and control.

# APPENDIX E – DRAFT LMA s57 AFFORDABLE HOUSING

# Affordable Housing Land Management Agreement

dated the date specified in Item 1 of the Schedule

## Parties

---

**Minister for Planning** a body corporate pursuant to the *Administrative Arrangements Act 1994* (SA) of 11<sup>th</sup> Floor, 45 Pirie Street, Adelaide SA 5000 ("**Minister**")

and

**The entity named in Item 2 of the Schedule**, of the address specified in Item 2 of the Schedule ("**Owner**")

## Background

---

- A. The Owner is the registered proprietor of the Land.
- B. The Owner acknowledges that the South Australian Government, via the South Australian Planning Strategy is committed to increasing both affordable home purchase and rental opportunities, and high need housing opportunities for South Australians, and that the planning strategy establishes a target of at least fifteen percent (15%) affordable housing in all significant new developments.
- C. The Minister and the Owner wish to manage the Land and to control development of the Land to ensure that the Government's affordable housing targets as set out in Background B above, are met.
- D. Pursuant to the provisions of Section 57(1) of the Act the Owner has agreed with the Minister to enter into this Agreement relating to any proposed development of the Land subject to the terms and conditions set out in this Agreement.
- E. The parties acknowledge that the matters recited in the Background and Schedule to this Agreement are true and accurate and agree that they form part of this Agreement.

---

# Agreed Terms

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## 1. Definitions and Interpretations

In this Agreement:

- 1.1 **Act** means the *Development Act 1993* (SA), and its replacement the *Planning Development and Infrastructure Act 2016* (SA);
- 1.2 **Affordable Homes Program** means the sale tool used by State Government to list properties for sale to affordable housing eligible home buyers;
- 1.3 **Affordable Housing Apartment** means an apartment constructed, or to be constructed, on the Land that meets the criteria for affordable housing specified in the Notice;
- 1.4 **Affordable Housing Facilitation Agreement** means a legal agreement made between the South Australian Government and a provider of housing which recognises, records and secures the policy and the respective financial interests agreed between the parties in respect to the provision of affordable housing;
- 1.5 **Affordable Housing Property** means a completed or partially completed Affordable Housing Residence, or an Affordable Housing Apartment, as the case may be;
- 1.6 **Affordable Housing Residence** means a dwelling that is constructed and meets the criteria for:
  - (a) affordable housing specified in the Notice; and
  - (b) a Standard Turn Key Home;
- 1.7 **Affordable Housing Plan** means the plan developed by the Owner and approved by the Director in accordance with clause 2.2 of this Agreement;
- 1.8 **Director** means the Director, Housing Growth and Development within Renewal SA;
- 1.9 **Eligible Buyer** means either:-
  - (a) a prospective homeowner listed on the SA Home Purchase Eligibility Register maintained by Renewal SA; or
  - (b) a registered community housing provider under the Community Housing Providers (National Law) (South Australia) Act 2013 (SA) or a party which is a transitioning housing association or transitioning housing co-operative under that Act; or
  - (c) South Australian Housing Trust; or
  - (d) a housing provider that is subject to an Affordable Housing Facilitation Agreement with any Minister, instrumentality or agency of the Crown in the right of the State of South Australia; or
  - (e) a Person approved to provide affordable rental under the NRAS; or
  - (f) such other Person as the Minister may from time to time nominate to the Owner in writing;
- 1.10 **Eligible Renter** means a person deemed eligible for affordable rental under criteria set out by the State Government for the purposes of affordable home purchase and rental;
- 1.11 **GST** means the tax imposed by the GST Law;
- 1.12 **GST Law** has the meaning attributed in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth);



- 1.13 **Land** means the whole of the land comprised in the Certificates of Title specified in Item 3 of the Schedule and includes any part or parts of the Land;
- 1.14 **Maximum Price** is the maximum sale price for the Affordable Housing Property specified in the Notice and is inclusive of GST payable by an Eligible Buyer but excludes stamp duty and registration fees payable by an Eligible Buyer;
- 1.15 **Mortgage** means the mortgage specified in Item 6 of the Schedule;
- 1.16 **Mortgagee** means the finance institution specified in Item 6 of the Schedule;
- 1.17 **Notice** means a notice published in the South Australian Government Gazette pursuant to Regulation 4 of the *South Australian Housing Trust (General) Regulations 1995* (SA) as amended from time to time;
- 1.18 **NRAS** means the former National Rental Affordability Scheme established by the Australian Government;
- 1.19 **Outcomes** has the meaning as set out in clause 2.1;
- 1.20 **Owner's Asking Price** is the sale price (inclusive of GST but excluding stamp duty and registration fees) at which the Owner advertises Affordable Housing (being an amount no higher than the Maximum Price);
- 1.21 **Person** will include a corporate body or other entity;
- 1.22 **Planning Strategy** means the strategy formulated under the Act.
- 1.23 **Practical Completion** means when an Affordable Housing Apartment is complete except for minor omissions and defects;
- 1.24 **Renewal SA** means a statutory corporation pursuant to the *Housing and Urban Development (Administrative Arrangements) (Renewal SA) Regulations 2012* (SA);
- 1.25 **Schedule** means the schedule to this Agreement;
- 1.26 **Standard Turn Key Home** means a dwelling other than an Affordable Housing Apartment which satisfies both the definition of "Turn Key Home" and includes the 'mandatory inclusions' as specified in the Government of South Australia Affordable Homes Program, Turn Key Home definition provided on the website ([www.renewalsa.sa.gov.au](http://www.renewalsa.sa.gov.au)) as at the time the Affordable Housing Property is listed for sale.
- 1.27 **Torrens Title Allotments** means an allotment that is not a community lot, a development lot or common property as defined in and created in accordance with the *Community Titles Act 1996*.
- 1.28 **Website** means the part of the website [www.realestate.com.au](http://www.realestate.com.au) that is used and maintained by Renewal SA for the purposes of listing affordable properties.
- 1.29 Words and phrases used in this Agreement which are defined in the Act or in the Regulations made under the Act will have the meanings ascribed to them by the Act or the Regulations as the case may be;
- 1.30 References to any statute or subordinate legislation will include all statutes and subordinate legislation amending, consolidating or replacing the statute or subordinate legislation referred to;
- (a) any term which is defined in the statement of the names and descriptions of the parties or in the Background will have the meaning there defined;
  - (b) a reference to a party includes that party's administrators, successors and permitted assigns;
  - (c) words importing the singular number or plural number will be deemed to include the plural number and the singular number respectively;
  - (d) words importing any gender will include every gender;

- 
- (e) clause headings are provided for reference purposes only and will not be resorted to in the interpretation of this Agreement.

- 1.31 The requirements of this Agreement are at all times to be construed as additional to the requirements of the Act and any other legislation affecting the Land.

## 2. **Development of Affordable Housing**

### 2.1 **Obligation to Create Affordable Housing**

The Owner must develop not less than five of the dwellings to be created on the Land as Affordable Housing Properties (the “**Outcomes**”), and make them available as either affordable housing home ownership opportunities, or affordable housing rental opportunities.

### 2.2 **Affordable Housing Plan**

- 2.2.1 The Owner must prepare an initial Affordable Housing Plan, and in doing so consult with and obtain approval from the Director of an Affordable Housing Plan by no later than the date specified in Item 4 of the Schedule.
- 2.2.2 The Affordable Housing Plan must:
- (a) specify development of the Land on a stage by stage basis;
  - (b) specify the approximate number and type of Affordable Housing Properties which are to be provided in each sub-stage;
  - (c) control a balanced delivery across a project that may support sub-stage approval with increased or decreased Affordable Housing Properties, providing that the Outcomes are delivered;
  - (d) in the case of Affordable Housing Apartments, specify the number, type and floor level within the building or buildings that the Affordable Housing Apartments are to be provided.
- 2.2.3 An Affordable Housing Plan can be amended from time to time by the Owner, provided that:
- (a) the Outcomes are delivered in the amended Affordable Housing Plan; and
  - (b) the amended Affordable Housing Plan is approved by the Director within fourteen (14) days of the amendment being made.
- 2.2.4 If requested by the Director, the Owner must meet and consult with the Director in good faith in relation to any concerns that the Director may have with the Affordable Housing Plan or any amendments to the Affordable Housing Plan.
- 2.2.5 The Owner acknowledges that the factors to be taken into account by the Director in considering the Affordable Housing Plan submitted by the Owner include:
- (a) the distribution of the Affordable Housing Properties through the stages, noting that some stages may have no Affordable Housing Properties;
  - (b) the style and specifications of the Affordable Housing Residences which the Developer proposes to construct or approve for construction on the Land;
  - (c) the attributes of the Land such as slope, location of water courses, trees and vegetation;
  - (d) the home ownership and rental mix;
  - (e) the mix of built form;
  - (f) the proposed marketing plan for the Affordable Housing Properties.

- 
- 2.2.6 The Owner must ensure that all Affordable Properties are developed and provided in accordance with the approved Affordable Housing Plan (subject to any amendments agreed pursuant to clause 2.2.3) and in accordance with any development authorisation received in respect of the application for the development of the Land.

### **2.3 Construction of Affordable Housing**

The Owner must ensure that:

- 2.3.1 Affordable Housing Properties are well integrated and complementary in design and appearance to other dwellings within the development;
- 2.3.2 in the event that the Owner is to develop the Land in stages, then the staging of the development must provide for the development of Affordable Housing Properties concurrently with the development of other land and dwellings;
- 2.3.3 Affordable Housing Properties are equivalent to other dwellings in the development in their energy efficiency, insulation, water conservation mechanisms, and solar access rating;
- 2.3.4 the exterior appearance of Affordable Housing Properties are reasonably similar to other dwellings built on the Land in the nature and quality of exterior building materials and finishes.

## **3. Price and Rent of Affordable Housing**

### **3.1 Price of Affordable Housing Properties**

3.1.1 Subject to clause 3.4, the Owner must not:

- (a) advertise Affordable Housing Properties, or
  - (b) rent Affordable Housing Properties
- at a price greater than the Maximum Price.

3.1.2 The Owner acknowledges and agrees that at the date of this Agreement the Maximum Price is that specified in Item 5 of the Schedule.

3.1.3 The parties acknowledge and agree that the Maximum Price may vary by publication of a fresh Notice. On publication of a fresh Notice the Maximum Price will vary accordingly provided that the Maximum Price for the purposes of this Agreement will not be less than the price specified in Item 5 of the Schedule at the execution of this Agreement.

### **3.2 Rent of Affordable Housing Properties - Eligible Renters**

3.2.1 The Owner must market and rent Affordable Housing Properties to Eligible Renters.

3.2.2 Renter eligibility shall be determined using the income and asset criteria for the Affordable Homes Program.

3.2.3 The Owner shall rent the Affordable Housing Properties for a minimum of five (5) years to eligible renters. The Land Management Agreement will be retained on the Title of the land until the five years rental is completed, at which point it will be rescinded in full.

### **3.3 Sale of Affordable Housing Properties**

In the event that the Owner wishes to sell the properties within the five year period committed to affordable rental provision, the Owner shall advertise the affordable rental properties through the Affordable Homes Program to Eligible Homebuyers in the first instance. For further information on sale of Affordable Housing Properties to eligible homebuyers, refer to Appendix A.

---

## 4. Noting of this Agreement

### 4.1 Noting of Agreement

The Minister and the Owner will do and execute all such documents and things as may be necessary to ensure that as soon as is possible after the execution of this Agreement by all necessary parties this Agreement is noted and a memorial thereof entered on the Certificate of Title for the Land pursuant to the provisions of Section 57 of the Act in priority to any other interest in the Land.

**[IF THERE IS A MORTGAGE THE CLIENT MAY REQUEST THAT THE FOLLOWING CLAUSES BE INCLUDED]**

Add to 4.1 'save and except for'

- 4.1.1 the estate and interest of the Mortgagee as mortgagee of the Land pursuant to the Mortgage listed in Item 6 of the Schedule.
- 4.1.2 It is acknowledged and agreed that if the Mortgagee exercises its power of sale under the Mortgage identified in Item 6 in the Schedule pursuant to Section 133 of the *Real Property Act 1886* that, notwithstanding Section 136(1)(a) of the *Real Property Act 1886*, any transfer of the Land or portion of the Land by the Mortgagee shall be made subject to this Agreement in accordance with the practice of the Registrar General of the Lands Titles Office to the effect that this Agreement will be binding on the purchaser of the Land or portion of the Land (as the case may be) as is contemplated by Section 57(7) of the Act.
- 4.1.3 The terms and conditions of this clause 4 are binding on the Mortgagee (and its successors assigns and transferees) as evidenced by the provision of the Mortgagee's consent to this Agreement.

### 4.2 Noting of Rescission

4.2.1 The Owner and the Minister agree that the Minister shall rescind (as that term is used in the Act) this Agreement and procure the noting by the Registrar General of such rescission of this Agreement over such relevant portions of the Land following:

- (a) the approval of the Affordable Housing Plan by the Director;
- (b) the Owner requesting the Minister to rescind the Agreement and specifying the particular allotment numbers in the relevant plan of division that will be used to deliver Affordable Housing Properties on that portion of the Land in accordance with the Affordable Housing Plan.

4.2.2 The Owner and the Minister agree that:

- (a) any rescission of this Agreement and noting of such rescission under this clause 4.2 shall not release the Owner from its obligations under this Agreement to deliver the Outcomes contemplated by the Affordable Housing Plan; and
- (b) the obligation on the Owner to deliver the Outcomes pursuant to this Agreement shall remain in full force and effect and is hereby confirmed.

Both the Owner and the Minister agree to undertake best endeavours to expedite the signing of any documents appropriate to rescind this Agreement from the relevant properties to meet the Owner's timing required to complete the sale of the relevant apartments in the development.

## 5. Owner to obtain consents



---

The Owner must:

- 5.1 obtain any consent(s) required to satisfy the requirements of Section 57 of the Act; and
- 5.2 provide a copy of the consent(s) to the Minister.

## 6. **Costs**

- 6.1 The Owner agrees to pay the costs incurred in the stamping and noting of this Agreement against the relevant certificates of title for the Land.
- 6.2 The Owner shall pay the Minister's costs of and incidental to the rescission or partial rescission of this Agreement and the noting of such rescission or partial rescission against the relevant portions of the Land.

## 7. **Indemnity**

In the event of a breach or non-performance of its obligations under this Agreement, the Owner hereby indemnifies the Minister and agrees to keep the Minister forever indemnified in respect of the whole of the Minister's costs and expenses (including without limitation legal costs and expenses) of and incidental to the enforcement of the Owner's obligations under this Agreement.

## 8. **Notices**

- 8.1 Without prejudice to any other means of giving notice any notice required to be served under this Agreement shall be sufficiently served or given:
  - 8.1.1 by personal service on that party (or if it is a body corporate on a director, secretary or other officer of the party);
  - 8.1.2 if to the Owner, by post to the address of the Owner set out in Item 8 of the Schedule such other address as the Owner may notify the Minister from time to time as being the Owner's address for service of notices; and
  - 8.1.3 if to the Minister, by post to the address of the Minister set out in Item 7 of the Schedule or such other address as the Minister may notify each other party from time to time as being the Minister's address for service of notices.
- 8.2 Any notice may be signed on that party's behalf by its attorney, director, secretary or other officer or solicitor.
- 8.3 A notice by post shall be deemed to be served or given at the time when it ought to be delivered in the due course of post.

## 9. **Minister may delegate**

The Minister may delegate any of its powers under this Agreement to any person.

## 10. **Reporting**

The Owner must provide to the Director information reasonably requested by the Director relating to the creation and delivery of Affordable Housing on the Land.

## 11. **General**

---

### 11.1 **Good Faith**

The Owner and the Minister must deal with one another in good faith in relation to their respective obligations under this Agreement.

### 11.2 **Joint and Several Liability**

When two or more persons are parties to this Agreement the covenants obligations and agreements on their part contained in this Agreement shall bind them jointly and each of them severally.

### 11.3 **Restrictions on dealing with Land**

11.3.1 The Owner must not assign, encumber or attempt to novate any of its rights or obligations in relation to this Agreement without the prior written consent of the Minister.

11.3.2 Unless this Agreement has been rescinded from the Land (or portion of the Land) pursuant to the provisions of this Agreement the Owner must not sell, assign, convey, transfer, create a trust in respect of, or otherwise dispose of the legal or any beneficial estate or interest in or to the Land or any portion of the Land other than in accordance with this Agreement, at any time during the term of this Agreement without the prior written consent of the Minister.

11.3.3 The Owner must not grant any lease, licence, or any other right which may enable any person any right to breach an obligation imposed on the Owner under this Agreement, unless such grant is made in writing and with the prior written consent of the Minister.

### 11.4 **Entire Agreement**

11.4.1 This Agreement incorporates the attached Schedule.

11.4.2 This Agreement contains the entire agreement between the parties with respect to its subject matter.

11.4.3 This Agreement supersedes any prior agreement, understanding or representation of the parties on the subject matter.

### 11.5 **Modification**

Any modification of this Agreement must be in writing and signed by each party.

### 11.6 **Waiver**

The Minister may waive compliance by the Owner with the whole or any part of the Owner's obligations provided that no such waiver will be effective unless expressed in writing and signed by the Minister.

### 11.7 **Severance**

11.7.1 Each word, phrase, sentence, paragraph and clause of this Agreement is severable.

11.7.2 If a court determines that a part of this Agreement is unenforceable, invalid, illegal or void that court may sever that part.

11.7.3 Severance of a part of this Agreement will not affect any other part of this Agreement.

### 11.8 **Relationship between the Parties**

Nothing in this Agreement will constitute either party as the partner, agent, employee or officer of, or as a joint venturer with, the other party, and neither party has any authority to bind the other party in any manner without the prior written consent of the other party.

### 11.9 **Governing Law**

11.9.1 This Agreement is governed and construed in all respects in accordance with the law of the State of South Australia and the Commonwealth of Australia.

---

11.9.2 The parties submit to the jurisdiction of the Courts of the State of South Australia and the Commonwealth of Australia in respect of all matters arising under or relating to this Agreement, provided that any proceedings issued in the Courts of the Commonwealth of Australia are issued in the Adelaide Registry of any such Court.

**11.10 Construction of Agreement**

In the interpretation of this Agreement no rules of construction shall apply to the disadvantage of one party on the basis that that party put forward the Agreement or any part thereof.

DRAFT

# Signing page

**EXECUTED** as a Land Management Agreement

By the **CHIEF EXECUTIVE, URBAN RENEWAL AUTHORITY**, trading as **RENEWAL SA**  
as delegate for **THE MINISTER FOR PLANNING**  
pursuant to an instrument of delegation dated  
3 July 2014, pursuant to s20 of  
the *Development Act 1993*:

.....

in the presence of

Witness .....

Print Name: .....

Position Held: .....

Address: .....

Contact Phone: .....

Date .....

Executed by **insert details**  
(**A.B.N. insert details**) in  
accordance with Section 127 of the Corporations  
Act 2001

.....  
Signature

.....  
Full Name (print)

.....  
Office Held

.....  
Date

.....  
Signature

.....  
Full Name (print)

.....  
Office Held

.....  
Date

If only one person has signed, that person warrants that he/she is the sole director and the sole secretary of the company.

**(Please affix the common seal if the company has a common seal)**



---

# Schedule

---

## ITEM 1 - Date of Agreement

## ITEM 2 – Owner

Owner's Name:  
Owner's Address:  
A.B.N.:

## ITEM 3 – Land (Clause 1.13)

The whole of the land comprised in Certificate of Title Volume XXXX Folio XXX

**Corner of Anzac Highway and Marion Road, Plympton**

## ITEM 4 - Provision of Affordable Housing Plan (Clause 2.2.1)

**Due Date:** within 30 days of obtaining Development Plan consent.

## ITEM 5 - Current Maximum Price (Clause 3.1.2)

Dwelling sales to eligible homebuyers – Greater Adelaide  
Dwelling or House and Land   \$320,000.00

Weekly rental to eligible renters – Greater Adelaide  
Dwelling or apartment         \$344/week

## ITEM 6 – Mortgage

Mortgage Institution  
Mortgage Number

## ITEM 7 Addresses for Notices (Clause 8)

### Minister

Contact Officer: **Jodi Davy**  
Phone Number: **8207 0223**  
E-mail address: [jodi.davy@sa.gov.au](mailto:jodi.davy@sa.gov.au)  
Postal Address:

### Renewal SA

**Attention: Jodi Davy, Team Leader Affordable Housing**  
**Level 9, Riverside Centre, North Terrace Adelaide, South Australia, 5000**

### Owner:

Contact Person:  
Phone Number:  
E-mail address:  
Postal Address:

---

## APPENDIX A – PRICE AND SALE OF AFFORDABLE HOUSING

### 1. PRICE AND SALE OF AFFORDABLE HOUSING

#### 1.1 Price of Affordable Housing Properties

1.1.1 Subject to clause 3.4, the Owner must not:

- (a) advertise Affordable Housing Properties, or
  - (b) sell Affordable Housing Properties
- at a price greater than the Maximum Price.

1.1.2 The Owner acknowledges and agrees that at the date of this Agreement the Maximum Price is that specified in Item 5 of the Schedule.

1.1.3 The parties acknowledge and agree that the Maximum Price may vary by publication of a fresh Notice. On publication of a fresh Notice the Maximum Price will vary accordingly provided that the Maximum Price for the purposes of this Agreement will not be less than the price specified in Item 5 of the Schedule at the execution of this Agreement.

1.1.4 The parties acknowledge and agree that the Owner may apply to the Minister in accordance with the *Affordable Housing Gazette notice (Determination of Criteria for the Purposes of the Concept of Affordable Housing, Regulation 4 of Development Act 1993)* for a variance to the Maximum Price of up to 15% where certain criteria are met in relation to location to public transport, unique finance options, environmental inclusions, and dual occupancy.

1.1.5 If the Owner makes an application to the Minister pursuant to clause 3.4.1(b) of this Agreement for a price variation which application is approved by the Minister (**Price Variation**) the Maximum Price for the purposes of this Agreement will vary according to the Price Variation.

#### 1.2 Sale of Affordable Housing Properties - Eligible Buyers

1.2.1 The Owner must take reasonable steps to market Affordable Housing Properties to Eligible Buyers.

1.2.2 The Owner must not sell and Affordable Housing Property, being:

- (a) an Affordable Housing Package; or
- (b) a Land Only Affordable Housing Property; or
- (c) a completed or partially completed Affordable Housing Residence;

to any Person other than an Eligible Buyer unless and until the Owner has continuously advertised the Affordable Housing Property through the Website (and through any other marketing mediums that the Owner and the Director agree), for at least thirty (30) days after development plan consent has been granted by the relevant authority, provided that the Director may, at the Director's discretion, also require at least fourteen (14) days of such advertising to occur after the plan of division creating the relevant affordable housing allotment has been accepted for deposit by the Registrar-General of the Lands Titles Office.

- 
- 1.2.3 The Owner must not sell an Affordable Housing Apartment to any Person other than an Eligible Buyer unless and until the Owner has advertised the Affordable Housing Apartment through the Website (and any other marketing mediums that the Owner and the Director agree) continuously for at least thirty (30) days after development plan consent has been granted for the Affordable Housing Apartment.
- 1.2.4 If any Affordable Housing Apartment remains unsold after the 30 day advertising period specified in 3.2.4 then that Affordable Housing Apartment may be offered for sale on the open market, provided that if any Affordable Housing Apartment still remains unsold at Practical Completion, a further period of fourteen (14) days of continuous advertising through the Website is required.
- 1.2.5 Subject to clause 3.4, if at any time within the period commencing with the first day of such advertising and continuing while any Affordable Housing Property remains unsold, an Eligible Buyers offers to purchase an Affordable Housing Property at either:
- (a) the Owner's Asking Price, or
  - (b) the Maximum Price,
- then the Owner must enter into a contract to sell the Affordable Housing Property to the Eligible Buyer for that price.

**1.3 Sale of Affordable Housing Properties - Non-Eligible Buyers**

In the event that no Eligible Buyer makes an offer which complies with clause 3.2. within the periods specified in clause 3.2, then the Owner may sell the Affordable Housing Property to any person provided that the Affordable Housing Property is sold at a price not higher than the Maximum Price. This sale will be counted as a sale of Affordable Housing Property towards the Owner's obligation to deliver the Outcomes.

**1.4 Sale of Affordable Housing Properties - Higher than the Maximum Price**

- 1.4.1 The Owner may sell Affordable Housing Properties at a price higher than the Maximum Price if:
- (a) the Eligible Buyer is of the class set out in clause 2(2)(b,c,d,e) of the Notice;  
or
  - (b) the "Dwelling", as that term is defined in the Notice:
    - (i) complies with clause 2(3) of the Notice;
    - (ii) any approval to a variation in the price is approved by the Chief Executive Renewal SA (or their delegate) pursuant to clause 2(3) of the Notice.
  - (c) in the case of an Affordable Housing Package or a completed or partially completed Affordable Housing Residence, at the Eligible Buyer's request, the dwelling includes items in excess of the Standard Turn Key Home requirements which increases the Price.

**1.5 Sale as a Land Only Affordable Property**

- 1.5.1 The Owner is only permitted to sell an Affordable Housing Property as a Land Only Affordable Property in respect of Torrens Title Allotments.

# APPENDIX F – STORMWATER MANAGEMENT PLAN





Project No: 170409

Monday, 22 October 2018

Folland Panozzo Architects Pty Ltd  
269 Brighton Road  
SOMERTON PARK SA 5044

Attn: Mr Mark Folland

**RE: HIGHWAY DEVELOPMENT - STAGE 2 – REVISED SCHEME**

We write to describe the changes to the Storm water management plan for the above project, in line with recent changes to the site layout.

We reference the CPR Stormwater management plan (170407-C100 Rev C) and report dated 20 December 2017 which formed part of the approved Planning Development Consent Gazetted on the 21 June 2018.

We confirm that the new layout for the site is now captured on the CPR Engineers drawing 170409-C101 which demonstrates the following items:

- A. The nominated Discharge Points 1 and 2 on Marion Road remain as per the previously approved scheme;
- B. The nominated discharge flow rates exiting the site for the 5 year ARI event and the 20 year ARI event remain within the previously approved limits;
- C. The existing bottle shop and new tenancy roof discharges stormwater to Anzac Highway using the same Grated Pit and connection point as the existing but with a smaller catchment area;
- D. The 100 year flows discharge at the rates defined as the maximum for 5 or 20 year events at discharge points 1 and 2;
- E. The overall site area does not change, the roof catchment area has reduced, the at grade landscape area has increased and the pavement area has increased.
- F. Despite the net site run-off co-efficient reducing due to the reduction in roof area discharging to Marion Road, the revised scheme has been able to increase the site detention volume.

In summary of Items A to F, we confirm that the revised storm water management scheme presented on the existing layout is still consistent with the

**COMBE  
PEARSON  
REYNOLDS**  
CONSULTING ENGINEERS

174 Fullarton Road, Dulwich SA 5065  
PO Box 2832, Kent Town SA 5071  
Ph: 08 8332 1344 Fax: 08 8332 1044  
email: admin@cprengineers.com.au

Combe Pearson Reynolds Pty Ltd as  
Trustee for the CPR Trust  
ACN 112 731 558 ABN 12 112 731 558  
08-08-11



agreed storm water management principles set by City of West Torrens, and we commit to providing further detail design at the appropriate stage of the documentation process.

Please let me know if you have any queries.

Yours Faithfully,

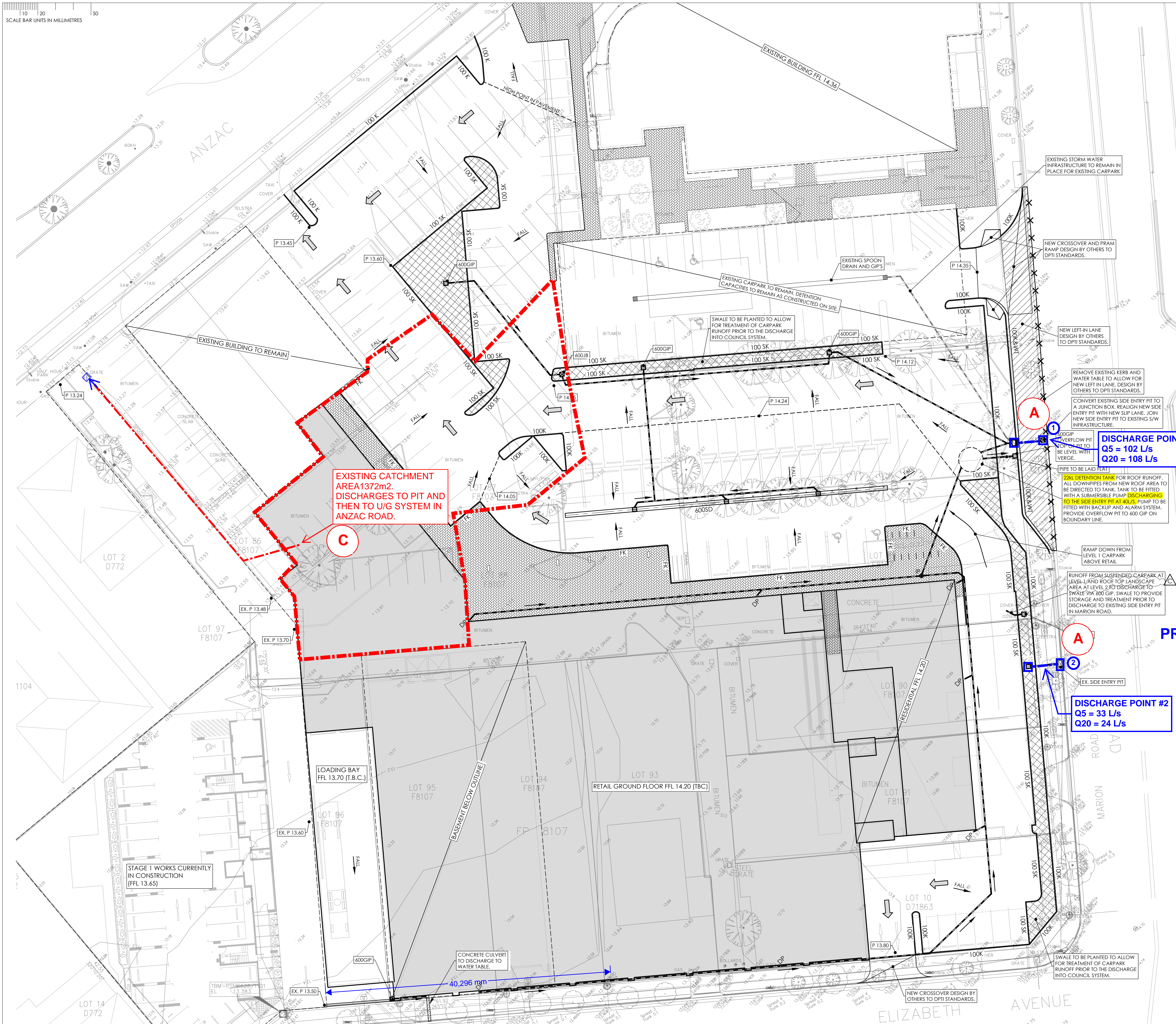
A handwritten signature in black ink, appearing to read 'D Reynolds', written over a light grey rectangular background.

David Reynolds

**COMBE PEARSON REYNOLDS**

Encl – I70409-CI00 Rev C – Previously submitted SMWP  
I70409-CI01 Rev A – Revised Storm Water Management Plan





## LEGEND

SD	CONCRETE SPOON DRAIN. REFER PLAN FOR SIZE.
K&WT	CONCRETE KERB & WATERTABLE HEIGHT AS NOTED.
K	CONCRETE KERB HEIGHT AS NOTED.
SK	CONCRETE SLOTTED KERB HEIGHT AS NOTED.
FK	FLUSH KERB.
	NEW STORMWATER PIPE
	EXISTING STORMWATER PIPE
	GRATED INLET PIT
	JUNCTION BOX
	SIDE ENTRY PIT
	STORMWATER INSPECTION POINT.
	DOWN PIPES.
	DESIGN LEVEL P-PAVEMENT LEVEL

TOTAL DETENTION VOLUME PROVIDED = 102kL  
22KL UNDERGROUND TANKS  
80KL SWALE DRAINS

400 m2 @ 0.2M AVE DEPTH  
DENOTES 200mm AVERAGE DEPTH SWALE. SWALE TO BE PLANTED TO ALLOW FOR TREATMENT OF CARPARK RUNOFF PRIOR TO DISCHARGE INTO THE COUNCIL SYSTEM. DETENTION PROVIDED = 80KL.  
DENOTES PLAZA PAVING AREA TO ARCH. SPECIFICATION.  
300 WIDE 'ACO' GRATED STRIP DRAIN OR SIMILAR APPROVED.  
OVERLAND FLOW PATH  
CONCRETE CULVERT WITH 6mm GALVANISED CHECKER PL.

DOWNPIPE LOCATIONS INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED IN DETAILED DESIGN.

A DENOTES ITEM REFERENCE IN CPR LETTER DATED 22/10/18

ROOF AREA = 3,941 m2  
LANDSCAPE AREA = 861 m2 (INCL ROOF GARDEN)  
PAVEMENT AREA = 6,523 m2  
TOTAL SITE AREA = 11,325 m2

## PREVIOUSLY APPROVED SCHEME



C	01-02-18	RE-ISSUED FOR PLANNING APPROVAL ONLY	D.R.V.M.N.S.
B	21-12-17	RE-ISSUED FOR PLANNING APPROVAL ONLY	C.M.V.A.C.
A	20-12-17	ISSUED FOR PLANNING APPROVAL ONLY	C.M.V.A.C.
Revision	Date	Details	Eng/Dft

**cpr** COMBE PEARSON REYNOLDS CONSULTING ENGINEERS

174 Fullarton Road Dulwich SA 5065  
PO Box 2832 Kent Town SA 5071  
Phone: 08 8332 1344  
e-mail: plans@cprengineers.com.au

Combe Pearson Reynolds Pty. Ltd.  
as limited for the CPR Act  
ACN 112 731 558 ABN 12 112 731 558

Project HIGHWAY DEVELOPMENT STAGE 2  
Address ANZAC HIGHWAY PLYMPTON, SA  
Client HIGHWAY INN PROPERTIES PTY LTD  
Architect FOLLAND PANOZZO  
269 BRIGHTON ROAD, SOMERTON PARK  
SA 5044, PH 8376 8888  
Sheet Title STORMWATER MANAGEMENT PLAN

Designed	C.M.	Drawn	M.N.S.	Checked	-	Date	Dec-17	Rev.	C
Scale	1:250 @ A1	Drawing No.	170409-C100						



LEGEND



DENOTES 200mm AVERAGE DEPTH SWALE. SWALE TO BE PLANTED TO ALLOW FOR TREATMENT OF CARPARK RUNOFF PRIOR TO DISCHARGE INTO THE COUNCIL SYSTEM. DETENTION PROVIDED = 68.5kL

TOTAL AREA PROVIDED = 457 m2 (>400m2)

TOTAL DETENTION VOLUME PROVIDED = 110.5kL > 102kL  
- 22kL UNDERGROUND TANKS  
- 20kL ABOVE GROUND TANKS  
- 68.5kL SWALE DRAINS

A

DENOTES ITEM REFERENCE IN CPR LETTER DATED 22/10/18

E

NEW ROOF AREA = 3,342 m2 (<3941 m2)  
NEW LANDSCAPE AREA = 640 m2 (<861 m2) (INCL ROOF GARDEN)  
PAVEMENT AREA = 7,343 m2 (>6,523 m2)  
TOTAL SITE AREA = 11,325 m2

DISCHARGE POINTS AND DISCHARGE RATES TO MARION ROAD REMAIN THE SAME AS APPROVED SCHEME.

B	07-11-18	REVISED FOR APPROVAL	
A	22-10-18	FOR APPROVAL	
Revision	Date	Details	INITIALS/INITIALS Eng\Dt



COMBE PEARSON REYNOLDS  
CONSULTING ENGINEERS

174 Fullarton Road Dulwich SA 5065  
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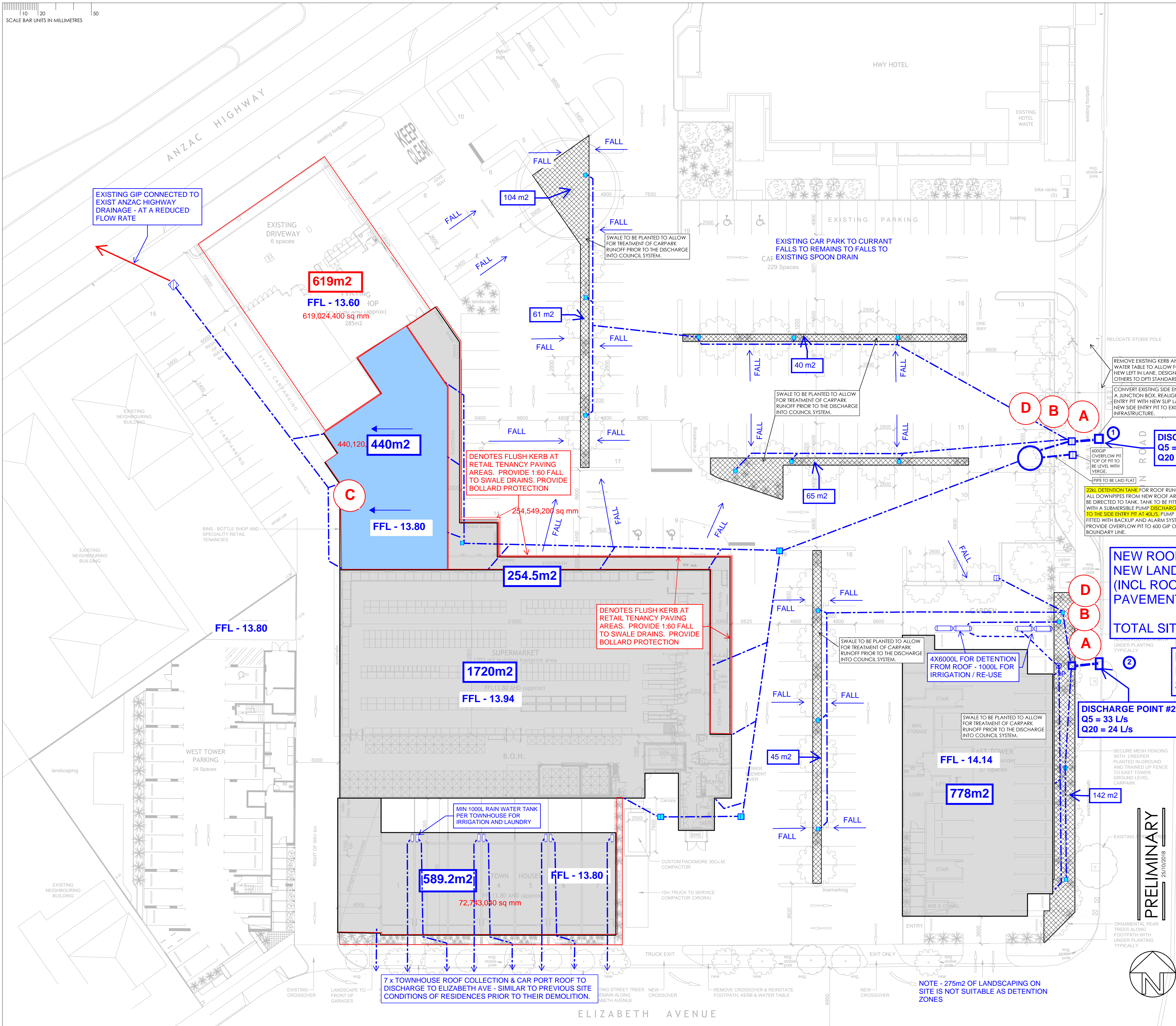
Combe Pearson Reynolds Pty. Ltd.  
is a limited liability company  
ACN 112 731 538 ABN 12 112 731 538

Project HIGHWAY DEVELOPMENT STAGE 2  
Address ANZAC HIGHWAY  
Client PLYMPTON  
HIGHWAY INN PROPERTIES PTY LTD  
Architect FOLLAND PANOZZO  
269 BRIGHTON ROAD, SOMERTON PARK  
Phone 8376-8888

Sheet Title STORMWATER MANAGEMENT  
PLAN

Designed D.R.	Drawn -	Checked -	Date Oct-18	Rev B
Scale 1:250 @ A1	Drawing No. 170409-C101			

Last issued by: H0470409



ELIZABETH AVENUE

PRELIMINARY  
25/10/2018





**COMBE  
PEARSON  
REYNOLDS**  
CONSULTING ENGINEERS

# Storm Water Management Plan



**Prepared For:**

Folland Panozzo Architects

**Site:**

HIGHWAY DEVELOPMENT STAGE 2

Anzac Highway, Plympton, SA



**Job No:** 170409

**Dated:** Wednesday 20 December 2017

**Prepared By:**

**Combe Pearson Reynolds**

**P** PO Box 2832  
Kent Town SA 5071

**A** L1, 174 Fullarton Road  
Dulwich SA 5065

**T** +61 8 8332 1344

**F** +61 8 8332 1044



# **HIGHWAY DEVELOPMENT STAGE 2 PROPOSED MIXED USE DEVELOPMENT ANZAC HIGHWAY, PLYMPTON, SA**

## **STORMWATER MANAGEMENT PLAN**

### **INTRODUCTION**

The following outlines the proposed plan to manage the disposal of stormwater from the post development site at Anzac Highway, Plympton.

The stormwater concept has been based upon the architectural plans prepared by Folland Panozzo Architects.

The existing portion of the site to be developed is approximately 11,325 sqm and comprises of 2 large commercial buildings, 3 residential buildings and large paved carpark area. Refer Appendix A – Existing Site Aerial View, April 2013. In 2013 and 2014 these buildings were demolished in readiness for future development.

The proposed development includes the following:

- Approximately 6760sqm mixed use, multi storey building and;
- Large at grade carpark.

This Stormwater Management Plan addresses the following issues:

- general stormwater management
- stormwater detention and disposal off site in accordance with council requirements.

This plan has been prepared in accordance with the approved stormwater management plan for Stage 1 of the Highway Development on the west side of the site.

### **GENERAL STORMWATER MANAGEMENT**

The new works will be designed for the following stormwater criteria:

- Post development ARI flows to match pre-development ARI flows for the 1 in 5 year, 1 in 20 year and 1 in 100 year ARI flows respectively.
- Overland flow for 1 in 100 year event

Stormwater from the development will discharge to two existing side entry pits on Marion Road with overland flows discharging via an existing cross over to Anzac Highway.

## FINISHED FLOOR LEVEL REQUIREMENTS

The proposed building is to have finished floor level set at RL 14.20.

Overland flow paths will be managed as the proposed floor level will be a minimum of 300mm higher than adjacent street kerb level. The pavement is to grade levels away from the building.

The above measures have been addressed in order to maintain an appropriate freeboard level higher than surrounding formed ground surfaces to enable overload flows from 1:100 ARI storm events to exit the site in an appropriate manner.

Information accessed from the council's website revealed the 100 year ARI flood levels do not impact on this site.

## STORMWATER DETENTION

As per the approved stormwater management plan for stage 1 of the development, the City of West Torrens requires the following stormwater detention criteria for to this site:

- Post development ARI flows to match pre-development ARI flows for a 1 in 5 year ARI event, 1 in 20 year ARI event and 1 in 100 year ARI event.

Stormwater detention calculations have thus been undertaken to assess the project requirements to limit the post development rate of runoff from the proposed development meet the council's requirements.

The calculations in Appendix D present the following table outlining the pre-development flows, flows from the post-development roof area, flows from the post-development paved/pervious area and the detention capacity required for each area in order to meet the post development flow restrictions.

<b>Table 1 – Stormwater Calculations, Discharge and Detention Requirements</b>					
Storm Event	1 in 5	1 in 20	1 in 100	Units	
Pre-development flow	157	233	357	L/s	
Post-development flow - Roof	40	71	123	L/s	
Post-development flow - Pavement/Pervious	95	60	128	L/s	
Difference Between Pre and Post Flows	22	102	106	L/s	
Post-development Detention - Roof	22.08	21.64	21.95	kL	
Post-development Detention - Pavement/pervious	5.16	79.63	79.57	kL	

In order to meet the requirements presented by the calculations, the following detention and discharge restrictions from site will be placed:

- 22kL underground detention tank located in the new carpark.  
A pump discharging to the side entry pit on Marion Road at 40L/s will be installed to collect the development's roof runoff.  
An overflow grated inlet pit will be provided at the boundary along Marion Road to cater for flows for the occasions when the tank is full and flows to the tank are greater than the 40L/s allowance. On these occasions, the excessive water will exit the site via overland flow.
- 400sqm of 200mm average depth swales (80kL detention capacity) will be installed within the carpark to collect and treat runoff from the suspended and ground level carparks.  
The swales are to be planted in order to meet the water quality requirements of council.  
Discharge from the swales are to match the pavement/pervious flows as defined by Table I and discharge via the existing side entry pits on Marion Road.

The above detention features will ensure that the Council's requirements in regards to stormwater discharge will be met.

After full utilization of the 22kL in ground detention tank and the 80kL swale storage for the carpark, the discharge rates from the post-development site are significantly less than the pre-development site (as illustrated in table I).

The swales within the carparks will be planted in order to treat the water to Council's requirements before discharge. The planting requirements of the swale will be specified in the detailed design phase of this project.

## ISSUES DURING CONSTRUCTION

The management of stormwater during construction will be under constant monitoring by the appointed construction manager and by CPR on behalf of the developer.

The construction manager will be employed to maintain control measures on site and to minimise run-off from the site which may contain fine earth particles and any deleterious material that washes off site will be cleaned up by the contractor.

### Prepared by



**Costa Morias**

**COMBE PEARSON REYNOLDS PTY LTD**

[costam@cprengineers.com.au](mailto:costam@cprengineers.com.au)





Encl.

Appendix A – Existing Site Aerial View – April 2013

Appendix B – Pre-Development Catchment Area Diagram

Appendix C – Post-Development Catchment Area Diagram

Appendix D - Stormwater Calculations SW1-SW9

Appendix E – Stormwater Management Plan –Drawing 170409-C100-C101



**APPENDIX A:**  
**- Existing Site Aerial View – April 2013**





Approximate extent  
of stage 2 boundary

Appendix A - Existing Site - April 2013



## **APPENDIX B:**

### **- Pre-Development Catchment Area Diagram**





Appendix B - Pre-development Areas



## **Appendix C:**

### **– Post-Development Catchment Area Diagram**





### Legend

- Denotes Roof Area
- Denotes Pervious Area

\* Unmarked area within the site boundaries are considered to be pavement

rev #	date	description
G	30.10.17	landscaping details amended
F	19.09.17	issued to DPTI



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ABN 56 100 862 879

**PRELIMINARY**  
**HIGHWAY DEVELOPMENT  
STAGE 2  
ANZAC HIGHWAY  
PLYMPTON, SA**

drawing title			
second level			
job #	draw #	issue #	
2015 1510	SK 03	G	
date	scale	drawn by	
30/10/17	1:250	js/am	



**SECOND LEVEL**  
SCALE 1:250 @ A1 (1:500 @ A3)  
0 2 4 6 8 10m

## Appendix C - Post-development Areas



## **Appendix D:**

- Stormwater Calculations SW1-SW9**





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**Page:** SW1  
**Date :** 20/12/17  
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**HWY stage 2 development**

PRE-DEVELOPMENT - 1 IN 5 YEAR ARI FLOWS

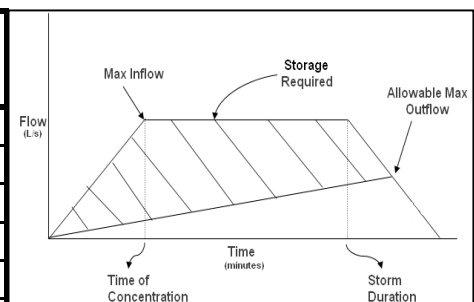
**Roof Area** 2143 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

**Pervious Area** 2151  
**Run-Off Coefficient** 0.4

**Pavement Area** 7031  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 5 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 157.32 L/s  
Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	81	212.38	63.71	
10	60	157.32	94.39	
15	49.1	128.74	115.86	
20	42.1	110.38	132.46	
25	37.1	97.27	145.91	
30	33.4	87.57	157.63	
35	30.5	79.97	167.94	
40	28.1	73.68	176.82	
50	24.4	63.98	191.93	
55	22.7	59.52	196.41	
60	21	55.06	198.22	
65	19.3	50.60	197.35	
70	17.6	46.15	193.81	
75	15.9	41.69	187.60	
80	14.2	37.23	178.71	
85	12.5	32.77	167.15	
90	10.8	28.32	152.91	



<b>Minimum Tank Size</b>	<b>0.00 m<sup>3</sup></b>
--------------------------	---------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.157316667 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 35516.097 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 212.65 mm	



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**HWY stage 2 development**

POST-DEVELOPMENT - 1 IN 5 YEAR ARI EVENT - ROOF ONLY

**Roof Area** 3941 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

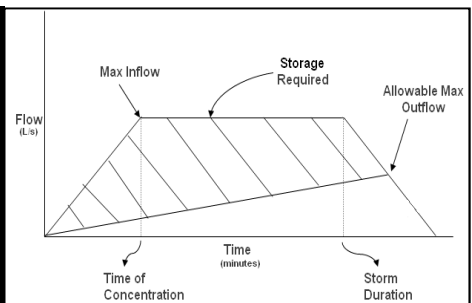
**Pervious Area** 0  
**Run-Off Coefficient** 0.4

**Pavement Area** 0  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 5 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 40.000 L/s

Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	81	93.13	27.94	9.94
10	60	68.98	41.39	17.39
15	49.1	56.45	50.81	20.81
20	42.1	48.40	58.08	22.08
25	37.1	42.65	63.98	21.98
30	33.4	38.40	69.12	21.12
35	30.5	35.07	73.64	19.64
40	28.1	32.31	77.54	17.54
50	24.4	28.05	84.16	12.16
55	22.7	26.10	86.13	8.13
60	21	24.14	86.92	2.92
65	19.3	22.19	86.54	-3.46
70	17.6	20.24	84.99	-11.01
75	15.9	18.28	82.26	-19.74
80	14.2	16.33	78.37	-29.63
85	12.5	14.37	73.29	-40.71
90	10.8	12.42	67.05	-52.95



<b>Minimum Tank Size</b>	<b>22.08 m<sup>3</sup></b>
--------------------------	----------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.04 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b>	
9030.473 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b>	
107.23 mm	



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### HWY stage 2 development

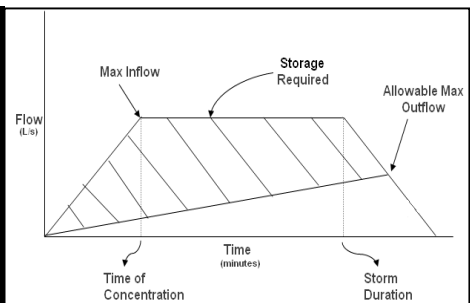
POST-DEVELOPMENT - 1 IN 5 YEAR ARI EVENT - PAVEMENT AND LANDSCAPING ONLY

**Roof Area** 0 m<sup>2</sup> **Pervious Area** 861  
**Roof Pitch** 5 degrees **Run-Off Coefficient** 0.4  
**Run-Off Coefficient** 1  
**Pavement Area** 6523  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 5 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 95.000 L/s

Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	81	139.86	41.96	-0.79
<b>10</b>	<b>60</b>	<b>103.60</b>	<b>62.16</b>	<b>5.16</b>
15	49.1	84.78	76.30	5.05
20	42.1	72.69	87.23	1.73
25	37.1	64.06	96.09	-3.66
30	33.4	57.67	103.81	-10.19
35	30.5	52.66	110.59	-17.66
40	28.1	48.52	116.45	-26.05
50	24.4	42.13	126.39	-44.61
55	22.7	39.20	129.34	-55.91
60	21	36.26	130.54	-68.96
65	19.3	33.32	129.97	-83.78
70	17.6	30.39	127.64	-100.36
75	15.9	27.45	123.54	-118.71
80	14.2	24.52	117.69	-138.81
85	12.5	21.58	110.07	-160.68
90	10.8	18.65	100.70	-184.30



<b>Minimum Tank Size</b>	<b>5.16 m<sup>3</sup></b>
--------------------------	---------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.095 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 21447.373 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 165.25 mm	



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**HWY stage 2 development**

PRE-DEVELOPMENT - 1 IN 20 YEAR ARI FLOWS

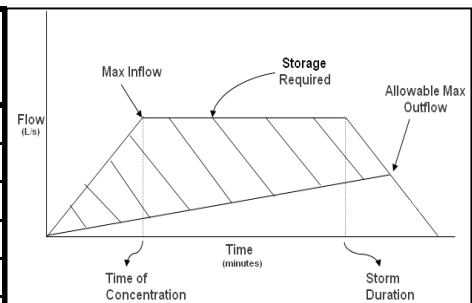
**Roof Area** 2143 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

**Pervious Area** 2151  
**Run-Off Coefficient** 0.4

**Pavement Area** 7031  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 20 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 233.35 L/s  
Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	121	317.26	95.18	
<b>10</b>	<b>89</b>	<b>233.35</b>	<b>140.01</b>	
15	72	188.78	169.90	
20	62	162.56	195.07	
25	54	141.59	212.38	
30	48.7	127.69	229.84	
35	44.3	116.15	243.92	
40	40.7	106.71	256.11	
50	35.3	92.55	277.66	
55	32.8	86.00	283.80	
60	30.3	79.44	286.00	
65	27.8	72.89	284.27	
70	25.3	66.34	278.61	
75	22.8	59.78	269.01	
80	20.3	53.23	255.48	
85	17.8	46.67	238.02	
90	15.3	40.12	216.63	



<b>Minimum Tank Size</b>	<b>0.00 m<sup>3</sup></b>
--------------------------	---------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.233353056 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b>	
52682.211 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b>	
258.99 mm	





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**HWY stage 2 development**

POST-DEVELOPMENT - 1 IN 20 YEAR ARI EVENT - ROOF ONLY

**Roof Area** 3941 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

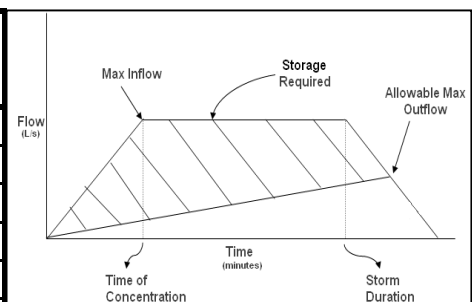
**Pervious Area** 0  
**Run-Off Coefficient** 0.4

**Pavement Area** 0  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 20 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 71.000 L/s

Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	121	139.12	41.73	9.78
<b>10</b>	<b>89</b>	<b>102.33</b>	<b>61.40</b>	<b>18.80</b>
15	72	82.78	74.50	21.25
20	62	71.28	85.54	21.64
25	54	62.09	93.13	18.58
30	48.7	55.99	100.78	15.58
35	44.3	50.93	106.96	11.11
40	40.7	46.79	112.30	5.80
50	35.3	40.59	121.76	-6.04
55	32.8	37.71	124.45	-14.00
60	30.3	34.84	125.41	-23.69
65	27.8	31.96	124.65	-35.10
70	25.3	29.09	122.17	-48.23
75	22.8	26.21	117.96	-63.09
80	20.3	23.34	112.03	-79.67
85	17.8	20.47	104.37	-97.98
90	15.3	17.59	94.99	-118.01



<b>Minimum Tank Size</b>	<b>21.64 m<sup>3</sup></b>
--------------------------	----------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.071 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 16029.089 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 142.86 mm	



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**HWY stage 2 development**

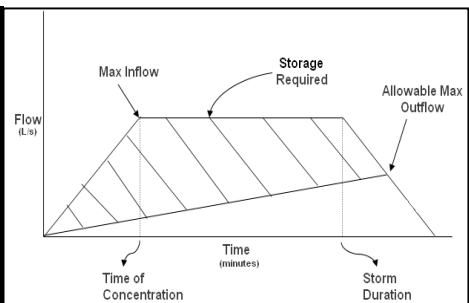
POST-DEVELOPMENT - 1 IN 20 YEAR ARI EVENT - PAVEMENT AND LANDSCAPING ONLY

**Roof Area** 0 m<sup>2</sup> **Pervious Area** 861  
**Roof Pitch** 5 degrees **Run-Off Coefficient** 0.4  
**Run-Off Coefficient** 1  
**Pavement Area** 6523  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 20 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 60.000 L/s

Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	121	208.93	62.68	35.68
<b>10</b>	<b>89</b>	<b>153.67</b>	<b>92.20</b>	<b>56.20</b>
15	72	124.32	111.89	66.89
20	62	107.05	128.46	74.46
25	54	93.24	139.86	76.86
30	48.7	84.09	151.36	79.36
35	44.3	76.49	160.63	79.63
40	40.7	70.28	168.66	78.66
50	35.3	60.95	182.85	74.85
55	32.8	56.63	186.89	69.89
60	30.3	52.32	188.34	62.34
65	27.8	48.00	187.21	52.21
70	25.3	43.68	183.48	39.48
75	22.8	39.37	177.16	24.16
80	20.3	35.05	168.25	6.25
85	17.8	30.73	156.75	-14.25
90	15.3	26.42	142.66	-37.34



<b>Minimum Tank Size</b>	<b>79.63 m<sup>3</sup></b>
--------------------------	----------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.06 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 13545.709 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 131.33 mm	



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**HWY stage 2 development**

PRE-DEVELOPMENT - 1 IN 100 YEAR ARI FLOWS

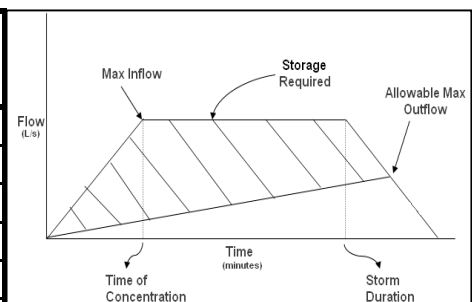
**Roof Area** 2143 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

**Pervious Area** 2151  
**Run-Off Coefficient** 0.4

**Pavement Area** 7031  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 100 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 356.58 L/s  
Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	186	487.68	146.30	
<b>10</b>	<b>136</b>	<b>356.58</b>	<b>213.95</b>	
15	110	288.41	259.57	
20	94	246.46	295.76	
25	82	215.00	322.50	
30	73	191.40	344.52	
35	66.5	174.36	366.15	
40	61	159.94	383.85	
50	53	138.96	416.89	
55	49	128.48	423.97	
60	45	117.99	424.75	
65	41	107.50	419.25	
70	37	97.01	407.45	
75	33	86.52	389.36	
80	29	76.04	364.97	
85	25	65.55	334.30	
90	21	55.06	297.33	



<b>Minimum Tank Size</b>	<b>0.00 m<sup>3</sup></b>
--------------------------	---------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.356584444 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b>	
80503.153 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b>	
320.16 mm	



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**HWY stage 2 development**

POST-DEVELOPMENT - 1 IN 100 YEAR ARI EVENT - ROOF ONLY

**Roof Area** 3941 m<sup>2</sup>  
**Roof Pitch** 5 degrees  
**Run-Off Coefficient** 1

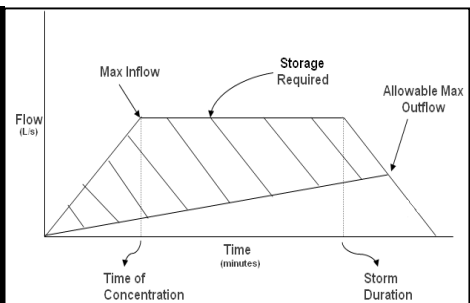
**Pervious Area** 0  
**Run-Off Coefficient** 0.4

**Pavement Area** 0  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 100 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 122.500 L/s

Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	186	213.85	64.15	9.03
<b>10</b>	<b>136</b>	<b>156.36</b>	<b>93.82</b>	<b>20.32</b>
15	110	126.47	113.82	21.95
20	94	108.07	129.69	19.44
25	82	94.28	141.42	12.79
30	73	83.93	151.07	4.07
35	66.5	76.46	160.56	-4.82
40	61	70.13	168.32	-15.43
50	53	60.94	182.81	-37.69
55	49	56.34	185.91	-52.96
60	45	51.74	186.26	-71.00
65	41	47.14	183.84	-91.78
70	37	42.54	178.67	-115.33
75	33	37.94	170.73	-141.64
80	29	33.34	160.04	-170.71
85	25	28.74	146.59	-202.54
90	21	24.14	130.38	-237.12



<b>Minimum Tank Size</b>	<b>21.95 m<sup>3</sup></b>
--------------------------	----------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.1225 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 27655.823 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 187.65 mm	





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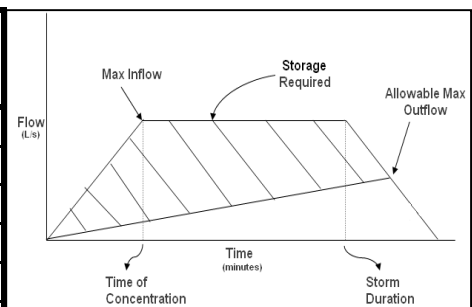
**HWY stage 2 development**

POST-DEVELOPMENT - 1 IN 100 YEAR ARI EVENT - PAVEMENT AND LANDSCAPING ONLY

**Roof Area** 0 m<sup>2</sup> **Pervious Area** 861  
**Roof Pitch** 5 degrees **Run-Off Coefficient** 0.4  
**Run-Off Coefficient** 1  
**Pavement Area** 6523  
**Run-Off Coefficient** 0.9

**Storm Design Recurrence Interval** 100 years  
**Time of Concentration** 10.0 minutes  
**Max Allowable Outflow** 128.000 L/s Based on (AR&R 1987)

Duration (Minutes)	Intensity (mm/h)	Inflow (L/s)	Inflow Volume (m <sup>3</sup> )	Max Storage (m <sup>3</sup> )
5	186	321.16	96.35	38.75
<b>10</b>	<b>136</b>	<b>234.83</b>	<b>140.90</b>	<b>64.10</b>
15	110	189.93	170.94	74.94
20	94	162.31	194.77	79.57
25	82	141.59	212.38	77.98
30	73	126.05	226.88	73.28
35	66.5	114.82	241.13	68.33
40	61	105.33	252.78	60.78
50	53	91.51	274.54	44.14
55	49	84.61	279.20	29.60
60	45	77.70	279.72	10.92
65	41	70.79	276.09	-11.91
70	37	63.89	268.32	-38.88
75	33	56.98	256.41	-69.99
80	29	50.07	240.35	-105.25
85	25	43.17	220.15	-144.65
90	21	36.26	195.80	-188.20



<b>Minimum Tank Size</b>	<b>79.57 m<sup>3</sup></b>
--------------------------	----------------------------

<b>Outlet Orifice Design</b>	
<b>Approximate head above outlet</b>	1 m water
<b>Max allowable outflow</b>	0.128 m <sup>3</sup> /s
<b>Discharge Velocity</b>	4.43 m/s
<b>Approx Pipe area</b> 28897.513 mm <sup>2</sup>	
<b>Approx Pipe Diameter</b> 191.82 mm	



**APPENDIX E:**  
**- Stormwater Management Plan – Drawing**  
**I70409-CI00-CI01**

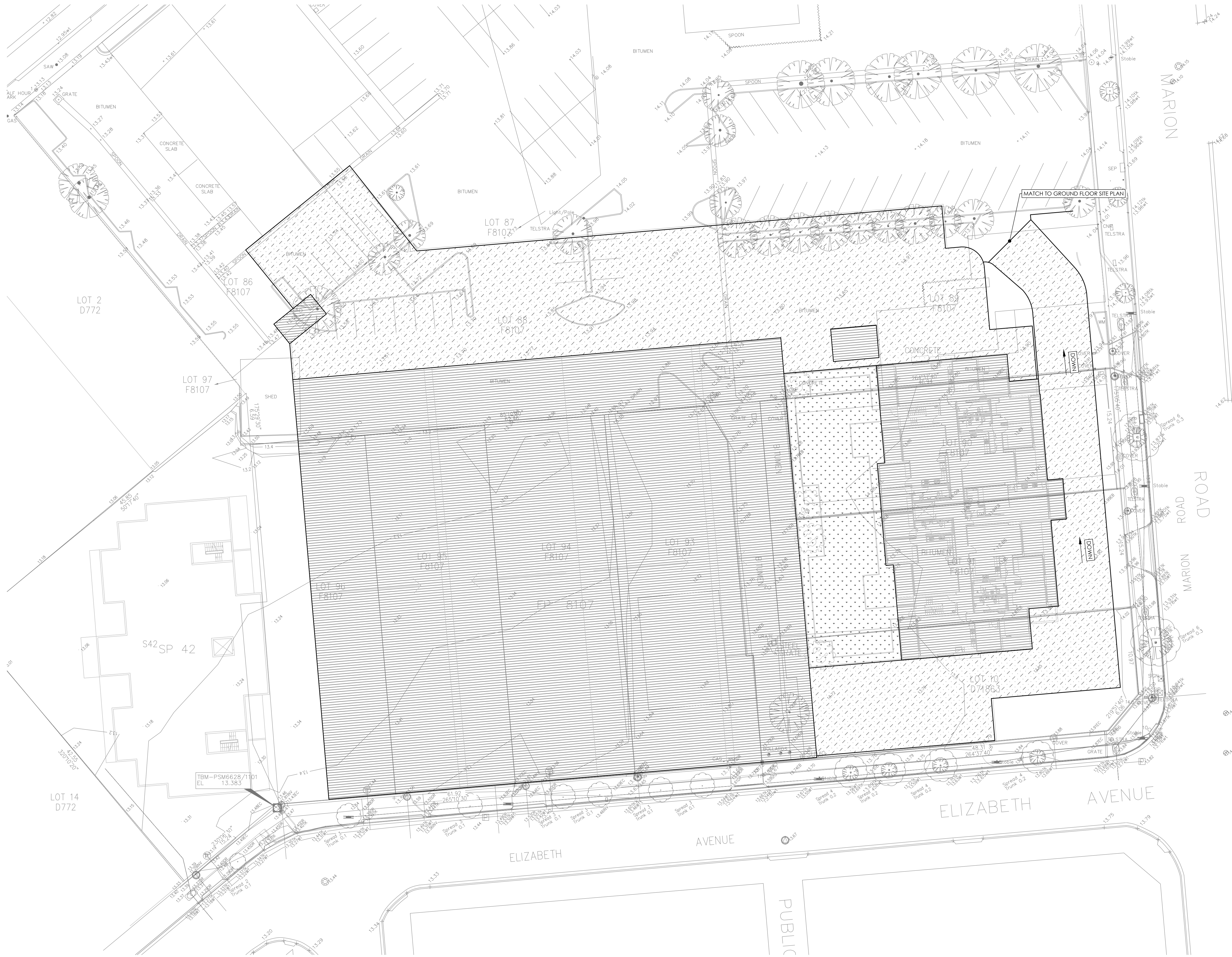




Designed C.M.	Drawn M.N.S.	Checked -	Date Dec-17	
Scale 1:250 @ A1	Drawing No. 170409-C100			Rev. B

Last Saved by: Tinc

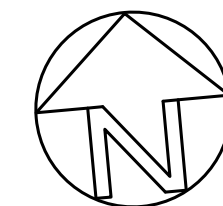




CONCRETE PAVING AREAS FOR CARPARK AND RAMP AREA ZONES.  
CONNECT TO MARION ROAD SWALE DETENTION AND TREATMENT ZONE.

UPPER LEVEL ROOF CATCHMENT AREAS. PROVIDE DOWNPIPE  
DRAINAGE TO LOWER LEVEL ROOF WATER DRAINAGE SYSTEM.

FEATURED LANDSCAPE/GARDEN AREA. DRAINAGE TO BE COLLECTED AND  
DISCHARGED TO MARION ROAD SWALE DETENTION TREATMENT ZONE.



PRELIMINARY

A	20-12-17	ISSUED FOR PLANNING APPROVAL ONLY	C.M.\T.A.C.
Revision	Date	Details	Eng\Diff



COMBE  
PEARSON  
REYNOLDS  
CONSULTING ENGINEERS

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Phone: 08 8332 1344  
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Combe Pearson Reynolds Pty. Ltd.  
as Trustee for the CPR Trust  
ACN 112 731 558 ABN 12 112 731 558

Project	HIGHWAY DEVELOPMENT STAGE 2
Address	ANZAC HIGHWAY PLYMPTON, SA
Client	HIGHWAY INN PROPERTIES PTY LTD
Architect	FOLLAND PANOZZO 269 BRIGHTON ROAD, SOMERTON PARK SA 5044. PH 8376 8888

Sheet Title UPPER LEVEL CATCHMENT PLAN

Designed C.M.	Drawn M.N.S.	Checked -	Date Dec-17	
Scale 1:250 @ A1	Drawing No. 170409-C101			Rev. A

Last Saved by: Time:



# APPENDIX G – CEMMP

## ENVIRONMENTAL MANAGEMENT PLAN STAGE 2 DEVELOPMENT ELIZABETH AVENUE, SOUTH PLYMPTON

### OVERVIEW

This Environmental Management Plan (EMP) was developed by Cook Building in regards to the reserved matters part (h), as set out in the gazette issued 21/12/2015 addressed to The Palmer Group. This EMP is a document that addresses site specific issues, risks and necessary prevention methods in relation to stormwater and environmental matters associated with the preconstruction and construction phases being undertaken by Cook Building in conjunction with the Palmer Group. This plan will be managed by Cook Building Project and Site Managers and adhered to by all contractors, sub-contractors and other site personnel through the entire duration of the project. Project goals, issues arising and potential hazards will be formally discussed during regular meetings and site inductions which will be compulsory for all individuals working on the project and providing workers with all the information necessary to successfully undertake this plan in its entirety.

### DESCRIPTION OF PROJECT, LOCATION and SENSITIVE RECEIVERS

**PROJECT DESCRIPTION-** The construction of 4 buildings with a 3,140sq/m footprint consisting a supermarket, a retail tenancy, a block of seven townhouses and four storeys of apartments (28 total) plus ground level carparking.

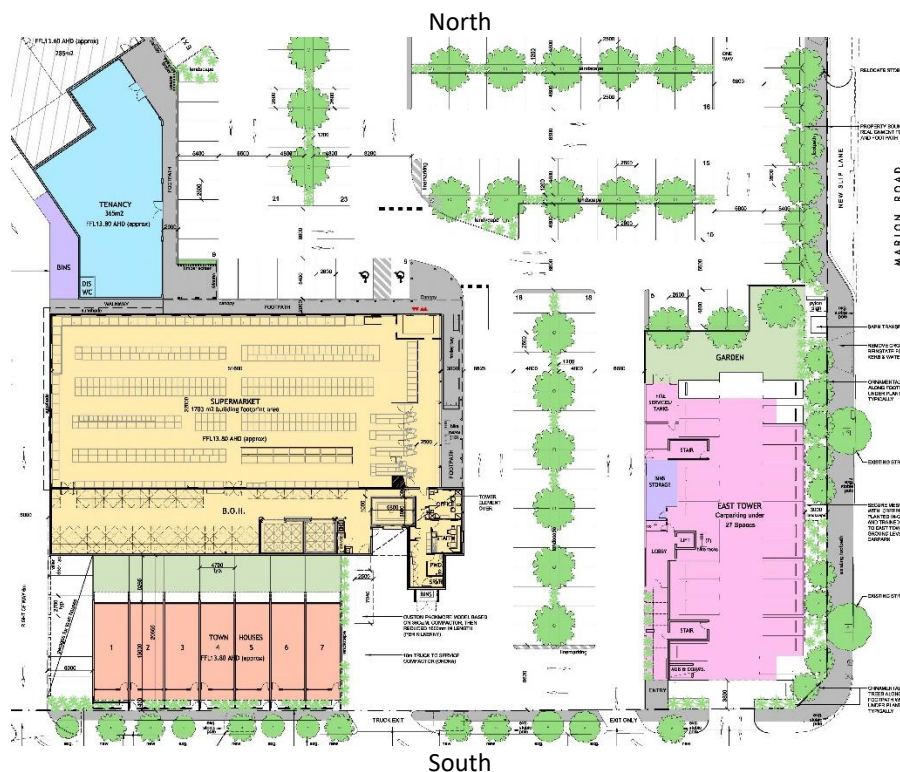
**PROJECT LOCATION-** Elizabeth Avenue, South Plympton.

**PROJECT TIMELINES-** Construction time to be approximately 18 months.

**SITE HOURS-** Monday to Saturday 7am – 5pm.

**RECEIVING ENVIRONMENT-** The existing area is of a mixed use, consisting of residential dwellings, low rise flats, duplexes, vacant land, a fast food outlet, a bottle shop, a carpark and a hotel.

**SENSITIVE RECEIVERS-** The site has a residential Apartment on the Western Boundary, a Hotel complex on the Northern Boundary, Marion road on the East and on the opposite side of the road (South) there are additional residential homes. (See below)



## PROJECT GOALS

The overall objective of the Environmental Management Plan is to adhere to all acceptable and relevant EPA guidelines throughout the duration of the build. This will be achieved by outlining procedures for the sound management of environmental issues relating to the execution of all construction work associated with this project. Cook Building and Development provides management of activities that have the potential to impact negatively on the environment as outlined in this EMP. Through proactive measures and regular site meetings with workers we aim to minimise the environmental impact in all aspects of construction work through the engagement of sound and effective practices.

## CONTRACTOR OBLIGATIONS

All contractor personnel working on the project will be required to attend an onsite orientation/induction provided by Cook Project or Site Management Personnel before working at the jobsite where the Environmental and Waste Management Plans will be detailed in full. Any newly employed, promoted or transferred personnel shall undertake the same process during their site induction. All personnel will receive orientation prior to starting work.

All Contractors/workers will fully understand their obligations and sign off agreeing to the site policies and rules prior to commencing any work onsite.

All Sub-Contracts between Cook Building and Developments P/L and Contractors will have adherence to the EMP and WMP listed in the “special conditions” section of the contract

## IMPLEMENTATION

The EMP shall be deemed a binding commitment by all parties who will undertake work on the project with the intent of sound environmental management and to cooperate and enforce the specifications contained wherein and where necessary.

Work shall at all times be approached with due concern for the natural and social environment.

Management and site procedures shall be directed towards minimising environmental impact and or damage in all aspects of the work that is to be undertaken.

Project and Site Management personnel shall furthermore establish appropriate management structures and communication forums through the means of site inductions and regular site meetings to discuss, reiterate and document potential issues arising and the prevention methods which are to be put in place.

## PROCESS

The process to be undertaken to achieve project goals are as follows and broken down into their respective categories.

## STORMWATER

To prevent stormwater contamination and pollution, the following prevention measures will be put in place.

## **WORKER EDUCATION**

- All workers will be inducted when commencing onsite for the first time. At that point, they will be educated in the purpose of the EMP and their role in maintaining its intent. Workers will be updated on any changes to the EMP during toolbox meetings from time to time or as the topic becomes necessary due to EMP upgrades, incidents or complacency towards the EMP in executing their roles onsite.

## **ADJACENT SITE RUNOFF**

- Where appropriate provide temporary or permanent modification to the gradient of surface terrain (soil or crushed stone berms etc.) in order to minimize the flow of stormwater into or out of excavated or otherwise disturbed areas.

#### **SITE PROTECTION**

- A crushed rock driveway, hardstand, laydown area and worker carpark will be established from the first day of the project to eliminate contamination to the adjoining streets.
- The main building base and paved areas rubble will be placed from the commencement of site works, along with installing permanent retaining walls, eliminating topsoil exposure to erosion and stormwater runoff to neighbouring properties.

#### **TOPSOIL EROSION CONTROL**

- Imported topsoil will be delivered and spread just prior to laying instant turf to eliminate erosion from wind and water.

#### **CONTROLLING WATER MOVEMENT**

- Prior to the roof cladding being installed, the retention/detention tank stormwater system will be installed. All downpipes will be permanently installed at the earliest possible time to prevent captured water run-off damage.
- Sand filled socks will be used in the gutters surrounding the site to capture any silt or sediment flowing into the stormwater side entry pits. Regular visual inspection of the socks will occur with any excess build up to be manually cleaned by sweeping and/or shovelling excess build up away.

#### **POLLUTANT CONTROL**

- On site cleaning of painting tools and materials will be prohibited.
- On site flushing of empty concrete trucks or dumping excess concrete will be prohibited. However, the truck chute may be flushed at a designated location on site where waste when solidified will be disposed of in the correct manner as set out in the waste management plan.
- All vehicle and machinery re-fuelling will be done off site.

#### **INSPECTION**

- The Project Site Team will undertake daily site inspections with Safety and Environment checklists, plus a weekly site check with the Project Manager in attendance. This ensures that all Safety, Waste and Environmental Plans are being adhered to. Plans are to be updated if necessary and where site condition changes are anticipated.

#### **NOISE POLICY**

In the interest of neighbouring properties and those within the surrounding areas all reasonable and practicable measures will be taken to minimise noise at all times. These measures include, but are not limited to the following;

#### **HOURS OF OPERATION**

- Operation of power equipment, machinery and radio restricted to the hours of 7am – 5pm on weekdays and Saturday.
- All work undertaken on a Sunday will be done in devoid of power tools.
- Excessively noisy equipment will be used only after 9am
- Night works will not be permitted

#### **RESPONSIBLE PERSONS**

- (a) If the activity is undertaken by or for the owner of the construction site, the owner
- (b) If the activity is undertaken by or for the occupier of the construction site, the occupier
- (c) If there is a contractor performing the work, the contractor
- (d) If there is a head contractor for the work, the head contractor



## **NOISE CONTROL MEASURES**

- Only machinery with fitted mufflers will be used onsite
- Noisy equipment will be located so that their impact on neighbouring properties is minimised when possible.
- Ensure that all maintenance and repairs to machinery and their noise limiting devices are up to date prior to use.
- Use lifting equipment and employ material handling measures to place materials quietly and to avoid dropping materials and minimise impact noise.
- Prefabrication of all external walls and columns off site. On site assembly only
- Prefabrication of all roof steel structure off site. On site assembly only
- Shutting or throttling down equipment when not in use.
- Building walls to be used to screen noise for neighbouring properties when possible.
- Radio use will be kept to low levels as a safety and nuisance control measure.

## **AIR QUALITY and DUST MANAGEMENT (Site and Roadway)**

To prevent the spread of dust during the pre-construction and construction phase the following measures will be put in place.

- Where appropriate perimeter fencing will be enclosed in shade cloth to prevent the spread of dust.
- Delivery area for trucks to be constantly monitored and cleaned when required with silt traps placed in the gutter to catch the sediment before entering any road side entry pits.
- Daily written Site Inspection Checklists conducted by the Site Manager include inspections of the roadways. Corrective actions are recorded and entered into our electronic Site Management system. The Project Manager is notified and then responsible to make ensure the corrective action is closed out in an appropriate timeframe. Please note, corrective actions can include sweeping, removal by shovel and or street sweeper if necessary.
- During excavation phases the site will be watered down and material delivered to site will be at optimum moisture content. (OMC)
- The external walls of the building have been designed as pre-cast concrete. This allows the early installation of windows after the walls are erected, therefore a greater containment of building dust is achieved. The interior will be swept regularly and good housekeeping standards employed to maintain a positive and healthy work environment.
- The work site, new building and worker accommodation buildings will strictly be managed as NON SMOKING.
- Soil stockpiles will not be used on the site, we will deliver and spread imported top soil just prior to the placement of grass turf.
- Excavators will be used to dig the footings, they will side cast directly into dump trucks. The excavators will place spoil material into the dump trucks, rather than drop the material into them. The dump trucks will dampen the material with water and cover all loads prior to leaving site. This will minimise wind-borne dust.
- All works/activities due to be performed on windy days will be assessed on their merits. Any works at high risk of air-borne pollutants will be re programmed for more suitable conditions.
- All areas designated for vehicular movement will be covered in crushed rock and maintained by dampening to avoid wheel generated dust.

### SITE CONTAMINATION

All site management staff are well trained in observing excavation works and identifying contaminants if present. If potential site contaminants are located on site during construction, we will notify the EPA immediately, and, if the contaminants are within the vicinity of underground water or an aquifer, we will also notify the EPA in writing

Soil tests have been conducted to a depth of 4-6metres. The testing produced topsoil, upper clay, lower clay and Hindmarsh clay only. Acid Sulphate soils do not exist on the site.

The previous use of the site has been residential with no history of underground tanks.

### HAZADOUS CHEMICALS AND WASTE

There will be no hazardous chemicals used on site during the build, thus a bunded area for storage is not required and all vehicle refuelling will be done off site.

The site was previously used as a residential home site, as it was demolished prior to occupation, we will be observant during footing and other excavations for asbestos remnants or other pollutants. If found, our contractors and site staff are instructed to stop work immediately and call suitably qualified asbestos removal contractors capable of remediating the polluted area.

### WASTE FILL

We will not be importing waste fill to the site at all.

### WASTE MANAGEMENT

All waste management procedures will be followed in accordance to the Waste Management Program which was developed with waste minimization principles incorporated into all activities to take place on the build to ensure the greatest of environmental benefits and to see 90% of all waste generated on site to be recycled. All wastes generated on site must be properly separated, contained and disposed of. Recycling, waste avoidance and minimisation shall be carried out as far as is practicable. See separated plan

### RECORDS, COMMUNICATION and COMPLAINT RESOLUTION

A Complaints Register will be maintained with the following information recorded

- Name and address of complainant
- Time and date of complaint received
- Description of complaint
- Activities and any associated equipment that gave cause to the complaint
- Action taken to resolve the issues leading to the complaint
- Date and time the complaint was resolved and documented complainants level of satisfaction with the actions to resolve the issue

The Project Manager will be responsible for managing complaints and communication, with name and contact details listed on the project signboard.

As the project is excavating to a maximum depth of 1 metre, but mainly 600mm, the majority of earth moving is spreading of imported crushed rock. As this is low risk to noise and air-borne pollution, we will notify all neighbours of the intended works and approx. duration together with contact details of the Project Manager for complaints

## REPORTING

Any incidents that require reporting (in particular noise and dust) will be done so in the correct manner to the EPA.

Dean Shmith  
Project Manager

# APPENDIX H – ACCOUSTIC REPORT



# HIGHWAY DEVELOPMENT

## STAGE 2

Acoustic Assessment

S5467C3

November 2018

sonus.

<b>Document Title</b>	Highway Development – Stage 2
<b>Document Reference</b>	S5467C2
<b>Date:</b>	October 2018
<b>Author</b>	Mathew Ward
<b>Reviewer</b>	Chris Turnbull, MAAS

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## INTRODUCTION

An acoustic assessment has been made of the proposed Highway Development Stage 2 on Marion Road, Plympton.

The development comprises a multi-level residential building containing 28 apartments, an ALDI supermarket, and 7 townhouses (as shown in Appendix A). The development site (subject site) is located within West Torrens Council Development Plan (the Development Plan).

This assessment considers the following:

- The ingress of noise into the multi-level residential building, as required by the Minister's Specification SA 78B *Construction requirements for the control of external sound*; and,
- The environmental noise from the ALDI supermarket to surrounding existing noise sensitive receivers, and to the multi-level residential building and townhouses on the subject site.

The assessment has been based on the following:

- *Folland Panozzo Architects* project "2015 1510" drawings "SK 101", "SK 102", "SK 103", "SK 106", "SK 107", "SK 108" and "SK 113" all dated October 2018;
- Continuous unattended traffic noise level measurements conducted at the subject site from 18 to 19 October 2018;
- Attended music noise level measurements conducted at the Highway on 12 October 2018;
- The understanding that the ALDI will:
  - not trade before 7am or after 10pm;
  - implement measures described in the ALDI SA, "Delivery and loading procedures" (such as turning off refrigeration and reversing beepers when delivering) to minimise the noise; and,
  - ensure trucks that attend the site have low level exhausts and attenuated compressed air release.

## MINISTERS SPECIFICATION SA 78B ASSESSMENT

### Criteria

#### Development Plan

The multi-level residential building is located in a “designated area” in the Development Plan. As such, the procedures of the Minister’s Specification SA 78B *Construction requirements for the control of external sound* (SA78B) are mandatory for the assessment of noise from road traffic, rail, mixed use development and entertainment venues where music is played. It is noted that the townhouses are not within a designated area.

Marion Road is a designated “Type A” road and the tram corridor to the south of the subject site is also a designated noise source within the Development Plan.

#### Ministers Specification SA 78B

SA78B applies to “*all Class 1, 2, 3, 4 or 9c aged care buildings that are in a designated area (or adjacent to a designated sound source) identified on the Noise and Air Emissions Overlay in the relevant Development Plan*”, and establishes mandatory requirements for the building to adequately address noise intrusion.

Acoustic treatments are required at all residences within:

- 100m of a designated 60km/h “Type A” road, such as Marion Road;
- 20m of a designated tram line; and,
- 65m of the allotment boundary of an entertainment venue, such as the Highway.

The proposed multi-level residential building is located more than 20m from the tram line, and therefore the impacts from the tram corridor are inherently compliant with SA78B due to the siting of the development.

The noise from Marion Road and music at the Highway has been assessed against SA78B.

#### *Road Noise*

SA78B provides two methods of assessing the noise from a designated road; a “deemed to satisfy” and a “verification” method. Both methods aim to achieve the following performance requirements for internal noise levels in the development as detailed in the table below:



**Table 1: SA78B “Internal sound criteria for road and rail sound intrusion”**

Type of room	Internal Sound Criteria		Applicable time period
	Building design target averaged over the total number of such rooms in the building	Maximum allowable for individual rooms in the building	
Bedroom	30 dB(A) $L_{Aeq, 9hr}$	35 dB(A) $L_{Aeq, 9hr}$	Night (10pm to 7am)
Other <i>habitable</i> room	35 dB(A) $L_{Aeq, 15hr}$	40 dB(A) $L_{Aeq, 15hr}$	Day (7am to 10pm)

#### Entertainment Noise

SA78B states that the level of attenuation provided by the building envelope and ventilation system against the intrusion of external airborne sound from music must be sufficient to maintain sound levels not exceeding suitable internal sound criteria obtained from either the council or the South Australian Environment Protection Authority.

In the absence of specific music criteria for new residences in the West Torrens Council Development Plan, reference is made to the South Australian Environment Protection Authorities guidelines for "Music noise from indoor venues and the South Australian Planning System" (the Music Guidelines).

The Guidelines state that:

*Noise from any music venue must not exceed 43dB Leq in any one-third octave band between and including 31.5Hz and 125Hz when assessed inside a noise sensitive development, including a bedroom and living room of a residential or short term accommodation premises - with closed windows.*

#### Assessment

##### Road Noise

The “deemed to satisfy” approach of SA78B requires each element of the building construction to achieve a specific acoustic rating based on the “sound exposure category”. The categories range from 1 to 5 and are assigned based on the distance from the road and the orientation of the facade relative to the road, with Category 5 requiring the highest level of acoustic treatment. For this site, the categories range from 2 to 4, which also satisfy the mixed use requirements of SA78B.

### *Recommendations*

Construction options of external walls, doors, and windows, roofs and ceilings are detailed below. Other options that achieve the SA78B requirements can be developed if need be.

1. External walls are required to achieve an airborne noise rating  $R_w + C_{tr}$  of 50 or higher. This rating can be achieved with precast concrete with a minimum thickness of 150mm.
2. The roof and ceiling construction is required to have a minimum airborne noise rating  $R_w + C_{tr}$  of:
  - 45 in bedrooms on the eastern (Marion Road) side of the building;
  - 40 in bedrooms on the western side of the building, and in habitable rooms (other than bedrooms) on the eastern side of the building; and,
  - 35 habitable rooms (other than bedrooms) on the western side of the building.
3. The above ratings can be achieved with:
  - Sheet metal cladding with minimum 0.42 BMT;
  - Minimum 165mm thick insulation (with a minimum density of 7kg/m<sup>3</sup>) installed above the ceiling; and,
  - Ceilings constructed from:
    - 2 layers of 13mm thick fire rated plasterboard in bedrooms on the eastern (Marion Road) side of the building;
    - 1 layer of 16mm thick fire rated plasterboard in habitable rooms (other than bedrooms) on the eastern side of the building;
    - 1 layer of 16mm thick fire rated plasterboard in bedrooms on the western side of the building;
    - 1 layer of 10mm thick plasterboard in all other areas.
4. Ensure apartments on the eastern side of the building have mechanical ventilation and air-conditioning systems that:
  - have acoustically insulated relief and fresh air ducting (SA78B requires the ducting system to provide an effective airborne noise rating ( $R_w$ ) of 40; and
  - can be operated with all external windows and doors in the closed position.

Ensure ventilation systems (other than openable windows) incorporated to the apartments on the western side of the building achieve the above requirements.

5. Where penetrations are required in the building envelope (such as for exhaust discharge), it should be designed to ensure that the noise rating of that building component is not diminished. Advice can be provided once the locations and details of any penetrations are developed.
6. The external sliding window and door requirements of SA78B are based on the areas of glass proposed as a percentage of the floor area. The glass to floor area ratio assumed and the corresponding minimum acoustic rating for the windows is detailed in Appendix B. Where the floor area ratio exceeds the ratio shown, the  $R_w + C_{tr}$  value would need to be increased. It is noted that increasing the  $R_w + C_{tr}$  above 34 will not be practicable, and therefore it is recommended that the glass to floor area ratio provided be achieved by restricting the size of the windows and doors.

The acoustic performance of external sliding windows and doors will vary between framing systems and manufacturers, as the frames and seals used will differ. Therefore, the following airborne noise rating recommendations are provided for the combined glazing and framing systems.

Sliding windows and doors marked as **green** in Appendix B should achieve an airborne noise rating  $R_w + C_{tr}$  of 28 or higher. The acoustic rating can generally be achieved with the following, but will vary depending on the overall system selected:

- Single laminated glazing with a minimum thickness of 6.38mm in a framing system with seals that can be sealed airtight when closed, or;
- Thermal double glazing consisting of two layers of glass with differing thicknesses (one pane having a minimum thickness of 6.38mm), separated by a small air cavity<sup>1</sup>, and in a framing system with seals that can be sealed airtight when closed.

---

<sup>1</sup> The air cavity will vary depending on the thermal requirements and what can be accommodated by the frame system, but typically will be in the order of 8 to 12mm.

Sliding windows and doors marked as **orange** in Appendix A should achieve an airborne noise rating  $R_w + C_{tr}$  of 31 or higher. The acoustic rating can generally be achieved with the following, but will vary depending on the overall system selected:

- Single laminated glazing with a minimum thickness of 10.38mm in a framing system with seals that can be sealed airtight when closed, or;
- Thermal double glazing consisting of two layers of glass with differing thicknesses (one pane having a minimum thickness of 10.38mm), separated by a small air cavity, and in a framing system with seals that can be sealed airtight when closed.

Sliding windows marked as **Blue** in Appendix B should achieve an airborne noise rating  $R_w + C_{tr}$  of 34 or higher. To achieve an airborne noise rating  $R_w + C_{tr}$  of 34 very specific acoustic systems will be required, but can be achieved with the following:

- Single laminated glazing with a minimum thickness of 10.38 or 10.5mm Viridian “Vlam Hush” in a system with acoustic seals, or;
- Thermal double glazing consisting of two layers of glass with differing thicknesses (one pane having a minimum thickness of 10.38mm or 10.5mm Viridian “Vlam Hush”), separated by a small air cavity, and in a framing system that has acoustic seals.

Where a higher acoustic performance is desired, the following options could be investigated:

- For windows, selecting awning type as they can achieve a better acoustic performance when compared to sliding windows (due to the acoustically superior compression seals that can be used on these types of systems);
- The use of tandem sliding window or door arrangements (i.e. two doors or windows with an air cavity of 50mm or more between them) with glass in each frame having differing thicknesses. These systems can provide very high levels of acoustic performance where the cavity between the glass can be 100mm or more; however, these system are not always practicable; or,
- Installing openable windows at the line of the balcony balustrades to enable the balconies to be fully enclosed (and sealed airtight). This option effectively forms a “double glazed” element from outside to inside of the apartments.



### Entertainment Noise

Attended noise level measurements were conducted at the Highway on 12 October 2018 to determine the noise from music at the proposed site. The measurements were made at a range of locations in the car park and at high level in the Stage 1 West Tower during a live performance in the outdoor area of the Highway venue.

Based on the music levels measured at the site, predictions have been made of the music within the apartments and compared against the EPA Guidelines.

The predictions indicate that the EPA Guidelines will be achieved with the inclusion of the traffic noise acoustic treatments required by SA78B and detailed above and in Appendix B.

That is, due the extensive treatments required under SA78B for traffic noise, the music levels will be adequately controlled inside the development.

## ALDI ENVIRONMENTAL NOISE ASSESSMENT

This assessment considers noise levels at the existing and proposed noise sensitive receivers from activity associated with the ALDI supermarket.

The closest noise sensitive receivers to the ALDI supermarket are the proposed residences on the same development site, and the existing residences located to the south and west of the site.

This assessment summarises the prediction of noise associated with the proposed ALDI supermarket, compares the predictions with the relevant criteria, and provides recommendations for acoustic treatment to ensure that the noise from the proposal does *not detrimentally affect the amenity of the locality*.

### Criteria

#### Development Plan

The proposed ALDI supermarket is located within both an Urban Corridor and a Residential Zone. The proposed multi-level residential building (same development site) is located within an Urban Corridor Zone. The proposed townhouses (same development site) and the existing noise sensitive land uses to the south and west are located within a Residential Zone. The Development Plan has been reviewed and the following provisions are considered relevant to the noise assessment.

#### ***Interface between Land Uses***

##### ***OBJECTIVES***

- 1 *Development located and designed to minimise adverse impact and conflict between land uses.*
- 2 *Protect community health and amenity from adverse impacts of development.*
- 3 *Protect desired land uses from the encroachment of incompatible development.*

##### ***PRINCIPLES OF DEVELOPMENT CONTROL***

- 1 *Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:*
  - ...
  - (b) noise
  - ...
- 2 *Development should be sited and designed to minimise negative impacts on existing and potential future land uses desired in the locality.*

- 4 *Residential development adjacent to non-residential zones and land uses should be located, designed and/or sited to protect residents from potential adverse impacts from non-residential activities.*
- 5 *Sensitive uses likely to conflict with the continuation of lawfully existing developments and land uses desired for the zone should be designed to minimise negative impacts.*
- 6 *Non-residential development on land abutting a residential zone should be designed to minimise noise impacts to achieve adequate levels of compatibility between existing and proposed uses.*

Noise Generating Activities

- 8 *Development that emits noise (other than music noise) should include noise attenuation measures that achieve the relevant Environment Protection (Noise) Policy criteria when assessed at the nearest existing noise sensitive premises.*

**Residential Development**

PRINCIPLES OF DEVELOPMENT CONTROL

Private Open Space

- 18 *Private open space (available for exclusive use by residents of each dwelling) should be provided for each dwelling and should be sited and designed:*

...

- (i) *to minimise noise ... impacts that may arise from traffic, industry or other business activities within the locality*

...

Noise

- 29 *External noise ... intrusion into bedrooms should be minimised by separating or shielding these rooms from:*

...

- (b) *service equipment areas and fixed noise sources on the same or adjacent sites.*

Environment Protection (Noise) Policy

Interface between Land Uses Principle of Development Control 8 makes reference to the *Environment Protection (Noise) Policy 2007* (the Policy).

The Policy is based on the World Health Organisation Guidelines to prevent annoyance, sleep disturbance and unreasonable interference on the amenity of an area. Therefore, compliance with the Policy is considered to be sufficient to satisfy the provisions of the Development Plan relating to environmental noise.

#### Noise from Rubbish Collection

The Policy deals with rubbish collection by limiting the collection hours to the least sensitive period of the day. Division 3 of the Policy requires rubbish collection to only occur between the hours of 9am and 7pm on Sunday or public holiday, and between 7am and 7pm on any other day, except where it can be shown that the maximum ( $L_{Amax}$ ) noise level from such activity is less than 60 dB(A).

#### Noise from all other Activity

The Policy sets goal noise levels based on the principally promoted land use in which the noise source (proposed ALDI supermarket) and noise sensitive receivers (existing and future dwellings) are located. The goal noise levels of the Policy can either be achieved outside a dwelling, such as in a private open space; or in the circumstance where acoustic treatments are applied to a dwelling, inside habitable rooms (such as bedrooms and living areas).

When assessing the noise at existing dwellings, where the existing ambient environment is subject to consistently high noise levels from sources such as traffic, the Policy provides the ability to relax the external goal noise levels. The influence of Marion Road and Anzac Highway resulted in background ( $L_{A90}$ ) noise levels in the area of no less than 52 dB(A) during the day and 44 dB(A) during the night, and maximum ( $L_{Amax}$ ) noise levels frequently greater than 65 dB(A). As such, at the existing dwellings to the south of the site near Marion Road, the external goal noise level ( $L_{Aeq}$ ) can be relaxed to 52 dB(A) during the day and 44 dB(A) during the night, and the maximum ( $L_{Amax}$ ) can be relaxed to 65 dB(A).

Therefore, to ensure the development does *not detrimentally affect the amenity of the locality or cause unreasonable interference*, the Policy has been applied in the following way to determine acoustic treatments:

- Achieving the external goal noise levels at the existing residences; and,
- Achieving the internal goal noise levels inside habitable rooms for the proposed dwellings.



The relevant goal noise levels of the Policy are as detailed in the following table.

**Table 2: External Goal Noise Levels of the Policy**

Noise Receiver Location	Type of Residence	Assessment Criteria, dB(A)		
		Average ( $L_{Aeq}$ ) noise level during the daytime (7am to 10pm)	Average ( $L_{Aeq}$ ) noise level during the night (10pm to 7am)	Maximum ( $L_{Amax}$ ) instantaneous noise level during the night (7am to 10pm)
Residence in Urban Corridor Zone	<i>Proposed multi-level residential building</i>	36 (internal level)	35 (internal level)	NA
Residence in a Residential Zone	<i>Proposed townhouses</i>	35 (internal level)	35 (internal level)	NA
	<i>Existing residences to the west</i>	48 (external level)	41 (external level)	60
	<i>Existing residences to the south (shown in Appendix A)</i>	52 (external level)	44 (external level)	65

When measuring or predicting noise levels for comparison with the goal noise levels of the Policy, a penalty adjustment may be applied if the noise exhibits any of the “annoying” characteristics of tone, impulse, low frequency and modulation. In order to apply a penalty, the characteristic must be dominant when considered within the context of the existing acoustic environment at the noise sensitive receiver.

In an environment where the existing acoustic environment is dominated by noise from Marion Road and Anzac, a penalty for modulation is not applicable as the intermittent noise sources from the ALDI are associated with vehicle movements and will not be dominant in the existing acoustic environment with noise of a similar character.

## Assessment

The noise from car park activity, truck movements and mechanical plant on the site has been predicted at the nearby residences, based on noise measurements conducted at similar sites. These measurements account for the noise associated with the following:

- car park activity such as people talking as they vacate or approach their vehicles, the opening and closing of vehicle doors, vehicles starting, vehicles idling, and vehicles moving into and accelerating away from their park position;
- typical vehicle movement through a carpark;
- an ALDI truck driving into a site;
- an ALDI truck reversing into a loading dock and stopping the engine;
- an ALDI truck unloading;
- an ALDI truck starting the engine, accelerating and driving out of the site;
- Mechanical plant operation; and,
- Rubbish collection.

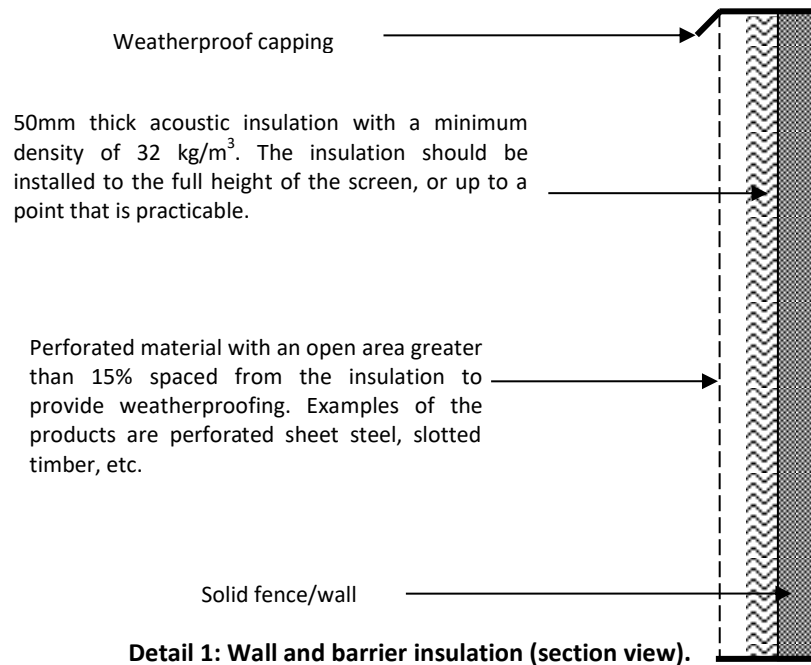
Based on the predictions, the following acoustic treatments would be required in order to achieve the Policy:

1. Restrict the hours of rubbish collection from the site and any use of the refuse area (including the operation of the compactor) to the hours of Division 3 of the Environment Protection (Noise) Policy 2007. That is, only between the hours of 9am and 7pm on a Sunday or public holiday, and 7am and 7pm on any other day.
2. The inclusion of the traffic noise acoustic treatments to the multi-level residential building as required by SA78B (detailed in the section above and in Appendix B).

3. The inclusion of the following to the design of the townhouses:
  - A minimum 3m high fence for the extent shown as red on the figure in Appendix A. The fence may be constructed from Colorbond or equivalent (i.e. material with similar or higher surface density) that is sealed airtight at all junctions, including with the ground;
  - Ensure that the external windows and glazed doors on the first floor incorporate a minimum 10.38mm thick laminated glass in a framing system with seals that can be sealed airtight when closed;
  - Ensure that the external windows on the ground floor incorporate a minimum 6.38mm thick laminated glass in a framing system with seals that can be sealed airtight when closed;
  - Ensure solid external doors incorporate seals that seal air tight all around the door when closed;
  - Incorporate a minimum 13mm thick plasterboard ceiling with a minimum 100mm thick insulation (with a minimum density of  $30\text{kg/m}^3$ ) laid above to habitable rooms on the first floor; and,
  - Incorporate a minimum 2 layers of 13mm thick plasterboard lining with a minimum 50mm thick insulation (with a minimum density of  $30\text{kg/m}^3$ ) in the cavity on the internal side of the northern and southern facades on the first floor.
4. As is typical at the development application stage, the proposed air conditioning, ventilation and refrigeration systems have not yet been designed or selected for the ALDI supermarket. The assessment of the mechanical plant has therefore been based on previous noise measurements and manufacturer data for units used at similar facilities.

Based on the typical mechanical plant sections, the following acoustic treatments are likely to be required in order to achieve the requirements of the Policy:

- Ensure solid screening is constructed on the eastern, southern and western sides of the roof mounted mechanical plant and equipment. The screen may be constructed from sheet steel or a material with an equivalent or greater surface density and should extend at least 1.0m above the tallest unit; and,
- Provide acoustic absorption to the mechanical plant side of the screens in accordance with Detail 1 below.



It is noted that the above extent of treatment has been based on typical equipment selections from other similar facilities. As such, the treatment measures should be reviewed during the detailed design phase of the project, once final equipment selections have been made for this development.



## CONCLUSION

An acoustic assessment has been made of the proposed Highway Development Stage 2 on Marion Road, Plympton.

The assessment has considered the ingress of noise into the multi-level residential building, and the environmental noise from the ALDI supermarket.

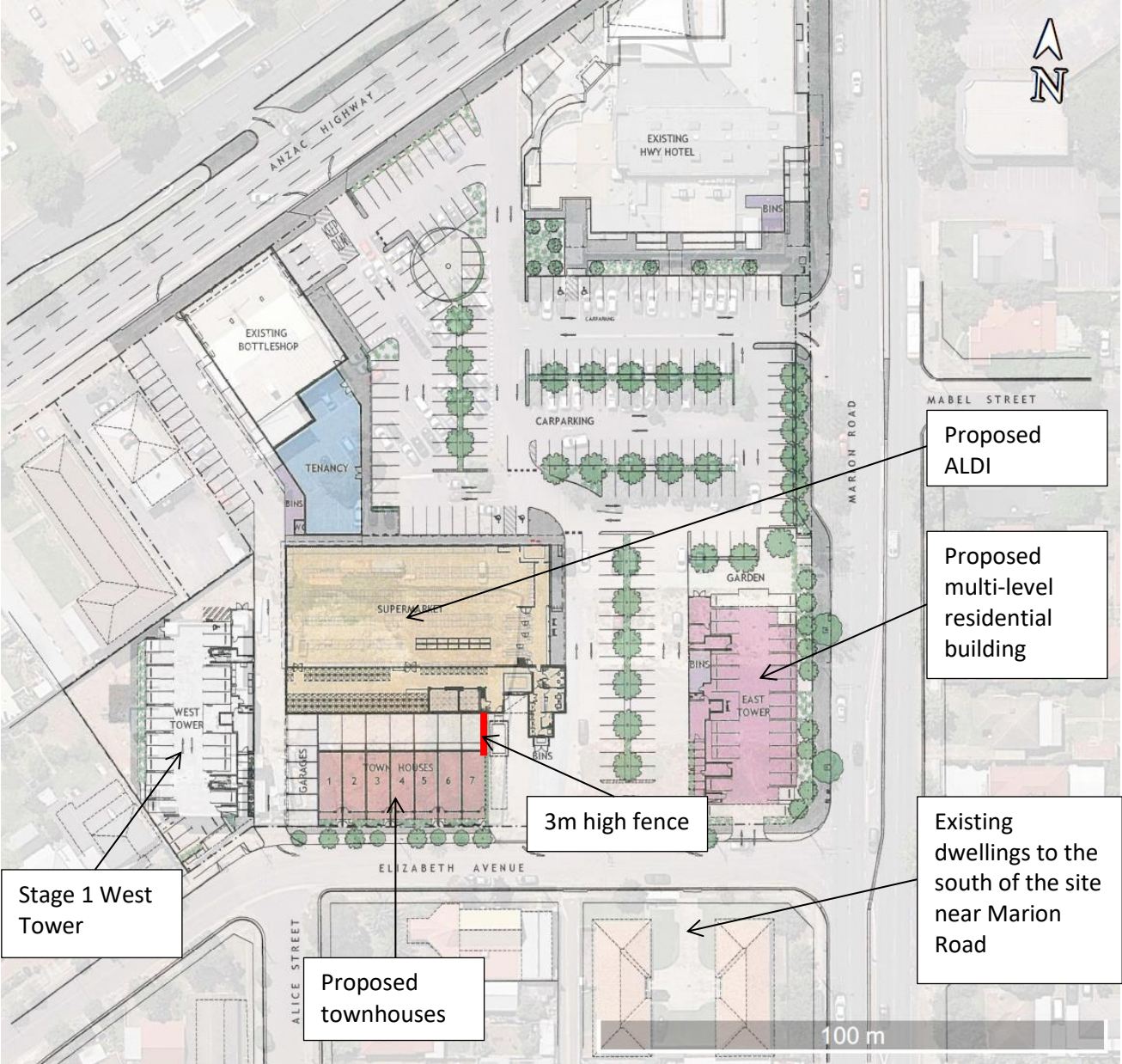
The requirements of the Minister's Specification SA 78B *Construction requirements for the control of external sound* can practicably be incorporated into the multi-level residential building.

The predicted noise associated with the ALDI supermarket can achieve the relevant requirements of the *Environment Protection (Noise) Policy 2007* subject to the treatments in this report, comprising;

- Restricting the times for rubbish collection and use of refuse area;
- Including acoustic design measures into the design of the townhouses; and,
- Including specific mechanical plant screening.

Based on the above, it is considered that the proposed Highway Development Stage 2 will incorporate measures to protect against external sound intrusion and will not *detrimentally affect the amenity of the locality* and will *protect residents from potential adverse impacts*, thereby achieving the relevant provisions of the West Torrens Council Development Plan related to environmental noise.

Appendix A: Site Plan and Fence Recommendation

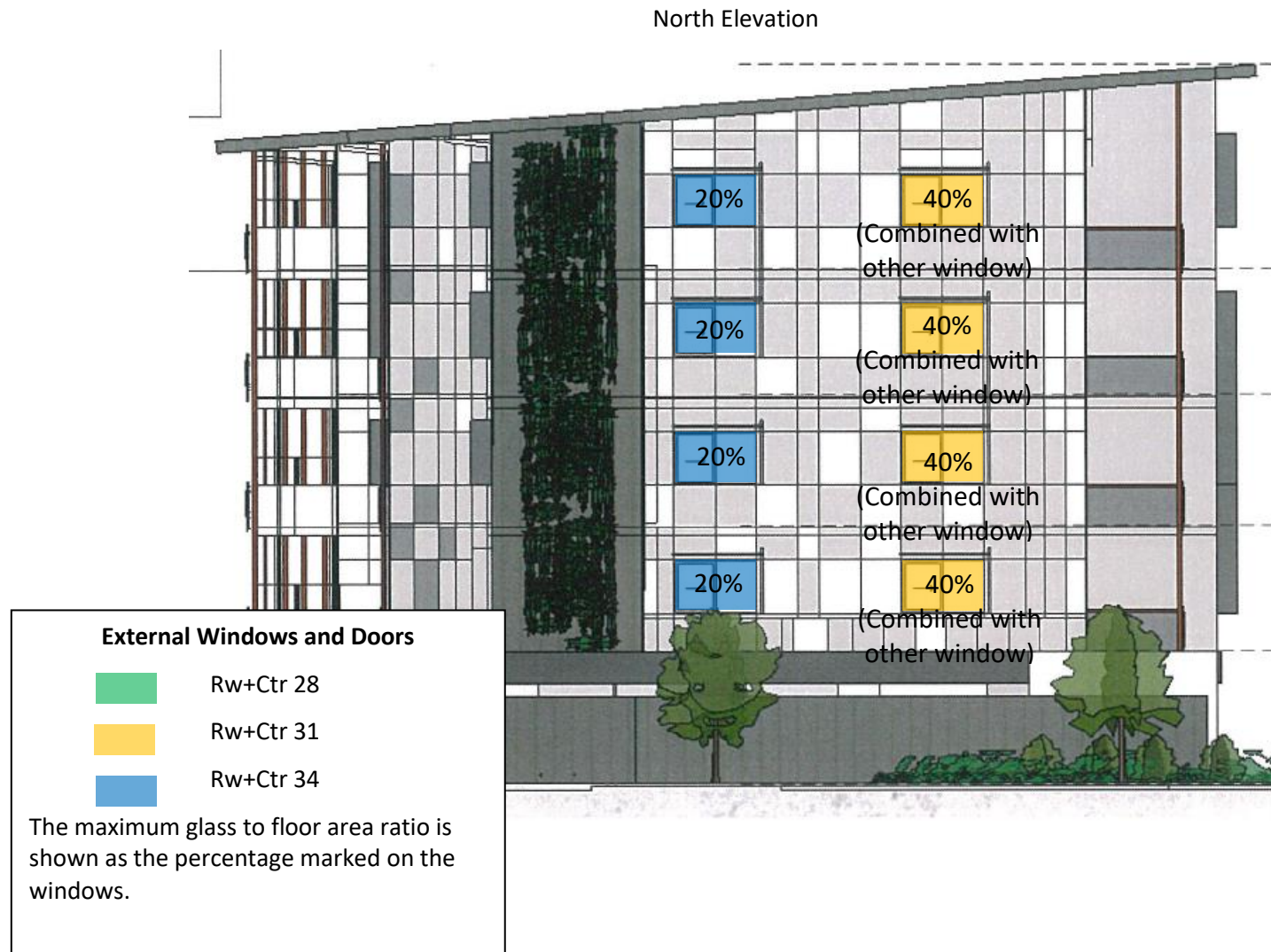


Appendix B: External Windows and Doors Recommendations

East Elevation

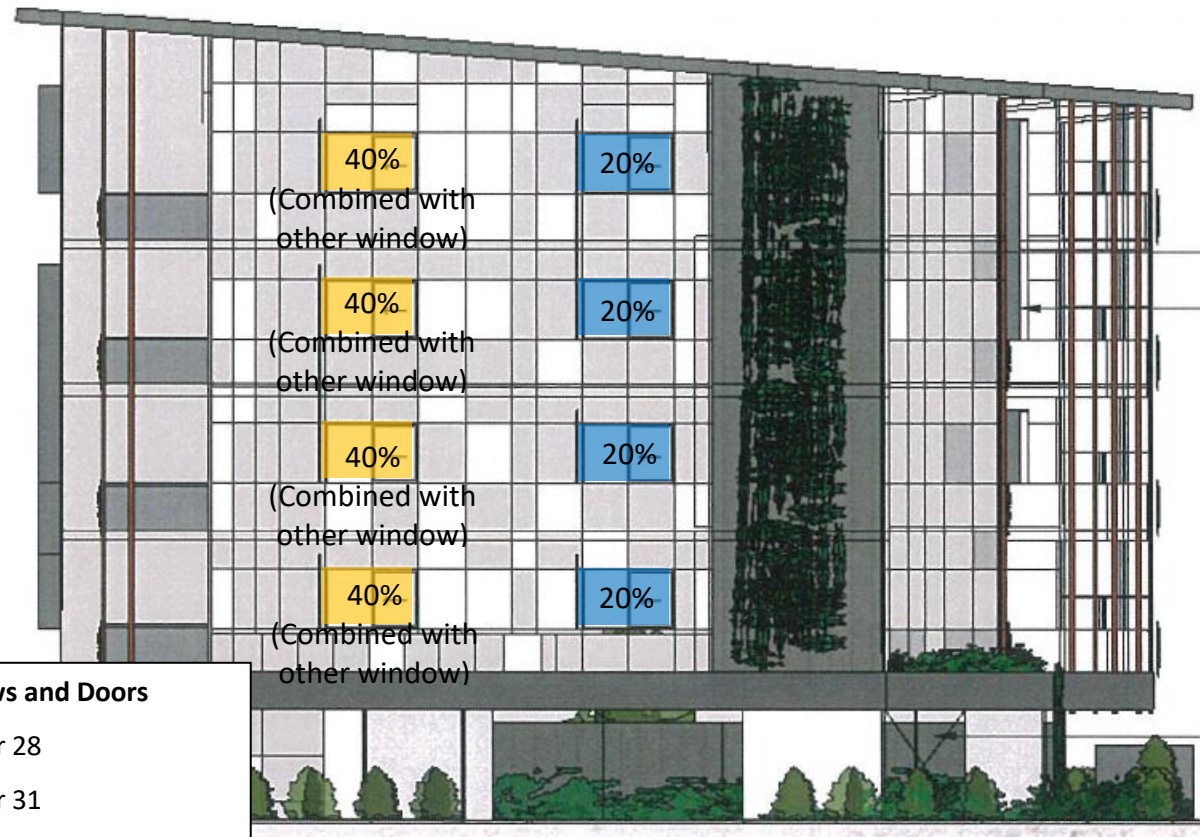








South Elevation

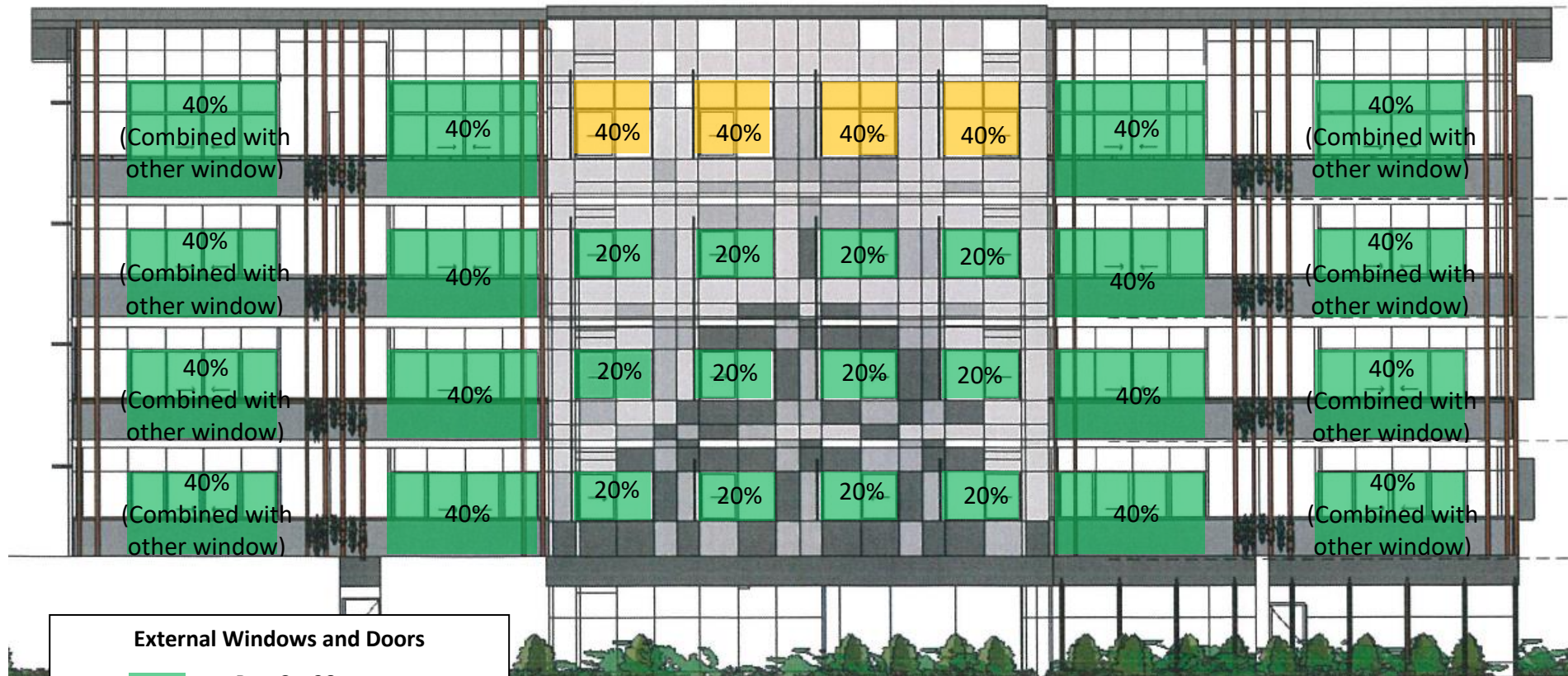


**External Windows and Doors**

- Rw+Ctr 28
- Rw+Ctr 31
- Rw+Ctr 34

The maximum glass to floor area ratio is shown as the percentage marked on the windows.

West Elevation



**External Windows and Doors**

- Rw+Ctr 28
- Rw+Ctr 31
- Rw+Ctr 34

The maximum glass to floor area ratio is shown as the percentage marked on the windows.

# APPENDIX I – THE PRECINCT LANDSCAPING



# THE PRECINCT — ANZAC HWY

Landscaping species and details – Trees to Ground Level Carpark and Marion Road



London Plane (*Platanus x acerifolia*)



Ornamental Pear (*Pyrus calleryana* 'Capital')



## Underplanting at Ground Level carpark and Level 1 East Tower Outdoor Area Garden Beds



Cycad (Cycadales)



Black-Anther Flax Lily (*Dianella Revoluta*)



Knobby Clubrush (*Ficinia nodosa*)



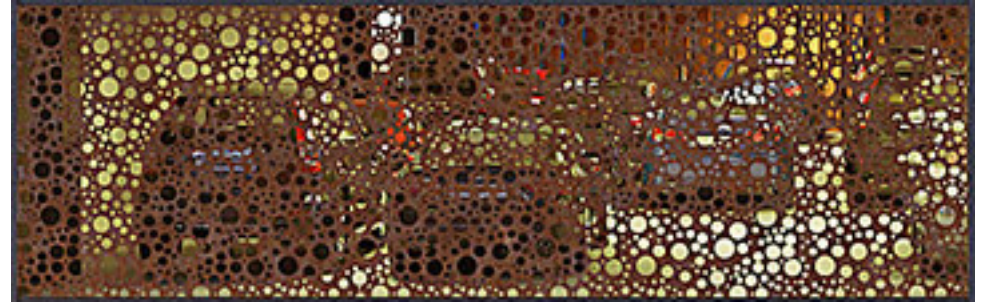
Garland Lily (*Calostemma Purpureum*)



## Vertical Gardens and Carpark Screening Plant to East Tower



Happy Wanderer (Hardenbergia) creeper

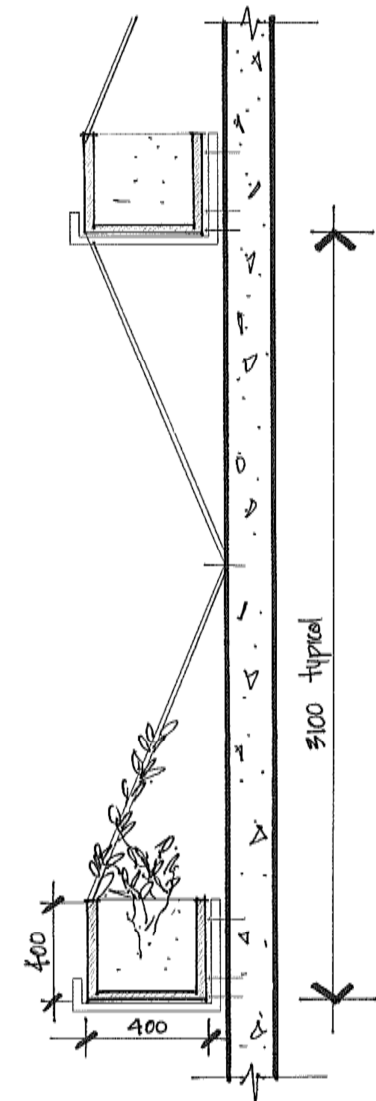


Laser Cut Corten Fencing Feature to East Tower Ground Level Carpark  
with selected climbing plant

## Vertical Gardens to East Tower - North & South Facades



GRC planters on flat roofs of East Tower



GRC planters fixed to side of East Tower Precast Walls and trained on fixed wires to detail



## Vertical Gardens on East wall of Townhouses



Small leaf Ficus (Ficus Pumila Minima) to match HWY Hotel Planting



Atlantis Gro-Wall Façade to East wall of Townhouses









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