STATE COMMISSION ASSESSMENT PANEL
A COMMITTEE OF THE STATE PLANNING COMMISSION

APPLICATION ON NOTIFICATION – CATEGORY 2

Applicant:	Nielsen Architects
Development Number:	080/E017/17
Nature of Development:	Partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at grade and undercroft car parking and landscaping
Type of development:	Retail
Zone / Policy Area:	Commercial (Main Road) Zone
Subject Land:	198-200 Main Road, Blackwood
Contact Officer:	David Storey
Phone Number:	7109 7205
Start Date:	21 September 2017
Close Date:	9 October 2017

During the notification period, hard copies of the application documentation can be viewed at the Department of Planning, Transport and Infrastructure, Level 5, 50 Flinders St, Adelaide, during normal business hours. Application documentation may also be viewed during normal business hours at the local Council office (if identified on the public notice).

Written representations must be received by the close date (indicated above) and can either be posted, hand-delivered or emailed to the State Commission Assessment Panel.

Any representations received after the close date will not be considered.

Postal Address:
The Secretary
State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Street Address:
Development Division
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders St
ADELAIDE SA 5000

Email Address: scapadmin@sa.gov.au

SOUTH AUSTRALIAN DEVELOPMENT ACT, 1993
REPRESENTATION ON APPLICATION – CATEGORY 2

Applicant:	Nielsen Architects
Development Number:	080/E017/17
Nature of Development:	Partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at grade and undercroft car parking and landscaping
Type of development:	Retail
Zone / Policy Area:	Commercial (Main Road) Zone
Subject Land:	198-200 Main Road, Blackwood
Contact Officer:	David Storey
Phone Number:	7109 7205
Close Date:	9 October 2017

My name:_____

My phone number: _____

PRIMARY METHOD(s) OF CONTACT: Email address: _____

Postal address:_____

_____Postcode_____

You may be contacted via your nominated PRIMARY METHOD(s) OF CONTACT if you indicate below that you wish to be heard in support of your submission.

My interests are:

- ☐ owner of local property
- ☐ occupier of local property
- ☐ a representative of a company/other organisation affected by the proposal
- ☐ a private citizen

The address of the property affected is _____ Postcode _____

The specific aspects of the application to which I make comment on are:

_____

_____

_____

_____

_____

Should the State Commission Assessment Panel conduct a public hearing for this Development Application:

I

- ☐ **wish to be heard in support of my submission**
- ☐ **do not wish to be heard in support of my submission**

(Please tick one)

By

- ☐ **appearing personally**
- ☐ **being represented by the following person:**

(Please tick one)

Date _____ Signature _____

Return Address: The Secretary, State Commission Assessment Panel, GPO Box 1815, Adelaide SA 5001 or scapadmin@sa.gov.au.

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: City of Mitcham

APPLICANT: Nielsen Architects

Postal Address: 108 Mt Barker Road
STIRLING SA 5152

Owner: 198-200 Main Road

Postal Address: Blackwood Pty Ltd

BUILDER: _____

Postal Address: _____

_____ Licence No: _____

CONTACT PERSON FOR FURTHER INFORMATION

Name: Ekistics Planning c/- Rebecca Thomas

Telephone: (08) 7231 0286 [work] _____ [Ah]

Fax: _____ [work] _____ [Ah]

EXISTING USE: Retail

FOR OFFICE USE

Development No: _____

Previous Development No: _____

Assessment No: _____

☐ Complying	Application forwarded to DA
☐ Non Complying	Commission/Council on
☐ Notification Cat 2	/ /
☐ Notification Cat 3	Decision: _____
☐ Referrals/Concurrences	Type: _____
☐ DA Commission	Date: / /

	Decision required	Fees	Receipt No	Date
Planning:				
Building:				
Land Division:				
Additional:				
Development Approval				

DESCRIPTION OF PROPOSED DEVELOPMENT: Partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at-grade and undercroft car parking and landscaping

LOCATION OF PROPOSED DEVELOPMENT: 198-200 Main Road, Blackwood

House No: 198-200 Lot No: ___ Street: Main Road Town/Suburb: Blackwood

Section No [full/part] _____ Hundred: _____ Volume: 6126 Folio: 685

Section No [full/part] _____ Hundred: _____ Volume: _____ Folio: _____

LAND DIVISION:

Site Area [m^2] _____ Reserve Area [m^2] _____ No of existing allotments _____

Number of additional allotments [excluding road and reserve]: _____ Lease: YES ☐ NO ☐

BUILDING RULES CLASSIFICATION SOUGHT: _____ Present classification: _____

If Class 5,6,78 or 9 classification is sought, state the proposed number of employees: Male: ____ Female: _____

If Class 9a classification is sought, state the number o persons for whom accommodation is provided: _____

If Class 9b classification is sought, state the proposed number of occupants of the various spaces at the premises: _____

DOES EITHER SCHEDULE 21 OR 22 OF THE DEVELOPMENT REGULATIONS 2008 APPLY? YES ☐ NO ☑

HAS THE CONSTRUCTION INDUSTRY TRAINING FUND ACT 2008 LEVY BEEN PAID? YES ☑ NO ☐

DEVELOPMENT COST [do not include any fit-out costs]: $ 5,600,000

I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Development Regulations 2008.

SIGNATURE: _____ Dated: 30 AUG 2017

DEVELOPMENT REGULATIONS 2008
Form of Declaration (Schedule 5 clause 2A)

Government of South Australia

To: City of Mitcham

From: Nielsen Architects

Date of Application: / /

Location of Proposed Development: 198-200 Main Road, Blackwood

House No: 198-200 Lot No: _____ Street: Main Road

Town/Suburb: Blackwood

Section No (full/part): _____ Hundred: _____

Volume: 6126 Folio: 685

Nature of Proposed Development:

Partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at-grade and undercroft car parking and landscaping

I Trent Burns **being the applicant/ ~~a person~~ acting on behalf of the applicant (delete the inapplicable statement) for the development described above declare that the proposed development will involve the construction of a building which would, if constructed in accordance with the plans submitted, not be contrary to the regulations prescribed for the purposes of section 86 of the Electricity Act 1996. I make this declaration under clause 2A(1) of Schedule 5 of the Development Regulations 2008.**

Signed: _____ **Date:** 31/AUG/2017

ekistics

198-200 MAIN ROAD, BLACKWOOD RETAIL REDEVELOPMENT

PLANNING STATEMENT

Proposed Development of a Supermarket and Associated Shops

Prepared for:
ALDI Stores

Date:
2 August 2017

ekistics

ekistics

Proprietary Information Statement

Document Control

Revision	Description	Author	Date
V1	Draft Planning Statement	HK	17/06/17
V2	Draft Planning Statement	RT	14/07/17
V3	Final Planning Statement	RT	2/08/17

Approved by:  Senior Associate Date: 2/08/2017

ekistics

Contents

Appendices

Figures

Tables

1. Executive Summary

Category	Details
PROJECT	198-200 Main Road Retail Redevelopment
ADDRESS OF SITE	198 - 200 Main Road, Blackwood, SA 5051
CERTIFICATE OF TITLE	Certificate of Title Volume 6126 Folio 685
SITE AREA	4,911m^2
FRONTAGES (Main Rd & Chapman St)	60m each (approx.)
LOCAL GOVERNMENT	City of Mitcham
RELEVANT AUTHORITY	Development Assessment Commission (DAC) – Coordinator General Application.
DEVELOPMENT PLAN	Mitcham Council Development Plan (consolidated 21 April 2016)
ZONING	Commercial Zone
POLICY AREA/PRECINCT	N/A
EXISTING USE	Various Specialty Shops (Retail) – Approx. GFA 1,600m^2
PROPOSAL DESCRIPTION	Partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at-grade and undercroft car parking and landscaping
REFERRALS/CONCURRENCES	• DPTI (Traffic) • Mitcham City
PUBLIC NOTIFICATION	Category 2
APPLICANT	Nielsen Architects
CONTACT PERSON	Rebecca Thomas – Ekistics Planning and Design – (08) 7231 0286
OUR REFERENCE	00287-001

2. Introduction/Background

This planning statement has been prepared in support of an application to construct a supermarket with associated shops, car parking and landscaping at 198 - 200 Main Road, Blackwood.

This planning statement provides information about the subject site and proposed development and addresses the merits of the development application against the relevant provisions of the Commercial Zone of the Mitcham Council Development Plan (Consolidated 21 April 2016), as well as the most relevant 'Council Wide' provisions.

For the purposes of this statement, the Mitcham Council Development Plan (Consolidated 21 April 2016) will be referred to as the 'Development Plan', the '*Development Act*', 1993 will be referred to as the 'Act' and the '*Development Regulations*', 2008 will be referred to as the 'Regulations'.

This planning statement has been prepared on the basis of the plans and elevations for the development prepared by Select Architects as identified in Table 2.1 *Drawing Schedule* on the following page.

Table 2.1 *Drawing Schedule*

Drawing #	Drawing Title
DA01	Existing Site Plan
DA01.2	Demolition Plan
DA02.1	Development Site Plan
DA02.2	Development Level 1 Plan
DA03.1	Existing External Elevations
DA03.2	Proposed Elevations
DA04	Sections
DA05.1	Signage Plan
DA05.2	Signage Details
DA08.1	3D Render
DA08.2	3D Render
DA09	Proposed Roof Plan
DA10.1	Proposed Shadow Diagram – Winter Solstice
DA10.2	Proposed Shadow Diagram – Summer Solstice
DA10.3	Existing Shadow Diagram – Winter Solstice
DA10.4	Existing Shadow Diagram – Summer Solstice

3. The Site and Locality

3.1 The Site

The subject land is located at 198 - 200 Main Road, Blackwood and is more particularly described as Certificate of Title Volume 6126 Folio 685 (refer to ***Appendix 1***). It is noted that there is one (1) electrical infrastructure easement affecting the subject land.

The irregular shaped land parcel measures 4,911m^2 and has two frontages, approximately 60 metres each to Main Road and Chapman Street.

The subject site contains an 'L' shaped building referred to as 'Blackwood Village' comprising ten (10) commercial (predominately retail) tenancies over approximately 1,600m^2 of gross leasable floor area with 72 at-grade car parking spaces (refer to Figure 3.1 for images). The various speciality stores include such activities as a real estate agent (formerly a café), fast food take away, beautician, hairdresser, fitness gym, consulting room and a large discount store with ground level car parking and landscaping which is primarily along the perimeter of the site.

The asphalt car park is sealed and the landscaping comprises low to medium trees, shrubs and bushes. Two (2) trees within the site have been identified as Regulated (and are to be retained) and five (5) street trees are located around the perimeter of the site (also to be retained).

Figure 3.1 *Site Photos*

Figure 3.1 *Site Photos (cont.)*

The topography of the land is generally flat, with a minor rise in elevation towards the northern portion of the site. The site is currently accessed via two double crossovers, one from Main Road and the other from Chapman Street.

The subject site is located within the Commercial (Main Road) Zone. Figure 3.2 is an aerial photograph which outlines the subject site.

Figure 3.2 *Subject Site*

3.2 The Locality and Surrounding Development

The subject site has a variety of adjacent land uses which include:

- North – single storey residential group dwellings and a physiotherapy business (*consulting room*) which operates out of converted former dwelling (all located within the Commercial Zone);
- East (separated by Main Road) – Vet/Pet Day Care (*consulting room*), Hardware Store (*shop*), Printing Business (*shop*); single storey residential units and a Service Station/shop;
- South (separated by Chapman Street) – Medical Centre and Pharmacy (*shop*); and
- West – single storey residential group dwellings (located in the Residential Zone)

A number of other retail and commercial land uses are also situated in the locality surrounding the subject land which are discussed further in section 6.2.1 and illustrated in the attached Land Use Survey (***Appendix 2***).

As mentioned, the site has an access point on Main Road (egress and ingress) allowing for left turns in and left turns out. Another access is present on Chapman Street (egress and ingress in all directions) near the western boundary of the site.

Main Road is two-way, 50km/h road which carries over 20,000 vehicles a day and is the primary road link through the township of Blackwood, connecting the area to Shepherds Hill Road (west) and Belair/Old Belair Road (north the city). The balance of Main Road (south/east) and Coromandel Parade feed vehicles into Main Road, Blackwood from the south. We understand that the existing round-a-bout south of the site where these roads converge is proposed to undergo a significant upgrade in the near future in recognition of the notable traffic volume increases experienced in recent years as areas such as Craigburn Farm develop. Main Road is under the care and control of the Department of Planning, Transport and Infrastructure (DPTI) who has confirmed that the section of road adjacent the site is not subject to road widening.

Chapman Street is a two-way road aligned in an east to west direction and is under the care and control of Council. With a single vehicle lane in each direction, Chapman Street is subject to a posted speed limit of 40km/h and kerbside parking is permitted on each side of the road, excluding Saturdays and Sundays between 8am to 6pm on the northern side. Chapman Street carries approximately 600 vehicles per day.

Pedestrian footpaths are located on either side of Main Road and Chapman Street adjacent the site. Kerb ramps are provided near the intersection of Main Road and Chapman Street for pedestrians crossing Chapman Street heading north towards the site.

4. Proposed Development

The proposal is to partially demolish an existing building ('Blackwood Village shops) and undertake modification of remaining building (tenancies 1-7 on the existing site plan) to convert to two shop tenancies, construct a new supermarket building on the western portion of the site and install associated facade advertising displays, at-grade and undercroft car parking and feature landscaping.

4.1 Land Use

The proposed development involves the construction of an ALDI supermarket and two additional tenancies (*group of shops*) with associated signage, car parking and landscaping on a 4,911m^2 site.

The proposed supermarket covers approximately one third of the site and comprises a net floor area of 1,596m^2, of which 1,170m^2 is retail and the remaining 419m^2 is for 'back of house' storage/amenities.

Two separate retail tenancies are created through modifications to the eastern end of the existing building on the site. Tenancy 'A' will be occupied by the current 'Browse 'n' Save' discount store (to be relocated) with a floor area of 500m^2. Between the proposed ALDI and 'Browse 'n' Save', Tenancy B will comprise a 205m^2 net area and 'Can Do Hearing' are to remain and either expand into the remaining space or the additional space will divided and leased to a new, small-format retail shop.

4.1.1 *Operational Aspects - ALDI*

ALDI Stores are in many ways similar to 'typical' supermarkets in that they offer traditional grocery products in a familiar aisle-by-aisle format. However, there are a number of key differences that distinguish ALDI from other supermarket operations. These differences include:

- Predominately exclusive ALDI label branded products;
- 'Hard discount' food and grocery model;
- Simplified, consistent supply chain, building development, internal layout, merchandising, store operations and marketing;
- All delivery and logistics undertaken by ALDI employees, with only two 14 metre truck deliveries per 24 hours and one daily bakery delivery via a small rigid vehicle;
- Low swept exhaust delivery vehicles (ALDI trucks are to European standards with the exhaust discharge at wheel level on the Prime Mover, i.e. there is no exhaust discharge above the vehicle cabin);
- Limited 'night fill' or store replenishment occurring outside of store operating hours, with staff leaving shortly after store closure;
- Regulated product range of approximately 1,300 items (compared with typical full-line supermarkets which offer between 20,000-30,000 items); and
- Considerably smaller retail floor plate of approximately 1,600m^2 (compared with full-line supermarkets which are typically between 3,000m^2 to 4,000m^2).

Of particular note is that ALDI Stores, of which there are in excess of 400 across Australia in Victoria, NSW, ACT and QLD (including 19 stores now open in Adelaide), successfully operate in close proximity to other major supermarket chains (i.e. Coles and Woolworths), with direct competition in approximately 80% of the existing locations.

Unlike most supermarket operations, ALDI own, operate and control all of its supply and logistics via its purpose-built distribution centre located in Regency Park. This streamlined system of operation enables ALDI to position itself as a discount supermarket quite differently to its competitors. Accordingly, a recessed loading bay will be situated on the western side of the building which will provide for ALDI's dedicated delivery by 14-metre-long semi-trailers.

A typical ALDI Store employs 25 full-time equivalent (FTE) employees with 6-10 employees present on site at any one time.

The hours of operation for the supermarket will be established and potentially varied in response to customer demands, however will be in accordance with any limitations set out by the Shop Trading Hours Act, 1977. The store is not proposed to operate over extended hours, with likely opening times no earlier than 7am and closing times no later than 9pm, other than in limited seasonal peaks such as Christmas and Easter.

4.2 Built Form

The proposed built form is best illustrated in the 3-D render images provided in ***Appendix 3*** (Drawings 08.1 and 08.2). An extract of one of these images is reproduced in the following figure. A full set of plans, sections, elevations is provided in ***Appendix 3***.

ALDI Stores typically present a relatively uniform appearance and regular design layout which is an essential component of the ALDI brand and more importantly is a functional necessity due to particular operational arrangements ALDI have as previously outlined.

The proposed built form for the Blackwood site seeks to adopt key ALDI design features in the form of a contemporary, flat roofed supermarket building which sits above an at-grade undercroft car park, glazed shop front and feature 'tower' element. The adjacent two shop tenancies will occupy portion of the existing building at ground level, along with the balance of the site car parking.

Figure 4.1 *Artist Impression (3D render) C/- Nielsen Architects*

The building setback from Main Road remains unchanged at 8.75m – 3.75m (due to angled front boundary) with the new ALDI setback beyond at 29m (to 'tower' element which contains the foyer and lift). From Chapman Street the building is setback 11.5m to the glazed ALDI façade. The building is to be sited on the northern boundary, that being, the boundary wall of the existing building remains unchanged and the ALDI store wall is to be built up to its northern boundary. To the west, the building is setback two (2) metres from the boundary for a length of 37 metres (other than an external stair extrusion allowing staff to access the ground level loading area and the upper level store). The balance of the building (side of the loading dock) is inset 6m from the western boundary.

The building height measures 11.93 metres to the top of the 'tower' element and 8.95 metres to the top of the upper level parapet. The existing shop building to be retained measures 6.2 metres to the top of its parapet.
A switch back ramp provides pedestrian access from the ground level carpark up to the upper level ALDI store. A lift and stair access is also provided.

Glazed shop fronts with projecting canopies are incorporated into the south elevations and high level windows also inserted at various locations for natural light, while protecting privacy. The existing glazing within the existing building fronting Main Road (now Tenancy A) is to be retained, albeit frosted (as a loading dock is behind).

The main walls of the building will be clad in a coloured precast panel (an orange/red tone and a grey) while metal profile cladding will be used on the 'tower' element. Colorbond® roof sheeting is proposed. Material, colours and finishes are outlined in detail on Drawing DA03.2 in ***Appendix 3***.

The external plant area is set in away from all boundaries and will be screened from view by an acoustically treated parapet walls on a centrally located rooftop platform. The setback of this plant area from the site boundaries and the angle of view will ensure it is not overly visible from these locations.

The variation in height, together with feature windows and colour and material variation provide articulation to the building façade.

4.3 Transport, Parking and Access

GTA Consultants have undertaken a detailed traffic and parking assessment to confirm that the proposed access/egress, vehicle manoeuvring and parking arrangements are feasible, safe and achieve the relevant Australian Standards (refer to ***Appendix 4***). This report sets out an assessment of the anticipated transport implications of the proposed development, including:

- Existing traffic and parking conditions surrounding the site;
- Parking demand likely to be generated by the proposed development;
- Suitability of the proposed parking in terms of supply (quantum) and layout;
- Traffic generation characteristics of the proposed development;
- Proposed access arrangements for the site; and
- Transport impact of the development proposal on the surrounding road network.

4.3.1 *Access/Egress*

The existing two-way crossover to Main Road is to be utilised (with minor modifications) and provides for left in and left out vehicle movements (excluding delivery vehicles).

Figure 4.2 *Existing Main Road Crossover (looking north)*

The existing crossover on Chapman Street will also be utilised and widened, providing for two-way movements in all directions (right and left). As well as customer vehicles, this crossover will service the all delivery and refuse vehicles.

Figure 4.3 *Existing Chapman Street Crossover (looking north)*

4.3.2 *Parking*

A total of 89 carparks are provided on the subject site at grade, with approximately half under-cover below the ALDI Store, and the remining parks in a similar configuration to those already on the site.

The Development Plan suggests a rate of 7 spaces per 100m^2 of retail floor area should be provided, which would equate to the provision of 162 spaces. It is well accepted that this rate is excessive and out dated.

GTA's parking surveys, including those undertaken at the recently opened Hawthorn Store on Belair Road, indicate that a rate closer to 4 spaces per 100m^2 is more realistic for current retail trading and ALDI Stores in particular. The other retail tenancies are anticipated to generate demand of between 1.9 and 3.1 spaces per 100m^2 of retail floor area.

Based on this empirical evidence, the proposed development is anticipated to generate a peak parking demand of 87 spaces. Accordingly, the 89 spaces provided will sufficiently service the development.

The parking layout, space dimensions and grades within the parking area have been designed in accordance with AS/NZS2890.1. Within the undercroft area, particular attention has been paid to column layout within the structural columns sited outside the vehicle design envelope and sufficient clearance provided. The parking spaces are suitable for User Class 3A: short term, high turnover parking.

Parking for people with disabilities (adjacent the lift), as well as parking facilities for eight (8) bicycles will be provided. The overall parking layout has been reviewed by GTA who have confirmed that it has been designed in accordance with the relevant Australian Standards and will function in a safe and convenient manner.

4.3.3 *Deliveries and Waste Collection*

ALDI Store

A loading area is proposed to be located adjacent the western site boundary with access to and from Chapman Street. A bin store will also be located in the loading dock area. It is understood that ALDI deliveries will be via 14.0 metre semi-trailers, which will deliver to the site two (2) times per day, directly from the proposed ALDI distribution centre. Other than a small van delivery for fresh bread (8.8 metre MRV or less), there will be no other third party deliveries to the site (unlike other supermarkets, which have multiple deliveries by various companies throughout the day). A 10.5 metre waste collection vehicle will attend the site once per week. All these delivery/waste vehicles will access and park within the loading dock when on site.

Swept path assessments show a 14.0 metre semi-trailer entering the site in a forward direction, under taking a two-stage reversing movement into the loading bay and exiting the site in a forward direction. The swept path shows that the 14.0 metre semi-trailer can negotiate the access arrangement without encroaching on the electrical transformer adjacent the entrance.

The upper floor for the ALDI Store will not be over the proposed heavy vehicle turning area to ensure there is no restriction on height clearance for a semi-trailer.

It is recognised that the location of the loading dock could result in heavy and light vehicles to mix at times however, the design allows for customer vehicles to enter the undercroft area to avoid the reversing truck. This arrangement is similar to the Hawthorn Store.

We note that parking controls will be required on Chapman Street (on at least one side) to accommodate the required truck entry and exit movements. This will be subject to further discussions with Mitcham Council.

As per the standard ALDI loading and delivery procedures, there will only be a maximum of two deliveries per 24 hour period by large trucks and deliveries are managed outside of peak operating hours (and only between 7am to 10pm to achieve acoustic requirements). As mentioned, ALDI oversees and undertakes all its own deliveries and therefore has full control of the operations and logistics, which enables the business to minimise the impact of deliveries on customers and nearby residents.

GTA has assessed the movements associated with delivery vehicles entering and exiting the loading area and has concluded that they meet relevant standards and will allow vehicles to enter and exit the site in a forward direction.

Tenancy A & B

Tenancy A is proposed to accommodate the relocated Browse and Save Discount store. A dedicated loading dock is incorporated to the side of this tenancy, designed for a 10m rigid vehicle (small truck). These delivery vehicles will access and leave the site via Chapman Street. GTA has confirmed they are able to safely manoeuvre within the carpark area, reverse into the loading dock and exit the site in a forward direction. Deliveries within this loading dock are anticipated to be a maximum of 1 delivery a day, Monday to Friday and are restricted to between 7:00am and 9:00am (as per EPA Noise Policy and lease requirements).

At this stage, Tenancy B is not anticipated to have any loading requirements, outside of the occasional standard vehicle delivery, which can be accommodated within a car park space.

4.3.4 *Pedestrian Accessibility*

The proposed development will provide pedestrian connections to Main Road, with a pathway commencing in the carpark adjacent the ALDI entrance and running along the front of the two shop tenancies to the existing street footpath.

Pedestrian footpaths are located on either side of Main Road and Chapman Street adjacent the site. A bicycle lane is provided on Main Road to the north of Chapman Street on both sides of the road. A bus service is located 90 metres south of the site and the more frequented Blackwood Train Station is located approximately 600 metres east of the site.

A median refuge is located on Main Road approximately 160 metres south.

4.4 Landscaping and Trees

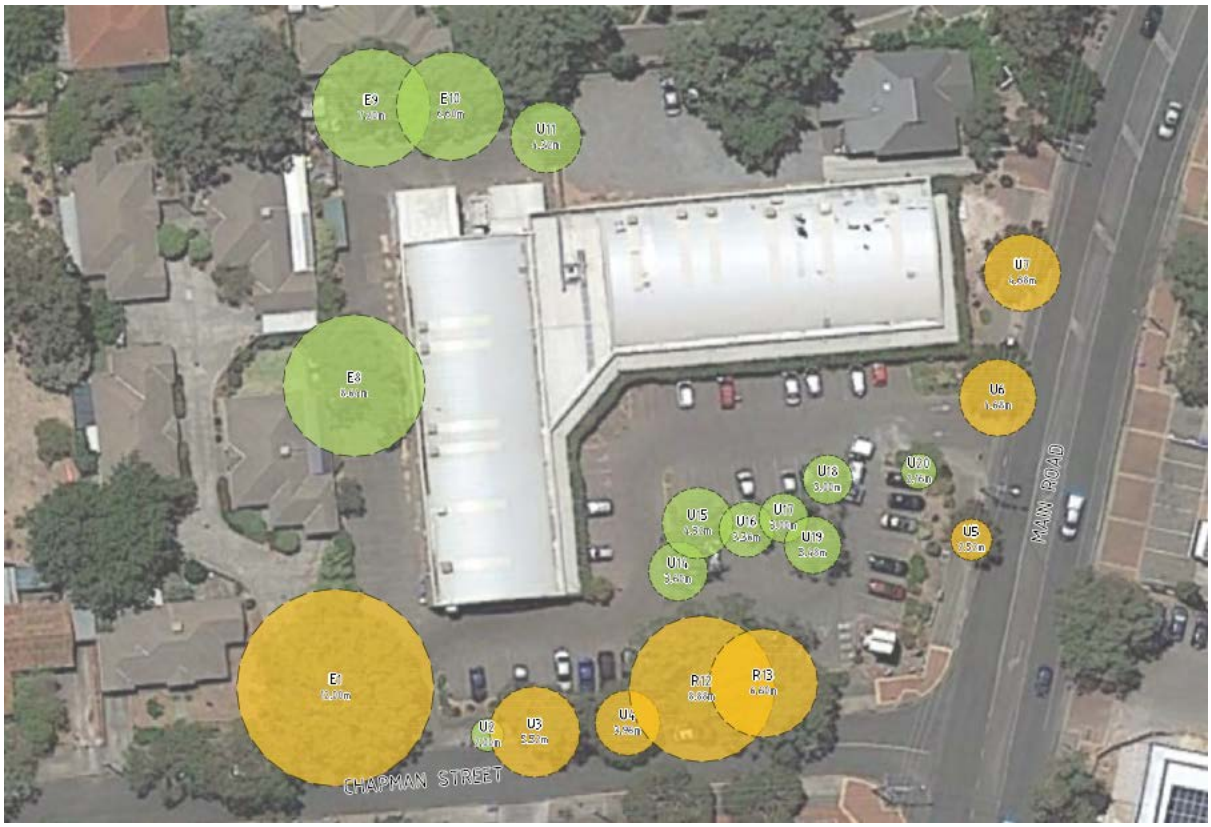
A landscaping plan prepared by Outerspace has been prepared for the proposal (refer ***Appendix 5***). In addition, Arborman Tree Solutions has prepared a Preliminary Tree Assessment Report and subsequent correspondence (letter dated 4 July 2017) which provides details of all trees over 5 metres in height on the site, trees in adjoining properties that are in proximity to the development and the Council road reserve trees (refer ***Appendix 6***).

In summary:

- There are no trees on the site with a 'high' or 'important' assessment retention rating;
- Two (2) Grey Box trees within the site (with a 'moderate' retention rating) have been identified as 'Regulated' as defined by the tree protection legislation and are to be retained;
- Five (5) Council street trees (3 Blue Gums and 2 Raywood) are located around the perimeter of the site and are not proposed to be removed;
- One (1) Lemon scented gum tree (with a 'moderate' retention rating) located on a neighbouring property (8 Chapman Street) is to be protected (notwithstanding it is technically exempt from tree protection legislation) and its long-term health has been considered in the design of the site;
- Three (3) Grey Box trees within the site, which have truck circumferences over 2m but are also exempt from protection, are proposed to be removed to accommodate the development; and
- The remaining trees are unregulated, have a low retention rating and are proposed for removal to accommodate the development.

The trees to be retained are illustrated in the following image as 'yellow' while those to be removed are identified as 'green'.

Figure 4.4 *Tree Assessment – Extract from Arborman Report (Appendix 6)*



The recommendations within the Arborman report to ensure protection of the trees to be retained will be adopted and such measures include:

- Create of a Tree Protection Plan for the site nominating the Tree Protection Zones (TPZ) within which any development work but be carefully monitored and managed during construction;
- Protection of the structural root zone of Tree 1 (located in the neighbouring property adjacent the Chapman Street crossover) during construction with excavation to occur by hand or similar un-invasive method. A garden bed is also proposed adjacent this tree which will assist to protect the roots;
- Protection of the structural root zone of the two Regulated trees with excavation to occur by hand or similar un-invasive method and modifying the carpark kerb location adjacent these trees if roots are encountered (i.e. two spaces reduced to small carparks at 5m long if required); and
- Engagement of the project arborist to assist in the design around the trees during construction and monitor excavation in proximity to the protected trees.

New landscaping to complement and enhance the development is proposed around the site perimeter. Tree species have been selected to contribute to the streetscape of both Main Road and Chapman Street, defined the site edges and identify key access points and provide boundary screening to the west.

A selection of low shrubs and grasses will fill the landscaping beds between the larger trees. Areas of shaded landscaping will also feature shade tolerant pants within the under-croft carpark and below the pedestrian ramp.

4.5 Signage

A site wide signage scheme will be lodged as a separate application once final tenancy requirements are confirmed however two (2) illuminated facade signs are included in this application as illustrated in Drawings DA05.1 and DA05.2 (***Appendix 2***). These two signs are to be located on the eastern façade facing Main Road. The Browse and Save sign indicated on the elevation replicates their existing façade sign and is shown for illustrative purposes only. Consent for this and other signage including a new freestanding pylon sign in the south-east corner of the site will be lodged separately. The existing 6.6m pylon sign (illustrated below) would be removed from the site following approval of the future site signage application.

Figure 4.5 *Existing pylon sign (to be replaced via a separate application)*

4.6 Stormwater Management

Wallbridge Gilbert Aztec have been engaged to prepare a preliminary stormwater management plan for the proposed development (refer to ***Appendix 7***). These reports assess the current management of stormwater on the site and identify the preferred method of water runoff from the redeveloped site.

Key aspects of the proposed management of stormwater for the site are as follows:

- The site current drains predominately to Chapman Street and an existing Side Entry Pit (SEP) and this will continue to be used;
- As the prosed development will not increase the level of water runoff from the subject site (which is already impervious) no on-site water detention is required;
- Three (3) drainage zones are identified, those being the:
  - east/south-east open carpark zone, which will drain to Chapman Street via a Gross Pollutant Trap (GPT) or similar;
  - south-west carpark zone, which will drain to a south and west boundary kerb and gutter with water treated in infiltration zones with the boundary landscaped areas before being drained to Chapman Street;
  - the undercover carpark zone, which will utilise kerb and gutter to direct water to the landscaped corner pockets (northern boundary) and as required, along the western boundary, connecting to the south-west carpark zone, out to Chapman Street;
- Building downpipes will connect to the underground stormwater drainage system and discharge to the street water table via box drains or to the SEP; and
- Grated strip drains or similar will collect surface water at driveway exit points.

The preliminary stormwater management plan will be refined in conjunction with construction documentation following the granting of a Planning Consent.

5. Procedural Requirements

5.1 Relevant Authority

The relevant authority to determine the development application is the **Development Assessment Commission** (DAC), with referral being made to the City of Mitcham. A request made under Schedule 10, Part 20 of the *Development Regulations,* 2008 has been accepted by the State Coordinator-General, Department of Premier and Cabinet for the proposed ALDI supermarket.

5.2 Nature of Development

The proposal comprises partial demolition of an existing building and modification of remaining building into two shop tenancies, construction of a supermarket together with associated advertising displays, at-grade and under croft car parking and landscaping.

It is considered that the land use is best described as a group of shops (noting that supermarket is a form of a 'shop').

A '*shop*', as defined in Schedule 1 of the *Development Regulations,* 2008:

> *shop means—*
>
> *(a) premises used primarily for the sale by retail, rental or display of goods, foodstuffs, merchandise or materials; or*
>
> *(b) a restaurant; or*
>
> *(c) a bulky goods outlet or a retail showroom; or*
>
> *(d) a personal service establishment,*
>
> *but does not include—*
>
> *(e) a hotel; or*
>
> *(f) a motor repair station; or*
>
> *(g) a petrol filling station; or*
>
> *(h) a plant nursery where there is no sale by retail; or*
>
> *(i) a timber yard; or*
>
> *(j) service trade premises; or*
>
> *(k) service industry;*

An application for the construction of shops with the Commercial (Main Road) Zone constitute a '**Consent**' application, to be assessed on its merits against the relevant provisions of the Development Plan.

As the exiting site primarily contains a group of shops, there is no change to the existing land use by the proposed ALDI store and 'Browse 'n' Save' tenancy. If Tenancy 'B' is occupied by a different land use, the tenant will seek the appropriate consents separate to this application.

5.3 Public Notification

The proposed development is within the Commercial (Main Road) Zone and adjacent land which is in a different zone (Residential Zone). Therefore, the proposal is a **Category 2** form of development as expressed in Zone Principle (PDC) 15.

5.4 Agency Referrals

Given that the Development Assessment Commission (DAC) is the relevant Planning Authority, it is understood that the proposal will be referred to the **City of Mitcham**.

As the development involves modification (albeit minor) to an existing crossover on an arterial road, it is anticipated that the proposal will be referred to the **Commissioner of Highways** (DPTI – Traffic).

The site is within a 'Medium Bushfire Risk' area and is not a habitable building therefore referral to the SA Country Fire Services is not required.

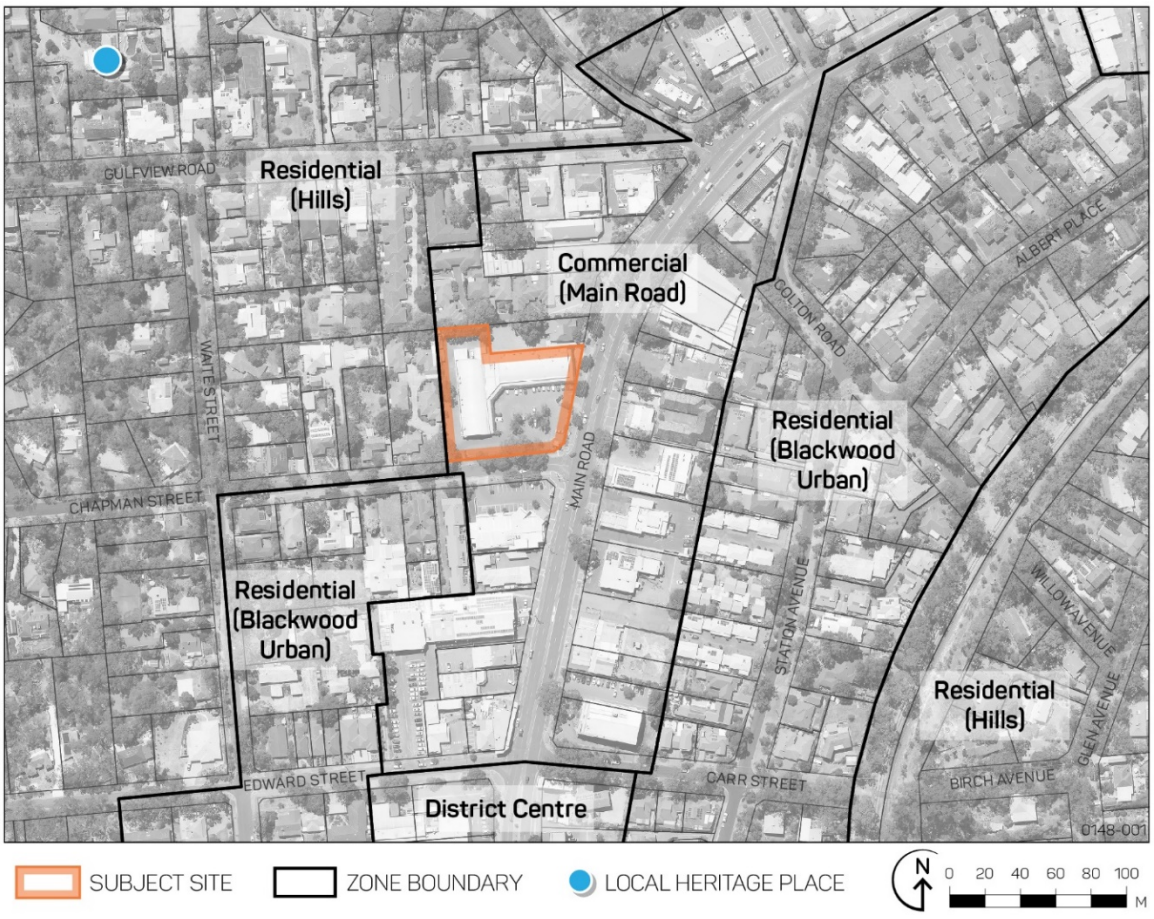
6. Development Plan Assessment

6.1 Overview

The subject land is located within the City of Mitcham and, accordingly, the relevant Development Plan is the Mitcham Council Development Plan – Consolidated 21 April 2016.

The subject land is located within the '**Commercial (Main Road) Zone**' and is not located within any Policy Area or Precinct. The figure on the following page shows the relevant zoning for the site and the surrounding land.

Figure 6.1 *Zoning and Policy Areas*



6.2 Zone and Council Wide Provisions

The following provides an assessment of the proposal against the relevant Development Plan Objectives and Principles of Development Control. Where there is notable duplication of provision between the Metropolitan and Council Wide provisions, the repeated provisions have not been restated.

6.2.1 *Land Use*

The following provisions are considered most relevant to the assessment of land use [our emphasis]:

Commercial (Main Road) Zone

OBJ 1 *A zone accommodating primarily residential, minor servicing, commercial, community and office related activities which generate low traffic volumes, and in a manner which will enhance the appearance of the zone and maintain the free flow of traffic on Main Road.*

OBJ 2 *A zone accommodating a variety of residential uses, low-intensity community, office, leisure and minor service activities and in which landscaping and residential building form enhances the local environment and forms an attractive 'gateway' to the Blackwood Centre.*

PDC 1 *Development undertaken in this zone should be for a range of residential uses and for community, commercial, office and minor service activities which are of low-scale and which generate low traffic volumes.*

PDC 3 *Shop development should generally comprise a maximum gross leasable floor area in the order of 250 square metres.*

Metropolitan Adelaide

Centres and Shops

OBJ 19 *Retailing not consistent with facilities envisaged in a centre located and operated so as not to adversely affect any designated centre, commercial, business or residential, zones, or areas, and traffic movements on local, primary, and primary arterial roads.*

The diversification of locations for retailing providing goods and services not compatible with the grouping of facilities envisaged for regional, district, and neighbourhood, centres may be considered so long as the integrity of the centre hierarchy is not compromised and the development is compatible with land uses in the locality.

Retail development of this kind should be evaluated having regard to:

(a) its locational and operational compatibility with existing shopping, business, commercial zones, or areas, including the nature of the goods and materials to be stocked, and the noise levels of vehicles and plant used on, and servicing, the site;

(b) its effect on adjacent residential development;

(c) the increased use of local and arterial roads;

(d) *the adequacy of vehicular access and car parking; and*

(e) *the maintenance of building and site development standards required for centres.*

PDC 17 *Shopping development should be located as follows:*

(a) *A shop, or group of shops, with a gross leasable area of greater than 250 square metres should be located in a business, centre, or shopping zone, or area…*

PDC 18 *Development or redevelopment within business, centre, and shopping zones, or areas, should meet the following criteria:*

(a) *Their location and assigned role in the centre hierarchy of designated centres and designated centre zones, or areas.*

(b) *The need to integrate facilities in the zone, or area.*

(c) *Staging of development within the centre and the needs for any future expansion of the zone, or area, as a whole…*

PDC 23 *Centres should develop on one side of an arterial road, or one quadrant of an arterial road intersection. Where centre facilities, already straddle a primary, or primary arterial, road, or the intersection of two primary, or primary arterials, roads, development within them should:*

(a) *concentrate on one side of the primary, or primary arterial, road or one quadrant of the arterial road intersection; and*

(b) *minimise the need for pedestrian and vehicular movement across the arterial road, from one part of the centre to another.*

Council Wide

Centres and Shops

PDC 65 *Centre type development located outside centre zones should:*

(a) *be of a size and type which would not hinder the development or function of any business, centre or shopping zone and be in accordance with the objectives for centres and shops and the objectives for the appropriate zones; and*

(b) *conform to the access, car parking and design principles for centre zones set out below.*

Land Use Planning Assessment

The site is located within a Commercial Zone straddling Main Road within the central area of the Blackwood township. Interesting, the Zone appears to emphasise residential development as key envisaged use however we note that in practice, there is limited residential development remaining within the Commercial Zone.

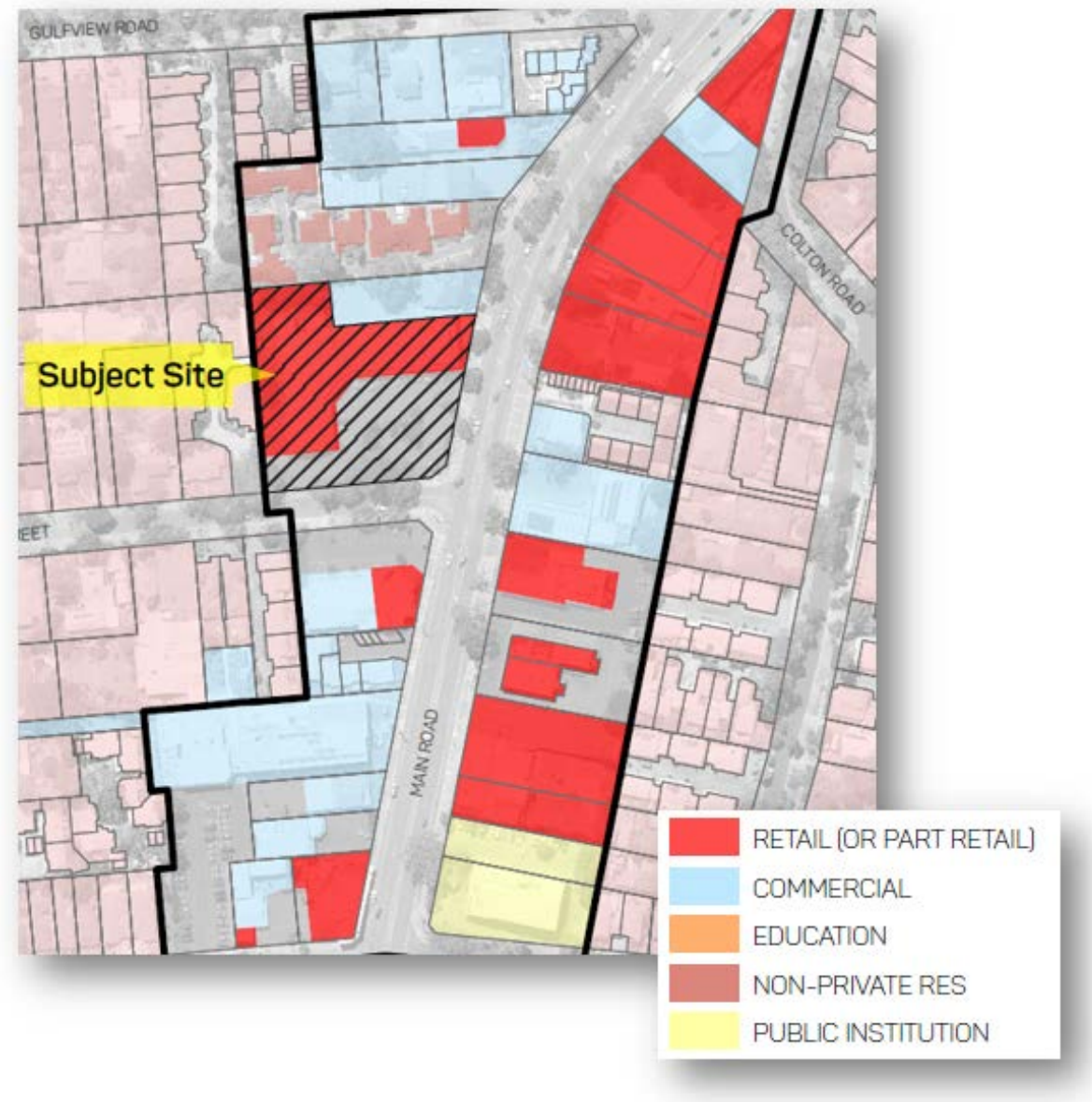
Other commercial activities such as '*minor servicing, commercial, community and office'* uses are also encouraged.

It is immediately evident on visiting the subject site that the existing Zone overlay and the actual functioning and mix of land uses within the locality are not consistent.

A detailed land use study was undertaken to better understand the arrangement of land uses within the Blackwood area. This is represented in the graphic in ***Appendix 2***.

An extract of this map as it relates specifically to the subject site and its immediate locality is reproduced below.

Figure 6.2 *Land Use Map (extract from Appendix 2)*



While 'low-scale', 'low-traffic' generating uses including shops no greater than 250m^2 in floor area are sought in the Commercial Zone we note that:

- The subject site currently comprises a total of 1,600m^2 of retail area with the largest shop over 800m^2 in floor area;
- Immediately adjacent the site and to the south there are several larger floor plate businesses (all illustrated in Figure 6.2) including:
  - a hardware store (including timber yard and nursery) accommodating an area in excess of 2,000m^2;
  - a vet and 'doggy-day care' business within a building exceeding 600m^2;
  - a pharmacy and medical clinic within a building exceeding 700m^2;
  - a service station within a building of some 400m^2;
  - a service trade premise and sports store within a combined building footprint in excess of 500m^2;
  - a garden nursery shop within a building in excess of 750m^2 (with an additional 900m^2 of associated outdoor plant display); and
  - a gymnasium and consulting rooms in a combined building measuring in excess of 2,000m^2;
- The land use study (***Appendix 2***) demonstrated that there is a similar proportion of 'retail' land uses located within the Commercial Zone as there are in the District Centre Zone;
- A wide range of commercial, retail, service and community land uses extend well north of the existing District Centre with activities concentrated towards Main Road as the primary activity centre thoroughfare within the township; and
- There is no discernible character or land use distribution difference between the District Centre Zone and the Commercial Zone.

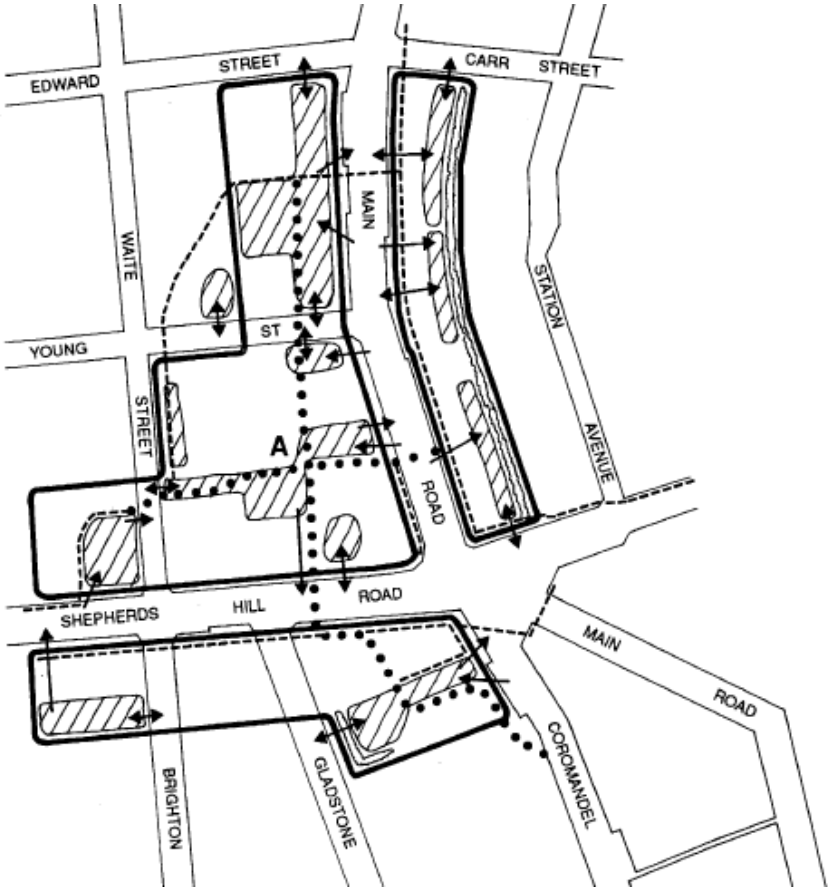
Further, we note the findings of the 'Retail Report' report prepared by Deepend Services (refer to ***Appendix 8***) reaffirm our findings, identifying that based on *the 2007 SA Retail Database 'the C(MR) zone… accommodated over one-quarter of all retail tenancies in Blackwood and 21% of the retail floorspace. This is a significant contribution for an area where planning policy discourages single or multiple retail developments exceeding 250 sqm. The reality on the ground is that the C(MR) zone is providing an important supply of retail floorspace which hqs spilled over from the tightly constrained DCe zone.'* (pg 15).

Further we note that the Mitcham Development Plan encourages the following land uses to establish within a District Centre Zone (refer to OBJ 15 Metropolitan Adelaide), however those underlined are actually already existing within the Commercial (Main Road) Zone:

- Ambulance Station
- Bank
- Child Care Centre
- Church
- Cinema
- Civic Centre
- Club/Meeting Hall
- Commercial Development
- Health Centre
- Consulting Room
- Day Care Centre
- Discount Department Store
- Further Education
- Hospital
- Hotel/Tavern
- Indoor Recreation Centre
- Library
- Offices
- Park
- Personal Service Establishments
- Playing Field
- Police Station
- Pre-school
- Primary School
- Restaurant
- Secondary School
- Service Station
- Special School
- Specialty Shop
- Supermarket
- Swimming Pool

The Development Plan suggests that within Blackwood, '*convenience shopping facilities'* should be concentrated in the area marked 'A' in the following figure (extract of Figure DCe/2 within the District Centre Zone of the Mitcham Development Plan).

Figure 6.3 *Blackwood Area District Centre Concept Plan (extract)*



While it is acknowledged that Supermarkets are an envisaged within Centre Zones, and in the case of Blackwood, primarily within the area marked 'A' on the above figure, it is evident, as illustrated by the finding of the land use study, that Blackwood has significantly outgrown its existing, highly constrained District Centre Zone.

Retail clusters have established themselves along the Main Road frontage (more so than Shepherds Hill Road) and as the area has grown, the functions and activities which typically define a District Centre Zone have diffused into the adjoining Commercial Zone due to the lack of land available within the District Centre Zone.

This is perhaps in part due to the outdated nature of the Mitcham Development Plan which we note has had minimal Centre policy amendment for many years (dating back to the early 1990's as we understand) and as a consequence of the Development Plan not being kept up to date, market forces have sought land outside the District Centre Zone in the adjoining Commercial Zone.

We understand that Mitcham Council commenced investigations to support a Centres DPA a few years ago however this has not progressed.

The planning philosophy associated with 'centre' development has shifted significantly since the original zoning of Blackwood with the approach now recognising that:

- Previous planning strategies which focused on an established 'hierarchy' of centres where any out-of-centre retail activity was prohibited, have been replaced by support for land use diversity and a greater emphasis on 'main streets';
- Mixed use activity centres rather than highly regulated centre zones are preferred where residential, commercial and retail development is integrated and co-located;
- In established built-up areas (such as Blackwood), commercial and retail business should be encouraged to ensure an appropriate level of services are available to growing communities and to encourage competition between and within centres; and
- Retail and other related services should be supported outside of designated centres where development will contribute to accessibility, high-quality design outcomes, employment opportunities, economic growth and competitiveness.

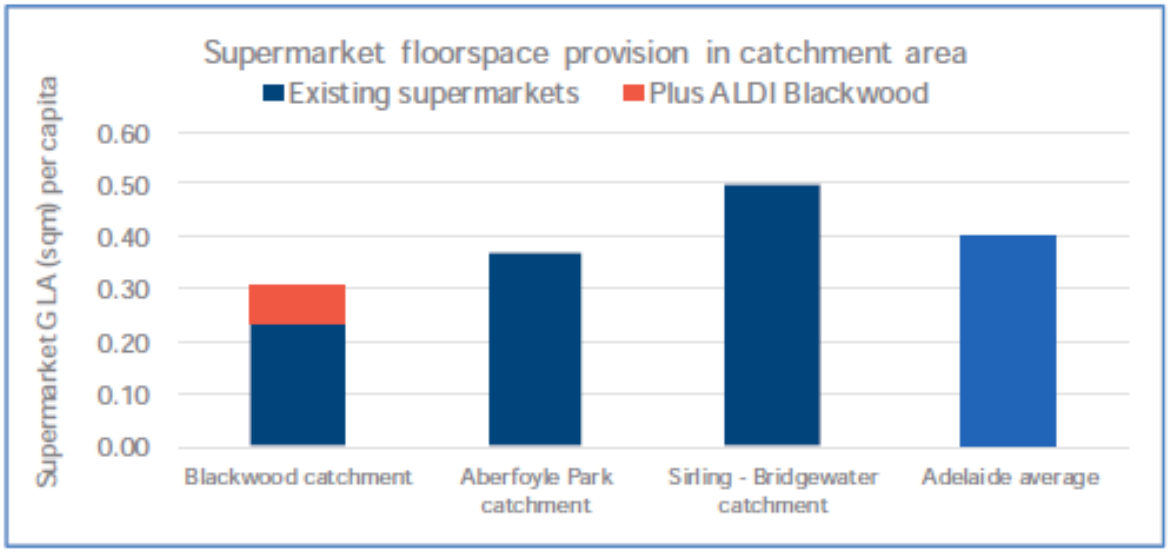
In this context, we note that the Ministerial 'Existing Activity Centres Policy Review DPA' authorised in April 2016 removed the mandatory floor space limit previously imposed in the Commercial Zone whereby retail developments over 250m^2 where listed as 'non-complying forms of development.

As Adelaide's population grows, there is recognition that the existing tightly held Centres are no longer able to cater for or accommodate the variety of retail and commercial business opportunities available to service the local and broader community.

In this regard, we note the findings of Deepend's report which identified the following with respect to the Blackwood District:

- The three (3) existing supermarkets within Blackwood are small format stores comprising approx:
  - 1,950m^2 (Woolworths);
  - 1,300m^2 (Foodland);
  - 2,400m^2 (Coles);
- The supermarkets enjoy a highly captive market due to the distance to other centre and the topography of the hills region;
- The main catchment area for Blackwood covers a considerable area including Blackwood, Belair, Glenalta, Hawthorndene, Craigburn Farm, Coromandel Valley and the eastern portion of Bellevue Heights with a population of some 24,313 people;
- This catchment has been steadily growing, primarily due to the Craigburn Farm/Blackwood Park subdivisions, which once complete, will have added about 2,300 people to the catchment;
- The average rate of supermarket floorspace provision in the Adelaide Statistical Division is approx. 0.40m^2 per capita;
- The average rate of supermarket floorspace provision in the Blackwood catchment is approx. 0.23m^2 per capita, meaning that Blackwood has a significant under supply of retail floor area given its population catchment; and
- The introduction of an ALDI store in the Blackwood Township would raise the supermarket floor space provision to just 0.30m^2 per capita which is still below the Adelaide average and the comparable areas of Aberfoyle Park and Adelaide Hills (as illustrated in the graph below):

Table 6.1 *Supermarket floor space provision (extract from Deepend's Report Appendix 8)*



This data is relevant in so far as the Development Plan is supportive of 'out-of-centre' retail development where '*the integrity of the centre hierarchy is not compromised and the development is compatible with land uses in the locality*' (Metro OBJ 19) and the proposal will '*not hinder the development or function of any business, centre, or shopping zone, or area*' (Metro PDC 17(c) & Council PDC 65).

We note that the ALDI supermarket will not compromise the viability of the existing District Centre Zone but will expand the total range of retail goods and services available to the local, growing community. ALDI is also a grocery retailer which, unlike other supermarket chains, does not produce or prepare food on site (i.e. no in-store bakery, butcher or deli) and that this model therefore supports and depends on the successful functioning of smaller fresh food retailers such as butcher, bakers and the like, further supporting the existing retail traders in the township.

The Deepend Report also identified the inadequacies with the existing District Centre Zone, concluding that:

- The area zoned District Centre is small by comparison with other outer District Centres in the southern suburbs;
- The extent of the District Centre zone at Blackwood is inadequate for the size of the catchment and is constraining new development in the centre; and
- Notwithstanding Council's policy, retailing has migrated to the Commercial (Main Road) zone where small ad-hoc developments have grown along Main Road. This has become an extension of the District Centre to ease growth pressures.

Further, Deepend concludes that Blackwood '*has approximately 9.4 hectares zoned District Centre but only 6.4 hectares once the road reservations are excluded. The potential to assemble a site of any significance is even more difficult given the small fragmented land holdings compared to most other centres*'.

As illustrated in the table below, Blackwood has the smallest 'usable' District Centre land (where unrestricted shops can be developed) relative to its catchment size.

Table 6.2 *District Centre Zones and Catchments (extract from Deepend's Report Appendix 8)*

District Centre	District Centre zone (ha)	Catchment population
Blackwood	9.4 [1]	24,313
Aberfoyle Park	10.8 [2]	20,664
Hallett Cove	8.1 [3]	23,300
Morphett Vale	28.0 [4]	27,000
Seaford	20 [5]	22,000
Aldinga	8.5 [6]	13,200
Stirling	13.7 [7]	11,300

[1] Includes roads
[2] DCe zone over shopping centre only
[3] Retail core only
[4] DCe along Main South Rd & Southgate Plaza
[5] Retail & Main St precinct only
[6] DCe retail precinct only
[7] Stirling core area only

This data is relevant as the Mitcham Development Planhighlights that the size of centres should '*should be related to the size and characteristics of the population it serves*' (Metro OBJ 15).

Notwithstanding the shortcomings of the existing Development Plan zoning which inadequately represents the existing pattern of development in Blackwood we note that the proposal does replicate the distribution of retail activity in the township (i.e. supermarkets occupying land on separate town blocks with a main road frontage). and the proposal maintains this pattern on the same side of Main Road (western side) in accordance with Metro PDC 23 which calls for centres to develop on one-side of an arterial road.

In summary, retail development is envisaged in the Commercial Zone and while shops should '*generally comprise*' a maximum gross leasable floor area '*in the order*' of 250m^2, the language within the Development Plan clearly anticipates that in certain circumstances, shops of a greater size will be appropriate.

The existing site already contains 1,600m^2 of retail or similar floor space which is essentially the scale of the proposed ALDI supermarket itself (1,639m^2 nett FA). The additional 700m^2 of retail floor area proposed will complement the ALDI and presents an efficient and coordinated commercial retail outcomes for the Blackwood district.

In considering the various issues presented above and the specific characteristics of this site and the locality, the proposal is considered to sufficiently achieve the land use intent of the Mitcham Development Plan, noting that the proposal will:

- Be of a modest size suitable for its function, while providing sufficient on-site car parking facilities;
- Cater for the existing and future population's shopping and community needs (particularly as there is currently a significant shortfall in retail offerings);
- Provide a degree of choice and stimulate competition;
- Be readily accessible to the population to be served;
- Retain the concentration of retail development to the western side of Main Road; and
- Demonstrate the potential to revitalise Blackwood and make effective use of existing investment in public infrastructure, utilities and transport.

6.2.2 *Built Form*

The following provisions are considered most relevant to the assessment of built form.

Commercial (Main Road) Zone

PDC 4 *Building development should provide a high standard of design and construction, be in keeping with the scale of adjacent development and be enhanced by substantial landscaping between the building and street frontage.*

Metropolitan Adelaide

Appearance of Land and Buildings

OBJ 43 *The amenity of localities not impaired by the appearance of land, buildings and objects.*

Centres and Shops

PDC 18 *Development or redevelopment within business, centre, and shopping zones, or areas, should meet the following criteria:*

(e) Attractive development, with a unified design of buildings and produce a close relationship between shops in a lively setting.

(f) Materials compatible with the natural features of the site and adjacent buildings.

(g) Acceptable micro-climatic conditions and degree of exposure in designing and orienting buildings, and locating open space and car parking areas.

Council Wide

PDC 68 *Development within centre zones should conform with the following design principles:*

(a) Development should provide for the integration of existing and future facilities so as to promote ease of pedestrian movement and sharing of facilities, while retaining opportunities for future expansion within the zone;

(b) Minimal grade separation should exist between and within development which is to be accessible to the public. Where grade separation does occur, the different levels should be

connected by ramps with slopes of not more than 1-in-14 and/or alternative facilities for access by disabled persons between the different levels should be provided;

(c) Development should:

(i) comply with the objectives for the zone or where otherwise appropriate be compatible with the predominant character of other developments in the locality;

(ii) preserve and enhance localities, spaces, buildings, structures, items and sites of architectural, historical, or scientific interest; and localities, spaces and sites of natural beauty;

(iii) preserve buildings of heritage significance listed on Table Mit/3 and encourage the retention and utilization of compatible buildings and land uses around them; and

(iv) utilize and adapt the existing building stock in preference to new buildings where those buildings contribute to the character of the zone…

Built Form Planning Assessment

The existing building currently presents as a relatively non-descript, single storey brick building with neutral colour tones.

Figure 6.4 *Existing building at 198-200 Main Road*

The proposed building, which reuses a portion of the existing single storey building along the northern boundary (as sought by Council PDC 68[c]), presents in part as single storey and also two-story with the ALDI Store elevated above an under croft carparking area. While there is little guidance in the Development plan in relation to the scale of new built form, we note the adjoining District Centre Zone suggests buildings up to two-storeys are acceptable and accordingly taking cues from this policy, the proposed height of the building (which for the most part reaches just below 9m above ground level) is considered suitable and consistent with other built form along the main road.

While the proposed building will present a more notable built form and physical presence incorporating a higher scale and bolder colour tones towards the main road, the site's presentation to its front boundary will remain essentially unchanged, with the new building set well back from the Main Road boundary (>29 metres).

The building facades are designed to offer a visually interesting street frontage, with a variety of material presented including a perforated metal copper coloured feature wall, metal profile cladding to the 'tower' element, glass balustrades, shop front and high level windows, canopies and a variety of pre-cast panels.

The existing glazed 'shop' front appearance to Main Road will be retained in the existing building albeit the area to the front of this loading dock wall will be densely landscaped. The use of simple, rectangular building forms together with retention of the existing curved roof over the existing building will sit harmoniously with the existing, somewhat diverse built form in the streetscape.

Figure 6.5 *Images of buildings within the Commercial Zone adjacent the subject site*

Figure 6.5 *Images of buildings within the Commercial Zone adjacent the subject site (cont.)*

In many respects the proposed car parking layout is similar to that existing (space to the front, side and rear of the site) albeit in the proposed development the building is raised with parking underneath (but still up to and along the side and rear boundary). While it is acknowledged that Council Wide PDC 68(b) seeks to minimise the grade separation in new developments, it is considered that the three metre grade change between the ALDI store and natural ground level is well managed with appropriate ramping, lifts and stair access ensuring equitable access and an efficient use of the land for commercial development.

While some of the smaller trees within the car parking area and three trees near the western and northern boundary will be removed to accommodate the development, the proposal incorporates new tree plantings along portions of the western boundary and both street boundaries while also retaining the two (2) Regulated gums and all street trees. The area in front of the existing building/Tenancy A will be densely planted natives and spaces below structures will provide opportunities for shade tolerant plantings.

Combined these features will provide an attractive built form presentation and achieve PDC 4 within the Zone which seeks for new development to '*provide a high standard of design and construction, be in keeping with the scale of adjacent development and be enhanced by substantial landscaping between the building and street frontage*'.

It is acknowledged that the visibility of the proposed building to the west and north will be more evident than the current building, however a two metre setback has been provided to the Residential Zone boundary and a darker rather than bolder colour palate has been selected for the walls facing the adjoining residential dwellings to the west and north (noting however that the northern property is located within the Commercial Zone). The assessment of interface issues is covered in more detail in Section 6.2.4 below.

In considering the relevant built form provisions within the Development Plan, we conclude that the proposal will not impair the appearance of the area, presents a unified, lively streetscape setting and is sufficiently compatible with the predominant character of other developments in the locality. In this regard, the proposal is considered to achieve the intent of the Development Plan with respect to built form.

6.2.3 *Transport, Access and Parking*

The following provisions are considered most relevant to the assessment of transport, access and parking.

Commercial (Main Road) Zone

PDC 5 *Developments should provide sufficient on-site car parking and loading areas to avoid the need for vehicle parking or loading on Main Road. Where possible, adjoining developments should share car parking areas to make efficient use of space, reduce the expanse of hard paved surface area and minimise points of access onto Main Road.*

PDC 6 *Vehicle parking should be provided in accordance with the rates set out in Table Mit/9 - Off Street Vehicle Parking Requirements for Designated Areas (where applicable).*

Metropolitan Adelaide

Transportation (Movement of People and Goods)

PDC 19 *Provision for the movement of people and goods within business, centre, and shopping zones, or areas, should comply with the following:*

(a) Development should not cause inconvenient and unsafe traffic and pedestrian movements or be likely to result in the need for significant expenditure on transport and traffic works, or facilities within, or outside, the locality.

(b) Development should be concentrated for pedestrian convenience and not allowed to extend unnecessarily along road frontages; (increasing the depth of development is a more desirable alternative).

(c) The separation of pedestrian and vehicle movements within zones or areas, is most desirable to ensure safety and convenience.

(d) Access to car parking areas should be designed not to cause congestion or detract from the safety of traffic on abutting roads.

e) Adequate and convenient provision should be made for service vehicles and the storage and removal of waste goods and materials.

(f) Parking areas should be consolidated and co-ordinated into convenient groups, rather than located individually, and the access points minimised.

(g) Car parks should be orientated so as to facilitate direct and convenient access of pedestrians between them and the facilities they serve.

(h) On-site parking shall be determined having regard to:

(i) the amount, type and timing of movement generated by the use;

(ii) the design, location and configuration of parking spaces;

(iii) *the ability of the site to accommodate the parking spaces;*

(iv) *the potential for shared use of parking spaces;*

(v) *the effect on surrounding activities;*

(vi) *specific in requests of cyclists; and*

(vii) *the availability of appropriate on-street parking.*

Council Wide

PDC 67 *Development within centre zones should conform to the following access, movement and car parking principles:*

(a) *Development should provide safe and convenient access for private cars, cyclists, pedestrians, service vehicles, emergency vehicles and public utility vehicles;*

(b) *Except for traffic movement on major through roads, pedestrian movement within centres should be the movement mode of most importance and be given predominance in design of movement paths in the centre;*

(c) *Pedestrians should be channelled onto pedestrian paths by use of barriers to reduce the possibility of pedestrian and vehicular conflict within the centre;*

(d) *Pedestrian paths should be:*

(i) *constructed with minimal grade changes or steps and require driveways to change level where they cross; and*

(ii) *paved with a material which contrasts with driveway and parking area paving;*

(e) *Areas and facilities should be provided for the parking and securing of bicycles, storage of shopping trolleys and hitching of dogs, provided that the facilities for the hitching of dogs are not within pedestrian movement areas;*

(f) *Access points onto public roads should be designed and located to minimise traffic hazards, queuing on public roads and intrusion into adjacent residential areas;*

(g) *The number, location and design of access points onto the arterial roads shown on Map Mit/1 (Overlay 1) should be such as to minimise traffic hazards, queuing on the roads, right turn movements and interference with the function of intersections, junctions, and traffic control devices;*

(h) *Development in the form of retail showrooms trading in bulky goods merchandise, should provide adequate manoeuvring and circulation areas in order to accommodate truck and trailer movements.*

Access points for the development should be determined by the Department of Road Transport in consultation with the Planning Authority.

(i) Shopping development should provide for separate parking spaces for the disabled;

(j) Development should provide sufficient off-street parking to accommodate customer, employee and service vehicles;

(k) Car parking areas should be located and designed in such a way as to ensure safe and convenient pedestrian access from vehicles to facilities, safe and convenient traffic circulation, minimal conflict between customer and service vehicles and should include adequate provision for manoeuvring into and out of parking bays;

(l) The layout of all parking areas should be designed so as to obviate the necessity for vehicles to reverse onto public roads;

(m) Individual parking areas should, wherever possible, be located and designed so that:

(i) vehicular movement between them does not require the use of public roads; and

(ii) the number of access points is minimised;

(n) Access to car parking areas and the direction of traffic flow within them should be made obvious to motorists by legible signs at the entrance;

(o) Opportunities for the shared use of car parking between development should be exploited so as to reduce the total extent of car parking areas;

(q) Development should provide car parking spaces for employees, customers, clients and visitors in accordance with the following standards:

(i) for a shop excluding a retail showroom, in a:

(C) district centre zone - seven car parking spaces per 100 square metres of lettable area; and

PDC 68 *Development within centre zones should conform with the following design principles:*

(d) Development should provide:

(i) off-street loading, service areas and service vehicle manoeuvring areas;

(ii) lighting for building and ancillary areas, with no light-spill causing nuisance or hazard;

(iii) for the location, screening, construction and operation of storage yards, refuse removal facilities, air conditioning motors, cool room motors and similar accessory facilities, in such a manner as to obviate nuisance caused to occupiers of adjacent properties by way of noise, vibration, smell or fumes;

(iv) public entrances to buildings and pedestrian access within centres that are sheltered and screened from south-westerly and northerly winds;

Movement of People and Goods

PDC 77 Development should conform with the following principles relating to traffic, parking and vehicles access, in addition to any relevant land use specific parking standards:

(a) Development should provide safe and convenient access for private vehicles, cyclists, pedestrians, service vehicles, emergency vehicles and public utility vehicles.

(b) Development adjacent to arterial roads and outside centre or mixed use zones should be confined to land uses which generate low traffic volumes.

(c) Access points onto public roads should be designed and located so as to minimise traffic hazards, queuing on public roads, and intrusion into adjacent residential areas.

(d) The number, design and location of access points onto the arterial roads shown on Map Mit/1 (Overlay 1) should be such as to minimise traffic hazards, queuing on the roads, right turn movements and interference with the function of intersections, junctions and traffic control devices.

(e) Where development is located adjacent to an intersection it should not create an obstruction or impair the visibility for drivers of motor vehicles entering arterial roads.

(f) Development should provide sufficient off-street parking to accommodate resident, visitor, customer, employee, and service vehicles.

(g) -

(i) Where a development is required to provide car parking of 25 spaces or more, at least one car parking space should be provided in every 25 spaces for the disabled; and

(ii) Parking spaces for the disabled should be conveniently located in relation to building entrances, ramps, and other specialised access facilities required or necessary for use by the disabled.

(h) Car parking areas should be designed and located so as to ensure safe and convenient pedestrian access from vehicles to facilities, and safe and convenient traffic circulation. Adequate provision should be made for manoeuvring into and out of parking bays, and, in the case of centre type development, parking areas and access ways should be designed to minimise conflict between customers and service vehicles.

(i) The layout of all parking areas should be designed so as to obviate the necessity for vehicles to reverse onto public roads.

(j) *Car parking areas should be sealed with material which will minimise any mud or dust hazard and provide an even, low maintenance pavement.*

(k) *Car parking areas should be:*

  (i) *line marked to indicate parking bays, movement aisles and direction of traffic flow;*

  (ii) *graded and drained to efficiently remove surface water; and*

  (iii) *landscaped to screen and shade vehicles in the parking area whilst retaining suitable lines of sight for safe vehicle and pedestrian movements.*

(l) *Individual car parking areas should, wherever possible, be designed and located so that:*

  (i) *vehicular movement between them does not require the use of public roads; and*

  (ii) *the number of access points is minimised.*

Transport, Access and Parking Planning Assessment

GTA has undertaken a detailed traffic assessment and analysis of the subject site and proposed development (refer ***Appendix 4***).

Parking and carpark layout

In relation to parking, the Mitcham Development Plan statutory parking rates for shops outside of a 'centre' Zone are seven (7) spaces per 100m² lettable area which, in the context of the proposal, would require 162 on-site car parking spaces. This rate is considerably higher than is typically found in commercial, centre or like Zones in Metropolitan Adelaide and given there has been minimal change to the Council's Development plan for many years, we suggest that the Mitcham Development Plan does not reflect current parking generation rates for shopping areas and is considerably out of date.

As outlined, the current site contains two crossover points for vehicles into a carpark with 72 spaces servicing retail shops comprising some ten (10) tenancies and 1,600m^2 of floor area. This equates to a current parking supply of 4.5 spaces per 100m^2 (and a theoretical shortfall of 40 spaces when assessed again the Development Plan rate).

The proposed development will retain the two crossover points for vehicles accessing a carparking area with 89 spaces servicing there (3) retail shops comprising some 2,289m^2 of floor area (and a theoretical shortfall of 73 spaces when assessed again the Development Plan rate).

Empirical evidence provided by GTA (outlined in Table 4.2 of the GTA report), which included surveys undertaken at the recently opened ALDI store at Hawthorn 6.5km (or 10 mins) north of the subject site, suggests that the proposed ALDI store will generate an average demand of 4.1 spaces per 100m², which would require the provision of 65 spaces.

With respect to the other retail tenancies, GTA have determined a maximum parking demand of 22 spaces will be generated.

These calculations do not take account of shared trips where customers to the site utilise both the ALDI Store and the adjoining shops. This aside, in total, the proposed development is anticipated to generate demand for 87 car parking spaces and therefore the proposed supply of 89 spaces will be sufficient to cater for peak parking demands generated by the proposed development. In this regard, the application is considered to achieve Zone PDC 5 (requiring a development to provide sufficient on-site car parking) and Metro PDC 19 (h) which seeks for the level of on-site parking to have regard to:

- The amount, type and timing of movement generated by the use;
- The design, location and configuration of parking spaces;
- The ability of the site to accommodate the parking spaces;
- The potential for shared use of parking spaces;
- The effect on surrounding activities; and
- The availability of appropriate on-street parking.

It should be noted that the Hawthorn Store, being a new store and located quite some distance from other ALDIs (with the Marion Store being the next closest store), is currently drawing customers from beyond its anticipated long-term catchment area. Once other ALDI Stores open (i.e. Blackwood), the peak demand at Hawthorn will balance out.

The proposed parking layout will achieve the dimensional requirements as set out in the Australian/New Zealand Standards for Off-Street Car Parking (AS/NZS2890.1, AS/NZS2890.6 and AS2890.2) and the provision of eight (8) bicycle parking spaces will satisfy the requirements of the Development Plan.

Access

As mentioned, the existing access and egress crossover points are retained with some minor modifications to Main Road and widening to Chapman Street. Adequate sight distances at these access points to view oncoming vehicles in accordance with the Austroads Guide is provided.

Deliveries/Service Vehicles

As sought by Zone PDC 5, the proposal incorporates sufficient loading areas within the subject site area. Metro PDC 19 (e) is also achieved through the adequate and convenient provision for service vehicles, storage and removal of waste goods and materials.

All service, refuse and delivery vehicles will utilise the Chapman Street crossover. As outlined, separate loading docks for the ALDI and the Browse and Save are provided.

In relation to the ALDI Store, deliveries will be made by vehicles up to 14 metre semi-trailers via with two delivery vehicles of this size expected per day based on almost all stock being provided through the ALDI distribution centre (to be operational for the opening of this store). In addition, one unit truck up to 8.8 metres will do a daily bakery delivery and a 10.5 metre refuse truck will collect waste approximately once a week (and only between the hours of 9am to 7pm on a Sunday or public holiday, and 7am and 7pm on any other day to ensure compliance with the EPA Noise Policy).

The swept path assessment indicates a vehicle up to 14.0 metre semi-trailer will be able to enter and exit the site in a forward movement with use of the car park aisle to reverse to the loading dock. This is similar to many other ALDI Stores around Australia (including Hawthorn) and operates safely, given the low number of deliveries per day by semi-trailer and given deliveries occur out of peak times in the car park (and only between 7am to 10pm to ensure compliance with the EPA Noise Policy).

It is noted that on-street parking controls on Chapman Street will need to be modified to accommodate truck passing movements.

Deliveries and loading arrangement for the retail tenancies are suitably accommodated within the designated loading dock with up to 10 metre trucks entering and exiting in a forward direction via Chapman Street typically less than once a day.

Traffic Volumes

The proposed development is expected to generate approximately 330 vehicle trips in the PM peak hour (or 2,935 vehicle movements on a peak day) however this excludes any discount factor for passing trade (typically 30%). An increase in traffic on Chapman Street to the west of the site is expected to equate to approximately 65 vehicles in the peak hour and approximately 590 vehicles throughout a day.

It is recognised that the development will increase traffic generation when compared to that generated by the current retail complex, however this outcome is considered reasonable given the site is a large commercial land parcel with Main Road frontage within an area which is by all accounts an extension of the existing Blackwood District Centre.

While we note that the Commercial Zone idealistically seeks development which generates 'low traffic volumes' (Zone OBJ 1) it is apparent on a visit to the site that the existing activities and resulting traffic movements within the Commercial Zone are not low traffic generating and that as the key vehicle thoroughfare through the township and the only road available to enter and exit Blackwood, Main Road is and will continue to function as a primary aerial road. Likewise, the traffic utilising Main Road will therefore, by default and through the encouragement of DPTI to direct key access and exit points off aerial road frontages, also increase traffic on side streets which connect onto Main Road. We note the existing line marking on Main Road already channels all vehicle wishing to turn right when heading south on main Road into Chapman Street.

The GTA report assesses the distribution, assignment and traffic impact on the existing road network in considerable detail. Following a SIDRA Intersection analysis, GTA conclude that queue lengths on Chapman Street are likely to increase from 1 vehicle to 2 vehicles in peak hour (which is not unreasonable) and that the existing right turn lane on Main Road will continue to operate satisfactorily with 1 vehicle queue length predicted. This accords with Council Wide PDC 77 which calls for access arrangements to minimise traffic hazards, queueing on the roads, right turn movements and interference with the function of intersections, junctions and traffic control devices.

The analysis undertaken indicates that there is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.

Pedestrian Accessibility

As highlighted in the Land Use map (*Appendix 2*) the retail and commercial arrangements in Blackwood are quite spread out as the township has formed in a linear fashion along Main Road. This is contrary to Metro PDC 19 which seeks for development to be concentrated for pedestrian convenience and not allowed to extend unnecessarily along road frontages. The PDC suggests that increasing the depth of development is a more desirable alternative to strip shopping. The intent of this provision has not been achieved in Blackwood in part due to the dominance of Main Road and the lack of updated planning policy and subsequent rezoning. The current strip shopping layout is well entrenched and highly unlikely to be reverted.

Within the site, a clearly defined point of entry is provided into the ALDI Store via a switch back ramp and a nearby left and stair. The proposal provides a pedestrian walkway along the front of the two retail tenancies linking to Main Road, with a pathway commencing in the carpark and running along the front of the two shop tenancies to the existing street footpath. These entry points are illustrated in Drawing DA02.1 by red arrows. These access points will be clearly identifiable and will achieve Council PDC 68 which seeks for public entrances to buildings and pedestrian access within centres to be sheltered and screened from south-westerly and northerly winds.

In the context of the pedestrian arrangements within Blackwood and the site layout, the relevant provisions in the Development Plan as they relate to pedestrian movement and access are considered to be satisfactorily achieved.

Further, the GTA report, which provides a detailed assessment of the summarised detail outlined above, concludes that the proposal will meet the relevant provisions of the Mitcham Development Plan as they relate to traffic, parking and access.

6.2.4 *Interface Considerations*

The following provisions are considered most relevant to the assessment of interface considerations particularly with respect to the adjoining Residential Zone.

Commercial (Main Road) Zone

PDC 7 *Development adjacent to residential zones should provide a two metre wide landscaped strip to screen such development from adjoining residential activities.*

Metropolitan Adelaide

Centres and Shops

PDC 18 *Development or redevelopment within business, centre, and shopping zones, or areas, should meet the following criteria:*

(g) *Acceptable micro-climatic conditions and degree of exposure in designing and orienting buildings, and locating open space and car parking areas.*

(h) *Development and operation of facilities within a zone, or area, compatible with adjoining areas. This should be promoted through landscaping, screen walls, centre orientation, location of access ways, buffer strips and transitional use areas.*

The location and design of centres and shopping development should ensure that all sources of noise, including refrigeration and air conditioning equipment, garbage collection and car parking, do not cause excessive or disturbing noise at neighbouring properties.

PDC 24 *Centres should have minimal adverse impacts on residential areas.*

Council Wide

Centre and Shops

PDC 14 *Non-residential development adjacent to residential development and/or zones should, where appropriate, be designed, sited, constructed, landscaped and operated in a manner which will minimise the impact of such activities on adjacent residential development and occupants.*

PDC 68 *Development within centre zones should conform with the following design principles:*

(e) *Development should not cause a nuisance or hazard arising from:*

(i) *microclimatic conditions;*

(ii) *excessive noise;*

(iii) *odours;*

(iv) *overlooking;*

(v) *overshadowing; or*

(vi) *visual intrusion;*

Interface Planning Assessment

The subject site abuts a Residential Zone to the west and for a portion of the boundary, residential dwellings within the Commercial Zone to the north. A such, the potential interface impacts of the proposal have been assessed.

The potential for noise transfer from customers, vehicles, trucks and plant equipment is recognised and Sonus Acoustic Engineers were engaged to assess and make recommendations on the proposed development in accordance with the Environment Protection (Noise) Policy 2007 and the relevant provisions of the Mitcham Development Plan (refer to ***Appendix 9***)

The siting and orientation of the store presents to the south and east, with the main building entrance, stairs, ramp and lifts located to the east facing away from the neighbouring residential properties. There are minimal door openings and only high level windows within the building facing west towards the Residential Zone.

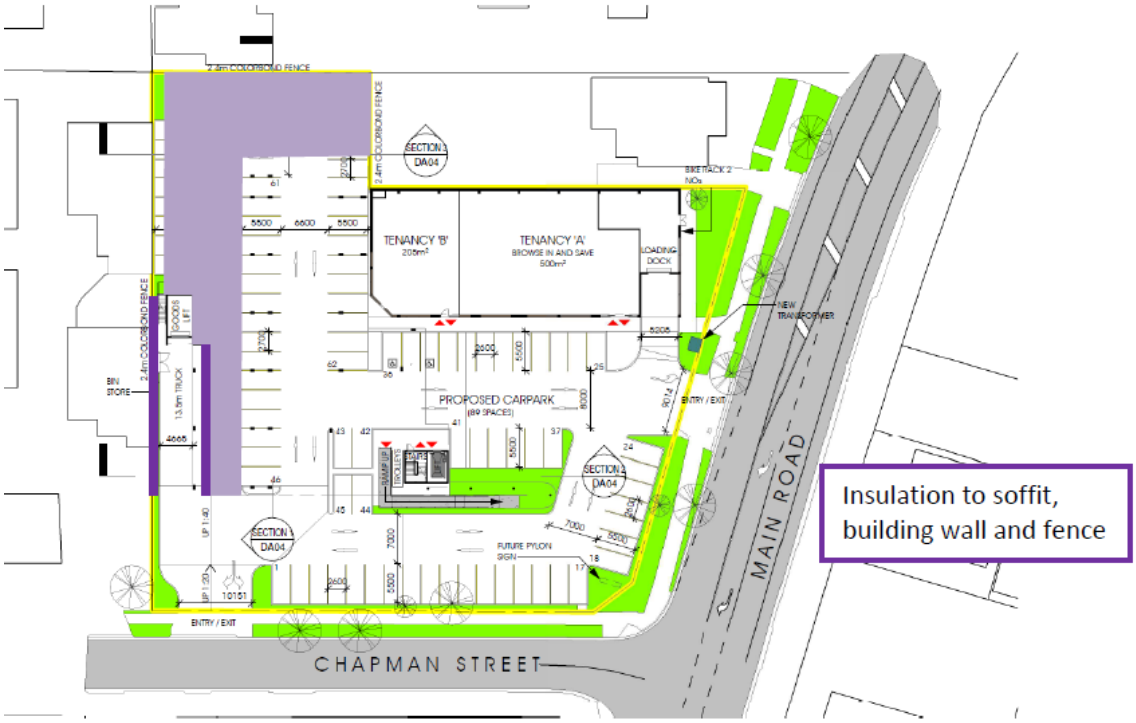
Plant equipment is contained within an acoustically screened plant platform on the building roof, off the property boundaries. This siting has been deliberately chosen to minimise noise transfer, while also limiting any views of the plant room from adjoining streets, public spaces and residential properties.

The vehicle access and egress is via the existing crossover on Chapman Street which is adjacent the Residential Zone to the west. Sonus have considered the impacts of noise generated by car park activity such as people talking, the opening and closing of vehicle doors, vehicles engines starting, vehicles idling, and vehicles moving into and accelerating away from their park position. In addition, Sonus have considered noise associated with truck deliveries such as trucks driving into the site, reversing into the loading dock (which his adjacent the western boundary), unloading and driving out of the site.

In order to manage this noise and ensure compliance with the Environment Protection (Noise) Policy 2007, the following measures have been adopted based on Sonus' recommendations:

- The shops including the ALDI store will not trade before 7am or after 10pm;
- Deliveries from trucks will not occur before 7am or after 10pm;
- Implementation of measures described in the ALDI SA "Delivery and loading procedures", such as turning off refrigeration and reversing beepers to minimise the noise from the delivery process;
- Use of low level exhausts on trucks (which is a specific modification made by ALDI to assist in optimising the noise reduction provided by boundary fencing);
- Fences at western and northern boundaries of the carpark to be constructed to a height of 2.4m above the floor level of the neighbouring residences. The fence should be constructed from a minimum of 9mm thick fibre cement sheet (or a material with an equal or greater surface density) which is sealed air tight at all junctions including at the ground, bins and corner of the site;
- Insulation to be installed on the inside face of the fence and part of the western facade of the ALDI building (adjacent the loading area); and
- Insulation to be installed to underside of soffit in car park areas for the shaded extent shown below.

Figure 6.6 *Acoustic treatments*



Sonus concludes that with the above acoustic measures in place, the development will be designed such that it will not detrimentally affect the amenity of the locality or cause unreasonable interference by the emission of noise, thereby achieving the relevant provisions of the Mitcham Council Development Plan.

There is no on-site food preparation (unlike other supermarkets) and accordingly issues of odour are not envisaged.

Overshadowing diagrams have been produced to compare the existing overshadowing experienced by the properties to the immediate west with the shade cast by the proposed ALDI Store. In summary, the dwellings to the west (which comprise small units with courtyards) will experience greater levels of overshadowing during the winter solstice up to 11am. After this, the proposed development has no impact on the level of shadow cast over those properties. For obviously orientation reasons the development does not cast any additional shadow on the properties to the north. The proposal therefore achieves the Development Plan provisions relating to microclimatic considerations.

It is acknowledged that the Zone PDC 7 calls for the inclusion of a 2-metre landscaping strip between commercial development and adjoining residential properties. The proposal achieves this in part with a building setback of 2 metres provided, however landscaping is not able to be provided for the full length of the western boundary due to the location of carparking spaces along the western boundary. Where possible shrubs interspersed with Capital Pear trees are to be planted along this boundary.

Further it is recognised that the proposed building will be more visible and closer to the zone interface boundary than the existing built form and as such the perceptible impacts of the commercial development will be more evident to the adjoining residential properties (including those to the north where the proposed wall is sited on the boundary).

In assessing the amenity-related impacts of a development, it is worthwhile considering the contemplated land uses for the locality. For example, residential properties located in close proximity to commercial zones and activities and close to main roads, will typically be exposed to greater amenity-related impacts created by commercial built form, greater volumes of noise and the like when compared with residential properties situated within the heart of a residential zone.

Whilst the preservation of high levels of amenity is of importance, it is also necessary to consider existing and anticipated land use activities within the locality when determining what is an acceptable amenity level for a locality.

This view is consistent with the approach adopted by the Environmental Resources and Development Court, as considered in the matter of *Wilkins v City of Unley [ERDC No. 524 of 2000*]:

> *If people choose to live at or near the boundary between a residential zone and a business zone, they must expect some noise, traffic, overshadowing and the like which would not be appropriate further into the residential zone. Likewise, the businesses must expect some residentially based activities which may annoy.*

In considering the potential interface issues which may arise from the proposal, it is our view that, subject to certain treatments, the development will satisfy the relevant provisions of the Development Plan.

6.2.5 *Landscaping and Vegetation*

The following provisions are considered most relevant to the assessment of landscaping, vegetation and site works.

Metropolitan Adelaide

Centres and Shops

PDC 20 *Landscaping should form an integral part of centre design, and be used to foster human scale, define spaces, reinforce paths and edges, screen utility areas, and generally enhance the visual amenity of the area.*

Council Wide

Vegetation and Landscaping

PDC 33 -

(a) *Development should minimise the removal of existing vegetation on the site and provide appropriate replacement of any vegetation that is required to be removed. Development should not involve the removal of any remnant native vegetation or other vegetation that contributes to the character of the site and the desired character of the locality.*

(b) *Development should preserve the long-term stability and health of existing vegetation by avoiding construction, excavation and filling of land close to the trunks of trees and minimising impervious surfaces beneath the canopy of trees. In particular, the construction of dwellings and in-ground swimming pools, or the excavation or filling of land that alters the natural ground level by more than 300 millimetres, should not be undertaken beneath the canopy of any tree.*

(c) *Development should provide landscaping that enhances the appearance and amenity of the site and complements the desired character of the locality. Landscaping should incorporate species of a type and size appropriate to their location, and have regard to the species contained in Table Mit/2. …*

Centres and Shops

PDC 68 *Development within centre zones should conform with the following design principles:*

(g) *Landscaping should be provided and maintained to:*

(i) *soften the hard outline of the built-form;*

(ii) *establish a buffer between development in the zone and adjacent areas;*

(iii) *complement and re-inforce the landscaping associated with adjacent development, except where such adjacent landscaping is inadequate, so as to enhance the visual appearance and character of the zone;*

(iv) *shade, define and create windbreaks for pedestrian paths and spaces;*

(v) *screen service yards, loading areas and outdoor storage areas;*

(vi) *screen, shade and enhance the appearance of car parking areas by utilizing clean trunked trees with high canopies and by planting between roadways and car parking areas; and*

(vii) *divide large car parking areas into smaller, visually separate areas;*

Landscaping and Vegetation Planning Assessment

The proposal seeks to retain and protect the most significant trees towards the front and around the perimeter of the site and supplement the site landscaping with a variety of species recommended by Outerspace Landscape Architects. Suitable protection measures around the existing vegetation will be implanted including managed excavation, surface treatments and kerbing alignment to ensure root protection zones are not adversely disturbed.

A detailed analysis of the large Lemon Scented Gum on the adjoining property has also been undertaken and similar measures will be employed to protect this tree from site works occurring within the vicinity of its root zone. Some limb removal will likely be necessary however given the canopy spread, the removal of the smaller limbs overhanging the driveway area on the subject site will not be detrimental to the trees health.

Figure 6.7 *Lemon Scented Gum at 8 Chapman Street (in the foreground) to be protected during construction*

The only trees to be removed are unregulated and/or have been assessed to have a low retention rating. The three (3) of the larger (albeit not protected) trees to be removed are along the rear boundary of the site and are not particularly evident from public spaces, although it is recognised they are partially visible from the adjoining residential properties.

A selection of low shrubs and grasses will fill the landscaping beds between new larger trees to be planted and landscaping beds within shaded area are proposed to feature shade tolerant pants (i.e. in the under-croft carpark and below the pedestrian ramp). The new landscaping will complement and enhance the development, is consistent with species selected within the Main Road streetscape, will assist to define the site edges, identify key access points and provide boundary screening to the west. The application achieves Zone PDC 20 as well as Council Wide PDC's 33 and 68 which seeks to minimise the removal of existing vegetation, preserve the long-term stability and health of existing vegetation, provide landscaping that enhances the appearance and amenity of the site and complements the desired character of the locality.

6.2.6 *Signage*

The following provisions are considered most relevant to the assessment of signage.

Commercial (Main Road) Zone

OBJ 3: *Outdoor advertising display which is designed to provide clearly visible property and business identification without dominating the appearance of the site upon which it is located or the streetscape.*

OBJ 4: *Outdoor advertising display which is specifically designed to have an overall co-ordinated appearance with all other advertisements complimentary to the building or site.*

OBJ 5: *Advertisements directed primarily towards a pedestrian audience and are compatible with the broader design and streetscape objective for the area.*

PDC 12 *Brilliant white and bright reflective colours should be avoided in advertisement and as a background to advertisements.*

Given the very nominal amount of signage proposed in this application, the Metropolitan and Council Wide provisions relating to signage have not been listed here.

Signage Planning Assessment

A nominal amount of façade signage is proposed in this application simply to identify the intent to construct an ALDI Store. Further signage will be proposed via a separate application once the final tenancy arrangements have been confirmed (namely, final arrangments for Tenancy B, as Tenancy 2 is confirmed to be Browse and Save) and a coordinated site wide scheme has been resolved.

Notwithstanding the two (2) illuminated facade signs are integrated within the building design and are appropriately sited and scaled to complement the building design and façade treatment and achieve the outdoor advertising provisions within the Commercial Zone.

6.2.7 *Stormwater Management*

The following provisions are considered most relevant to the assessment of stormwater management.

Metropolitan Adelaide

Stormwater Management

OBJ 19 *Development which maximises the use of stormwater.*

OBJ 20 *Development designed and located to protect stormwater from pollution sources.*

OBJ 21 *Development designed and located to protect or enhance the environmental values of receiving waters.*

OBJ 22 *Development designed and located to prevent or minimise the risk of downstream flooding.*

Council Wide

PDC 38 *Development of stormwater management systems should be designed and located to improve the quality of stormwater, minimise pollutant transfer to receiving waters, and protect downstream receiving waters from high levels of flow.*

PDC 39 *Development affecting existing stormwater management systems should be designed and located to improve the quality of stormwater, minimise pollutant transfer to receiving waters, and protect downstream receiving waters from high levels of flow.*

Stormwater Planning Assessment

A preliminary Stormwater Management Plan has been prepared by Wallbridge Gilbert Aztec. This report assesses the current management of stormwater on the site and the proposed method of water runoff from the redeveloped site.

- As the site is already completely impervious (either covered in building or bitumen car park with the exception of small areas of landscaping), the proposed development will not increase the peak flow rate of water runoff from the subject site and therefore, on the advice of Council, on-site water detention is not required.
- As per the advice of Council, minimum site and building floor level have been established to accommodate 1 in 100 year flows and stormwater quality improvement measures will been incorporated to improve the quality of run off from the site (an upgrade from the existing arrangements). Runoff from the car parking area and other paved areas will be treated by a gross pollutant trap or other suitable filtration method before being discharged to existing street drainage system.

In the context of the site characteristics and available infrastructure, the proposed management of stormwater satisfies the relevant provisions of the Development Plan.

7. Conclusion

This development application seeks to establish an ALDI Store and adjoining retail tenancies within a Commercial (Main Road) Zone in the City of Mitcham. The site is currently occupied by some 1,600m of commercial / retail activities within a similar L shaped building configuration as that proposed. The proposal seeks to demolish part and readapt the remaining building for retail while also constructing a new supermarket.

Key planning considerations, which include land use and scale of retail development, carparking and access, landscaping and zone interface impacts, have been thoroughly examined and assessed in this report and the various appended specialist reports.

In considering this application, a balanced appraisal of all relevant Development Plan Objectives and Principles is required, together with pragmatic regard for the current realities of the locality and the considerably out date planning policy. In addition, case law has identified a number of general principles to guide a planning authority in the interpretation and use of Development Plan provisions in assessing the planning merits of an application. These principles require a planning authority to recognise that:

- The Development Plan is a 'practical code calling for practical application';
- The Development Plan is a practical 'planning document' rather than a statute. In other words, it is to be approached on the basis that it expresses planning objectives and principles rather than hard and fast rules having mandatory effect.

Following an inspection of the subject site and locality, a review of the proposed plans and associated documentation accompanying the application and a detailed assessment of the proposed development against the relevant provisions of the Mitcham Council Development Plan, we have formed the opinion that the proposed development represents appropriate and orderly development that deserves favourable consideration for approval.

In forming this view, we note that:

- The proposal retains the existing use of the land (retail/commercial) and provides a new retail offering in a locality where a shortfall exists, given the size of the catchment area;
- The building features a contemporary design which, combined with the proposed materials and finishes, appropriately responds to the built form character sought in the Commercial (Main Road) Zone;
- The development will be integrated with the broader community through the utilisation of the existing road network and pedestrian movements throughout the area;
- Projected traffic generation and distribution will not adversely impact on the intended function and/or capacity of the adjacent road networks;

- The site has been designed to accommodate safe and convenient vehicle access, egress and circulation, including service vehicles that will enter the site in forward direction, safely reverse into the loading dock and exit the site in a forward direction;
- The supply of car parking spaces will satisfy the anticipated demand generated by the proposed retail operations; and
- The proposal retains and protects mature trees where possible and incorporates new landscaping to enhance the aesthetics of the site.

The proposed development is therefore sufficiently aligned with the most relevant provisions of the Mitcham Council Development Plan and warrants Development Plan Consent, subject to reasonable and relevant conditions.

ekistics

Appendix 1. Certificate of Title

Government of South Australia
Department of Planning, Transport and Infrastructure

Product	Register Search
Date/Time	18/04/2016 04:51PM
Customer Reference	
Order ID	20160418011271
Cost	$27.25

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.

Registrar-General

Certificate of Title - Volume 6126 Folio 685

REAL PROPERTY ACT, 1886
South Australia

Parent Title(s)	CT 5164/458
Dealing(s) Creating Title	DDA 12041314
Title Issued	10/12/2013
Edition	2
Edition Issued	25/11/2014

Estate Type

FEE SIMPLE

Registered Proprietor

198-200 MAIN ROAD BLACKWOOD PTY. LTD. (ACN: 106 620 606)
OF CARE GANT LEVEL 3/18 DEQUETTEVILLE TERRACE KENT TOWN SA 5067

Description of Land

ALLOTMENT 102 DEPOSITED PLAN 22970
IN THE AREA NAMED BLACKWOOD
HUNDRED OF ADELAIDE

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED A TO THE ELECTRICITY TRUST OF SOUTH AUSTRALIA (T 6688192)

Schedule of Dealings

Dealing Number	Description
10477902	LEASE TO SA TAB PTY. LTD. COMMENCING ON 1/4/2006 AND EXPIRING ON 31/3/2016 OF PORTION (SHOP 2.A IN FP 48148)
11956981	MORTGAGE TO EQUITY TRUSTEES LTD.
12202186	LEASE TO SOPHIE ELIZABETH PTY. LTD. COMMENCING ON 1/7/2014 AND EXPIRING ON 30/6/2017 OF PORTION (SHOP 4 IN GP 682/1988)

Notations

Dealings Affecting Title

NIL

Priority Notices

NIL

Notations on Plan

NIL

Registrar-General's Notes

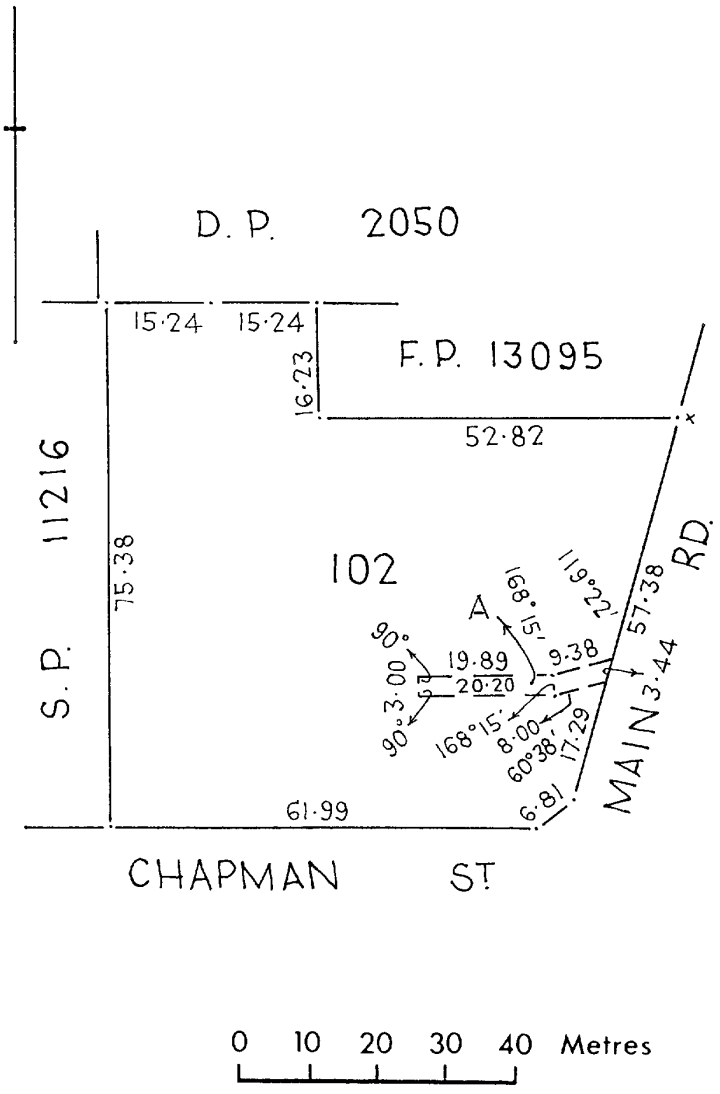
PLAN FOR LEASE PURPOSES VIDE G682/1988
APPROVED FILED PLAN FOR LEASE PURPOSES FX48148

Administrative Interests

NIL

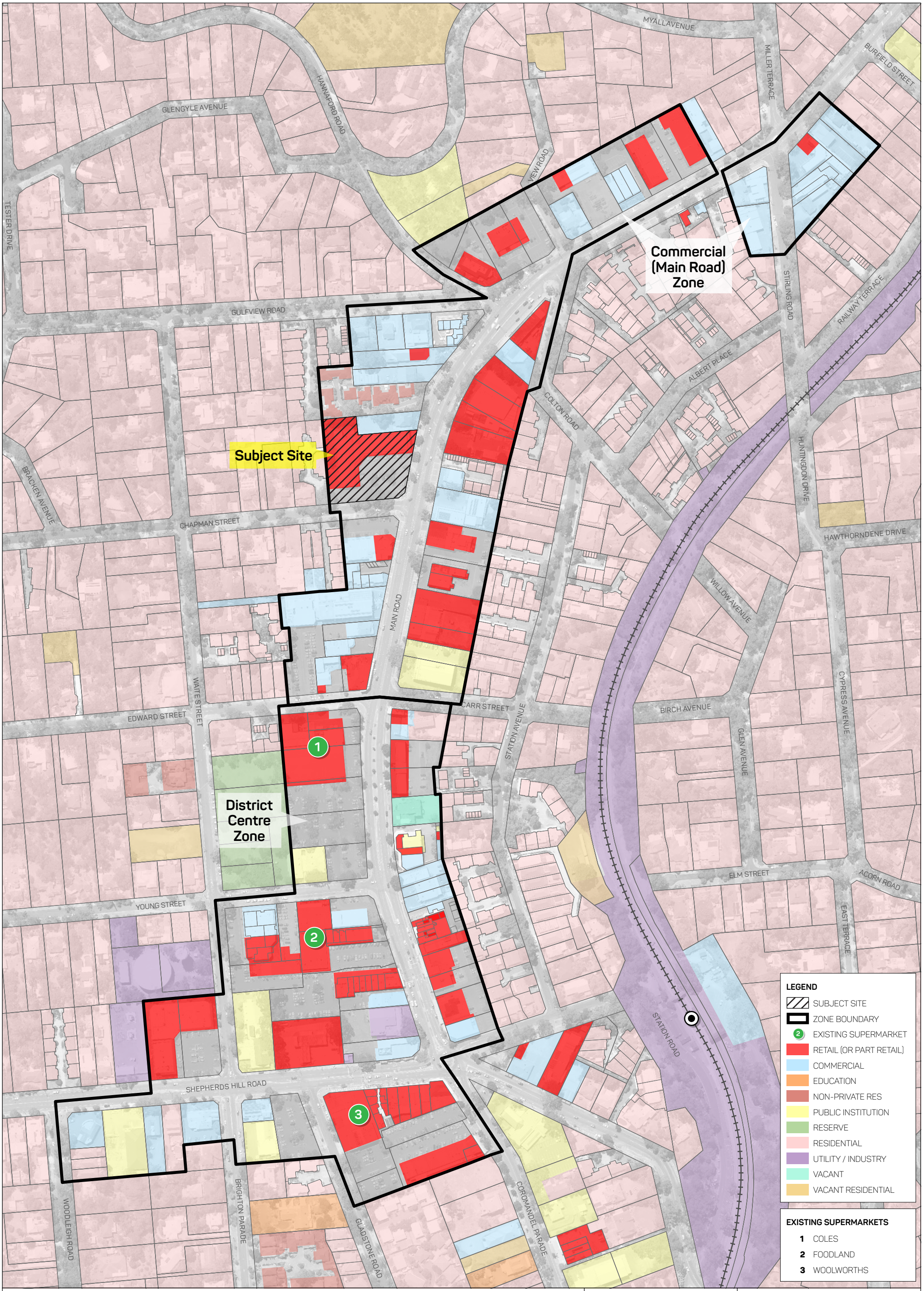
* Denotes the dealing has been re-lodged.

Product	Register Search
Date/Time	18/04/2016 04:51PM
Customer Reference	
Order ID	20160418011271
Cost	$27.25



ekistics

Appendix 2. Land Use Survey Map



DETAILED LAND USE
BLACKWOOD

ekistics

0148-005 R2>04.07.2017

ekistics

Appendix 3. Proposed Plans and Elevations

PROPOSED ALDI BLACKWOOD

198-200 MAIN ROAD
BLACKWOOD SA 5051

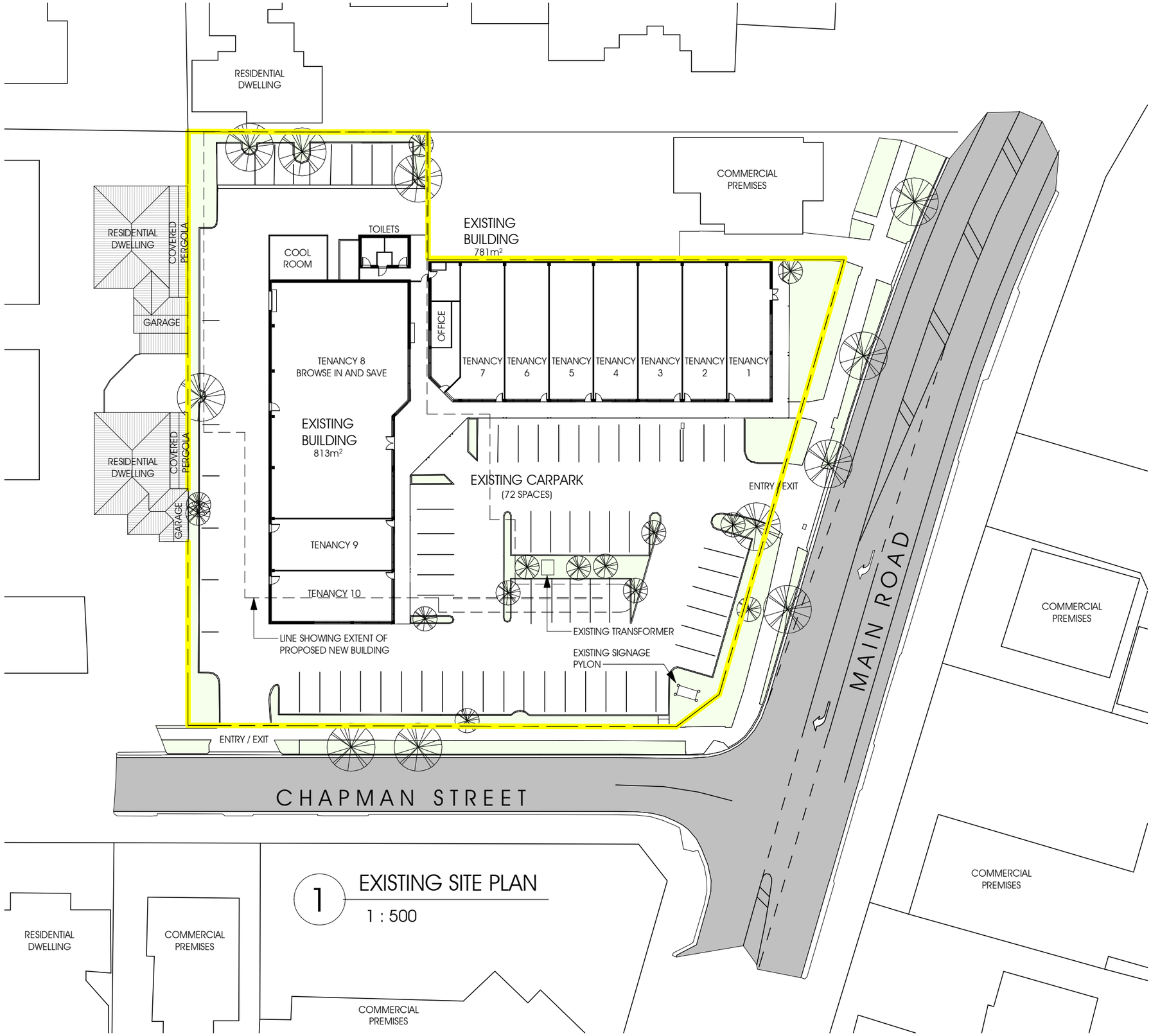
NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

PROPOSED ALDI BLACKWOOD

TABLE OF CONTENTS

NIELSEN ARCHITECTS

108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au



1 EXISTING SITE PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

ALDI

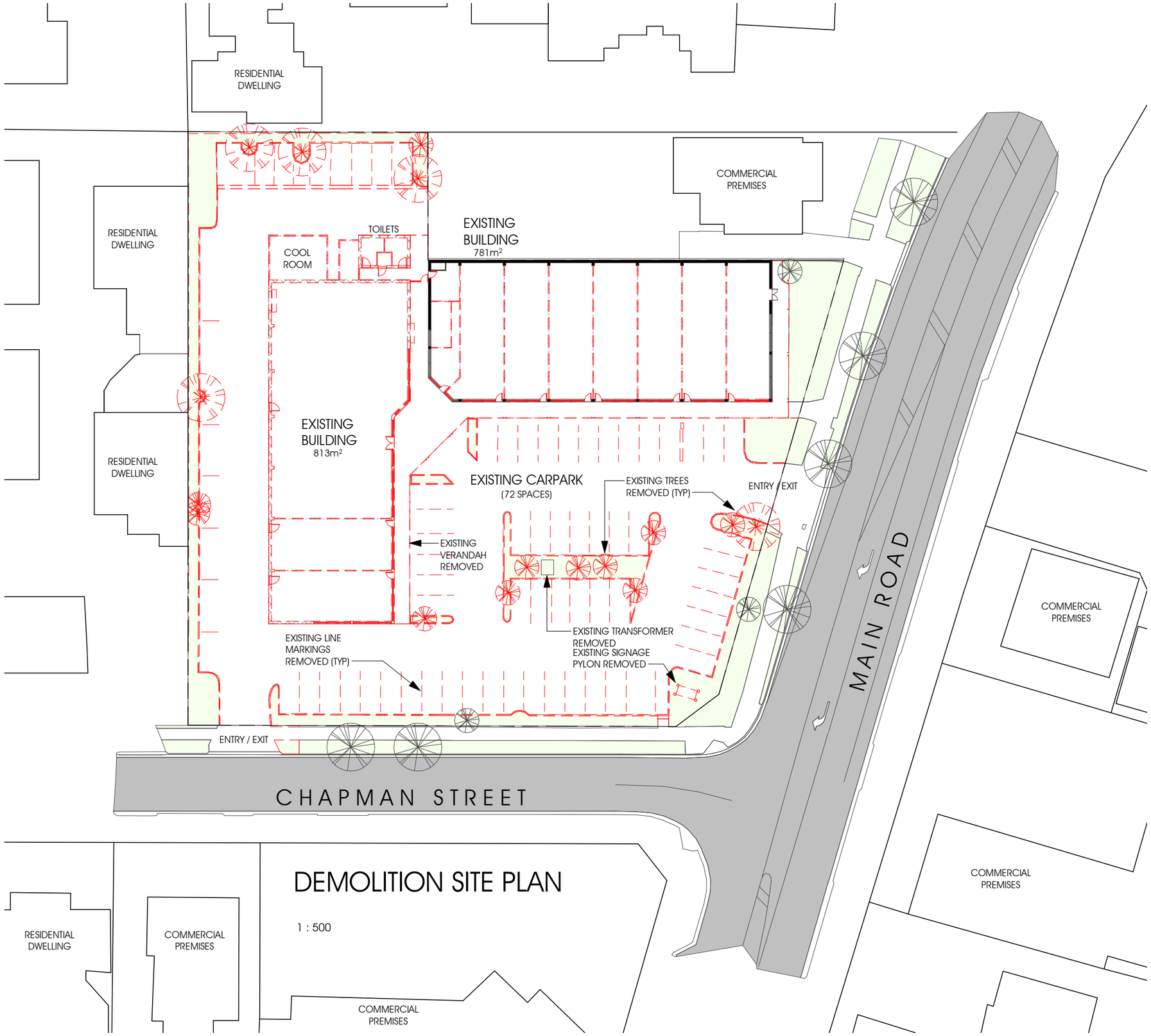
PROJECT
ALDI BLACKWOOD

DRAWING
EXISTING SITE PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 500	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA01		



DEMOLITION SITE PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

NOTE:
ALL ITEMS SHOWN RED/DASHED TO BE DEMOLISHED

CLIENT

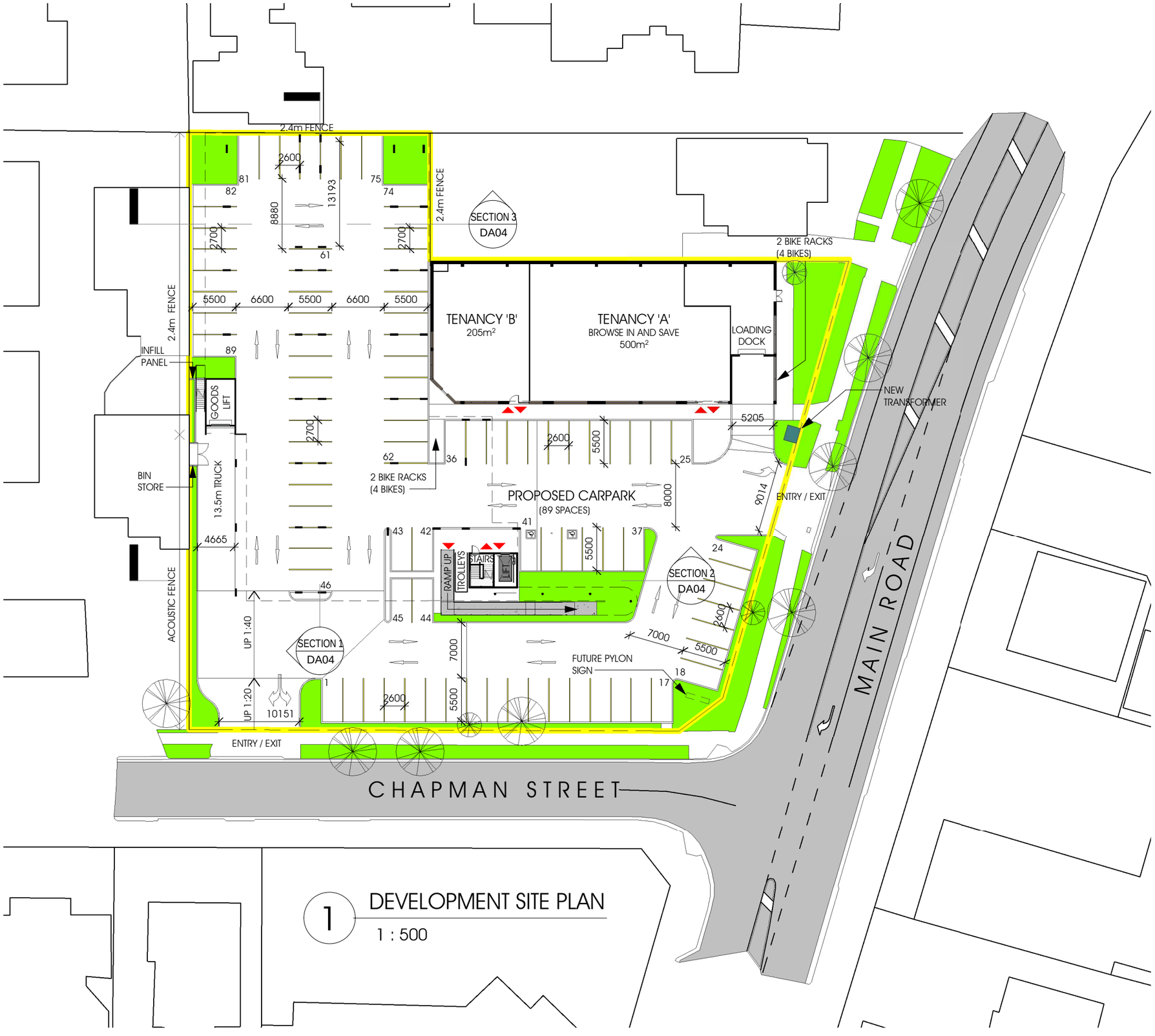
PROJECT
ALDI BLACKWOOD

DRAWING
DEMOLITION PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 500	31/03/17	Author	Checker

PROJECT No	DRAWING No	STATUS	REV
2090	DA01.2		



1 DEVELOPMENT SITE PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1639m²
ALDI NETT AREA	1589m²
ALDI RETAIL NETT AREA	1170m²
ALDI BOH NETT AREA	351m²
ALDI AMENITIES NETT AREA	68m²
NUMBER OF CARS	89
SIZE OF TRUCK	13.5m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LANDSCAPED AREA	

CLIENT

ALDI

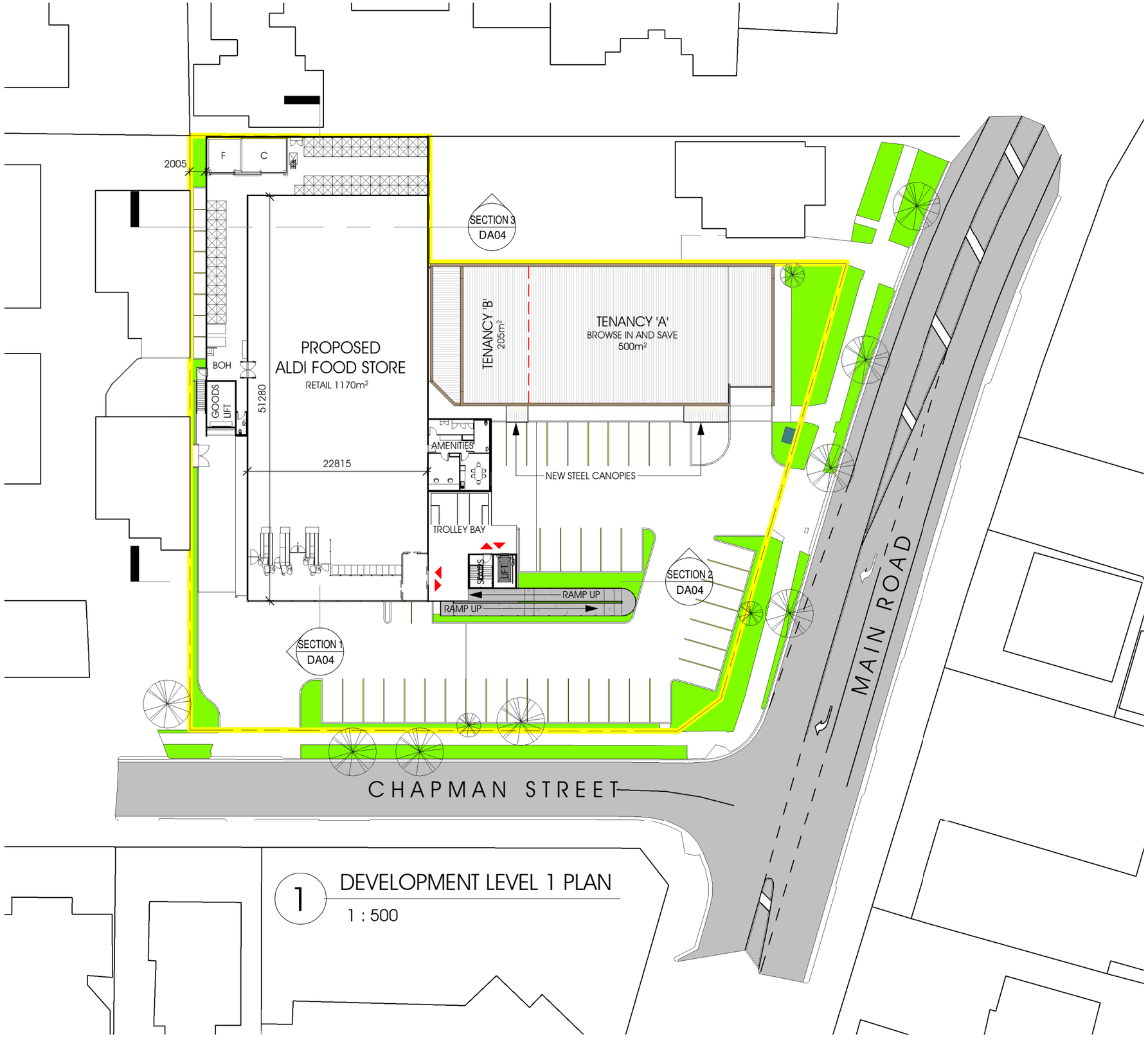
PROJECT
ALDI BLACKWOOD

DRAWING
DEVELOPMENT SITE PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA02.1		



1 DEVELOPMENT LEVEL 1 PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1639m²
ALDI NETT AREA	1589m²
ALDI RETAIL NETT AREA	1170m²
ALDI BOH NETT AREA	351m²
ALDI AMENITIES NETT AREA	68m²
NUMBER OF CARS	89
SIZE OF TRUCK	13.5m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LANDSCAPED AREA	

CLIENT

PROJECT
ALDI BLACKWOOD

DRAWING
DEVELOPMENT LEVEL 1 PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA02.2		

Existing Parapet
276460

Tenancy Level
270250

1 EXISTING EAST ELEVATION

1 : 250

plant
278100

Existing Parapet
276460

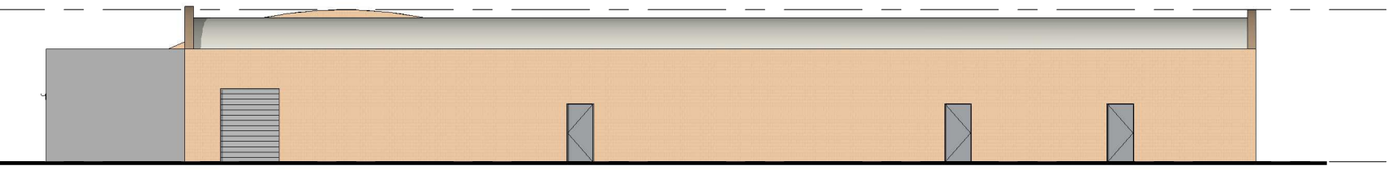
Tenancy Level
270250

2 EXISTING SOUTH ELEVATION

1 : 250

Existing Parapet
276460

Tenancy Level
270250



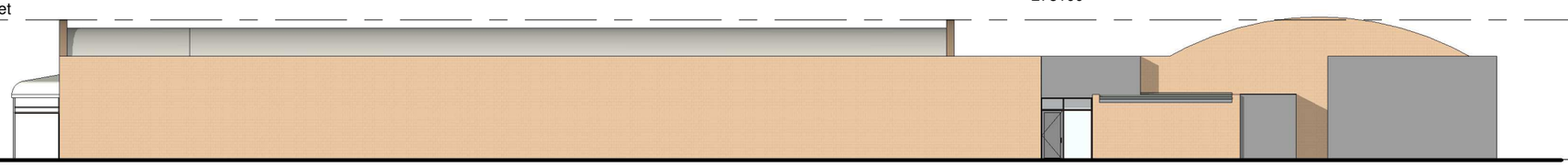
3 EXISTING WEST ELEVATION

1 : 250

plant
278100

Existing Parapet
276460

Tenancy Level
270250



4 EXISTING NORTH ELEVATION

1 : 250

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

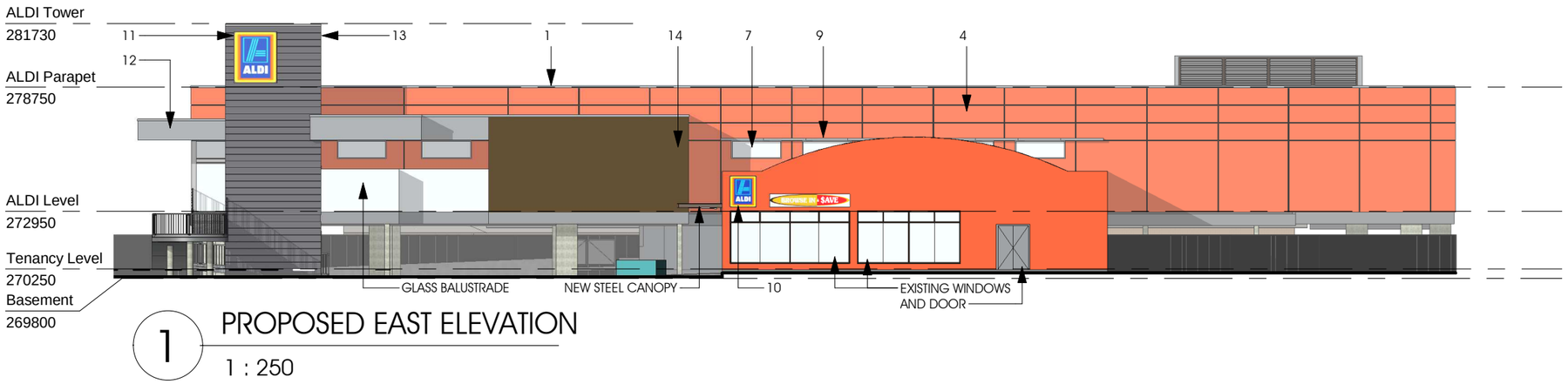
PROJECT
ALDI BLACKWOOD

DRAWING
EXISTING EXTERNAL ELEVATIONS

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

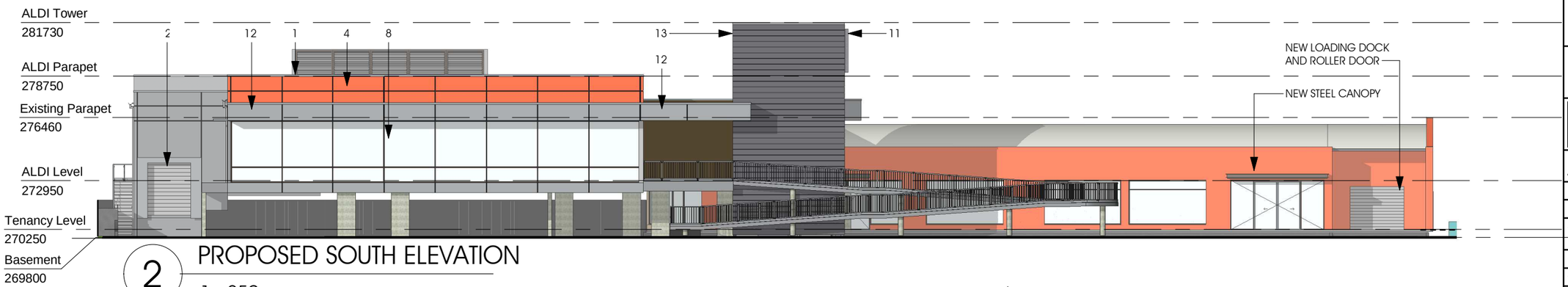
SCALE	DATE	DRAWN	CHECKED
1 : 250	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA03.1		



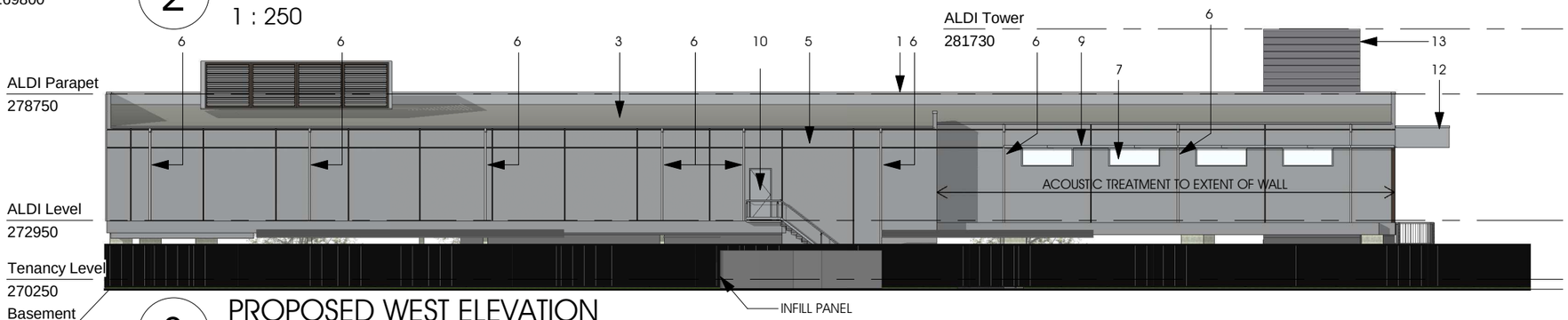
1 PROPOSED EAST ELEVATION

1 : 250



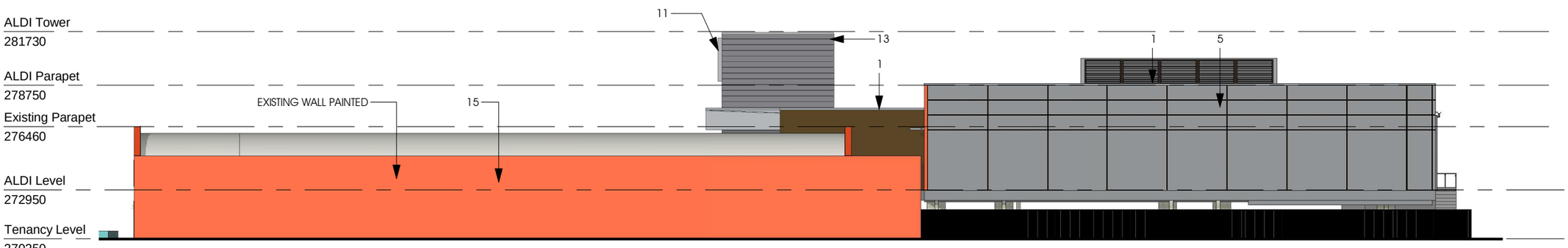
2 PROPOSED SOUTH ELEVATION

1 : 250



3 PROPOSED WEST ELEVATION

1 : 250



4 PROPOSED NORTH ELEVATION

1 : 250

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

MATERIAL SCHEDULE

	METAL PROFILED CLADDING - DULUX 'DRIVETIME'
	PRECAST RC PANEL, PAINT FINISH - DULUX 'OLD PEWTER'
	PRECAST RC PANEL, PAINT FINISH - DULUX 'FLUORESCENT FIRE'
	FIBRE CEMENT FASCIA, DULUX 'OLD PEWTER'
	PERFORATED METAL CLADDING, DULUX 'COPPER KINETIC'
1	COLORBOND CAPPING, COLOUR TO MATCH ADJACENT PRECAST PANEL FINISH
2	PANEL LIFT DOOR 'OLD PEWTER'
3	COLORBOND ROOF SHEETING 'SURFMIST'
4	PRECAST RC PANEL, DULUX 'FLUORESCENT FIRE'
5	PRECAST RC PANEL, DULUX 'OLD PEWTER'
6	GUTTER AND DOWNPIPES, 'BASALT GREY'
7	WINDOWS, ANODISED ALUMINIUM FRAMES, NATURAL FINISH
8	SHOPFRONT, ANODISED ALUMINIUM FRAMES, NATURAL FINISH
9	SUNSCREEN, POWDER COATED ALUMINIUM FRAME, COLORBOND BASALT GREY
10	DOOR & FRAME, DULUX 'OLDE PEWTER'
11	ALDI ILLUMINATED SIGNS
12	FIBRE CEMENT FASCIA, DULUX 'DRIVETIME'
13	METAL PROFILE CLADDING, DULUX 'DRIVETIME'
14	PERFORATED METAL SHEETING, POWDERCOATED DULIX 'COPPER KINETIC'
15	RENDER AND PAINT FINISH

CLIENT

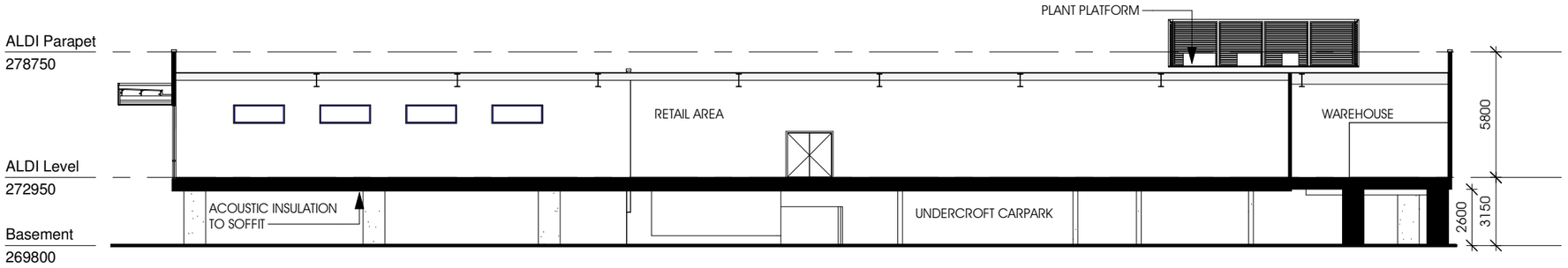
PROJECT
ALDI BLACKWOOD

DRAWING
PROPOSED ELEVATIONS

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

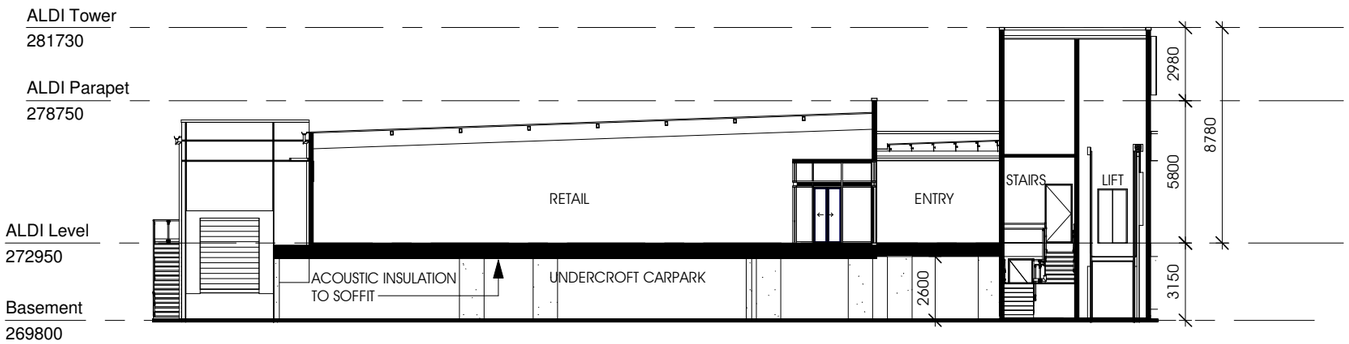
SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA03.2		



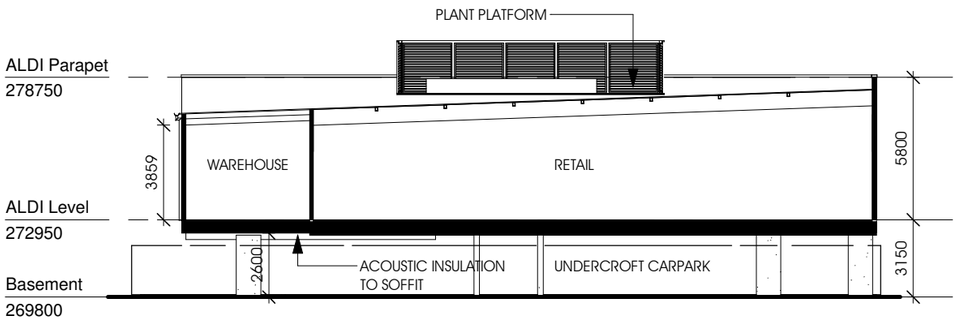
1 SECTION 1

1 : 250



2 SECTION 2

1 : 250



3 SECTION 3

1 : 250

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

ALDI

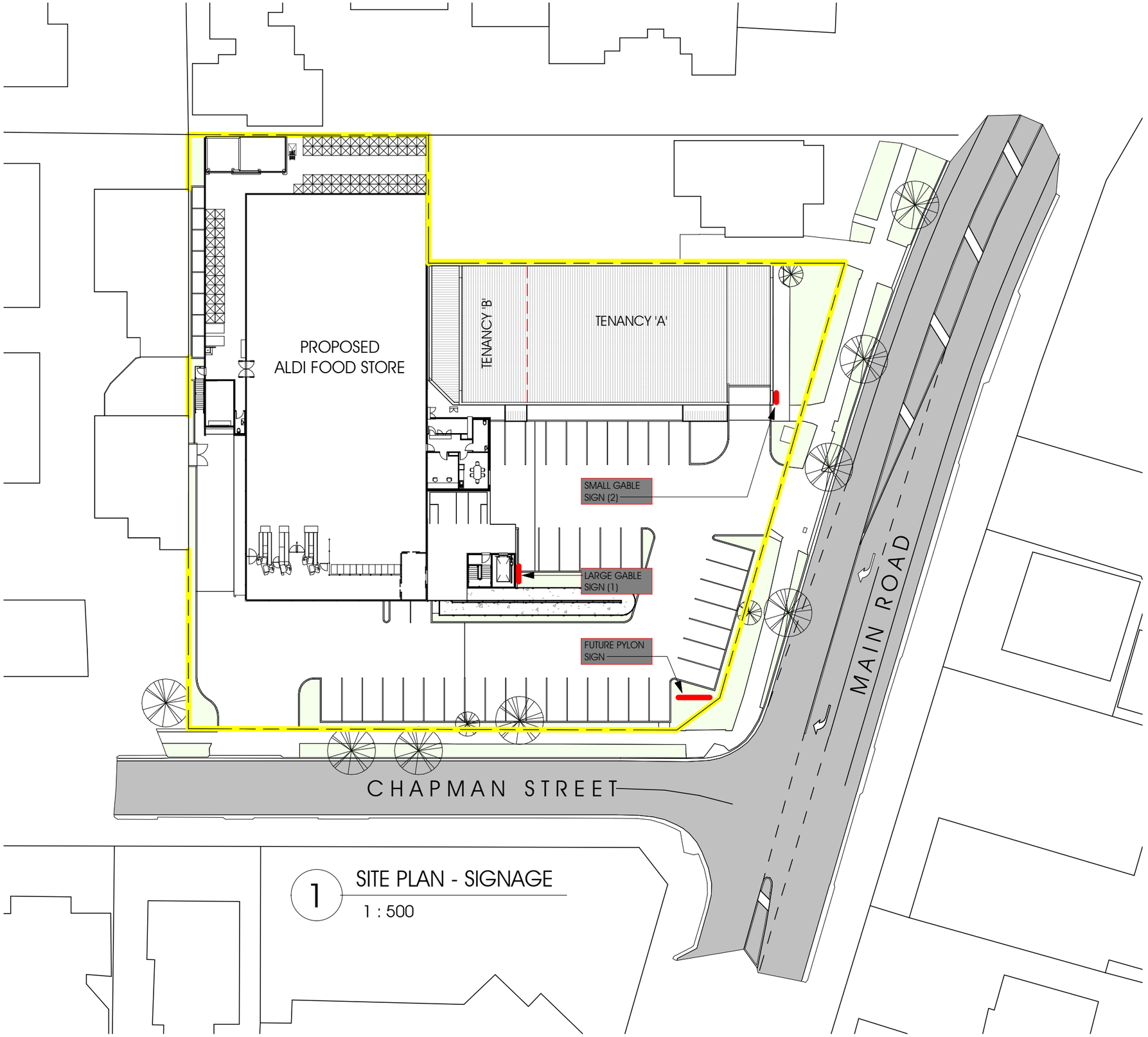
PROJECT
ALDI BLACKWOOD

DRAWING
SECTIONS

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 250	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA04		



1 SITE PLAN - SIGNAGE

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

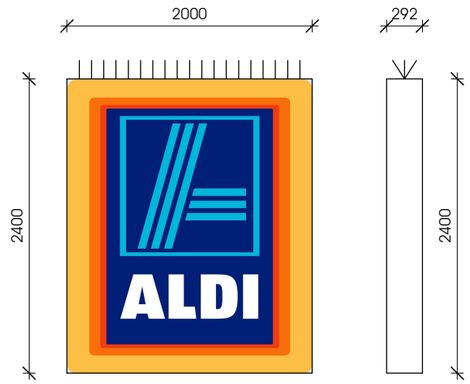
PROJECT
ALDI BLACKWOOD

DRAWING
SIGNAGE PLAN

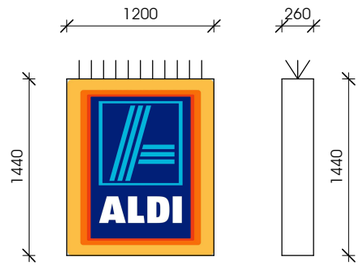
NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 500	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA05.1		



LARGE GABLE SIGN
LIGHTBOX
2000w x 2400h x 292d mm SINGLE SIDED
FLEXFACE WALL SIGN
DIR-571 OR SIMILAR 200mm ALUM SIGNBOX
EXTRUSION WITH 1.6mm ALUMINIUMCLADDING
TO BACK
PAINT FINISH EXTERNAL: DULUX OLD PEWTER
50243 70% GLOSS IN 2 PACK POLYURETHANE
OR POWDERCOAT FP964
PAINT FINISH INTERNAL: FLAT WHITE
INTERNAL ILLUMINATION: 'DAYLIGHT'
FLUORESCENT TUBES SPACED EVENLY
LIGHT OUTPUT: CALVIN - 40,000
LUMENS 16,500



SMALL GABLE SIGN
LIGHTBOX
1200w x 1440h x 260d mm SINGLE SIDED
FLEXFACE WALL SIGN
DIR-571 OR SIMILAR 200mm ALUM SIGNBOX
EXTRUSION WITH 1.6mm ALUMINIUMCLADDING
TO BACK
PAINT FINISH EXTERNAL: DULUX OLD PEWTER
50243 70% GLOSS IN 2 PACK POLYURETHANE
OR POWDERCOAT FP964
PAINT FINISH INTERNAL: FLAT WHITE
INTERNAL ILLUMINATION: 'DAYLIGHT'
FLUORESCENT TUBES SPACED EVENLY
LIGHT OUTPUT: CALVIN - 40,000
LUMENS 16,500

1 SIGNAGE DETAILS
1 : 50

NOTES ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT ALDI

PROJECT
ALDI BLACKWOOD

DRAWING
SIGNAGE DETAILS

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 50	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA05.2		

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

PROJECT
ALDI BLACKWOOD

DRAWING
3D RENDERS SHEET 1

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA08.1		

NOTES ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

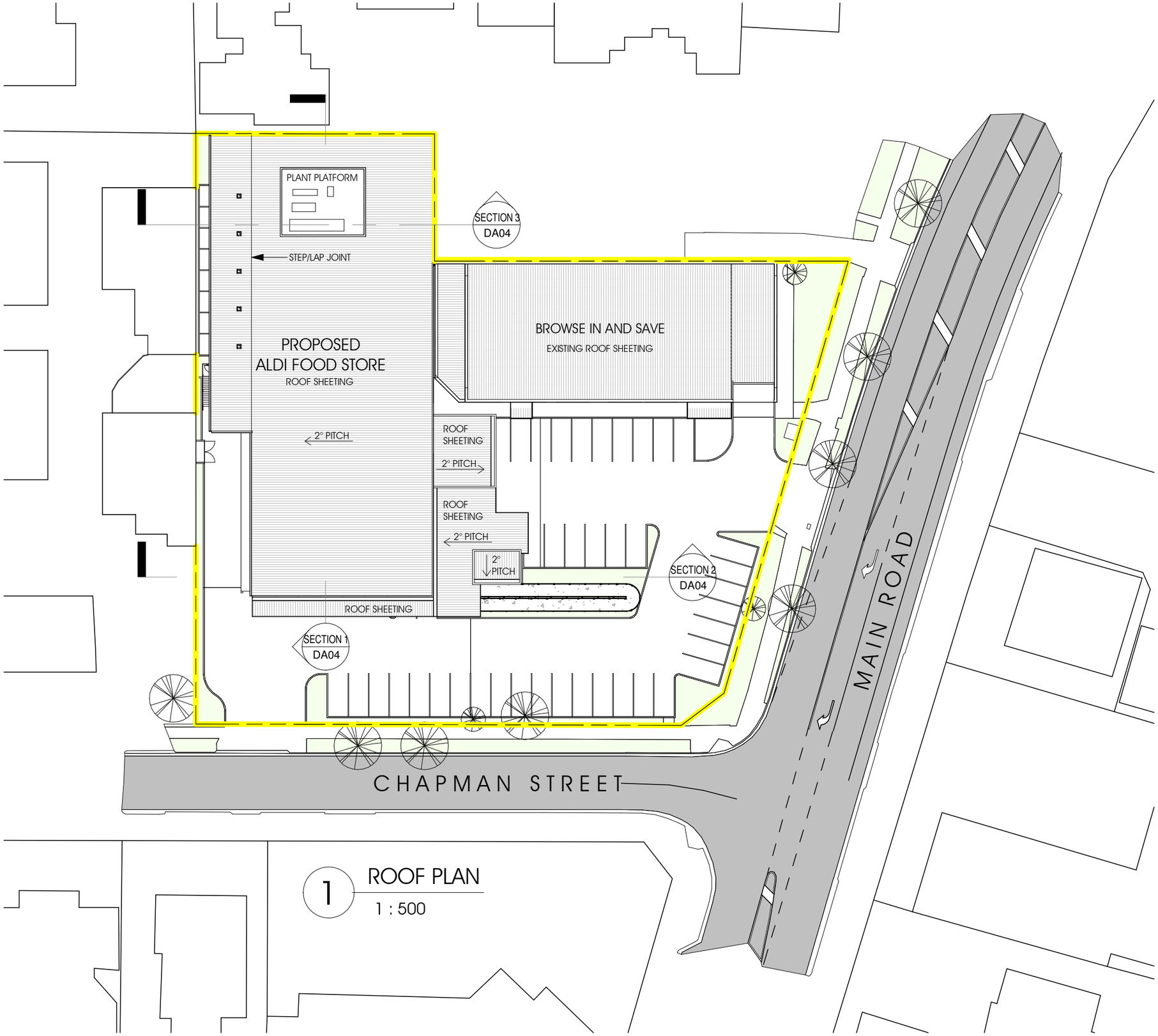
PROJECT
ALDI BLACKWOOD

DRAWING
3D RENDERS SHEET 2

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA08.2		



1 ROOF PLAN
1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

PROJECT
ALDI BLACKWOOD

DRAWING
PROPOSED ROOF PLAN

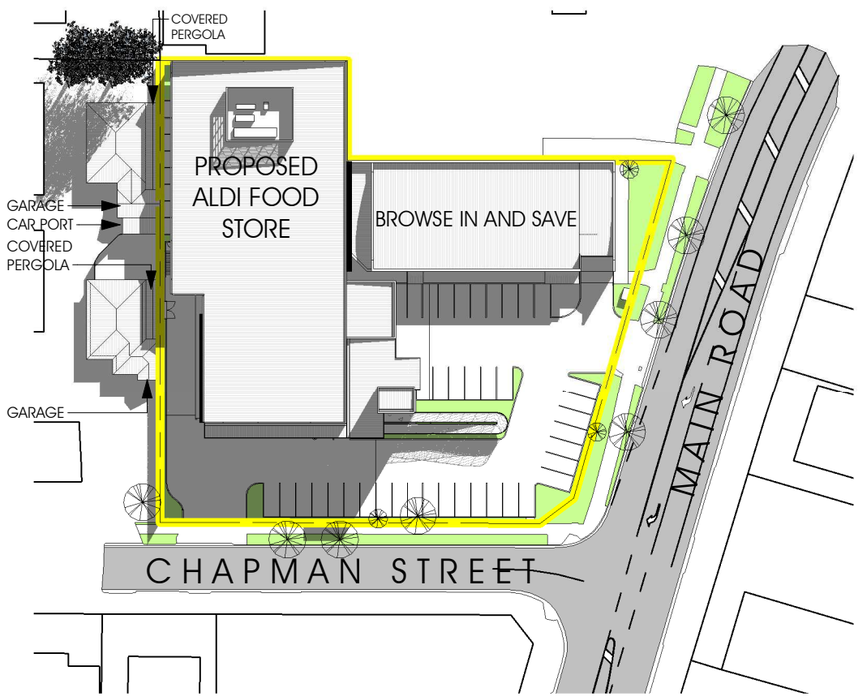
NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 500	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA09		

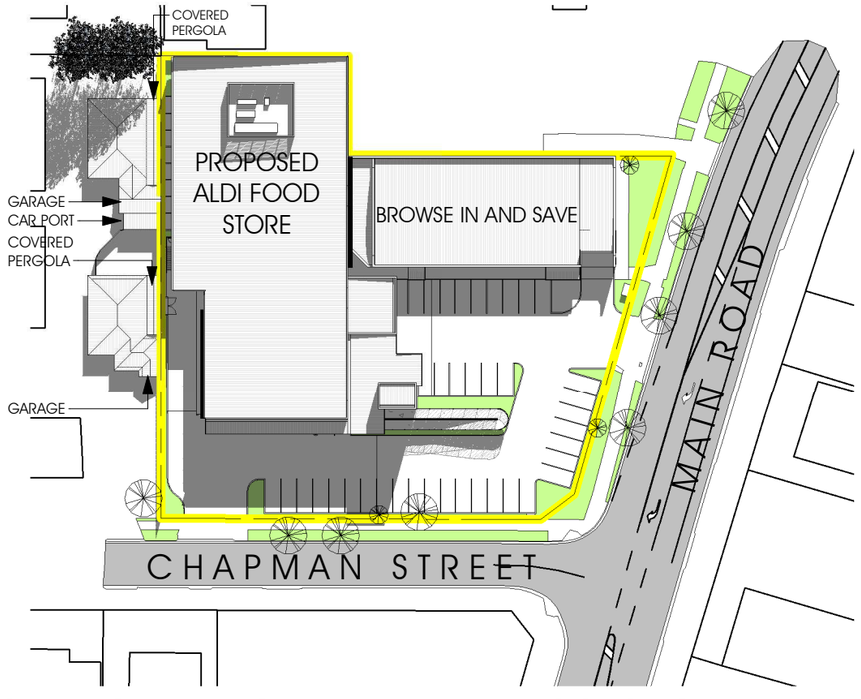
SHADOW DIAGRAM - WINTER SOLSTICE 9am

1 : 1000



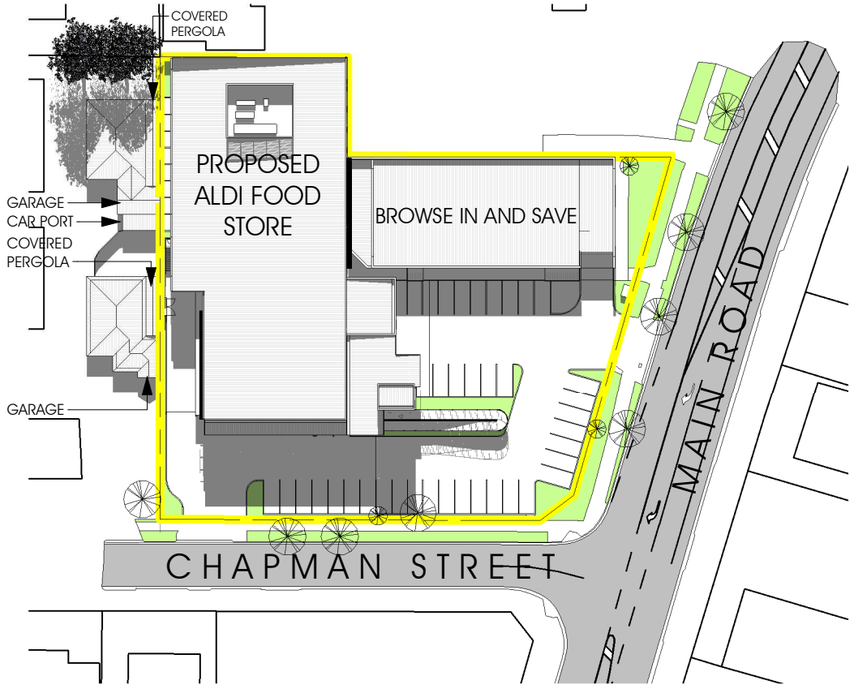
SHADOW DIAGRAM - WINTER SOLSTICE 10am

1 : 1000



SHADOW DIAGRAM - WINTER SOLSTICE 11am

1 : 1000



SHADOW DIAGRAM - WINTER SOLSTICE 12pm

1 : 1000

NOTES ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

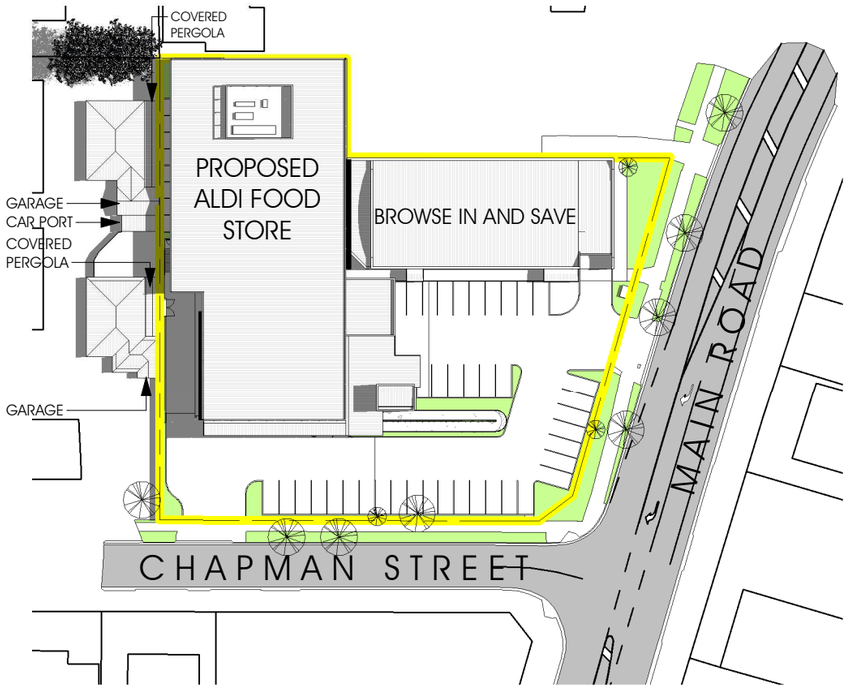
PROJECT
ALDI BLACKWOOD

DRAWING
PROPOSED SHADOW DIAGRAM - WINTER SOLSTICE

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

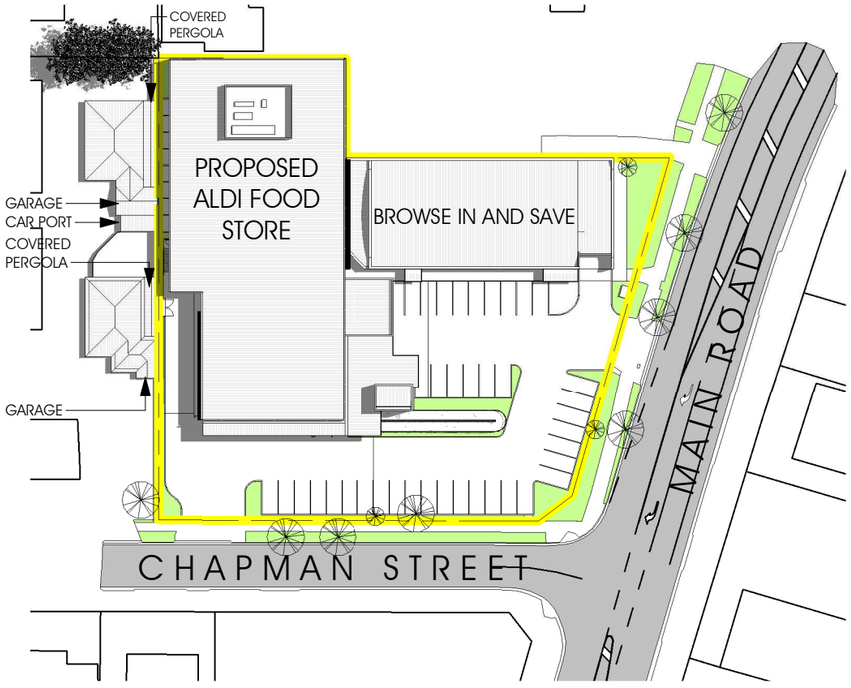
SCALE	DATE	DRAWN	CHECKED
1 : 1000	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA10.1		



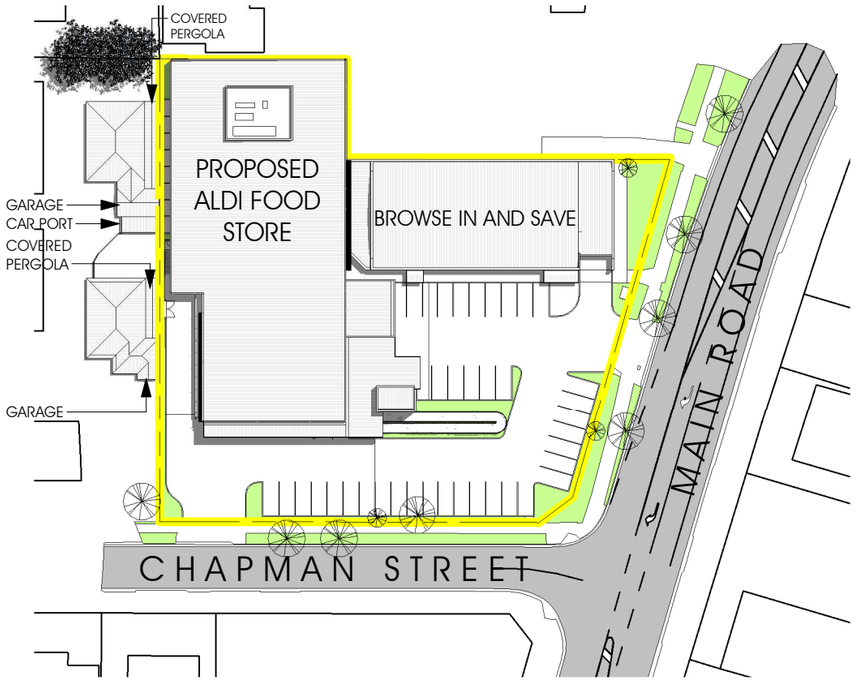
SHADOW DIAGRAM - SUMMER SOLSTICE
9am

1 : 1000



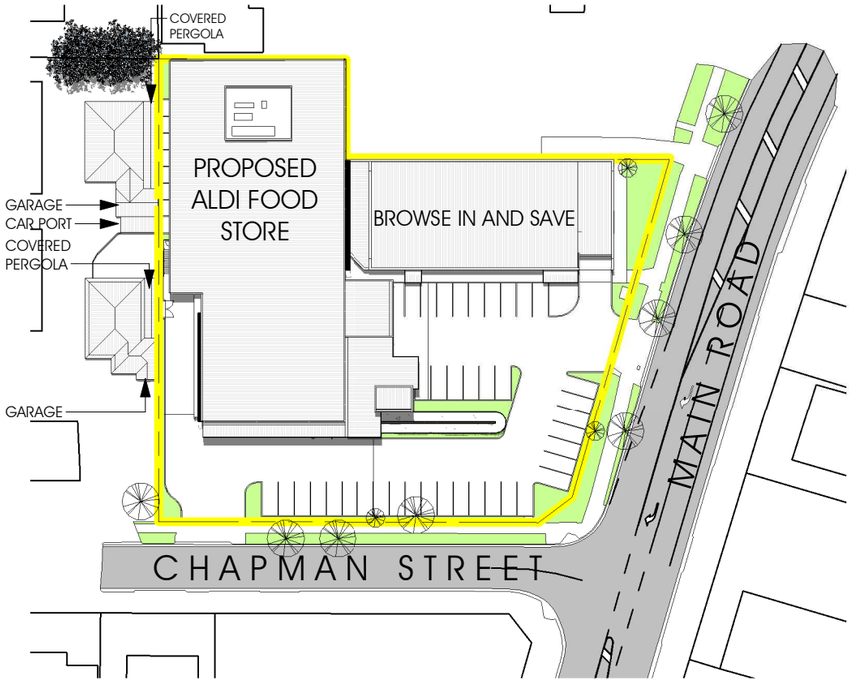
SHADOW DIAGRAM - SUMMER SOLSTICE
10am

1 : 1000



SHADOW DIAGRAM - SUMMER SOLSTICE
11am

1 : 1000



SHADOW DIAGRAM - SUMMER SOLSTICE
12pm

1 : 1000

NOTES ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

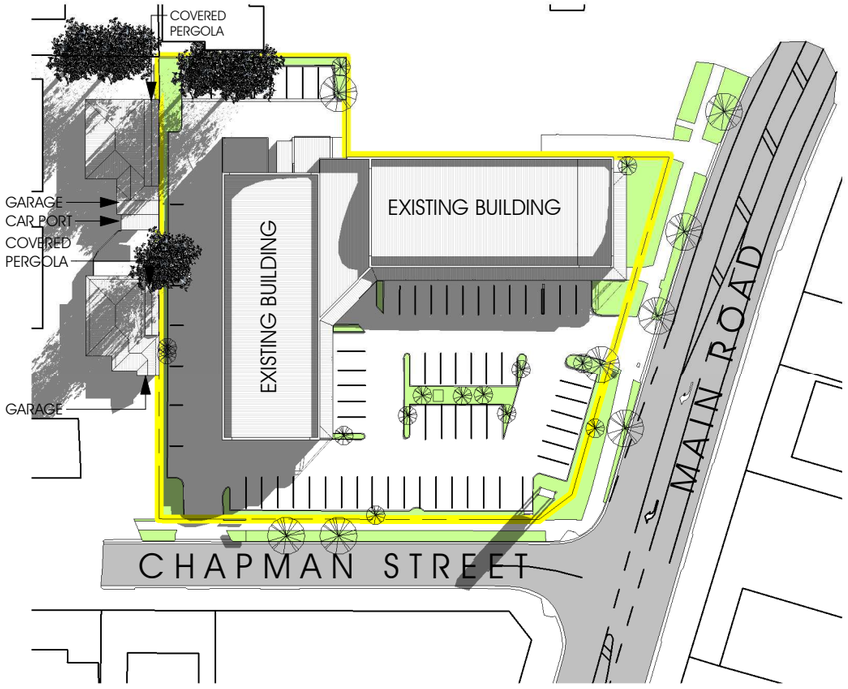
PROJECT
ALDI BLACKWOOD

DRAWING
PROPOSED SHADOW DIAGRAM - SUMMER SOLSTICE

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

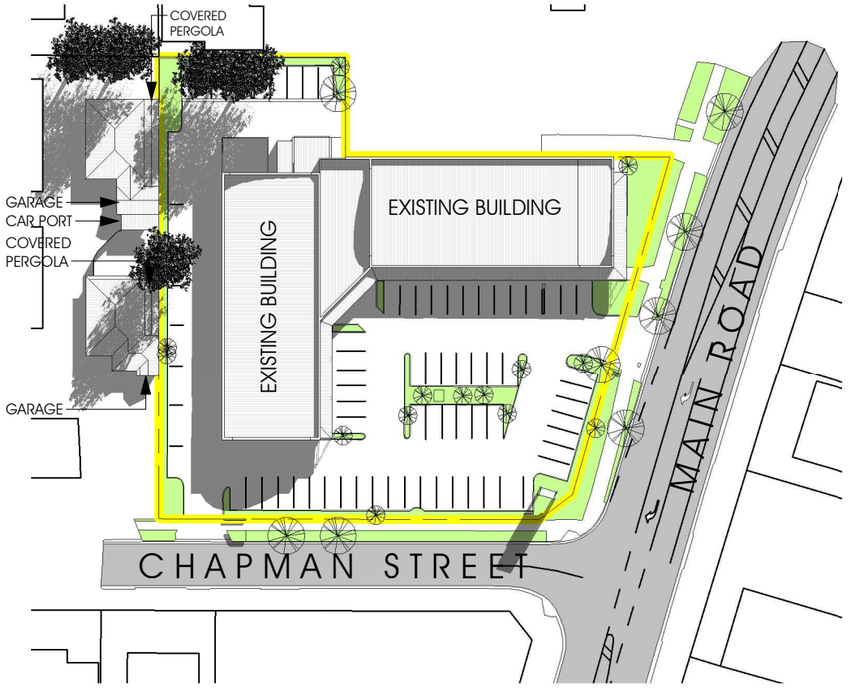
SCALE	DATE	DRAWN	CHECKED
1 : 1000	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA10.2		



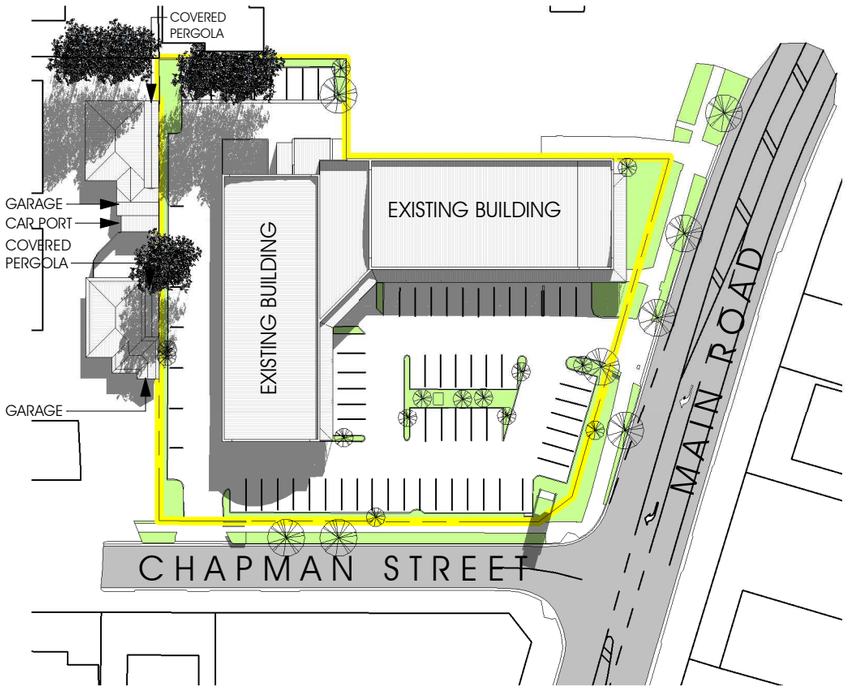
SHADOW DIAGRAM - EXISTING WINTER SOLSTICE 9am

1 : 1000



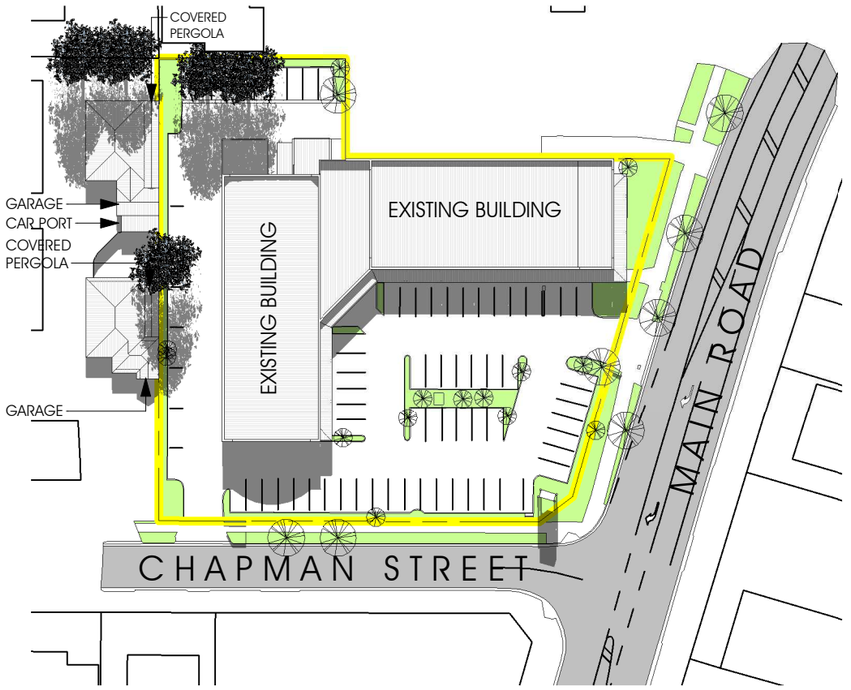
SHADOW DIAGRAM - EXISTING WINTER SOLSTICE 10am

1 : 1000



SHADOW DIAGRAM - EXISTING WINTER SOLSTICE 11am

1 : 1000



SHADOW DIAGRAM - EXISTING WINTER SOLSTICE 12pm

1 : 1000

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

ALDI

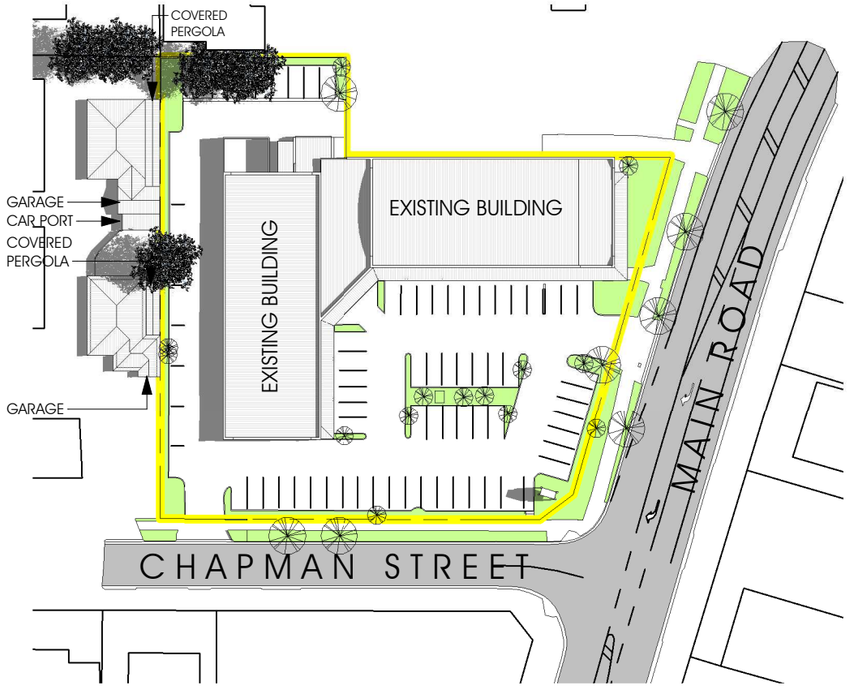
PROJECT
ALDI BLACKWOOD

DRAWING
EXISTING SHADOW DIAGRAM - WINTER SOLSTICE

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

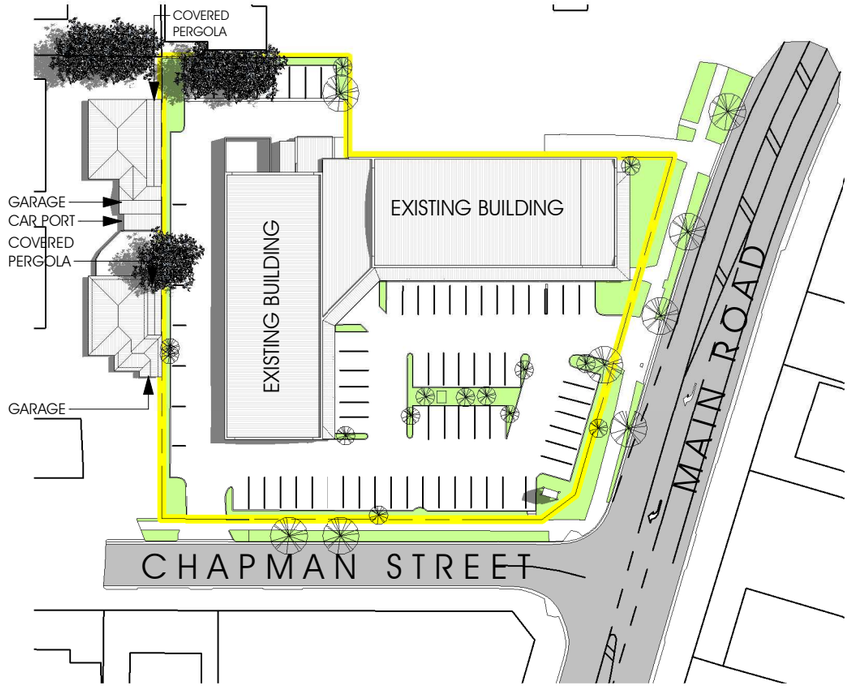
SCALE	DATE	DRAWN	CHECKED
1 : 1000	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA10.3		



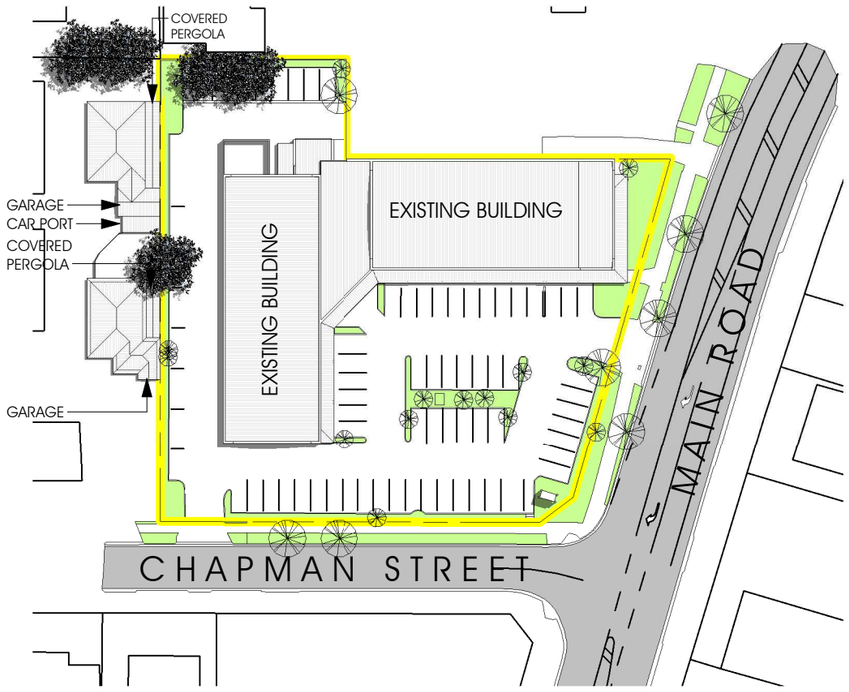
SHADOW DIAGRAM - EXISTING SUMMER SOLSTICE 9am

1 : 1000



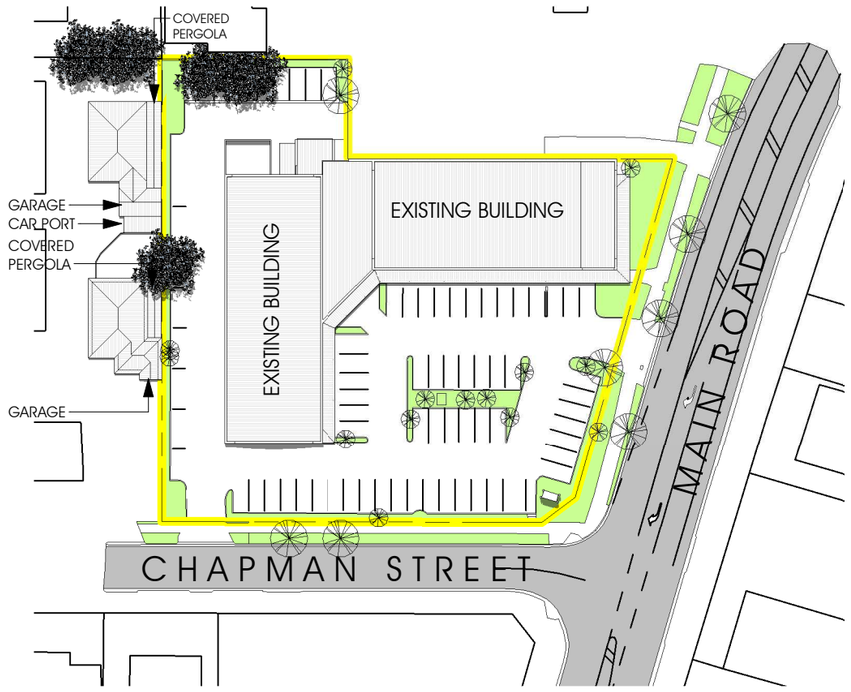
SHADOW DIAGRAM - EXISTING SUMMER SOLSTICE 10am

1 : 1000



SHADOW DIAGRAM - EXISTING SUMMER SOLSTICE 11am

1 : 1000



SHADOW DIAGRAM - EXISTING SUMMER SOLSTICE 12pm

1 : 1000

NOTES ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

PROJECT
ALDI BLACKWOOD

DRAWING
EXISTING SHADOW DIAGRAM - SUMMER SOLSTICE

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 1000	31/03/17	Author	Checker

PROJECT No	DRAWING No	STATUS	REV
2090	DA10.4		

ekistics

Appendix 4. Traffic Impact Assessment

GTA Consulting

GTAconsultants

ALDI Blackwood
198 Main Road, Blackwood
Transport Impact Assessment

Client //	ALDI
Office //	SA
Reference //	16A1283200
Date //	13/07/2017

ALDI Blackwood

198 Main Road, Blackwood

Transport Impact Assessment

Issue: A 13/07/2017

Client: ALDI
Reference: 16A1283200
GTA Consultants Office: SA

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	13/07/2017	Final	Lydia Kairl	Paul Morris	Paul Morris	

GTAconsultants
Melbourne | Sydney | Brisbane
Canberra | Adelaide | Perth
Gold Coast | Townsville

Table of Contents

Figures

Tables

1. Introduction

1.1 Background

Development Consent is currently being sought for a proposed ALDI Store at the corner of Main Road and Chapman Street in Blackwood. GTA Consultants (GTA) has been engaged to undertake a transport impact assessment of the proposed development.

1.2 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

i existing traffic and parking conditions surrounding the site
ii parking demand likely to be generated by the proposed development
iii suitability of the proposed parking in terms of supply (quantum) and layout
iv traffic generation characteristics of the proposed development
v proposed access arrangements for the site
vi transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- City of Mitcham Development Plan (consolidated 21 April 2016)
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- plans for the proposed development prepared by Select Architects
- traffic and car parking surveys undertaken by GTA Consultants as referenced in the context of this report
- various technical data as referenced in this report
- an inspection of the site and its surrounds
- other documents as nominated.

2. Existing Conditions

2.1 Subject Site

The subject site is located at the corner of Main Road and Chapman Street in Blackwood. The site of approximately 4,850sq.m has frontages of approximately 70 metres to Chapman Street and 60 metres to Main Road.

The site is located within a Commercial (Main Road) zone and is currently occupied by Blackwood Village which comprises approximately 1,600sq.m Gross Leasable Floor Area.

The surrounding properties include a mix of residential and commercial land uses.

The location of the subject site and the surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject Site and its Environs

(PhotoMap courtesy of NearMap Pty Ltd)

2.2 Road Network

2.2.1 Adjoining Roads

Main Road

Main Road is a two-way road aligned in an approximately northeast to southwest direction and configured with one vehicle lane in each direction set within an approximately 14.8 metre wide

carriageway. Indented parking bays are available on Main Road to the south of Chapman Street. Main Road carries approximately 20,400 vehicles per day[1].

Figure 2.2: View south of Main Road adjacent site (on right)

Chapman Street

Chapman Street is a two-way road aligned approximately east to west and configured with one vehicle lane in each direction in an approximately 7.5 metre wide carriageway. Kerbside parking is permitted on each side of the road, except on Saturdays and Sundays between 8am to 6pm on the northern side. Chapman Street is subject to a posted speed limit of 40km/h and carries approximately 600 vehicles per day[2].

Figure 2.3: View east of Chapman Street adjacent site (on left)

2.2.2 Traffic Volumes

GTA Consultants undertook traffic movement counts on key roads in the vicinity of the site on Thursday 07 July 2016 between 4:30pm and 6:30pm.

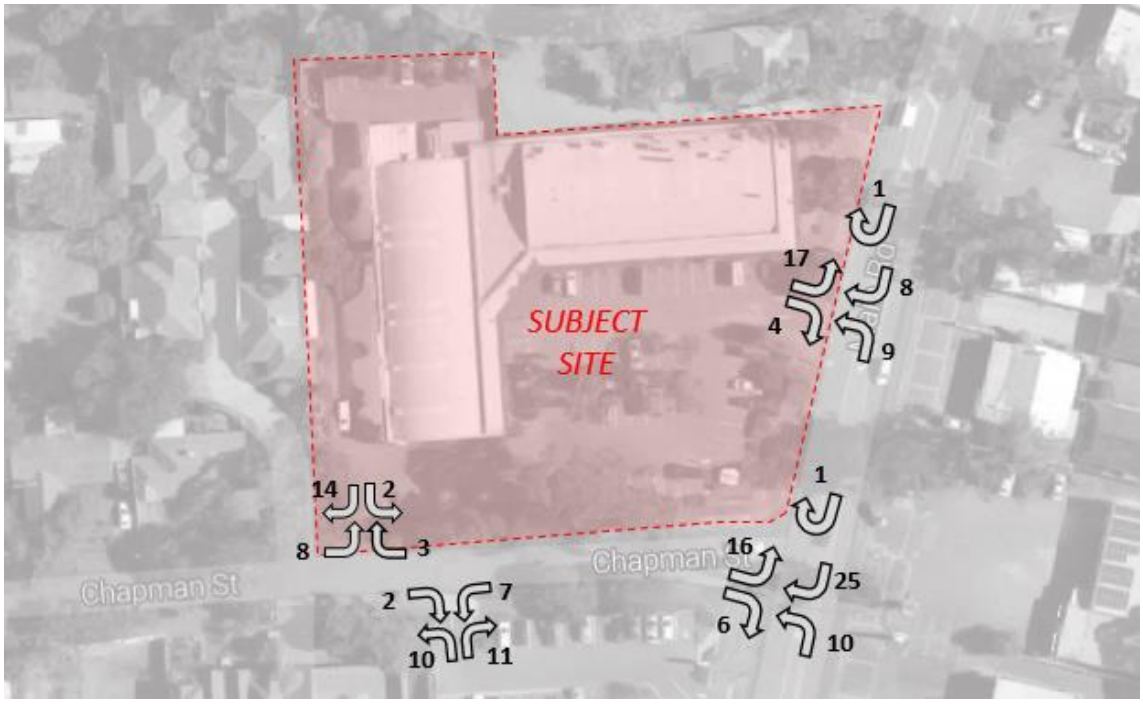
The PM peak hour (4:30pm to 5:30pm) traffic volumes are shown in Figure 2.4.

---

1 Department of Planning Transport and Infrastructure Annual Average Daily Traffic Volume Estimates (2015),

2 Based on the peak hour traffic counts undertaken by GTA and assuming a peak-to-daily ratio of 10%

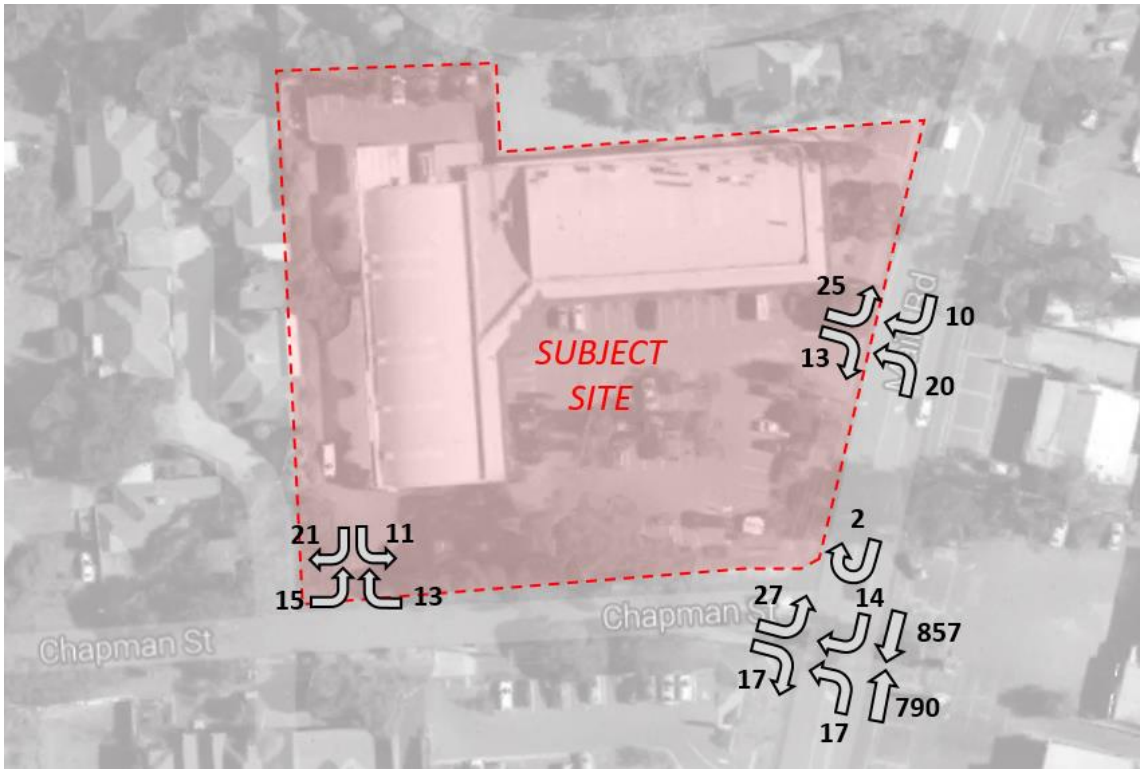
Figure 2.4: Existing Thursday PM Peak Hour Traffic Volumes



The existing peak hour traffic volumes indicate the existing site generates 65 trips during the peak hour, which equates to 4 trips per 100 sq.m. GLFA.

In addition to these surveys GTA commissioned AusTraffic to undertake additional surveys on Saturday 27 May 2017 between 9:45am and 2pm. The site peaked at 11am with some 128 vehicle movements recorded. The Saturday peak hour traffic volumes are shown in Figure 2.5.

Figure 2.5: Existing Saturday Peak Hour (11am-12pm) Traffic Volumes

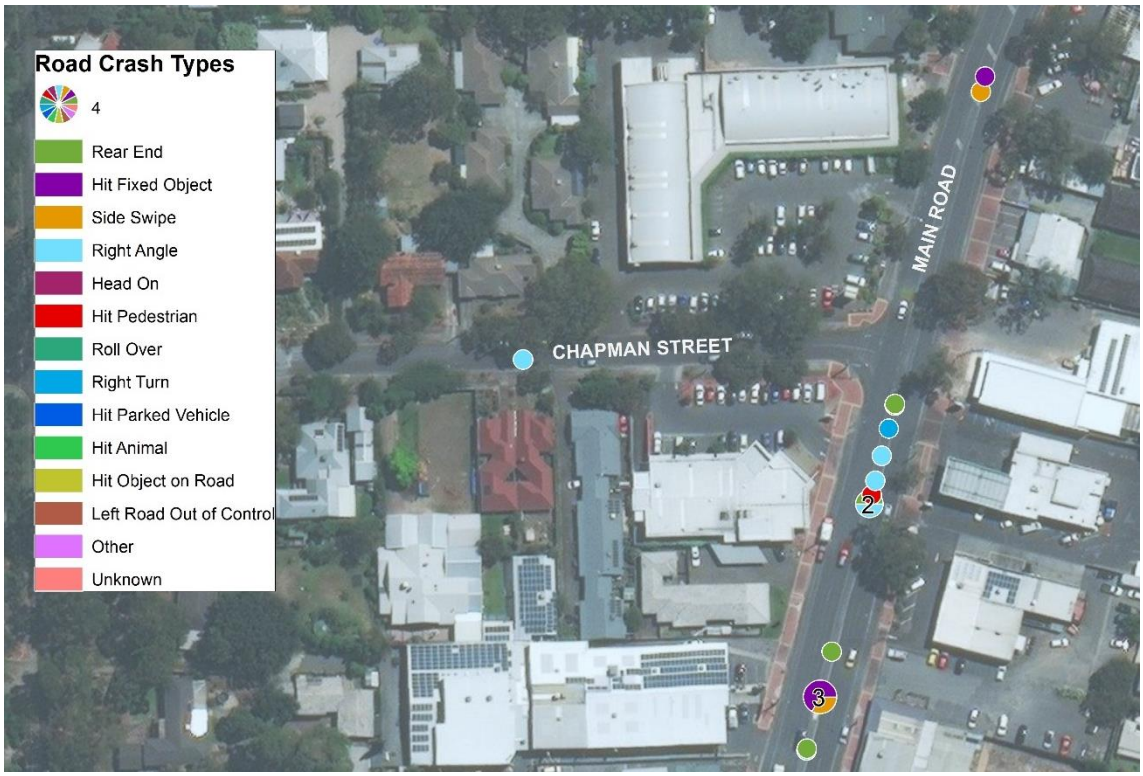


2.2.3 Crash Data

A review of the reported accident casualty history for the roads and intersections adjoining the subject site has been sourced from the Department of Planning, Transport and Infrastructure (www.data.sa.gov.au) for the most recent 5-year period (2011-2015). GTA notes that 2016 crash data has not been finalised and this has not been included at the time of this report.

Figure 2.6 shows the recorded crashes in the vicinity of the subject site.

Figure 2.6: Crash Data 2011-2015



No crashes were recorded at the Chapman Street and Main Road intersection.

2.3 Car Parking

2.3.1 Weekday Peak

The existing site car parking was surveyed on Thursday 7 July 2016 between 4:30pm and 6:30pm. The off-street car parking area of 72 spaces was surveyed as well as the both sides of Chapman Street between the existing site access and Main Road (some 12 spaces). The peak off-street parking demand was recorded at 4:30pm with 31 spaces occupied, as such there was 41spaces vacant. At the same time 3 spaces were occupied on-street. The peak on-street parking demand was recorded at 5:40pm with 6 spaces recorded. At the same time 28 vehicles were parked off street.

The parking surveys indicate the existing site generates a Thursday PM peak parking demand of approximately 1.9 spaces per 100sq.m Gross Leasable Floor Area.

2.3.2 Weekend Peak

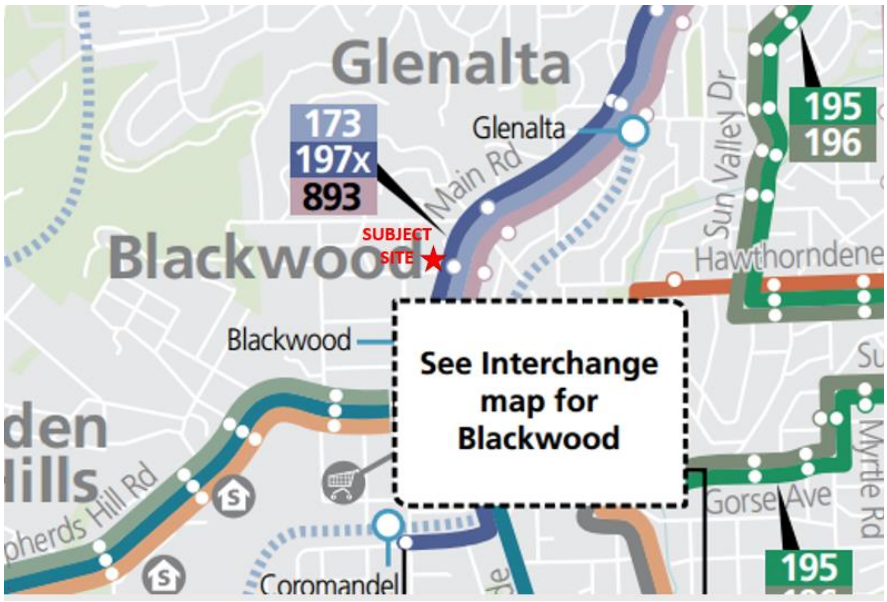
In addition to these surveys GTA commissioned AusTraffic to undertake additional surveys on Saturday 27 May 2017 between 9:45am and 2pm. The peak on and off-street parking demand occurred at 10:00am with 44 spaces occupied on site. At the same time 6 spaces were occupied on Chapman Street opposite the site (unrestricted parking). As such at the peak time (10:00am) there were some 28 vacant spaces on site. The parking surveys indicate the existing site generates a Saturday peak parking demand of approximately 3.1 spaces per 100sq.m Gross Leasable Floor Area.

2.4 Sustainable Transport Infrastructure

2.4.1 Public Transport

Figure 2.7 shows the subject site in relation to existing public transport routes within its vicinity.

Figure 2.7: Public Transport Map



There is a bus stop approximately 90 metres south of the subject site on Main Road. This stop is serviced by buses to Blackwood (including Blackwood Station and Blackwood High School), Belair Road and Adelaide City. There are only 4 services throughout the day with two services in the morning and two in the afternoon, timed to service school start/finish times. In addition to road based public transport, Blackwood railway station on the Belair line is located approximately 600 metres (by walking) from the site.

2.4.2 Pedestrian Infrastructure

Pedestrian paths are located on both sides of Chapman Street and Main Road in the vicinity of the subject site. A median refuge is located on Main Road approximately 160 metres south of the subject site.

2.4.3 Cycle Infrastructure

A bicycle lane is provided on Main Road to the north of Chapman Street on both sides of the road.

3. Development Proposal

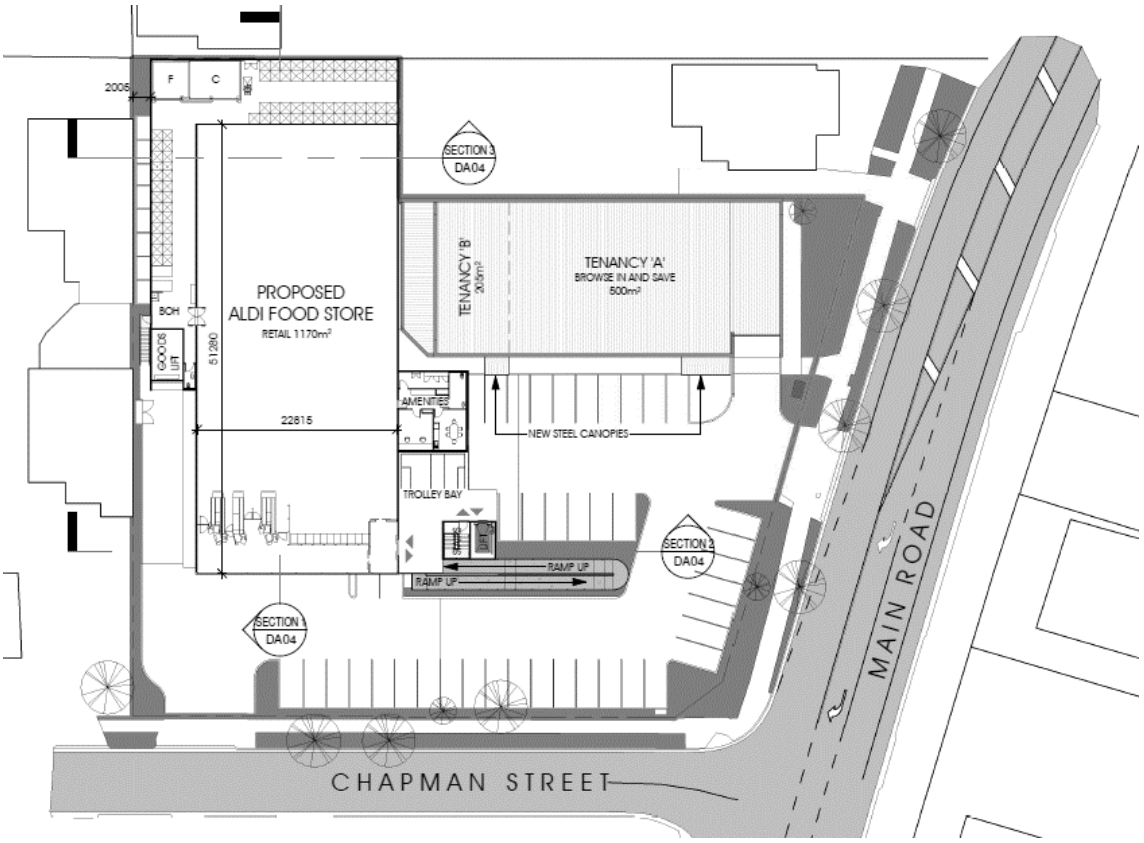
3.1 Land Uses

The proposed development is to include:

- ALDI Supermarket of 1,589sq.m gross leasable floor area (GLFA).
- Tenancy 'A' (Browse in and save) of 500sq.m GLFA.
- Tenancy 'B' of 205sq.m GLFA.
- Car parking for 89 vehicles within the site, all at grade with undercroft areas.
- The two existing access points (one to Main Road and one to Chapman Street) will be maintained.

The proposed development layout is shown in Figure 3.1.

Figure 3.1: Proposed Layout Plan



4. Car Parking

4.1 Development Plan Car Parking Requirements

Based on the limited bus services and distance to the Blackwood railway station, this site does not meet the requirements of a Designated Area in the Mitcham Council Development Plan.

Hence, the standard parking requirements of the Development Plan will apply. Principle of Development Control (PDC) 67 relates to car parking provision outside of a Designated Area.

PDC 67: *"Development within centre zones should conform to the following access, movement and car parking principles:*

(q) Development should provide car parking spaces for employees, customers, clients and visitors in accordance with the following standards:

(i) for a shop excluding a retail showroom, in a:

(A) local centre zone - five car parking spaces per 100 square metres of lettable area;

(B) neighbourhood centre zone - six car parking spaces per 100 square metres of lettable area;

(C) district centre zone - seven car parking spaces per 100 square metres of lettable area; and

(D) shop outside centre zone - seven car parking spaces per 100 square metres of lettable area"

Based on the above Table 4.1 summarises the proposed developments car parking requirements.

Table 4.1: Development Plan Car Parking Requirements

Use	Size (sq.m)	Car Parking Rate	Car Parking Requirement
ALDI Store	1,589	7 spaces per 100sq.m	112
Other Retail	705		50
TOTAL			**162 spaces**

Under Development Plan rates the proposed development would require 162 car parking spaces. This is considered very high compared to known ALDI store operating conditions and the existing site. The existing site has a parking supply of 4.5 spaces per 100sq.m GLFA which is a theoretical shortfall of 40 spaces based on existing floor space.

The following section sets out an empirical assessment of the parking requirements of the site.

4.2 Empirical Assessment

4.2.1 ALDI Parking Requirements

Parking demand surveys were undertaken by GTA Consultants at stand-alone ALDI stores including surveys at the same sites on more than one occasion. Table 4.2 presents the results of the parking demand surveys for the most recent dates for each site.

Table 4.2: Parking Demand Surveys (Weekends) – ALDI Stores

Location	Retail Floor Area (sq.m)	Date	Peak Parking Demand (spaces per 100 sq.m)
Sunbury	1,274	17&18/02/2006	3.4
Hampton Park	1,291	17&18/02/2006	3.2
Carrum Downs	1,284	24&25/02/2006	4.6
Rosebud	1,454	24&25/02/2006	3.7
Corio	1,445	18&19/04/2008	5.3
Kangaroo Flat	1,285	18&19/04/2008	5.5
Morwell	1,424	2&3/05/2008	2.7
Sebastopol	1,434	2&3/05/2008	2.7
Warragul	1,447	18&19/04/2008	3.7
Ferntree Gully	1,274	15&31/07/2010	6.1
Pakenham	1,382	15&31/07/2010	3.5
Drysdale	1,400	12&13/09/2014	4.5
Hawthorn	1,566	24/05/2017	3.7
Hawthorn	1,566	25/05/2017	3.6
Hawthorn	1,566	27/05/2017	4.6
		AVERAGE	**4.1**

Table 4.2 demonstrates that an ALDI Store will generate an average peak parking demand of 4.1 spaces per 100sq.m gross leasable floor area based on South Australian and Victorian data. The above data is considered representative of ALDI Store parking demands. It is noted that only one South Australian store has been surveyed to date as most South Australian stores have been operating less than one year and there are less than 20 stores across the metropolitan area.

Recent surveys at the ALDI Hawthorn store found the maximum parking demand on a Wednesday and Thursday was 3.7 spaces per 100 sq.m, whilst the maximum parking demand on a Saturday was 4.6 spaces per 100sq.m. The peaks on the Saturday occurred at 12.30pm and from 3pm where the car park was full but no overload of parking was observed (i.e. on-street queueing and delays in the car park). There was a high turnover of parking spaces at this time with customers staying less than 20 minutes on average.

The isolated nature of the Hawthorn store (that is no other ALDI Store in close proximity, with Marion over 10km/20 minutes away) and the recently opened status of the store will cause higher than average parking demands. Therefore, the average parking rate calculated above is considered appropriate.

Using the average parking demand for ALDI stores, the proposed ALDI store of 1,589 sq. m is anticipated to generate a peak parking demand of 65 spaces.

4.2.2 Retail Tenancies Car Parking Requirement

The existing large specialty store (Browse In) is proposed to be retained on the site with another smaller tenancy to remain as well. Based on the car parking surveys conducted by GTA at the existing site (including Browse In and other specialty retailers) the existing peak parking demand in the site is 31 spaces on a Thursday evening at 4:30pm and 40 spaces on a Saturday at 10:00am. Based on an existing floor area of approximately 1,600sq.m this correlates to a peak parking demand rate of 1.9 and 3.1 spaces per 100sq.m for the Thursday and Saturday respectively. This is substantially lower than the Development Plan rate of 7 spaces per 100sq.m.

Based on the above identified parking demand rates, the proposed retail tenancies (total 705sq.m) would have a parking requirement of 14 spaces on a Thursday and 22 spaces on a Saturday.

4.2.3 Peak Car Parking Demands

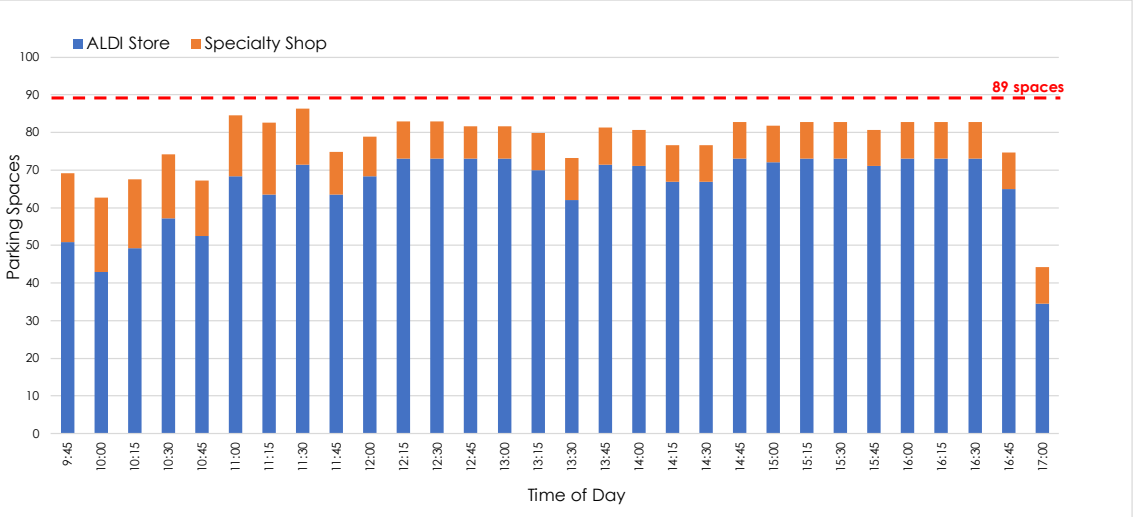
Based on surveys conducted by GTA and AusTraffic for ALDI stores (including one located at Hawthorn) and the existing site, the parking demand rate (spaces per 100sq.m) varies across the day of the week and the time of day.

The parking survey at ALDI Hawthorn found that peak parking occurred at 12.30pm and 3.00pm. Conversely the peak parking demand at the Blackwood Village Shopping Centre occurred at 10am.

The temporal demands for parking have been applied to the proposed development to calculate the true peak parking demands for the ALDI Store and Specialty Shops combined.

Figure 4.1 show the predicted Blackwood site parking demand based on the surveyed parking demands of the existing specialty shops and the ALDI Hawthorn parking rates for a Saturday based on available survey data for each of the uses (from Hawthorn and Blackwood Village SC).

Figure 4.1: Predicted Blackwood Site Parking Demand on a Saturday



The analysis indicates that the temporal demands for parking for both ALDI and the specialty shops across a Saturday, being the busiest day for ALDI Stores, will be within the proposed parking supply of the proposed development.

4.3 Adequacy of Parking Supply

The proposed ALDI store and adjacent retail tenancies have an anticipated peak parking demand of 87 spaces based on the operation of existing ALDI stores around the country and the existing operation of the specialty stores. The proposed 89 spaces will cater for this anticipated peak.

Based on analysing the temporal parking rates at an existing ALDI store (Hawthorn) and existing temporal demand the proposed developments car parking demand during both the Thursday PM period and the Saturday lunchtime period stays below the proposed car parking supply (89 spaces).

The peak Thursday demand is anticipated to be 49 spaces and the peak Saturday demand is anticipated to be 87 spaces (at approximately 11.30am) based on this analysis. These peak

demands are lower than the proposed 89 spaces and as such will cater for the anticipated peaks based on this sensitivity analysis. Based on both methods of calculation, the proposed parking supply of 89 spaces will cater for the anticipated peak parking demand.

4.4 Vehicle Access

Access 1 – Main Road

Access 1 is located on Main Road, to the north of Chapman Street utilising an existing crossover. Access 1 is a two-way (ingress and egress) access point allowing for left turns in and left turns out, and will provide access for customer vehicles generally. GTA notes during turning movement surveys at this access, vehicles were observed making all turning movements into and out of the site at this access. This access point will have satisfactory sight distance in each direction for the posted 50km/h speed limit for left turn exit movements.

Access 2 – Chapman Street

Access 2 is located on Chapman Street, to the west of Main Road with the existing crossover being widened. Access 2 is a two-way (ingress and egress) access point, and will provide access for customers and delivery vehicles for all turning movements. This access point will have satisfactory sight distance in each direction for the posted 40km/h speed limit.

4.5 Car Park Layout

The car parking bays shall be designed in accordance with AS/NZS2890.1.

- The car parking spaces shall be suitable for User Class 3A, short term, high turnover parking. As such car parking spaces shall exceed the following requirements;
  - 2.7 metres wide and 5.4 metres long set within a minimum 6.2 metre aisle or;
  - 2.6 metres wide and 5.4 metres long set within a minimum 6.6 metre aisle;
- Columns within the undercroft car park will be situated outside the vehicle design envelope in accordance with the standard.
- In locations where aisles are adjacent walls or columns, an additional 300 mm clearance will be provided.
- Two disabled car parking spaces will be located near the lift with an associated shared space.

4.5.1 General Parking Layout Requirements

Further to the above, the grades within the parking area must conform to the following requirements (as per AS/NZS2890.1, AS/NZS2890.6 and AS2890.2):

- Maximum grade of 1 in 20 (5%) across nature strip and 1 in 40 (2.5%) across any footpath
- Maximum grade of 1 in 20 (5%) for 14 metres into the site (where commercial vehicles use the driveway) or 6 metres for light vehicles (if an upgrade ramp)
- A maximum grade of 1 in 6.5 (15.4%) along commercial vehicles circulation roads, the maximum grade shall be 1 in 8 (12.5%) where reverse manoeuvres are required
- A maximum grade of 1 in 20 (5%) measured parallel and 1 in 16 (6.25%) measured in any other direction to the angle of parking.

These requirements will need to be confirmed through detailed design.

5. Loading Facilities

5.1 Development Plan Requirements

Principle of Development Control (PDC) 68 in The City of Mitcham Development Plan sets out the statutory requirements for loading applicable to the proposed development. PDC 68 (d) part (i) is as follows;

"Development should provide: off-street loading, service areas and service vehicle manoeuvring areas."

5.2 Proposed Loading Arrangements

5.2.1 ALDI Store

A loading area is proposed to be located adjacent the western site boundary with access to and from Chapman Street. The loading dock will be provided in accordance with ALDI's standard detail. A bin store will also be located in the loading dock area.

GTA understands ALDI deliveries will be with vehicles up to 14.0 metre semi-trailers and will require approximately 2 deliveries per day. A swept path analysis has been carried out to assess the adequacy of the proposed loading arrangements for a semi-trailer.

Other heavy vehicles attending the site for ALDI will be a medium rigid vehicle (MRV up to 8.8 metre) for bread deliveries daily, and waste collection vehicle (HRV up to 10.5 metres) on a weekly basis. These vehicles will be able to use the loading dock in addition to the semi-trailer.

It has also been assumed that the truck will arrive from the south on Main Road via Shepherds Hill Road/South Road given the vehicle length restriction (12 metre) on Old Belair Road and the winding alignment of Belair Road (via Windy Point). Shepherds Hill Road would be the most direct route to and from the Distribution Centre in Regency Park (by approximately 2 km based on Google maps route comparison).

The truck will be able to enter Chapman Street via left turn from Main Road, and exit to Main Road via a right turn. The truck will cross the centreline of Chapman Street during the left turn. A painted median is recommended to ensure vehicles exiting Chapman Street do not obstruct truck access. The entry and exit turns to and from Main Road are shown in Figure 5.1 and Figure 5.2.

Figure 5.1: Left turn into Chapman Street – 14.0m Semi-trailer

Figure 5.2: Right turn from Chapman Street – 14.0m Semi-trailer

Figure 5.3 considers a 14.0 metre Semi-Trailer entering via Chapman Street in a forward position. Figure 5.4 and Figure 5.5 then shows the Semi reversing in a two-staged reverse manoeuvre. Whilst this type of manoeuvre close to an entry point is not ideal, this will be similar to the Hawthorn store which has operated satisfactorily to date.

Vehicles which may enter following the truck will be able to enter the undercroft parking area to avoid the reversing truck. Figure 5.4 considers the vehicle exiting the site in a forward direction towards Main Road.

Figure 5.3: Site Ingress – 14.0m Semi-Trailer

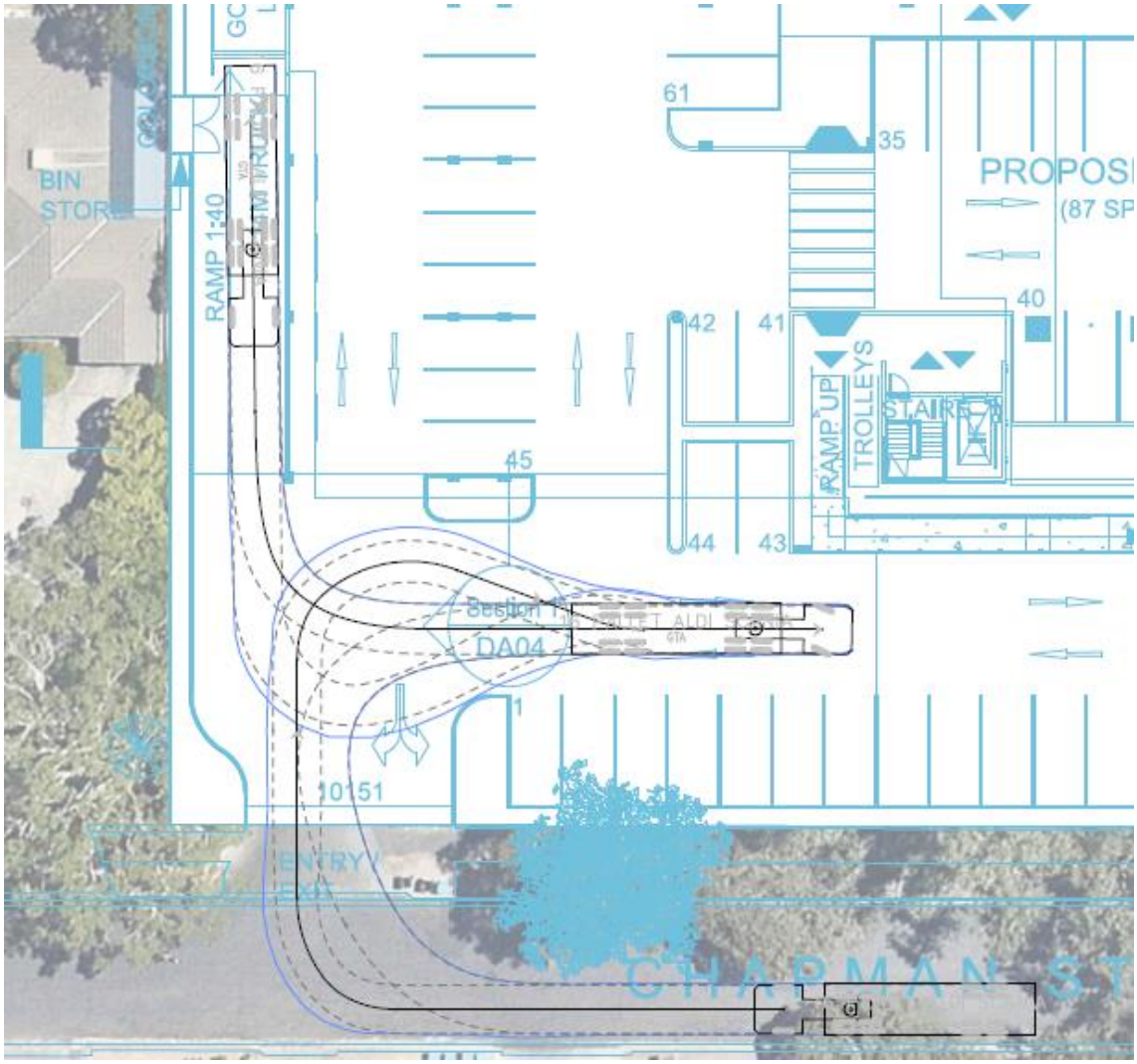
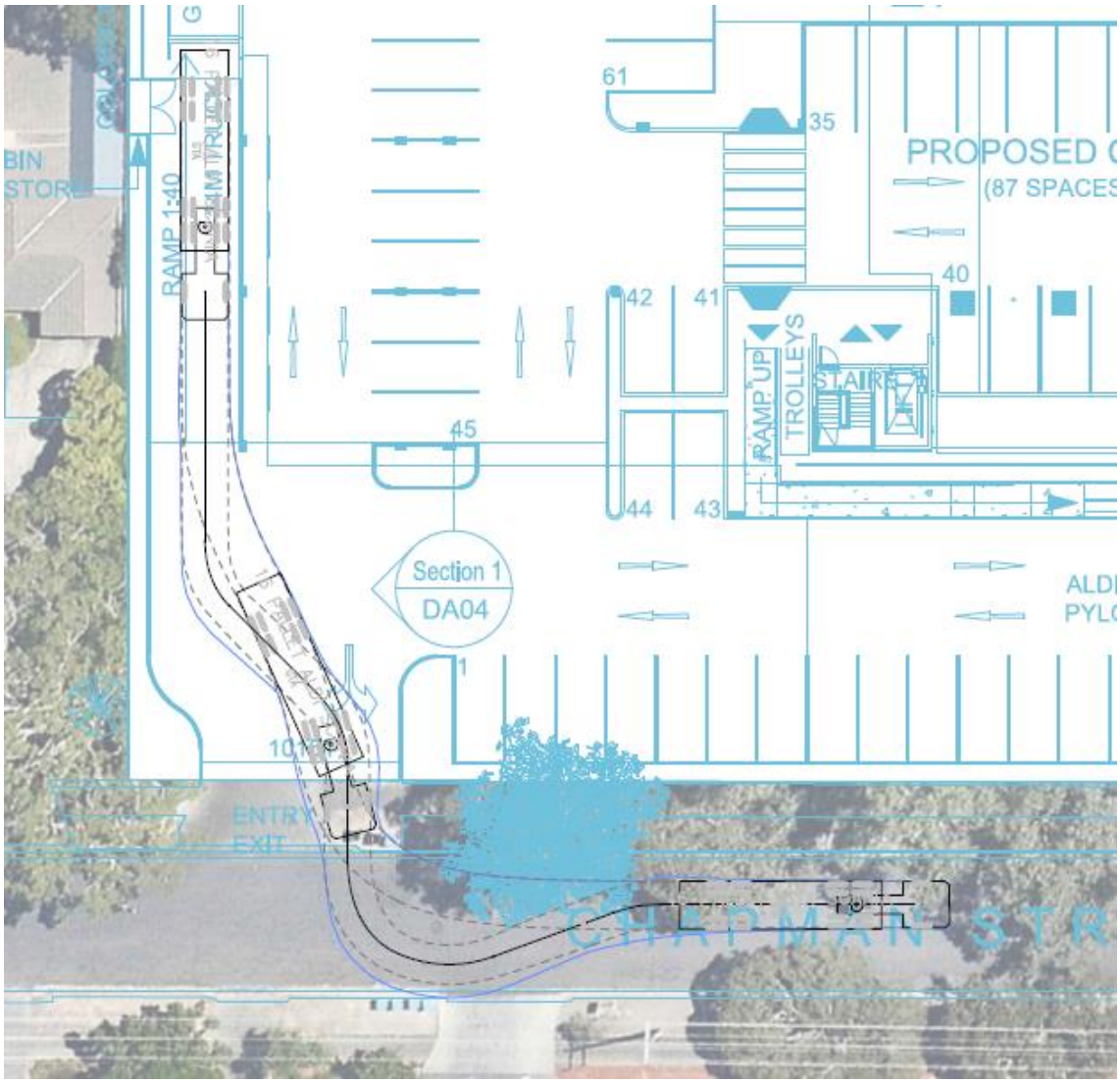


Figure 5.4: Site Egress – 14.0m Semi-Trailer



The turn paths in Figure 5.3 and Figure 5.4 indicate that the 14.0 metre truck can feasibly enter and exit the site in a forward direction. It should be noted that these turn paths are very conservative with recent tests at the ALDI Distribution Centre for minimum turning diameters found this truck can turn up to 1.5 metres tighter than shown.

Given the width of the loading dock and proximity of the corner of the building, drivers may reverse to the loading dock and then straighten prior to the final reverse. To confirm this manoeuvre, turn paths are shown in Figure 5.5 and Figure 5.6. These turn paths confirm that drivers can undertake a staged reverse manoeuvre clear of traffic entering the site from Chapman Street. A staged turn is a typical manoeuvre for many truck drivers when accessing commercial sites.

Figure 5.5: Staged Reverse Manoeuvre (01) – 14m Semi-Trailer

Figure 5.6: Staged Reverse Manoeuvre (02) – 14m Semi-Trailer

The turn path diagrams indicate the ALDI 14.0 metre truck will be able to enter and exit in a forward direction satisfactorily. However, the turn paths demonstrate that full-time parking restrictions will be required on Chapman Street on at least one-side of the street to enable the truck to travel on the street and pass oncoming traffic.

Parking controls will also be required opposite the proposed ALDI driveway on Chapman Street to enable the truck to enter and exit the site.

5.2.2 Retail Tenancies

It is anticipated that the retail tenancies could be serviced by vehicles up to a 10 metre Heavy Rigid Vehicle. The loading area is located at the north-east corner of the site with ingress and egress is proposed via Chapman Street. Use of Chapman Street for these deliveries will avoid the need for a larger crossover on Main Road. It is expected that this size of truck would occur less than once per day for the Browse In store (occasional service), and smaller vehicles for the other tenancy. Figure 5.7 and Figure 5.8 shows a 10 metre rigid vehicle adequately entering and exiting the loading facility in a forward direction. These deliveries would occur out of peak hours.

Figure 5.7: 10m Rigid Truck - Entry

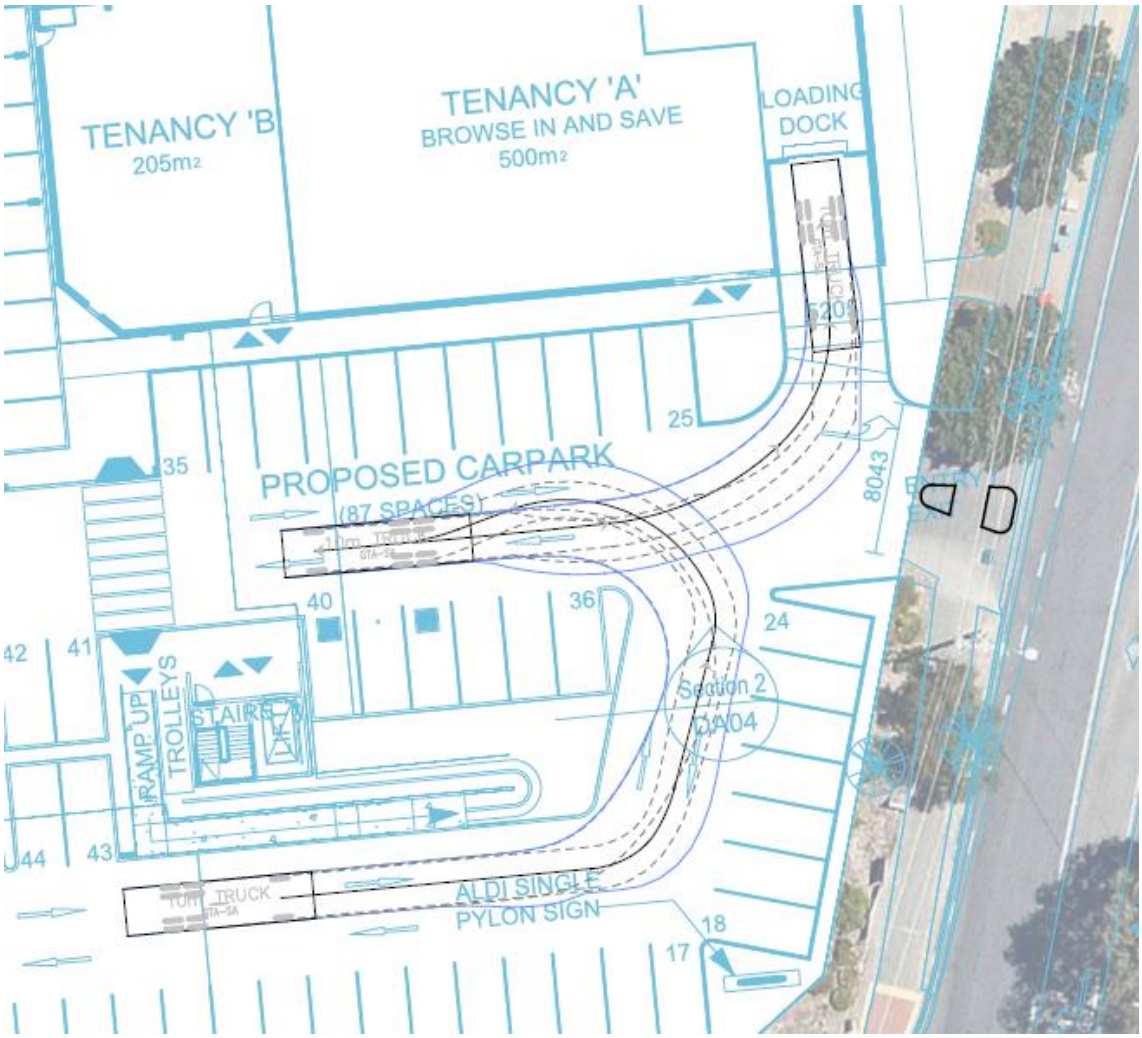


Figure 5.8: 10m Rigid Truck - Exit

6. Sustainable Transport Infrastructure

6.1 Bicycle End of Trip Facilities

The City of Mitcham Development Plan provides guidance on the provision of bicycle parking facilities within Principle of Development Control (PDC) 67. PDC 67 (e) is as follows;

"Areas and facilities should be provided for the parking and securing of bicycles, storage of shopping trolleys and hitching of dogs, provided that the facilities for the hitching of dogs are not within pedestrian movement areas."

The Austroads 'Cycling Aspects of Austroads Guides' document summarises the bicycle parking rates applicable to the proposed development. These rates are as follows;

Shop (Customer)	*1 per 300 sq. m*
Shop (Employee)	*1 per 500 sq. m over 1000 sq. m*

Application of the above rates to the proposed development will result in a bicycle parking requirement of 6 spaces for visitors and 2 spaces for employees.

Based on the above, propose a bicycle parking provision of 8 spaces (4 bicycle loops) be supplied to meet the anticipated demand.

6.2 Walking and Cycling Network

The proposed development will provide pedestrian connections to the footpath on the western side of Main Road. Footpaths are also available on the adjacent Chapman Street.

6.3 Public Transport

The site is accessible by public transport with a bus stop within 100 metres and Blackwood Railway Station approximately 600 metres from the site.

7. Traffic Impact Assessment

7.1 Existing Site Traffic Generation

Traffic surveys by GTA and Austraffic recorded peak traffic volumes at the existing site for a Thursday and Saturday. The volumes recorded (refer to Section 2.2.2) recorded 4 and 8 trips per 100sq.m of existing floor space on a Thursday PM Peak and Saturday AM peak respectively

7.2 Empirical Traffic Rates

Table 7.1 presents the results of traffic generation surveys undertaken by GTA at standalone ALDI stores.

Table 7.1: Traffic Generation Surveys – ALDI Stores

Location	Gross Leasable Floor Area (sq.m)	Date	Traffic Generation (trips per 100sq.m)	
			Daily	PM Peak Hour
Sunbury	1,274	17/02/2006	136.5	13.5
Hampton Park	1,291	17/02/2006	126.2	14.6
Carrum Downs	1,284	24/02/2006	-	13.2
Rosebud	1,454	24/02/2006	-	10.7
Ferntree Gully	1,274	15&31/07/2010	-	27.5
Pakenham	1,382	15&31/07/2010	-	12.0
AVERAGE			**131.0**	**15.3**

Based on the traffic generation survey results the following traffic generation rates have been adopted:

Weekday (Daily): *131 trips per 100sq.m*

Weekday (PM Peak Hour): *15.3 trips per 100sq.m*

Given the above, the proposed ALDI store of 1,589 sq. m gross leasable floor area would generate approximately 243 and 2,082 vehicle trips in the PM peak hour and daily periods respectively.

7.3 Link Trip Discount

GTA undertook 162 questionnaire surveys at six existing ALDI stores located in Victoria. The survey questions involved travel patterns including mode of travel, typical origin and destination and linking of trips. The results of the questionnaire survey with regards to passing trade from linked trips are presented in

Table 7.2.

Table 7.2: ALDI Travel Patterns Questionnaire Survey – Link Trips

Site	Customer Surveys		
	Passing Trade	Total	Percentage
Belmont	7	30	23%
Carrum Downs	8	26	31%
Ferntree Gully	12	40	30%
Hampton Park	16	38	42%
Rosebud	2	5	40%
Sunbury	2	23	9%
AVERAGE	**47**	**162**	**29%**

The results of the table above indicate approximately 30% of all customers surveyed were identified as passing trade.

Based on the results of the questionnaire surveys a 30% discount factor for passing trade is considered reasonable for the development. Application of this discount factor results in an overall trip generation for the site of 170 and 1,457 new vehicle trips onto the road network in the PM peak and daily periods respectively.

The concept of linked trips is also supported by Austroads *Guide to Traffic Management Part 12* where it is recognised that traffic generated by (or attracted to) a development will be composed of the following:

- New trips that will not be made on the network if the development does not proceed
- Existing trips between an origin and destination that divert a significant distance to visit the development
- Existing trips that use the roads immediately abutting the development and break the journey to use the development.

7.4 Traffic Generation

Notwithstanding the above, the total traffic generation of the proposed development based on typical traffic generation rates have been applied to test the site as a worst-case scenario.

Based on the above Table 7.3 summarises the anticipated traffic generation.

Table 7.3: Traffic Generation

Use	Size (sq.m)	Daily		Peak Hour	
		Traffic Generation Rate	Traffic Generation	Traffic Generation Rate	Traffic Generation
ALDI Store	1,589	131 trips per 100sq.m	2,082	15.3 trips per 100sq.m	243
Retail Tenancies	705	121 trips per 100sq.m	853	12.3 trips per 100sq.m	87
TOTAL			**2,935 trips**	**TOTAL**	**330 trips**

The above indicates the proposed development will generate up to 2,935 and 330 vehicle trips in the daily and PM peak hour periods respectively.

By way of comparison, the site's current use could have typically generated in the order of 190 vehicles in a peak hour or 1,900 vehicles per day. The traffic survey of the site has identified much lower peak traffic generation of approximately 65 trips per hour in the PM peak hour. As such the proposal increases the traffic generation of the site by some 265 movements in the peak hour.

7.5 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development will be influenced by a number of factors, including the:

i configuration of the arterial road network in the immediate vicinity of the site;
ii existing operation of intersections providing access between the local and arterial road network, and
iii distribution of households in the vicinity of the site.

Having consideration to the above, for the purposes of estimating vehicle movements, the following directional distributions have been assumed:

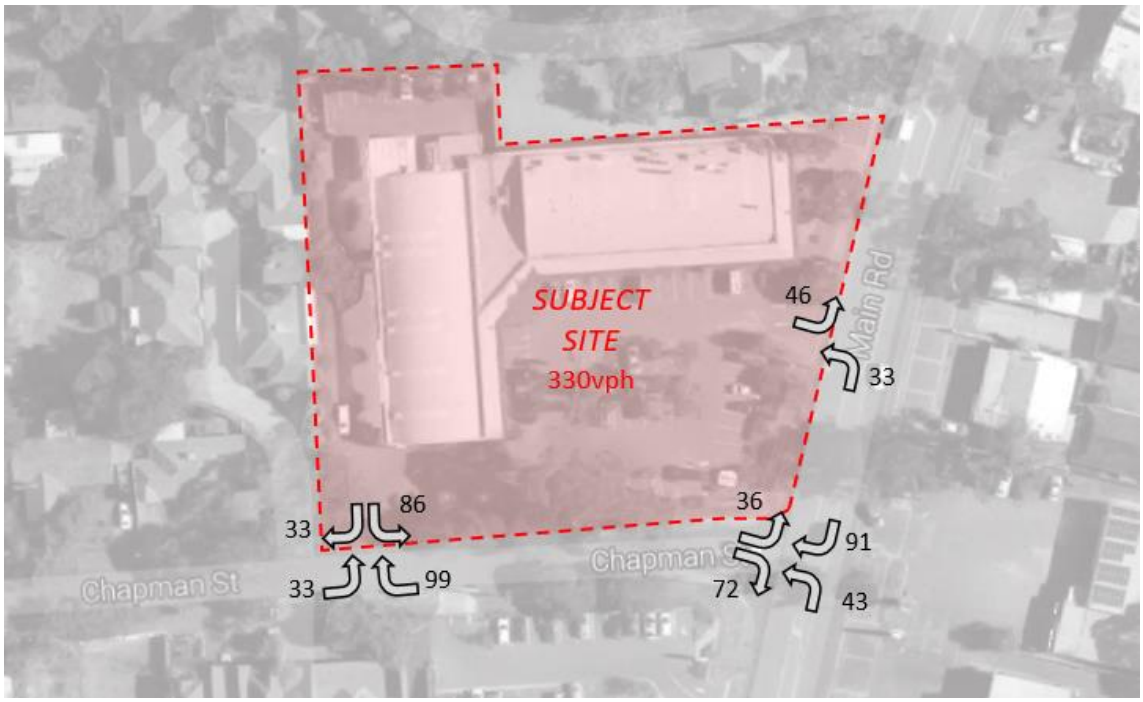
- Main Road (north) 40%
- Main Road (south) 40%
- Chapman Street 20%.

In addition, the directional split of traffic (i.e. the ratio between the inbound and outbound traffic movements) is assumed to be 50:50.

Based on the above, Figure 7.1 has been prepared to show the estimated marginal increase in turning movements in the vicinity of the subject property following full site development. Key assumptions for the development of the traffic volumes are:

- Left turn entry and exit only at Main Road
- Some diversion of traffic to west on Chapman Street (to avoid Main Road)
- Even split of left turns from Main Road compared to left turn into Chapman Street
- 30% of northbound exiting vehicles use Chapman Street

Figure 7.1: Predicted PM Peak Hour Traffic Volumes



7.6 Traffic Impact

A SIDRA analysis was prepared to assess the impact of the predicted traffic volumes on the Chapman Street and Main Road intersection. The assessment assumed that if only one vehicle on Chapman Street is waiting to turn right left turners can fit past to turn left, as currently occurs (and observed on site). The assessment summary is shown in Table 7.4, Table 7.5 and Table 7.6.

Traffic data from an intersection survey at the Blackwood Roundabout by DPTI in 2013 was used to identify peak hour volumes on Main Road. These identified 1,133 and 626 vehicles per hour southbound and northbound respectively during the PM peak period between 5-6pm.

Table 7.4: SIDRA Movement Summary – Existing PM Weekday – Chapman Street intersection

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Main Road											
1	L2	11	2.0	0.320	4.6	LOS A	0.0	0.0	0.00	0.01	49.2
2	T1	659	2.0	0.320	0.0	LOS A	0.0	0.0	0.00	0.01	49.9
Approach		669	2.0	0.320	0.1	NA	0.0	0.0	0.00	0.01	49.9
North: Main Road											
8	T1	1193	2.0	0.569	0.1	LOS A	0.0	0.0	0.00	0.00	49.9
9	R2	26	2.0	0.022	6.8	LOS A	0.1	0.7	0.58	0.64	41.8
Approach		1219	2.0	0.569	0.2	NA	0.1	0.7	0.01	0.01	49.7
West: Chapman Street											
10	L2	17	2.0	0.013	6.3	LOS A	0.1	0.6	0.72	0.58	41.2
12	R2	6	2.0	0.031	19.2	LOS C	0.1	0.6	0.89	0.94	34.2
Approach		23	2.0	0.031	9.9	LOS A	0.1	0.6	0.77	0.68	39.0
All Vehicles		1912	2.0	0.569	0.3	NA	0.1	0.7	0.02	0.02	49.7

Table 7.5: SIDRA Movement Summary – Predicted PM Weekday – Chapman Street intersection

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Main Road											
1	L2	45	2.0	0.337	4.6	LOS A	0.0	0.0	0.00	0.04	48.9
2	T1	659	2.0	0.337	0.0	LOS A	0.0	0.0	0.00	0.04	49.7
Approach		704	2.0	0.337	0.3	NA	0.0	0.0	0.00	0.04	49.7
North: Main Road											
8	T1	1193	2.0	0.569	0.1	LOS A	0.0	0.0	0.00	0.00	49.9
9	R2	96	2.0	0.084	7.1	LOS A	0.4	2.7	0.61	0.72	41.7
Approach		1288	2.0	0.569	0.6	NA	0.4	2.7	0.05	0.05	49.3
West: Chapman Street											
10	L2	38	2.0	0.029	6.4	LOS A	0.2	1.3	0.72	0.62	41.2
12	R2	76	2.0	0.407	27.2	LOS D	1.3	9.3	0.94	1.03	30.9
Approach		114	2.0	0.407	20.3	LOS C	1.3	9.3	0.86	0.89	33.7
All Vehicles		2106	2.0	0.569	1.6	NA	1.3	9.3	0.07	0.09	48.6

Table 7.6: SIDRA Movement Summary – Predicted AM Saturday – Chapman Street intersection

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Main Road											
1	L2	45	2.0	0.432	4.6	LOS A	0.0	0.0	0.00	0.03	49.0
2	T1	857	2.0	0.432	0.1	LOS A	0.0	0.0	0.00	0.03	49.8
Approach		902	2.0	0.432	0.3	NA	0.0	0.0	0.00	0.03	49.7
North: Main Road											
8	T1	938	2.0	0.448	0.1	LOS A	0.0	0.0	0.00	0.00	49.9
9	R2	96	2.0	0.114	8.7	LOS A	0.5	3.5	0.68	0.83	40.7
Approach		1034	2.0	0.448	0.9	NA	0.5	3.5	0.06	0.08	49.2
West: Chapman Street											
10	L2	38	2.0	0.042	8.4	LOS A	0.2	1.7	0.79	0.73	39.9
12	R2	76	2.0	0.311	20.1	LOS C	1.0	7.2	0.90	0.99	33.8
Approach		114	2.0	0.311	16.2	LOS C	1.0	7.2	0.86	0.90	35.6
All Vehicles		2049	2.0	0.448	1.5	NA	1.0	7.2	0.08	0.10	48.7

The SIDRA analysis has found that during the weekday PM peak, the predicted queue length on Chapman Street could an increase from 1 vehicle to 2 vehicles as the longest length expected in the peak hour. The existing right turn lane on Main Road will also continue to operate satisfactorily with 1 vehicle queue length predicted.

The results are similar for the Saturday AM peak given the site traffic generation is assumed to be the same, and the traffic volumes on Main Road are similar expect evenly distributed north and south.

Significantly there will be little change in the Degree of Saturation of the intersection which will remain below 0.6 for both weekday and Saturday scenarios.

The distribution of traffic to and from the proposed development would result in an increase in traffic on Chapman Street to the west of the site by some 65 vehicles in the peak hour and approximately 590 vehicles throughout a day.

Overall, the traffic impact of the proposed development will be relatively minor.

8. Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

i The proposed development generates a development plan parking requirement of 162 spaces which is considered excessive compared to actual parking demands at the existing site and ALDI Stores generally.

ii Based on empirical evidence the proposed development will have an anticipated peak parking demand of 87 spaces when considering the peak periods for teach of the uses proposed in the site.

iii The proposed supply of 89 spaces is considered appropriate having consideration to the existing and anticipated peak parking demands for ALDI and the specialty shops.

iv The proposed parking layout is consistent with the dimensional requirements as set out in the Australian/New Zealand Standards for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009).

v Access is proposed to be retained on Main Road with left turn entry and exit movements only at the existing crossover (with minor modifications for the new layout)

vi Two bicycle rails should be provided to meet the anticipated bicycle parking demand.

vii The ALDI loading dock is located on the western boundary of the site, and is designed to cater for up to a 14.0m semi-trailer entering and exiting the site in a forward direction via Chapman Street.

viii The other retail tenancies will be serviced by a loading area in the north-east corner of the site designed for vehicles up to a 10 metre Rigid Vehicle access via Chapman Street access point and through the car park.

ix Parking will need to be prohibited on the southern side of Chapman Street to enable safe and efficient movement of delivery vehicles between the site and Main Road.

x A painted median is proposed on the Chapman Street approach to clearly delineate the truck turn path during left turns into Chapman Street. No changes to Main Road are required for the proposed development.

xi The site is expected to generate up to 330 and 2,935 vehicle movements in the peak hour and daily periods respectively.

xii Analysis of the Main Road and Chapman Street intersection using SIDRA Intersection software indicates very little change in traffic operation from existing conditions for both weekday and Saturday peak periods.

xiii There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.

Melbourne

A Level 25, 55 Collins Street
PO Box 24055
MELBOURNE VIC 3000
P +613 9851 9600
E melbourne@gta.com.au

Brisbane

A Ground Floor, 283 Elizabeth Street
BRISBANE QLD 4000
GPO Box 115
BRISBANE QLD 4001
P +617 3113 5000
E brisbane@gta.com.au

Adelaide

A Suite 4, Level 1, 136 The Parade
PO Box 3421
NORWOOD SA 5067
P +618 8334 3600
E adelaide@gta.com.au

Townsville

A Level 1, 25 Sturt Street
PO Box 1064
TOWNSVILLE QLD 4810
P +617 4722 2765
E townsville@gta.com.au

Sydney

A Level 6, 15 Help Street
CHATSWOOD NSW 2067
PO Box 5254
WEST CHATSWOOD NSW 1515
P +612 8448 1800
E sydney@gta.com.au

Canberra

A Tower A, Level 5,
7 London Circuit
Canberra ACT 2600
P +612 6243 4826
E canberra@gta.com.au

Gold Coast

A Level 9, Corporate Centre 2
Box 37, 1 Corporate Court
BUNDALL QLD 4217
P +617 5510 4800
F +617 5510 4814
E goldcoast@gta.com.au

Perth

A Level 2, 5 Mill Street
PERTH WA 6000
PO Box 7025, Cloisters Square
PERTH WA 6850
P +618 6169 1000
E perth@gta.com.au

ekistics

Appendix 5. Landscape Plan

PLANTING NOTES

PLANTS HAVE BEEN SELECTED TO GIVE A STRONG IDENTITY TO ALL ALDI STORES WITHIN METROPOLITAN ADELAIDE. EACH SPECIES SERVING A SPECIFIC FUNCTION.

SCREENING SHRUB SPECIES ARE TO BE USED AROUND ELECTRICAL TRANSFORMER. THE STREET FRONTAGE GARDEN BEDS ARE TO BE LOW GROWING MASS PLANTED AREAS TO PROVIDE A BARRIER TO UNDESIRED PEDESTRIAN ENTRY.

FEATURE PLANTING WILL BE SITUATED AT ALL VEHICLE AND PEDESTRIAN ENTRIES. PROVIDING AN INSTANT IMPACT FOR SHOPPERS ENTERING THE CAR PARK. THIS WILL BE ACHIEVED THROUGH CONTRASTING COLOUR AND TEXTURES.

TREES ARE PROPOSED TO BE CLEAN TRUNKED SPECIES THAT PROVIDE SHADE TO THE CARPARK BUT ENABLE SIGHTLINES TOWARDS THE ALDI STORE FRONT AND FOR PEDESTRIAN SAFETY.

TREES

Pyrus calleryana 'Capital'
Capital Pear
Height: 11m
Width: 3m

Lagerstroemia indica
Crepe Myrtle
Height: 6m
Width: 4m

Cupaniopsis anacardoides
Tuckeroo
Height: 8m
Width: 5m

Eucalyptus leucoxylon dwarf
Eucky Dwarf
Height: 6m
Width: 5m

SCREENING SHRUBS

Cistus salvifolius 'Brilliancy'
Rock Rose
Height: 1.5m
Width: 1.5m

Correa alba
White Correa
Height: 1.5m
Width: 1.5m

Rosmarinus officinalis
Rosemary
Height: 1.5m
Width: 1.5m

LOW SHRUBS & GROUNDCOVERS

Anigozanthos flavidus
Kangaroo Paw
Height: 1m
Width: 0.5m

Dianella tasmanica 'Tassie Red'
Tasman Flax Lily
Height: 0.5m
Width: 0.5m

Dietes grandifolia
Wild Iris
Height: 0.7m
Width: 0.7m

Hebe 'Beverly Hills'
Hebe
Height: 1m
Width: 1m

Liriope muscari
Lilyturf
Height: 0.4m
Width: 0.4m

Lomandra longifolia
Long Leaved Mat Rush
Height: 0.6m
Width: 0.6m

Leucophyta brownii
Cushion Bush
Height: 1m
Width: 1m

Viburnum tinus
Laurustinus
Height: 3m
Width: 2m

Clivia miniata
Bush Lily
Height: 0.6m
Width: 0.9m

Raphiolepsis delacourii
Indian Hawthorn
Height: 1.5m
Width: 1.5m

Dodonea viscosa spatulata
Sticky Hop Bush
Height: 1.5m
Width: 1.5m

Bursaria spinosa
Christmas Bush
Height: 2m
Width: 2m

Grevillea lavendulacea
Lavender Grevillea
Height: 1m
Width: 2m

Eremophila glabra
Common Emu Bush
Height: 1.5 m
Width: 3m

LEGEND

- EXISTING TREES
- SMALL - MEDIUM NATIVE TREES (PYRUS CALLERYANA 'CAPITAL') (LAGERSTROEMIA INDICA)
- MEDIUM - LARGE TREES (CUPANIOPSIS ANACARDIOIDES)
- SMALL-MEDIUM TREES (EUCALYPTUS LEUCOXYLON DWARF)
- PROPOSED SCREENING SHRUBS
- PROPOSED LOW SHRUBS & GROUNDCOVERS
- ORGANIC MULCH
- PROJECT BOUNDARY

OUTER SPACE
258a rundle street adelaide, sa 5000
p: (08) 8223 3228
e: admin@outerspace.net.au
w: www.outerspace.net.au

PROJECT	PROPOSED ALDI FOOD STORE - BLACKWOOD
CLIENT	ALDI STORES
DRAWING	DRAFT LANDSCAPE PLAN - DEVELOPMENT APPROVAL

DRAWN BY	MN
APPROVED BY	PG
DRAWING No.	OS592_CP01
ISSUE DATE	29-06-17

0 2 5 10 15 20 25m
SCALE 1:250 @ A1

PRELIMINARY
NOT FOR CONSTRUCTION

ekistics

Appendix 6. Preliminary Tree Assessment

Arborman Tree Solutions

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Preliminary Tree Assessment

Site: 198 Main Road, Blackwood

Date: Thursday, 13 April 2017
ATS4252-198MaiRdPTA

Contents

Report Reference Number: ATS4252-198MaiRdPTA

Report prepared for

ALDI C/- Nielsen Architects Attn: Evan Drage, Architect

Author

Jason Williams Consulting Arborist, Arborman Tree Solutions Pty Ltd

Brief

Arborman Tree Solutions was engaged to undertake a Preliminary Tree Assessment at the site location known as 198 Main Road, Blackwood. The purpose of a Preliminary Tree Assessment is to evaluate trees' suitability for retention in a future development through the identification of a Tree Retention Rating system.

In accordance with section 2.2 of the *Australian Standard 4970-2009 Protection of trees on development sites (2.2)* the following information is provided:

- Assessment of the health and structure of the trees.
- Identification of the Legislative Status as defined within the *Development Act 1993* and the local development plan.
- The identification of the species of each tree and a Tree Retention Rating for each tree.
- The identification of the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) for each tree.

Documents and Information Provided

The following information was provided for the preparation of this assessment

- Site Plan
- Aerial image

Executive Summary

Arborman Tree Solutions was engaged to undertake a Preliminary Tree Assessment of all trees on the site greater than five metres in height and all trees on neighbouring properties or council land that are likely to be impacted by development. The purpose of this assessment is to identify trees' suitable for retention within a development through the use of a Tree Retention Rating system.

A total of 20 trees were assessed with two trees identified as Regulated, four trees are exempt due to their proximity to a dwelling in a Bushfire Risk Area and 14 trees identified as unregulated under the *Development Act 1993*. A total of eight trees have been identified as suitable for retention and 12 trees which do not warrant development constraint, alternative designs or tree-friendly construction methodologies.

This assessment identifies:

1. Tree 1 is on a neighbouring property and Trees 2 to 7 are street trees as such they are all third party assets and therefore require protection during any development within the site.
2. Trees 8, 9 and 10 are exempt from legislative control due to their proximity to an existing dwelling in a Bushfire Risk Area and therefore their removal, if required, does not require a development application.
3. Trees 12 and 13 are Regulated and have a Moderate Retention Rating indicating they should be considered for retention in a future development. Their removal may be approved if it can be demonstrated that they are restricting an otherwise reasonable and expected development and alternative design solutions are not available to retain them.
4. Any trees identified as Regulated or Significant Trees require Development Approval prior to any tree damaging activity occurring. This includes activities within the TPZ, tree removal and may include pruning.

Site Location

Figure 1: Survey site location - 198 Main Road, Blackwood

Methodology

A site inspection was undertaken on Monday, 10 April 2017. Trees were mapped using a Trimble Geo7X handheld and assigned a unique tree number. Individual tree findings were recorded using the Tree Assessment Form (TAF©). Tree Health Indicator (THI©), Tree Structure Assessment (TSA©) and Useful Life Expectancy (ULE), were assessed using the methodology described within Appendix A. Legislative Status was identified for all trees under the *Development Act 1993*.

Each tree's suitability for retention was determined by reviewing principles under the local development plan or relevant authority and applying these findings in the Tree Retention Rating (TRR©) method, as described within Appendix A. Tree Protection Zones and Structural Root Zones were calculated using the Australian Standard AS4970-2009 (Section 3.2). Mapping was performed using GIS, CAD and Civil 3D software.

Limitations: *Tree management options such as pruning, soil amelioration, pathogen treatment are not part of this report and should be considered in relation to any proposed development.*

Findings

Arborman Tree Solutions was engaged to undertake a Preliminary Tree Assessment of all trees with a height greater than five metres within and adjacent to the site located at 198 Main Road, Blackwood.

1. Tree Population

The assessment identified 20 trees and the tree population included a variety of exotic, indigenous and Australian native species.

Table 1 Tree Population

Botanic Name	Common Name	Number of Trees	Origin
Eucalyptus robusta	Swamp Mahogany	6	Native
Eucalyptus microcarpa	Grey Box	5	Indigenous
Eucalyptus leucoxylon	South Australian Blue Gum	4	Indigenous
Fraxinus angustifolia subsp. oxycarpa 'Raywood'	Claret Ash	2	Exotic
Eucalyptus camaldulensis	River Red Gum	1	Indigenous
Corymbia citriodora	Lemon Scented Gum	1	Native
Hymenosporum flavum	Native Frangipani	1	Native

Findings on individual tree health and structure are presented within Appendix B, Tree Assessment Findings.

2. Legislation

Of the trees assessed two were identified as Regulated, four trees are exempt due to their proximity to a dwelling in a Bushfire Risk Area and 14 trees identified as unregulated under the *Development Act 1993*. Significant and Regulated Trees should be protected if they meet the criteria under the local development plan.

Table 2 Legislative Tree Status

Legislative Status	Number of Trees
Unregulated	14
Regulated	2
Exempt	4

3. Retention Rating

The trees that achieved a Moderate Retention Rating could be retained in a future development. Trees which achieved a Low Retention Rating indicate that development constraint, alternative designs or tree friendly construction methodologies are not warranted. As such, tree removal could be considered to achieve the development. Trees with a Low Retention Rating achieve one or more of the following attributes:-

a) provide limited environmental/aesthetic benefits to the area,

b) are a short lived species,

c) represent a material risk to people or property,

d) identified as causing or threatening to cause substantial damage to a structure of value,

e) have a short Useful Life Expectancy.

f) Are young and easily replaced (less than five metres tall).

A total of eight trees have been identified as suitable for retention and received a Moderate Retention Rating. It is my opinion that the Regulated Trees that scored a Moderate Retention Rating also meet one or more criteria, as described within the *Development Act 1993* that warrant retention.

Table 3 Retention Rating

Retention Rating	Number of Trees
Moderate	8
Low	12

The remaining 12 trees achieved a Low Retention Rating indicating that development constraint, alternative designs or tree-friendly construction methodologies are not warranted. As such, tree removal could be considered to achieve development (this includes Regulated/Significant Trees).

4. Development Constraints

The assessment identified that:

i. Trees 1, 8, 9 and 10 are exempt from legislation control and therefore their removal, if required, does not require a development application and as such these trees are not a constraint to the development of the site.

ii. Trees 12 and 13 are Regulated and have a Moderate Retention Rating indicating they should be considered for retention in a future development. The removal of Regulated Trees may be approved if it can be demonstrated that they are restricting an otherwise reasonable and expected development and alternative design solutions are not available to retain them.

iii. Tree 1 is a third party asset that requires protection during development, pruning or removal of this tree, if required, requires approval from the tree owner.

iv. Trees 2 to 7 are assets of the City of Mitcham and require protection during development. If these trees are in conflict with a future development approval from the City of Mitcham is required prior to their removal.

5. Tree Protection

Australian Standard AS4970-2009 *Protection of trees on development sites* prescribes the use of a Tree Protection Zone (TPZ) as the principle means of protecting trees throughout the development process. If encroachment is required within any TPZ, the Project Arborist should be consulted to identify impacts and recommend mitigation measures. The Tree Protection Zones should be used to determine scope for development of the site by maintaining these areas as open space. The Tree Protection Zone radii are included within Appendix D Tree Assessment Summary.

Recommendation

The following recommendations are presented based on the Preliminary Tree Assessment:

1. Trees that achieved a Moderate Retention Rating should be considered for retention within a future development. The removal of Regulated trees may be approved if it can be demonstrated that they are restricting an otherwise reasonable and expected development and alternative design solutions are not available to retain them.

2. Trees 1 to 7 are third party assets and require protection during development, if removal is necessary approval from the tree owner is required.

3. Trees that achieved a Low Retention Rating do not warrant development constraint, alternative designs or tree friendly construction methodologies. As such, tree removal could be considered to achieve the development (this includes Regulated/Significant Trees).

4. Regulated or Significant Trees require Development Approval prior to any tree damaging activity occurring. This includes development activities within the TPZ, tree removal and potentially pruning.

5. A Project Arborist should be appointed to assist in the design around trees to be retained; the development impacts and tree protection requirements are to be included in a Development Impact Report and a Tree Protection Plan as identified in Australian Standard AS 4970 2009 *Protection of trees on development sites*.

Thank you for the opportunity to provide this report. Should you require further information, please contact me and I will be happy to be of assistance.

Yours sincerely

JASON WILLIAMS
Consulting Arboriculturist
Diploma of Arboriculture
International Society of Arboriculture – Tree Risk Assessment

Glossary

Size:	approximate height and width of tree in metres.
Age:	identification of the maturity of the subject tree.
Useful Life Expectancy:	expected number of the years that the subject specimen will remain alive and sound in its current location and/or continues to achieve the relevant Principles of Development Control.
Health:	visual assessment of tree health.
Structure:	visual assessment of tree structure.
Circumference:	trunk circumference measured at one metre above ground level. This measurement is used to determine the status of the tree in relation to the *Development Act 1993*.
Diameter at Breast Height (DBH):	trunk diameter measured at 1.4 metres above ground level used to determine the Tree Protection Zone as described in Australian Standard AS4970-2009 *Protection of trees on development sites*.
Diameter at Root Buttress (DRB):	trunk diameter measured just above the root buttress as described in Australian Standard AS4970-2009 *Protection of trees on development sites* and is used to determine the Structural Root Zone.
Tree Damaging Activity	Tree damaging activity includes those activities described within the *Development Act 1993* such as removal, killing, lopping, ringbarking or topping or any other substantial damage such as mechanical or chemical damage, filling or cutting of soil within the TPZ. Can also include forms of pruning above and below the ground.
Tree Protection Zone:	area of root zone that should be protected to prevent substantial damage to the tree's root system.
Structural Root Zone:	calculated area within the tree's root zone that is considered essential to maintain tree stability.
Project Arborist	A person with the responsibility for carrying out a tree assessment, report preparation, consultation with designers, specifying tree protection measures, monitoring and certification. The Project Arborist must be competent in arboriculture, having acquired through training, minimum Australian Qualification Framework (AQTF) Level 5, Diploma of Horticulture (Arboriculture) and/or equivalent experience, the knowledge and skills enabling that person to perform the tasks required by this standard.

References

Australian Standard AS4970–2009 ***Protection of trees on development sites***: Standards Australia.

Matheny N. Clark J. 1998: ***Trees and Development a Technical Guide to Preservation of Trees During Land Development***: International Society of Arboriculture, Champaign, Illinois, USA.

Dunster J.A., Smiley E.T., Metheny N. and Lilly S. 2013. ***Tree Risk Assessment Manual***. International Society of Arboriculture, Champaign, Illinois USA.

Appendix A - Tree Assessment Methodology

Tree Assessment Form (TAF©)

Record	Description
Tree	A perennial woody plant with a mature height of greater than 5 metres and life expectancy of more than 10 years.
Genus and Species	Trees are identified using normal field plant taxonomy techniques. Due to hybridisation and plant conditions available on the day of observation it may not always be possible to identify the tree to species level; where species cannot be ascertained *sp.* is used.
Height	Tree height is observed and recorded in the following ranges; <5m, 5-10m, 10-15m and >20m.
Spread	Crown width (projection) diameter is recorded by the following fields <5m, 5-10m, 10-15m, 15-20m, >20m.
Tree Health	Tree health was assessed using the Arborman Tree Solutions - Tree Health Assessment Method that is based on international best practice.
Tree Structure	Tree structure was assessed using Arborman Tree Solutions - Tree Structure Assessment Method that is based on international best practice.
Tree Risk Assessment	Trees were assessed using the International Society of Arboriculture Level 1 Tree Assessment method. The person conducting the assessment has acquired the International Society of Arboriculture Tree Risk Assessment Qualification (TRAQ).
Legislative Status	Legislation status was identified through the interpretation of the *Development Act 1993*, and the *Natural Resource Management Act 2004* as well as other relevant legislation, therefore determining regulatory status of the subject tree.
Mitigation	Measures to reduce tree risk may be recommended in the form of pruning and this listed in the Tree Assessment Findings (Appendix C). Tree pruning is recommended in accordance with AS4373-2007 *Pruning amenity trees* where practicable. Where measures to mitigate risk is not possible and the risk is unacceptable, then tree removal or further investigation is recommended.

Useful Life Expectancy (ULE)

ULE Rating	Definition
Surpassed	The tree has surpassed its Useful Life Expectancy.
<10 years	The tree displays either or both Poor Health and/or Structure and is considered to have a short Useful Life Expectancy of less than ten years.
>10 years	The tree is displays Fair Health or Structure and Good Health and Structure and is considered to have a Useful Life Expectancy of more than ten years.
>20 years	The tree displays Good Health and Structure and is considered to have an extended Useful Life Expectancy of more than twenty years.

Maturity (Age)

Age Class	Definition
Senescent	The tree has surpassed its optimum growing period and is declining and/or reducing in size. May be considered as a veteran in relation to its ongoing management. Tree will have generally reached greater than 80% of its expected life expectancy.
Mature	A tree which has reached full maturity in terms of its predicted life expectancy and size, the tree is still active and experiencing cell division. Tree will have generally reached 20-80% of its expected life expectancy.
Semi Mature	A tree which has established, but has not yet reached maturity. Normally tree establishment practices such as watering will have ceased. Tree will generally not have reached 20% of its expected life expectancy.
Juvenile	A newly planted tree or one which is not yet established in the landscape. Tree establishment practices such as regular watering will still be in place. Tree will generally be a newly planted specimen up to five years old; this may be species dependant.

Tree Health Indication (THI©)

Category	Description
Good	Tree displays high vigour, uniform leaf colour, no or little dieback (<5%), crown density (>85%) and or healthy axillary buds and typical internode length. The tree has little to no pest and/or disease infestation.
Fair	Tree displays low vigour, dull leaf colour, little dieback (<15%), crown density (>70%) and/or reduced axillary buds and internode length. Minor pest and/or disease infestation potentially impacting on tree health.
Poor	Tree displays no vigour, chlorotic or dull leaf colour, moderate to high crown dieback (>15%), low crown density (<70%) and/or few or small axillary buds and shortened internode length. Pest and or disease infestation is evident and/or widespread.
Dead	The tree has died and has no opportunity for recovery.

Tree Structural Assessment (TSA©)

Category	Description
Good	Little to no branch failure observed within the crown, well-formed unions, no included bark, good branch and trunk taper present, root buttressing and root plate are typical.
Fair	History of minor branch failure observed in crown, well-formed unions, no included bark, acceptable branch and trunk taper present, root buttressing and root plate are typical.
Poor	History of significant branch failure observed in crown, poorly formed unions, included bark present, branch and trunk taper absent, root buttressing and root plate are atypical.
Failed	The structure of the tree has or is in the process of collapsing.

Tree Retention Rating (TRR)

The Tree Retention Rating is based on a number of factors that are identified as part of the standard tree assessment criteria including Condition, Size, Environmental, Amenity and Special Values. These factors are combined in a number of matrices to provide a Preliminary Tree Retention Rating and a Tree Retention Rating Modifier which combine to provide a Tree Retention Rating that is measurable, consistent and repeatable

Preliminary Tree Retention Rating

The Preliminary Tree Retention Rating is conducted assessing Tree Health and Structure to give an overall Condition Rating and Height and Spread to give an overall Size Rating. The following matrices identify how these are derived.

Condition Matrix				
Structure	**Health**			
	Good	**Fair**	**Poor**	**Dead**
Good	C1	C1	C3	C4
Fair	C1	C2	C3	C4
Poor	C3	C3	C4	C4
Failed	C4	C4	C4	C4

Size Matrix					
Spread	**Height**				
	>20	**15-20**	**10-15**	**5-10**	**<5**
>20	S1	S1	S1	S2	S3
15-20	S1	S1	S2	S3	S3
10-15	S1	S2	S2	S3	S4
5-10	S2	S3	S3	S4	S5
<5	S3	S3	S4	S5	S5

The results from the Condition and Size Matrices are then placed in the Preliminary Tree Retention Rating Matrix.

Preliminary Tree Retention Rating				
Size	**Condition**			
	C1	**C2**	**C3**	**C4**
S1	High	High	Low	Low
S2	High	Moderate	Low	Low
S3	Moderate	Moderate	Low	Low
S4	Moderate	Moderate	Low	Low
S5	Low	Low	Low	Low

The Preliminary Tree Retention Rating gives a base rating for all trees regardless of other environmental and/or amenity factors and any Special Value considerations. The Preliminary Tree Retention Rating can only be modified if these factors are considered to be of high or low enough importance to warrant increasing or, in a few cases, lowering the original rating.

Tree Retention Rating Modifier

The Preliminary Tree Retention Rating is then qualified against the recognised Environmental and Amenity benefits that trees present to the community thereby providing a quantitative measure to determine the overall Tree Retention Rating. Data is collected in relation to Environmental and Amenity attributes which are compared through a set of matrices to produce a Tree Retention Rating Modifier.

Environmental Matrix				
Origin	**Habitat**			
	Active	**Inactive**	**Potential**	**No Habitat**
Indigenous	E1	E1	E2	E3
Native	E1	E2	E3	E3
Exotic	E2	E3	E3	E4
Weed	E3	E3	E4	E4

Amenity Matrix				
Character	**Aesthetics**			
	High	**Moderate**	**Low**	**None**
Important	P1	P1	P2	P3
Moderate	P1	P2	P3	P3
Low	P2	P3	P3	P4
None	P3	P3	P4	P4

Tree Retention Rating Modifier				
Amenity	**Environment**			
	E1	**E2**	**E3**	**E4**
P1	High	High	Moderate	Moderate
P2	High	Moderate	Moderate	Moderate
P3	Moderate	Moderate	Moderate	Moderate
P4	Moderate	Moderate	Moderate	Low

Tree Retention Rating

The results of the Preliminary Tree Retention Rating and the Tree Retention Rating Modifier matrices are combined in a final matrix to give the actual Tree Retention Rating.

Tree Retention Rating Matrix			
Tree Retention Rating Modifier	**Preliminary Tree Retention Rating**		
	High	**Moderate**	**Low**
High	Important	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Low

Special Value Trees

There are potentially trees that have Special Value for reasons outside of normal Arboricultural assessment protocols and therefore would not have been considered in the assessment to this point; to allow for this a Special Value characteristic that can override the Tree Retention Rating can be selected. Special Value characteristics that could override the Tree Retention Rating would include factors such as the following:

Cultural Values

Memorial Trees, Avenue of Honour Trees, Aboriginal Heritage Trees, Trees planted by Dignitaries and various other potential categories.

Environmental Values

Rare or Endangered species, Remnant Vegetation, Important Habitat for rare or endangered wildlife, substantial habitat value in an important biodiversity area and various other potential categories.

Where a tree achieves one or more Special Value characteristics the Tree Retention Rating will automatically be overridden and assigned the value of Important.

Tree Retention Rating Definitions

Important These trees are considered to be important and will in almost all instances be required to be retained within any future development/redevelopment. It is highly unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Protection of these trees should as a minimum be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites* however given the level of importance additional considerations may be required.

High These trees are considered to be important and will in most instances be required to be retained within any future development/redevelopment. It is unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Protection of these trees should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Moderate These trees are considered to be suitable for retention however they achieve less positive attributes than the trees rated as Important or High and as such their removal or other tree damaging activity is more likely to be considered to be acceptable in an otherwise reasonable and expected development. The design process should where possible look to retain trees with a Moderate Retention Rating. Protection of these trees, where they are identified to be retained, should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Low These trees are not considered to be suitable for retention in any future development/redevelopment; trees in this category do not warrant special works or design modifications to allow for their retention. Trees in this category are likely to be approved for removal and/or other tree damaging activity in an otherwise reasonable and expected development. Protection of these trees, where they are identified to be retained, should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Appendix B - Tree Assessment Findings

Corymbia citriodora

Tree No: 1

Lemon Scented Gum

Inspected: Monday, 10 April 2017

Height: 10-15 metres
Spread: 10-15 metres
Health: Good
Structure: Fair

Trunk Circumference: 5.62 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 12 metres

GPS Coords (MGA Zone 54): 282458.134E, 6122486.307N

Legislative Status	Exempt
Retention Rating	Moderate

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: 2

South Australian Blue Gum

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Good
Structure: Good

Trunk Circumference: 0.1 metres
Useful Life Expectancy: >20 years

Tree Protection Zone (TPZ): 2.00 metres

GPS Coords (MGA Zone 54): 282475.512E, 6122504.328N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: 3

South Australian Blue Gum

Inspected: Monday, 10 April 2017

Height: 5-10 metres
Spread: 5-10 metres
Health: Fair
Structure: Fair

Trunk Circumference: 1.45 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 5.52 metres

GPS Coords (MGA Zone 54): 282481.167E, 6122505.854N

Legislative Status	Unregulated
Retention Rating	Moderate

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: 4

South Australian Blue Gum

Inspected: Monday, 10 April 2017

Height: 5-10 metres
Spread: 5-10 metres
Health: Fair
Structure: Good

Trunk Circumference: 1.1 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3.96 metres

GPS Coords (MGA Zone 54): 282492.558E, 6122506.512N

Legislative Status	Unregulated
Retention Rating	Moderate

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus leucoxylon

Tree No: 5

South Australian Blue Gum

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Good
Structure: Good

Trunk Circumference: 0.75 metres
Useful Life Expectancy: >20 years

Tree Protection Zone (TPZ): 2.52 metres

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

GPS Coords (MGA Zone 54): 282534.447E, 6122529.291N

Legislative Status	Unregulated
Retention Rating	Moderate

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Fraxinus angustifolia subsp. oxycarpa 'Raywood'

Tree No: 6

Claret Ash

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Good
Structure: Fair

Trunk Circumference: 1.24 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 4.68 metres

GPS Coords (MGA Zone 54): 282537.669E, 6122546.59N

Legislative Status	Unregulated
Retention Rating	Moderate

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Fraxinus angustifolia subsp. oxycarpa 'Raywood'

Tree No: 7

Claret Ash

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Good
Structure: Fair

Trunk Circumference: 1.15 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 4.68 metres

GPS Coords (MGA Zone 54): 282540.643E, 6122561.817N

Legislative Status	Unregulated
Retention Rating	Moderate

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus microcarpa

Tree No: 8

Grey Box

Inspected: Monday, 10 April 2017

Height: 5-10 metres

Spread: 5-10 metres

Health: Fair

Structure: Poor

Trunk Circumference: 2.25 metres

Useful Life Expectancy: <10 years

Tree Protection Zone (TPZ): 8.64 metres

GPS Coords (MGA Zone 54): 282459.138E, 6122548.073N

Legislative Status	Exempt
Retention Rating	Low

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

The tree has a history of branch failure. Removal of the tree is recommended due to poor structure.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus microcarpa

Tree No: 9

Grey Box

Inspected: Monday, 10 April 2017

Height: 10-15 metres
Spread: 5-10 metres
Health: Fair
Structure: Poor

Trunk Circumference: 2.65 metres
Useful Life Expectancy: <10 years

Tree Protection Zone (TPZ): 7.2 metres

GPS Coords (MGA Zone 54): 282460.92E, 6122580.492N

Legislative Status	Exempt
Retention Rating	Low

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

There is an unstable union in the primary structure. Removal of the tree is recommended due to poor structure.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus microcarpa

Tree No: 10

Grey Box

Inspected: Monday, 10 April 2017

Height: 10-15 metres
Spread: 5-10 metres
Health: Fair
Structure: Poor

Trunk Circumference: 2.55 metres
Useful Life Expectancy: <10 years

Tree Protection Zone (TPZ): 6.6 metres

GPS Coords (MGA Zone 54): 282468.995E, 6122577.849N

Legislative Status	Exempt
Retention Rating	Low

Legislative Status Comments

This tree is exempt from control under the Development Act 1993.

General Observations

There is an unstable union in the primary structure. Removal of the tree is recommended due to poor structure.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus camaldulensis

Tree No: 11

River Red Gum

Inspected: Monday, 10 April 2017

Height: 5-10 metres
Spread: 0-5 metres
Health: Good
Structure: Fair

Trunk Circumference: 1.58 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 4.32 metres

GPS Coords (MGA Zone 54): 282480.049E, 6122574.852N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus microcarpa

Tree No: 12

Grey Box

Inspected: Monday, 10 April 2017

Height: 15-20 metres
Spread: 10-15 metres
Health: Fair
Structure: Fair

Trunk Circumference: 2.3 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 8.88 metres

GPS Coords (MGA Zone 54): 282501.398E, 6122512.88N

Legislative Status	Regulated
Retention Rating	Moderate

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus microcarpa

Tree No: 13

Grey Box

Inspected: Monday, 10 April 2017

Height: 10-15 metres
Spread: 10-15 metres
Health: Fair
Structure: Fair

Trunk Circumference: 2.28 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 6.6 metres

GPS Coords (MGA Zone 54): 282507.616E, 6122510.034N

Legislative Status	Regulated
Retention Rating	Moderate

Legislative Status Comments

This tree is a Regulated Tree under the Development Act 1993.

General Observations

Pruning may be required to accommodate the proposed development.

Recommendations

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 14

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: 5-10 metres
Spread: 0-5 metres
Health: Good
Structure: Fair

Trunk Circumference: 1 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3.6 metres

GPS Coords (MGA Zone 54): 282498.685E, 6122525.437N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 15

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: 5-10 metres
Spread: 0-5 metres
Health: Fair
Structure: Fair

Trunk Circumference: 1.15 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 4.32 metres

GPS Coords (MGA Zone 54): 282501.042E, 6122531.291N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 16

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Fair
Structure: Fair

Trunk Circumference: 0.85 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3.36 metres

GPS Coords (MGA Zone 54): 282507.031E, 6122530.501N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 17

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Fair
Structure: Good

Trunk Circumference: 0.8 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3 metres

GPS Coords (MGA Zone 54): 282511.538E, 6122531.93N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 18

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Fair
Structure: Fair

Trunk Circumference: 0.75 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3 metres

GPS Coords (MGA Zone 54): 282516.914E, 6122536.611N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Eucalyptus robusta

Tree No: 19

Swamp Mahogany

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Fair
Structure: Fair

Trunk Circumference: 0.9 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 3.48 metres

GPS Coords (MGA Zone 54): 282515.095E, 6122528.624N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Hymenosporum flavum

Tree No: 20

Native Frangipani

Inspected: Monday, 10 April 2017

Height: <5 metres
Spread: 0-5 metres
Health: Fair
Structure: Fair

Trunk Circumference: 0.6 metres
Useful Life Expectancy: >10 years

Tree Protection Zone (TPZ): 2.16 metres

GPS Coords (MGA Zone 54): 282528.036E, 6122537.611N

Legislative Status	Unregulated
Retention Rating	Low

Legislative Status Comments

This tree is not regulated under the Development Act 1993.

General Observations

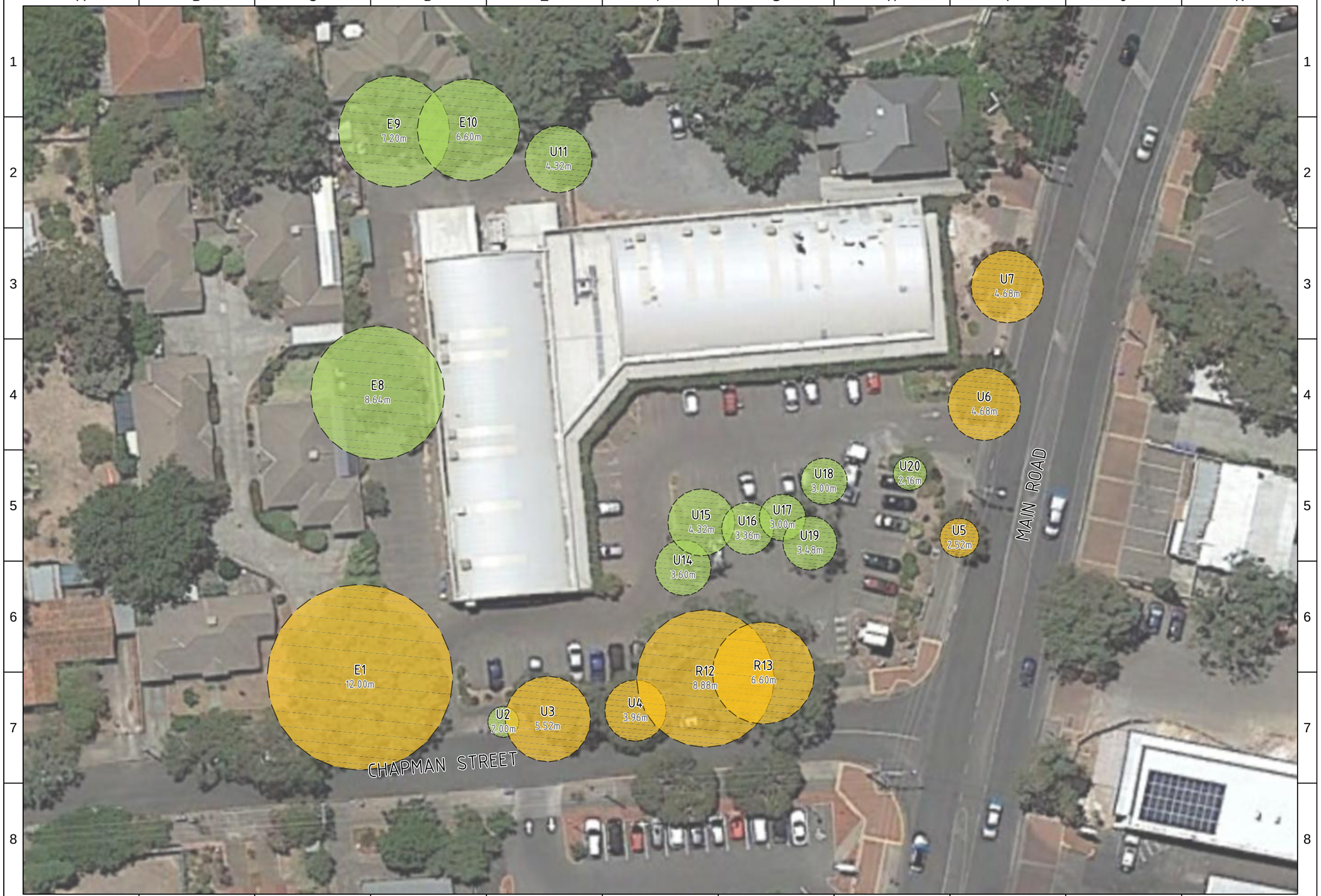
Removal of the tree may be required to accommodate the proposed development.

Recommendations

This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Appendix C - Mapping



Legislative Status

S	Significant
R	Regulated
U	Unregulated
E	Exempt

Retention Rating

- Important
- High
- Moderate
- Low

Labels denote tree number, legislative status and TPZ radius in metres, unless otherwise shown.

Issue: PRELIMINARY
Date: 13/04/2017 Rev: 2
Ref: ATS4252-198MaiRdPTA

Arborman Tree Solutions
23 Aberdeen Street
Port Adelaide SA 5015
(08) 8240 5555
www.arborman.com.au

Preliminary Tree Assessment

0 20 40 m

1:500 @ A3

arborman® tree solutions
PROFESSIONALS IN ARBORICULTURE

Appendix D – Tree Assessment Summary

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Comments	Recommendations
1	*Corymbia citriodora*	Exempt	Moderate	12 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
2	*Eucalyptus leucoxylon*	Unregulated	Low	2.00 metres		This tree has a Low Retention Rating and should not form a material constraint to any future development.
3	*Eucalyptus leucoxylon*	Unregulated	Moderate	5.52 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
4	*Eucalyptus leucoxylon*	Unregulated	Moderate	3.96 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
5	*Eucalyptus leucoxylon*	Unregulated	Moderate	2.52 metres		This tree has a Moderate Retention Rating and could be considered for retention in any future development.

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Comments	Recommendations
6	*Fraxinus angustifolia subsp. oxycarpa 'Raywood'*	Unregulated	Moderate	4.68 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
7	*Fraxinus angustifolia subsp. oxycarpa 'Raywood'*	Unregulated	Moderate	4.68 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
8	*Eucalyptus microcarpa*	Exempt	Low	8.64 metres	The tree has a history of branch failure. Removal of the tree is recommended due to poor structure.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
9	*Eucalyptus microcarpa*	Exempt	Low	7.2 metres	There is an unstable union in the primary structure. Removal of the tree is recommended due to poor structure.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
10	*Eucalyptus microcarpa*	Exempt	Low	6.6 metres	There is an unstable union in the primary structure. Removal of the tree is recommended due to poor structure.	This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Comments	Recommendations
11	*Eucalyptus camaldulensis*	Unregulated	Low	4.32 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
12	*Eucalyptus microcarpa*	Regulated	Moderate	8.88 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
13	*Eucalyptus microcarpa*	Regulated	Moderate	6.6 metres	Pruning may be required to accommodate the proposed development.	This tree has a Moderate Retention Rating and could be considered for retention in any future development.
14	*Eucalyptus robusta*	Unregulated	Low	3.6 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
15	*Eucalyptus robusta*	Unregulated	Low	4.32 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.

arborman tree solutions
PROFESSIONALS IN ARBORICULTURE

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Comments	Recommendations
16	*Eucalyptus robusta*	Unregulated	Low	3.36 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
17	*Eucalyptus robusta*	Unregulated	Low	3 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
18	*Eucalyptus robusta*	Unregulated	Low	3 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
19	*Eucalyptus robusta*	Unregulated	Low	3.48 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.
20	*Hymenosporum flavum*	Unregulated	Low	2.16 metres	Removal of the tree may be required to accommodate the proposed development.	This tree has a Low Retention Rating and should not form a material constraint to any future development.

Reference Number:
ATS4252-198MaiNorRdDIR V2

4 July 2017

ALDI (Blackwood Village)
C/- Nielsen Architects
Attn: Evan Drage
108 Mt Barker Road
Stirling SA 5152

Dear Evan

Re: ALDI Blackwood Village – Preliminary Level and Stormwater Plan

I have reviewed the Preliminary Level and Stormwater Plan for the ALDI Blackwood Village at 198 Main Road, Blackwood and made observations in relation to the potential conflicts between the trees and proposed level changes. This report looks specifically at the Trees 1, 3, 4, 12 and 13 as identified in the Preliminary Tree Assessment ATS4252-198MaiRdPTA. Factors such as species, health, structure, risk and the tree's growing environment have also been taken into account when considering the impacts of the proposal.

Tree 1 is not likely to be substantially impacted by the proposal however there is potential for damage within the Structural Root Zone of this tree and therefore recommendations to minimise this have been identified. Tree 3 and 4 are located such that they are not expected to be impacted by the proposal. Tree 12 and 13 are most at risk as the proposal requires the surface level to be excavated by approximately 0.09 metres within the Structural Root Zones of these trees; removal of roots in this area will destabilise the tree therefore recommendations to minimise the potential for damage to these trees have been identified. The impacts and recommendations are summarised in the appended table.

All the trees have pruning options that will allow for vehicle and pedestrian access without negatively impacting on their aesthetic value.

Thank you for the opportunity to provide this information. Should you have any questions or require further information, please contact me and I will be happy to be of assistance.

Yours sincerely

MARCUS LODGE
Senior Consulting Arboriculturist
Diploma in Arboriculture
ISA Tree Risk Assessment

Tree Location

Tree Number	Proposed Works	Potential Impact	Recommendation
1	Removal and replacement of the existing car park and driveway surface. Replacement is identified to be at a level between 0.01 and 0.3 metres below the existing grade.	Excavation potentially occurs within the Structural Root Zone however at this location it is minimal and given the existing surface treatment substantial roots are not expected to be present. The most substantial excavation occurs away from the tree and given the existing surface treatment substantial root activity is unlikely to be present at this distance from the tree.	Excavation within the Structural Root Zone is to be undertaken by hand or other methodology that will preserve any encountered roots. Where roots are in conflict with the proposal the Project Arborist is to determine the most appropriate management option and treat the roots accordingly. The existing garden bed within the cart park adjacent to this tree is to be preserved which will assist in the protection of the roots in this area.
3 and 4	Removal and replacement of the existing car park surface. Replacement is identified to be at a level between 0.02 and 0.1 metres below the existing grade.	There is a minor encroachment into the Tree Protection Zone of both these trees however they are both street trees and it is not expected that substantial root activity will be found below the existing car park surface.	No specific management is recommended for these trees however they should be included within the Tree Protection Plan for the site.
12 and 13	Removal and replacement of the existing car park surface. Replacement is identified to be at a level approximately 0.09 metres below the existing grade.	Excavation is proposed within the Structural Root Zone; the trees are located adjacent to the existing car park kerbing and there is some corruption of the existing pavement indicating roots are close to the surface in this location. The proposal is has the potential to damage these roots which could lead to the failure of the trees.	Excavation within the Structural Root Zone is to be undertaken by hand or other methodology that will preserve any encountered roots. Where roots are in conflict with the proposal the Project Arborist is to determine the most appropriate management option and treat the roots accordingly. Alternative design options may be required to preserve the structural roots of these trees, this could be as simple as designating the car parks adjacent to the trees as small car or motorbike parks thereby allowing the kerbing to be placed further from the trees.

ekistics

Appendix 7. Stormwater Management Report

Wallbridge and Gilbert

WGA

WALLBRIDGE GILBERT
AZTEC

Nielsen Architects Pty Ltd

ALDI BLACKWOOD

ALDI BLACKWOOD

Job No. WAD160996
Rev B
23rd May 2017

CONTENTS

1 INTRODUCTION

1.1 Background

WGA has been engaged by ALDI Stores to prepare a Stormwater Management Plan for the proposed ALDI store on the corner of Chapman Street and Main Road, Blackwood.

This report is intended to conceptually outline the stormwater management design for the proposed development and detail the stormwater management methodology. A final detailed design should be carried out to provide construction documentation and incorporate the stormwater design principles outlined in this report. The final documentation is considered to be beyond the scope of this report.

1.2 Scope of the Assessment

The preparation of the plan comprises the scope of services listed below:

- Site visit
- Liaise with the City of Mitcham (Council) to determine appropriate and relevant stormwater requirements for the specific site
- Prepare a Stormwater Management Plan detailing the proposed method of collection and the disposal of site generated stormwater runoff
- Prepare a preliminary sketch plan showing likely site drainage infrastructure
- Incorporate significant but nominal assessment of required design pavement levels based on Council and ALDI requirements

1.2.1 Documentation

The client has provided a preliminary Architectural Site Plan for the development.

2 DETAILED REPORT

2.1 Development Description

The proposed ALDI development is located on a site on the north-eastern corner of Chapman Street and Main Road, Blackwood. The development involves the construction of an ALDI Store and a car park with 87 parking spaces.

2.2 Catchment Description

The proposed site covers a total area of approximately 4,850 m^2 and is currently occupied by an existing single storey shopping centre comprising 10 tenancies. The existing site is fully developed to include hard stand loading zones and significant carpark space. An Existing Site Plan by Nielsen Architects is available in Appendix A. A current aerial photograph is shown in Appendix B.

The internal site land and Main Road have steady fall from north to south with the existing building floor levels sitting from 0.8m to 1m above the Chapman Road centreline. Chapman Road itself breaks to the east and west at approximately the midpoint of the site, with the western section quickly escalating in grade, particularly beyond the project site. A copy of the current engineering survey is attached in Appendix C.

Copies of the proposed architectural plans by Nielsen Architects may be found attached within Appendix D, detailing the proposed catchment.

2.3 Existing Stormwater Drainage

Internal stormwater drainage system within the site appears to bear largely towards Chapman Road and an adjacent Council Side Entry Pit (SEP), whilst some roof catchment looks to be discharged to the Main Road watertable nearby.

The City of Mitcham have provided some detail of the existing underground drainage system in the surrounding streets. A copy of this is shown in Appendix E, and indicates only a relatively shallow SEP at Chapman Road, close to the Main Road intersection.

The Council drawing indicates a 600mm deep SEP, whilst the survey indicates it may be a fraction shallower at approximately 500mm. Our site investigation included viewing this SEP, which appears to contain a debris basket. The outlet pipe could not be viewed at the time, although Council documents indicate an existing 300mm diameter stormwater pipe draining this pit and conveying the stormwater to Council infrastructure on the opposite side of Main Road.

2.4 Council Requirements

Council have confirmed the following storm water requirements with respect to this site:

- On site detention storage (to reduce the peak flow rate) is not required in this instance as the 'pre-development' layout is fully developed with impermeable roofs and pavements. This is unchanged by the new, proposed development.
- Site levels are to be set to provide a clear overland flow path for the 1 in 100 year flows
- Stormwater quality improvement measures (such as GPTs) are encouraged to treat the quality of the stormwater runoff from the trafficable areas (loading docks, car parks etc)

2.5 Stormwater Management Methodology

Based on discussions with Council, and in accordance with the operational needs of the Client, the following stormwater management methodology is proposed.

The existing tenancy finished floor level of RL 270.25 is to be met at ground floor level. The undercover carparking below the proposed store is, however, to be largely at a considerably lower level of approximately 269.80, in order to match preliminary clearance and accessibility requirements.

External, open carpark areas to the east and southeast of the proposed structure are to be drained towards the shallow Council Side Entry Pit, with run-off to be first passed through a suitably shallow Gross Pollutant Trap or Pollution Control Device.

The southwestern portion of the site must be drained to the Chapman Stree watertable at it's lowest point. Collection of run-off will be along the site's southern and western boundary via a kerb and gutter, and a degree of 'first flush' treatment is proposed by adopting dished, infiltration treatment zones within the limited landscape spaces.

Whilst most of the western carpark areas are undercover, windblown rainfall extending below the upper level is catered for by some perimeter paving grading (outwards), a series of kerb and gutters and treatment / retention areas within the northern landscape corners. Overflow provision from these small, exposed catchments at the back is via kerb and gutter along the western boundary, passing overflow behind the Goods Lift and onwards to Chapman Road.

Downpipes, from new and existing buildings, will be connected to new underground stormwater drainage systems that will ultimately discharge to the street watertables via galvanised box drains, or direct to the Council Side Entry Pit available. Run-off discharge will be spread to a number of loactions so as not to allow excessive outflow at one particular kerb location.

Grated strip drains, or trench grates, will act to intercept surface stormwater outflow at the driveway exit points.

Refer to Appendix F for a Preliminary Level & Stormwater Management Plans.

2.6 Summary

The Preliminary Sketch Plans contained within this report have been prepared to demonstrate the philosophy behind the proposed treatment of the stormwater runoff from this development, with consideration of surface level and clearance issues. The information provided is preliminary and will be subject to detailed design and documentation.

APPENDIX A – EXISTING SITE PLAN

1 EXISTING SITE PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

CLIENT

ALDI

PROJECT

ALDI BLACKWOOD

DRAWING

EXISTING SITE PLAN

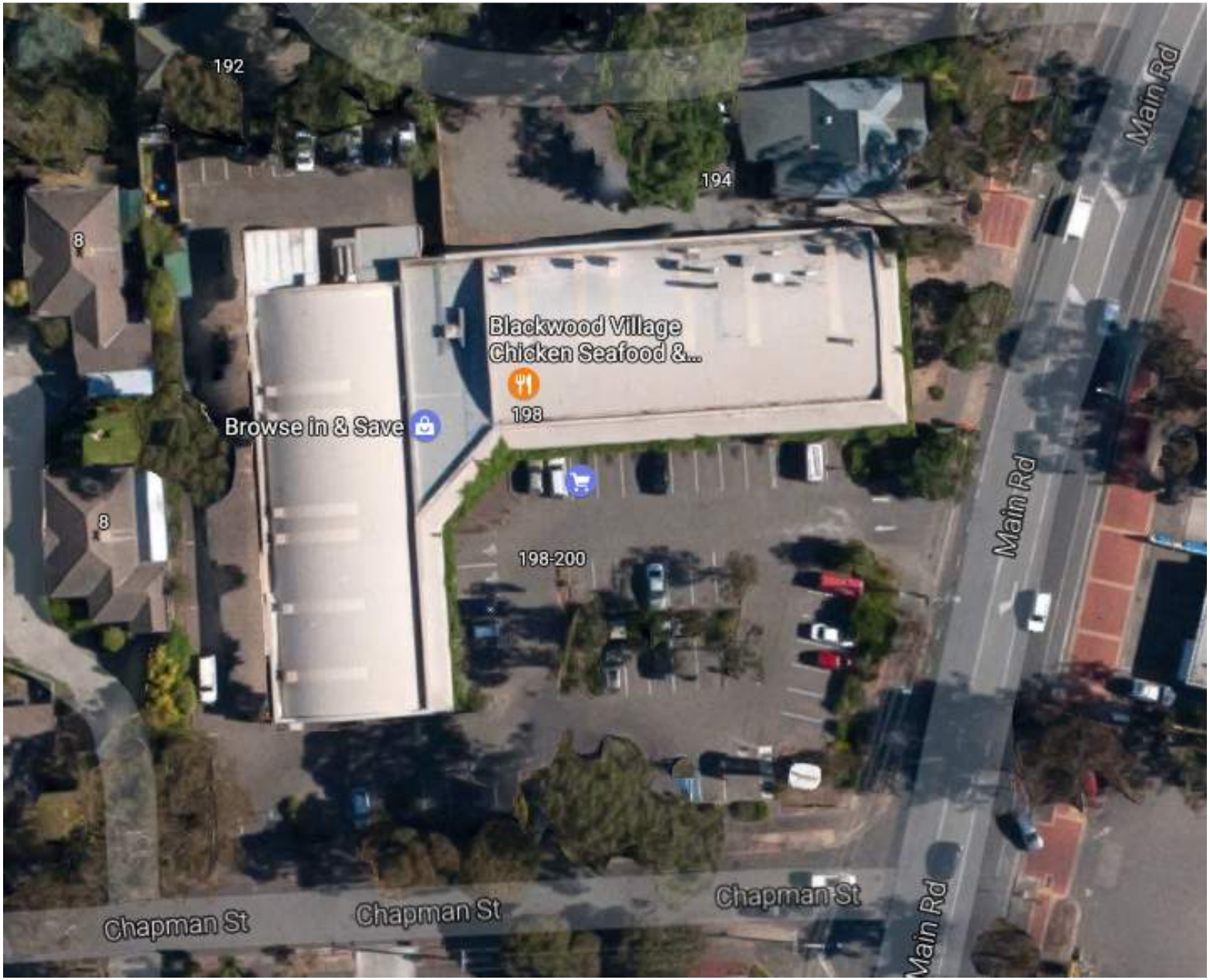
NIELSEN ARCHITECTS

108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1 : 500	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA01		

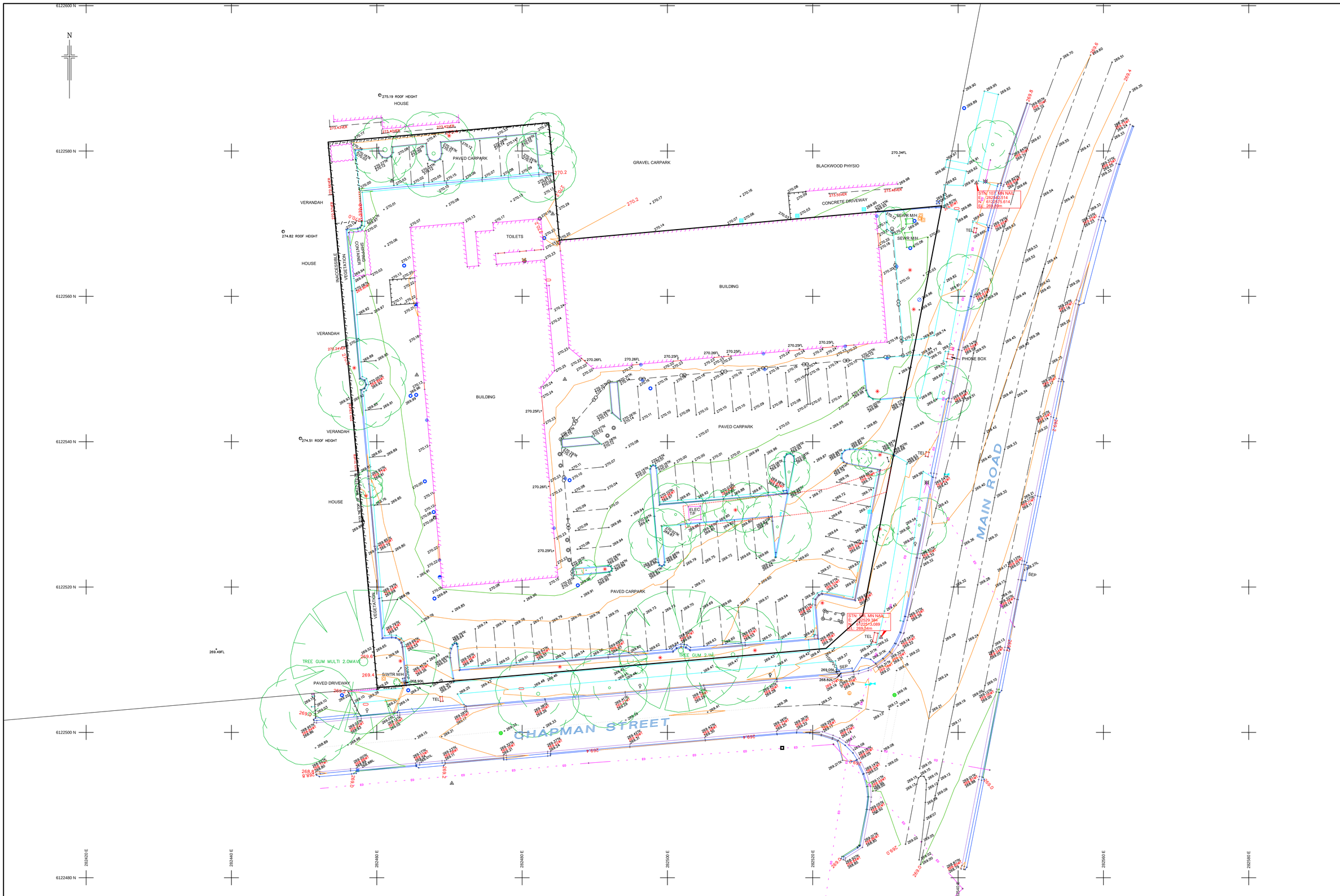
APPENDIX B – AERIAL PHOTOGRAPH



Aerial Photograph

APPENDIX C – ENGINEERING SURVEY

WGA



REV	DATE	DESCRIPTION	CALC	FIELD
		ADDITIONS, AMENDMENTS AND APPROVALS		

LEGEND

- 47.51TK TOP KERB
- 47.36WT WATER TABLE
- 45.16FL FLOOR LEVEL
- 48.12IL INVERT LEVEL
- TAP
- WATER METER
- SPRINKLR / IRRIG VALVE
- HYDRANT
- DOMESTIC OUTLET
- DOWNPIPE
- DOMESTIC SUMP
- STORMWATER MHOLE
- SEP / GRATING
- TEL, COMM. PILLAR / PIT
- TRAFFIC LIGHT
- SIGN / BUS SIGN
- LITTER BIN
- MAIL BOX / SIGNAL BOX
- TICKET MACHINE
- ROAD / ELEC. SERVICE
- WATER SV / FP
- ELEC. / GAS METER
- GAS SERVICE
- PSM
- PEG / TBM
- SURVEY MARKS
- BOREHOLE
- POWER / LIGHT POLE
- CABLE MARKER
- STOBIE / WOODEN POLE
- POST / BOLLARD
- SEWER MH / IO / SIP
- UNKNOWN POINT / SERVICE
- EDGE OF VEGETN
- ROAD SIGN / HOARD.
- TREE / SHRUB
- Possible REGULATED / SIGNIFICANT TREE by measurement only (trunk greater than 2.0m circumference). Professional advice from council / arborist required.
- BOTTOM OF BANK
- TOP OF BANK
- CHANGE OF GRADE
- DRAIN
- SEWER PIPE UG
- TEL. COMM. UG
- WATER PIPE UG
- BUILDING
- WALL
- GI BUILDING
- CONCRETE
- FENCE
- GATE

COORDINATE SYSTEM	
VERTICAL:	AHD
HORIZONTAL:	GROUND PLANE ORIENTED TO: MGA 94 ZONE 54
SCALE: GROUND (CSF = 1.000139492)	

ADOPTED STATION & AUTHORITY			
PSM 6627/10249	RL:	269.314m	SDB
PSM 6627/10249	E:	282515.793	SDB
	N:	6122497.868	SDB

SDB denotes SA Government survey data base

0 2 4 8 12 16 20 m

1:200

© ALEXANDER & SYMONDS PTY. LTD. ORIGINAL SHEET SIZE B1

Notes:
Property boundaries shown hereon have been compiled from the government records and have not been verified by field survey.

CONTOUR INTERVAL:	0.2m	
SURVEY:	TLH	07-06-2016
DRAWN:	TLH	08-06-2016
CHECKED:	BT	08-06-2016

Alexander & Symonds Pty Ltd
11 King William Street Kent Town,
South Australia 5067
PO Box 1000 Kent Town, SA 5071
ABN 93007 753 988

T (08) 8130 1666
F (08) 8362 0099
W www.alexander.com.au
E adelaide@alexander.com.au

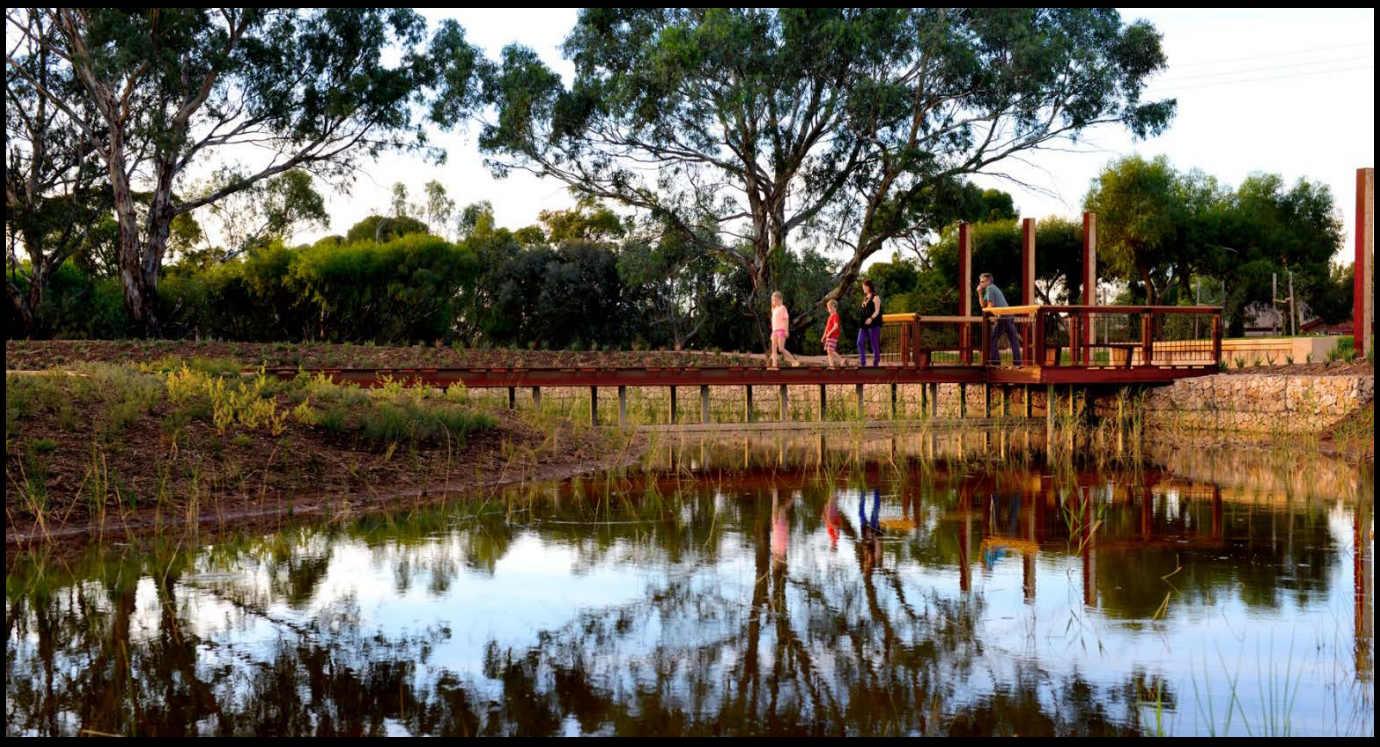
+ Property + Land Development +
+ Construction + Mining +
+ Spatial Information Management +

Alexander Symonds Surveying Consultants

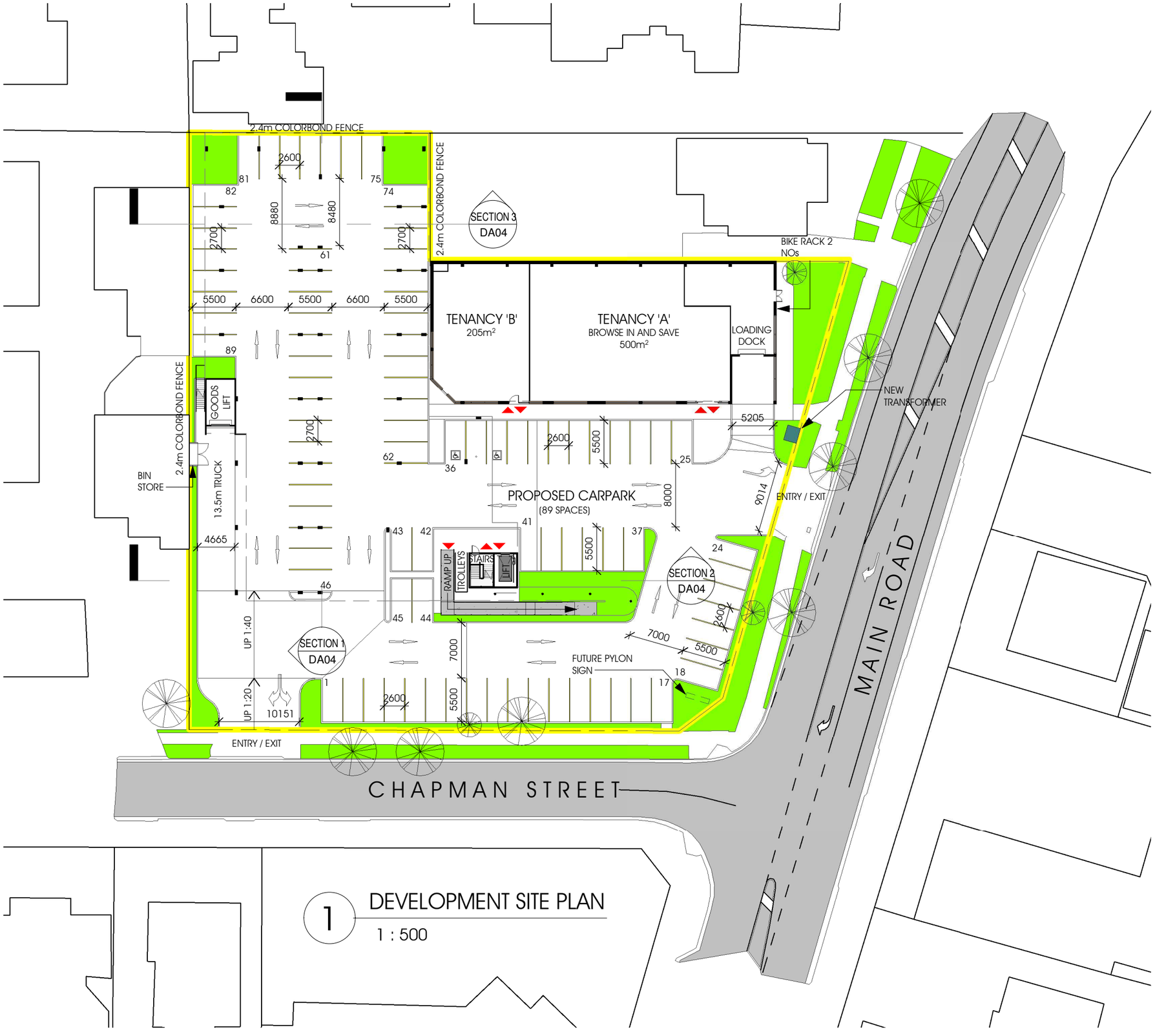
DETAIL & LEVEL SURVEY
198-200 MAIN ROAD
BLACKWOOD

DRAWING No.	SHEET	REVISION
A070616-DETAIL(0)	1 OF 1	0

APPENDIX D – PROPSED ARCHITECTURAL PLANS – SITE & LEVEL 1



WGA



1 DEVELOPMENT SITE PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1639m²
ALDI NETT AREA	1589m²
ALDI RETAIL NETT AREA	1170m²
ALDI BOH NETT AREA	351m²
ALDI AMENITIES NETT AREA	68m²
NUMBER OF CARS	89
SIZE OF TRUCK	13.5m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LANDSCAPED AREA	

CLIENT

ALDI

PROJECT

ALDI BLACKWOOD

DRAWING

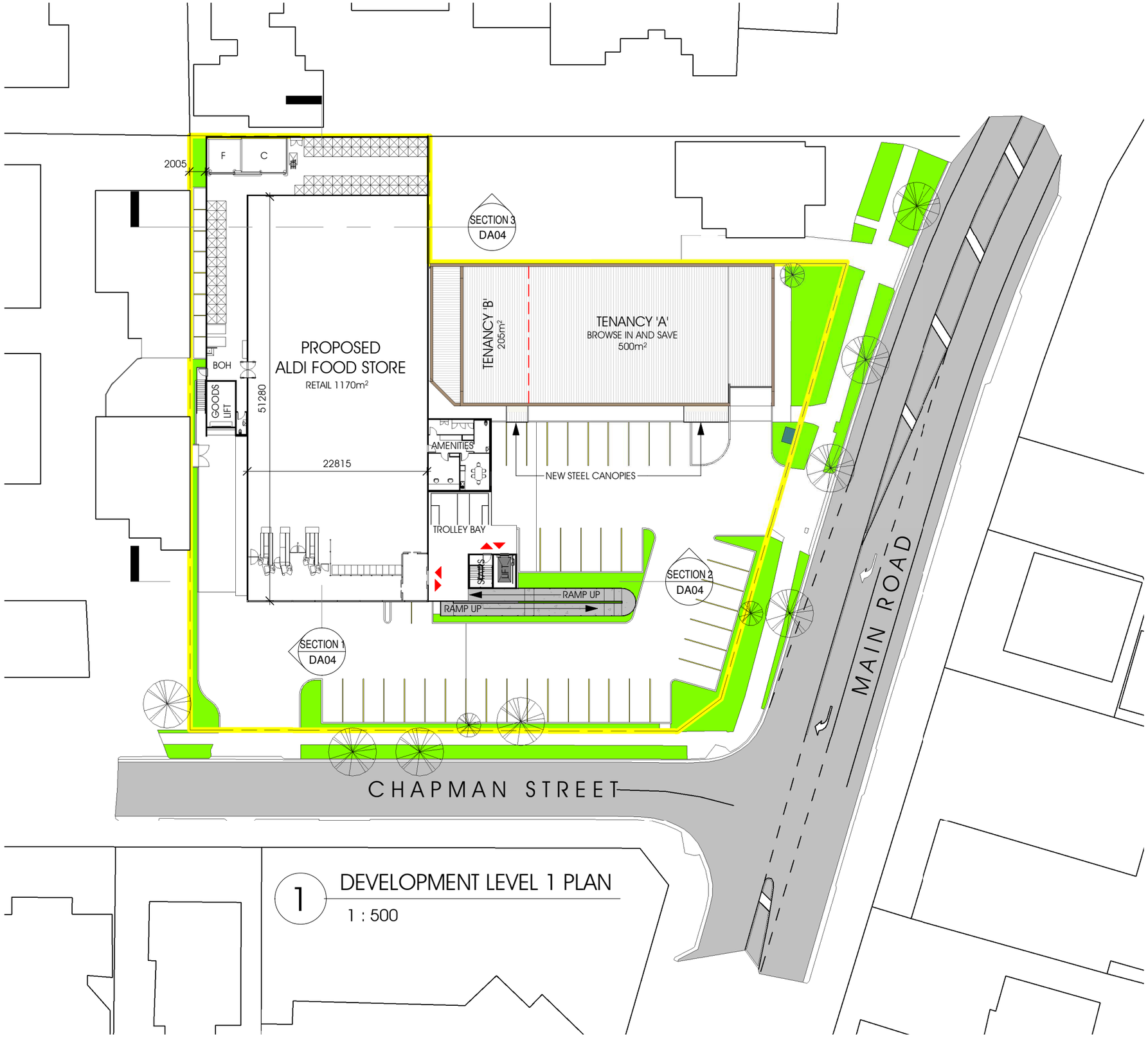
DEVELOPMENT SITE PLAN

NIELSEN ARCHITECTS

108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA02.1		



1 DEVELOPMENT LEVEL 1 PLAN

1 : 500

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1639m²
ALDI NETT AREA	1589m²
ALDI RETAIL NETT AREA	1170m²
ALDI BOH NETT AREA	351m²
ALDI AMENITIES NETT AREA	68m²
NUMBER OF CARS	89
SIZE OF TRUCK	13.5m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LANDSCAPED AREA	

CLIENT

ALDI

PROJECT
ALDI BLACKWOOD

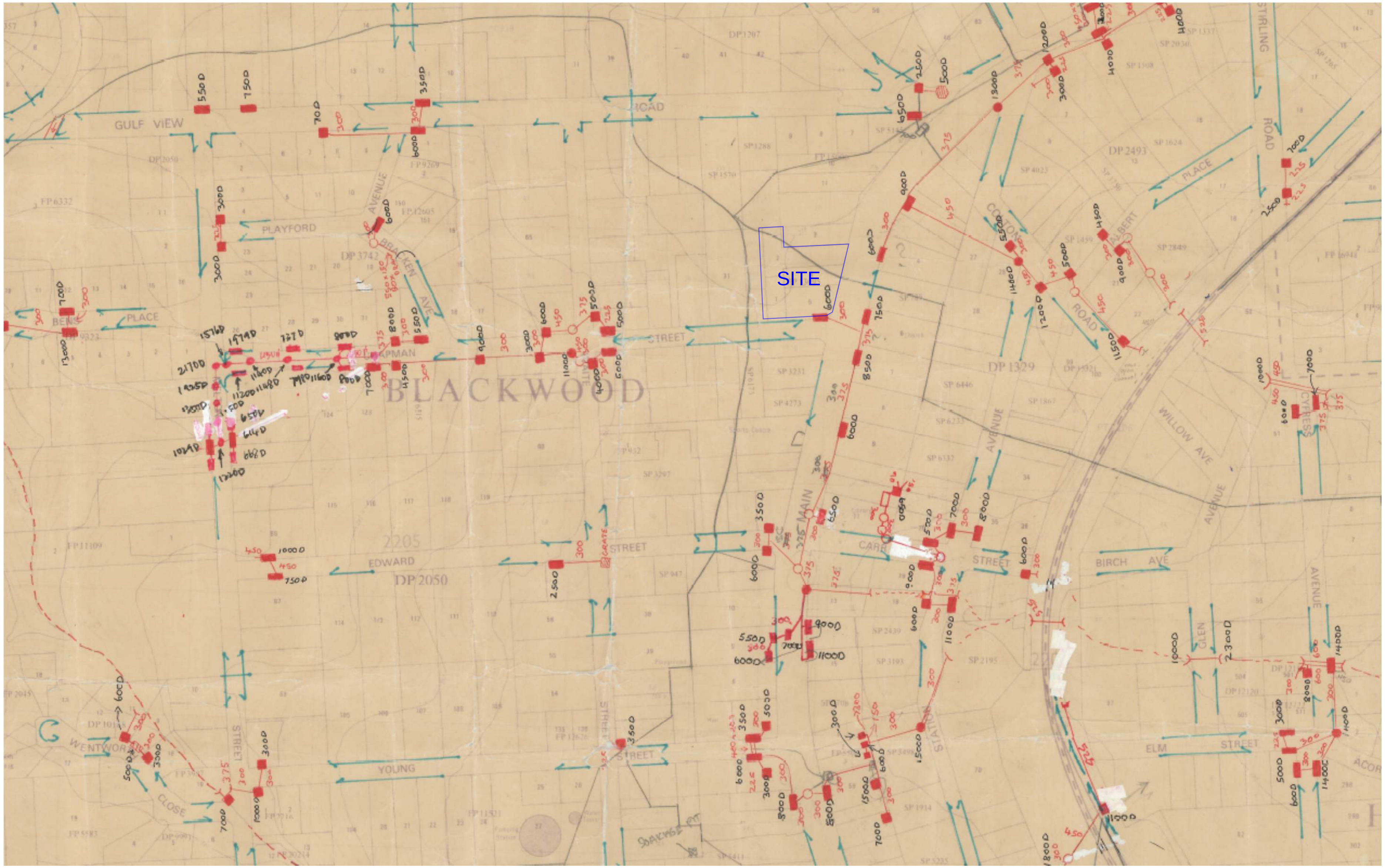
DRAWING
DEVELOPMENT LEVEL 1 PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

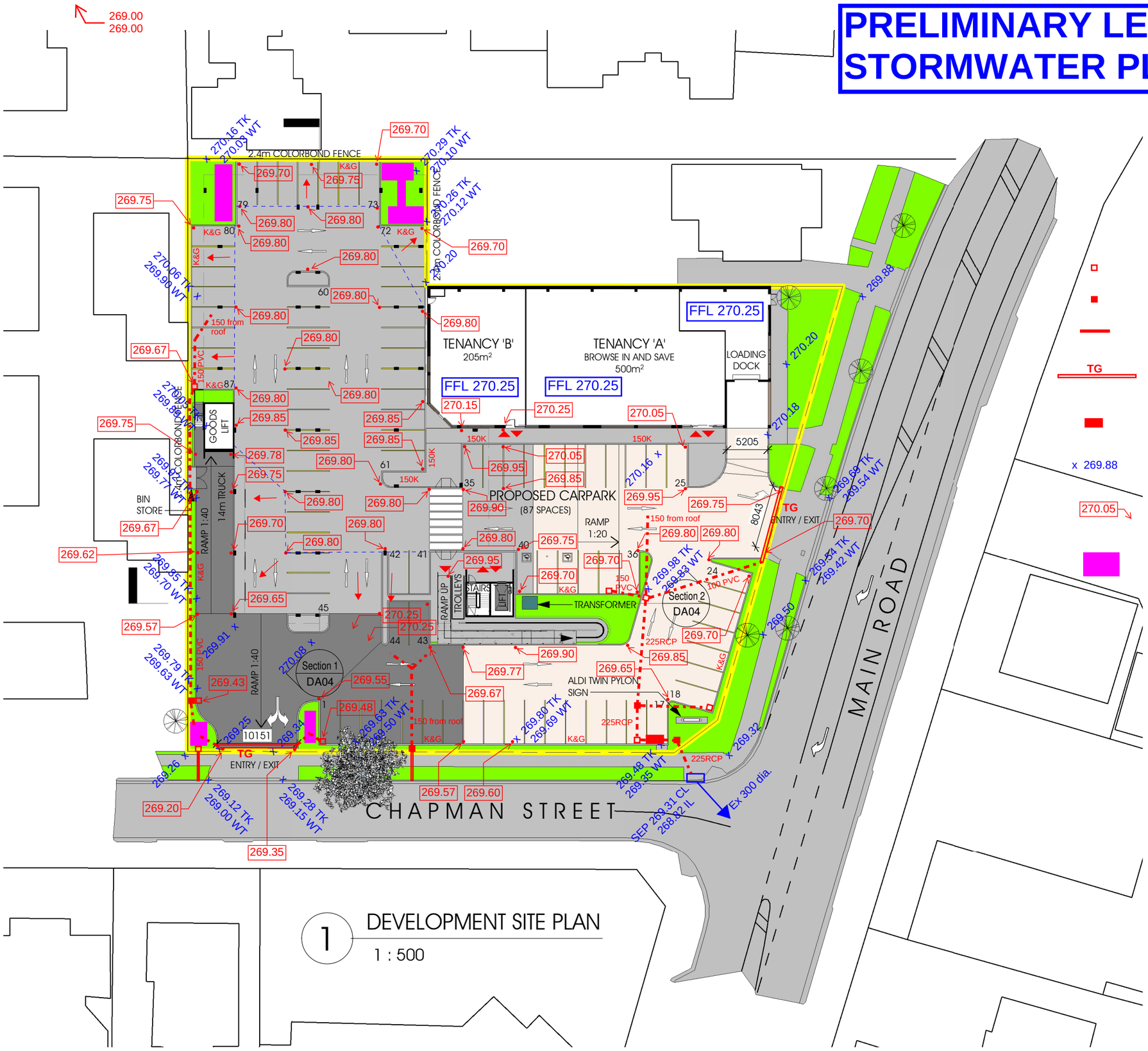
PROJECT No	DRAWING No	STATUS	REV
2090	DA02.2		

APPENDIX E – COUNCIL STORMWATER INFORMATION


SITE
BLACKWOOD
GULF VIEW
ROAD
PLAYFORD
PLACE
STREET
EDWARD
DP 2050
YOUNG
MAIN
STATION
AVENUE
BIRCH AVE
ELM STREET
STIRLING ROAD
WILLOW AVE
DP 1329
DP 2493
WENTWORTH
CLOSE

APPENDIX F – PRELIMINARY LEVEL & STORMWATER PLANS

PRELIMINARY LEVELS & STORMWATER PLAN - 1 of 2



1 DEVELOPMENT SITE PLAN
1 : 500

Grated Inlet Pit

Junction Box

Galv Box Drain

TG 100mm Trench Grate

ECOSOL or similar GPT (shallow)

x 269.88 Existing Level

270.05 Design Level

Dished Treatment / Soakage Area

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1595m²
ALDI NETT AREA	1545m²
ALDI RETAIL NETT AREA	1124m²
ALDI BOH NETT AREA	341m²
ALDI AMENITIES NETT AREA	80m²
NUMBER OF CARS	87
SIZE OF TRUCK	14m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LIGHT DUTY CONCRETE	
HEAVY DUTY CONCRETE	
BITUMEN	
LANDSCAPED AREA	
EXISTING LEVEL	EX 0.00
DESIGN LEVEL	RL 0.00

CLIENT ALDI

PROJECT
ALDI BLACKWOOD

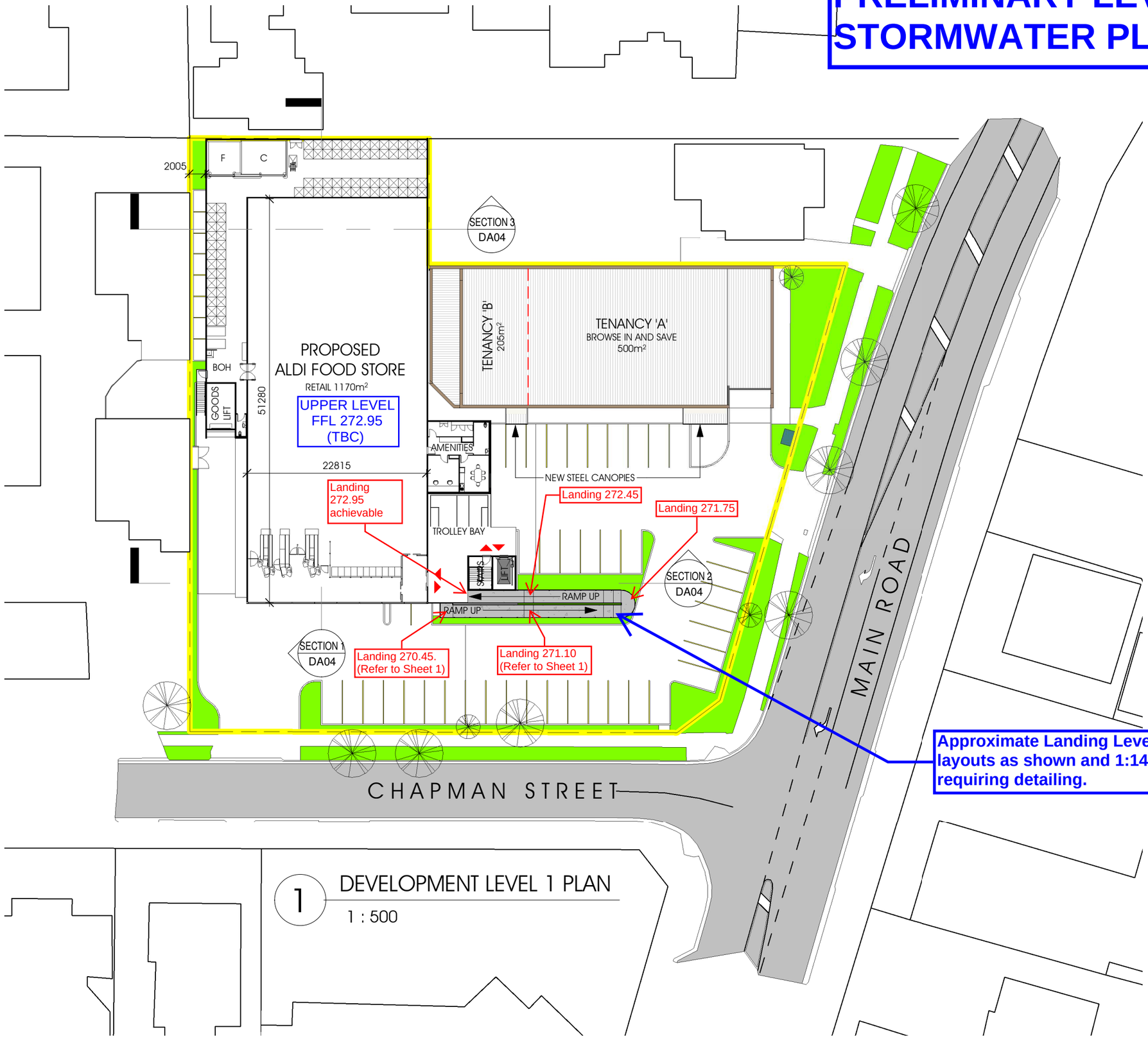
DRAWING
DEVELOPMENT SITE PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA02.1		

PRELIMINARY LEVELS & STORMWATER PLAN - 2 of 2



1 DEVELOPMENT LEVEL 1 PLAN
1 : 500

Approximate Landing Levels based upon layouts as shown and 1:14 compliant ramps requiring detailing.

NOTES

ORIGINAL A3

REV	DATE	DESCRIPTION	DRN	CHKD

PROPERTY DESCRIPTION	
TOTAL SITE AREA	4911m²
ALDI GROSS AREA	1639m²
ALDI NETT AREA	1589m²
ALDI RETAIL NETT AREA	1170m²
ALDI BOH NETT AREA	351m²
ALDI AMENITIES NETT AREA	68m²
NUMBER OF CARS	89
SIZE OF TRUCK	13.5m
TENANCY GROSS AREA	1595m²
TENANCY A NETT AREA	500m²
TENANCY B NETT AREA	205m²
SITE BOUNDARY	
LANDSCAPED AREA	

CLIENT ALDI

PROJECT
ALDI BLACKWOOD

DRAWING
DEVELOPMENT LEVEL 1 PLAN

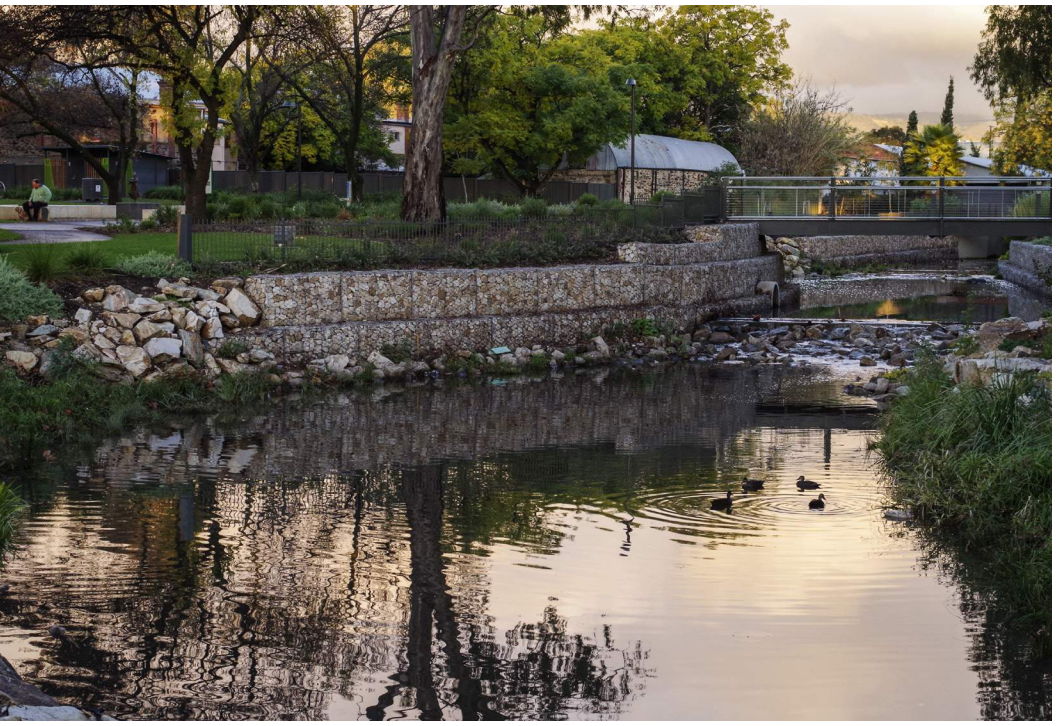
NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
p: 08 8339 8008
f: 08 8339 2004
P.O Box 691 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
As indicated	31/03/17	LE	ED

PROJECT No	DRAWING No	STATUS	REV
2090	DA02.2		

WGA

WALLBRIDGE GILBERT AZTEC



TECHNICAL EXCELLENCE
INNOVATION
PROFESSIONALISM

Warren Smith
PROJECT ENGINEER
Telephone: 08 8223 7433
Email: wsmith@wga.com.au

ADELAIDE
60 Wyatt Street
Adelaide SA 5000
Telephone: 08 8223 7433

DARWIN
Suite 7,9 Keith Lane
Fannie Bay NT 0820
Telephone: (08) 8941 1678
Facsimile: (08) 8941 5060

MELBOURNE
Level 2, 31 Market Street
South Melbourne VIC 3205
Telephone: 03 9696 9522

PERTH
634 Murray Street
West Perth, WA 6005
Telephone: (08) 9336 6528

WHYALLA
Level 1,15 Darling Terrace
Whyalla SA 5600
Telephone: 08 8644 0432
Facsimile: 08 8645 0544

WALLBRIDGE GILBERT AZTEC
www.wga.com.au
adelaide@wga.com.au

ekistics

Appendix 8. Retail Report

deep end services

ALDI Blackwood Retail Report

ALDI Stores Ltd
14 July 2017

Deep End Services
Deep End Services is an economic research and property consulting firm based in Melbourne. It provides a range of services to local and international retailers, property owners and developers including due diligence and market scoping studies, store benchmarking and network planning, site analysis and sales forecasting, market assessments for a variety of land uses, and highest and best use studies.

Contact
Deep End Services Pty Ltd
Suite 304
9-11 Claremont Street
South Yarra VIC 3141

T +61 3 8825 5888
F +61 3 9826 5331
deependservices.com.au

Enquiries about this report should be directed to:

Chris Abery
Principal
Chris.abery@deependservices.com.au

Document Name
ALDI Blackwood Retail Report - 14 July 2017
14.07.17

Contents

Tables + Figures

1

Introduction

1.1 Proposal

ALDI Stores is progressing a development application at 198-200 Main Road Blackwood. The 4,900 sqm site lies at the northern end of the Blackwood District Centre and has an existing group of shops known as Blackwood Village (refer Figure 1). The centre comprises 10 shop and office tenancies of approximately 1,440 sqm GLA, arranged in an L-shaped configuration with 72 off-street car spaces.

The proposal is to demolish the western section of the building and construct a raised ALDI supermarket with under-croft parking. Existing shops on the northern boundary are retained and refurbished.

The proposed ALDI store will have a gross leasable area (including storage and non-selling areas) of approximately 1,700 sqm. Th existing shops to be retained are approximately 750 sqm.

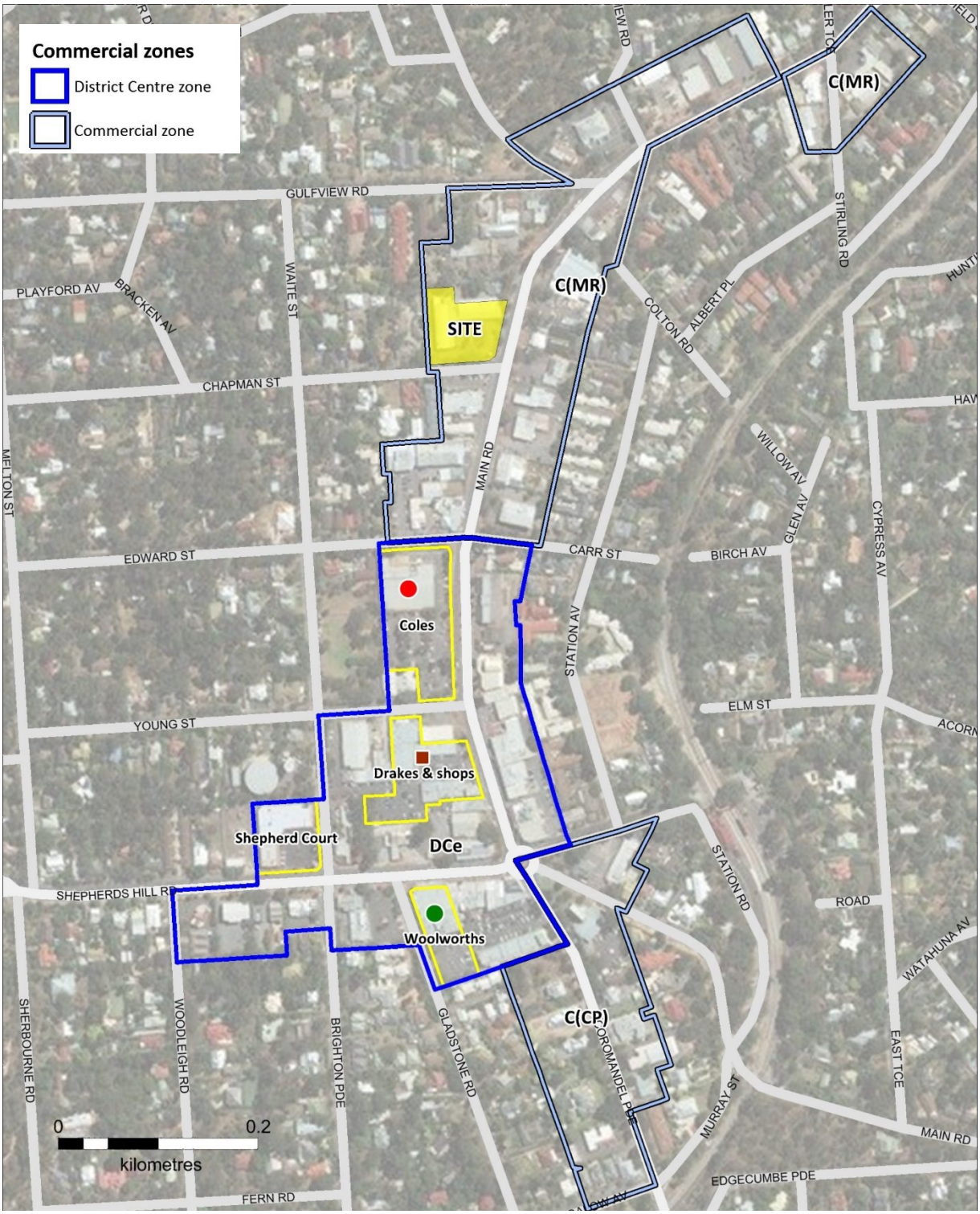
The combined shop uses will share on-site parking of 87 spaces. Access and egress to the site is from existing cross-overs to Main Road and Chapman Street.

1.2 Planning context

The site is situated in the Commercial (Main Road) Zone under the Mitcham (City) Development Plan. The Principles of Development Control under the C(MR) zone include, amongst other things:

- Development undertaken in this zone should be for a range of residential uses and for community, commercial, office and minor service activities which are of low-scale and which generate low traffic volumes.
- Shop development should generally comprise a maximum gross leasable floor area of 250 square metres.

Figure 1— ALDI site location



The C(MR) Zone extends approximately 700 metres along Main Road and includes a range of small shop developments, office and commercial premises, retail showrooms and take-away food / restaurant outlets. These long-established uses extend well north the subject site and several (including Blackwood Village) are shop developments or include shops which exceed 250 sqm.

The site is 170 metres north of the northern boundary (Edward Street) of the District Centre Zone. The District Centre zone (DCe zone) is a compact area which extends two blocks north along Main Road from its intersection with Shepherds Hill Road and a similar distance west along Shepherds Hill Road. The DCe zone accommodates the three existing supermarkets in Blackwood – Coles, Foodland and Woolworths.

The District Centre zone Objectives for Blackwood include:

- The area contains facilities satisfying the major weekly needs of the hills residents so that residents look on the area as the focal point of the district.
- The development of the centre accords with the concepts indicated in the District Centre Blackwood Area Concept Plan.
- Convenience shopping facilities are concentrated in the area marked "A" in the District Centre Blackwood Area Concept Plan.

The Objectives and Principles of Development Control also reference the area's bushland setting, native landscaping, low building scale and rustic setting. These values are reflected in the dispersed pattern of development along Main Road through both the DCe and C(MR) zones.

Under 'Centres and Shops', Principle of Development Control 63 states that "A shop or group of shops excluding retail showrooms, with a gross leasable area of greater than 250 square metres should be located in a centre zone".

1.3 Purpose of report

The proposal is a 'merit' or 'consent' application in the C(MR) zone. The objectives of this report are to:

- Analyse the supply and demand of supermarket floorspace in the Blackwood catchment to determine whether there is a need for additional space and competition.
- Assess the size and adequacy of the District Centre zone in relation to the extent of the catchment and other comparable areas.
- Assess the prospect of securing a site within the District Centre zone.
- Assess the current land uses within the C(MR) zone and determine whether they represent an extension of District Centre uses.

2

Blackwood Trade Area & Supermarket floorspace provision

2.1 Blackwood supermarkets

There are three supermarkets in the Blackwood District Centre which have all been present in one form or another since at least 1982. They occupy each of the three main blocks in the DCe zone extending north along Main Road.

At the south end, the small Woolworths on the corner of Shepherds Hill Road and Gladstone Road is one of the oldest in Adelaide, dating back to the mid 1960's. The store was refurbished in 2014 however its gross leasable area is around 1,950 sqm making it small by comparison to Woolworths' state average of approximately 3,300 sqm. The supermarket shares a rear car park with adjoining shops and has a second off-street parking area off Gladstone Road. There are limited expansion opportunities given the roads, common parking areas and adjoining strata shops.

A Drakes Foodland supermarket is located at 240 Main Road in the central block. The supermarket and other shop developments face a narrow and disjointed parking area extending between Waite Street and Main Road. While the SA Retail Database lists the Foodland supermarket at 852 sqm, aerial imagery suggests it is closer to 1,300 sqm and has been extended through to Young Street from where it currently loads. A supermarket has been operating here for many years and Drakes are thought to have acquired and extended the store in about 2000. It is understood a second, small extension to Drakes of about 100 sqm occurred in 2015.

The freestanding Coles supermarket and large at-grade car park has an extensive frontage to Main Road between Young Street and Edward Street – where the District Centre zone finishes and the C(MR) zone continues north. Coles was developed in 1982 and has a gross leasable area of approximately 2,440 sqm. It

appears to have been refurbished in about 2013. Coles Blackwood is also quite small or about 20% smaller than Coles' state average of about 3,050 sqm.

Typical of many strip shopping areas that have evolved along a main road with small lots and fragmented ownership, the three supermarkets at Blackwood are well-separated and have limited pedestrian connectivity between them. Each is oriented to off-street parking and separated by streets and limited inter-block vehicle or pedestrian connections.

Figure 2—Blackwood supermarkets

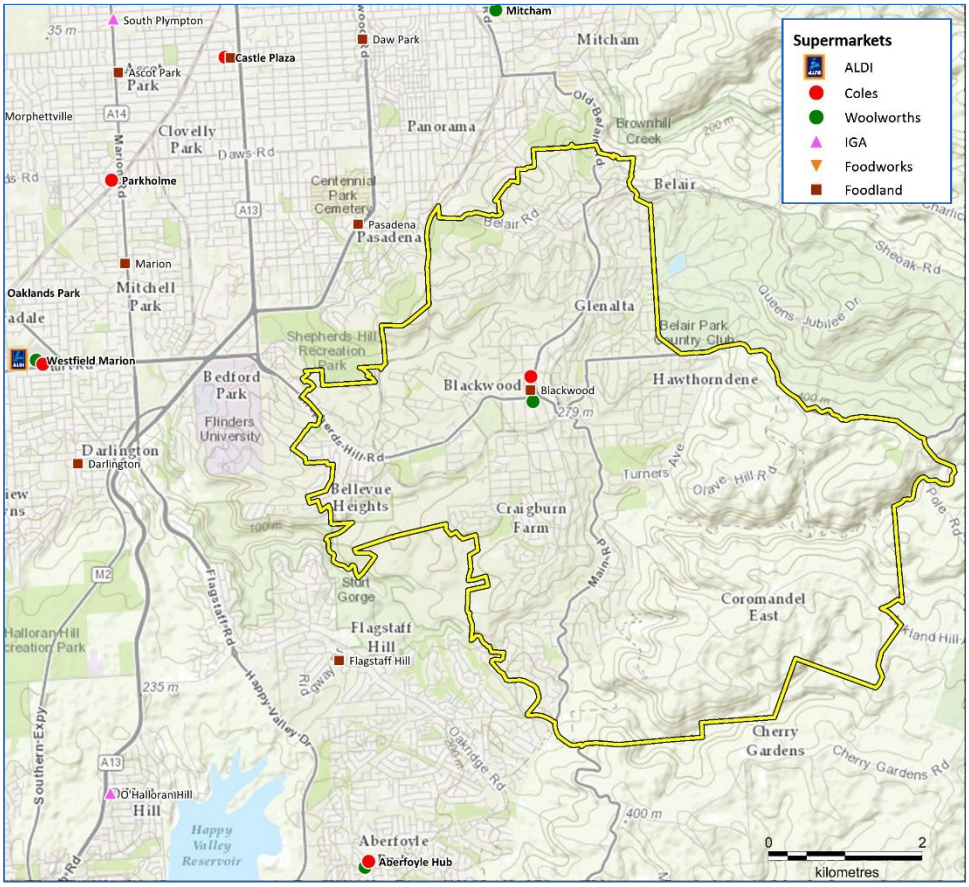
2.2 Blackwood trade area

The main catchment area for the Blackwood District Centre is shown in Figure 3. It includes the six suburbs which straddle the north-south ridge line and form a discrete market centred on the Blackwood Centre. Main Road traverses the hills area providing good access for residents of Blackwood, Belair, Glenalta, Hawthorndene, Craigburn Farm and Coromandel Valley.

The three Blackwood supermarkets enjoy a highly captive market as the nearest supermarkets outside the catchment area are at:

- Mitcham, Pasadena or Westfield Marion on the lower metropolitan plain.
- Flagstaff Hill or Aberfoyle Park which are well outside the Blackwood catchment area to the south.

Figure 3—
Blackwood trade
area



2.3 Population

Based on the just-released Census results, the defined Blackwood catchment had a 2016 usual resident population[1] (URP) of 24,313 people. Since 2011, when the equivalent URP was 23,295 people, the trade area has grown by 1,018 residents – at the average rate of 0.9% per annum.

In the catchment area, subdivisions have been steadily filling in the Craigburn Farm area just south of Blackwood. Here, the Blackwood Park estates have been developing for about 20 years with the last three nodes underway or commencing shortly. Node 1 is largely developed with a few of the 219 allotments left, Node 2 (240 lots) is 85% complete and Node 3 is yet to be released.

When complete, the Blackwood Park estates will have added about 2,300 people to the catchment over a 10-year period.

2.4 Population characteristics

The population and housing characteristics of the Blackwood catchment area from the 2016 Census are presented in Table 1 with comparisons to metropolitan Adelaide.

The defining features are:

- Older, high income families who stay in the area attracted to the bushland setting, elevated position but good road connections to central Adelaide.

[1] The ABS have released Usual Resident Population (URP) estimates which is a count of every person on Census night based on where they normally live. The URP excludes estimates of residents missed on Census, such as those temporarily overseas.

- Families with young or teenage children who have lived in the area for some time however there is a low proportion of younger adults (20-34 years) suggesting this age group moves away but are not returning or buying in the area.
- Detached homes are 94% of all dwellings. They attract 'couples or singles with children' (48%) which yield a high average household size (2.78 persons).
- High levels of outright home ownership (40% vs Adelaide 32%)
- Personal income levels are 21% higher than the Adelaide average while household incomes (which include multiple income earners) are 29% higher.

Table 1— Blackwood catchment characteristics – 2016 Census

Demographic characteristic	Blackwood	Adelaide
Persons and dwellings		
Usually resident population	24,313	1,295,674
Total private dwellings [6]	8,731	492,397
- % unoccupied	7%	9%
Persons per dwelling [7]	2.78	2.63
Age group		
0-9	12%	12%
10-19	13%	12%
20-34	14%	21%
35-49	21%	20%
50-64	20%	19%
65+	19%	17%
Total	100%	100%
Average age	40.9	39.7
Income & housing payments		
Average individual income	$51,942	$42,811
Variation from Adelaide average	21%	-
Average household income	$108,760	$84,222
Variation from Adelaide average	29%	-
Average household loan repayment	$23,222	$20,257
Average household rent payment	$18,426	$14,851
Country of birth [1]		
Australia	78%	73%
England	10%	7%
Germany	1%	1%
Other	11%	19%
Occupied private dwelling tenure [1][4][5][6]		
Fully owned	40%	32%
Being purchased	49%	38%
Rented	11%	30%
Total	100%	100%
Dwelling type [1][4][7]		
Separate house	94%	75%
Townhouse/semi-detached	3%	17%
Apartment	3%	8%
Total	100%	100%
Household composition [4][5]		
Couples with children	39%	30%
Couples without children	31%	26%
One parent family	9%	12%
Lone person	19%	28%
Group	2%	4%
Total	100%	100%
Motor vehicle ownership per dwelling [1][5]		
None	2%	8%
One	28%	38%
Two	47%	37%
Three or more	22%	17%
Total	100%	100%

Notes:
[1] Excludes not stated
[2] 15 years and over and excludes not stated
[3] Excludes inadequately described and/or partially stated
[4] Excludes other
[5] Occupied private dwellings
[6] Includes visitor only households
[7] Excludes visitor only households
[8] Multi-response question; total sums to >100%

The higher income levels and large family units generate higher than average spending levels on food and groceries. Using 'Marketinfo', a proprietary spending data set that models small area spending levels from the last ABS Household Expenditure Survey, average per capita spending levels in the Blackwood catchment area are 9.6% higher than the Adelaide average.

2.5 Supermarket rates of provision

A general measure of the rate of supermarket floorspace provision in an area is made by dividing the resident population into the total supply of supermarket floorspace (sqm) and expressing this as a rate (sqm) per person. When compared with city or state-wide benchmarks, the current or projected rate for a given area is a simple and effective guide as to whether retail floorspace supply levels are relatively high or low before and after a proposed development.

An analysis of the *SA Retail Data Base* indicates the average rate of supermarket floorspace provision in the Adelaide Statistical Division increased from 0.32 sqm per capita in 1999 to 0.36 sqm in 2007. Based on developments since then and others under construction, we estimate the current day level is approximately 0.40 sqm per capita.

Table 2 presents calculations of current rates of supermarket floorspace provision for the Blackwood trade area in 2016 compared to the catchment area around Aberfoyle Park – a similar hills catchment area – and the Adelaide Hills area from Stirling to Bridgewater. The catchment areas for the three centres are shown in Figure 5.

The three supermarkets at Blackwood have a combined GLA of 5,687 sqm. For the 24,313 people in its catchment area, Blackwood has 0.23 sqm of supermarket space per capita.

Aberfoyle Park District Centre has 33% more supermarket floorspace than Blackwood and a smaller catchment population resulting in a much higher 0.37 sqm per capita. The Stirling – Bridgewater area has an even higher rate of 0.50 sqm per capita.

When compared to the Adelaide average (0.4 sqm), Blackwood's level of provision is 42% below average while Aberfoyle Park is just below average and Stirling – Bridgewater is 25% higher.

While Blackwood has a similar number of supermarkets, the relatively small floor areas are the contributing factor to the District Centre's low level of supply. Low levels of floorspace supply can result in:

- Restricted departments and a reduced range and choice of products.
- Compressed store layouts which affect customers' comfort and ease of shopping.
- Congestion in peak periods with tight layouts and fewer check outs.

The introduction of ALDI (1,700 sqm) to the Blackwood District Centre raises the supermarket floorspace provision to just 0.30 sqm per capita which is still below the Adelaide average and the comparable areas of Aberfoyle Park and Adelaide Hills.

Table 2— Comparative rates of supermarket floorspace provision

Branded supermarkets	Blackwood	Aberfoyle Park	Stirling - Bridgewater
	(sqm)	(sqm)	(sqm)
• Woolworths	1,948	3,700	2,593
• Coles	2,439	2,380	3,906
• Foodland	1,300	1,505	2,000
• IGA	-	-	725
Total Supermarket floorspace	5,687	7,585	9,224
Trade area population - 2016	24,313	20,664	18,481
Supermarket floorspace provision (sqm capita)	0.23	0.37	0.50
Plus Blackwood ALDI (1,700 sqm)	0.30		

Figure 4— Catchment rates of provision vs Adelaide

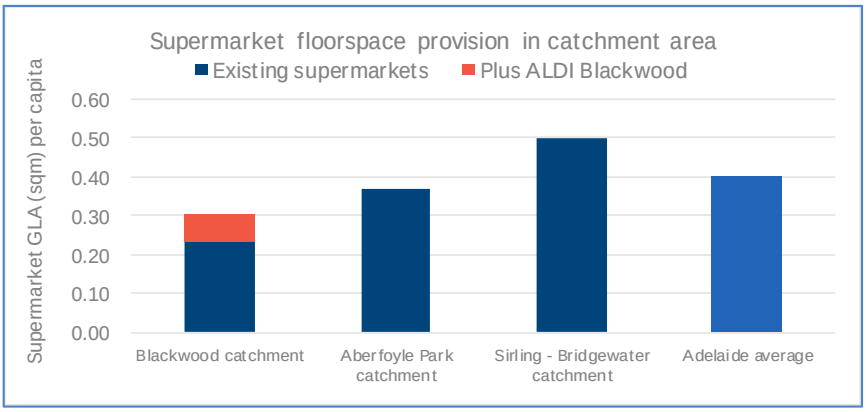
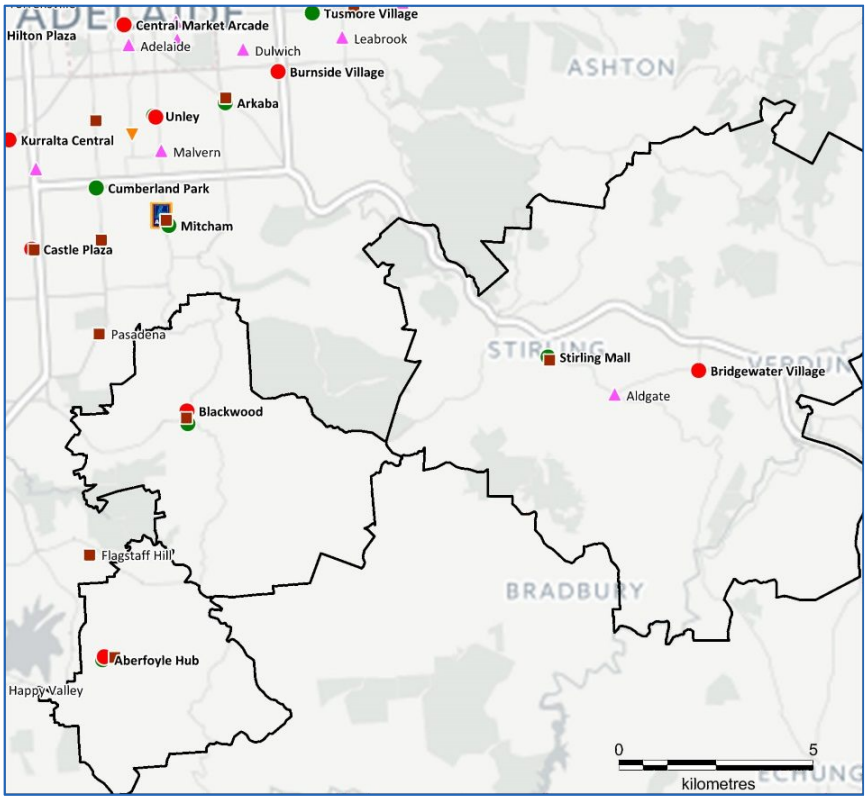


Figure 5— Trade areas used for supermarket provision rates



The favourable market characteristics that support additional supermarket floorspace at Blackwood are therefore:

- The last major additions to supermarket floorspace at Blackwood was in 1982 (Cols) followed by an extension to Foodland around 2000. A second extension to Foodland in 2015 was relatively minor at about 100 sqm.
- The major supermarkets – and particularly Woolworths which is site-constrained - have floor areas well below their typical stores.
- There has been steady growth in the catchment area with new housing estates just south of the District Centre.
- Higher than average income levels and spending on food & groceries.
- The low level of supermarket floorspace provision in the Blackwood catchment compared to other centres and the Adelaide average.

In our view, there is a need and demand for the additional floorspace and the lower pricing model and differentiated format and products offered by ALDI.

3

Blackwood District Centre

An analysis of the Commercial and District Centre zones at Blackwood and the size and composition of the commercial uses serves to demonstrate several points:

- The area zoned District Centre is small by comparison with other outer District Centres in the southern suburbs.
- The extent of the District Centre zone at Blackwood is inadequate for the size of the catchment and is constraining new development in the centre.
- Notwithstanding Council's policy, retailing has migrated to the Commercial (Main Road) zone where small ad-hoc developments have grown along Main Road. This has become an extension of the District Centre to ease growth pressures.

3.1 District Centres comparison

There are 30 District Centres in Adelaide including six in the outer southern suburbs of Adelaide from Blackwood through to Aldinga. The Stirling District Centre in the Adelaide Hills is also worthy of inclusion in the sample.

Table 4 records the land area zoned District Centre at each of the seven centres and their respective catchment populations. In each case, the land area relates to District Centre precincts which have existing shops or could accommodate conventional retailing.

For consistency, the measured areas include road reserves however these inflate the land area in the older strip or town centres such as Blackwood, Morphett Vale and Stirling.

Blackwood, for example, has approximately 9.4 hectares zoned District Centre but only 6.4 hectares once the road reservations are excluded. The potential to assemble a site of any significance is even more difficult given the small fragmented

land holdings compared to most other centres – other than Stirling where the District Centre is also overlaid on a main road and adjoining local street pattern with small lot subdivisions. Civic and community uses such as libraries and churches are also found in Blackwood's District Centre which are important to its function but also occupy key sites that might otherwise be capable of redevelopment.

Other outer area District Centres such as Aberfoyle Park, Hallett Cove, Seaford and Aldinga have been largely planned as greenfield centres and do not present the inefficiencies of traditional town centres.

Comparing Blackwood's catchment (24,313 people) and its effective usable District Centre land area (6.4 hectares) to the other centres, it can be concluded that Blackwood has the smallest 'usable' District Centre land (where unrestricted shops can be developed) relative to its catchment size.

Table 3—District Centres zone & catchments

District Centre	District Centre zone (ha)	Catchment population
Blackwood	9.4 [1]	24,313
Aberfoyle Park	10.8 [2]	20,664
Hallett Cove	8.1 [3]	23,300
Morphett Vale	28.0 [4]	27,000
Seaford	20 [5]	22,000
Aldinga	8.5 [6]	13,200
Stirling	13.7 [7]	11,300

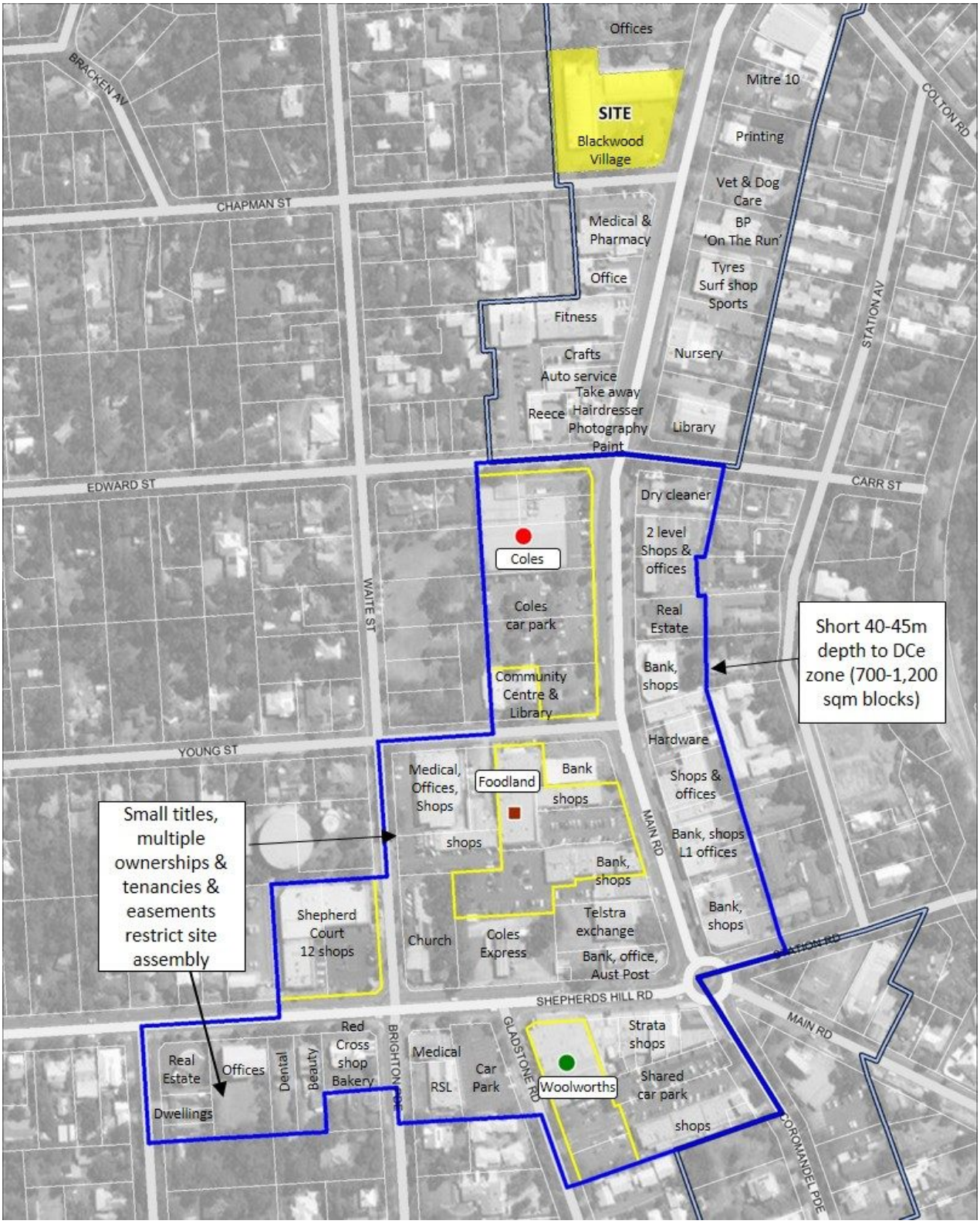
[1] Includes roads
[2] DCe zone over shopping centre only
[3] Retail core only
[4] DCe along Main South Rd & Southgate Plaza
[5] Retail & Main St precinct only
[6] DCe retail precinct only
[7] Stirling core area only

3.2 Capacity to redevelop existing District Centre zone

The difficulties in assembling a site for ALDI in the District Centre zone are highlighted in Figure 6. :

- The areas south of Shepherds Hill Road are limited by the presence of Woolworths and car parking areas supporting existing retailers. The western approach has small land holdings including existing dwellings.
- Shepherd Court is a substantial site on the western entry but still relatively small. Any potential redevelopment is subject to a willing vendor and multiple small leases over the complex.
- Any redevelopment of the central block is restricted by the existing Foodland, multiple shops off a central car park (and possible easements) and a church and recently redeveloped Coles Express.
- The east side of Main Road has a short depth and multiple small blocks of up to 1,000 sqm would need to be assembled. This is unlikely with the presence of banks which often have lengthy leases and are reluctant to relocate.
- Coles and its car park take up most of the north-east block.

Figure 6—District Centre zone land use and constraints



3.3 Blackwood retail floor area by Zone

The Blackwood District Centre has grown over many years from the main intersection – generally north along Main Road and east along Shepherds Hill Road. The rail line and topography to the east has also forced the centre's growth along the two main roads which function as the main entry and exit points for the catchment.

The northern boundary of the District Centre has probably not changed since the early 1980's when Coles was developed at the north end of the current retail strip. The tight street pattern, topography and strata shop developments have clearly limited the redevelopment potential for Woolworths in the south and restricted other potential sites from being assembled.

The orientation of some buildings and the poor inter-block vehicle and pedestrian connections has been noted as a problem for the centre. The short depth of main road properties and the multiple small strata developments with numerous lease tenures makes it difficult – if not impossible - to assemble a viable site in the DCe zone suitable for ALDI accomodating:

- A gross leasable area up to 1,700 sqm
- Car parking for at least 80 cars; and
- Suitable arrangements for delivery vehicles including managing the residential interface on many properties.

The presence of three supermarkets at Blackwood for many years has resulted in little interest from other supermarket groups and little or no pressure to test the boundaries or further capacity of the DCe zone to accommodate large retailers.

While other major retailers have had limited interest or been unsuccessful in finding sites in the Blackwood DCe zone, many small shops and services have established outside the DCe boundaries – to the extent that a significant level of retail and business activity takes place in the Commercial zone, despite the intentions of the Development Plan policy.

The leasable area of retail, commercial and other centre-based land uses throughout Adelaide can be measured from the SA Retail Database – a survey of commercial land use conducted by the State Government's planning authority in 1999 and 2007. Although the 2007 data is now 10 years old and some developments have probably occurred and tenancies changes, it nonetheless provides a comprehensive and reasonably accurate measure of activity at a given point. In the District Centre for example, the overall level of floorspace is unlikely to have changed substantially over the last 10 years and our checks reveal that many retailers present in 2007 are still in place.

The distribution of retailers and floorspace between the DCe zoned land and the Commercial zones to the north and south - which are significant in area but under policy have a more restrictive retail function - can be measured.

The Database allows commercial uses (and their floor area) to be sorted by type of use and by the zone they fall within. For Blackwood, the data is arranged in Table 4 by the three Commercial zones and by three major activities - retailing, offices (inc. banks, medical uses, professional services) and bulky goods and homewares retailers.

In terms of zone coverage, the titled land in the DCe zone at Blackwood (6.95 ha) is only slightly larger than the 6.43 hectares in the C(MR) zone – where the ALDI site is located. The two Commercial zones north and south of the District Centre (9.2 ha) have 31% more usable land than the DCe zone.

In terms of retail activity, the database reveals 78 retail-type tenancies in the DCe zone occupying 14,649 sqm with another 30 in the C(MR) zone to the north and just 6 in the C(CP) zone to the south. In 2007, the C(MR) zone therefore accommodated over one-quarter of all retail tenancies in Blackwood and 21% of the retail floorspace. This is a significant contribution for an area where planning policy discourages single or multiple retail developments exceeding 250 sqm. The reality on the ground is that the C(MR) zone is providing an important supply of retail floorspace which has spilled over from the tightly constrained DCe zone.

The C(MR) zone also accommodates a similar number of commercial / office uses to the DCe zone and most of the larger bulky goods / homewares uses often found in peripheral locations.

In total, the retail and office floorspace in the C(MR) zone (9,393 sqm) in 2007 was almost 50% of the floorspace in the DCe zone (18,830 sqm).

Table 4— Zone area and commercial floorspace

	Blackwood District Centre zones				Aberfoyle Park
	District Centre Zone	Commercial (Main Road)	Commercial (Coromandle Pde)	Total District Centre	District Centre zone
Zone area - ex. roads (ha)	6.95	6.43	2.74	16.12	8.79
Floorspace (GLA)					
Retail	14,649	4,110	528	19,287	10,561
Office	3,381	2,272	770	6,423	1,633
Bulky goods - homewares	800	3,011	0	3,811	1,263
Total	18,830	9,393	1,298	29,521	13,457
Tenants (no)					
Retail	78	30	6	114	44
Office	17	16	6	39	13
Bulky goods - homewares	3	8	0	11	2
Total	98	54	12	164	59

Source: SA Retail Data base (2007), Deep End Services

4

Conclusions

The Blackwood catchment is a significant market of over 24,000 people. It has a high income profile and should continue to grow at low to moderate rates.

Retailing is concentrated in the Blackwood District Centre with little or no competition in the discrete well-defined hills catchment. Residents have good access to the centrally located District Centre forming a captive market. Supermarket options outside Blackwood are too far away for convenience-based purchases.

Blackwood has older origins than other District Centres to the south. It is a traditional town centre layout along main roads with intersecting local streets and a small lot subdivision pattern. The DCe zone is overlaid on the three main blocks and east side of Main Road however the usable land area is small relative to the size of Blackwood's catchment area. The subdivision and development pattern prevents any viable site assembly suitable to ALDI in the DCe zone.

The three supermarkets (Coles, Woolworths and Foodland) have been established for many years in their small-store formats. The level of supermarket floorspace is low relative to the size of the catchment. An ALDI store of 1,700 sqm can be easily supported by the catchment and not result in an oversupply of floorspace in Blackwood.

The balance of the centre has seen only modest changes and redevelopments in recent years.

The C(MR) zone extending north along Main Road is a significant area – similar in size to the DCe zone – but with a restrictive policy on shops or shop developments over 250 sqm. This area accommodated offices, showrooms and a significant small shop retail mix which has grown out of the constrained DCe zone over many years.

The subject site (Blackwood Village) is an existing retail development of 1,440 sqm situated 170 metres north of the DCe zone. The C(MR) zone continues for over 400 metres past the ALDI site where it is characterised by other small retail and commercial developments.

The west side of Main Road between the north boundary of the DCe zone (Edward Street) and the site (Chapman Street) includes a group of 4 shops (366 sqm GLA), an auto mechanic, separate shop, large fitness centre, office and combined medical centre and pharmacy (approx. 700 sqm). These are all fully occupied buildings with active uses and are comparable in built form and land use intensity to many areas of the DCe zone. Blackwood Village itself continues the retail and services land use pattern to the point where there is little to distinguish the uses in this section of the C(MR) zone to many parts of the DCe zone.

The ALDI proposal is a redevelopment and more intensive use of an existing retail complex. The site could be easily perceived as part of the Blackwood District Centre given the continuous pattern of retail and commercial uses between it and Coles on the northern edge of the DCe zone.

The proposal will address the deficiency in supermarket floorspace and bring new competition, a unique format and lower food and grocery prices to the Blackwood catchment.

ekistics

Appendix 9. Environmental Noise Assessment

Sonus Pty Ltd

ALDI Blackwood

Environmental Noise Assessment

June 2017

S4217.15C3

sonus.

Chris Turnbull
Principal
Phone: +61 (0) 417 845 720
Email: ct@sonus.com.au
www.sonus.com.au

INTRODUCTION

An environmental noise assessment has been made of the ALDI supermarket proposed to be developed at 198 Main Road, Blackwood.

The closest noise sensitive receivers to the ALDI Supermarket are the residences directly west adjacent the loading bay on Chapman Street and directly north, adjacent the car park.

This assessment considers noise levels at the noise sensitive receivers (residences) in the vicinity from the following:

- car park activity and vehicle movements;
- operation of mechanical plant;
- transformer operation;
- scissor lift operation within the loading bay;
- deliveries; and,
- rubbish collection.

The assessment has been based on the following:

- the Nielsen Architects drawings dated May 2017;
- the assumption that the ALDI store will not trade before 7am or after 10pm;
- implementation of measures described in the ALDI SA "Delivery and loading procedures", such as turning off refrigeration and reversing beepers to minimise the noise from the delivery process;
- low level exhausts on trucks (which is a specific modification made by ALDI to assist in optimising the noise reduction provided by boundary fencing).

This assessment predicts the noise from 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.

DEVELOPMENT PLAN

The proposed site is located within the Commercial (Main Road) Zone of the Mitcham (City) Development Plan. Residences are located to the immediate west in the Residential (Hills) Zone and to the north within the Commercial (Main Road) Zone .

Principles of Development control relevant to the noise assessment include:

METROPOLITAN ADELAIDE

Centres and Shops PDC 19

The location and design of centres and shopping development should ensure that all sources of noise, including refrigeration and air conditioning equipment, garbage collection and car parking, do not cause excessive or disturbing noise at neighbouring properties.

COUNCIL WIDE

Centres and Shops PDC 68 includes:

Development within centre zones should conform with the following design principles:

(d) Development should provide:

(iii) for the location, screening, construction and operation of storage yards, refuse removal facilities, air conditioning motors, cool room motors and similar accessory facilities, in such a manner as to obviate nuisance caused to occupiers of adjacent properties by way of noise, vibration, smell or fumes;

(e) Development should not cause a nuisance or hazard arising from:

(ii) excessive noise;

Commercial Development PDC 82

Development near residential zones should not impair the amenity of the residential area. Entry and exit points should be located in such a way as to discourage related traffic movements through adjacent residential streets. Activities likely to create significant impacts in terms of noise or odour, smoke fumes, dust or other airborne pollutants should not be located adjacent to residential zones.

EXISTING ACOUSTIC ENVIRONMENT

To assess the existing background noise environment, a noise logger was placed at the rear of the proposed ALDI site, in a location representative of the residences. Continuous monitoring occurred for the period 21 to 26 July 2016, including several weekdays and a weekend. The results of the noise monitoring are presented in Appendix A, with periods when rain or high wind may have affected the results excluded based on *Bureau of Meteorology* data.

ENVIRONMENT PROTECTION (NOISE) POLICY 2007

To provide an objective assessment of the Principles of Development Control relevant to the noise assessment, reference is made to the *Environment Protection (Noise) Policy 2007* (the Policy).

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_{max}) noise level from such activity is less than 60 dB(A).

Therefore, it is recommended that he hours of rubbish collection from the site and any use of the refuse area is restricted to the hours of 9am to 7pm on a Sunday or public holiday, and 7am and 7pm on any other day.

Noise from all other Activity

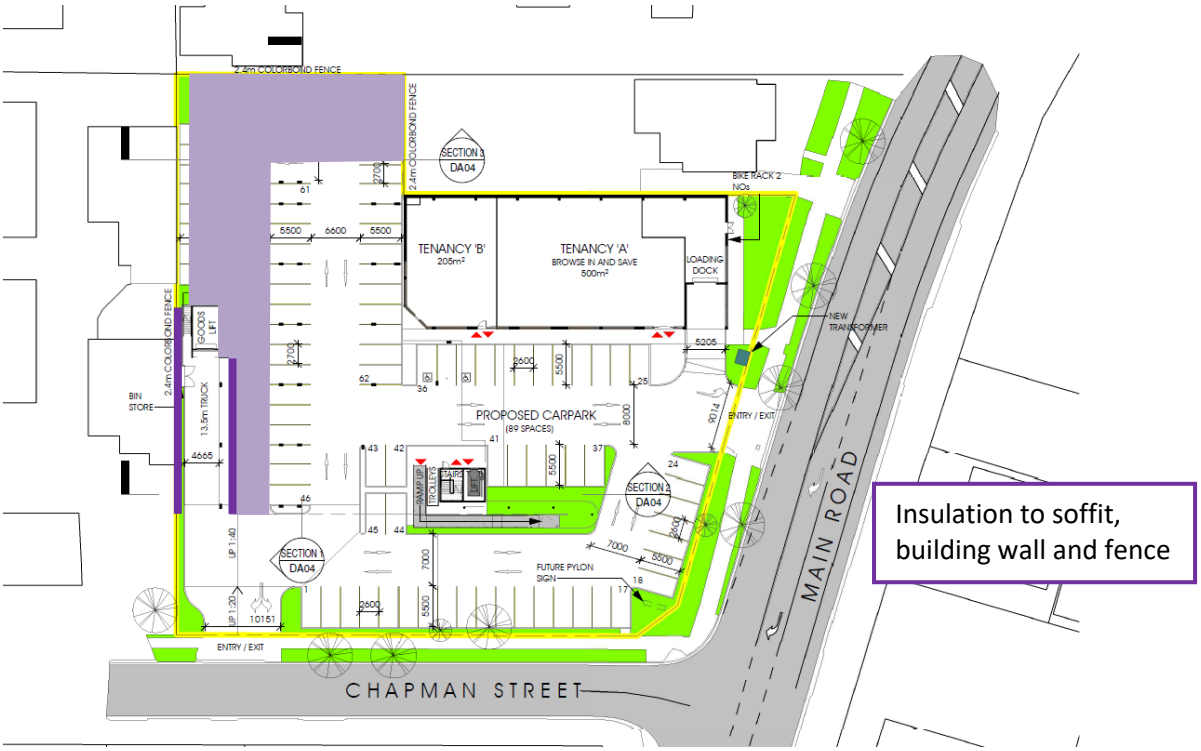
The Policy sets goal noise levels based on the principally promoted land use as designated by the Development Plan in which the noise source (proposed ALDI supermarket) and noise sensitive receivers (residences) are located.

Based on the commercial and residential zoning and the application of penalties for noise character in accordance with the Policy, the following are the criteria to be achieved at residences:

	Commercial (Main Street) Zone	**Residential (Hills) Zone**
Day Average (dB(A))	47	45
Night Average (dB(A))	40	38
Night Maximum (dB(A))	N/A	60

By providing the acoustic treatments to the site detailed below, the highest day time noise level at the nearby residences is predicted to be 45 dB(A). Night time noise levels are predicted to be below 30 dB(A) at all residences.

- Restrict truck deliveries to the hours of 7am to 10pm;
- Fences at western and northern boundaries of the carpark to be constructed to a height of 2.4m above the floor level of the neighbouring residences. The fence should be constructed from a minimum of 9mm thick fibre cement sheet (or a material with an equal or greater surface density) which is sealed air tight at all junctions including at the ground, bins and corner of the site.
- Insulation to be installed on the inside face of the fence and part of the western facade of the ALDI building (adjacent the loading area) for the extent shown below.
- Insulation to be installed to underside of soffit in car park areas for the shaded extent shown below.



CONCLUSION

An assessment has been made of the environmental noise from the proposed ALDI Blackwood. Recommendations have been made for acoustic treatment to reduce the noise to the recommended noise levels of the *Environment Protection (Noise) Policy 2007*. With the Policy achieved, it is considered that the proposed ALDI Blackwood facility will not:

- cause excessive or disturbing noise at neighbouring properties;
- cause a nuisance or hazard arising from excessive noise;
- impair the amenity of the residential area; and
- create nuisance to occupiers of adjacent properties by way of noise

Based on the above, with the proposed acoustic measures as detailed in this assessment implemented, it is considered that the relevant Principles of Development Control related to noise will be achieved.

APPENDIX A: Background Noise Logging Results