STATE COMMISSION ASSESSMENT PANEL
A COMMITTEE OF THE STATE PLANNING COMMISSION

APPLICATION ON NOTIFICATION – Category 2

Applicant:	Veritas Liberte Pty Ltd
Development Number:	155/M004/19
Nature of Development:	Construction of a five (5) level mixed use development (including ground level, plus associated basement car parking and roof top plant), comprising 28 apartments, 2 ground floor tenancies and landscaping.
Development Type:	Merit
Subject Land:	82 Rundle Street Kent Town
Development Plan:	Norwood Payneham and St Peters Development Plan Consolidated 21 March 2019
Zone / Policy Area:	Mixed Use Historic (Conservation) Zone - The Parade/Fullarton Road Policy Area
Contact Officer:	Yasmine Alliu
Phone Number:	08 71097076
Consultation Start Date:	11 June 2019
Consultation Close Date:	24 June 2019
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 Street
ADELAIDE

Email Address: scapreps@sa.gov.au

South Australian
DEVELOPMENT ACT, 1993
REPRESENTATION ON APPLICATION – CATEGORY 2

Applicant:	Veritas Liberte Pty Ltd
Development Number:	155/M004/19
Nature of Development:	Construction of a five (5) level mixed use development (including ground level, plus associated basement car parking and roof top plant), comprising 28 apartments, 2 groundfloor tenancies and landscaping.
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Subject Land:	82 Rundle Street Kent Town
Contact Officer:	Yasmine Alliu
Phone Number:	08 71097076
Close Date:	24 June 2019

My Name: _____ My phone number: _____

Primary method(s) of contact: **Email:** _____

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 by the State Commission Assessment Panel in support of your submission.

My interests are: *(please tick one)*

- ☐ 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** _____

My interests are: *(please tick one)*

- ☐ I support the development
- ☐ I support the development with some concerns
- ☐ I oppose the development

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

I: *(please tick one)*

- ☐ wish to be heard in support of my submission
- ☐ do not wish to be heard in support of my submission *(Please tick one)*

By: *(please tick one)*

- ☐ appearing personally
- ☐ being represented by the following person *(Please tick one)*

Signature: _____

Date: _____

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

STATE COMMISSION ASSESSMENT PANEL

A COMMITTEE OF THE STATE PLANNING COMMISSION

Why have I received this notice?

The role of the State Commission Assessment Panel (SCAP) is to independently assess and determine specified kinds of development applications in South Australia in accordance with the *Development Act 1993*.

Some types of development application require public notification. This is determined by the relevant Development Plan and Schedule 9 of the *Development Regulations 2008*. Development applications fall into one of the following categories:

- Category 1: No public notification
- Category 2: Notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed. A person contacted in this way has the right to make a written representation to the SCAP. Representations from those with a right to be heard must be taken into consideration by SCAP when assessing the development application.
- Category 3: Written notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed and to any owner/occupier of land which the SCAP believes would be directly affected to a significant degree if the development were to proceed. Notice by newspaper advertisement to be given to the general public.

What is a valid representation?

Your representation must be made within the public notification period as described upon the notice you have received. Pursuant to the *Development Act 1993*, this period is 10 business days from the date notice is given.

Your representation must be signed, dated, set out the reasons for the representation and include your full name and address contact details.

What can I comment on?

It is important to be mindful that your representation should avoid raising matters that are not relevant to the planning assessment of the application. A planning assessment can only have regard to the relevant provisions of the Development Plan. A representation can raise issues both in support and in opposition to a development.

You can access the relevant Development Plan here: https://www.sa.gov.au/topics/planning-and-property/development-plans

What happens next?

All valid representations received through either a Category 2 or Category 3 process are forwarded to the applicant for a response and taken into consideration by a Planning Officer from the Department of Planning, Transport and Infrastructure in preparing their assessment.

Pursuant to the *Freedom of Information Act 1991* and *Development Act 1993* any information provided may become part of a public document and may be published as an attachment to the Planning Officer's report.

If you have indicated that you wish to be heard you will receive an invitation to appear personally before the SCAP, or be represented by counsel, solicitor or agent. This invitation must give five (5) business days notice of the meeting but, dependent on other issues to be assessed, this meeting may not occur for an indefinite period of time after your representation is made. Unfortunately, the meeting time and date cannot be adjusted to accommodate all attendees.

If you have not indicated that you wish to be heard in support of your submission, you will not receive any further correspondence on this matter until a decision is made.

What is a SCAP meeting?
SCAP meetings are generally held on the second and fourth Thursdays of each month in the Kardi Munaintya meeting room on the ground floor at 50 Flinders Street, Adelaide.

The SCAP will be assessing the development application against the relevant Council Development Plan. To assist, an assessment report will be prepared by a Planning Officer from the Department of Planning, Transport and Infrastructure. This report is publicly available from https://www.saplanningcommission.sa.gov.au/scap/agendas_minutes on the Monday afternoon prior to the meeting. This report will include a copy of your representation.

Representors wishing to be heard will be given the opportunity to make a short (5 minute maximum) verbal presentation to the SCAP. Please note that Representors are only provided with the opportunity to make a verbal presentation at the initial hearing of an application. At this meeting, the SCAP may also hear comments from the applicant, relevant agencies, and Council.

How do I know what decision is made?
You will be able to ascertain the outcome of the SCAP's deliberation when the meeting minutes are made available on the SCAP website on the afternoon of the day after a meeting.

Once a decision is made by the SCAP, valid representors will be sent a copy of the Decision Notification Form which includes any conditions relevant to the application.

Note: Dependent on the assessment process for the application, and if no Representors indicate that they wish to be heard, a decision may be made by a Delegate of the SCAP without the application being heard at a SCAP meeting.

Appeal rights
If the proposal is a Category 3 application, then you can appeal a decision made by the SCAP if you have made a valid representation

Such an appeal must be lodged at the Environment, Resources and Development Court fifteen (15) business days from the date of decision. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide (telephone number 8204 0300).

Representors do not have a right of appeal in relation to Category 2 development applications.

For more information
Contact the SCAP Secretariat on:

Telephone: 1800 752 664 (Select Option 4)
Direct: 7109 7061
E-mail: scapadmin@sa.gov.au

Postal: GPO Box 1815, Adelaide SA 5001

Street: Level 5, 50 Flinders Street, Adelaide SA 5000

Website: https://www.saplanningcommission.sa.gov.au/scap

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: Norwood, Payneham & St Peters

APPLICANT: Mekaarn Waaye Veritas Liberte Pty Ltd

Postal Address: –

Owner: –

Postal Address:

BUILDER: TBC

Postal Address:

Licence No:

CONTACT PERSON FOR FURTHER INFORMATION

Name: Matthew King - URPS

Telephone: 0417 080 596 [work] 8333 7999 [Ah]

Fax: – [work] – [Ah]

EXISTING USE: Vacant

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: 5 storey building with carparking

LOCATION OF PROPOSED DEVELOPMENT:

House No: 82 Lot No: 33 Street: Rundle Street Town/Suburb: Kent Town

Section No [full/part] Hundred: Volume: 6203 Folio: 414

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

LAND DIVISION:

Site Area [m²] Reserve Area [m²] 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]: $ 10 Million

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: 12 / 4 / 19

(URPS - AS AGENT)

URPS

Veritas Liberte
2018-0379
16 May 2019

Mixed Use Development

88 Rundle Street, Kent Town

Planning Report

Mixed Use Development

16 May 2019

Lead consultant	URPS
In association with	Alexander Brown Architects LCS Landscapes CIRQA Traffic Engineers SALT3 Waste Consultants SUHO Consultants Sonus Acoustic Engineers Alexander Symonds Surveyors
Prepared for	Veritas Liberte
Consultant Project Manager	Matthew King RPIA, Director Suite 12/154 Fullarton Road (cnr Alexandra Ave) Rose Park, SA 5067 Tel: (08) 8333 7999 Email: matthew@urps.com.au
URPS Ref	Planning Report 88 Rundle Street Kent Town (Final Draft) (Version 005) 16 May 2019

Document history and status

Revision	Date	Author	Reviewed	Details
V1	24.04.19	MK	MK	Draft 1
V2, V3	30.04.19	MK	MK	Drafts
V4	15.05.19	JS	MK	Final draft issued to client
V5	16.05.19	JS	MK	Final report

www.urps.com.au
ABN 55 640 546 010

H:\Synergy\Projects\18ADL\18ADL-0379 82 Rundle Street, Kent Town - 6 Storey Apartment Building\Draft Reports\Planning Report 88 Rundle Street Kent Town (Final Draft) (Version 005) 16 May 2019.docx

Contents

1.0 Executive summary

1.1 Proposal and subject land details

Proposal	Mixed use development comprising the construction of a five (5) storey mixed use building accommodating 28 dwellings (apartments), two ground floor tenancies containing a café and fitness studio, and associated basement carparking and at-grade landscaping.
Location	88 Rundle Street, Kent Town
Site area	1,110.6m^2 (approximately)
Site frontage	Rundle Street (Approximately 34.6 metres)
Council area	City of Norwood Payneham and St Peters
Relevant authority	SCAP (State Coordinator General $5+ million development pathway)
Development Plan	City of Norwood Payneham and St Peters (Consolidated 21 March 2019)
Zoning	Mixed Use Historic (Conservation) Zone; The Parade/Fullarton Road Policy Area 11.2
Assessment pathway	Merit
Public notification	Category 2
Referrals	Office for Design and Architecture SA (ODASA); DPTI (Commissioner of Highways); State Heritage Branch

1.2 Project team details

Architect	Alexander Brown Architects
Planning consultant	URPS
Landscape Architect	LCS Landscapes

Traffic consultant	CIRQA
Waste Consultant	SALT Waste Consultants
ESD Consultant	SUHO
Acoustic	Sonus Acoustic Engineers
Surveyor	Alexander Symonds

2.0 Introduction and Background

URPS has been engaged to provide planning advice and to prepare this planning report in support of a proposal involving the construction of a multi-storey, mixed-use development located within central Kent Town.

This application relates to a previous Development Application, namely 155/E010/17, which involved the development of the subject land and the surrounding allotments located to the west and south.

This previous application received planning consent on 2 March 2018 and involved the construction of a four (4) storey mixed use building containing a motel facing Rundle Street, with basement car parking. The previous application also included the construction of a number of two (2) and three (3) storey townhouses facing Rundle Street, College Street and Little Grenfell Street; and the restoration of an existing Local Heritage Place known as the Panini Kitchen.

A related land division created differing 'super lots' for the differing components of the overall development. An individual allotment for the motel site was created.

The applicant hereby seeks a separate stand-alone approval to construct a five (5) storey mixed use building on the previously approved four (4) storey 'motel' site at 88 Rundle Street, Kent Town.

It is noted that various amendment applications have been lodged and approved which have altered the original built form features of the originally approved townhouses. However, the fundamental layout and design of the original approved 'super lot' land division has not changed.

The subject land is located within the **Parade/Fullarton Road Policy Area** of the **Mixed Use (Historic Conservation Zone)** and has been identified in Fig MUH(C)/1 of the Norwood, Payneham and St Peters Development Plan (consolidated 21 March 2019) as a 'key development site'.

The subject land is therefore considered to be a highly suitable site for the proposed development as the Development Plan provides for a mixture of commercial and medium density residential development up to four (4) storeys in height.

This proposal has undergone rigorous review and revision through the design development phase, aided by a qualified and experienced team of architects and landscape architects, and consultants in planning, traffic, waste management, ESD and acoustic engineering.

The plans have been further refined as part of the State Government's pre-lodgement and design review process through the Office for Design and Architecture SA (ODASA).

The proposed development will provide a desirable mix of land uses, and importantly, an increase in residential density in a strategic location, upon land that has been remediated and cleared of existing undesirable and unsightly buildings. The result will be a high-quality design outcome which appropriately complements surrounding historic built form.

This planning report has been prepared following our review of the following:

- Physical view of the subject land, locality and review of various aerial mapping software.

- Certificates of Title – **Appendix A.**
- Survey plan – **Appendix B.**
- City of Norwood Payneham and St Peters Development Plan (21 March 2019).
- Proposal plans and render drawings prepared by Alexander Brown Architects and LCS Landscapes – **Appendix C.**
- Traffic and car parking report prepared by CIRQA – **Appendix D.**
- Waste Management Plan prepared by SALT Waste Consultants – **Appendix E.**
- ESD Statement prepared by SUHO – **Appendix F.**
- Acoustic report prepared by Sonus – **Appendix G.**
- Contamination/Remediation Report prepared by Environment Projects – **Appendix H.**

3.0 Proposal

This proposal involves:

> *The construction of a five (5) storey mixed-use apartment building which is to provide retail floor area at ground level and residential apartments above with associated on-site car parking and at-grade landscaping.*

A detailed description of the various components to this proposal is provided below

3.1 Residential apartments

The proposed residential accommodation will comprise a total of twenty-eight (28) apartments and will include:

- Ten (10) one-bedroom apartments, four (4) of which are anticipated to be utilised for short stay accommodation (such as Airbnb). However, the short stay accommodation has been assessed as typical dwellings.
- Sixteen (16) two-bedroom apartments.
- Two (2) three-bedroom apartments.
- Each residence is provided with large balconies with floor waste traps for drainage to encourage outdoor living and urban-scale gardening.
- Landscaping is also proposed with 75% of all planted vegetation to comprise native or drought tolerant species. The plans also depict deep soil zones for medium tree plantings, 300-400 mm wide raised garden beds located adjacent the western and eastern side boundaries of the site, feature planting to the main entry and climbing vegetation along the front façade.
- The development incorporates smart technology in the building, including CCTV, sound system, access controls (for entry to apartments and the main entrance), all via a smart phone application.
- The proposed building is to incorporate a number of features that will minimise energy consumption. These include good building fabric, appropriately-sized high performance glazing, solar photovoltaic, efficient building services and controls (HVAC air-conditioning, lighting, domestic hot water), and efficient appliances
- A Waste Management Plan has been prepared by Salt^3 Waste Consultants. This plan outlines the landfill, recycling and FOGO (Food and Garden Organics) waste volumes generated, how these separate waste streams are managed, and collection details.

3.2 Commercial (non-residential) tenancies

The proposed development will also include two (2) separate tenancies located at ground floor level comprising an 80 m² fitness studio (Tenancy 1) and a 93 m² café (Tenancy 2), providing a total floor area of 173 m².

The fitness studio is not a form of 'indoor recreation centre' in our view. Specifically, the fitness studio is not a 'centre' in planning terms due to its small scale, its local customer base, its narrow range of services, and as it is not related to other similar recreation uses on the land. The proposed fitness studio is in stark

contrast to a true 'indoor recreation centre', which is usually contained in a large-scale building; offering a range of recreation opportunities such as fitness equipment, numerous playing courts and potentially swimming pools; with a far-reaching customer base; and is often managed by Councils. Our opinion is supported by the judgement of Cole J. in *Willcocks v Corporation of The City of Whyalla [2009] SAERDC 23*, who pertinently states the following at para 14:

> *In considering whether a proposed land use falls within the definition of a defined term, it is important not to lose sight of the term itself. The question here is whether the use proposed for approximately 80m² of floor space for Curves is an indoor recreation centre. Clearly, it is not the case that all recreation undertaken indoors will amount to an indoor recreation centre. Issues of fact and degree are relevant. In this case, the 80m² space in question is part of premises of approximately 210m² and those premises comprise one of two buildings on the land (see the report of Mr Batge). When used as a town planning description rather than a marketing term, the word "centre" implies premises of considerable size and, generally, the presence of a number of elements related to an overarching kind of land use. A single shop is not a shopping centre, but a group of shops may be. A single doctor's consulting room is not a medical centre, but premises containing the consulting rooms of a number of health practitioners may be. In the same way, I do not consider that a single exercise circuit occupying 80m² of floor space in premises containing other uses which are not recreational uses can be called an indoor recreation centre for town planning purposes. The "Curves" use is an undefined use.*

3.3 Car parking and access

- Pedestrian access to the apartments and commercial tenancies will be provided via the Rundle Street frontage.
- Vehicle access to the site will be provided via a two-way access crossover situated on Rundle Street at the north-eastern end of the site's frontage. The associated driveway, which is to run along the eastern side and southern rear boundaries of the site, will provide access to an at-grade loading bay and a basement parking area (with associated ramp).
- The basement parking area will accommodate a total of 38 parking spaces. These 38 spaces are allocated as follows:
  - 32 spaces are provided within a mechanical stacking system, comprising 28 residential spaces for dwelling occupants and 4 staff spaces for the commercial tenancies.
  - The remaining parking comprising 6 visitor spaces, including 1 space for people with disabilities.
- The proposal includes secure bicycle parking in the basement, providing a total of 25 bicycle parking spaces. There are 14 lockable spaces in the basement for residents and 9 spaces at ground level for the commercial tenancies and visitors. These spaces are all at grade to ensure convenient access and avoid cyclists unnecessarily lifting their bikes.

3.4 Design philosophy

The proposal has been designed by an experienced architect and involves a high-quality design which integrates and reflects the character of its surroundings.

The proposal complements the street-wall heights of nearby State Heritage Places, and provides textured and articulated external materials.

Some key design attributes include:

- The building will have an overall height of 17.0 metres above ground level (not inclusive of the plant room located above roof level).
- Maintaining free-flowing pedestrian links at ground level, both on street and within the development. Accessibility and movement throughout the site are integrated to ensure the pedestrian is prioritised.
- Varying façade treatments fronting Rundle Street provide visual interest. This includes the incorporation of a two-level red brick podium, balcony screening materials, black aluminium louvre screening extending vertically from first to third floors, and the introduction of raw concrete frames to the balconies at third floor level.
- Use of earthen and natural tones and materials of natural texture which together complement the existing streetscape colour palette.
- Public realm additions and landscaping that softens edges.
- A good level of integration in form, materials and public realm elements throughout the development especially at ground level.

4.0 Subject land and locality

4.1 Subject land

The subject land comprises one allotment with a street address of 82-88 Rundle Street, Kent Town.

The site is located on the southern side of Rundle Street, is nearly square, has a street frontage of 34.6 metres, a depth of 32.1 metres, and a total land area of some 1,110.6m^2.

An existing 4.0-metre-wide SAPN (11KV) easement runs along the north-eastern side boundary of the site almost to the rear of the subject land.

The land is presently vacant. A previous industrial warehouse building on the site was recently demolished and cleared from the land.

Photos of the land are provided in Figures 4-1 to 4-3.

Figure 4-1: Subject land in bold outline

Photo 4-2: Subject land (Rundle Street frontage)

Photo 4-3: Subject land (Rundle Street frontage, with State Heritage Places at left of image)

4.2 Locality

The locality comprises a diverse range of land uses, which is reflective of the various zones which meet in this area.

The subject land is directly surrounded by the following forms of development:

- A number of commercial buildings at one to two-storeys in height are located to the north and north-west on the opposite side of Rundle Street (Notation "A" on Figure 4-4).
- Vacant land to the west and south but with approval for:
  - A group of four (4) two-storey town houses, facing Rundle Street, with a common driveway and vehicle access to Little Grenfell Street are to be located immediately to the west (Notation "B").
  - A group of six (6) three-storey town houses, facing College Road, with a common driveway and vehicle access to Little Grenfell Street are to be located to the south-west ("C").
  - A group of twelve (12) three-storey town houses, facing Little Grenfell Street, are to be located immediately to the rear to the south and south-east ("D").
- A group of two-storey State Heritage listed buildings containing commercial uses/offices fronting Rundle Street are located adjacent the north eastern boundary of the land ("E").
- A pair of unlisted semi-detached dwellings, facing Little Grenfell Street, are located immediately adjoining the south eastern boundary of the land ("F").

More broadly, the locality comprises the following development and land uses:

- An independent living unit facility operated by Eldercare lies to the south of Little Grenfell Street ("G")
- The two-storey Kent Town Hotel to the south-west, which includes the Local Heritage listed corner pub building ("H").
- Bunnings retail hardware shop to the west. Various commercial buildings, at one to two-storeys, to the north-west ("I").
- The Panini Kitchen which fronts College Road and operates within a Mid-Victorian bluestone corner shop, listed as a Local Heritage Place and a former retail showroom/service industry ("J").

The area is considered to exhibit a mixed character dominated by residential and commercial land uses on a range of allotment sizes and of varying height and design.

Figure 4-4: Locality

Figure 4-5: State Heritage listed 'townhouses', directly east of subject land

Figure 4-6: Rundle Street State Heritage Places

Figure 4-7: Northern side of Rundle Street

Figure 4-8: Northern side of Rundle Street

Figure 4-9: Northern side of Rundle Street

Figure 4-10: View west down Rundle Street

Figure 4-11: View east down Rundle Street

5.0 Procedural matters

5.1 Zoning

The land is located within the **Mixed Use Historic (Conservation) Zone** & **Parade/Fullarton Road Policy Area 11.2** in the City of Norwood Payneham and St Peters Development Plan (consolidated 21.3.19).

5.2 Relevant authority

The **State Planning Commission** was determined to be the relevant authority by the State Coordinator-General (SCG) on 13 December 2019, in accordance with Schedule 10 clause 20 of the SA *Development Regulations* 2008. The development:

- Has a cost of more than $5 million.
- Is not solely for prescribed residential purposes.
- In the opinion of the SCG, should be assessed by the State Planning Commission.

We note that the application could have also been called-in by the SCG for other reasons, including:

- The application may constitute a 'variation' to the original application which was called-in for assessment by the Commission – see Schedule 10 clause 20 (2)(a); OR
- The application is ancillary to or in association with the original development which was called-in - see Schedule 10 clause 20(2)(b).

5.3 Assessment pathway

The proposal is an **on-merit** kind of development. Multi-storey residential apartment buildings, residential flat buildings, shops and fitness studios (undefined use) are not listed as either "complying" or "non-complying" in the subject Zone/Policy Area.

5.4 Public notification

The proposed development is identified as a **Category 2** form of development for public notification purposes by Zone Principle 22, which states:

> **The following development is assigned to Category 2 pursuant to Section 38 of the Development Act 1993, and accordingly will be subject to the public notification requirements applying to Category 2 development:**
>
> **All forms of development (except where the development is classified as non-complying) in the:**
>
> > **(a) Payneham Road Policy Area not listed as Category 1; or**
> >
> > **(b) The Parade/Fullarton Road Policy Area where located in key development areas as shown on Concept Plan Fig MUH(C)/1 and more than 3 storeys (11.5 metres) in height**

5.5 Referrals

Referrals are required to the Office for Design and Architecture SA (ODASA), State Heritage Branch and DPTI (Commissioner of Highways).

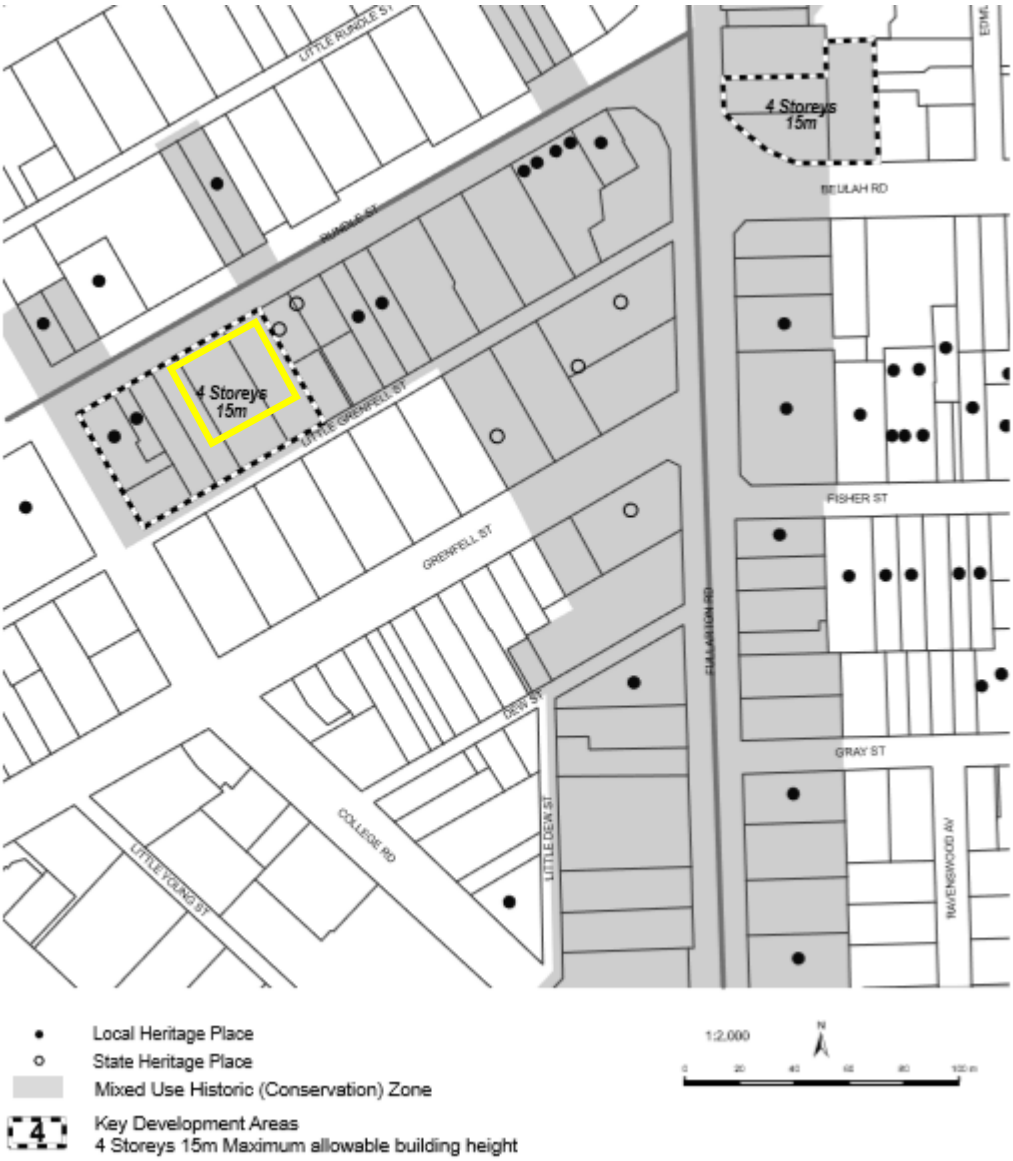
6.0 Development Plan assessment

6.1 Land use

The land is located within the Mixed Use Historic (Conservation) Zone and Policy Area 11.2 as illustrated on Maps NPSP/9 and 15 (reproduced below).

In addition, the subject land is identified on Concept Plan Fig MUH(C)/1 as a key development site which allows for mixed use developments up to four storeys in height (see below).

Figure 6-1: Concept Plan – Fig MUH(C)/1



The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
Mixed Use Historic (Conservation) Zone	1, 3	4
Orderly and Sustainable Development	1, 8, 13	2, 3, 11, 13
Medium and High Rise Development (3 or more Storeys)	60, 62, 65	-

The desired character statement (DCS) for Policy Area 11.2:

> **A key development site at the intersection of Rundle Street, College Road and Little Grenfell Street as depicted on Concept Plan Fig MUH(C)/1 provides the opportunity for a mixture of commercial and medium density residential development. Development will be up to four (4) storeys, however, building elements above two storeys will be set back an additional three or more metres so as to be visually recessive and to maintain a lower-scale feel along Rundle Street and College Road.**
>
> **Taller building elements will be focused toward Rundle Street and transition down in height and scale to a maximum of three (3) storeys toward Little Grenfell Street and the adjacent Residential Zone. Building elements above two storeys fronting Little Grenfell Street will also be setback an additional two or more metres to minimise building massing and overshadowing of development on the southern side of the street.**
>
> **Development of this site should also be cognisant of the strong heritage and character nature of the locality and sensitively interface with the original form of heritage buildings located on or adjacent the site. Large frontages should be strongly articulated to reflect the historic fine-grained building pattern of the area. Vehicle access should be provided via common driveways from Rundle Street and/or to the rear of dwellings.**
>
> **(My emphasis underlined)**

The Zone DCS calls for:

> **Townhouses and residential apartment buildings of a scale consistent with the locality…**
>
> **Over time redevelopment will occur on sites which are incompatible with the historic character of the Zone and the relevant Policy Area.**
>
> **(My emphasis underlined)**

Further, Zone PDC 4 states

> **Development in the Mixed Use Historic (Conservation) Zone should be primarily for offices, consulting rooms and residential dwellings, generally utilising existing historic building stock, with the development of new residential apartments and townhouses in appropriate locations within each of the policy areas, except in the Portrush Road Policy Area.**
>
> **(My emphasis underlined)**

The composition of uses to be accommodated within the proposed building comprising both retail/commercial and residential apartments generally aligns with those uses envisaged in the Zone and underlined above.

The land is considered to provide a desirable location for a mix of high density residential and small-scale retail/commercial land uses.

Kent Town is a gentrifying area with many former warehouse and light industrial facilities being replaced with mixed use housing and commercial development to create a vibrant urban village. The proposal complements the existing land use trends in the area.

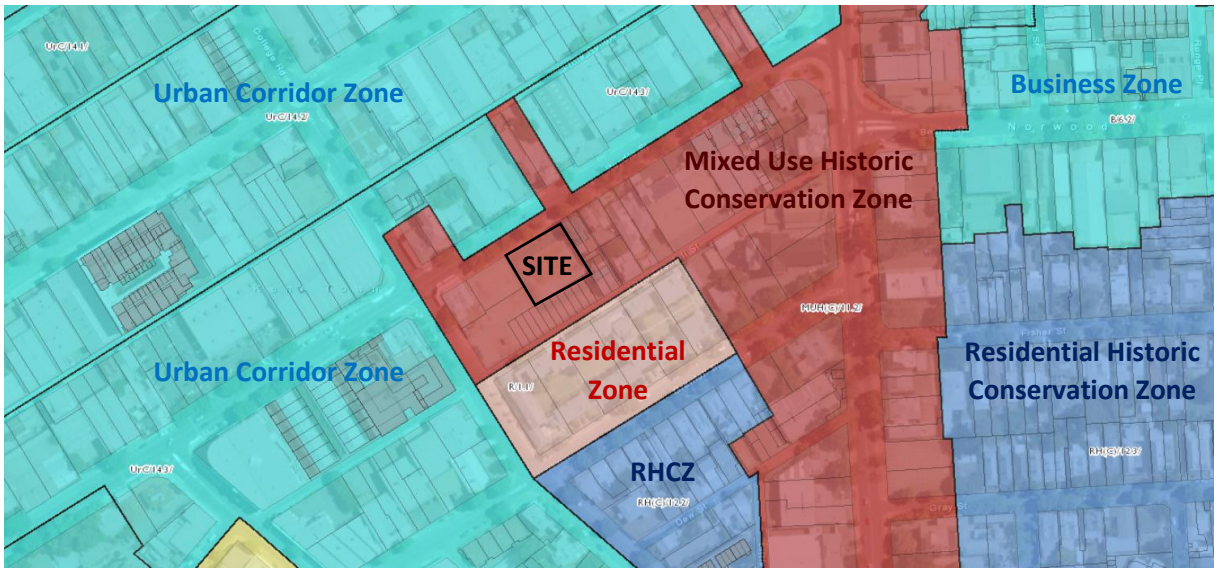
The area is very close to the CBD, providing good access by car, bike and pedestrian. The land is also adjacent to the Norwood Parade and many local services which will serve both those persons residing in the townhouses and visitors alike.

The proposal will enhance the appearance of the land and locality significantly while providing greater living opportunities and more affordable higher density development comprising a combination of one, two and three-bedroom apartments in this highly sought-after suburb.

It is noteworthy that the land is located adjacent the Urban Corridor Zone to the immediate west and north (as demonstrated in Figures 6-1 and 6-2 below) where mixed use zone developments accommodating a range of compatible non-residential and medium and high-density residential land uses at 3-5 levels in height are contemplated.

It is therefore considered that the proposal will integrate well with future urban corridor developments.

Figure 6-2: Zone Map



6.2 Contamination

The DCS for the Zone encourages and actively seeks the continuation of residential activities and the redevelopment of sites for residential purposes. The proposed mixed-use development satisfies this intent.

Council Wide PDC 172 seeks to ensure that development only occurs where the site has been assessed and remediated as necessary to ensure it is suitable for the proposed use.

Environmental Projects were commissioned by the previous owner, Mr Greg Meyer, to undertake an environmental assessment of the site soils on the subject land at 88 Rundle Street in Kent Town, which at the time of the assessment, was vacant and free from any buildings or hardstand areas.

A soil assessment of the site was required to provide an indication of the presence or absence of soil contamination. The soil investigations included soil bore drilling at 10 grid-based locations (based on AS 4482.1-2005 guidance for a 0.35 ha site) to a total depth of 1 metre below ground level (mBGL) and two targeted soil bores (in the location of the former 400L UST) to a depth of 4 mBGL. Soil samples were submitted to a NATA accredited laboratory with selected samples requested for testing for chemicals considered to be of concern.

The results of the soil assessment identified the presence of elevated concentrations of Polycyclic aromatic hydrocarbons (PAHs), including carcinogenic PAHs such as benzo(a)pyrene toxicity equivalents (BaP TEQ) above Health Investigation Level B (HIL B)[1]. The elevated concentrations appeared to be within a specific layer of dark brown silty clay fill containing ash and cinders present across the approximate south eastern corner of site.

The balance of the site had target analyte concentrations in selected soil samples that complied with HIL B and required no further investigation.

Site remediation was undertaken to excavate the visually discernible contaminated ash layer from across the south eastern corner of the site. Remediation excavation removed the contaminated ash layer to expose a visually distinct red brown natural clay layer. The natural in-situ soils were sampled from the base of excavations at 18 locations and from the wall of excavations at 7 locations.

Samples selected for laboratory testing had concentrations below the laboratory limit of reporting (LOR) for target soil contaminants. Validation sampling and testing of selected soil samples from the base and walls of the remediation excavations confirmed the successful removal of the PAH contaminated soil layer.

The final condition of in-situ soils across the site suggested target analyte/chemical concentrations in selected soil samples complied with HIL B for residential high-density development. This means no further investigation or action is required.

6.3 Density

The DCS, Objective 3 and PDC 4 of the Zone all refer to the development of townhouses and "residential apartment buildings."

The Policy Area DCS states:

> **A key development site at the intersection of Rundle Street, College Road and Little Grenfell Street as depicted on Concept Plan Fig MUH(C)/1 provides the opportunity for a mixture of commercial and medium density residential development**

The proposal includes a range of development opportunities including two commercial tenancies at ground level and twenty-eight (28) residential apartments. The proposal therefore desirably increases the

[1] Health Investigation Levels (HILs) establish the concentration of a contaminant above which further appropriate health investigation & evaluation will be required. They are derived for four generic land-use categories, including HIL B: Residential with minimal opportunities for soil access, includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats, *National Environment Protection (Assessment of Site Contamination) Measure April 2011*.

density of the site and provides multi-storey "apartments" as expressly sought by the Zone, in a locality characterised by a mix of commercial and multi-storey townhouse development at varying densities.

As noted above, the site is located within close proximity of the CBD, parklands and Norwood Parade. The site is in an excellent strategic location for the proposed increase in density.

6.4 Design, appearance and character

Considerable time has been invested into the design and appearance of the proposed building to ensure that it is sympathetic to the mixed-use character of the locality, and particularly buildings of historic significance, including those located immediately adjacent the site.

The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
Mixed Use Historic (Conservation) Zone		5, 6, 7, 8, 9, 11
Design and Appearance of Land and Buildings	18, 19, 20, 22	28, 29, 30, 31, 32, 33, 35(a)(b), 36, 37, 38, 39, 40, 41, 47
Medium and High Rise Development (3 or more Storeys)	60, 62, 64	260, 261, 262, 263, 264, 266, 267, 268, 269

Zone PDC 5 and 6 respectively state:

> **Development should conserve, maintain, enhance and reinforce the existing streetscape of the relevant policy area and the historic character of individual buildings, exhibiting architectural detail, roof forms, designs, street frontage widths, materials, colours, fences and landscape settings which complement, without effecting the reproduction of, historic buildings and their detailing;** and
>
> **Development in the Mixed Use Historic (Conservation) Zone should…**
>
> **(a) ensure coherence at street level and compatibility with adjacent buildings in the…level of interest;**
>
> **(b) be compatible with street frontage of adjacent buildings and the desired street frontage in the area;**
>
> **(c) establish horizontal and vertical subdivisions and upper level setbacks compatible with the form and context of adjacent buildings;**
>
> **(d) be of a high quality, contemporary design that reinforces the siting and alignment patterns prevailing in the streetscape;**
>
> **(e) be designed to be of a bulk, scale and visual interest at least equal to that of the adjacent buildings in the streetscape, where:**
>
> **(i) the development is situated on land in a strategic or prominent location, such as a corner;**
>
> **(ii) …**
>
> **(iii) a strong street presence is desirable; and for each of the above, the heritage value or historic character of the locality is not diminished;**
>
> **(f) locate car parking to the rear of buildings;**
>
> **(g) …**

The above PDCs are supported by various Council Wide policies which seek to ensure that development is of a high architectural standard and appearance that does not impair the amenity of the locality.

More specific policies applicable to medium and high-rise development call for buildings of scale to be sympathetic to the human scale at ground level whilst being designed to reduce visual mass and reinforce corners.

The proposed building has been designed to primarily address Rundle Street, it is of five (5) storey construction, being similar in height as the previously approved "motel" building, and provides access to a basement car parking area via a new driveway crossover point to be constructed along Rundle Street.

The proposed building is of a high architectural design standard achieved by a mix of construction materials and variation in texture which is in keeping with the character of Kent Town.

Materials include, natural timber and batten cladding, reclaimed brick, glass and metal, perforated bi-folding screens and precast concrete panels.

The building features strong ground level activation achieved through the use of expansive glazing which is set behind the reclaimed red brick podium section extending outwards from the front of the building to create external courtyards to the front of the ground floor apartments and commercial tenancies facing Rundle Street.

The bulk and massing of the building is carried in the lower (2) storeys, whilst the upper three (3) storeys are stepped back, which provides a clear separation from the lower (2) storeys. The inclusion of the reclaimed red brick podium provides a clear separation from the upper levels and importantly, ensures a human scale is presented to the street.

Figure 6-3: Streetscape imagery – Rundle Street elevation

Development to the immediate north-east comprises four State Heritage listed townhouses fronting Rundle Street. It is considered that the proposed development will not seriously affect or compromise the context or setting within which these places sit given it is positioned 'back' from the shared side boundary by in excess of 6 metres and will feature a healthy strip of landscaping along the dividing boundary.

Indeed, the form and materiality of the development is considered a vast improvement upon the existing warehouse buildings that once occupied the subject land.

As shown in the renderings reproduced in Figures 6.3, 6.5 and 6.6 and the streetscape photo in Figure 6.4, the siting of the proposed building is considered to be in character with the streetscape.

Figure 6-4: Existing Streetscape (Rundle Street)

Figure 6-5: Rundle Street (looking south-east)

Figure 6-6: Rundle Street facade

6.5 Building height

The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
The Parade/Fullarton Road Policy Area	1	2
Design and Appearance of Land and Buildings		32
Medium and High Rise Development (3 or more Storeys)		281

PDC 2 of the Parade/Fullarton Road Policy Area states that development should not exceed two storeys in height above the natural ground level, except where indicated on Concept Plan Fig MUH(C)/1.

As previously noted, the site of the development has been identified as a key development site on Concept Plan Fig MUH(C)/1, which allows for a maximum building height of up to 4 storeys and 15 metres on this site (subject to the upper levels of the building being suitably setback from the street boundary).

We are aware that the proposed development comprises the construction of a five storey (17.0m high) building, and thus exceeds the height guideline. It is worthy however to note that the floors of the proposed building above two storeys have been setback from the street boundary to assist with reducing the visual bulk of the building when viewed from Rundle Street.

While exceeding the suggested height limit, the overall height of the proposed building is not considered to significantly offend the existing or desired character of the area, particularly when considering the site's adjacency to the Urban Corridor Zone wherein development of up to five (5) storeys is contemplated. We note in this respect that an approval exists for a development with a height of 17 .1

metres for the part within the Mixed-Use Historic Conservation Zone and 21 metres for the part within the Urban Corridor Zone.

Council Wide PDC 281 notes that:

> **Development of 5 or more storeys, or 21 metres or more in building height (excluding the rooftop location of mechanical plant and equipment), should be designed to minimise the risk of wind tunnelling effects on adjacent streets by adopting one or more of the following:**
>
> **(a) A podium at the base of a tall tower and aligned with the street to deflect wind away from the street;**
>
> **(b) Substantial verandas around a building to deflect downward travelling wind flows over pedestrian areas;**
>
> **(c) The placement of buildings and use of setbacks to deflect the wind at ground level.**

When assessing the dispensation in height, it is also important to consider the overall design and integration of the development within the locality including new and existing built form adjoining the site.

In this respect and with regard to Council Wide PDC 281:

- Particular attention has been given to reducing the dominance of the upper storeys of the proposed building when viewed from Rundle Street through articulated façade treatments, changes to the colour and design of the roof and stepping back upper sections of the building from the street.
- The retention of an access way to the eastern boundary provides significant separation between the proposal and the existing State Heritage Places, which not only assists with reducing the bulk of the building but will also deflect any potential wind tunnelling effect that may result.

Given the above, the height, scale and mass of the proposed building is considered to be compatible with the 4-storey buildings envisaged in the Zone, and is considered complementary to existing and approved built form adjacent the site. Further, the proposal will not constitute a dominant built form element within the locality, particularly considering the height of the development approved on the adjacent site.

6.6 Setbacks

Mixed Use Historic (Conservation) Zone PDC 10 states that:

> **Frontage and side boundary set-backs should be similar to the predominant pattern established by heritage places and contributory items in the immediate locality, with particular regard to adjacent heritage places and contributory items.**

Development within the locality is typically built to both front and side boundaries, or within very close proximity. The future direction of development in this area follows the trend of having a 'hard edge' to road frontages.

The proposed development is consistent with the established setback characteristics in my view. Further commentary on this is provided as follows.

- **Front setback:**
  - 0m (built to the front boundary); with upper level stories progressively setback from the street boundary as the building increases in height.

- **Western side setback**:
  - 1.5 metres at ground level, reducing to 0m at first floor level with upper storeys progressively setback from the side boundary as the building increases in height. The fifth storey is setback 1.5m from the side boundary.
- **Eastern side setback**:
  - Minimum 6.0 metres at ground floor level, reducing to 4.9 metres for the first to third floor. The fifth storey is however set back 6.4m from this side boundary.
- **Rear setback**:
  - The proposed building is generally setback a minimum of 5.0 metres form the rear boundary, except for very minor protrusions from the building (eg window screens)

Given the aforementioned comments regarding the existing and future setback character for the locality, the proposed setback of the building, which reinforce the desire for a 'hard edge' to roads, is considered appropriate.

6.7 Heritage

The protection of valuable heritage places and the importance of sensitive integration with these items has been taken into consideration.

The Zone DCS talks of new development which conserves, enhances and complements the existing heritage places and is carefully integrated into the established streetscape.

Further, Council Wide PDC 347 suggests that development should not:

> **"compromise or detrimentally affect the heritage value, character, integrity, setting, siting or function of buildings or sites…identified as Local Heritage Places."**

The heritage value of the State Heritage listed buildings located to the north-east have been taken into consideration during the design stage of the proposed mixed-use apartment building.

In this regard, the proposed building has been located a minimum ground level distance of 6.0 metres from the north-eastern side boundary in order to achieve a satisfactory separation between the State Heritage listed buildings and the proposed building.

Further to the above, the materials and finishes to be used in the construction of the proposed building includes similar materials, tones and colours to those used in the original construction of the adjacent heritage listed dwellings, including the use of red brick and timber.

As previously discussed in Section 6.4 of this report, the form and materiality of the proposal is emphasised at its first two storeys above ground, which assists the proposal with reflecting the two-storey scale of the adjacent State Heritage Places.

It is therefore considered that the proposed building will not compromise or detrimentally affect the heritage value, character, integrity and setting of the two storey State Heritage listed buildings to the north-east of the subject land.

6.8 Crime Prevention and Private Open Space

The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
Landscaping, Fences and Walls	24	73,
Medium and High Rise Development (3 or more Storeys)		266, 282, 283
Residential Development		226, 227, 228,

It is recognised that a high quality, cohesive internal environment will benefit not only to the users of the site of the proposed building, but also the wider locality.

The site's design and layout place a focus on the pedestrian with pleasant, human scale connections throughout the development site, whilst connecting to the wider public realm and the street below.

6.8.1 Crime Prevention

The Development Plan seeks integrated land uses that are designed to provide community surveillance. The proposed 'mix' of uses across the site promotes extended surveillance as it facilitates a range of activities occurring on the land.

In particular, the development features the following attributes to ensure it contributes to a safe, secure and crime resistant environment:

- It encourages pedestrian activity at ground level due to the mixed residential / short-stay / retail / fitness studio uses proposed to take place within the building.
- The presence of similar commercial uses adjacent the subject land creates surveillance opportunities and increases the perception of safety.
- The proposed building has been designed to provide clear sightlines down into public and shared spaces from the street facing balcony areas and at street level from the ground floor tenancies.
- The proposed use of red bricks on the building facade will reduce the likelihood of graffiti that may otherwise be invited by using blank concrete walling.
- Sufficient space and screening exist between the proposed development and buildings on adjoining land discouraging access between balconies, rooftop decks and roofs.
- The proposed landscaping and planting regime maintain clear sight lines, especially to the front of the building at street level.
- The design includes the inclusion of non-intrusive catenary lighting throughout the common areas (car parking, manoeuvring and pedestrian environments) to provide illumination.

It is considered that the treatments and design philosophies set out above will assist in creating a pleasant, connected, safe and inviting public space with strong pedestrian linkages to be established throughout the development site and along both side of Rundle Street.

6.8.2 Private Open Space

In assessing the suitability of the private open space allocated to each apartment, regard has been given to Council Wide (Residential Development) Principles of Development Control 222(c) and 226.

Council Wide PDC 222 states:

> **Private open space (land available for the exclusive use of residents of each dwelling) may comprise one or more of the following forms:**
>
> **(c) a balcony, terrace, or other upper level outdoor areas (other than a roof top outdoor area), with a minimum dimension of 2 metres, provided the area of each is equal to or greater than 8 square metres.**
>
> **(My emphasis underlined)**

Council Wide PDC 226 states:

> **Residential development in the form of apartments within a multi storey building should have associated private open space of sufficient area and shape to be functional and capable of meeting the likely needs of the occupant(s) and should be in accordance with the following requirements:**
>
> **(a) studio (no separate bedroom) or one bedroom, a minimum area of 10 square metres of private open space;**
>
> **(b) two bedrooms, a minimum area of 12 square metres of private open space; or**
>
> **(c) three bedrooms or greater; a minimum area of 15 square metres of private open space.**

Each apartment is provided with private open space in the form of an outdoor terrace or upper level balcony. The following is a summary of the private open space provision:

- **One-bedroom:**
  - In respect to the ten (10) one-bedroom apartments, six (6) will be provided with more than the minimum 10m^2 of private open space prescribed by PDC 226(a). Four apartments are provided between 8.0 to 9.0 square metres of private open space, being just short of the prescribed minimum (Apartments 103, 104, 202 and 203). Nevertheless, all of the balconies provided for the one (1) bedroom apartments comply with Council Wide PDC 222, as they have a minimum size of 8m^2 with 2m minimum dimensions.
- **Two-bedroom:**
  - Of the sixteen (16) two-bedroom apartments, fifteen (15) will be provided between 12m^2 and 20m^2 of private open space prescribed by PDC 226(b). Apartments 205, 206, 207, 304, 305 and 306 are each provided 20m^2 of private open space. Only Apartment 406 will fall short, very marginally, with a balcony of 11m^2. Overall, private open space provision for the two (2) bedroom apartments is considered generous.
- **Three-bedroom:**
  - In respect to the two (2) three-bedroom apartments to be located on the fourth floor, both of these apartments will be provided with 17 square metres of private open space which exceeds the minimum 15 square metres of private open space prescribed by PDC 226(c).

As an average across the development, the private open space provision surpasses the Development Plan minimum.

The proposed site configuration provides 12 apartments with balconies directly facing Rundle Street. These apartments provide activation and surveillance to Rundle Street and also enjoy a substantial northern aspect (for sunlight).

Upper level balconies located along the western side of the proposed building will also take advantage of the sites north-westerly aspect with these areas of open space to be afforded with direct sunlight throughout later periods of the day.

Further, the site has excellent access to the Adelaide parklands, which are about a 7-minute walk away.

Overall, the size, dimension and location of private open space for each apartment is considered satisfactory.

6.9 Interface with street and adjacent land

As discussed throughout this report, sympathetic integration of the development within the locality has been a key consideration. The Development Plan provides controls to ensure that development integrates with the street and surrounding land uses.

6.9.1 Street Interface

The proposal has strong ground floor activation which provides shelter, façade articulation and features the use of multiple materials and textures, sensitive landscaping, and clearly delineated entrances which provide a pleasant environment and a sense of arrival.

All plant and equipment, including waste storage, is desirably located away from public areas.

6.9.2 Adjacent Land Uses

Being largely residential in nature, the development is compatible with surrounding land uses which are both residential and commercial in nature.

Proposed commercial activities in the form of the proposed Fitness Studio and Café are suitably sited away from shared boundaries which will assist in reducing any impacts associated with the operation of these uses, whilst common vehicle parking areas are located underground (per Council Wide PDC 80).

6.9.3 Privacy

The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
Orderly and Sustainable Development		11
Design and Appearance of Land and Buildings		31, 35
Energy Efficiency		71
Residential Development		195, 196, 206, 234, 235, 236

Medium and High-Rise Development (3 or more Storeys)	62	266(c), 272

The Objectives and Principles of Development Control listed above seek to preserve and protect the amenity and privacy of adjacent owners/occupiers; and to address and minimise impacts derived from overlooking and overshadowing.

Principle of Development Control 234 states:

> **In areas where buildings of 3 or more storeys are contemplated, direct overlooking into habitable room windows or onto the useable private open spaces of other dwellings from upper level windows, external balconies, terraces and decks should be minimised through the adoption of one or more of the following methods and may be supplemented by landscaping:**
>
> **(a) building layout;**
>
> **(b) location and design of windows and balconies;**
>
> **(c) screening devices; or**
>
> **(d) adequate separation.**

It is considered that the proposed development accords with the above provision as the proposal incorporates various devices and treatments to restrict overlooking into the private open space and habitable windows of adjacent dwellings.

Such treatments include:

- The use of fixed obscure glazing to 1.7 metres in height above upper floor level;
- The use of rotating privacy blades (30 degree) to upper level windows to restrict views across and down into adjacent properties;
- Louver clad privacy screens to side/rear elevations – aluminium, colour black (Screen 1);
- Louver clad privacy screens (120mm spacing) – aluminium, colour black (Screen 2);
- Perforated Bi-folding Screens to side/rear elevations- colour black (Screen 3);
- Louver clad bar 100 x 20mm (100mm spacing) – aluminium, colour black (Screen 4);
- Timber Battens 50 x 30mm (80mm spacing) as indicated - painted black (Screen 5).

6.9.4 Overshadowing

A series of shadow diagrams have been provided which show the degree of overshadowing that is to occur over adjacent properties to the west, south and east of the subject land. Land to the north is not overshadowed. These plans are accompanied by a corresponding set of the shadow plans which show the extent of shadow that would have been cast by the previously approved five storey 'motel' building.

Principle of Development Control 195 states:

> **Unless otherwise specified in the relevant Zone and/or Policy Area, development should ensure that the north-facing windows of habitable rooms of dwelling(s) on adjacent sites receive at least 3 hours of direct sunlight over a portion of their surface and in the case of the main living area windows, a minimum of 50% of their surface, between 9am and 5pm on the winter solstice (21 June). Development should not increase the overshadowed area in cases where overshadowing from existing structures, fences and non-deciduous vegetation already exceeds this requirement.**

Principle of Development Control 196 states:

> **Unless otherwise specified in the relevant Zone and/or Policy Area, development should ensure that at least half of the ground level private open space of existing dwelling(s) receive direct sunlight for a minimum of two hours between 9.00am and 3.00pm on 21 June. Development should not increase the overshadowed area in cases where overshadowing already exceeds these requirements.**

The overshadowing diagrams confirm that on 21st June the private yard areas of the yet to be constructed dwellings to the west will be cast in shadow during the early hours of the day between 9.00am and 12.00pm.

The plans indicate however that this situation improves after 12.00pm, with the private yard areas of the dwellings to the west unaffected by shadow and in full sunlight to at least 4.00pm on the 21st of June.

In respect to the rear private yards areas of the yet to be constructed three storey dwelling to the south of the subject land, the shadow diagrams confirm that the impact from overshadowing to be less intrusive with the rear yards of these dwellings unaffected by shadow between 9.00am and 12.00 noon with the private yard areas of at least five (5) dwellings to the south-west of the subject land are largely unaffected by overshadowing for the majority of the day on the 21st of June.

When compared with the shadow diagrams prepared in relation to the previously approved 'motel' building, it is considered that the shadow to be cast by the proposed mixed-use apartment building to be similar with no significant increase in the amount of shadow to be cast over the adjacent properties to the west, south and east. Given this, the expected level and degree of overshadowing to occur is considered to be acceptable in this instance.

6.9.5 Waste collection noise

Sonus has performed an assessment on waste collection noise, which is provided in **Appendix G**.

Waste collection will occur in a dedicate area on-site, located immediately south-east of the café tenancy.

Per Council Wide PDC 86:

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

The Environment Protection (Noise) Policy 2007 specifically addresses rubbish collection. Division 3 of the Policy suggests limiting rubbish collection to 9am-7pm (Sundays or public holidays), and 7am-7pm on any other day, except where it can be shown that the maximum noise level from such activity is less than 60 dB(A), or less than that which already occurs as a background level.

Sonus therefore recommend that waste collection only occurs between 9am-7pm on a Sunday or public holiday, and 7am-7pm on any other day, to ensure compliance with the relevant criteria. The applicant would accept a condition worded accordingly.

6.10 Car parking and traffic

6.10.1 Summary of expert traffic and parking advice

CIRQA were engaged to provide advice in respect to traffic and parking aspects of the proposal. Their report is contained in **Appendix D**. In summary, their report states:

- The previously approved use comprised a 42-bedroom tourist accommodation (serviced apartments) facility and a 177 m² retail tenancy to be accessed via a two-way access on Rundle Street.
- The previous proposal was approved on the basis of reduced parking rates in line with the application of the Designated Area provisions in the Development Plan.
- The car parking spaces and ramped access into the basement have been designed to comply with relevant Australian Standards.
- The layout will allow such vehicles [7.3 m long refuse collection vehicle] to be driven into and out of the site in a forward direction, with sufficient 3.3m clearance height.
- The proposal would require 74 spaces according to the base Development Plan rates. Given the proposed provision of 38 spaces, there will be a shortfall.
- On the basis of the adjacent Urban Corridor Zone rates however, the proposed development has a requirement for 29 resident spaces, 7 resident visitor spaces and 6 spaces for the non-residential uses. The proposed provision of 38 parking spaces will therefore allow full accommodation of the (UCZ) resident parking requirement with nine remaining spaces for use by the non-residential tenancies and resident visitors. On this basis, there would be a shortfall of 3 parking spaces, which was considered acceptable by CIRQA given residential and non-residential parking will peak at differing times, and as there was a shortfall associated with the site' previous use, so the overall impact on on-street parking will therefore be negligible (if not improved).
- Bicycle parking supply complies, with 5 surplus parking spaces provided.
- It is therefore forecast that the development would distribute in the order of 30 peak hour trips. Such traffic volumes are low and the same as that identified for the previously approved application. The previous assessment including SIDRA analysis of the access point on Rundle Street (which will service the current proposal)

6.10.2 Access and car parking

In respect of the proposal we make the following additional submissions:

- The subject land is located within a mixed use residential/commercial area that has historically not included extensive formal off-street car parking for commercial land uses.
- Access to the site was previously accommodated via two crossovers on Rundle Street. Additional access was also provided via Little Grenfell Street, however the Little Grenfell Street access has been "divided off" the subject site as part of a previous application. All turning movements are accommodated at each crossover.
- The site has a high level of accessibility by public transport and is well connected to the surrounding active transport networks (walking and cycling). The site's proximity to the CBD and The Parade will encourage a relatively high modal share for both walking and cycling. This will minimise reliance on private motor vehicle use for residents and likely result in a lower traffic generation than forecast.

- The sole vehicle access for the site will be provided via a two-way access on Rundle Street at the north-eastern end of the site's frontage. The associated driveway will provide access to an at-grade loading bay and a basement parking area (with associated ramp).
- The ramped access into the basement will have a one-way width (4.5 m plus 300 mm clearances either site) however will be controlled via a traffic signal system (i.e. lanterns and detectors near the top and bottom of the ramp to advise drivers when to proceed or wait).
- Refuse collection and deliveries/servicing will be accommodated via an on-site loading bay. All movements into and out of the site will be in a forward-in/forward-out direction.
- The subject site is located within a Mixed Use Historic Zone (Policy Area 11.2 - The Parade / Fullarton Road). On the basis of this zoning, the following minimum parking provision rates are relevant to the proposed development:
  - Retail (shop or a group of shops greater than 250 m²) – 5 spaces per 100 m² of gross leasable area. There is no requirement for shops or groups of shops less than 250 m² (as is the subject proposal);
  - Restaurant (including café) – 1 space per 3 seats (no additional requirement for outdoor dining up to 25% of indoor seating);
  - Residential flat building – 1 car parking space per one-bedroom and 2 car parking spaces per two-bedroom or three-bedroom dwelling plus 1 visitor space for every 2 dwellings up to 10 dwellings and 1 space per 4 dwellings thereafter.

    On this basis, the proposal would have a requirement for 46 (resident) spaces plus 9.5 residential visitor spaces.
- We concur with CIRQA **that application of the Urban Corridor Zone rates is appropriate** and in line with the assessment and approval of the previous application associated with the site.
- On the basis of the UCZ parking rate, all resident and staff parking can be accommodated on-site with additional visitor spaces available on-site. There will be a minor shortfall of 3 spaces associated with (short to medium) term visitor parking.
- Furthermore, there was a shortfall in on-site provision associated with the site's previous use and the overall impact of the theoretical shortfall will be minimal.

6.11 Storage

The Development Plan requires covered storage areas for use by residents of medium and high-rise development measuring a minimum of 8 cubic metres.

As shown on the storage schedule on the plans, each apartment tis provided with some 8.3m^2 to 13.65m^2 of storage space. As depicted on the schedule and floor plans, storage is spread throughout laundries, studies, hallways, living areas and within dedicated storage lockers in the basement.

6.12 Waste

The effective management of waste is recognized as an important consideration and noted in PDCs 285 and 286. Salt[3] Waste Consultants has prepared a *Waste Management Plan* for the proposed development which is discussed below and included as **Appendix E.**

Residential apartments

The proposal includes a dedicated waste storage area at ground level. Residents located at ground level will access the bin storage area using an accessway that passes through the lobby.

Residents occupying the apartments on levels 1 to 4 will utilise the dual chute system provided adjacent to the stair well on each floor to dispose of garbage and recyclable waste.

Residents on levels 1 to 4 will utilise the lift to access the residential bin storage to dispose of organic waste, hard waste, difficult waste and e-waste.

Access routes are levelled ensuring minimal risks to the users. Storage area design should prevent and mitigate fire risks and prevent entrapment areas for residents and staff members. Waste management would be overseen by building management.

Café and fitness studio tenancies

The café spaces will be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 280 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

The retail spaces will be furnished with unlined bins for the temporary holding of recyclable waste, to have a minimum cumulative capacity of 20 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners will dispose of waste from these bins directly into an appropriate 1,100L bin provided within the ground level commercial bin storage area, accessed via either the internal or external accessway.

Waste Collection

Residential waste will be collected by a private contractor as follows;

- Two 1,100L garbage bins collected once per week;
- Two 660L commingled recycling bins collected once per week; and
- One 360L organics bin collected twice per week.

Hard-waste, e-waste and difficult waste collections will be arranged by building management as required.

All residential waste bins will be stored on-site in the residential bin storage area provided on the ground level.

Commercial waste bins will be collected by a private contractor ass follows;

- One 1,100L garbage bin collected three times a week;
- One 1,100L commingled recycling bin collected two times a week; and
- Three 360L organics bin collected three time per week.

Hard waste and e-waste will be collected as required by a private contractor. All commercial bins will be stored on-site in the commercial bin storage area provided on the ground level.

Residential and commercial waste collections will occur in synergy to reduce traffic impacts on local roads. Waste collections should occur outside of peak traffic periods to minimise safety and noise impacts to the surrounding residents and the public.

Garbage, recycling and organics waste collections would occur via a 7.26 metre waste collection vehicle which has an operating height of approximately 3.0 metres. This height will allow the waste truck to access and operate within the waste truck bay. E-waste, hard waste and difficult waste collections will be performed by a utility vehicle or *AustRoads* B99 design vehicle equivalent.

Waste collection vehicles will enter the subject site in a forward direction from Rundle Street. The vehicles will perform a reversing manoeuvre to prop safely at the waste truck bay to perform collections. Vehicle operators will ferry waste bins from the respective bin storage areas and return upon emptying. Waste collection vehicles would then exist the waste truck bay in a forward direction, exiting the subject site onto Rundle Street.

Building management will ensure that waste vehicle operators are able to access the bin storage areas. Waste bins and hard waste will not be presented to street kerb at any point.

Salt[3] has advised that the attached *Waste Management Plan* will provide efficient waste management for the proposed development.

6.13 Energy Efficiency

The applicant engaged the services of SUHO to provide an ESD Statement in support of the proposed mixed-used residential development at 88 Rundle Street, Kent Town. Specifically, SUHO has been engaged to provide advice in respect to managing solar exposure and minimizing energy consumption.

The advice provided within the ESD Statement prepared by SUHO is contained in **Appendix F** and expands upon the following commentary.

The following table summarises the provisions which are most relevant under this heading.

Zone / General Section	Objectives	Principles
Energy Efficiency	23	67, 68, 69, 70, 71,72
Medium and High Rise Development (3 or more Storeys)	66	

We make the following comments:

- The preferred contractor will develop a site-specific Environmental Management Plan prior to construction commencement.
- The building incorporates a number of features that will reduce energy consumption and reduce waste. These include good building fabric, glazing, solar PVs, efficient buildings services (HVAC, lighting DHW) and controls, and efficient appliances. Ample bicycle parking is provided, and the site is in walking distance to many local shops, services and facilities.
- The development is positioned to maximize the available sunlight and is further assisted with window configuration and space layout.

- All apartments facing Rundle St will have main living areas facing north. For south facing apartments, natural light to the main living areas is maximised through large high-performance windows. South facing apartments are considered unavoidable to this large urban site.
- Operable windows have been provided to the corridors on each floor, allowing good levels of natural light into these spaces that would otherwise rely on 100% artificial lighting.
- Excessive solar gains will be minimised through external perforated shading devices and deep balconies.
- All spaces will be provided with operable windows to allow for good natural cross ventilation throughout
- High performance double glazing will be provided throughout the development. Actual glazing thermal performance will be confirmed following detailed energy modelling.
- The project will generally include energy-efficient LED lights throughout. This initiative will enable the development to achieve an overall lighting power density of no more than 4W/m².
- Common area lighting, excluding safety lighting, will be provided with daylight/motion sensors where applicable.
- A rainwater tank will be provided in the basement level and will harvest all rainwater from the roof. Rainwater will be used for some toilet flushing and landscape irrigation. The extent of reuse will be determined during Design Development phase following detailed water balance modelling. At this stage the rainwater tank is anticipated to be approximately 20kL in capacity.

6.13.1 On-Site Energy Generation

- The project includes an indicative area of 185m² for the inclusion of solar photovoltaic (PV) panel. This area can accommodate a total system size of 25kWp, which can generate approximately 25MWh per annum based on a 10° inclination.
- The system will be on the roof of the building which will not be impacted by neighbouring overshadowing or vegetation.
- The relatively flat roof will maximise the number of panels to be installed on the roof at 10° inclination with minimal self-shading.
- Based on the proposed PV layout (185m²), there will be minimal impact by the plant screen overshadowing the system. The western portion of the array (approx. 30m²) will only be impacted in the morning, however the rest of the system will be unaffected.

7.0 Conclusion

The proposed mixed-use apartment building provides a range of accommodation options as well as two commercial tenancies (shop/café and fitness studio) which are to be both located at ground level.

An assessment of the proposed development against the relevant provisions of the Norwood Payneham and St Peters Development Plan reveals that the proposal is not significantly at variance with the Zone's intent to provide a range of compatible land uses within this section of Kent Town.

It is considered that the proposal will provide a highly resolved architecturally designed building that marginally exceeds the maximum building height prescribed for buildings located within the Mixed Use Historic (Conservation) Zone. Moreover, it is considered that the proposed development will add, as well as make a positive contribution to, the character of the Kent Town area.

In summary the development:

- Is considered to provide appropriate land uses within the Zone and Policy Area and desirably adds to the mix of one, two- and three-bedroom residential apartments available to the community while providing business opportunities for small café and fitness studio operators.
- Desirably adds investment into the immediate city fringe area with land uses that do not negatively impact upon but rather complement surrounding land uses which are presently both commercial and residential in nature (soon to be more-so residential).
- Appropriately locates residential apartments at densities which will help to activate and enhance the locality.
- Provides for increased residential living to meet varying demands, all of which will have a high level of occupant amenity including private areas of open space and access to light and ventilation.
- Will exceed the height guideline for the zone, but does not exceed heights contemplated by the immediately adjoining Urban Corridor Zone, and demonstrates a high level of design merit that integrates and responds well with its local context/surrounding development.
- Locates parking underground and at-grade which contributes to the high-quality design outcomes and delivers a development which has strong contextual relevance when considering the existing heritage listed buildings located in close proximity to the site of the development.
- Promotes casual surveillance over shared internal spaces and adjoining public spaces due to the highly fenestrated and articulated facades of the building.
- Incorporates design elements that seek to reduce large blank walls which in turn reduces the overall perceived mass of the building as viewed from the street and incorporates high quality materials and colours which complements the existing colour palette within the locality.
- Achieves a high degree of compliance with a number of environmentally sustainable design (ESD) objectives and principles prescribed within the subject Development Plan.
- Is suitably designed and positioned on the subject land to help minimise the negative impacts generally associated with overlooking and overshadowing adjoining properties. In this regard, privacy screening and obscure glazing has been applied to all relevant upper level windows and

external deck areas in order to protect and preserve the privacy and the amenity of the owners and occupiers of adjacent land to the west, east and south.

- Provides for an adequate level of car parking given its relative location to the CBD and features access and car parking areas that comply with relevant Australian Standards.
- Will not generate a large/high volume of traffic that which cannot be handled by the surrounding road network.
- Provides appropriate waste storage capacity and collection methods which do not give rise to impacts upon the surrounding road network.

For the reasons outlined above, we are of the view that the proposal is a desirable form of development that satisfies the majority of the pertinent Development Plan provisions so as to be worthy of the granting of Development Plan Consent.

Appendix A – CT

Government of South Australia
Department of Planning, Transport and Infrastructure

Product	Register Search (CT 6203/414)
Date/Time	23/11/2018 04:11PM
Customer Reference	18ADL-0379
Order ID	20181123009055
Cost	$28.75

REAL PROPERTY ACT, 1886
South Australia

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.

Certificate of Title - Volume 6203 Folio 414

Parent Title(s) CT 5078/828, CT 5401/954

Creating Dealing(s) RTC 12870480

Title Issued 06/02/2018 **Edition** 4 **Edition Issued** 05/07/2018

Estate Type

FEE SIMPLE

Registered Proprietor

HONOR SA PTY. LTD. (ACN: 621 144 125)
OF CARE 64 HALIFAX STREET ADELAIDE SA 5000

Description of Land

ALLOTMENT 33 DEPOSITED PLAN 117407
IN THE AREA NAMED KENT TOWN
HUNDRED OF ADELAIDE

Easements

NIL

Schedule of Dealings

Dealing Number	Description
12924749	MORTGAGE TO CEG DIRECT SECURITIES PTY. LTD. (ACN: 150 878 587)

Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

Appendix B – Survey detail plan

REV	DATE	DESCRIPTION	CALC	FIELD
0	30.04.2019	INITIAL ISSUE	SM	SM

ADDITIONS, AMENDMENTS AND APPROVALS

LEGEND

- 47.517K TOP KERB
- 47.389T 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
- TREE / SHRUB
- Possible REGULATED / SIGNIFICANT TREE by measurement only (trunk greater than 2.0m circumference). Professional advice from council / arborist required.
- EDGE OF VEGETN.
- TOP OF BANK
- ROAD SIGN / HOARD.
- BOTTOM 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 2020 ZONE 54
SCALE: GROUND	(CSF = 1.00017470)

ADOPTED STATION & AUTHORITY			
PSM 6628/1549	RL:	43.364	SDB
PSM 6628/1549	E:	282566.022	SDB
	N:	6133402.644	SDB

SDB denotes SA Government survey data base values

0 1 2 4 6 8 10 m

1:100

ORIGINAL SHEET SIZE B1

Notes:
Property boundaries and easements shown hereon have been compiled from government records and show discrepancies to Certificate of Title dimensions. Boundaries have not been verified by field survey. Construction or design on or near boundaries or easements will require additional survey work.

CONTOUR INTERVAL:	MIN - 0.1m; MAJ - 0.5m	
SURVEY:	SEM	26.04.2019
DRAWN:	AMP	30.04.2019
CHECKED:	FR	30.04.2019

Alexander & Symonds Pty Ltd
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South Australia 5067
PO Box 1000 Kent Town, SA 5071
ABN 93007 753 988

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W www.alexander.com.au
E adelaide@alexander.com.au

+ Property + Land Development +
+ Construction + Mining +
+ Spatial Information Management +

Alexander Symonds Surveying Consultants

DETAIL AND LEVEL SURVEY
82 RUNDLE STREET
KENT TOWN

DRAWING No.	SHEET	REVISION
A037419 DET(0)	1 OF 1	0

Appendix C – Proposal & landscape plans

ABA

RUNDLE STREET APARTMENTS

88 RUNDLE STREET, KENT TOWN

ALEXANDER
BROWN
ARCHITECTS

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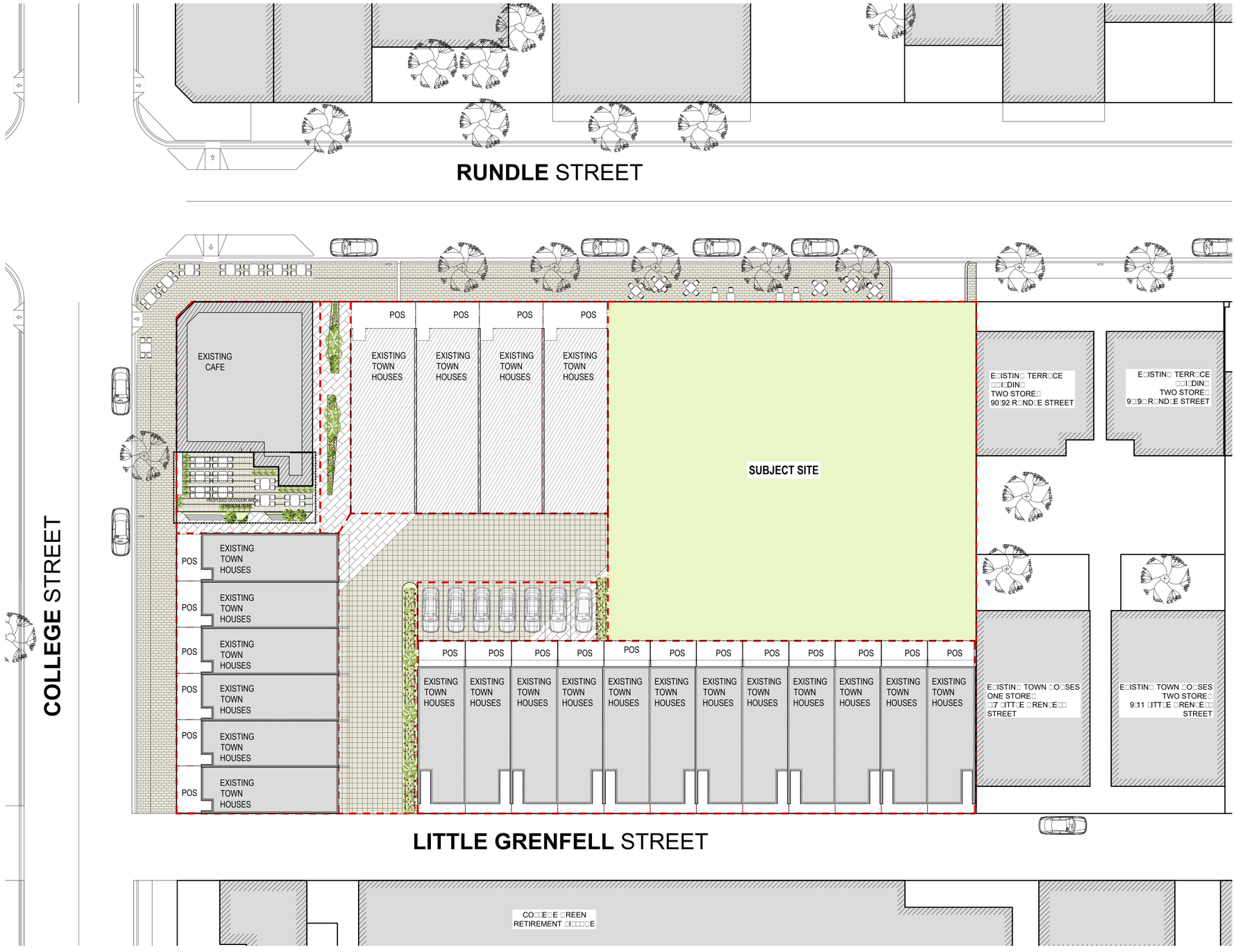
ALEXANDER
BROWN
ARCHITECTS
Suite 6, 609 - 611 Magill Road, Magill, S.A. 5072
p 8364 4447 www.alexanderbrown.com.au

AREA SCHEDULE

TOTAL SITE	1,112.73m²
SITE COVERAGE	56.55%



LOCATION PLAN
1:200 @ A1

N

02	09.04.2019	PLANNING
01	29.03.2019	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL01.02

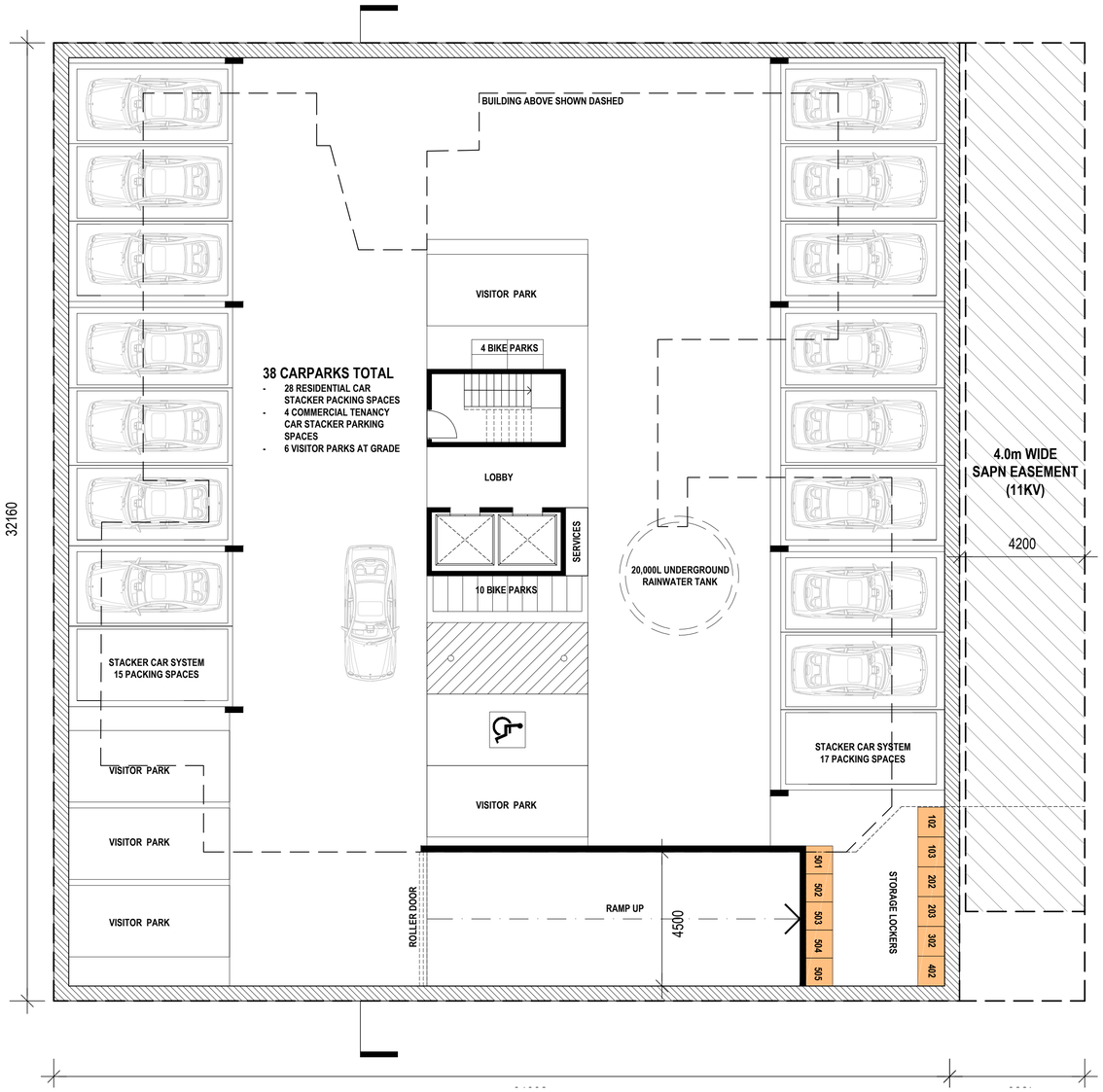
PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
LOCATION / CONTEXT PLAN

DETAILS
Drawn **SP/AD/NF**
Scale **1: 200 @ A1**
Date **APRIL**

ABA



BASEMENT PLAN
1:100 @ A1

N

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STORAGE

APARTMENT 101 + 104
LAUNDRY 2.16m³
STUDY 4.08m³
HALL 4.32m³
TOTAL 10.56m³

APARTMENT 102 + 103 + 302 + 402
LAUNDRY 2.16m³
STUDY 4.08m³
BASEMENT 2.16m³
TOTAL 8.32m³

APARTMENT 201 + 204
LAUNDRY 2.40m³
STUDY 4.03m³
HALL 3.60m³
TOTAL 10.03m³

APARTMENT 202 + 203
LAUNDRY 5.33m³
STUDY 2.09m³
HALL 1.57m³
BASEMENT 2.16m³
TOTAL 11.15m³

APARTMENT 205 + 207 + 304 + 306 + 404 +406
LAUNDRY 6.48m³
STUDY 5.88m³
TOTAL 12.36m³

APARTMENT 206 + 305 + 405
LAUNDRY 4.56m³
HALL 3.12m³
DINING 2.64m³
TOTAL 10.32m³

APARTMENT 301 + 303 + 401 + 403
LAUNDRY 3.09m³
LIVING 4.80m³
STUDY 2.88m³
TOTAL 10.77m³

APARTMENT 501 + 502
LAUNDRY 3.00m³
LIVING 8.64m³
BASEMENT 2.01m³
TOTAL 13.65m³

APARTMENT 503 505
LAUNDRY 3.07m³
LIVING 2.83m³
HALL 2.10m³
BASEMENT 2.01m³
TOTAL 10.01m³

APARTMENT 504
LAUNDRY 3.10m³
LIVING 4.44m³
BASEMENT 2.01m³
TOTAL 9.55m³

AREA SCHEDULE

TOTAL SITE 1,112.73m²
SITE COVERAGE 56.55%

LANDSCAPING 45.2m²
DEEP SOIL ZONE 37.1m²
DEEP SOIL ZONE (%) 3.3%

PARKING
RESIDENTIAL 28 PARKS
COMMERCIAL 04 PARKS
VISITOR 06 PARKS
TOTAL 38 PARKS
BASEMENT 915m²

GROUND FLOOR 629.3m²
TENANCIES 173m²
APARTMENTS 320m²

FIRST FLOOR 743.0m²
APARTMENTS 633m²

SECOND FLOOR 755.0m²
APARTMENTS 613m²

THIRD FLOOR 734.3m²
APARTMENTS 578m²

FOURTH FLOOR 672.7m²
APARTMENTS 574m²

1 BED STUDIO TOTAL 10
2 BED APARTMENT TOTAL 16
3 BED PENTHOUSE TOTAL 2
COMMERCIAL TENANCIES TOTAL 2

06	16.05.2019	PLANNING
05	09.04.2019	PLANNING
04	29.03.2019	PLANNING
03	25.03.2019	PLANNING
02	05.03.2019	PLANNING
01	22.02.2019	PLANNING
01	22.02.2019	PLANNING
00	20.11.2018	PLANNING
B	19.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL02.06

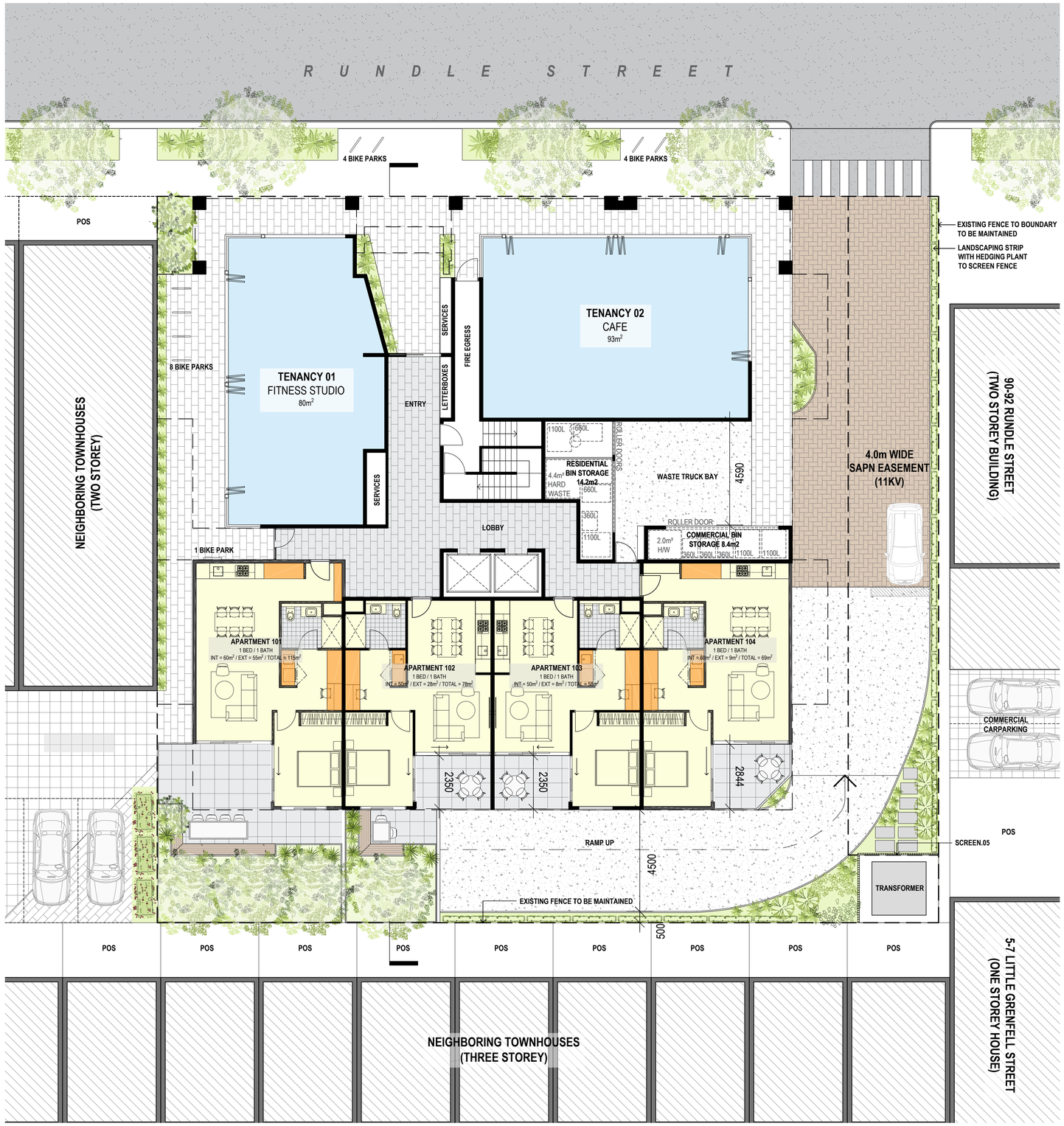
PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
BASEMENT PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA



GROUND FLOOR PLAN
1:100 @ A1

N

STORAGE

APARTMENT 101 + 104
LAUNDRY 2.16m³
STUDY 4.08m³
HALL 4.32m³
TOTAL 10.56m³

APARTMENT 102 + 103 + 302 + 402
LAUNDRY 2.16m³
STUDY 4.08m³
BASEMENT 2.16m³
TOTAL 8.32m³

APARTMENT 201 + 204
LAUNDRY 2.40m³
STUDY 4.03m³
HALL 3.60m³
TOTAL 10.03m³

APARTMENT 202 + 203
LAUNDRY 5.33m³
STUDY 2.09m³
HALL 1.57m³
BASEMENT 2.16m³
TOTAL 11.15m³

APARTMENT 205 + 207 + 304 + 306 + 404 +406
LAUNDRY 6.48m³
STUDY 5.88m³
TOTAL 12.36m³

APARTMENT 206 + 305 + 405
LAUNDRY 4.56m³
HALL 3.12m³
DINING 2.64m³
TOTAL 10.32m³

APARTMENT 301 + 303 + 401 + 403
LAUNDRY 3.09m³
LIVING 4.80m³
STUDY 2.88m³
TOTAL 10.77m³

APARTMENT 501 + 502
LAUNDRY 3.00m³
LIVING 8.64m³
BASEMENT 2.01m³
TOTAL 13.65m³

APARTMENT 503 505
LAUNDRY 3.07m³
LIVING 2.83m³
HALL 2.10m³
BASEMENT 2.01m³
TOTAL 10.01m³

APARTMENT 504
LAUNDRY 3.10m³
LIVING 4.44m³
BASEMENT 2.01m³
TOTAL 9.55m³

AREA SCHEDULE

TOTAL SITE 1,112.73m²
SITE COVERAGE 56.55%

LANDSCAPING 45.2m²
DEEP SOIL ZONE 37.1m²
DEEP SOIL ZONE (%) 3.3%

PARKING
RESIDENTIAL 28 PARKS
COMMERCIAL 04 PARKS
VISITOR 06 PARKS
TOTAL 38 PARKS
BASEMENT 915m²

GROUND FLOOR 629.3m²
TENANCIES 173m²
APARTMENTS 320m²

FIRST FLOOR 743.0m²
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THIRD FLOOR 734.3m²
APARTMENTS 578m²

FOURTH FLOOR 672.7m²
APARTMENTS 574m²

1 BED STUDIO TOTAL 10
2 BED APARTMENT TOTAL 16
3 BED PENTHOUSE TOTAL 2
COMMERCIAL TENANCIES TOTAL 2

FINISHES SCHEDULE

SCREEN 01 LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02 LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03 LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04 LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05 TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK

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06	16.05.2019	PLANNING
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02	05.03.2019	PLANNING
01	22.02.2019	PLANNING
00	20.11.2018	PLANNING
C	19.11.2018	PLANNING
B	14.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL03.06

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
GROUND FLOOR PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA

FIRST FLOOR PLAN
1:100 @ A1

N

STORAGE

APARTMENT 101 + 104		
LAUNDRY	2.16	m^3
STUDY	4.08	m^3
HALL	4.32	m^3
TOTAL	**10.56**	**m^3**
APARTMENT 102 + 103 + 302 + 402		
LAUNDRY	2.16	m^3
STUDY	4.08	m^3
BASEMENT	2.16	m^3
TOTAL	**8.32**	**m^3**
APARTMENT 201 + 204		
LAUNDRY	2.40	m^3
STUDY	4.03	m^3
HALL	3.60	m^3
TOTAL	**10.03**	**m^3**
APARTMENT 202 + 203		
LAUNDRY	**5.33**	**m^3**
STUDY	**2.09**	**m^3**
HALL	**1.57**	**m^3**
BASEMENT	2.16	m^3
TOTAL	**11.15**	**m^3**
APARTMENT 205 + 207 + 304 + 306 + 404 +406		
LAUNDRY	6.48	m^3
STUDY	5.88	m^3
TOTAL	**12.36**	**m^3**
APARTMENT 206 + 305 + 405		
LAUNDRY	4.56	m^3
HALL	3.12	m^3
DINING	2.64	m^3
TOTAL	**10.32**	**m^3**
APARTMENT 301 + 303 + 401 + 403		
LAUNDRY	3.09	m^3
LIVING	4.80	m^3
STUDY	2.88	m^3
TOTAL	**10.77**	**m^3**
APARTMENT 501 + 502		
LAUNDRY	3.00	m^3
LIVING	8.64	m^3
BASEMENT	2.01	m^3
TOTAL	**13.65**	**m^3**
APARTMENT 503 505		
LAUNDRY	3.07	m^3
LIVING	2.83	m^3
HALL	2.10	m^3
BASEMENT	2.01	m^3
TOTAL	**10.01**	**m^3**
APARTMENT 504		
LAUNDRY	3.10	m^3
LIVING	4.44	m^3
BASEMENT	2.01	m^3
TOTAL	**9.55**	**m^3**

AREA SCHEDULE

TOTAL SITE	**1,112.73**	**m^2**
SITE COVERAGE	**56.55%**	
LANDSCAPING	45.2	m^2
DEEP SOIL ZONE	37.1	m^2
DEEP SOIL ZONE (%)	3.3%	
PARKING		
RESIDENTIAL	28 PARKS	
COMMERCIAL	04 PARKS	
VISITOR	06 PARKS	
TOTAL	**38 PARKS**	
BASEMENT	**915**	**m^2**
GROUND FLOOR	**629.3**	**m^2**
TENANCIES	173	m^2
APARTMENTS	320	m^2
FIRST FLOOR	**743.0**	**m^2**
APARTMENTS	633	m^2
SECOND FLOOR	**755.0**	**m^2**
APARTMENTS	613	m^2
THIRD FLOOR	**734.3**	**m^2**
APARTMENTS	578	m^2
FOURTH FLOOR	**672.7**	**m^2**
APARTMENTS	574	m^2

1 BED STUDIO
TOTAL 10

2 BED APARTMENT
TOTAL 16

3 BED PENTHOUSE
TOTAL 2

COMMERCIAL TENANCIES
TOTAL 2

FINISHES SCHEDULE

SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
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SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK

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01	05.12.2018	PLANNING
00	20.11.2018	PLANNING
D	19.11.2018	PLANNING
C	14.11.2018	PLANNING
B	14.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL04.07

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
FIRST FLOOR PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA

SECOND FLOOR PLAN
1:100 @ A1

N

STORAGE

APARTMENT 101 + 104	
LAUNDRY	2.16m³
STUDY	4.08m³
HALL	4.32m³
TOTAL	**10.56m³**
APARTMENT 102 + 103 + 302 + 402	
LAUNDRY	2.16m³
STUDY	4.08m³
BASEMENT	2.16m³
TOTAL	**8.32m³**
APARTMENT 201 + 204	
LAUNDRY	2.40m³
STUDY	4.03m³
HALL	3.60m³
TOTAL	**10.03m³**
APARTMENT 202 + 203	
LAUNDRY	**5.33m³**
STUDY	**2.09m³**
HALL	**1.57m³**
BASEMENT	2.16m³
TOTAL	**11.15m³**
APARTMENT 205 + 207 + 304 + 306 + 404 +406	
LAUNDRY	6.48m³
STUDY	5.88m³
TOTAL	**12.36m³**
APARTMENT 206 + 305 + 405	
LAUNDRY	4.56m³
HALL	3.12m³
DINING	2.64m³
TOTAL	**10.32m³**
APARTMENT 301 + 303 + 401 + 403	
LAUNDRY	3.09m³
LIVING	4.80m³
STUDY	2.88m³
TOTAL	**10.77m³**
APARTMENT 501 + 502	
LAUNDRY	3.00m³
LIVING	8.64m³
BASEMENT	2.01m³
TOTAL	**13.65m³**
APARTMENT 503 505	
LAUNDRY	3.07m³
LIVING	2.83m³
HALL	2.10m³
BASEMENT	2.01m³
TOTAL	**10.01m³**
APARTMENT 504	
LAUNDRY	3.10m³
LIVING	4.44m³
BASEMENT	2.01m³
TOTAL	**9.55m³**

AREA SCHEDULE

TOTAL SITE	**1,112.73m²**
SITE COVERAGE	**56.55%**
LANDSCAPING	45.2m²
DEEP SOIL ZONE	37.1m²
DEEP SOIL ZONE (%)	3.3%
PARKING	
RESIDENTIAL	28 PARKS
COMMERCIAL	04 PARKS
VISITOR	06 PARKS
TOTAL	**38 PARKS**
BASEMENT	**915m²**
GROUND FLOOR	**629.3m²**
TENANCIES	173m²
APARTMENTS	320m²
FIRST FLOOR	**743.0m²**
APARTMENTS	633m²
SECOND FLOOR	**755.0m²**
APARTMENTS	613m²
THIRD FLOOR	**734.3m²**
APARTMENTS	578m²
FOURTH FLOOR	**672.7m²**
APARTMENTS	574m²

1 BED STUDIO
TOTAL 10
2 BED APARTMENT
TOTAL 16
3 BED PENTHOUSE
TOTAL 2
COMMERCIAL TENANCIES
TOTAL 2

FINISHES SCHEDULE

SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK

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08	16.05.2019	PLANNING
07	09.04.2019	PLANNING
06	29.03.2019	PLANNING
05	25.03.2019	PLANNING
04	05.03.2019	PLANNING
03	22.02.2019	PLANNING
02	21.02.2019	PLANNING
01	05.12.2018	PLANNING
00	20.11.2018	PLANNING
D	19.11.2018	PLANNING
C	14.11.2018	PLANNING
B	14.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL05.08

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
SECOND FLOOR PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA

THIRD FLOOR PLAN
1:100 @ A1

N

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STORAGE

APARTMENT 101 + 104	
LAUNDRY	2.16m³
STUDY	4.08m³
HALL	4.32m³
TOTAL	**10.56m³**
APARTMENT 102 + 103 + 302 + 402	
LAUNDRY	2.16m³
STUDY	4.08m³
BASEMENT	2.16m³
TOTAL	**8.32m³**
APARTMENT 201 + 204	
LAUNDRY	2.40m³
STUDY	4.03m³
HALL	3.60m³
TOTAL	**10.03m³**
APARTMENT 202 + 203	
LAUNDRY	**5.33m³**
STUDY	**2.09m³**
HALL	**1.57m³**
BASEMENT	2.16m³
TOTAL	**11.15m³**
APARTMENT 205 + 207 + 304 + 306 + 404 +406	
LAUNDRY	6.48m³
STUDY	5.88m³
TOTAL	**12.36m³**
APARTMENT 206 + 305 + 405	
LAUNDRY	4.56m³
HALL	3.12m³
DINING	2.64m³
TOTAL	**10.32m³**
APARTMENT 301 + 303 + 401 + 403	
LAUNDRY	3.09m³
LIVING	4.80m³
STUDY	2.88m³
TOTAL	**10.77m³**
APARTMENT 501 + 502	
LAUNDRY	3.00m³
LIVING	8.64m³
BASEMENT	2.01m³
TOTAL	**13.65m³**
APARTMENT 503 505	
LAUNDRY	3.07m³
LIVING	2.83m³
HALL	2.10m³
BASEMENT	2.01m³
TOTAL	**10.01m³**
APARTMENT 504	
LAUNDRY	3.10m³
LIVING	4.44m³
BASEMENT	2.01m³
TOTAL	**9.55m³**

AREA SCHEDULE

TOTAL SITE	**1,112.73m²**
SITE COVERAGE	**56.55%**
LANDSCAPING	45.2m²
DEEP SOIL ZONE	37.1m²
DEEP SOIL ZONE (%)	3.3%
PARKING	
RESIDENTIAL	28 PARKS
COMMERCIAL	04 PARKS
VISITOR	06 PARKS
TOTAL	**38 PARKS**
BASEMENT	**915m²**
GROUND FLOOR	**629.3m²**
TENANCIES	173m²
APARTMENTS	320m²
FIRST FLOOR	**743.0m²**
APARTMENTS	633m²
SECOND FLOOR	**755.0m²**
APARTMENTS	613m²
THIRD FLOOR	**734.3m²**
APARTMENTS	578m²
FOURTH FLOOR	**672.7m²**
APARTMENTS	574m²

1 BED STUDIO
TOTAL 10
2 BED APARTMENT
TOTAL 16
3 BED PENTHOUSE
TOTAL 2
COMMERCIAL TENANCIES
TOTAL 2

FINISHES SCHEDULE

SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK

08	16.05.2019	PLANNING
07	09.04.2019	PLANNING
06	29.03.2019	PLANNING
05	25.03.2019	PLANNING
04	05.03.2019	PLANNING
03	22.02.2019	PLANNING
02	21.02.2019	PLANNING
01	05.12.2018	PLANNING
00	20.11.2018	PLANNING
C	19.11.2018	PLANNING
B	14.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL06.08

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
THIRD FLOOR PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA

FOURTH FLOOR PLAN
1:100 @ A1

N

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STORAGE

APARTMENT 101 + 104
LAUNDRY 2.16m³
STUDY 4.08m³
HALL 4.32m³
TOTAL 10.56m³

APARTMENT 102 + 103 + 302 + 402
LAUNDRY 2.16m³
STUDY 4.08m³
BASEMENT 2.16m³
TOTAL 8.32m³

APARTMENT 201 + 204
LAUNDRY 2.40m³
STUDY 4.03m³
HALL 3.60m³
TOTAL 10.03m³

APARTMENT 202 + 203
LAUNDRY 5.33m³
STUDY 2.09m³
HALL 1.57m³
BASEMENT 2.16m³
TOTAL 11.15m³

APARTMENT 205 + 207 + 304 + 306 + 404 +406
LAUNDRY 6.48m³
STUDY 5.88m³
TOTAL 12.36m³

APARTMENT 206 + 305 + 405
LAUNDRY 4.56m³
HALL 3.12m³
DINING 2.64m³
TOTAL 10.32m³

APARTMENT 301 + 303 + 401 + 403
LAUNDRY 3.09m³
LIVING 4.80m³
STUDY 2.88m³
TOTAL 10.77m³

APARTMENT 501 + 502
LAUNDRY 3.00m³
LIVING 8.64m³
BASEMENT 2.01m³
TOTAL 13.65m³

APARTMENT 503 505
LAUNDRY 3.07m³
LIVING 2.83m³
HALL 2.10m³
BASEMENT 2.01m³
TOTAL 10.01m³

APARTMENT 504
LAUNDRY 3.10m³
LIVING 4.44m³
BASEMENT 2.01m³
TOTAL 9.55m³

AREA SCHEDULE

TOTAL SITE 1,112.73m²
SITE COVERAGE 56.55%

LANDSCAPING 45.2m²
DEEP SOIL ZONE 37.1m²
DEEP SOIL ZONE (%) 3.3%

PARKING
RESIDENTIAL 28 PARKS
COMMERCIAL 04 PARKS
VISITOR 06 PARKS
TOTAL 38 PARKS
BASEMENT 915m²

GROUND FLOOR 629.3m²
TENANCIES 173m²
APARTMENTS 320m²

FIRST FLOOR 743.0m²
APARTMENTS 633m²

SECOND FLOOR 755.0m²
APARTMENTS 613m³

THIRD FLOOR 734.3m²
APARTMENTS 578m³

FOURTH FLOOR 672.7m²
APARTMENTS 574m³

1 BED STUDIO
TOTAL 10
2 BED APARTMENT
TOTAL 16
3 BED PENTHOUSE
TOTAL 2
COMMERCIAL TENANCIES
TOTAL 2

FINISHES SCHEDULE

SCREEN 01 LOUVER CLAD
ALUMINIUM LOUVER DELTA SERIES
COLOR : BLACK

SCREEN 02 LOUVER CLAD, ALUMINIUM LOUVER
150X20 BAROSSA @120mm SPACING
COLOR : BLACK

SCREEN 03 LOCKER GROUP PERFORATED
BIFOLDING SCREENS
SCREEN : MOROCCO, BLACK
FRAME : BLACK

SCREEN 04 LOUVER CLAD, ALUMINIUM LOUVER
BAR - 100x20mm BAROSSA SERIES
@100mm SPACING
COLOR : BLACK

SCREEN 05 TIMBER BATTENS
50 x 30mm @80mm SPACING
PAINTED : BLACK

06	16.05.2019	PLANNING
05	09.04.2019	PLANNING
04	29.03.2019	PLANNING
03	25.03.2019	PLANNING
02	05.03.2019	PLANNING
01	22.02.2019	PLANNING
00	20.11.2018	PLANNING
C	19.11.2018	PLANNING
B	14.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL07.06

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
FOURTH FLOOR PLAN

DETAILS
Drawn **NF/BM/AB**
Scale **1: 100 @ A1**
Date **MAY**

ABA

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Suite 6, 609 - 611 Magill Road, Magill, S.A. 5072
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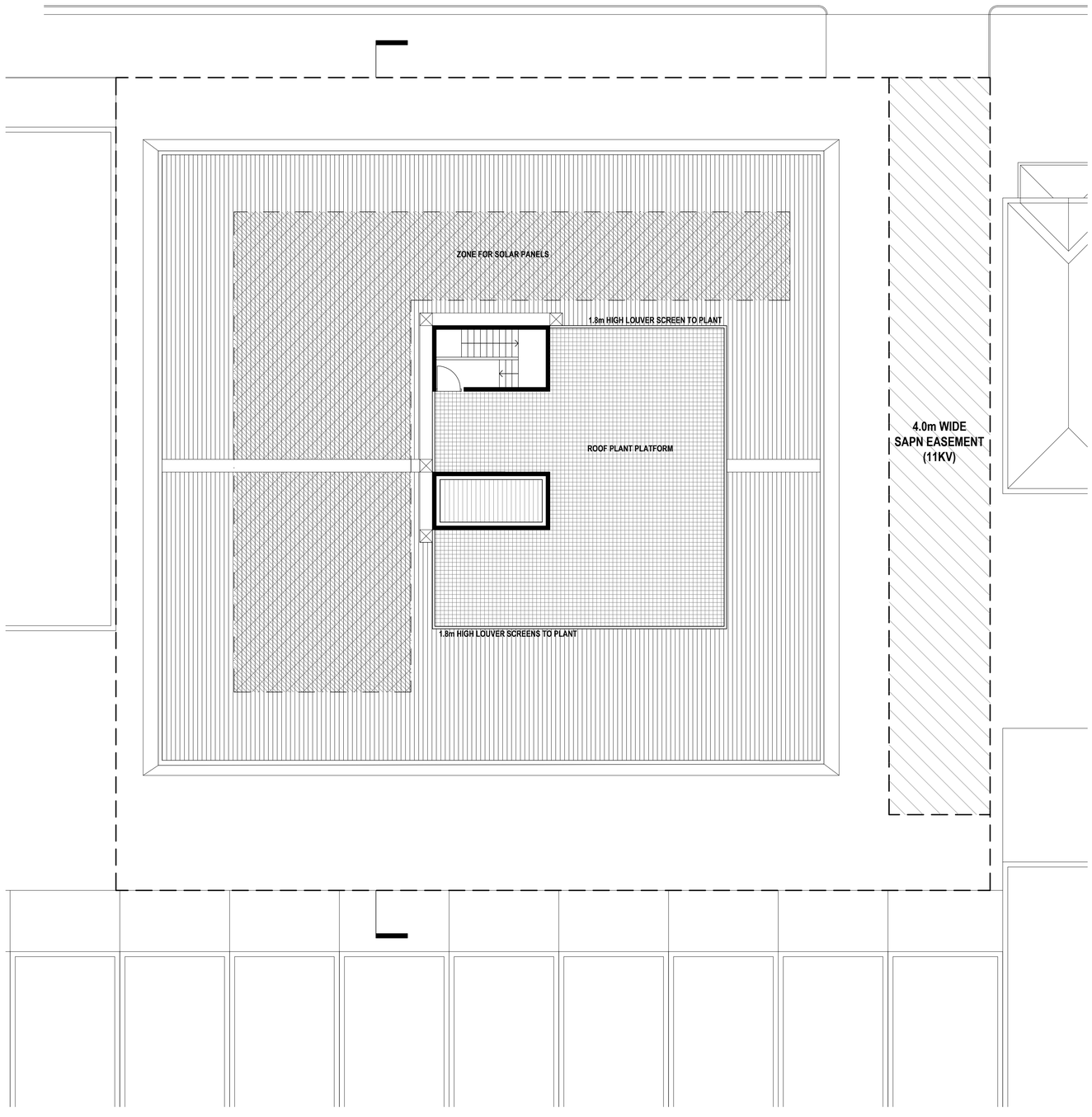
R U N D L E S T R E E T



ROOFTOP FLOOR PLAN
1:100 @ A1

N

AREA SCHEDULE

TOTAL SITE	**1,112.73m²**
SITE COVERAGE	**56.55%**
LANDSCAPING	45.2m²
DEEP SOIL ZONE	37.1m²
DEEP SOIL ZONE (%)	3.3%
PARKING	
RESIDENTIAL	28 PARKS
COMMERCIAL	04 PARKS
VISITOR	06 PARKS
TOTAL	**38 PARKS**
BASEMENT	**915m²**
GROUND FLOOR	**629.3m²**
TENANCIES	173m²
APARTMENTS	320m²
FIRST FLOOR	**743.0m²**
APARTMENTS	633m²
SECOND FLOOR	**755.0m²**
APARTMENTS	613m³
THIRD FLOOR	**734.3m²**
APARTMENTS	578m³
FOURTH FLOOR	**672.7m²**
APARTMENTS	574m³

1 BED STUDIO
TOTAL 10
2 BED APARTMENT
TOTAL 16
3 BED PENTHOUSE
TOTAL 2
COMMERCIAL TENANCIES
TOTAL 2

04	09.04.2018	PLANNING
03	29.03.2018	PLANNING
02	25.03.2018	PLANNING
01	05.03.2018	PLANNING
00	20.11.2018	PLANNING

PLANNING

18-016.PL08.04

PROJECT
RUNDLE STREET APARTMENTS

88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
ROOFTOP PLAN

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1: 100 @ A1**
Date **APRIL**

ABA

NORTH ELEVATION
1:100 @ A1

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ARCHITECTS

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FINISHES SCHEDULE

WF.01	**WALL FINISH 01** PGH BALMAIN COLOR : RECLAIMED RED
WF.02	**WALL FINISH 02** JAMES HARDIE SCYON STRIA CLADDING PAINTED : DULUX DOMINO
WF.03	**WALL FINISH 03** PRECAST CONCRETE PANELS COLOR : BRIGHTON LITE
WF.04	**WALL FINISH 04** JAMES HARDIE SCYON AXON CLADDING PAINTED : DOMINO
WF.05	**WALL FINISH 05** CONCRETE
WF.06	**WALL FINISH 06** PRECAST PANEL WITH TIMBER GRAIN EXTERNAL TEXTURE PAINTED : DOMINO
BAL.01	**BALUSTRADE 01** ALUMINIUM FRAMED GLASS BALUSTRADE FRAME COLOR : BLACK
BAL.02	**BALUSTRADE 02** FRAMELESS GLASS BALUSTRADE WITH BLACK HANDLE
SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK
FASCIA	REVOLUTION ROOFING
01 / 02	METAL FLASHING COLOR : BLACK
FENCE 01	TIMBER PAILING FENCE SPECIES : PINE STAINED BLACK

GENERAL LEGEND

GLAZING SUITE
COMMERCIAL ALUMINIUM FRAMED GLASS
FRAME COLOR : BLACK

THA	TOP HUNG AWNING
FG	FIXED GLAZING
GBFD	GLAZED BIFOLDING DOOR
GHD	GLASS HINGED DOOR
GSD	GLASS SLIDING DOOR
AGSH	AUTOMATIC GLASS SLIDING DOOR
OB	OBSCURE GLAZING

02	09.04.2019	PLANNING
01	29.03.2019	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL09.02

PROJECT
RUNDLE STREET APARTMENTS

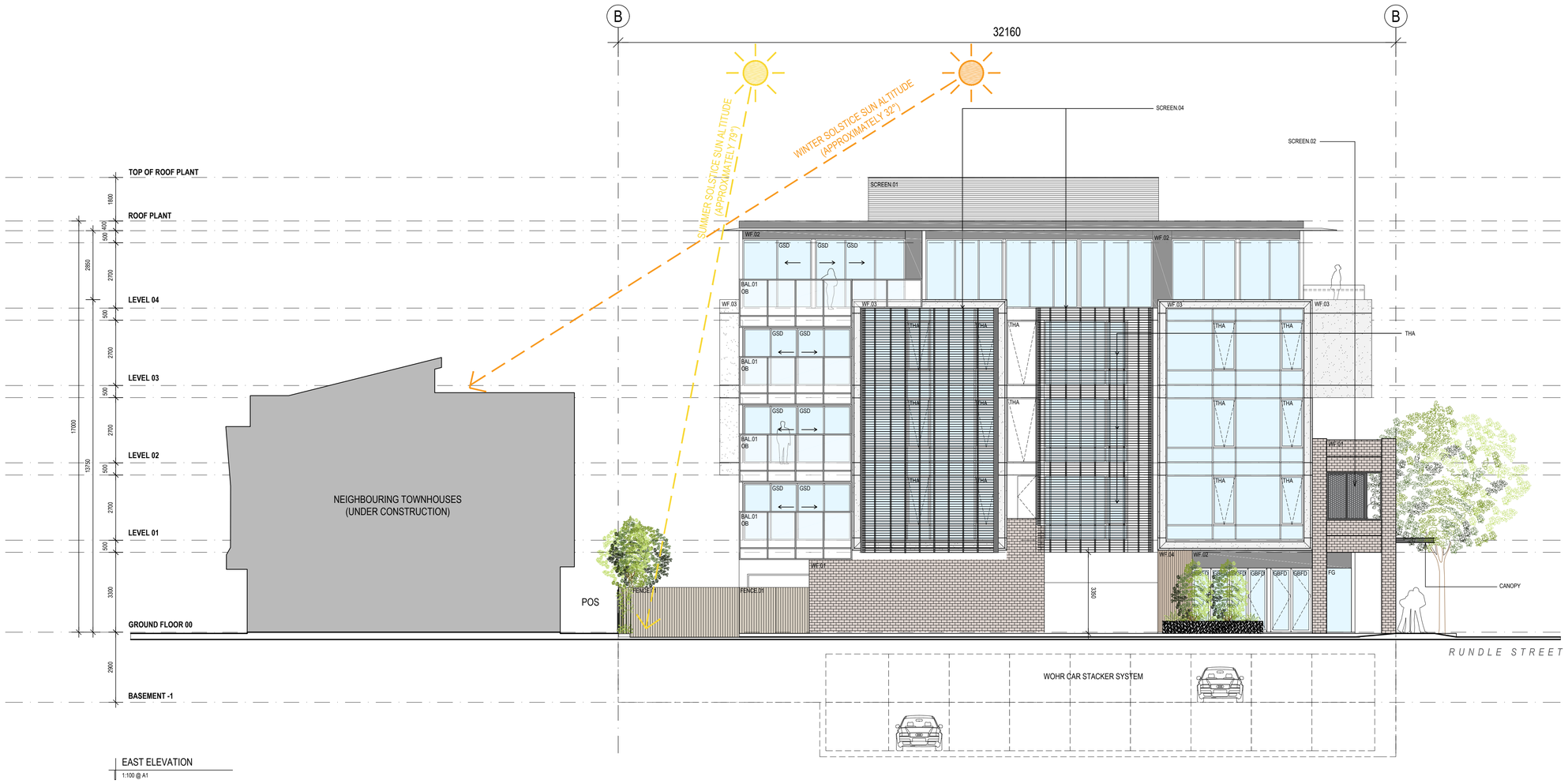
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
NORTH ELEVATION

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1: 100 @ A1**
Date **APRIL**

ABA



EAST ELEVATION
1:100 @ A1

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FINISHES SCHEDULE

WF.01	**WALL FINISH 01** PGH BALMAIN COLOR : RECLAIMED RED
WF.02	**WALL FINISH 02** JAMES HARDIE SCYON STRIA CLADDING PAINTED : DULUX DOMINO
WF.03	**WALL FINISH 03** PRECAST CONCRETE PANELS COLOR : BRIGHTON LITE
WF.04	**WALL FINISH 04** JAMES HARDIE SCYON AXON CLADDING PAINTED : DOMINO
WF.05	**WALL FINISH 05** CONCRETE
WF.06	**WALL FINISH 06** PRECAST PANEL WITH TIMBER GRAIN EXTERNAL TEXTURE PAINTED : DOMINO
BAL.01	**BALUSTRADE 01** ALUMINIUM FRAMED GLASS BALUSTRADE FRAME COLOR : BLACK
BAL.02	**BALUSTRADE 02** FRAMELESS GLASS BALUSTRADE WITH BLACK HANDLE
SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK
FASCIA 01 / 02	REVOLUTION ROOFING METAL FLASHING COLOR : BLACK
FENCE 01	TIMBER PAILING FENCE SPECIES : PINE STAINED BLACK

GENERAL LEGEND

GLAZING SUITE
COMMERCIAL ALUMINIUM FRAMED GLASS
FRAME COLOR : BLACK

THA	TOP HUNG AWNING
FG	FIXED GLAZING
GBFD	GLAZED BIFOLDING DOOR
GHD	GLASS HINGED DOOR
GSD	GLASS SLIDING DOOR
AGSH	AUTOMATIC GLASS SLIDING DOOR
OB	OBSCURE GLAZING

02	09.04.2019	PLANNING
01	29.03.2019	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL10.02

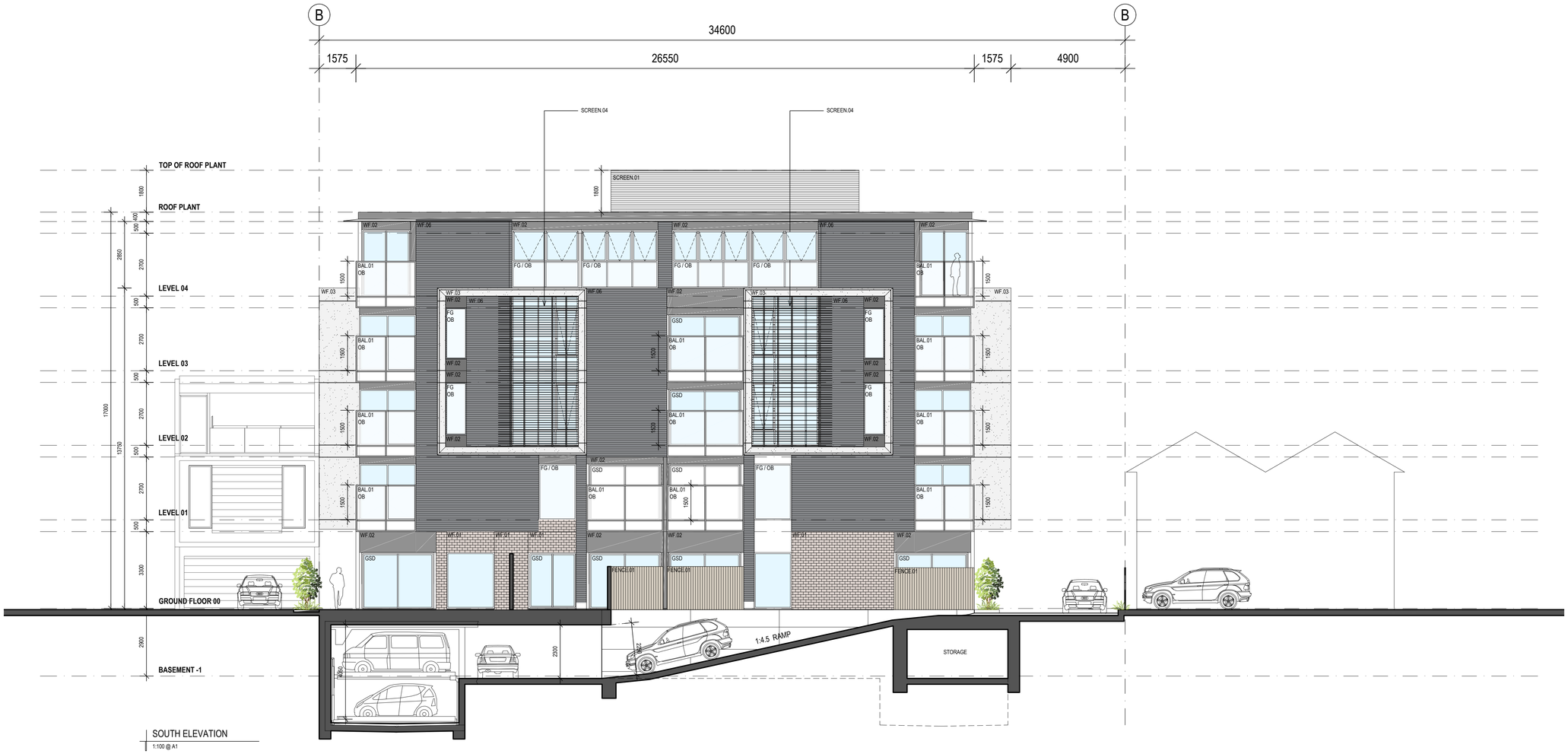
PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
EAST ELEVATION

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1: 100 @ A1**
Date **APRIL**

ABA



SOUTH ELEVATION
1:100 @ A1

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FINISHES SCHEDULE

WF.01	**WALL FINISH 01** PGH BALMAIN COLOR : RECLAIMED RED
WF.02	**WALL FINISH 02** JAMES HARDIE SCYON STRIA CLADDING PAINTED : DULUX DOMINO
WF.03	**WALL FINISH 03** PRECAST CONCRETE PANELS COLOR : BRIGHTON LITE
WF.04	**WALL FINISH 04** JAMES HARDIE SCYON AXON CLADDING PAINTED : DOMINO
WF.05	**WALL FINISH 05** CONCRETE
WF.06	**WALL FINISH 06** PRECAST PANEL WITH TIMBER GRAIN EXTERNAL TEXTURE PAINTED : DOMINO
BAL.01	**BALUSTRADE 01** ALUMINIUM FRAMED GLASS BALUSTRADE FRAME COLOR : BLACK
BAL.02	**BALUSTRADE 02** FRAMELESS GLASS BALUSTRADE WITH BLACK HANDLE
SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK
FASCIA	REVOLUTION ROOFING
01 / 02	METAL FLASHING COLOR : BLACK
FENCE 01	TIMBER PAILING FENCE SPECIES : PINE STAINED BLACK

GENERAL LEGEND

GLAZING SUITE
COMMERCIAL ALUMINIUM FRAMED GLASS
FRAME COLOR : BLACK

THA	TOP HUNG AWNING
FG	FIXED GLAZING
GBFD	GLAZED BIFOLDING DOOR
GHD	GLASS HINGED DOOR
GSD	GLASS SLIDING DOOR
AGSH	AUTOMATIC GLASS SLIDING DOOR
OB	OBSCURE GLAZING

02	09.04.2019	PLANNING
01	29.03.2019	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL11.02

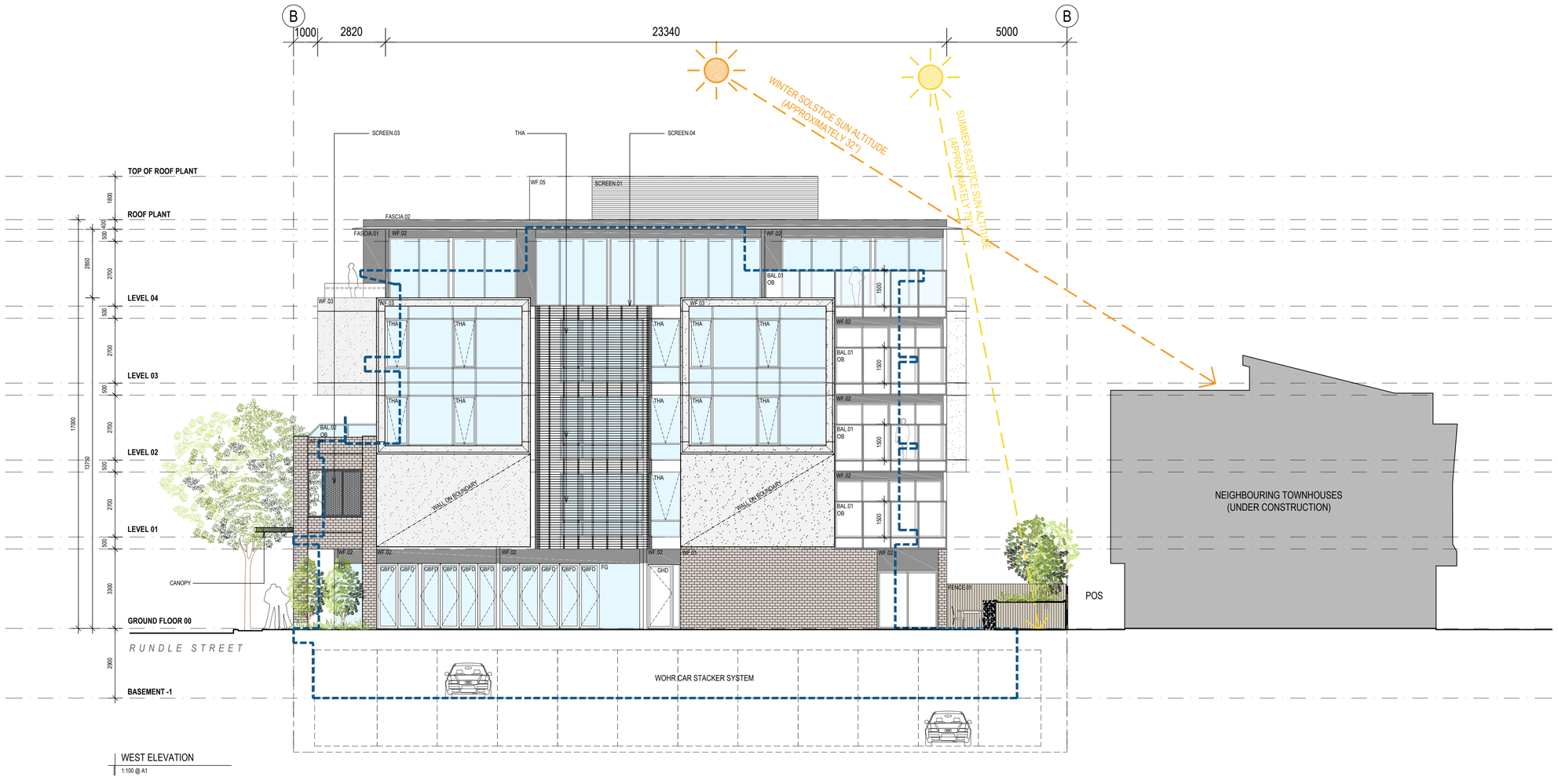
PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
SOUTH ELEVATION

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1: 100 @ A1**
Date **APRIL**

ABA



WEST ELEVATION
1:100 @ A1

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FINISHES SCHEDULE

WF.01	**WALL FINISH 01** PGH BALMAIN COLOR : RECLAIMED RED
WF.02	**WALL FINISH 02** JAMES HARDIE SCYON STRIA CLADDING PAINTED : DULUX DOMINO
WF.03	**WALL FINISH 03** PRECAST CONCRETE PANELS COLOR : BRIGHTON LITE
WF.04	**WALL FINISH 04** JAMES HARDIE SCYON AXON CLADDING PAINTED : DOMINO
WF.05	**WALL FINISH 05** CONCRETE
WF.06	**WALL FINISH 06** PRECAST PANEL WITH TIMBER GRAIN EXTERNAL TEXTURE PAINTED : DOMINO
BAL.01	**BALUSTRADE 01** ALUMINIUM FRAMED GLASS BALUSTRADE FRAME COLOR : BLACK
BAL.02	**BALUSTRADE 02** FRAMELESS GLASS BALUSTRADE WITH BLACK HANDLE
SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
SCREEN 03	LOCKER GROUP PERFORATED BIFOLDING SCREENS SCREEN : MOROCCO, BLACK FRAME : BLACK
SCREEN 04	LOUVER CLAD, ALUMINIUM LOUVER BAR - 100x20mm BAROSSA SERIES @100mm SPACING COLOR : BLACK
SCREEN 05	TIMBER BATTENS 50 x 30mm @80mm SPACING PAINTED : BLACK
FASCIA 01 / 02	REVOLUTION ROOFING METAL FLASHING COLOR : BLACK
FENCE 01	TIMBER PAILING FENCE SPECIES : PINE STAINED BLACK

GENERAL LEGEND

GLAZING SUITE
COMMERCIAL ALUMINIUM FRAMED GLASS
FRAME COLOR : BLACK

THA	TOP HUNG AWNING
FG	FIXED GLAZING
GBFD	GLAZED BIFOLDING DOOR
GHD	GLASS HINGED DOOR
GSD	GLASS SLIDING DOOR
AGSH	AUTOMATIC GLASS SLIDING DOOR
OB	OBSCURE GLAZING

02	09.04.2019	PLANNING
01	29.03.2019	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL12.02

PROJECT
RUNDLE STREET APARTMENTS

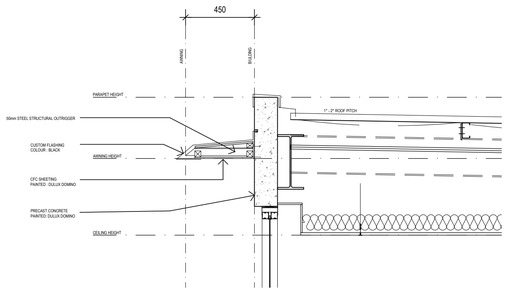
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
WEST ELEVATION

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1: 100 @ A1**
Date **APRIL**

ABA



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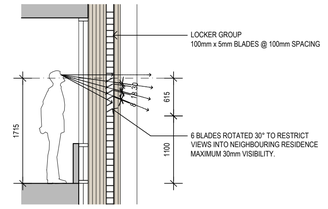

SECTION DETAIL 02
1:20 @ A1

DESIGN SECTION
1:100 @ A1

ALEXANDER BROWN ARCHITECTS
Suite 6, 609 - 611 Magill Road, Magill, S.A. 5072
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FINISHES SCHEDULE

WF.01	**WALL FINISH 01** PGH BALMAIN COLOR : RECLAIMED RED
WF.02	**WALL FINISH 02** JAMES HARDIE SCYON STRIA CLADDING PAINTED : DULUX DOMINO
WF.03	**WALL FINISH 03** PRECAST CONCRETE PANELS COLOR : BRIGHTON LITE
WF.04	**WALL FINISH 04** JAMES HARDIE SCYON AXON CLADDING PAINTED : DOMINO
WF.05	**WALL FINISH 05** CONCRETE
WF.06	**WALL FINISH 06** PRECAST PANEL WITH TIMBER GRAIN EXTERNAL TEXTURE PAINTED : DOMINO
BAL.01	**BALUSTRADE 01** ALUMINIUM FRAMED GLASS BALUSTRADE FRAME COLOR : BLACK
BAL.02	**BALUSTRADE 02** FRAMELESS GLASS BALUSTRADE WITH BLACK HANDLE
SCREEN 01	LOUVER CLAD ALUMINIUM LOUVER DELTA SERIES COLOR : BLACK
SCREEN 02	LOUVER CLAD, ALUMINIUM LOUVER 150X20 BAROSSA @120mm SPACING COLOR : BLACK
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FASCIA 01 / 02	REVOLUTION ROOFING METAL FLASHING COLOR : BLACK
FENCE 01	TIMBER PAILING FENCE SPECIES : PINE STAINED BLACK

GENERAL LEGEND

GLAZING SUITE
COMMERCIAL ALUMINIUM FRAMED GLASS
FRAME COLOR : BLACK

THA	TOP HUNG AWNING
FG	FIXED GLAZING
GBFD	GLAZED BIFOLDING DOOR
GHD	GLASS HINGED DOOR
GSD	GLASS SLIDING DOOR
AGSH	AUTOMATIC GLASS SLIDING DOOR
OB	OBSCURE GLAZING

02	09.04.2018	PLANNING
01	05.03.2018	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL13.02

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
DESIGN SECTION

DETAILS
Drawn **SP/AD/NF/AR**
Scale **REFER TO DRAWINGS**
Date **APRIL**

ABA

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RUNDLE STREET PERSPECTIVE 1
N.T.S

RUNDLE STREET PERSPECTIVE 2
N.T.S

RUNDLE STREET PERSPECTIVE 3
N.T.S

RUNDLE STREET PERSPECTIVE 4
N.T.S

02	28.03.2018	PLANNING
01	07.02.2018	PLANNING
00	20.11.2018	PLANNING
A	13.11.2018	PLANNING

PLANNING

18-016.PL14.02

PROJECT
RUNDLE STREET APARTMENTS

88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
3D PERSPECTIVES

DETAILS
Drawn **SP/AD/NF/AR**
Scale **@ A1**
Date **MARCH2019**

ABA

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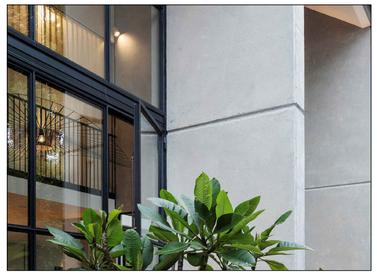


PRECAST CONCRETE PANEL
COLOR : BRIGHTON LITE

TIMBER LOOK
SOFFIT LINING

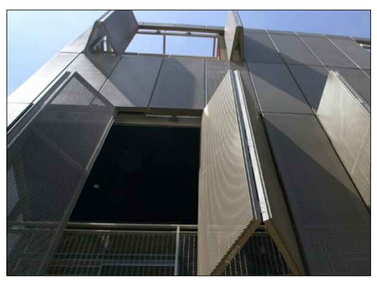
HORIZONTAL LOUVERS
LOUVERCLAD

JAMES HARDIE
SCYON AXON CLADDING
PAINTED : DULUX DOMINO

FOLDED METAL EAVES
COLOR : BLACK

BRICK PLINTH
PGH SANDSTOCKS BALMAIN

BIFOLDING SCREENS WITH PERFORATED PANELS
LOCKER GROUP : MOROCCO BLACK



WESTERN RED CEDDAR
FEATURING CLADDING

METAL CANOPY TO ENTRY
COLOR : BLACK

CLIMBING SPECIES

00 10.04.2019 PLANNING

PLANNING

18-016.PL15.00

PROJECT
RUNDLE STREET APARTMENTS
88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
MATERIAL SELECTIONS

DETAILS
Drawn **SP/AD/NF/AR**
Scale **N.T.S**
Date **APRIL**

ABA

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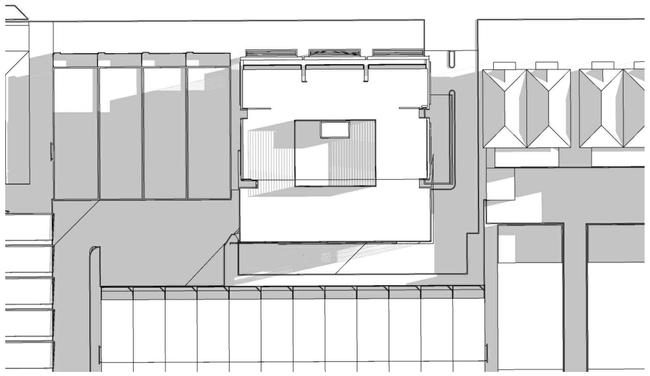
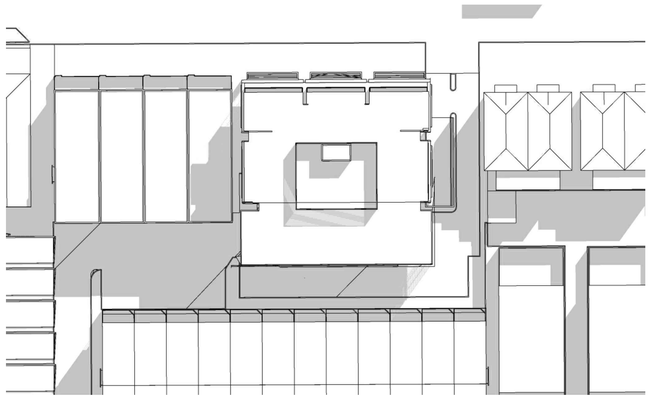
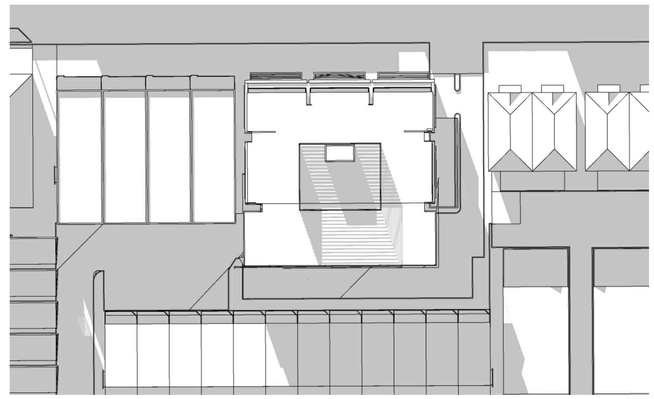
SHADOW DIAGRAMS
WINTER SOLSTICE - JUNE 21st



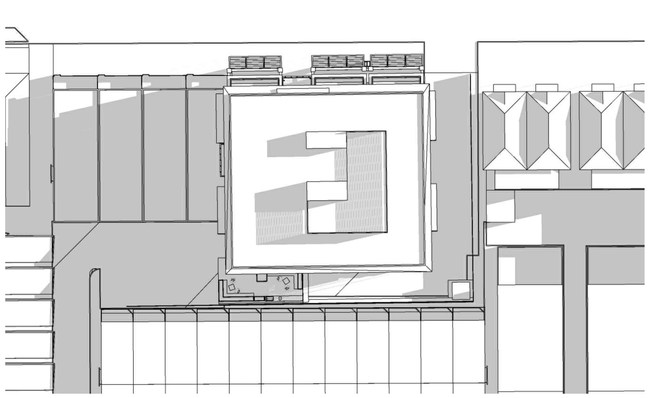
APPROVED HOTEL
9AM



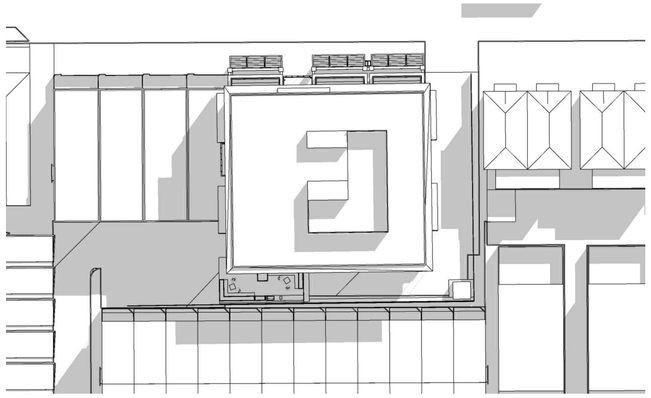
APPROVED HOTEL
12PM



APPROVED HOTEL
4PM



PROPOSED MIXED USE APARTMENT BUILDING
9AM



PROPOSED MIXED USE APARTMENT BUILDING
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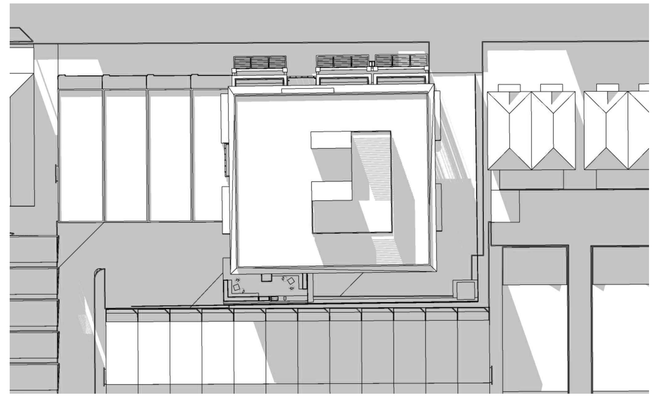


PROPOSED MIXED USE APARTMENT BUILDING
4PM

00 10.04.2019 PLANNING

PLANNING

18-016.PL16.00

PROJECT
RUNDLE STREET APARTMENTS

88 Rundle Street , KENT TOWN, SA 5067

CLIENT
VL DEVELOPMENTS

DRAWING TITLE
SHADOW DIAGRAMS

DETAILS
Drawn **SP/AD/NF/AR**
Scale **1:100 @ A1**
Date **APRIL**

ABA

RONSTAN TENSILE WEBNET MESH TRELLIS ON FACADE OF TENANCY 1

CLIMBING PLANT TRAINED ON TRELLIS SUITED TO THE NORTHERN ASPECT
- Trachelospermum jasminoides

FEATURE PLANTING TO THE ENTRY
- Cycas revoluta

SUGGESTED VERGE PLANTING
- Lomandra 'Tanika'
- Westringia 'Smokey'

DEEP SOIL ZONE FOR MEDIUM TREE PLANTING
- Koelreuteria paniculata

UNDERPLANTING
- Anigozanthos 'Amber velvet'
- Rhagodia spinescens

RAISED PLANTER (500MM HEIGHT) WITH INTEGRATED SEATING

VISITOR BIKE PARKING

PLANTERS WITH TALL SHRUBS
- Murraya paniculata

GRASSES & GROUND COVER
- Liriope 'Evergreen giant'
- Tradescantia pallida

300-400MM WIDTH RAISED GARDEN BED WITH RONSTAN WIRE TRELLIS FIXED TO ADJOINING TOWNHOUSE WALL. LANDSCAPING PROPOSED TO SOFTEN APPEARANCE OF ADJACENT HARDSCAPES

CLIMBING PLANT
- Trachelospermum jasminoides

GROUND COVER
- Tradescantia pallida

COURTYARD FOR APT 101 & APT 102 WITH RAISED GARDEN PLANTERS AND INTEGRATED FURNITURE

PLANTING INCLUDES SHADE TREES
- Koelreuteria paniculata

SHRUBS & GROUNDCOVERS
- Rhaphiolepis 'Cosmic Pink'
- Tradescantia pallida
- Aspidistra elatior

NOTE:
RAISED PLANTERS TO BE MIN 1000MM HEIGHT FOR DEEP SOIL ZONE IN AREAS ABOVE UNDERCROFT TO SUPPORT MEDIUM SIZE TREES

RAISED GARDEN BED PLANTERS WITH STRAPPY LEAF PLANTS SUGGESTED SPECIES
- Dianella brevicaulis
- Anigozanthos 'Amber velvet'

INDICATION OF FIRST FLOOR OVERHANG

RAISED GARDEN BED (450MM) WITH SMALL TREES TO FEATURE ALONG DRIVEWAY WITHOUT INTERFERING WITH THE FIRST FLOOR OVERHANG
- Magnolia Grandiflora 'Little Gem'

TALL SHRUBS TO SOFTEN ADJACENT BOUNDARY
- Viburnum odoratissimum

FEATURE PAVED BANDING TO BREAK UP DRIVEWAY SURFACE

DEEP SOIL ZONE WITH MEDIUM SIZE TREES
- Ginkgo biloba

UNDERPLANTING CONTINUES ALONG SOUTHERN BOUNDARY
- Clivia miniata
- Trachelospermum asiaticum
- limonium perezii

TRANSFORMER , VEHICLE ACCESS MAY BE REQUIRED

NOTE:
PLANTING SCHEDULE CONTAINS ESTIMATED 75% OF NATIVE OR DROUGHT TOLERANT SPECIES

TALL SHRUBS TO SOFTEN ADJACENT BOUNDARY
- Viburnum odoratissimum

GROUND LEVEL LANDSCAPE CONCEPT

SCALE 1:100 AT A1

SCALE 1:100 0 1 2 5 10

LCS LANDSCAPES

PROJECT: RUNDLE STREET APARTMENTS - 88 RUNDLE STREET, KENT TOWN
CLIENT: URPS

DATE: 10/04/2019
DRAWING NUMBER: LS.016.19 A

SCALE: 1:100 @ A1

RONSTAN TENSILE WEBNET MESH TRELLIS & CLIMBING PLANT ON FACADE OF TENANCY 1 EXTENDS TO UPPER LEVELS

LOUVRED SCREEN

LIGHTWEIGHT RAISED PLANTERS TO BALCONIES.

SPECIES SUITED TO RAISED PLANTERS AND THE NORTHERN ASPECT.

SUGGESTED SPECIES
- Dianella brevicaulis
- Zamia furfurcea

LIGHTWEIGHT RAISED GARDEN BED PLANTERS ON BALCONIES TO BE HAND WATERED BY RESIDENTS

LIGHTWEIGHT RAISED GARDEN BED PLANTERS TO SOFTEN BALCONIES
SUGGESTED SPECIES
- Dracaena marginata

UNDERPLANTING
- Tradescantia pallida

INDICATION OF LANDSCAPE AT GROUND LEVEL

FIRST LEVEL LANDSCAPE CONCEPT

SCALE 1:100 AT A1

SCALE 1:100 0 1 2 5 10

LCS LANDSCAPES

PROJECT: RUNDLE STREET APARTMENTS - 88 RUNDLE STREET, KENT TOWN
CLIENT: URPS

DATE: 10/04/2019
DRAWING NUMBER: LS.016.19 A

SCALE: 1:100 @ A1

LIGHTWEIGHT RAISED GARDEN BED PLANTERS ON BALCONIES TO BE HAND WATERED BY RESIDENTS

DEEP SOIL ZONE AROUND TRANSFORMER WITH MEDIUM SIZE TREE
- Ginkgo biloba

TALL SHRUBS TO SOFTEN ADJACENT BOUNDARY
- Viburnum odoratissimum

RAISED GARDEN BED (450MM) WITH SMALL TREES TO FEATURE ALONG DRIVEWAY WITHOUT INTERFERING WITH THE FIRST FLOOR OVERHANG
- Magnolia Grandiflora 'Little Gem'

LIGHTWEIGHT RAISED PLANTERS TO BALCONIES.

SPECIES SUITED TO RAISED PLANTERS AND THE NORTHERN ASPECT.

SUGGESTED SPECIES
- Zamia furfurcea

DEEP SOIL ZONE FOR MEDIUM TREE PLANTING
- Koelreuteria paniculata

UNDERPLANTING
- Anigozanthos 'Amber velvet'
- Rhagodia spinescens

RAISED GARDEN BED PLANTERS WITH STRAPPY LEAF PLANTS SUGGESTED SPECIES
- Dianella brevicaulis
- Anigozanthos 'Amber velvet'

SUGGESTED VERGE PLANTING
- Lomandra 'Tanika'
- Westringia 'Smokey'

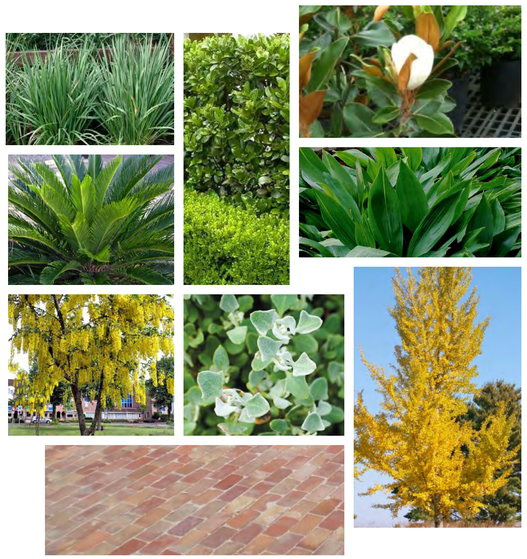
FEATURE PLANTING TO THE ENTRY
- Cycas revoluta

RONSTAN TENSILE WEBNET MESH TRELLIS ON FACADE OF TENANCY 1

CLIMBING PLANT TRAINED ON TRELLIS SUITED TO THE NORTHERN ASPECT
- Trachelospermum jasminoides

RUNDLE STREET ELEVATION

SCALE 1:100 AT A1



PLANTING SCHEDULE

SPECIES	COMMON NAME	POT SIZE	INDICATIVE SIZE (Height x spread)
GROUND COVERS & CLIMBERS			
Trachelospermum jasminoides	Chinese star jasmine	140mm	5m x 30mm
Tradescantia pallida	Purple heart	140mm	300mm x 3m
LOW/ MEDIUM SHRUBS + STRAPPYS			
Anigozanthos 'Amber velvet'	Kangaroo Paw	140mm	600mm x 600mm
Aspidistra elatior	Cast-iron Plant	140mm	1m x 1m
Clivia miniata	Bush lily	140mm	600mm x 600mm
Dianella brevicaulis	Native flax lily	140mm	600mm x 600mm
Limonium perezii	Sea lavander	140mm	400mm x 400mm
Lomandra 'Tanika'	Mat Rush	140mm	600mm x 600mm
Lomandra katrinus 'Deluxe'	Matt rush	140mm	600mmx 700mm
Rhaphiolepis 'Cosmic Pink'	Indian Hawthorn	140mm	500mm x 800mm
Rhagodia spinescens	Salt bush	140mm	1m x 1m
Westringia 'Smokey'	Coastal Rosemary	140mm	1m x 1m
FEATURE PLANTS			
Cycas revoluta	Sago palm	300mm	600mm x 600mm
Dracaena marginata	Madagascar palm	300mm	up to 3m x 1m
Zamia furfuracea	Card board palm	300mm	600mm x 600mm
TALL SHRUBS			
Viburnum odoratissimum	Sweet viburnum	300mm	3m x 2m
Magnolia Grandiflora 'Little Gem'	Little Gem	300mm	3m x 2m
Murraya paniculata	Orange jessamine	300mm	3m x 2m
TREES			
Ginkgo biloba 'Princeton sentry	Maidenhair tree	100L	9m x 5m
Koelreuteria paniculata	Golden Rain Tree	100L	6m x 4m

MATERIALS & ELEMENTS

SCALE 1:100 0 1 2 5 10

LCS LANDSCAPES

PROJECT: RUNDLE STREET APARTMENTS - 88 RUNDLE STREET, KENT TOWN
CLIENT: URPS

DATE: 10/04/2019
DRAWING NUMBER: LS.016.19 A

SCALE: 1:100 @ A1

Appendix D – Traffic and parking report

RUNDLE STREET APARTMENTS
88 RUNDLE STREET, KENT TOWN

TRAFFIC AND PARKING REPORT

CIRQA™

DISCLAIMER

DOCUMENT CONTROL

Report title:	Rundle Street Apartments, 88 Rundle Street, Kent Town – Traffic and Parking Report
Project number:	18331
Client:	Veritas Liberte
Client contact:	Benny Xiong

Version	Date	Details/status	Prepared by	Approved by
Draft	19 Feb 19	For review	BNW	BNW
V1	28 Mar 19	For submission	BNW	BNW
V1.1	20 Apr 19	Minor updates	BNW	BNW
V1.2	21 May 19	Plan reference update	BNW	BNW

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150 Halifax Street, Adelaide SA 5000
(08) 7078 1801
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1. INTRODUCTION

CIRQA has been engaged to provide design and assessment advice for the proposed mixed-use development at 88 Rundle Street, Kent Town. Specifically, CIRQA has been engaged to provide advice in respect to traffic and parking aspects of the proposal.

This report provides a review of the subject site, the proposed development, its access and parking provisions and the associated traffic impact on the adjacent road network. The traffic and parking assessments have been based upon plans prepared by Alexander Brown Architects (drawing nos. 18-016.PL00 to PL17, dated 17 May 2019, refer Appendix A).

2. BACKGROUND

2.1 SUBJECT SITE

The subject site is located on the south-eastern side of the Rundle Street in Kent Town. The site is bounded by commercial premises to the northeast, a residential development site to the southeast, adjacent residential development (under construction) to the southwest and Rundle Street to the northwest. The City of Norwood, Payneham and St Peters' Development Plan identifies that the site is located within a Mixed Use Historic Zone (Policy Area 11.2 - The Parade/Fullarton Road). Figure 1 illustrates the subject site and surrounding road network.

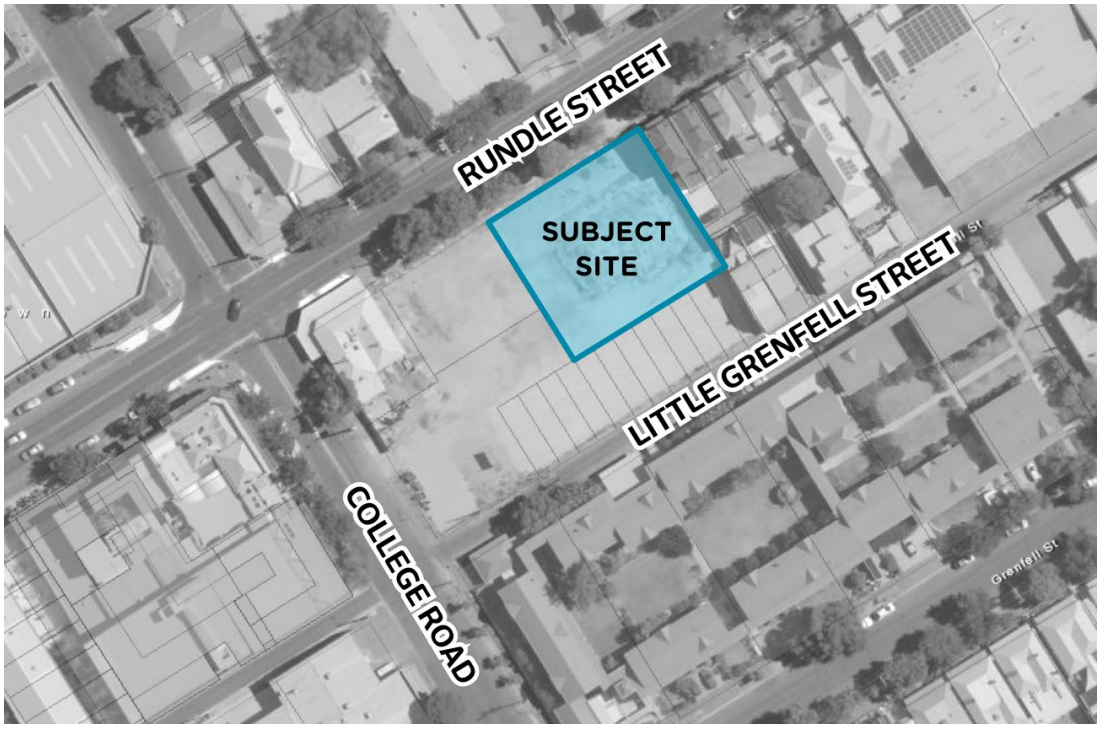

Figure 1 – Subject site and adjacent road network

The site is currently vacant however previously contained a portion of warehouse which occupied 80-88 Rundle Street (which was demolished in 2018).

Access to the site was previously accommodated via two crossovers on Rundle Street (additional access was also provided via Little Grenfell Street, however the south-eastern portion of the site was divided from the subject site as part of a previous application). All turning movements are accommodated at each crossover.

No parking is currently provided on-site, nor was any parking provided within the subject portion of the previous warehouse.

A previous development application for the subject site (as well as associated proposals for adjacent sites) was approved by the State Commission Assessment Panel in 2018. For the subject site, the previously approved use comprised a 42-bedroom tourist accommodation (serviced apartments) facility and a 177 m² retail tenancy. The development was to be accessed via a two-way access on Rundle Street (at the north-eastern end of the site's frontage) with a basement car park. A loading area was also to be provided via the associated driveway. Of particular relevance, the previous proposal was approved on the basis of reduced parking rates in line with the application of the Designated Area provisions in the Development Plan.

2.2 ADJACENT ROAD NETWORK

Rundle Street is under the care and control of the Department of Planning, Transport and Infrastructure (DPTI). Adjacent the subject site, Rundle Street contains a single traffic lane in each direction with a parallel parking lane on the northern side (as noted above kerbside parking is permitted on the southern side outside of the part-time bicycle lane restrictions). In addition to the part-time bicycle lane restrictions, on-street parking is also restricted to a two-hour limit Monday to Friday 9:00 am to 5:00 pm and on Saturdays between 9:00 am and 12:00 pm. Paved footpaths are provided on both sides of the roadway. Bicycle movements are accommodated on-street (under a typical shared arrangement) and on the adjacent footpaths. Rundle Street is subject to a default urban speed limit of 50 km/h. Traffic data provided by DPTI identifies an Annual Average Daily Traffic (AADT) volumes of 7,100 vehicles per day (vpd), of which approximately 1.5% are commercial vehicles.

2.3 WALKING AND CYCLING

The site is well serviced by active transport (walking and cycling facilities) with Rundle Street forming part of the 'BikeDirect' network. Footpaths and on-road bicycle lanes are also provided on numerous arterial roads within close vicinity to the site, providing connections to/from the Adelaide CBD and broader 'BikeDirect' network. DPTI has also recently installed bicycle lanes on Rundle Street. The

bicycle lane on the northern side forms a full-time facility, whereas the bicycle lane on the southern (city-bound) side comprises a part-time bicycle lane (operational between 7:00 am to 9:00 am weekdays with parking permitted at other times).

2.4 PUBLIC TRANSPORT

Public transport routes (buses) also operate within close vicinity to the subject site. Key roads such as Rundle Street (south-west of its intersection with The Parade West), The Parade West, North Terrace and Dequetteville Terrace facilitate routes which link the site to the CBD and metropolitan Adelaide.

3. PROPOSED DEVELOPMENT

3.1 LAND USE AND YIELD

The proposed development comprises the construction of a mixed-use, multi-storey building comprising residential apartments and two ground floor commercial tenancies. Specifically, the proposal will include:

- ten (10) one-bedroom dwellings;
- sixteen (16) two-bedroom dwellings;
- two (2) three-bedroom dwellings; and
- a 93 m² café tenancy; and
- an 80 m² fitness studio.

3.2 ACCESS AND PARKING DESIGN

The sole vehicle access for the site will be provided via a two-way access on Rundle Street at the north-eastern end of the site's frontage. The associated driveway will provide access to an at-grade loading bay and a basement parking area (with associated ramp). Pedestrian access will be provided to the subject site via the site's frontage to Rundle Street.

The basement parking area will contain a total of 38 spaces including one space for use by persons with disabilities. Thirty-two of the parking spaces will be provided in a mechanical stacking system (specifically a Wohr Combilift system is proposed, albeit other similar systems would also be feasible). The spaces will conform with the requirements of the "*Australian/New Zealand Standard for Parking Facilities – Part 1: Off-Street Car Parking*" (AS/NZS 2890.1:2004) in that spaces will be at least 2.4 m wide and 5.4 m long with an aisle of 5.8 m width (with clearances to obstructions).

Turnaround movements will be possible in the intersection of the aisles (to enable drivers to exit in a forward direction should all visitor spaces be occupied.

Nevertheless, directional parking signage with a dynamic element identifying spaces available will be provided adjacent the Rundle Street access.

The car park will have a secure roller door, however this will remain open during typical business hours for the tenancies (say 7:00 am to 9:00 pm) to allow access for visitors and patrons. Outside of these hours resident and staff access will be provided via fob/remote (or similar) and the car park closure can be noted on the dynamic parking sign near the access.

The parking space for use by persons with disabilities will conform with the Australian/New Zealand Standard, *Parking Facilities Part 6: Off-street parking for people with disabilities* (AS/NZS 2890.6:2009) in that it will be 2.4 m wide and 5.4 m long (with an adjacent shared area of the same dimension).

Resident bicycle parking (14 spaces) will be accommodated within the basement. Visitor bicycle parking (nine spaces) will be provided at-grade.

The ramped access will have gradients in accordance with AS/NZS 2890.1:2004 in that a maximum grade of 1 in 5 will be provided with appropriate 1 in 8 transitions at either end of the ramp. The ramp will have a one-way width (4.5 m plus 300 mm clearances either site) however will be controlled via a traffic signal system (i.e. lanterns and detectors near the top and bottom of the ramp to advise drivers as to whether ramp is clear or being utilised by an oncoming vehicle). Vehicle turn path assessment has utilised to ensure that the required manoeuvres can be accommodated as illustrated in Figure 2.

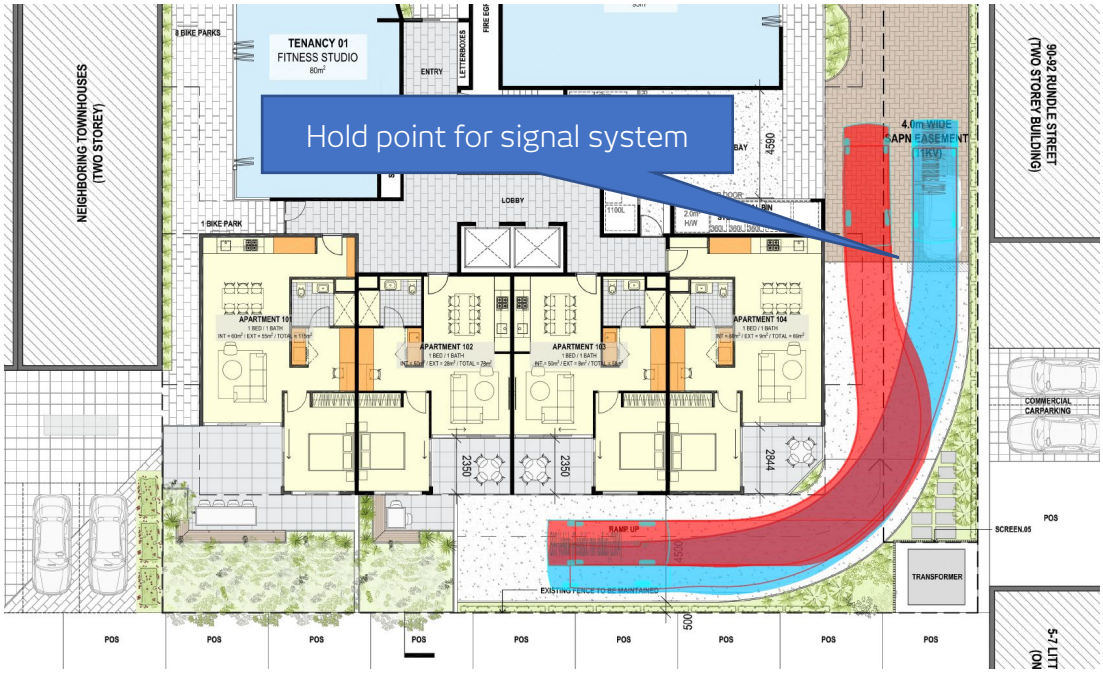

Figure 2 – B99 vehicle turn paths for access to/from basement

3.3 REFUSE COLLECTION/DELIVERIES

Refuse collection and deliveries are proposed to be accommodated within an at-grade loading bay. The bay has been designed to accommodate turning movements of a 7.3 m long refuse collection vehicle as illustrated in Figure 3. Such a vehicle allows for a variety of small to medium refuse collection vehicles and anticipated delivery vehicles associated with the café tenancy. The layout will allow such vehicles to be driven into and out of the site in a forward direction. A headheight of at least 3.3 m will be provided in the loading bay which is sufficient for the proposed vehicle sizes.

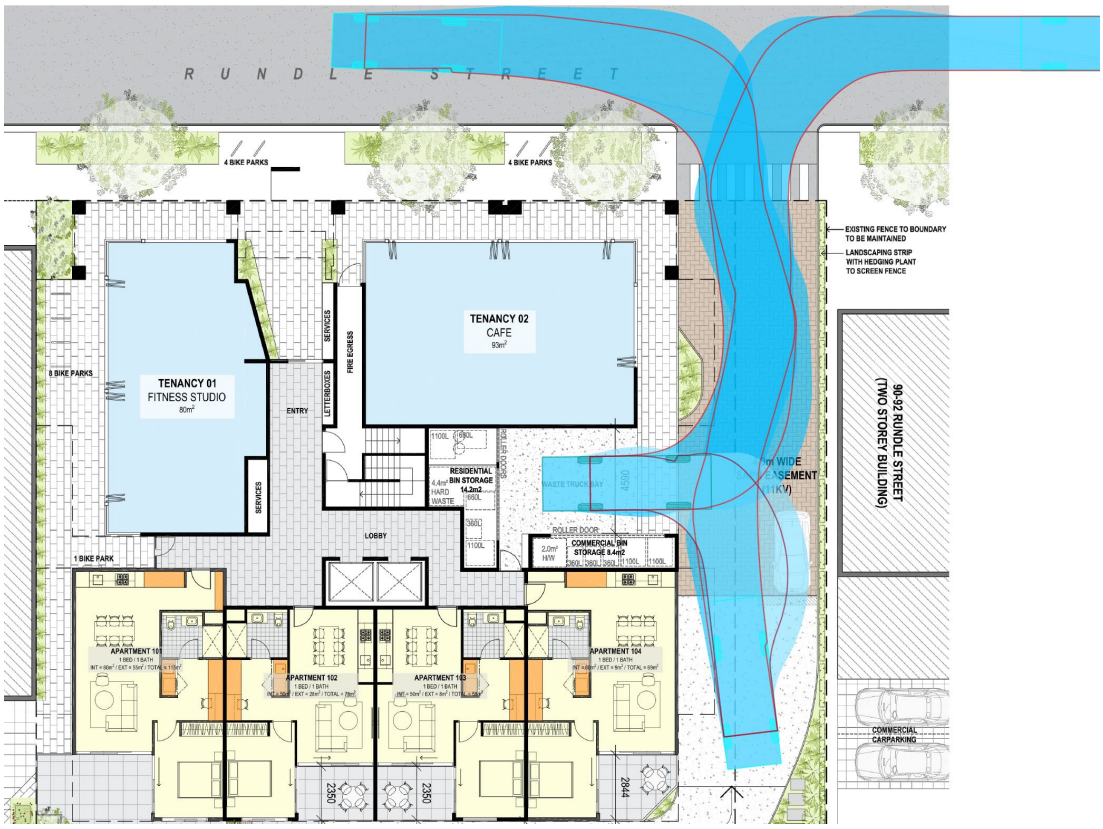

Figure 3 – Delivery/service vehicle truck turn path

4. PARKING ASSESSMENT

4.1 CAR PARKING

The subject site is located within a Mixed Use Historic Zone (Policy Area 11.2 - The Parade/Fullarton Road) as defined by the City of Norwood, Payneham and St Peters' Development Plan. On the basis of this zoning, the following minimum parking provision rates are relevant to the proposed development:

- indoor recreation centre – (including personal training establishment) – assess on a needs basis;

- **restaurant (including café)** – one space per three seats (no additional requirement for outdoor dining up to 25% of indoor seating);
- **residential flat building** – one space per one-bedroom and two parking spaces per two-bedroom or three-bedroom dwelling plus one visitor space for every two dwellings up to ten dwellings and one space per four dwellings thereafter.

For the café, specific seating numbers have not been identified. However, the RTA "*Guide to Traffic Generating Developments*" identifies a rate of 2.1 m² per internal seat provided in a restaurant/café (including back-of-house areas). On this basis, the proposed café tenancy could accommodate approximately 45 internal seats. Assuming the external seating number is no higher than 25% (in line with the provisions in the Development Plan rates), 11 external seats could be provided (without need for additional parking).

For the fitness studio, the demands experienced will depend on the nature of the studio. For instance, 24-hour fitness studios have been surveyed to generate peak demands in the order of 4.6 spaces per 100 m², whereas class-based centres (high intensity, interval training etc.) can vary from approximately two to six spaces per 100 m². Given the relatively small size of the proposed fitness centre, it is unlikely that large class-based activities could be held and, if utilised for class-based training, it is anticipated that traffic would be generated at the lower end of this range. For the following assessment, the rate of 4.6 spaces per 100 m² identified for 24-hour fitness centres has been adopted.

On the basis of the above, the proposal would require:

- 46 resident spaces;
- 9.5 resident visitor spaces;
- 3.7 fitness studio spaces; and
- 14.7 restaurant spaces.

There is therefore a requirement for 74 spaces. Given the proposed provision of 38 spaces, there will be a shortfall when assessed against the base Development Plan rates.

However, the above parking requirements for residential parking are considered excessively conservative for application to the subject development and location. Furthermore, the non-residential uses would likely generate peak demands at different times (for instance, fitness centres typically peak on Monday and Tuesday evenings when the café would either generate little or no parking demand).

In comparison, it is noted that reduced rates are applied for the Urban Corridor Zone. Sites surrounding and adjacent the subject site are within the Urban Corridor Zone and the relevant parking demand generation factors applicable to these adjacent areas would be equally applicable to subject site (i.e. proximity to the CBD, active and sustainable transport connectivity, mixed use development etc.).

In addition to the above, it is noted that Principle of Development Control 122 in the Development Plan states that:

> *"A lesser on-site car parking rate may be applied to applicable elements of a development in any of the following circumstances:*
> ...
> *(c) mixed use development including residential and non-residential development has respective peak demands for parking occurring at different times; or*
> ...
> *(g) where it can be demonstrated that it would not result in a greater demand for on-street car parking on existing streets in the locality."*

As noted above, the previous proposal for the subject site was approved by SCAP on the basis of the use of Urban Corridor Zone rates (acknowledging that reduced rates are contemplated by PDC 122). This included consideration of shortfall associated with the previous site use, public transport accessibility and the mixed-use nature of the proposal.

On the basis of the above, it is therefore considered that application of the Urban Corridor Zone rates is appropriate for assessment of the subject proposal. Furthermore, the adoption of the UCZ rates is considered desirable to support broader Council and State Government goals of reduced reliance on private motor vehicle use and increased use of active and sustainable transport modes. The UCZ rates are as follows:

- non-residential land use – a minimum of three spaces per 100 m²; and
- residential uses – one space per one-bedroom or two-bedroom dwelling and 1.25 spaces per three-bedroom dwelling plus one visitor space for every four dwellings.

On the basis of the UCZ rates, the proposed development has a requirement for 29 resident spaces, seven resident visitor spaces and six spaces for the non-residential uses. The proposed provision of 38 parking spaces will therefore allow full accommodation of the (UCZ) resident parking requirement with nine remaining spaces for use by the non-residential tenancies and resident visitors.

On this basis, there would be a shortfall of three parking spaces. However, given resident visitor demands and the non-residential demands would typically peak at different times, the shortfall would be even lower. Also, as detailed in the previous application's traffic report, there was a shortfall associated with the site's previous use and the overall impact on on-street parking will therefore be negligible (if not improved) compared to the previous use on the site.

The spaces will be assigned as 28 stacker spaces designated to residents, four stacker spaces designated to commercial tenancy staff parking and the remaining six spaces (non-stacker) available for visitors/patrons.

4.2 BICYCLE PARKING

The Development Plan also identifies a requirement for the provision of bicycle parking for multi-storey residential development of 0.5 resident bicycle spaces per dwelling plus 0.2 visitor spaces per dwelling. No rate is identified for cafés or fitness centres.

On this basis, there is a requirement for 14 residential and six visitor spaces. The proposed provision will therefore exceed this requirement with additional capacity for demand associated with the non-residential uses.

5. TRAFFIC ASSESSMENT

The NSW RTA's *"Guide to Traffic Generating Development"* (and its subsequent updates) is a commonly used document by traffic consultants to forecast vehicular traffic volumes generated by various land uses. In respect to the subject proposal, the following traffic generation rates apply:

- residential – 0.50 to 0.65 peak hour trips per medium density dwelling (arguably the higher density rate identified in the Guide could be applied, however medium density rates have been applied for conservatism);
- restaurant (café) – 5.0 trips per 100 m² of gross floor area in the pm peak period; and
- fitness centre (gymnasiums) – 9.0 trips per 100 m² (this rate is more related to more traditional style, larger facilities and is higher than would realistically be generated. Nevertheless, it has been adopted to provide a conservative assessment).

Table 1 summarises the forecast generation associated with the site.

Table 1 – Forecast peak hour generation associated with the proposal

Use	Quantity	Rate	Generation
Residential	28	0.65 trips per dwelling	18.2 trips
Cafe	93 m²	5.0 trips per 100 m²	4.7 trips
Fitness Centre	80 m²	9.0 trips per 100 m²	7.2 trips
		Total Trips	**30 trips**

It is therefore forecast that the development would distribute in the order of 30 peak hour trips. Such traffic volumes are low and the same as that identified for the previously approved application (which was forecast to generate approximately 30 peak hour trips).

The previous application's traffic report included assessment of the traffic impacts of the broader proposal on the adjacent road network. Given that the traffic generation of the current proposal is the same as that previously assessed, it is considered the previous outcomes remain valid. The previous assessment including SIDRA analysis of the access point on Rundle Street (which will service the current proposal).

The analysis results indicated that the access point would operate with a high level of service (LOS A) with minimal queuing and delays. Vehicle queues (95th percentile) will be less than one vehicle for all movements at the access points. Average delays were identified as being than 15 seconds for all turning movements and less than one second for through movements (i.e. the SIDRA analysis confirmed the additional volumes would have negligible impact on through movements on Rundle Street).

6. SUMMARY

The proposal will result in the construction of a new mixed-use development with residential, a café and a fitness centre.

The site has a high level of accessibility by public transport and is well connected to the surrounding active transport (walking and cycling) networks. The site's proximity to the CBD and The Parade will encourage a relatively high modal share for both walking and cycling. This will minimise reliance on private motor vehicle use for residents and likely result in a lower traffic generation than forecast.

Access to the site will be provided a two-way access points on Rundle Street. The site will be serviced by 38 parking spaces within a basement car park. The proposed parking areas have been designed in accordance with the relevant Australian Standards. Bicycle parking spaces will be provided within the site in excess of the requirements of the Development Plan.

Refuse collection and deliveries/servicing will be accommodated via an on-site loading bay. All movements into and out of the site will be in a forward-in/forward-out direction.

An assessment of car parking requirements identifies a shortfall in relation to the applicable Development Plan rates. However, it is considered that application of the Urban Corridor Zone rates is appropriate and in line with the assessment and approval of the previous application associated with the site. On the basis of the UCZ zones all resident and staff parking can be accommodated on-site with additional visitor spaces available on-site. There will be a minor shortfall of three spaces associated with (short to medium) term visitor parking. However, this does not include consideration that resident visitor and non-residential use visitor/patron demands may not peak at the same times. Furthermore, there was a shortfall in on-site provision associated with the site's previous use and the overall impact of the theoretical shortfall will be minimal.

The proposal will generate in the order of 30 peak hour trips which is the same as that identified for the previously approved development. SIDRA analysis of the conditions at the proposed Rundle Street access (undertaken for the previous application) indicate that the generated traffic will be readily accommodated with minimal impact on through-bound movements.

Appendix E – Waste management plan

PROPOSED MIXED USE DEVELOPMENT

88 RUNDLE STREET, KENT TOWN

WASTE MANAGEMENT PLAN

SALT^3

PROPOSED MIXED USE DEVELOPMENT, 88 RUNDLE STREET, KENT TOWN
Client: URPS
Report Reference: 18739W
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Document Control

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EXECUTIVE SUMMARY

SALT has been engaged by URPS to prepare a Waste Management Plan (WMP) for a proposed mixed use development located at 88 Rundle Street, Kent Town.

SALT understands that the proposal would involve the development of residential areas consisting of 10 one-bedroom apartments, 16 two-bedroom apartments, 2 three-bedroom penthouses and commercial areas consisting of an 80m^2 fitness studio and a 93m^2 cafe.

Residential waste would be stored on-site in the bin storage area located at ground level.

Residential waste would be collected by private contractor, with:

- Two 1,100L garbage bins collected once per week;
- Two 660L recycle bins collected once per week; and
- One 360L organics bin collected twice per week.

E-waste, hard waste and difficult waste would be collected three times annually.

Commercial waste would be collected by private contractor, with:

- One 1,100L garbage bin collected three times per week;
- One 1,100L recycle bin collected two times per week; and
- Three 360L organics bins collected three times per week.

E-waste, hard waste and difficult waste would be collected on an as required basis.

Waste vehicles would prop safely within the waste truck bay provided. Vehicle operators would ferry waste bins from the bin storage area to the collection vehicle and return upon emptying.

In the opinion of SALT the enclosed Waste Management Plan would provide efficient waste management for the proposed development.

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LIST OF TABLES

1 INTRODUCTION

SALT has been requested by URPS to prepare a Waste Management Plan (WMP) for a proposed mixed use development located at 88 Rundle Street, Kent Town. This WMP has been prepared based on the Norwood Payneham and St Peters City Council *Development Plan* (2017) and South Australia *Waste Management for Residential and Mixed-Use Developments Better Practice Guide* (2014).

2 INCLUDED IN THIS REPORT

Enclosed is the Waste Management Plan for the proposed development at 88 Rundle Street, Kent Town. Included are details regarding:

- Land use;
- Waste generation;
- Waste systems;
- Bin quantity, size and colour;
- Collection frequency;
- Bin storage area;
- Signage;
- Waste collection;
- Ventilation, washing and vermin-prevention;
- Noise reduction;
- Supplier contact information; and
- Scaled waste management drawings.

3 LAND USE

Land Development Plan Zone: Mixed Use Historic (Conservation)

Land use type: Mixed use commercial and residential

Number of levels: 5

Residential Space:

- 10 one-bedroom apartments;
- 16 two-bedroom apartments; and
- 2 three-bedroom penthouses.

Commercial Space:

- 93m^2 café space; and
- 80m^2 fitness studio.

4 RESIDENTIAL WASTE MANAGEMENT PLAN

4.1 WASTE GENERATION

Residential waste generation rates are shown in Table 1. Calculations are based on 7 days per week operation. Generation rates have been adopted based on the high density residential dwelling waste generation rates enclosed in the South Australia *Better Practice Guide: Waste Management for Residential and Mixed-Use Developments Better Practice Guide* (2014).

Table 1 Residential Waste Generation Rates

Use	Garbage (L/bedroom/week)	Recycling (L/bedroom/week)	Organics (L/bedroom/week)
High Density Residential Dwelling	30L	25L	10L

A residential waste generation assessment is provided in Table 2.

Table 2 Residential Waste Generation Assessment

Use	Bedrooms	Waste Per Week		
		Garbage	Recycling	Organics
High Density Residential Dwelling	48	1,440L	1,200L	480L
Total Waste Generated per Week		**1,440L**	**1,200L**	**480L**

4.2 WASTE SYSTEMS

Waste would be sorted on-site by residents as appropriate into the following streams:

- Garbage (General Waste);
- Commingled Recycling;
- Organics; and
- Hard waste, difficult waste and e-waste

4.2.1 GARBAGE (GENERAL WASTE)

Each apartment would be furnished with plastic lined bins to have a minimum capacity of 15 litres for the temporary holding of garbage.

Residents occupying the apartments on ground floor would transfer the waste as required to the 1,100L bin located within the residential bin storage area using the internal accessway through the lobby. Residents occupying the units on levels 1 to 4 would transfer the waste as required to the appropriate chute drop off point located adjacent to the lift core at each level, as shown in Appendix 1.

Garbage is to be disposed of bagged.

4.2.2 COMMINGLED RECYCLING

Each apartment would be furnished with unlined bins to have a minimum capacity of 12 litres for the temporary holding of commingled recycling.

Residents occupying the apartments on ground floor would transfer the waste as required to the residential bin storage area using the internal accessway passing through the lobby. Residents occupying the apartments on levels 1 to 4 would transfer the waste as required to the appropriate chute drop off point located adjacent to the lift core at each level, as shown in Appendix 1.

Recyclables are to be disposed of loosely.

4.2.3 ORGANICS

Each apartment would be furnished with bins lined with compostable bags for the temporary holding of organics. These bins would have a minimum capacity of 5 litres. Residents of all apartments would dispose of organics from these bins directly into the appropriate 360L bins provided within the ground level residential bin storage area, accessed via the lift and internal accessway (refer to Appendix 1).

Organics are to be disposed of using a compostable liner or as required by the waste contractor.

4.2.4 HARD WASTE, DIFFICULT WASTE AND E-WASTE

A minimum annual storage capacity of 21.56m^3 is required for the storage of hard waste and electronic waste. This has been calculated based on the rate of 0.77m^3 of hard waste and e-waste generated per household annually. An area of 4.4m^2 (based on a height allowance of 2m) has been allocated within the ground level bin storage area to ensure enough space is provided for hard waste, difficult waste and e-waste to be temporarily stored based on an expectation of three (3) collections occurring a year.

The area would be clearly marked. Residents would access this room via lift and internal accessway, as shown in Appendix 1. Building management would arrange for collections to occur as required, with a private contractor.

4.3 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

The bin quantity, size and the frequency of collection are shown below in Table 3 and Table 4.

Two waste collections per week is recommended for organics waste to prevent the attraction of vermin.

Table 3 Residential Bin Size and Collection Frequency

Waste Stream	Collections per Week	Bin Size	No. Bins	Total weekly Volume	Weekly capacity per bedroom	Total weekly Capacity
Garbage	1	1,100L	2	1,440L	45L	2,200L
Commingled Recycling	1	660L	2	1,200L	27L	1,320L
Organics	2	360L	1	480L	15L	720L

Table 4 Typical Waste Bin Dimensions

Capacity (L)	Width (mm)	Depth (mm)	Height (mm)	Area (m^2)
1,100	1240	1070	1330	1.33
660	1260	780	1330	0.98
360	680	848	1100	0.58

4.4 BIN COLOUR AND SUPPLIER

All bins would be provided by private supplier. Bin colours would be designated as identified in the Australian Standard, as defined below:

- Garbage (general waste) shall have red lids with dark green or black body;
- Recycle shall have yellow lids with dark green or black body; and
- Organics have lime green lids with dark green or black body.

Note, private contractors often supply bins for collection.

4.5 WASTE STORAGE AREA

Table 5 demonstrates the cumulative space requirements and provision of waste areas in the residential areas of the proposed development. Residents located on the ground level would access the bin storage area using an accessway that passes through the lobby. Residents occupying the apartments on levels 1 to 4 would utilize the dual chutes system provided adjacent to the stairwell on each floor to dispose of garage and recyclable waste. Residents on levels 1 to 4 would utilize the lift to access the residential bin storage to dispose of organic waste, hard waste, difficult waste and e-waste.

Access routes are levelled ensuring minimal risks to the users. Storage area design should prevent and mitigate fire risks and prevent entrapment areas for residents and staff members. Waste management would be overseen by building management.

The scaled drawing shown in APPENDIX 1 demonstrates the location of the residential bin storage area and the proposed bin arrangement.

Table 5 Waste Area Space Requirements

Stream	Space Required (excluding circulation)	Space Provided
General Waste	2.66m²	14.20m²
Commingled Recycling	1.96m²	
Organics	0.58m²	
Hard and difficult waste	4.40m²	
TOTAL	**9.60m²**	**14.20m²**

5 COMMERCIAL WASTE MANAGEMENT PLAN

5.1 WASTE GENERATION

Commercial waste generation rates are shown in Table 1. Generation rates have been adopted based on the commercial waste generation rates enclosed in the South Australia *Better Practice Guide: Waste Management for Residential and Mixed-Use Developments Better Practice Guide* (2014). The calculations demonstrated are based on 7 days per week operation for the both the café and fitness studio spaces.

Retail (less than 100m²) waste generation rates have been adopted for the fitness studio servicing this development.

Table 6 Commercial Waste Generation Rates

Use	Garbage (L/10m²/week)	Recycling (L/10m²/week)	Organics (L/10m²/week)
Café	210L	140L	280L
Retail (less than 100m²)	35L	17.5L	1.75L

A commercial waste generation assessment is provided in Table 2.

Table 7 Commercial Waste Generation Assessment

Use	Area	Waste Per Week		
		Garbage	Recycling	Organics
Café	93m²	1,953L	1,302L	2,604L
Retail (less than 100m²)	80m²	280L	140L	14L
Total Waste Generated per Week		**2,233L**	**1,442L**	**2,618L**

5.2 WASTE SYSTEMS

Waste would be sorted on-site by staff and cleaners as appropriate into the following streams:

- Garbage (General Waste);
- Commingled Recycling;
- Hard Waste; and
- E-waste.

5.2.1 GARBAGE (GENERAL WASTE)

The café spaces would be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 280 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

The retail spaces would be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 40 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 1,100L bin provided within the ground level commercial bin storage area, accessed via either the internal or external accessway (refer to Appendix 1).

Garbage is to be disposed of bagged.

5.2.2 COMMINGLED RECYCLING

The café spaces would be furnished with unlined bins for the temporary holding of recyclable waste, to have minimum cumulative capacity of 190 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

The retail spaces would be furnished with unlined bins for the temporary holding of recyclable waste, to have minimum cumulative capacity of 20 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 1,100L bin provided within the ground level commercial bin storage area, accessed via either the internal or external accessway (refer to Appendix 1).

Commingled recycling would be disposed of loosely.

5.2.3 ORGANICS

The café spaces would be furnished with bins lined with compostable bags for the temporary holding of organics. These bins would have the minimum cumulative capacity of 375 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

The retail spaces would be furnished with bins lined with compostable bags for the temporary holding of organics. These bins would have the minimum cumulative capacity of 5 litres. This capacity is based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of organics from these bins directly into the appropriate 360L bin provided within the ground level commercial bin storage area, accessed via either the internal or external accessway (refer to Appendix 1).

Organics are to be disposed of using a compostable liner or as required by the waste contractor.

5.2.4 HARD WASTE, E-WASTE AND DIFFICULT WASTE

An area of 2m^2 has been allocated within the ground floor commercial bin storage area. The area would be clearly marked, and staff would access this room via the internal accessway, as shown in Appendix 1.

Building management would arrange for hard waste, difficult waste and e-waste collections to be conducted by private contractor on an as required basis.

5.3 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

The bin quantity, size and the frequency of collection are shown below in Table 8 and Table 9.

It is recommended that shared bins are provided for the commercial tenancies within the development.

It should be noted that the generated garbage waste volume exceeds the capacity volume by 1.5%. Due to the conservative nature of the waste generation estimates, this minor exceedance of the bin capacity is considered negligible. Therefore, the collection frequencies and number of bins enclosed in the table below is considered appropriate by SALT.

Table 8 Commercial Bin Size and Collection Frequency

Waste Stream	Collections per Week	Bin Size/Area	No. Bins	Weekly Capacity	Weekly Volume
Garbage	3	1,100L	1	2,200L	2,233L
Commingled Recycling	2	1,100L	1	2,200L	1,442L
Organics	3	360L	3	3,240L	2,606L
Hard waste, e-waste and difficult waste	As required	2m^2	-	-	-

Table 9 Typical Waste Bin Dimensions

Capacity (L)	Width (mm)	Depth (mm)	Height (mm)	Area (m^2)
1,100	1240	1,080	1330	1.33
360	680	848	1,100	0.58

5.4 BIN COLOUR AND SUPPLIER

All bins would be provided by private supplier. Bin colours would be designated as identified in the Australian Standard, as defined below:

- Garbage (general waste) shall have red lids with dark green or black body;
- Recycle shall have yellow lids with dark green or black body;
- Organics have lime green lids with dark green or black body; and

Note, private contractors often supply bins for collection.

5.5 WASTE STORAGE AREA

Table 5 demonstrates the cumulative space requirements and provision of waste areas in the commercial area of the proposed development. It is ensured that the space within the storage location would allow for bin rotation and safe service provision.

Staff members of the retail tenancies can access the bin storage area using a safe and direct access route which is either via the internal accessway that passes through the lobby or the external accessway. These access routes are levelled ensuring minimal risks to the users.

The scaled drawing shown in APPENDIX 1 demonstrates the location of the commercial bin storage area and the proposed bin arrangement.

Table 10 Commercial Waste Area Space Requirements

Stream	Space Required (excluding circulation)	Space Provided
General Waste	1.33m^2	8.40m^2
Commingled Recycling	1.33m^2	
Organics	1.74m^2	
Hard waste and e-waste	2.00m^2	
TOTAL	**6.40m^2**	**8.40m^2**

6 WASTE COLLECTION

Residential waste would be collected by private contractor, as follows:

- Two 1,100L garbage bins collected once per week;
- Two 660L commingled recycling bins collected once per week; and
- One 360L organics bin collected twice per week.

Hard waste, e-waste and difficult waste collections would be arranged by building management as required.

All residential waste bins would be stored on-site in the residential bin storage area provided on the ground level.

Commercial waste would be collected by private contractor, as follows:

- One 1,100L garbage bin collected three times per week;
- One 1,100L commingled recycling bin collected two times per week; and
- Three 360L organics bin collected three times per week.

Hard waste and e-waste would be collected as required by a private contractor.

All commercial bins would be stored on-site in the commercial bin storage area provided on the ground level.

Residential and commercial waste collections would occur in synergy to reduce traffic impacts of local roads. Waste collections should occur outside peak traffic periods to minimise safety and noise impacts to the surrounding residents and the public.

Garbage, recycling and organics waste collections would occur via a 7.26m waste collection vehicle which has an operating height of approximately 3.0m. This height would allow the waste truck to access and operate within the waste truck bay. E-waste, hard waste and difficult waste collections would be performed by a utility vehicle or AustRoads B99 design vehicle equivalent.

Waste collection vehicles would enter the subject site in a forwards direction from Rundle Street. The vehicles would perform a reversing manoeuvre to prop safely at the waste truck bay to perform collections. Vehicle operators would ferry waste bins from the respective bin storage areas and return upon emptying. Waste collection vehicles would exit the waste truck bay in a forward direction, exiting the subject site onto Rundle Street.

Building management would ensure that waste vehicle operators are able to access the bin storage areas. Waste bins and hard waste would not be presented to street kerb at any point.

7 SIGNAGE

Waste storage areas and bins would be clearly marked and signed with the industry standard signage based on examples provided in Figure 1. The typical Sustainability Victoria signage is illustrated in Figure 1

Figure 1 Example Signage

8 VENTILATION, WASHING, VERMIN-PREVENTION

Ventilation would be provided in accordance with Australian Standard AS1668.

An appropriately drained wash down area would be provided within the bin storage areas in which each bin is to be washed regularly by building management. Bin washing areas or bin wash bays must not discharge into the stormwater collection system.

Alternatively, a third-party bin washing service can be engaged to perform this service. Bin washing suppliers must retain all waste water to within their washing apparatus so as to not impact on the drainage provisions of the site.

9 NOISE REDUCTION AND AMENITY

All waste areas would meet EPA, BCA and AS2107 acoustic requirements as appropriate within operational hours assigned to minimise acoustic impact on surrounding premises.

The bin storage area has been located by considering minimal noise impacts to the surrounding developments and preservation of the local visual amenity.

10 OPERATION AND MANAGEMENT

Building management would be responsible in educating residents, staff members and waste contractors through but not limited to the following actions:

- Provision of relevant materials or guides to individual tenants highlighting expected service costs, waste areas, access routes, disposal methods for general waste, commingled recycling, organics, hard waste, difficult waste and e-waste and waste and service costs;
- Ensuring appropriate signage is available in all waste areas to ensure that optimum waste management practices are conducted; and
- Ensure that waste contractors are well informed on bin storage area, access routes, loading area, collection timings and frequencies.

11 SUPPLIER CONTACT INFORMATION

Table 11 provides a list of equipment specified by this waste management plan.

Table 11 High Level Purchasing Schedule

Item	Quantity	Supplier	Notes
1,100L Bins	4	Private Supplier*	2 x 1,100L bins for residential garbage 1 X 1,100L bin for commercial garbage 1 X 1,100L bin for commercial recycling
660L Bins	2	Private Supplier*	2 X 660L bins for residential recycling
360L Bin	4	Private Supplier*	1 x 360L bin for residential organics 3 X 360L bin for commercial organics
*Private waste collection contractors often supply their own bins for collection.			

A complimentary listing of contractors and equipment suppliers is provided on the following page. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers.

SALT does not warrant (or make representations for) the goods/services provided by these suppliers.

11.1 EQUIPMENT SUPPLIERS

- Sulo MGB Australia (bin supplier) – 1300 364 388

11.2 WASTE COLLECTORS

11.2.1 GARBAGE, RECYCLING AND ORGANICS

- Cleanaway – 1300 683 931
- Integrated Waste Services (IWS) – 08 8348 5100
- Signal Waste and Recycling – 08 8162 5544
- SUEZ Environment – 13 13 35
- VISY Waste Management – 03 9369 7447
- Veolia Environmental Services – 132 955
- Waster – 1300 927 837

11.2.2 HARD WASTE

- 1800-GOT-JUNK – 1800 468 586
- 1300RUBBISH – 1300 782 247

11.2.3 E-WASTE

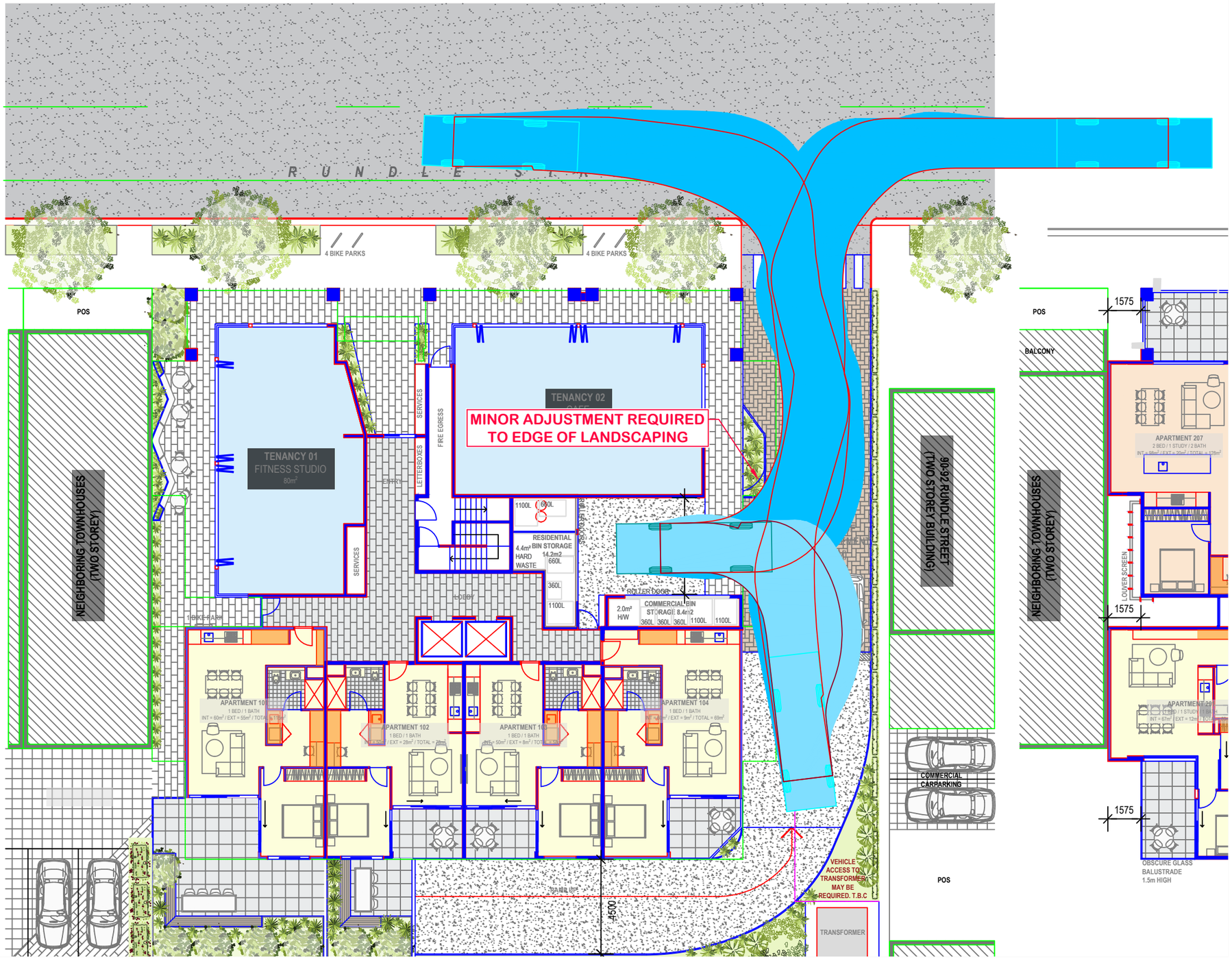
- Electronic Recycling Australia – 08 8374 2276

11.3 BIN WASHING SERVICES

- All Purpose Solutions – 08 8471 0494
- Binforce – 0414 742 700
- OZ Bin Cleaning – 0468 324 228

APPENDIX 1 DESIGN DRAWINGS

APPENDIX 2 SWEPT PATH (PREPARED BY OTHERS)



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DRAWING AMENDMENTS

REV	DATE	DESCRIPTION	DWN	CHK
A	27/03/2019		BNW	BNW

C18331_04.DWG 27/3/2019 12:30 PM

N
1:200
@ A3

88 RUNDLE STREET, KENT TOWN

REFUSE COLLECTION VEHICLE (7.4m TRUCK) TURN PATH

PROJECT # 18331 SHEET # 04_SH01

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Appendix F – ESD Statement

ESD Statement

88 Rundle Street

Reference: SH109969_v1

Date: 22 May 2019

Assessment of:

Proposed Residential Development

88 Rundle Street, Kent Town, SA 5067

Report commissioned by:

VL Developments

Responsible authority:

City of Norwood Payneham and St Peters

Contact:

Tom Symons

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Contents

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Document Control

Job Title	88 Rundle Street	SH Reference:	SH109969
Document Title	ESD Statement	File Reference:	R:\...\SH109969\reports
File Name	ESD Statement_88 Rundle Street_SH109969		

Version	Date	Prepared by	Checked by	Approved by	Comments
0	13/03/2019	DN	LV	JW	Draft Revision
1	12/04/2019	DN	LV	JW	Amendments to satisfy Council objectives.
2	22/05/2019	LV	TS	JW	Updated based on latest drawings

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Executive Summary

SUHO has been engaged by VL Developments to provide an ESD Statement to support the Development Application for the proposed mixed-used residential development at 88 Rundle Street, Kent Town, SA. This project is within the jurisdiction of the City of Norwood Payneham and St Peters. The Council ESD requirements for this project have been outlined in this report, along with the project's design response. The intent of this document is to outline the various ESD initiatives proposed to demonstrate the developer's commitment to sustainability.

The key sustainable design strategies considered in the development include:

- High performance building fabric and glazing
- Solar PVs for onsite energy generation
- Energy efficient building services, including HVAC, lighting and DHW systems
- Water efficient fixtures and fittings
- Rainwater harvesting and reuse system
- Green facades and preference for drought tolerant and/or native vegetation
- Good access to natural daylight and ventilation
- Large balconies to improve resident amenity and connection to the outdoors
- Bicycle parking to encourage active modes of transport
- Smart technology across numerous building systems via smart phone app

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1 Introduction

SUHO has been engaged by VL Developments to prepare an Environmentally Sustainable Design (ESD) Statement to support the Development Approval application of 88 Rundle Street development.

1.1 Purpose

The purpose of this document is to demonstrate the client's commitment to ESD in the 88 Rundle Street development and outline Development Plan compliance.

1.2 Project Overview

The 88 Rundle Street development is a 5-storey apartment building with two ground floor retail tenancies. There are 28 apartments in total, made up of one, two and three bedroom apartments. The project also includes a basement carpark for both residents and retail staff.

1.3 Planning Requirements

The local planning requirements generally relate to managing solar exposure and minimising energy consumption. These requirements and objectives are outlined in Section 3 of this report, along with the design response. VL Developments is committed to delivering a project that exceeds Council requirements, for a market that has growing expectations for ESD.

1.4 Basis of Assessment

This document and all related assessments have been based on the following:

- Project discussions and email correspondence with Alexander Brown Architects.
- The following architectural drawing set from Alexander Brown Architects:

Drawing	Description	Title	Rev.	Date
PL00	Planning Issue	Context Plan	00	20/11/2019
PL01		Location Plan & Context	02	09/04/2019
PL02		Basement Floor Plan	06	16/05/2019
PL03		Ground Floor Plan	06	16/05/2019
PL04		First Floor Plan	07	16/05/2019
PL05		Second Floor Plan	08	16/05/2019
PL06		Third Floor Plan	08	16/05/2019
PL07		Fourth Floor Plan	06	16/05/2019
PL08		Rooftop Plan	04	09/04/2019
PL09		North Elevation	02	09/04/2019
PL10		East Elevation	02	09/04/2019
PL11		South Elevation	02	09/04/2019
PL12		West Elevation	02	09/04/2019
PL13		Section	02	09/04/2019
PL14		3D Perspectives	02	28/03/2019
PL16		Overshadowing Diagrams	00	10/04/2019

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1.5 Sustainability Categories

This Statement categorises the proposed ESD initiatives into 9 broad sustainability categories. These categories align with Green Star; a widely recognised and applied rating tool across the industry. These categories are summarised below:

- Management
- Indoor Environment Quality
- Energy
- Transport
- Water
- Materials
- Land Use & Ecology
- Emissions
- Innovation

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2 ESD Features

The following is a summary of the ESD initiatives included in each of the categories.

2.1 Management

The following describes items relating to Management included in this project.

#	Initiative	Description	Responsibility
2.1.A	Environmental Management Plan	The preferred contractor will develop a site-specific Environmental Management Plan prior to construction commencement. ISO 14001 Environmental Management System accreditation will also be highly regarded when considering tenderers.	Contractor
2.1.B	Waste Management Plan	A Waste Management Plan has been prepared by Salt3 Waste Consultants. This plan outlines the landfill, recycling and FOGO (Food and Garden Organics) waste volumes generated, how these separate waste streams are managed, and collection details.	Waste Consultant
2.1.C	Building Information	The building will incorporate a number of smart technologies. The client is currently exploring this technology to enable residents to easily access their consumption data on their smart phones. Having this data readily accessible has the potential to improve consumption habits and reduce wastage.	BMS Contractor

2.2 Indoor Environment Quality

The following describes items relating to Indoor Environment Quality (IEQ) included in this project.

#	Initiative	Description	Responsibility
2.2.A	Natural Ventilation	The building's common areas such as lifts and corridors will be naturally ventilated via accessible balconies and operable windows. While this will reduce energy consumption, it will also improve the connection to the outdoors and allow for fresh air into these spaces.	Architect
2.2.B	Daylight	Operable windows have been provided to the corridors on each floor, allowing good levels of natural light into these spaces that would otherwise rely on 100% artificial lighting.	Architect

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2.3 Energy

The following describes items relating to Energy included in this project.

#	Initiative	Description	Responsibility
2.3.A	Building Fabric	Where appropriate, the building will include additional insulation that significantly improves upon the NCC reference case. Actual building fabric system performance values will be confirmed following detailed energy modelling.	ESD Consultant / Architect
2.3.B	Glazing	High performance double glazing will be provided throughout the development. Actual glazing thermal performance will be confirmed following detailed energy modelling.	ESD Consultant / Architect
2.3.C	Solar PV	The project includes an indicative area of 185m^2 for the inclusion of solar photovoltaic (PV) panel. This area can accommodate a total system size of 25kWp, which can generate approximately 25MWh per annum with a 10° inclination. This energy will be used for common area services, and the feasibility for future battery storage will explored at a later stage. Detailed modelling may be undertaken at a later date..	ESD Consultant / Contractor
2.3.D	HVAC	The building's heating and cooling will be provided by efficient VRF / VRV systems. These systems generally have a coefficient of performance (COP) of at least 3.5, but can achieve COPs of greater than 5.0 depending on the system configuration and environmental conditions.	Mechanical Designer / Contractor
2.3.E	Lighting	The project will generally include energy-efficient LEDs throughout. This initiative will enable the development to achieve an overall lighting power density of no more than 4W/m^2.	Lighting Designer / Contractor
2.3.F	Lighting Control	Common area lighting, excluding safety lighting, will be provided with daylight/motion sensors where applicable.	Lighting Designer / Contractor
2.3.G	Domestic Hot Water System	The project is currently adopting a gas domestic hot water system to reduce overall energy consumption and greenhouse gas emissions when compared with a conventional electric system. The client is currently exploring heat pump technology to further improve the system, however this will be confirmed at a later date once further analysis has been conducted.	Hydraulic Consultant / Contractor

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2.3.H	Appliances	Whitegoods that are included in the development, such as dishwashers, will have a minimum 4 Star Energy Rating.	Architect / Contractor

2.4 Transport

The following describes items relating to Transport included in this project.

#	Initiative	Description	Responsibility
2.4.A	Bicycle Parking Facilities	The project currently includes secure bicycle parking in the basement. There are 14 lockable parks in the basement, and 9 commercial/tenancy and visitor spaces at ground level. These spaces are all at grade to improve accessible and avoid cyclists having to unnecessarily lift their bikes.	Architect / Contractor
2.4.B	Walk Score	Based on the project's location, the Walk Score is 87. This means that the project is within close proximity of key businesses and shops that most errands can be accomplished on foot.	Architect

2.5 Water

The following describes items relating to Water included in this project.

#	Initiative	Description	Responsibility
2.5.A	Efficient Fixtures and Fittings	Through the use of water-efficient fixtures and fittings, and rainwater reuse, the development is able to achieve approximately a 15% reduction in potable water consumption. Current selection includes WELS 6 Star taps, 4 Star toilets, and 3 Star showers.	Architect / Contractor
2.5.B	Rainwater Harvesting & Reuse	A rainwater tank will be provided in the basement level and will harvest all rainwater from the roof. Rainwater will be used for some toilet flushing and landscape irrigation. The extent of reuse will be determined during Design Development phase following detailed water balance modelling. At this stage the rainwater tank is anticipated to be approximately 20kL in capacity.	Hydraulic Designer / Contractor
2.5.C	Landscape Irrigation	Landscape irrigation will be delivered via sub-surface drip systems using harvested rainwater.	Landscape Designer / Contractor

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2.6 Materials

The following describes items relating to Materials included in this project.

#	Initiative	Description	Responsibility
2.6.A	Construction & Demolition Waste	During demolition and construction phases, the contractor is to ensure as much material is recycled as practical. Individual bins to separate waste streams will improve recycling rates on site.	Contractor
2.6.B	Sustainable Timber	All major timber in this development will be sustainably sourced and hold either FSC or PEFC/AFS certification.	Architect / Contractor

2.7 Land Use & Ecology

The following describes items relating to Land Use & Ecology included in this project.

#	Initiative	Description	Responsibility
2.7.A	Large Balconies	Each residence is provided with large balconies with floor waste traps to encourage outdoor living and urban-scale gardening.	Architect / Contractor
2.7.B	Deep Soil Zones	3m wide raised planter at the rear of the site will provide a buffer between town homes and building. This provides a total of 37.1m^2 and is accompanied by other landscaping zones.	Landscape Designer / Contractor

2.8 Emissions

The following describes items relating to Emissions included in this project.

#	Initiative	Description	Responsibility
2.8.A	Waterless Heat Rejection	The building does not utilise any heat-rejection water. This is achieved through the adoption of VRF / VRV heating and cooling.	Mechanical Designer / Contractor
2.8.B	Light Pollution	All external lighting that is not required for pedestrian safety will be positioned to avoid direct light pollution to the night sky.	Lighting Designer / Contractor

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2.9 *Innovation*

The following describes items relating to Innovation included in this project.

#	Initiative	Description	Responsibility
2.9.A	Smart Building	The development incorporates smart technology in the building, including CCTV, sound system, apartment and main entry door access, etc. all via a smart phone app. This can greatly assist in how the residents use the building; potentially improving the way they live. This technology also has the potential to be connected to consumption data of each residence, allowing occupants to make appropriate energy and water decisions.	BMS Contractor / Contractor
2.9.B	Tecport	Energy consumption will be easily visible and tracked on the smartphone app (Eve) for residents. The Eve app shows energy consumption charts for daily, weekly and monthly usage. For penthouse apartments connected to collar, the Eve app will report how much solar has been used or stored.	BMS Contractor / Contractor

3 Council ESD Requirements and Objectives

The following table provides a summary of the overall design response in relation to Council requirements and objectives.

#	Objective	Design Response
Objective 23	Development designed and sited to conserve and minimise waste.	The building incorporates a number of features that will reduce energy consumption and reduce waste. These include good building fabric, glazing, solar PVs, efficient buildings services (HVAC, lighting DHW) and controls, and efficient appliances. The development also includes a Waste Management Plan developed by Salt3 that addresses landfill, recycling and FOGO waste.
Clause 67	Development should provide for efficient solar access to buildings and open space all year round.	The development is positioned to maximise the available sunlight and is further assisted with window configuration and space layout. South-facing dwellings

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		will have less solar exposure than the northern façade, however this is a practical outcome for this urban site.
Clause 68	Buildings should be sited and designed to ensure: a) That the main living areas and the private open space associated with the main living areas, face north to maximise exposure to winter sun; and b) Adequate natural light and winter sunlight is available to the main internal living areas and principal private open spaces of adjacent properties.	All apartments facing Rundle St will have main living areas facing north. For South-facing apartments, natural light to the main living areas is maximised through large high performance windows.
Clause 69	Development should be designed to minimise energy consumption by incorporating, where practicable, energy efficient building design elements, techniques and materials, such as: a) The sizing, orientation and shading of windows to reduce summer heat loads and take advantage of winter sun; b) The use of deciduous trees, pergolas, eaves, verandas and awnings, to allow penetration of heat and light from the sun in winter and to provide shade in summer; c) Openings designed to maximise the potential for natural cross-ventilation to enable cooling breezes to reduce internal temperatures in the summer months; or the use of colours on external surfaces such as roofs and walls, to minimise heat absorption in summer.	The building incorporates a number of features that will minimise energy consumption. These include good building fabric, appropriately-size high performance glazing, solar PVs, efficient buildings services (HVAC, lighting DHW) and controls, and efficient appliances. Excessive solar gains will be minimised through external perforated shading devices and deep balconies. All spaces will be provided with operable windows to allow for good natural cross-ventilation throughout. Common areas will also be provided with operable windows to encourage natural ventilation.
Clause 70	Development should facilitate the efficient use of solar collectors, such as solar hot water systems and photovoltaics cells by: a) Taking into account overshadowing from neighbouring buildings and trees;	The development includes allowance for a potential 25kWp onsite energy generation system. The system will be on the roof of the building which will not be impacted by neighbouring overshadowing or vegetation.

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	and b) Designing roof orientation and pitch to maximise exposure to direct sunlight.	The relatively flat roof will maximise the number of panels to be installed on the roof at 10° inclination with minimal self-shading.
Clause 71	Development should maintain solar access, for a minimum of 3 hours between 9am and 3pm on 21 June, to: a) Any existing solar collectors (such as solar hot water systems and photovoltaic cells) on adjoining properties; or b) An area of at least 10m^2 on the north facing roof of the existing building/s, in the event that there are no existing solar panels and/or photovoltaic cells on the adjoining property; and in any case Development should not increase the overshadowed area by more than 20 per cent in cases where overshadowing already exceeds these requirements.	Based on the proposed PV layout (185m^2), there will be minimal impact by the plant screen overshadowing the system. The western portion of the array (approx. 30m^2) will only be impacted in the morning, however the rest of the system will be unaffected.
Clause 72	Development should not incorporate vegetation or landscape elements which are likely to overshadow existing or proposed solar collectors (including solar hot water systems and photovoltaic cells).	The proposed solar photovoltaic panels will be on the roof of the building. No vegetation of landscape elements will impact these collectors.

4 Conclusion

Based on the above inclusions and the client's commitment to ESD, the project satisfies Council's requirements for a development of this nature.

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Appendix G – Acoustic report

88 Rundle Street

Waste Collection Noise Assessment

S5993C1

May 2019

sonus.

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Document Title	:	88 Rundle Street Waste Collection Noise Assessment
Document Reference	:	S5993C1
Date	:	May 2019
Author	:	Jason Turner, MAAS
Reviewer	:	Chris Turnbull, MAAS

INTRODUCTION

A waste collection noise assessment has been made of the proposed apartment building to be located at 88 Rundle Street, Kent Town.

The proposed development comprises 5 levels of apartments, underground car parking for residences, and associated facilities including a café and fitness studio. Waste collection will occur at the rear (south) of the café on the ground level. Collection trucks will enter and exit the site via Rundle Street.

Figure 1: *Site Plan.*

The subject site is located within a mixed use area with other residential land uses and commercial land uses in the immediate vicinity of the site. The closest noise sensitive locations are the existing residences located to the east of the site. The locations of the closest residences and the proposed facility are shown and labelled in Appendix A.

The assessment considers noise levels at noise sensitive locations from waste collection activity at the proposed facility, and recommends acoustic treatment measured to ensure appropriate residential amenity.

The assessment has been based on *Alexander Brown Architects* drawing set for "RUNDLE STREET APARTMENTS", project reference "18-016", dated April/May 2019, including drawings "PL00" through "PL17".

CRITERIA

Development Plan

The proposed facility and all nearby residences are within *The Parade/Fullarton Road Policy Area 11.2* within the *Mixed Use Historic (Conservation) Zone* of the Norwood Payneham and St Peters (City) Council Development Plan[1]. The Development Plan has been reviewed and the following provision is relevant to the waste collection noise assessment:

City Wide – Interface Between Land Uses

Noise Generating Activities

PDC 86 *Development that emits noise (other than music noise) should include noise attenuation measures that achieve the relevant Environment Protection (Noise) Policy criteria when assessed at the nearest existing noise sensitive premises.*

Environment Protection (Noise) Policy 2007

PDC 86 references the *Environment Protection (Noise) Policy,* which provides specific provisions for activity such as rubbish collection. The most recent version is the *Environment Protection (Noise) Policy 2007* (the Policy).

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

The Policy addresses with rubbish collection by effectively limiting the 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 Sundays or public holidays, 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), or less than that which already occurs in the ambient acoustic environment.

[1] Consolidated 21 March 2019.

ASSESSMENT

In order for rubbish collection to achieve the *Environment Protection (Noise) Policy 2007,* the hours of collection should be restricted to that of Division 3 of the Policy. That is, only *between the hours of 9am and 7pm on a Sunday or public holiday, and 7am and 7pm on any other day.*

CONCLUSION

A waste collection noise assessment has been made of the proposed apartment building to be located at 88 Rundle Street, Kent Town.

The assessment considers noise levels at noise sensitive locations from waste collection activity at the proposed facility, and recommends acoustic treatment measures to ensure appropriate residential amenity.

The development will achieve the relevant requirements of the *Environment Protection (Noise) Policy 2007* relating to waste collection subject to limiting the waste collection to occur at specific times.

It is therefore considered that the facility has been designed to *minimise adverse impacts*, *avoid unreasonable interference on amenity*, and *will not detrimentally affect the locality by way of noise*, thereby achieving the relevant provisions of the Development Plan related to waste collection noise.

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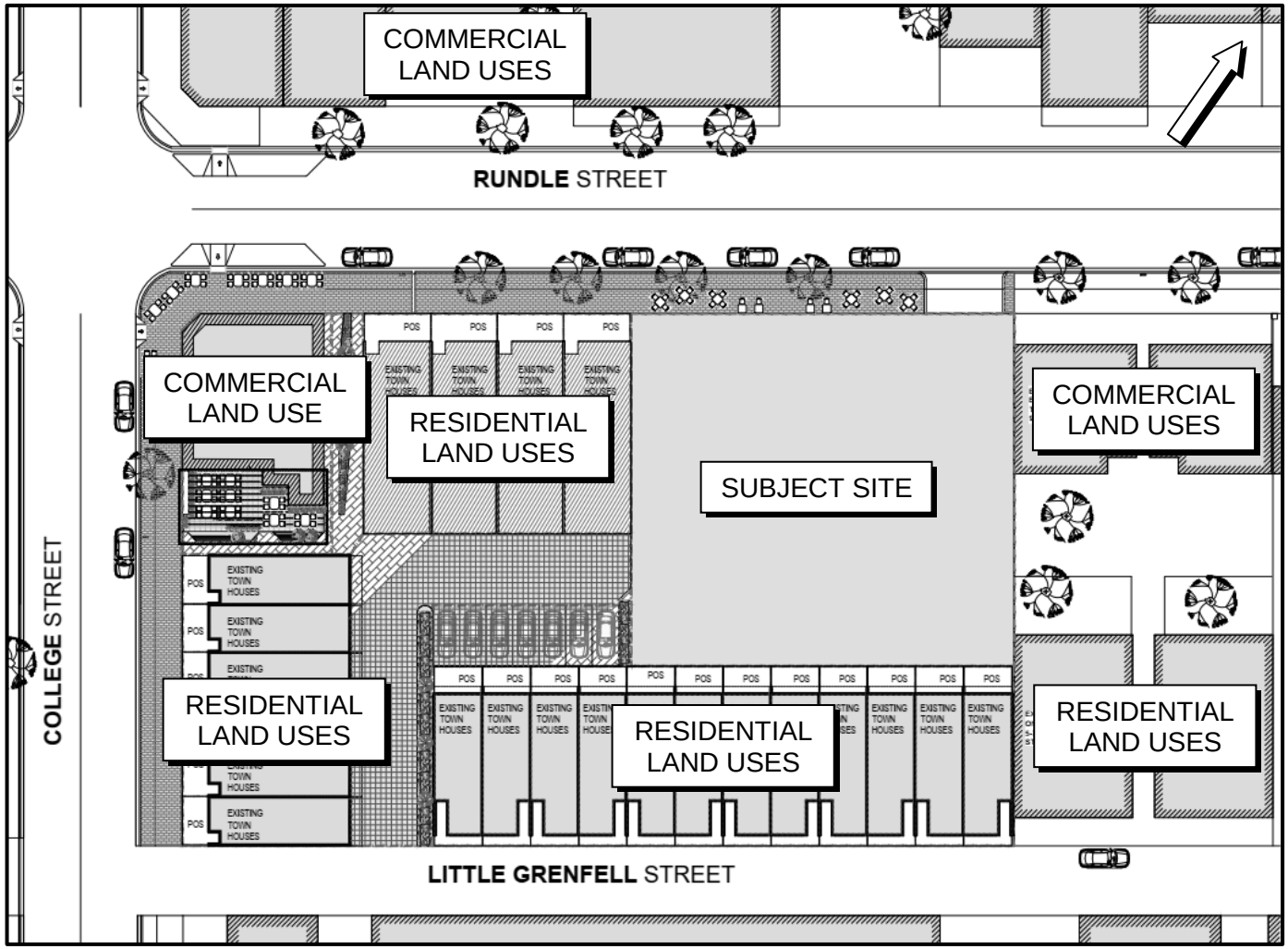
APPENDIX A: Site locality and nearby residences.



Appendix H – Contamination report

environmental projects

Soil Assessment Report

88 Rundle Street, Kent Town, South Australia 5067

29 November 2017

Level 3 117 King William Street Adelaide 5000
environmentalprojects.com.au

Document Control

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Author(s): BF

Principal review: JP

Approved for issue: JP

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Revision	Date Issued	Client	Other	EP
FINAL	29 November 2017	1 x PDF	-	1 x PDF file

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EXECUTIVE SUMMARY

Environmental Projects was commissioned by the client to undertake an environmental assessment of site soils. The site, located at 88 Rundle Street Kent Town, SA was a vacant site free from any buildings or hardstand areas and is proposed to be developed for high density residential land use including townhouses with minimal garden areas, a proposed high rise hotel and driveways.

A soil assessment of the site was required to provide an indication of the presence or absence of soil contamination. The soil investigations included soil bore drilling at 10 grid based locations (based on AS 4482.1-2005 guidance for a 0.35 ha site) to a total depth of 1 mBGL and two targeted soil bores (in the location of the former 400L UST) to a depth of 4 mBGL. Soil samples were submitted to a NATA accredited laboratory with selected samples requested for testing for chemicals considered to be of concern.

The results of the soil assessment identified the presence of elevated concentrations of PAHs, including carcinogenic PAHs as benzo(a)pyrene toxicity equivalents (BaP TEQ) above HIL B (residential high density). The elevated concentrations appeared to be within a specific layer dark brown silty clay fill containing ash and cinders that was present across the approximate south eastern corner of site (see Figure 4 in **Appendix A**).

The balance of the site had target analyte concentrations in selected soil samples that complied with HIL B (residential high density).

Site remediation was undertaken to excavate a visually discernible contaminated ash layer from across the approximate south eastern corner of site. Remediation excavations removed the contaminated ash layer to expose a visually distinct red brown natural clay layer. The natural in-situ soils were sampled from the base of excavations at 18 locations and from the wall of excavations at 7 locations. Samples selected for laboratory testing had concentrations below the laboratory LOR for target soil contaminants. Validation sampling and testing of selected soil samples from the base and walls of the remediation excavations confirmed the successful removal of the PAH contaminated soil layer.

The final condition of in-situ soils across the site suggested target analytes concentrations in selected soil samples complied with HIL B (residential high density)

The information provided in this report is subject to the limitations expressed in Section 10. The reader should make themselves aware of the limitations and how they relate to the provided above.

1. INTRODUCTION

Environmental Projects (EP) was engaged by Greg Meyer (the client) to undertake soil sampling as a precursor to residential development at 88 Rundle Street, Kent Town, South Australia, 5067. A site location plan is provided as Figure 1 in **Appendix A**.

EP understood the following:

- The site area was approximately 3,500 m^2
- The site was to be developed for high density residential use including townhouses and a hotel
- The client requested soil sampling to determine whether historical soil contamination was present across site
- A former 400 L underground storage tank (UST) had been removed from site and its former location was to be accurately located by the site supervisor for targeted soil assessment

The information provided in this report is subject to the limitation expressed in Section 10. The reader should make themselves aware of the limitations and how they relate to the conclusions and recommendations provided at Section 9.

2. REGULATORY FRAMEWORK

In South Australia, the assessment, management and remediation of site contamination is regulated by the *Environment Protection Act* 1993 (*EP Act*). The *EP Act* 1993 defines site contamination in section 5B as follows:

(1) For the purposes of this Act, site contamination exists at a site if—

(a) chemical substances are present on or below the surface of the site in concentrations above the background concentrations (if any); and

(b) the chemical substances have, at least in part, come to be present there as a result of an activity at the site or elsewhere; and

(c) the presence of the chemical substances in those concentrations has resulted in—

(i) actual or potential harm to the health or safety of human beings that is not trivial, taking into account current or proposed land uses; or

(ii) actual or potential harm to water that is not trivial; or

(iii) other actual or potential environmental harm that is not trivial, taking into account current or proposed land uses.

(2) For the purposes of this Act, environmental harm is caused by the presence of chemical substances—

(a) whether the harm is a direct or indirect result of the presence of the chemical substances; and

(b) whether the harm results from the presence of the chemical substances alone or the combined effects of the presence of the chemical substances and other factors.

(3) For the purposes of this Act, site contamination does not exist at a site if circumstances of a kind prescribed by regulation apply to the site.

Based on the above, the first stage in determining whether or not site contamination exists is to assess whether chemical substances have been added to the site through an activity and whether these substances are above background concentrations. The second stage is to assess whether the chemical substances have resulted in actual or potential harm to the health or safety of human beings or the environment (including water) that is not trivial.

If site contamination is determined to be present at a site, the EP Act provides mechanisms to assign responsibility for the contamination and appropriate assessment and/or remediation of the contamination.

The professional assessment of site contamination and consequential risk to human health and the environment is guided by the National Environment Protection Council National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM, as amended 2013), Australian Standards and numerous other guidelines and technical publications prepared by the EPA and other scientific organisations. The ASC NEPM operates as an environment protection policy under the *EP Act* 1993.

3. SCOPE OF WORK

The soil assessment scope of work included:

- intrusive soil investigations, including drilling of 10 grid based soil bores (based on AS 4482.1-2005 guidance for a 0.35 ha site) to a total depth of 1 metre below ground level (mBGL) and two targeted soil bores (in the location of the former 400L UST) to a depth of 4 mBGL
- logging of soil conditions at each sampling location, including consideration of odours, presence of foreign materials and other relevant observations
- collection of a minimum of four soil samples from each location and at intervals considered appropriate by the field consultant and laboratory analysis of samples for the inferred contaminants of concern,
- collection of blind coded field duplicates and equipment rinse blank samples for quality control (QC) purposes
- comparison of soil results to applicable human health screening guidelines
- additional soil testing to delineate any exceedances of the applicable criteria
- targeted remediation of impacted soil by excavation and stockpiling for off-site disposal and validation sampling of remaining in-situ soils
- preparation of this soil assessment report

4. SOIL ASSESSMENT METHODOLOGY

4.1 Regulatory Guidance

Intrusive assessment of soils at the subject site was completed with reference to the guidance in the following publications:

- Environment Protection Authority (2010) Standard for the production and use of Waste Derived Fill, South Australia
- Environment Protection Authority Victoria, 2007. Soils Sampling Guideline (Off-site Management and Acceptance to Landfill). Publication 1178
- National Environmental Protection Council 1999, National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM), as amended in 2013. Schedules B(1), B(2), B(4).
- Standards Australia, AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds

4.2 Soil Sampling Methodology

The soil investigation methodology is summarised in the table below:

Table 4-1: Soil Investigation Methodology

Activity	Details
Environment, health, safety (EHS) plan	Prior to the commencement of fieldwork, EP prepared a site-specific EHS plan
Soil bore sampling	On 24 October 2017, 10 grid based soil bores and two targeted soil bores were drilled by an experienced driller (AussieProbe) using push tube methodology. Grid based soil bores were drilled to 1 mBGL. Two targeted soil bores were drilled through the former UST pit to a total depth of 4 mBGL. The site supervisor, who removed the UST, advised EP of the former location to ensure soil bores were drilled within the former UST pit. Soil samples were obtained from depth intervals considered relevant for sampling by EP to ensure that all discrete fill and natural soil layers were sampled.
Soil logging	Soils encountered at each sampling location were logged in general accordance with the Standards Australia (1993) Geotechnical Site Investigations AS1726. Soil logs are provided as **Appendix B.**
Sample handling	Soil samples were handled exclusively by EP personnel, and samples were stored in glass jars supplied by the primary contract laboratory. Disposable nitrile gloves were worn whilst handling all samples and were replaced prior to the collection of each sample.
Decontamination of sampling equipment	Push tubes and sample core trays were decontaminated using a phosphate free Decon 90 solution followed by a potable water rinse.
Duplicate samples	A total of eight blind coded duplicate samples were obtained whilst sampling soil cores to meet QA/QC requirements. A total of three blind coded duplicate samples from soil sampling were selected for chemical testing, of which two were intra-lab duplicates and one was inter-lab duplicates.
Sample preservation	All soil samples were stored under chilled conditions in a portable cooler immediately after sampling. Samples were kept chilled prior to and during delivery to the contract laboratory. Sample transport was performed in accordance with EPs chain of custody procedures.

Activity	Details
Laboratory analysis	Envirolab was contracted as the primary laboratory for analysis. Australian Laboratory Services (ALS) was the secondary laboratory contracted to analyse inter-laboratory duplicate samples. Both laboratories were NATA accredited for the selected analysis. The following testing was requested: • 24 x heavy metals (17)[1] • 10 x polycyclic aromatic hydrocarbons (PAHs) • 5 x total recoverable hydrocarbons (TRH) and benzene, toluene, ethylbenzene and xylenes (BTEX) • 5 x organochlorine pesticides (OCPs) • 1 x NEPM HIL Screen[2]

[1]Heavy metals (17): arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, selenium, silver, tin, zinc.

[2]NEPM HIL Screen: metals (arsenic, beryllium, boron, cadmium, hexavalent chromium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, zinc), TRH, PAH, phenols, OCPs, organophosphorus pesticides (OPPs), polychlorinated biphenyls (PCBs), cyanide, semi-volatile organic compounds (SVOCs), synthetic pyrethroids, phenoxy acids

5. SOIL SCREENING CRITERIA

5.1 Land Use for Assessment Criteria

The subject site is proposed to be redeveloped into high density residential allotments. Therefore, EP assessed whether site contamination existed with respect to a high density residential land use.

5.2 Risk Screening Criteria

The ASC NEPM provides a nationally consistent framework for assessing the presence and significance of site contamination in soil and groundwater. The NEPM methodology is based on assessing the potential for an unacceptable risk to human health or the environment by comparing concentrations of chemical substances to conservative, generic investigation levels for various environmental settings and land use scenarios.

Investigation levels are defined in the ASC NEPM as… *concentrations of a contaminant above which further appropriate investigation and evaluation will be required. They are not clean up or response levels. A response level is defined as… the concentration of a contaminant at a specific site based on a site assessment for which some form of response is required to provide an adequate margin of safety to protect public health and/or the environment.*

The NEPM health investigation levels (HILs) are based on conservative assumptions around providing protection to a young child living or playing on the site and subjected to exposure to contaminated soils. The most stringent HILs are assigned to sensitive land uses such as residential, child care centres and primary schools. Where the land use provides for reduced access to soils, or reduced time in the setting for a child (e.g. high density residential apartments or an industrial site), higher HILs are set respectively in the NEPM.

In the event that an investigation level is exceeded at a site, the nature of the appropriate response is typically determined by development of an appropriate site-specific risk management strategy or environmental or human health risk assessment.

5.3 Human Health and Environmental Screening Criteria

Based on the likely exposure scenarios for humans in a residential setting, EP adopted the ASC NEPM HILs for exposure setting 'B' – Residential with minimal opportunities for soil access, including dwellings with fully and permanently paved yard space such as high-rise buildings and apartments. This was considered to be suitable for assessing potential human health risks for the proposed high density residential development.

ASC NEPM health screening levels (HSLs) for vapour intrusion, based on the soil type and depth of the potential contamination source; and management limits for hydrocarbons based on soil type were also adopted as follows:

- ASC NEPM HSL A/B (residential) from a source between 0-1, 1-2 and 2-4 mBGL in clay soils; and
- ASC NEPM management limits for residential, parkland and public open space in fine soils

Chemical contaminants may adversely affect the ecological values of a site and the levels considered suitable based on human health considerations may not afford protection to the local ecology. In order to consider the potential for toxicity to sensitive plants and animals, contaminant concentrations have also been compared to ecological investigation levels (EILs) and ecological screening levels (ESLs) presented in the ASC NEPM. These values are typically only applicable to the top 2 metres of the soil profile where plants (and to a lesser degree animals) are likely to interact with the soil. Generic EILs were derived for arsenic, lead, naphthalene and DDT.

The screening guidelines adopted for assessing the contaminant status of soils at the site are provided in the soil chemical data tables in **Appendix C.**

5.4 NEPM Management Limits for Soils

Section 2.5 in ASC NEPM Schedule B (1) – Guideline on Investigation Levels for Soil and Groundwater, includes physical and aesthetic 'management limits' for petroleum hydrocarbon compounds. These limits reflect potential for adverse effects to exist beyond typical health and ecological concerns, including free phase formation, fire and explosive hazards, effects on buried infrastructure and aesthetic considerations. These values provide interim screening levels as Tier 1 guidance for residual petroleum hydrocarbon contamination and their application requires consideration of site specific factors such as the depth of building basements and services or for residual contamination to be re-excavated in the use of the land, in order to determine the maximum depth of application of these limits.

An exceedance means there is a potential for acute hazards to exist that may warrant remediation, even if chronic exposure risks are determined to be acceptable.

5.5 Soil Disposal Criteria

The criteria used to assess the suitability of soils for off-site disposal (Stockpile 1) are documented in EPA information sheet Current Criteria for the Classification of Waste including Commercial and Industrial Waste (Listed) and Waste Soil, dated March 2010.

The waste soil classifications, listed by severity of contamination from lowest to highest, are:

- Waste Fill (WF)
- Intermediate Waste Soil (IWS)
- Low-Level Contaminated Waste (LLCW)

Maximum permissible chemical concentrations for these waste classifications are referred to collectively as the soil disposal criteria**.**

In addition to chemical content, consideration was given to the physical requirements of WF as defined in the Environment Protection Regulations 2009. "Waste Fill" is defined as waste containing clay, concrete, rock, sand, soil or other inert mineralogical matter in pieces not exceeding 100 mm in length (but does not include waste consisting of or containing asbestos or bitumen).

6. SOIL RESULTS

The following section summarises the field observations and chemical results of the laboratory soil testing.

Grid based and targeted soil sampling locations are presented on Figure 2 in **Appendix A**. Tabulated laboratory soil testing results are presented in **Appendix C**.

Detailed descriptions of the in-situ materials encountered, and depth intervals identified are summarised in the soil borehole logs presented in **Appendix B.**

6.1 Surface and Subsurface Conditions

The site was generally flat with no buildings or hardstand pavements observed onsite. Fill material was encountered at each of the 10 grid based and two targeted sampling locations. Fill material across site appeared to consist of a shallow pale grey / pale brown / yellow fill layer of sand / clay mixtures with inclusions of brick fragments and gravels. Some trace ash and cinders were observed from soil bore locations SB3, SB7 and SB8. The surficial fill layer was generally underlain by a clay fill with varying silt and sand inclusions and darker colour (brown to red-brown) clay. Inclusions included some brick chip fragments, ash and cinders and trace amounts of bitumen. There was good correlation between elevated PAH laboratory results and logged soils (dark brown silty clays with inclusions of ash and cinders in SB6 to SB9).

Natural soil encountered were generally logged as red brown silty or sandy clays.

6.2 Soil Analytical Results

6.2.1 PAH

Concentrations of benzo(a)pyrene TEQ exceeded HIL B (residential high density) in soil samples SB6-3, SB7-2, SB8-3 and SB9-3. All samples were logged as a dark brown silty clay fill with inclusions of ash and cinders. The underlying soil sample from each location had concentrations of benzo(a)pyrene less than the HIL B criterion.

Concentrations of benzo(a)pyrene exceeded the ESL criterion (0.7 mg/kg) in soil samples SB6-3, SB7-2, SB8-3, SB8-4, SB9-3, and marginally exceeded the ESL criterion in SB10-1 (0.76 mg/kg) and SB11-3 (0.73 mg/kg).

6.2.2 Lead

Concentrations of lead exceeded HIL B (residential high density) in soil sample SB3-4. The underlying sample had a lead concentration less than the HIL B criterion.

Sample SB3-4 was logged as containing ash and cinders with trace clay, gravel and sand. The fill was observed to be an isolated pocket and excavated. The material was stockpiled with PAH impacted soils for off-site disposal to a licensed landfill facility. A validation sample was collected from underlying soils to confirm successful removal of impacted materials.

6.2.3 TPH

Sample SB8-3, collected from 0.3 to 0.4 mBGL, had concentrations for carbon chain fraction C_{16}-C_{34} that exceeded the ESL criterion. Concentrations of TPH in seven other samples selected for testing were below the adopted screening criteria or less than the laboratory limit of reporting (LOR).

Concentrations of samples tested were less than the HIL B criterion and adopted soil HSLs for vapour intrusion.

6.2.4 OCPs

Six soil samples were selected for OCP analysis and all samples had concentrations less than the applicable screening criteria. Trace concentrations were detected in all soil samples analysed, excluding sample SB3-4 where all concentrations were less than the laboratory LOR.

6.2.5 Targeted Soil Bores (SB11 and SB12)

Soil bores SB11 and SB12 were drilled through the former UST pit which was located by the site supervisor. Two soil samples from both soil bores were tested for TRH, BTEX and metals. All soil samples had TRH and BTEX concentrations less than the laboratory LOR. Metal concentrations were less than the adopted criteria and/or the adopted screening criteria.

6.2.6 Non-Detectable

The remaining analytes tested had concentrations generally below the laboratory LOR.

Some metal concentrations were reported above the laboratory LOR but were below the adopted screening criteria where available. These included:

- Phenol
- OPP
- PCB
- Several metals not listed here for brevity

7. REMEDIATION AND VALIDATION

From review of laboratory chemical results for analytes selected for testing, field logs and site observations, the following was generally noted by EP:

- Soil samples with elevated PAH concentrations were generally confined to the approximate south eastern corner of site (see Figure 3 in **Appendix A**)
- Soil samples with elevated PAH concentrations correlated well with a fill layer logged as a dark brown silty clay fill with inclusions of ash and cinders
- Additional laboratory testing of soil samples confirmed elevated PAH concentrations from underlying natural soils were below the laboratory LOR and / or the adopted screening criteria
- The PAH impacted fill layer, generally contained to the south east corner of site, was overlain by a surficial fill layer of an average thickness of 0.2 m.

A remediation and validation plan is provided as Figure 3 in **Appendix A**.

The following remediation excavation and validation was undertaken:

- The visibly discernible PAH impacted fill layer, approximately limited to SB6 and immediate surrounds and SB7-SB9 and immediate surrounds was carefully excavated and stockpiled for offsite disposal to a licensed landfill facility
- Validation samples were collected from remaining in-situ natural soils at the base and side walls of the excavation to confirm successful removal of PAH impacted fill material
- The ash and cinder pocket identified at SB3-4 with lead concentrations exceeding HIL B (residential high density) was excavated and stockpiled with impacted PAH soils for offsite disposal to a licensed landfill facility. A validation sample was collected from remaining in-situ soils to confirm successful removal of impacted fill material

A site remediation and validation plan showing remediated areas and validation samples is provided as Figure 3 in **Appendix A.**

7.1 Validation Results

Remediated areas and validation samples are provided on Figure 3 in **Appendix A**. Tabulated laboratory soil validation results are presented in **Appendix D**.

Validation samples had target contaminant concentrations generally less than the laboratory LOR. Where concentrations were reported above the laboratory LOR they were below the adopted screening criteria.

7.2 Stockpiled Soils for Disposal

The excavated impacted material was sampled for offsite disposal to an EPA licensed landfill facility. The stockpile was sampled for chemicals of concern identified from the initial soil investigation works.

Tabulated laboratory soil validation results are presented in **Appendix E**.

Concentrations of benzo(a)pyrene (BaP) exceeded the Low Level Contaminated Waste criterion in sample SP6.

The results of statistical interpretation (95% upper confidence level (UCL) about the mean) for BaP suggested that the average concentration across the site would be 3.308 mg/kg, less than the Low Level Contaminated Waste criterion of 5 mg/kg.

Concentrations of PAHs, lead, zinc and PCBs exceeded the Waste Fill and or Intermediate Waste Criteria in selected samples.

As a whole, the stockpile exceeded the Intermediate Waste classification.

Disposal classification had not been finalised at the time of preparing this report.

8. DATA VALIDATION

The relative percentage difference (RPD) for a pair of duplicate concentrations was calculated using the formula:

$$RPD\ (\%) = \quad 100(x1 - \bar{x}2) / x$$

where x_1, x_2 = duplicate results and $\bar{x}$ = mean of duplicate results.

According to the ASC NEPM,

- typical RPD values for soils are in the range of ±30%;
- a RPD within the range was considered to show acceptable agreement and, conversely, data was considered to have relatively poor agreement where a RPD was outside this range.

Generally higher RPD values occur for organic compounds than for metals and where low concentrations of an analyte are recorded.

The results of internal laboratory quality control procedures are provided within the laboratory certificates (**Appendix F**). The acceptance criteria for internal laboratory replicates was set at an RPD of 30%. Laboratory recoveries should be in the range 50% to 150%.

Table 12-17 indicates conformance to specific QA/QC requirements for soil analysis.

Table 8-2: Soil Data Validation

QA/QC Requirement	Compliant	Comments
Chain of Custody (COC) documentation completed	Yes	All samples were transported under EP COC procedures
Samples delivered to the laboratory within sample holding times and with correct preservative where required	Yes	All samples were delivered to the contract laboratory within the sample holding times and in laboratory supplied jars/containers.
All analysis NATA accredited	Yes	Envirolab and ALS was NATA accredited for all of the analyses performed.
Required number of sample duplicates	Yes	One duplicate sample was submitted for inter-laboratory analysis and two duplicate samples were submitted for intra-laboratory analysis, consistent of the recommendations in AS4482.1-2005 and the ASC NEPM.

QA/QC Requirement	Compliant	Comments
A majority of intra-laboratory field duplicate samples reported RPDs within +/-30% recommended by ASC NEPM	Yes	For the primary-intra-laboratory duplicate sample pairs tested, 40 of 49 RPDs were within +/-30%. RPDs not within +/-30% were likely to be due to the heterogeneous distribution of analytes in soil as there was no evidence in the data of a systematic laboratory or sampling error. A large number of RPDs were unable to be calculated due to one or both samples having concentrations below the laboratory LOR. Overall the analyte pair RPD results indicated good data correlation between the primary results and duplicate results.
A majority of inter-laboratory field duplicate samples reported RPDs within +/-30% recommended by ASC NEPM	Yes	For the primary- inter-laboratory duplicate sample pairs tested, 19 of 33 RPDs were within +/-30%. RPDs not within +/-30% were likely to be due to the heterogeneous distribution and low concentrations of analytes in soil as there was no evidence in the data of a systematic laboratory or sampling error. Multiple RPDs were unable to be calculated due to one or both samples having concentrations below laboratory PQL. Overall the analyte pair RPD results indicated good data correlation between the primary results and duplicate results.
Acceptable laboratory QC results	Yes	All sample hold times were complied with. All internal laboratory duplicates, method blanks, laboratory control spikes and matrix spikes were within appropriate limits with the exception of: • Barium duplicate RPD% for Envirolab. The laboratory control methods were considered acceptable for the purposes of this assessment.

9. CONCLUSIONS AND RECOMMENDATIONS

Environmental Projects was commissioned by the client to undertake an environmental assessment of site soils. The site, located at 88 Rundle Street Kent Town, SA was a vacant site free from any buildings or hardstand areas and is proposed to be developed for high density residential land use including townhouses with minimal garden areas, a proposed high rise hotel and driveways.

A soil assessment of the site was required to provide an indication of the presence or absence of soil contamination. The soil investigations included soil bore drilling at 10 grid based locations (based on AS 4482.1-2005 guidance for a 0.35 ha site) to a total depth of 1 mBGL and two targeted soil bores (in the location of the former 400L UST) to a depth of 4 mBGL. Soil samples were submitted to a NATA accredited laboratory with selected samples requested for testing for chemicals considered to be of concern.

The results of the soil assessment identified the presence of elevated concentrations of PAHs, including carcinogenic PAHs as benzo(a)pyrene toxicity equivalents (BaP TEQ) above HIL B (residential high density). The elevated concentrations appeared to be within a specific layer dark brown silty clay fill containing ash and cinders that was present across the approximate south eastern corner of site (see Figure 4 in **Appendix A**).

The balance of the site had target analyte concentrations in selected soil samples that complied with HIL B (residential high density).

Site remediation was undertaken to excavate a visually discernible contaminated ash layer from across the approximate south eastern corner of site. Remediation excavations removed the contaminated ash layer to expose a visually distinct red brown natural clay layer. The natural in-situ soils were sampled from the base of excavations at 18 locations and from the wall of excavations at 7 locations. Samples selected for laboratory testing had concentrations below the laboratory LOR for target soil contaminants. Validation sampling and testing of selected soil samples from the base and walls of the remediation excavations confirmed the successful removal of the PAH contaminated soil layer.

The final condition of in-situ soils across the site suggested target analytes concentrations in selected soil samples complied with HIL B (residential high density)

The information provided in this report is subject to the limitations expressed in Section 10. The reader should make themselves aware of the limitations and how they relate to the provided above.

10. LIMITATIONS

Scope of Services

This environmental site assessment report ("the report") has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Greg Meyer and Environmental Projects (EP) ("scope of services"). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

Reliance on Data

In preparing the report, EP has relied upon data, surveys, analyses, designs, plans and other information provided by Greg Meyer and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise stated in the report, EP has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. EP will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to EP.

Environmental Conclusions

In accordance with the scope of services, EP has relied upon the data and has conducted environmental field monitoring and/or testing in the preparation of the report. The nature and extent of monitoring and/or testing conducted is described in the report.

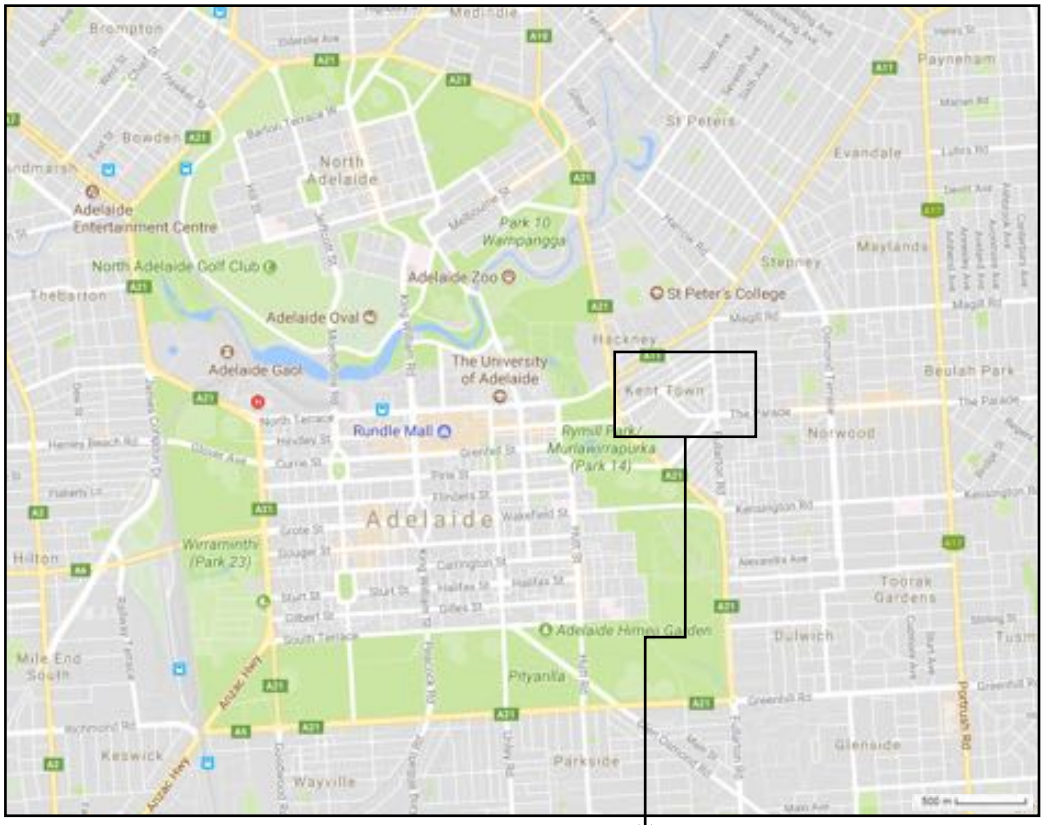
On all sites, varying degrees of non-uniformity of the vertical and horizontal soil or groundwater conditions are encountered. Hence no monitoring, common testing or sampling technique can eliminate the possibility that monitoring, or testing results/samples are not totally representative of soil and/or groundwater conditions encountered. The conclusions are based upon the data and the environmental field monitoring and/or testing and are therefore merely indicative of the environmental condition of the site at the time of preparing the report, including the presence or otherwise of contaminants or emissions.

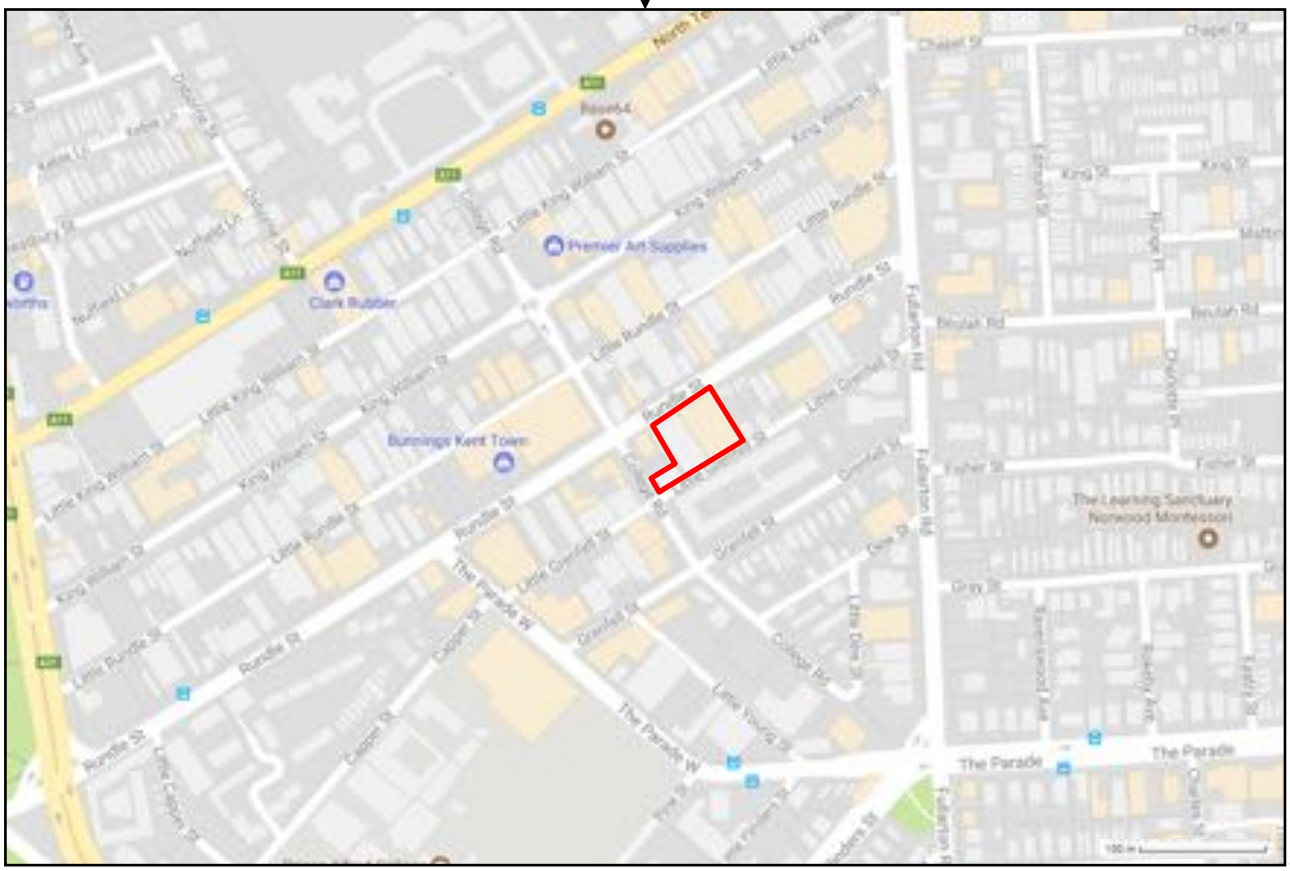
Also, it should be recognised that site conditions, including the extent and concentration of contaminants, can change with time.

Within the limitations imposed by the scope of services, the monitoring, testing, sampling and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

Appendix A

Figures





Environmental Projects Level 3, 117 King William Street, Adelaide 5000	**Site Location Plan**	Job Name: Soil Assessment	Prepared for: Greg Meyer
	Figure 1	Site Address: 88 Rundle Street, Kent Town, South Ausralia	
Source: Google Maps	Date: 08.11.2017	Job Number: 17087.01	Drawn: J. Tomas

Legend: Site boundary

Environmental Projects Level 3, 117 King William Street, Adelaide 5000	**Sample Location Plan**		Job Name: Soil Assessment	Prepared for: Greg Meyer	Scale 0 10 20 m
	Figure 2	Date: 08.11.2017	Site Address: 88 Rundle Street, Kent Town, South Australia	Image Source: SARIG	Job Number: 17087.01 Drawn: J Tomas

Legend: Approximate site boundary; Approximate targeted soil bore location; Approximate soil bore location

Environmental Projects Level 3, 117 King William Street, Adelaide 5000	**Validation Sample Location Plan**		Job Name: Soil Assessment	Prepared for: Greg Meyer	Scale 0 10 20 m
	Figure 3	Date: 23.11.2017	Site Address: 88 Rundle Street, Kent Town, South Australia	Image Source: SARIG	Job Number: 17087.01 Drawn: T Martin

Legend:

- Approximate site boundary
- Approximate area remediated to natural ground
- Approximate base excavation sample location
- Approximate wall excavation sample location