APPLICATION ON NOTIFICATION – Category 2

Applicant:	Lustro c/- Intro Architecture
Development Number:	020/A015/19
Nature of Development:	Demolition of all existing structures on the site, and construction of a nine level (including ground and mezzanine car park level) residential flat building with ancillary car parking and landscaping.
Development Type:	Merit
Subject Land:	278 South Terrace, Adelaide
Development Plan:	Adelaide (City), consolidated 7 June 2018
Zone / Policy Area:	City Living Zone / South Terrace Policy Area 30
Contact Officer:	Will Gormly
Phone Number:	08 7109 7370
Consultation Start Date:	6 June 2019
Consultation Close Date:	20 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
Fax Number: (08) 8303 0753

South Australian
DEVELOPMENT ACT 1993
REPRESENTATION ON APPLICATION – CATEGORY 2

Applicant:	Lustro c/- Intro Architecture
Development Number:	020/A015/19
Nature of Development:	Demolition of all existing structures on the site, and construction of a nine level (including ground and mezzanine car park level) residential flat building with ancillary car parking and landscaping.
Development Type:	Merit
Zone / Policy Area:	City Living Zone / South Terrace Policy Area 30
Subject Land:	278 South Terrace, Adelaide
Contact Officer:	Will Gormly
Phone Number:	08 7109 7370
Close Date:	20 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

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: ADELAIDE CITY COUNCIL

APPLICANT: LUSTRO
C/O INTRO ARCHITECTURE

Postal Address: PO BOX 207, RUNDLE MALL, ADELAIDE, SA 5000

Owner:

Postal Address:

BUILDER:

Postal Address:

Licence No:

CONTACT PERSON FOR FURTHER INFORMATION

Name: ANTHONY GATTI

Telephone: [work] 0402 424 403 [Ah]

Fax: [work] [Ah]

EXISTING USE:

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: THE DEMOLITION OF ALL EXISTING STRUCTURES ON SITE, THE CONSTRUCTION OF AN EIGHT STOREY RESIDENTIAL FLAT BUILDING WITH ANCILLARY CAR PARKING, LANDSCAPING AND BIKE STORAGE.

LOCATION OF PROPOSED DEVELOPMENT:

House No: 278 Lot No: Street: SOUTH TERRACE Town/Suburb: ADELAIDE

Section No [full/part] A305 FP 181957 Hundred: ADELAIDE Volume: 5661 Folio: 707

Section No [full/part] A306 FP181958 Hundred: ADELAIDE Volume: 5945 Folio: 733

LAND DIVISION:

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

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

BUILDING RULES CLASSIFICATION SOUGHT: Present classification:

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

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

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

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

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

DEVELOPMENT COST [do not include any fit-out costs]: $ 13.85 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: 11 / 02 / 2019

intro.com.co

RESIDENTIAL APARTMENT

278 SOUTH TERRACE, ADELAIDE
PLANNING REPORT

FEBRUARY 2019

Activating human space

INTRO

CONTENTS

01 INTRODUCTION

Intro has prepared this report on behalf of Lustro, to provide planning advice pertaining to the establishment of a mixed use building located at 278 South Terrace, Adelaide . The proposal represents an opportunity to deliver a high quality residential building overlooking the southern Adelaide Park Lands

In undertaking the project design, the Applicant has commissioned Intro Architects for both Planning and Architecture.

In forming my opinions herein, I confirm that I have viewed the proposal plans prepared by Intro Architecture, have attended the subject land and locality and considered the relevant provisions of the Adelaide City Development Plan (consolidated - 7 June 2018).

02 SUBJECT LAND AND LOCALITY

02.1 SUBJECT LAND

The subject site is located at 278 South Terrace and is on the south-west facing corner of South Terrace and Charlotte Street. The land holding is more particularly described within the following Certificates of Title:

ALLOTMENT	FILED PLAN	VOLUME/FOLIO	HUNDRED
306	181958	5945/733	Adelaide
305	181957	5661/707	Adelaide

A copy of the Certificates of Title is included within Appendix 01 of this document.

The site comprises a corner position with site area approximately 709 square metres in size. The site presents a frontage of 18.456m to South Terrace and 28.42m to Charlotte Street and 18.3m to a 3 metre-wide private road to the north. The subject land has no rights of way over this private road and it serves as rear access to the allotments to the north and east of the subject site.

Currently located on the subject site is a two-storey masonry building comprising office tenancies. The building has dual access: one glazed entry central on the western facade to Charlotte Street and the primary access central to the South Terrace frontage. The building has generous glazing to South Terrace. The bulk of the western facade is blank rendered masonry interrupted by small square windows with fixed shuttering. The building steps down to a single-storey built form to the north. The northern, single-storey built form presents an uninterrupted cream brick wall built directly onto a narrow, 3 metre-wide private road known as Charlotte Lane.

The existing built form is depicted in Figure 02.1 below.

No off-street parking is currently provided. There is currently on-street parking of 1 and 2hr time limits during business hours directly to the west and south of the site on Charlotte Street and South Terrace.

FIGURE 02.1: SUBJECT LAND FROM SOUTH TERRACE

02.2 LOCALITY

South Terrace is one of Adelaide's four bounding boulevards that form the interface between the city square mile to the north and the southern Adelaide Park Lands. The site locality is depicted in Figure 2.02 below.

Built form setbacks from South Terrace range between on-boundary development evident on the existing building on the subject site to setbacks of approximately 5 metres in the case of the Child and Youth Health building at 285-295 South Terrace to the east.

The elements in the near locality are described as follows:

SOUTH

- The subject site overlooks the **Adelaide Himeji Gardens** to the south-east celebrating Adelaide's sister city in Japan and is a carefully maintained Japanese-style garden popular for quiet reflection as well as weddings and functions and set within **Wita Wirra Park of the Adelaide Park Lands**.

WEST

- **274 South Terrace** - on the opposite side of Charlotte Street is a series of five, four-storey residential flat buildings with frontages to both South Terrace and Charlotte Street. The red and cream brick buildings are set back by a minimum 1 metre from the South Terrace and 2.5 metres from Charlotte Street. Common residential parking is provided at the rear of the site.
- **261-265 South Terrace** - approximately 60 metres to the west of the site beyond the residential flats is the State Heritage-listed Royal South Australian Deaf Society Headquarters which is a grand, red brick two-storey building constructed for purpose in 1927 in the Georgian revival idiom. The building is now the head offices for Deaf Can:Do. The building is historically significant as a continuing institution aiding those with hearing impairments.

NORTH

- **24, 26, 28 and 30 Charlotte Street** - across Charlotte Lane to the north is occupied by four, two-storey red brick row dwellings typical of those constructed in late 80s or early 90s. Whilst the basic built form is consistent, each of the dwellings has variety materiality including the garage or carport doors that dominate their street frontage.
- The southern-most of these row dwellings at Charlotte Street gains vehicular access to their rear garage via Charlotte Lane and a courtyard is located at the centre of the site.
- Both 26 and 28 Charlotte Street also have rear courtyards, with that of 26 Charlotte Street primarily covered by an open pergola.
- Further east at **7 and 7A Charlotte Place** are two, 2 to 3 storey semi-detached red brick dwellings with rear carport access via Charlotte Lane and central courtyards.
- **13 and 15 Charlotte Place** presents two large two-storey dwellings set behind forecourts and with the built form wrapping around a small internal courtyard. One of these recently constructed is a sandstone dwelling of mock-Georgian style whilst the 15 Charlotte Street dwelling is contemporary in style constructed of concrete and glass.

EAST

- **280 South Terrace** - adjacent to the site on the east is a two storey rendered art deco office building painted cream. The building is set back from the adjoining boundary by approximately 0.7 metres. The building presents a setback of approximately 4 metres from its primary frontage to South Terrace. No windows are evident on its western facade. To the rear of original built form comprises a two-storey addition built on the boundary.
- **283 South Terrace** - further east presents two semi-detached 3-storey townhouses. The dwellings are typical post-modern design of the last 1980s. These are set-back by approximately 3.5 metres from the front boundary.
- Further to the east, at **284-286 South Terrace** is Magarey House, a two-storey dwelling converted to a community centre and consulting room use that is listed as a State Heritage item by virtue of it fulfilling the below criteria under section 16(1) of the Act:

(g) it has a special association with the life or work of a person or organisation or an event of historical importance.

The bluestone house (since painted), commenced construction in 1884 and comprises quoins, a bay window with balconies. More recent extensions were added to the eastern side in the 1950s.

The SA Heritage Places Database documents that Margarey House is of heritage significance because of its association with the life and work of Dr Helen Mayo and the Mothers and Babies Health Association (MBHA) from 1938. Dr Helen Mayo, in partnership with Miss Harriet Stirling, founded the School for Mothers in 1909 which became the Mother and Babies Health Association (MBHA) in 1927. The principal role of the MBHA was to promote the education of the mother in all that concerns the physical, mental and moral development of herself and her offspring. In 1938 the MBHA moved to South Terrace establishing its infant welfare and training centre facility in Magarey House and has now become the Child and Youth Health.

Photographs of the locality are included in the Architectural Set that forms Appendix 02 of this report.

03 PROPOSED DEVELOPMENT

The particular elements of the proposal are detailed within the plans prepared by Intro Architecture dated February 2019, which form Appendix 02 of this planning statement.

The proposal consists of the construction of an 8-storey residential flat building comprising apartments and with ancillary car parking and bicycle parking.

A floor breakdown is provided below:

GROUND FLOOR

- lobby;
- DDA compliant apartment 71sqm with 12sqm courtyard;
- recessed entry with post boxes 12sqm;
- two car parking spaces including one DDA car parking space;
- car lift to Mezzanine and Level 1;
- 24 bicycle parking spaces;
- refuse store; and
- building services.

MEZZANINE CAR PARK

- 8 car parking spaces with car lift access; and
- resident storage areas.

LEVEL 1 CAR PARK

- 16 car parking spaces

LEVELS 2-6

- 4 x 2-bedroom apartments of 81-83 sqm per level;
- 4 x private balconies of 12sqm per level.

LEVEL 7

- 2 x 3-bedroom penthouses of 124-130sqm; and
- 2 x private balconies of 47-49sqm.

A waste chute is accessible from the lobbies at each apartment level.

Over-bonnet storage is incorporated into all car parking areas.

In total the proposed development incorporates 1 one-bedroom DDA-compliant apartment, 20 two-bedroom apartments, 2 three-bedroom penthouses, 26 secure car parking spaces and 24 bicycle parking spaces.

04 STATUTORY PLANNING

04.1 NATURE OF DEVELOPMENT

The proposed development is contained within the South Terrace Policy Area 30 of the City Living Zone as detailed within the Adelaide (City) Development Plan (consolidated – 7 June 2018). The site abuts the South East Policy Area 31 to the north.

The particular details of the proposed development are referenced in the preceding chapter. For ease of assessment I recommend that the nature of the proposed development be described as:

> *the demolition of all existing structures on site, the construction of an eight storey residential flat building with ancillary car parking, landscaping and bike storage.*

The proposed development is not prescribed as complying nor as non complying within the Development Plan and should be assessed on its merits as a consent form of development.

04.2 PUBLIC NOTIFICATION

Principle 17 of the City Living Zone prescribes dwellings more than one storey in height as Category 2 within the Zone. The proposal should navigate the Category 2 public notification process.

The Category 2 public notification procedures are detailed with Section 38 (3a) of the *Development Act 1993*.

04.3 RELEVANT DEVELOPMENT PLAN PROVISIONS

This planning assessment will consider the relevant provisions determined to be pertinent to the proposed development.

04.3.1 LAND USE + DESIRED CHARACTER

SOUTH TERRACE POLICY AREA 30 PROVISIONS

Objective 1: **Development that strengthens, achieves and is consistent with the desired character for the Policy Area.**

DESIRED CHARACTER

The Policy Area will primarily contain medium scale residential development that takes advantage of the frontage to the Park Lands. The lower levels of buildings may be developed for non-residential uses where they are of a type, nature and size that make a positive contribution to residential amenity and the street level interface with the Park Lands.

The location and scale of buildings will achieve high quality urban design outcomes with the highest built form along South Terrace facing the Park Lands. Development at the entrance to the City grid on the corner of Hutt Street will create landmark buildings.

Buildings will have minimal or no setback and provide tall walls when viewed from the main road frontage to achieve a consistent built form façade and a sense of address to the Park Lands. Landscaping and small variations in front setback will assist in softening the continuous edge of new built form and provide a higher amenity streetscape and pedestrian environment which is shaded by street trees and other mature vegetation.

Buildings will have a strong horizontal emphasis with clearly defined and segmented vertical elements. At street level, the use of solid materials will be appropriately balanced with glazed areas to provide visual interest and activity. Building façades will be well articulated with finer details that contribute positively to the public realm, including modelled façades, canopies, fenestration and balconies that make use of light and shade. An interesting pedestrian environment and human scale at ground level which integrates well with the Park Lands will be created.

.....

PDC 1:	**The Policy Area will primarily comprise residential development or mixed use buildings where non-residential development is appropriate at the ground and or first floor.**
PDC 2:	**Development should be consistent with the Desired Character for the Policy Area.**

CITY LIVING ZONE PROVISIONS

Objective 1:	**A Zone comprising a range of dwelling types and tenures, including affordable housing.**
Objective 2:	**Development should make a positive contribution to the desired character as expressed by its respective Policy Area.**
Objective 3:	**Increased dwelling densities in appropriate locations.**
PDC 2:	**The following types of development, or combinations thereof, are envisaged:** **Residential Flat Building**

The development proposes to extinguish a commercial land use on the site and construct a medium to high, 8-storey residential flat building, capitalising on views to the southern Park Lands and the southern Adelaide Hills Face beyond. The development will deliver high-quality, spacious city living apartments to the Adelaide CBD at a location where residential development is envisaged.

In line with the desired character for the policy area, the 30.6 metre tall building proposed is to be built to the property boundaries with limited balcony extents projecting over the footpaths at upper levels.

Landscaping is proposed to flank the corner portion of the ground floor, providing a green buffer to the DAA apartment and courtyard whilst giving some relief to the street frontage and providing additional amenity to the pedestrian environment.

The red brick element to the south-east clearly demarcates the entry point whilst referencing the heritage fabric to the west and the scale of the adjacent build form to the east. The hit and miss brick work allows ventilation to the car park without diminishing the streetscape presence of this element. The building entry is additionally recessed to provide incidental pedestrian shelter and an interstitial space for residents to greet guests.

The ground floor apartment is of adequate proportions and layout to facilitate ease of adaptation to a commercial land use in the future.

The built form comprises a series of undulating horizontal bands that form balconies and shadow lines providing sculptural articulation to the upper levels. The podium, by contrast is vertically attenuated by screening and column elements. The upper levels are vertically segmented by recessed elements central to the east and west facades.

Notwithstanding the higher scale of development, for the reasons listed above, the development is considered to reinforce and achieve the Desired Character of the Policy Area at an appropriate location for such, and aligns with the above zone and policy area provision.

PDC 5:	**The number of dwellings should be increased by:** **(a) the redevelopment of poor quality and underutilised buildings or sites which are in discord with the desired character of the Policy Area, provided maintenance of residential amenity and the values of heritage places;** **(b) the adaptation and conversion of non-residential buildings to residential uses; or** **(c) development in upper levels of existing buildings, or by increasing the height of buildings or roof volumes, or on sites behind existing buildings.**

Development at the subject site delivers 23 additional dwellings within the City Living Zone via the redevelopment of an underutilised commercial building that, by virtue of its land use and built form generally discords with the Desired Character of the zone and policy area.

04.3.2 LIVING CULTURE

Objective 3:	**Development that enhances the public environment and provides interest at street level.**

The podium element of the proposed development provides, soft landscaping, rhythmic columns and varied, warm materiality that imbues a residential atmosphere. A slatted timber fence veils the ground floor aparatment and courtyard from the public realm, striking an appropriate balance to allow views out over the Park Lands from the apartmentas well as passive surveillance whilst providing a sense of privacy.

The building in and of itself is considered to be a piece of understated art, adding a striking addition to the south Adelaide skyline.

Feature art is envisaged to be installed within the building lobby at a position where it can be glimpsed by passing pedestrians.

04.3.3 CITY LIVING

HOUSING CHOICE

Objective 6:	**A variety of housing options which supplement existing types of housing and suit the widely differing social, cultural and economic needs of all existing and future residents.**
Objective 7:	**A range of long and short term residential opportunities to increase the number and range of dwellings available whilst protecting identified areas of special character and improving the quality of the residential environment.**
PDC 5:	**Development should comprise of a range of housing types, tenures and cost, to meet the widely differing social and economic needs of residents.**

The proposed development comprises high-quality, well-appointed apartments that capitalises on parkland views. By virtue of the lands orientation in the streetscape, a tall built form is able to be accommodated on the subject site without unduly impacting on the daylight and solar access of surrounding dwellings.

A DDA compliant apartment is included on the ground floor of the proposed building. Further, the proposal offers both 2-bedroom and 3-bedroom apartments, each with desirable outlooks and balconies aimed at the high-end apartment market.

PDC 7:	**Residential development should be designed to be adaptable to meet people's needs throughout their lifespan to ensure that changes associated with old age, special access and mobility can be accommodated.**

The building design incorporates adaptable floor plates, at-grade access, lift access to apartments and stepless thresholds throughout including the showers. The building will have a services backbone for duress alarms should they be required in the future. Walls will be constructed with the strength to support new handrails as required.

There is generous circulation space within the entry foyer and lobbies.

The building will have the services backbone for the recharging of electric bikes, mobility scooters and cars.

MEDIUM TO HIGH SCALE RESIDENTIAL

Objective 22:	**Medium to high scale residential (including student accommodation) or serviced apartment development that:** **a. has a high standard of amenity and environmental performance;** **b. comprises functional internal layouts;**

c. **is adaptable to meet a variety of accommodation and living needs; and**

d. **includes well-designed and functional recreation and storage areas.**

The medium to high-scale residential development proposed will have generous floor areas, efficient open plan layouts with ample access to natural light.

ESD initiatives will be employed throughout including water efficient fittings, Low-E glazing throughout and energy efficient lighting and climate control.

Generous storage is available within each apartment with additional storage available within the car parking area and in dedicated store rooms on the mezzanine car parking level.

PDC 48: **Entrances to medium to high scale residential or serviced apartment development should:**

a. **be oriented towards the street;**

b. **be visible and easily identifiable from the street; and**

c. **provide shelter, a sense of personal address and transitional space around the entry.**

PDC 49: **Entrances to individual dwellings or apartments within medium to high scale residential or serviced apartment development should:**

a. **be located as close as practical to the lift and/or lobby access and minimise the need for long access corridors;**

b. **be clearly identifiable; and**

c. **avoid the creation of potential areas for entrapment.**

The articulation of the red brick podium makes the location of the main entrance intuitively legible. The full depth of the double height entrance foyer is visible from the street. The front entry doors are recessed back to provide a sheltered, transitional space.

The floor plate's central circulation results in a configuration where all dwellings are immediately accessible from the lift lobby for ease of access and clear lines of sight throughout.

DAYLIGHT, SUNLIGHT AND VENTILATION

PDC 50: **Medium to high scale residential or serviced apartment development should be designed to maximise opportunities to facilitate natural ventilation and capitalise on natural daylight and minimise the need for artificial lighting during daylight hours.**

PDC 51: **Medium to high scale residential or serviced apartment development should be designed and located to maximise solar access to dwellings and communal open space on the northern facade.**

PDC 52: **Ceiling heights that promote the use of taller windows, highlight windows, fan lights and light shelves should be utilised to facilitate access to natural light, improve daylight distribution and enhance air circulation, particularly in dwellings with limited light access and deep interiors.**

PDC 54: **The maximum distance of a habitable room such as a living, dining, bedroom or kitchen from a window providing natural light and ventilation to that room is 8 metres.**

PDC 56: **Medium to high scale residential or serviced apartment development should be designed to ensure living areas, private open space or communal open space, where such communal open space provides the primary area of private open space, are the main recipients of sunlight.**

Every apartment will have openable windows to all habitable rooms and bifold doors to the balconies allowing for very effective passive ventilation and natural daylight. By wrapping the southern balconies around the east and western facades, solar access to southern apartments is maximised. Generous floor to ceiling heights of 3 meters to apartment levels will allow for taller glazing to the balconies further optimising air circulation and daylighting.

All habitable rooms are located less than 8 metres from an external window.

PDC 57: **Medium to high scale residential or serviced apartment development should locate living areas, private open space and communal open space, where such communal open space provides the primary area of private open space, where they will receive sunlight and, where possible, should maintain at least two hours of direct sunlight solar time on 22 June to:**

a. at least one habitable room window (excluding bathroom, toilet, laundry or storage room windows);

b. to at least 20 percent of the private open space; and

The orientation of the private open space on east and west balconies of the southern apartments will achieve more than two hours of direct sunlight on winter solstice. Living areas will have bifold glazed doors facing east-west to balconies and all bedrooms will also be provided with adequate daylight thus achieving the above provisions at winter solstice.

PDC 58: **Natural cross ventilation of habitable rooms should be achieved by the following methods:**

a. positioning window and door openings in different directions to encourage cross ventilation from cooling summer breezes;

b. installing small low level windows on the windward side and larger raised openings on the leeward side to maximise airspeed in the room;

c. installing higher level casement or sash windows, clerestory windows or operable fanlight windows to facilitate convective currents;

d. selecting windows which the occupants can reconfigure to funnel breezes such as vertical louvred, casement windows and externally opening doors;

e. ensuring the internal layout minimises interruptions to airflow;

f. limiting building depth to allow for ease of cross ventilation; and/or

g. draught proofing doors, windows and other openings.

Every apartment occupies a corner of the building. With openable windows and doors to the adjacent facades, and an open plan living area and kitchen, effective cross ventilation can be achieved.

Door and windows will all be draught proofed to deliver effective zoned heating and cooling as well as acoustic performance.

PRIVATE OPEN SPACE

PDC 59: **Medium to high scale residential development and serviced apartments should provide the following private open space:**

c. 2 bedroom dwelling/apartment: 11 square metres.

d. 3+ bedroom dwelling/apartment: 15 square metres.

PDC 60: **Medium to high scale residential (other than student accommodation) or serviced apartment development should ensure direct access from living areas to private open space areas, which may take the form of balconies, terraces, decks or other elevated outdoor areas provided the amenity and visual privacy of adjacent properties is protected.**

Each two-bedroom apartment is provided with a minimum of 12 square metres of open space. The two penthouse apartments have 47 and 49 square metres of balcony area. All balconies are directly accessible from the living areas. Obscure glazing to north-facing balconies on levels 2, 3 and 4 will maintain privacy to the courtyards of the properties across Charlotte Lane to the north and north-east. The obscure glazing will also provide additional privacy to balconies from existing and potential vantage points within the northern locality.

PDC 61: **Other than for student accommodation, private open space should have a minimum dimension of 2 metres and should be well proportioned to be functional and promote indoor/outdoor living.**

PDC 62:	**Balconies should be integrated into the overall architectural form and detail of the development and should:** **a. utilise sun screens, pergolas, shutters and openable walls to control sunlight and wind;** **b. be cantilevered, partially cantilevered and/or recessed in response to daylight, wind, acoustic and visual privacy;** **c. be of a depth that ensures sunlight can enter the dwelling below; and** **d. allow views and casual surveillance of the street while providing for safety and visual privacy.**

All balconies and the ground floor courtyard have a minimum dimension of at least 2 metres and bi-fold doors allow for seamless indoor-outdoor integration of the living spaces.

Balconies are integral to the proposed building's form and are partially recessed and partially cantilevered for varied microclimatic conditions. Balconies are proportioned to permit adequate sunlight access to the dwellings below.

The balconies will deliver impressive views and opportunities for passive surveillance across South Terrace and the Park Lands.

VISUAL PRIVACY

PDC 66:	**Medium to high scale residential or serviced apartment development should be designed and sited to minimise the potential overlooking of habitable rooms such as bedrooms and living areas of adjacent development.**
PDC 67:	**A habitable room window, balcony, roof garden, terrace or deck should be set-back from boundaries with adjacent sites at least three metres to provide an adequate level of amenity and privacy and to not restrict the reasonable development of adjacent sites.**

Balcony balustrades to north-facing apartments over Levels 2 to 4 will be comprised of obscure glazing to screen potential overlooking of private spaces in the dwellings to the north and north-east.

Charlotte Lane is of a 3-metre width thus providing adequate separation from allotments to the north.

Balconies on levels 2 to 6 are set back by 2 metres from the eastern boundary and interface with this boundary for a five-metre extent to the southern corner and a two-metre extent to the northern corner. Notwithstanding this shortfall of balcony setback to this boundary, it is considered that reasonable development potential of the adjacent site at 280 South Terrace will not be unduly impacted as the site retains access to more desirable uninterrupted views to the south and north.

NOISE AND INTERNAL LAYOUT

PDC 68	**Medium to high scale residential or serviced apartment development close to high noise sources (e.g. major roads, established places of entertainment and centres of activity) should be designed to locate noise sensitive rooms and private open space away from noise sources, or be protected by appropriate shielding techniques.**
PDC 69	**Attached or abutting dwellings/apartments should be designed to minimise the transmission of sound between dwellings and, in particular, to protect bedrooms from possible noise intrusions.**

Reduced glazing to the bedrooms combined with their position back from South Terrace will minimise their exposure of these noise-sensitive rooms from any traffic noise. The high-level bedroom windows of the DDA compliant apartment at the ground floor will be fitted with double-glazing or equivalent acoustic glazing treatments to minimise noise intrusion.

MINIMUM UNIT SIZES

PDC 70 **Medium to high scale residential or serviced apartment development should provide a high quality living environment by ensuring the following minimum internal floor areas:**

c. 2 bedroom dwelling/apartment: 65 square metres

d. 3+ bedroom dwelling/apartment: 80 square metres plus an additional 15 square metres for every additional bedroom over 3 bedrooms.

ADAPTABILITY

PDC 72 **Within medium to high scale residential or serviced apartment development, dwelling/apartment layouts should be adaptable to accommodate:**

a. a range of activities and privacy levels between different spaces;

b. flexible room sizes and proportions;

c. efficient circulation to optimise the functionality of floor space within rooms; and

All apartment layouts have efficient circulation and adequate bedroom sizes to accommodate small desks. The bi-fold doors to the balconies effectively adapt the living areas a generously open indoor-outdoor space.

OUTLOOK

PDC 73 **All medium to high scale residential or serviced apartment development should be designed to ensure the living rooms have a satisfactory external outlook. Living rooms that do not have an outlook or the only source of outlook is through high level windows or a skylight are not considered to provide an appropriate level of amenity for the occupiers.**

The living areas to all apartments have desirable views to either the north across the city or, alternatively, to the south across the Adelaide Park Lands.

ON-SITE PARKING AND FENCING

Objective 23 **Safe and convenient on-site car parking for resident and visitor vehicles.**

PDC 75 **To ensure an adequate provision of on-site parking, car parking should be provided for medium to high scale residential (other than student accommodation) or serviced apartment development in accordance with Table Adel/7.**

Twenty-six secure car parking spaces are assigned to the apartments. Two resident car parks will be assigned per penthouse and one per each one and two-bedroom apartments. One surplus car park will be available to be assigned to an apartment on demand. An accessible car park is to be provided on the ground floor within easy access of the ground floor DDA-compliant one bedroom apartment.

PDC 76 **Garages and parking structures associated with medium to high scale residential or serviced apartment development should be located so that they do not visually dominate the street frontage.**

As depicted on drawings DA53 and DA100, the car parking elements are integrated within the overall podium form and car access is via the secondary street front whilst pedestrian movement is prioritised over South Terrace. The site has no rights of access over Charlotte Lane to the north.

The ground floor apartment addresses the street corner with the car parking located within the podium to the rear and above. It is thought that this car parking solution provides safety of movement whilst retaining an active street address and uninterrupted footpath to South Terrace.

PDC 77 **Car parking areas should be designed and located to:**

a. be close and convenient to dwellings/apartments;

b. be lit at night;

c. be well ventilated if enclosed;

d. avoid headlight glare into windows; and

e. clearly define visitor parking.

A car lift optimises space efficiency within the car park and enables the location of car parking within close proximity of lift access to the apartment levels. The car park area will be internally lit at night, is well ventilated with the use of aluminium louvers to three sides. The louvres will be angled to ensure that headlight glare into windows of adjacent dwellings does not occur.

Short-term visitor car parking is available on both South Terrace and Charlotte Street.

PDC 79 **Fencing and walls should:**

a. be articulated and detailed to provide visual interest;

b. assist the development to address the street;

c. assist in the provision of safety and surveillance;

d. assist in highlighting entrances; and

e. enable visibility of buildings from and to the street.

The podium is well articulated with red brick cladding in concert with timber slat fencing and vertical climbers. The double-height entry is easily legible and generously accessible. The timber slat fence to the ground floor tenancy enables passive surveillance across the South Terrace whilst retaining a sense of privacy to the apartment's private open space.

STORAGE AREAS

PDC 80 **Site facilities should be readily accessible to each dwelling/serviced apartment, complement the development and relevant desired character and should include:**

a. a common mail box structure located close to the main pedestrian entrance;

b. areas for the storage and collection of goods, materials, refuse and waste including facilities to enable the separation of recyclable materials as appropriate to the size and nature of the development and screened from public view; and

c. external clothes drying areas for residential dwellings that do not incorporate ground level open space.

A common mail box area is integrated into the building's undercover entry. Waste chute access is available to all floors and will be fitted to manage separate waste streams in consultation with a Waste Consultant during the detailed design process.

There is adequate space on the balconies to accommodate clothes drying.

PDC 81 **Medium to high scale residential (other than student accommodation) or serviced apartment development should provide adequate and accessible storage facilities for the occupants at the following minimum rates:**

b. 1 bedroom dwelling/apartment: 8 cubic metres

c. 2 bedroom dwelling/apartment: 10 cubic metres

d. 3+ bedroom dwelling/apartment: 12 cubic metres

50 percent of the storage space should be provided within the dwelling/apartment with the remainder provided in the basement or other communal areas.

In dwelling storage is provided at the following approximate rates:

- one-bedroom apartment 6.5m^3
- two-bedroom apartments 10m^3
- three-bedroom penthouses 15m^3.

Additional storage cages are provided in store rooms on the mezzanine level and above bonnet storage will also be provided throughout car parking areas. Adequate storage is achieved within the all apartments.

04.3.5 ENVIRONMENTAL

CRIME PREVENTION THROUGH URBAN DESIGN

Objective 24: **A safe and secure, crime resistant environment that:**

a. ensures that land uses are integrated and designed to facilitate natural surveillance;
b. promotes building and site security; and
c. promotes visibility through the incorporation of clear lines of sight and appropriate lighting.

PDC 82 **Development should promote the safety and security of the community in the public realm and within development. Development should:**

a. promote natural surveillance of the public realm, including open space, car parks, pedestrian routes, service lanes, public transport stops and residential areas, through the design and location of physical features, electrical and mechanical devices, activities and people to maximise visibility by:

i. orientating windows, doors and building entrances towards the street, open spaces, car parks, pedestrian routes and public transport stops;
ii. avoiding high walls, blank facades, carports and landscaping that obscures direct views to public areas;
iii. arranging living areas, windows, pedestrian paths and balconies to overlook recreation areas, entrances and car parks;
iv. creating a complementary mix of day and night-time activities, such as residential, commercial, recreational and community uses, that extend the duration and level of intensity of public activity;
v. ensuring that rear service areas and access lanes are either secured or exposed to surveillance.

The development will further activate South Terrace and the Park Lands interface. Clear sight lines will be achieved from the entry foyer and balcony spaces to the surrounds apart from where obscured glass balustrading is used to ensure privacy is retained to the dwellings to the north. The ground floor apartment and southern apartments above will have views out across South Terrace from their living area and courtyard or balconies.

The car parking, waste and service areas will be enclosed and secure.

c. provide awareness through design of what is around and what is ahead so that legitimate users and observers can make an accurate assessment of the safety of a locality and site and plan their behaviour accordingly by:

- **i. avoiding blind sharp corners, pillars, tall solid fences and a sudden change in grade of pathways, stairs or corridors so that movement can be predicted;**
- **ii. using devices such as convex security mirrors or reflective surfaces where lines of sight are impeded;**
- **iii. ensuring barriers along pathways such as landscaping, fencing and walls are permeable;**
- **iv. planting shrubs that have a mature height less than one metre and trees with a canopy that begins at two metres;**
- **v. adequate and consistent lighting of open spaces, building entrances, parking and pedestrian areas to avoid the creation of shadowed areas; and**
- **vi. use of robust and durable design features to discourage vandalism.**

The building has been designed to maximise the visual connections between the internal spaces with outdoor areas. For instance, residential apartments have external views and provide passive surveillance the public realm. The building design eliminates isolated external nooks, eliminating opportunities for hiding. All entry points to the building will be clearly identified by the architecture, lighting and signage.

The proposed development will incorporate a comprehensive range of active and passive surveillance strategies. All public and shared areas will be well lit to enable facial recognition so that people can see and interact with one another.
ed design.

Providing clearly defined paths of travel to and from all entrances has been a central component of the proposal. The main public entrance fronts a public thoroughfare and is directly accessible from the public realm. The paths of travel from surrounding public transit stops are clearly defined through the existing road network.

A robust material palette has been expressed throughout the design language.

Having regard to the commentary above, it is considered that the proposal achieves the intent of the Crime Prevention provisions of the Development Plan.

PDC 84	**To maximise security and safety, buildings should be designed to minimise access between roofs, balconies and windows of adjacent buildings.**

No access will occur from balconies or windows of adjacent buildings and adequate separation between balconies is provided.

NOISE RECEIVERS

Objective 27	**Noise sensitive development designed to protect its occupants from existing noise sources and from noise sources contemplated within the relevant Zone or Policy Area and that does not unreasonably interfere with the operation of non-residential uses contemplated within the relevant Zone or Policy Area.**
PDC 95	**Noise sensitive development should incorporate adequate noise attenuation measures into their design and construction to provide occupants with reasonable amenity when exposed to noise sources such as major transport corridors (road, rail, tram and aircraft), commercial centres, entertainment premises and the like, and from activities and land uses contemplated in the relevant Zone and Policy Area provisions.**
PDC 96	**Noise sensitive development in mixed use areas should not unreasonably interfere with the operation of surrounding non-residential uses that generate noise levels that are commensurate with the envisaged amenity of the locality.**

The proposed development will incorporate adequate glazing and solid construction in line with PDC 97 to ensure that occupants are protected from noise sources existing and contemplated for the zone. An acoustic report will be required in order to ensure that noise levels within the ground floor apartment is compliant given adjacency to services, car parking and traffic. It is anticipated that double-glazing or glass of equivalent

acoustic properties will be used throughout the ground floor apartment and elsewhere as required.

PDC 98 **Attached dwellings/serviced apartments should be designed to minimise the transmission of sound between dwellings/serviced apartments and should particularly protect bedrooms from possible noise intrusion.**

PDC 97 **Noise sensitive development adjacent to noise sources should include noise attenuation measures to achieve the following:**

a. satisfaction of the sleep disturbance criteria in the bedrooms or sleeping areas of the development as defined by the limits recommended by the World Health Organisation;

b. the maximum satisfactory levels in any habitable room for development near major roads, as provided in the Australian/New Zealand Standard AS/NZS 2107:2000 - 'Acoustics - Recommended Design Sound Levels and Reverberation Times for Building Interiors'; and

c. noise level in any bedroom, when exposed to music noise (L10) from existing entertainment premises, being:

i. less than 8 dB above the level of background noise (L90,15 min) in any octave band of the sound spectrum; and

ii. less than 5 dB(A) above the level of background noise (LA90,15 min) for the overall (sum of all octave bands) A-weighted levels.

Background noise within the habitable room can be taken to be that expected in a typical residential/ apartment development of the type proposed, that is inclusive of internal noise sources such as air conditioning systems, refrigerators and the like as deemed appropriate.

Unless otherwise demonstrated, the minimum background noise to be used will be:

Octave Band Centre Frequency (Hz)	Minimum Background Noise Level ($L_{A90,\ 15}$) dB (A)
63	10
125	12
250	14
500	14
1000	12
2000	10
4000	8
Overall Sum	21

on the basis of the windows being closed for the noise sensitive development and any existing entertainment premises complying with the relevant legislation relating to noise emission.

All private open spaces are suitably separated to protect bedrooms of adjacent apartments from possible noise intrusion from social activities. The apartments are sensitively laid out: bedrooms are located awady from South Terrace and living areas are not located directly above bedrooms. Doors and windows will be appropriately sealed to be the noise criteria in PDC 97.

PDC 99 **The number of dwellings/serviced apartments within a development sharing a common entry should be minimised to limit noise generation in internal access ways.**

On each residential level, no more than four dwellings will share common lobby access from the lift or stairs.

WASTE MANAGEMENT

Objective 28: **Development which supports high local environmental quality, promotes waste minimisation, re-use and recycling, encourages waste water, grey water and stormwater re-use and does not generate unacceptable levels of air, liquid or solid pollution.**

PDC 101 **A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development.**

A refuse area is provided at ground level with chutes for recycling, organic and general waste. Chute access will be provided at each apartment level.

PDC 102 **A dedicated area for the collection and sorting of construction waste and the recycling of building materials during construction as appropriate to the size and nature of the development should be provided and screened from public view.**

PDC 103 **Development greater than 2 000 square metres of total floor area should manage waste by:**

- **a. containing a dedicated area for the collection and sorting of construction waste and recyclable building materials;**
- **b. on-site storage and management of waste;**
- **c. disposal of non-recyclable waste; and**
- **d. incorporating waste water and stormwater re-use including the treatment and re-use of grey water.**

A Construction Waste Management Plan will be prepared to ensure that the development adheres to Council Wide PDC 103.

ENERGY EFFICIENCY

Objective 30: **Development which is compatible with the long term sustainability of the environment, minimises consumption of non-renewable resources and utilises alternative energy generation systems.**

A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development.

PDC 106 **Buildings should provide adequate thermal comfort for occupants and minimise the need for energy use for heating, cooling and lighting by:**

- **c. locating, sizing and shading windows to reduce summer heat loads and permit entry of winter sun;**
- **d. allowing for natural cross ventilation to enable cooling breezes to reduce internal temperatures in summer;**
- **e. including thermal insulation of roof, walls, floors and ceilings and by draught proofing doors, windows and openings;**
- **f. ensuring light colours are applied to external surfaces that receive a high degree of sun exposure, but not to an extent that will cause glare which produces discomfort or danger to pedestrians, occupants of adjacent buildings and users of vehicles;**
- **g. use of landscaping.**

All 2-bedroom apartments have approximately 30% of wall areas glazed whilst penthouses are at approximately 44%. The Low-E glazing to be specified, will allow the optimal views whilst retaining strong environmental performance. The primary extents of glazing throughout, is to the north and south facades where balconies are to optimise direct solar access over winter whilst shading the glazing over summer.

PDC 107 **All development should be designed to promote naturally ventilated and day lit buildings to minimise the need for mechanical ventilation and lighting systems.**

PDC 108 **Energy reductions should, where possible, be achieved by the following:**

- **a. appropriate orientation of the building by:**
  - **ii. maximising north/south facing facades;**
  - **iii. designing and locating the building so the north facade receives good direct solar radiation;**
  - **iv. minimising east/west facades to protect the building from summer sun and winter winds;**
  - **v. narrow floor plates to maximise the amount of floor area receiving good daylight; and/or**
  - **vi. minimising the ratio of wall surface to floor area.**
- **b. window orientation and shading;**
- **c. adequate thermal mass including night time purging to cool thermal mass;**
- **d. appropriate insulation by:**
  - **i. insulating windows, walls, floors and roofs; and**
  - **ii. sealing of external openings to minimise infiltration.**
- **e. maximising natural ventilation including the provision of openable windows;**
- **f. appropriate selection of materials, colours and finishes; and**
- **g. introduction of efficient energy use technologies such as geo-exchange and embedded, distributed energy generation systems such as cogeneration*, wind power, fuel cells and solar photovoltaic panels that supplement the energy needs of the building and in some cases, export surplus energy to the electricity grid.**

109	**Orientation and pitch of the roof should facilitate the efficient use of solar collectors and photovoltaic cells.**
111	**New buildings should be readily adaptable to future alternative uses.**
112	**Selection of internal materials for all buildings should be made with regard to internal air quality and ensure low toxic emissions, particularly with respect to paint and joinery products.**

The benefits of the site are that the north façade receives unimpeded daylighting from the south which will remain into the future given its frontage to South Terrace. Solar access from the north is also currently unimpeded. The architectural design of the building will ensure the highest environmental performance through material selection, location of openable windows and orientation and shading of glazed elements through the use of balcony elements.

Embodied energy will also be a consideration during final material selection.

Consideration will be given to the inclusion of distributed energy generation systems such as solar photovoltaics and the roof will be designed to accommodate a suitable array. Battery storage can also be incorporated in the building's service areas or surplus car parking space if desired in the future.

The layout and ceiling height of the ground floor apartment makes this space adaptable for alternative future uses.

PDC 113	**New residential development and residential extensions should be designed to minimise energy consumption and limit greenhouse gas emissions.**
PDC 114	**Development is encouraged to avoid heat loss by incorporating treatments, such as double glazing of windows along the southern elevation, or by minimizing the extent of windows facing south.**

MICRO-CLIMATE AND SUNLIGHT

Objective 33:	**Buildings which are designed and sited to be energy efficient and to minimise micro-climatic and solar access impacts on land or other buildings.**
Objective 34:	**Protection from rain, wind and sun without causing detriment to heritage places, street trees or the integrity of the streetscape.**
PDC 119	**Development should be designed and sited to minimise micro-climatic and solar access impact on adjacent land or buildings, including effects of patterns of wind, temperature, daylight, sunlight, glare and shadow.**
PDC 120	**Development should be designed and sited to ensure an adequate level of daylight, minimise overshadowing of buildings, and public and private outdoor spaces, particularly during the lunch time hours.**
PDC 122	**Glazing on building facades should not result in glare which produces discomfort or danger to pedestrians, occupants of adjacent buildings and users of vehicles.**

The proposed development is designed in review of ESD best-practise, the application of known and proven systems will be considered to facilitate greater efficiency outcomes and long-term cost-savings and comfort within the building. Consideration is to be given to double-glazing south-facing and ground floor apartment windows.

The site benefits from uninterrupted solar access to the north, whilst west-facing fenestration will be Low-E glazing to mitigate the summer afternoon peak heat load in the building.

Ample natural daylighting will be available to all apartments.

Glazing to the north, east and west elevations will be interrupted by the horizontal projecting balcony bands and will not result in glare.

Given the sites' location on a south-west facing corner, overshadowing impacts on adjacent dwellings is considered to be insignificant.

Objective 35:	**Development which maximises the use of stormwater.**
PDC 128	**Development should incorporate appropriate measures to minimise any concentrated stormwater discharge from the site.**

The proposed development will not increase stormwater discharged from the site.

04.3.6 BUILT FORM AND TOWNSCAPE

Objective 46:	**Reinforcement of the city's grid pattern of streets through:** **a. high rise development framing city boulevards, the Squares and Park Lands** **...**

The development proposed would deliver a medium to high rise development to frame South Terrace and the Adelaide Park Lands to the south.

Objective 47:	**Buildings should be designed to:** **a. reinforce the desired character of the area as contemplated by the minimum and maximum building heights in the Zone and Policy Area provisions;** **b. maintain a sense of openness to the sky and daylight to public spaces, open space areas and existing buildings;** **c. contribute to pedestrian safety and comfort; and** **d. provide for a transition of building heights between Zone and Policy Areas where building height guidelines differ.**

The proposed building is designed to a maximum height of 30.6 metres in a Policy Area where the height limit is 22 metres. South Terrace is of a width that embodies a sense of openness to the sky can accommodate greater building heights to the north.

Notwithstanding the height, the following design elements have been integrated into the proposed apartment building to reinforce the existing streetscape and Desired Character:

- the uppermost building canopy is stepped back by 2 metres from the balcony line and the parapet set back a further metre resulting in a building that reads as a height of some 27 metres when viewed from nearby along South Terrace. This is depicted in DA100 in Appendix 02.
- red bricks are used in the podium as a warm and honest material that reflects the local urban fabric including the State Heritage listed Royal South Australian Deaf Society building to the west;
- the podium height references data lines on the apartment buildings to the west as well as the approximate eaves heights of the buildings at 282 and 284 South Terrace (Margarey House);
- the building is appropriately segmented vertically whist presenting organic, yet rhythmic horizontal articulation by way of the meandering balcony projections, and
- a recessed entry provides interstitial sheltered space at the building's entry.

Objective 48:	**Development which incorporates a high level of design excellence in terms of scale, bulk, massing, materials, finishes, colours and architectural treatment.**
PDC 167	**Where development significantly exceeds quantitative policy provisions, it should demonstrate a significantly higher standard of design outcome in relation to qualitative policy provisions including pedestrian and cyclist amenity, activation, sustainability and public realm and streetscape contribution.**

A high level of design excellence is embodied in the proposed building which responds to its context in the

scale, massing and materiality of the podium. The upper levels form a distinctly contemporary form which maximise the play of light and shade through the organic balcony bands. The bulk of the building is attenuated by a vertical recessed element running the full height of the eastern and western facades, interrupting the horizontal bands and visually dividing the tower mass into two.

Bicycle and/or mobility scooter storage is provided at the ground floor at a rate of one per apartment in line with Development Plan provisions. Pedestrian amenity is provided by way of the sheltered entry and landscaping. Opportunities will be explored to provide novel visitor bicycle parking and other street furniture along the South Terrace verge in collaboration with Adelaide City Council.

The proposed development reinforces the gridded layout of the city by addressing South Terrace. The proposal responds to the Desired Character of the Zone in a range of ways and the built form, at 8 storeys, responds to the desire for increased scale development to address the Park Lands. Importantly, the proposed design addresses the ground and first floor levels to respond to the relevant portions of the Desired Character Statement. The proposal creates an interesting pedestrian environment by generating a human scale at the ground level, by providing for a sheltered double-height threshold as well as building articulation, openings and fenestration which create visual interest. A heavy podium with deep reveals is proposed which reinforces the predominant masonry form of the heritage places within the streetscape.

PDC 271 **Development should not unreasonably restrict the development potential of adjacent sites, and should have regard to possible future impacts such as loss of daylight/sunlight access, privacy and outlook.**

The proposed development will not unreasonably restrict the development potential of adjacent sites. The proposed development is setback to:

- the align with laneway to the north, and provide obscure ballustrades to north-facing balconies to Levels 2 to 4 to protect the privacy of adjoining properties to the north; and
- two metres from the eastern boundary (the balconies) where the potential is reasonably retained for medium-rise development to be designed on the adjacent site whilst retaining adequate privacy to living areas.

Being located on the north side of South Terrace, there are no properties to the south of the site which will have their solar access unreasonably impeded by the height of the proposed apartment building.

Further, the development is not likely to unduly impact the existing or potential outlook to views from land in the locality.

HEIGHT, BULK AND SCALE

PDC 168 **Development should be of a high standard of design and should reinforce the grid layout and distinctive urban character of the City by maintaining a clear distinction between the following:**

a. the intense urban development and built-form of the town acres in the Capital City, Main Street, Mixed Use, City Frame and City Living Zones.

...

PDC 169 **The height and scale of development and the type of land use should reflect and respond to the role of the street it fronts as illustrated on Map Adel/1 (Overlay 1).**

Cognisant of its frontage to South Terrace in the City Living Zone, the subject development delivers appropriately intense development to the site.

PDC 170 **The height, scale and massing of buildings should reinforce:**

a. the desired character, built form, public environment and scale of the streetscape as contemplated within the Zone and Policy Area, and have regard to:
i. maintaining consistent parapet lines, floor levels, height and massing with existing buildings consistent with the areas desired character;
i. reflecting the prevailing pattern of visual sub-division of neighbouring building frontages where frontages display a character pattern of vertical and horizontal sub-divisions; and
i. avoiding massive unbroken facades.

b. a comfortable proportion of human scale at street level by:
i. building ground level to the street frontage where zero set-backs prevail;
ii. breaking up the building facade into distinct elements;
iii. incorporating art work and wall and window detailing; and
iv. including attractive planting, seating and pedestrian shelter.

The podium is suitably detailed with patterns and rhythms that reflect built form within the locality. Eave lines and other height data from built form along South Terrace are successfully interpreted in the scale of the podium.

Landscaping is provided to the perimeter of the ground floor apartment providing additional amenity to the pedestrian environment. Opportunities for bicycle racks and seating can additionally be explored in liaison with Adelaide City Council.

CITY LIVING ZONE PROVISIONS

PDC 7: **Development should not exceed the height prescribed for each Policy Area. The height of new buildings, including the floor to ceiling clearances of each level, should take reference from the prevailing building heights within the locality, with particular reference to adjacent heritage places.**

PDC 8: **Where development proposes a building higher than the prevailing building heights that contribute to the desired character of a locality, the taller building elements should be setback from street frontages to avoid a detrimental impact on the prevailing character.**

SOUTH TERRACE POLICY AREA PROVISIONS

PDC 3: **Except where located on a site greater than 1500 square metres (which may include one or more allotment, building height should not exceed 22 metres**

PDC 4: **Development should have a minimum building height of 4 storeys, except where adjacent to a heritage place, to provide optimal height and floor space yields that activate and frame the Park Lands.**

Whilst there are no adjacent heritage places, the design of the building defers to Margarey House to the west, referencing its eaves in the podium height and it also references the red brick materiality of the Royal South Australian Deaf Society to the west.

The modulation of the building into podium and tower elements effectively enables a lower element that corresponds with the prevailing character of built form along South Terrace whilst enabling the optimal height and floor space yields to activate and frame the Park Lands.

LANDSCAPED OPEN SPACE

PDC 177: **Landscaped open space should be provided on the site of a development to at least the extent specified in the Principles of Development Control for the relevant Zone or Policy Area for siting, amenity and screening purposes. Where the existing amount of landscaped open space provided is less than the amount specified in the relevant Zone or Policy Area, development should not further reduce this amount. Where landscaped open space is not required, the provision of landscaped pedestrian spaces, planter boxes and in-ground planting is appropriate.**

Vertically layered landscaping, incorporating climbers in integrated raised planting beds is envisaged to the south-west corner of the building at street level, framing the ground floor apartment and adding vitality to the pedestrian environment.

BUILDING SETBACKS

SOUTH TERRACE POLICY AREA PROVISIONS

PDC 5:	**Buildings (excluding verandahs, porticos and the like) should be built to the primary road frontage with landscaping to maintain and enhance the pattern of development in the locality.**

CITY LIVING ZONE PROVISIONS

PDC 9	**Where consistent building set-backs from front, side and rear allotment boundaries prevail in a locality, new development should be consistent with these setbacks.**

No set-back is proposed for the subject development along the street frontages which will contribute to the desired 'City Wall' character of South Terrace. This alignment will be consistent with the existing built form on the site and aligns with PDC 5 of the Policy Area above.

In this instance, PDC 5 of the Policy Area is deemed to take precedence over PDC 9 of the Zone as it considers the specific context of the South Terrace frontage.

COMPOSITION AND PROPORTION

PDC 180:	**Development should respect the composition and proportion of architectural elements of building facades that form an important pattern which contributes to the streetscape's distinctive character in a manner consistent with the desired character of a locality by:** **a. establishing visual links with neighbouring buildings by reflecting and reinforcing the prevailing pattern of visual sub-division in building facades where a pattern of vertical and/or horizontal sub-divisions is evident and desirable, for example, there may be strong horizontal lines of verandahs, masonry courses, podia or openings, or there may be vertical proportions in the divisions of facades or windows; and** **b. clearly defining ground, middle and roof top levels.**

As depicted in the Streetscape Elevations DA54 and DA55 in Appendix 02, the proposed building's podium takes visual cues from the South Terrace streetscape in both materials and its proportions. Ground levels are clearly defined from the upper levels with a contrasting architectural language.

ARTICULATION AND MODELLING

PDC 182	**Building facades fronting street frontages, access ways, driveways or public spaces should be composed with an appropriate scale, rhythm and proportion which responds to the use of the building, the desired character of the locality and the modelling and proportions of adjacent buildings.**
PDC 183	**Balconies should be designed to give shelter to the street or public space at first floor levels.**
PDC 184	**Balconies should:** **a. respond to the street context and building orientation; and** **b. incorporate balustrade detailing to reflect the balcony type and location and the materials and detail of the building facade.**
PDC 186	**Building services such as drainage pipes together with security grills/screens, ventilation louvres and car park entry doors, should be coordinated and integrated with the overall facade design.**

Whilst pedestrian canopies are not provided, they are not typical to the locality. Instead the building entrance gives pedestrian shelter as required.

The facade design has contemplated the incorporation screens, ventilation louvers and services.

MATERIALS, COLOURS AND FINISHES

PDC 187	**The design, external materials, colours and finishes of buildings should have regard to their surrounding townscape context, built form and public environment, consistent with the desired character of the relevant Zone and Policy Area.**
PDC 188	**Development should be finished with materials that are sympathetic to the design and setting of the new building and which incorporate recycled or low embodied energy materials. The form, colour, texture and quality of materials should be of high quality, durable and contribute to the desired character of the locality. Materials, colours and finishes should not necessarily imitate materials and colours of an existing streetscape**
PDC 189	**Materials and finishes that are easily maintained and do not readily stain, discolour or deteriorate should be utilised.**
PDC 190	**Development should avoid the use of large expanses of highly reflective materials and large areas of monotonous, sheer materials (such as polished granite and curtained wall glazing).**

Material selection is detailed in Appendix 02 and all materials have been selected to be low, maintenance, high-quality and robust. Balconies will shade and articulate the glazing to each apartment level.

SOUTH TERRACE POLICY AREA PROVISIONS

PDC 6:	**The ground floors of buildings should have a minimum floor to ceiling height of 3.5 metres to allow for adaptation to a range of land uses including shops, cafés, restaurants or offices without the need for significant alterations to the building.**

A floor to ceiling height of 3.3 metres is provided to the ground floor apartment which is adequate to allow for a range of land uses.

PDC 7:	**Buildings on sites with a frontage greater than 10 metres should be articulated through variations in forms, materials, openings and colours.**

The building design employs a range of materials, from bricks to timber, plants, aluminium and glass with openings that both address South Terrace and the intersection with Charlotte Street, but also provide adequate ventilation and daylighting.

PDC 8:	**Development on land directly abutting the South East Policy Area should avoid tall, sheer walls at the interface by ensuring walls greater than 3 metres in height are set back at least 2 metres from the rear allotment boundary with further articulation at the upper levels.**

Whilst the proposed building is to be built to the subject land's rear boundary, the 3-metre wide Charlotte Lane to the north allows adequate separation to achieve the intents and purposes of PDC 8 above.

SKY AND ROOF LINES

Objective 49:	**Innovative and interesting skylines which contribute to the overall design and performance of the building.**

PDC 193 **Buildings should be designed to incorporate well designed roof tops that:**

a. **reinforce the desired character of the locality, as expressed in the relevant Zone or Policy Area;**
b. **enhance the skyline and local views;**
c. **reinforce the desired character of the locality, as expressed in the relevant Zone or Policy Area;**
d. **enhance the skyline and local views;**
e. **contribute to the architectural quality of the building;**
f. **provide a compositional relationship between the upper-most levels and the lower portions of the building;**
g. **provide an expression of identity;**
h. **articulate the roof, breaking down its massing on large buildings to minimise apparent bulk;**
i. **respond to the orientation of the site; and**
j. **create minimal glare.**

The roof top design enhances the skyline through its unique visual element forming a strongly modelled facade that contributes to an identifiable architectural quality as well as ensuring its visual compatibility with the locality and environmental performance within the building. The stepped back penthouse canopies reduce the perceived height of the building.

PDC 194 **Roof top plant and ancillary equipment that projects above the ceiling of the top storey should:**

a. **be designed to minimise the visual impact; and**
b. **be screened from view, including the potential view looking down or across from existing or possible higher buildings, or be included in a decorative roof form that is integrated into the design of the building.**

PDC 195 **Roof design should facilitate future use for sustainable functions such as:**

a. **rainwater tanks for water conservation;**
b. **roof surfaces orientated, angled and of suitable material for photovoltaic applications; and/or**
c. **"green" roofs (ie roof top gardens structurally capable of supporting vegetation) or water features.**

Roof top plant and ancillary equipment has been screened from view within a louvred enclosure that is setback from the building's edge to minimise visual impact. The proponent is investigating the potential to provide a solar array at this level.

ACTIVE STREET FRONTAGES

Objective 50 **Development that enhances the public environment and, where appropriate provides activity and interest at street level, reinforcing a locality's desired character.**

Objective 51 **Development designed to promote pedestrian activity and provide a high quality experience for City residents, workers and visitors by:**

a. **enlivening building edges;**
b. **creating welcoming, safe and vibrant spaces;**
c. **improving perceptions of public safety through passive surveillance; and**
d. **creating interesting and lively pedestrian environments.**

PDC 196 **Development should be designed to create active street frontages that provide activity and interest to passing pedestrians and contribute to the liveliness, vitality and security of the public realm.**

PDC 199 **Residential development should be designed to create interesting pedestrian environments and resident surveillance of any street, accessway and driveway.**

CITY LIVING ZONE PROVISIONS

PDC 10: **The finished ground floor level of buildings should be at grade and/or level with the footpath to provide direct pedestrian access and street-level activation.**

Both lobby and ground floor apartment elements activate and provide additional securirity to the public realm by offering passive surveillance. Direct pedestrian access is available to the at-grade lobby via the South Terrace footpath.

PDC 53	**All new medium to high scale residential or serviced apartment development should have direct ventilation and natural light.**

The development is to have openable windows to allow for direct ventilation.

PDC 58	**Natural cross ventilation of habitable rooms should be achieved by the following methods:** **a. positioning window and door openings in different directions to encourage cross ventilation from cooling summer breezes;** **b. installing small low level windows on the windward side and larger raised openings on the leeward side to maximise airspeed in the room;** **c. installing higher level casement or sash windows, clerestory windows or operable fanlight windows to facilitate convective currents;** **d. selecting windows which the occupants can reconfigure to funnel breezes such as vertical louvred, casement windows and externally opening doors;** **e. ensuring the internal layout minimises interruptions to airflow;** **f. limiting building depth to allow for ease of cross ventilation; and/or** **g. draught proofing doors, windows and other openings.**

Design of apartments accords with Council Wide PDC 58 (a,d,e,f and g) above to facilitate natural cross-ventilation.

VISUAL PRIVACY

PDC66	**Medium to high scale residential or serviced apartment development should be designed and sited to minimise the potential overlooking of habitable rooms such as bedrooms and living areas of adjacent development.**
PDC67	**A habitable room window, balcony, roof garden, terrace or deck should be set-back from boundaries with adjacent sites at least three metres to provide an adequate level of amenity and privacy and to not restrict the reasonable development of adjacent sites.**

The proposed development has adequate set-backs and orientation of habitable spaces to minimise potential overlooking issues to the north, east and west. Private open spaces within the northern locality will have their privacy retained through the use of opaque glass balustrades on north-facing apartments to level 4.

04.3.7 ACCESS + MOVEMENT

Objective 60	**Access to and movement within the City that is easy, safe, comfortable and convenient with priority given to pedestrian and cyclist safety and access.**
PDC 224	**Development should provide safe, convenient and comfortable access and movement.**
PDC 225	**Vehicle access points along primary and secondary city access roads and local connector roads, as shown on Map Adel/1 (Overlay 1) should be restricted.**

PEDESTRIAN ACCESS

Objective 61	**Development that promotes the comfort, enjoyment and security of pedestrians by providing shelter and reducing conflict with motor vehicles.**
Objective 62	**Development that contributes to the quality of the public realm as a safe, secure and attractive environment for pedestrian movement and social interaction.**

Safe access to and past the site is provided by the proposed development. No new vehicle access points will be introduced to South Terrace reducing conflict with pedestrians and cars. There are strong visual links between the lobby and South Terrace, providing comfortable spaces for incidental interaction.

Objective 63	**Safe and convenient design of and access to buildings and public spaces, particularly for people with disabilities.**

PDC 232	**Access for people with disabilities should be provided to and within all buildings to which members of the public have access in accordance with the relevant Australian Standards. Such access should be provided through the principal entrance, subject to heritage considerations and for exemptions under the relevant legislation.**

The building is appropriately accessible to people with disabilities with a DDA compliant car park and apartment on the ground floor.

BICYCLE ACCESS

Objective 64:	**Greater use of bicycles for travel to and within the City and the improvement of conditions, safety and facilities for cyclists.**
Objective 65:	**Adequate supply of secure, short stay and long stay bicycle parking to support desired growth in City activities.**
PDC 233	**Development should have regard to the bicycle routes identified within Map Adel/1 (Overlay 3) by:** **a. limiting vehicular access points; and** **b. ensuring that vehicles can enter and leave the site in a forward direction, thereby avoiding reverse manoeuvres.**
PDC 234	**An adequate supply of on-site secure bicycle parking should be provided to meet the demand generated by the development within the site area of the development. Bicycle parking should be provided in accordance with the requirements set out in Table Adel/6.**

24 secure bicycle parking spaces are provided in line with development plan provisions. Visitor bicycle rails could be provided on the generous verge along South Terrace in liaison with Adelaide City Council.

PDC 235	**Onsite secure bicycle parking facilities for residents and employees (long stay) should be:** **a. located in a prominent place;** **b. located at ground floor level;** **c. located undercover;** **d. located where passive surveillance is possible, or covered by CCTV;** **e. well lit and well signed;** **f. close to well used entrances;** **g. accessible by cycling along a safe, well lit route;** **h. take the form of a secure cage with locking rails inside or individual bicycle lockers; and** **i. in the case of a cage have an access key/pass common to the building access key/pass.**

The secure bicycle parking facilities will be located adjacent the ground floor car park and will be well lit and signed. The bicycle store will be within a secure room or cage with an access key/pass common to the building access key/pass as per PDC 235(i) above. The internal entrance will also be covered by CCTV.

TRAFFIC AND VEHICLE ACCESS

PDC 247	**The number of access points on primary city access roads identified in Map Adel/1 (Overlay 1) should be limited to minimise traffic and pedestrian inconvenience, interference with public transport facilities and adverse effects on the environment.**
PDC 241	**Development should be designed so that vehicle access points for parking, servicing or deliveries, and pedestrian access to a site, are located to minimise traffic hazards and vehicle queuing on public roads. Access should be safe, convenient and suitable for the development on the site, and should be obtained from minor streets and lanes unless otherwise stated in the provisions for the relevant Zone or Policy Area and provided residential amenity is not unreasonably affected.**
PDC 246	**There is no minimum setback required from a rear access way where a rear access way where the access way is wider than 6.5 metres. Where the access way is less than 6.5 metres in width, a set-back distance equal to the additional width required to make the access way 6.5 metres or more, is required to provide adequate manoeuvrability for vehicles.**

The proposed development will not introduce any additional access points to South Terrace. The proposed

development introduces one additional vehicular access point to the site off Charlotte Street.

The site does not have any rights of access over Charlotte Lane and thus PDC 246 is not deemed to apply in this instance.

CAR PARKING

CITY LIVING ZONE PROVISIONS

PDC 11	**Access to parking and service areas should be located so as to minimise the interruption to built form on street frontages and to minimise conflict with pedestrians. Access, where possible, should be from minor streets, or side or rear lanes provided road width is suitable and the traffic generation does not unreasonably impact residential amenity.**

Sufficient car parking spaces are provided to meet the Development Plan objectives in Table Adel/7. More than one car park is provided for each apartment and one accessible car park is provided at ground floor.

The refuse collection is proposed to be via Charlotte Street and undertaken by a private contractor.

05 CONCLUSIONS

It is concluded that the proposal is an appropriate development within the South Terrace Policy Area of the City Living Zone, for the following reasons:

- the proposed land uses reflect the advocated land use direction within the specific provisions of the Policy Area and relevant Desired Character Statement and provisions of the Zone;
- notwithstanding that the height is greater than that designated for the Policy Area, the building form reflects the advocated policy direction and will not cause undue impacts on sense of space in the public realm, sunlight access and views currently enjoyed by adjacent properties to the north;
- the material palette will be sympathetic and complementary to the prevailing built form appearance within the locality;
- an appropriate waste management solution can be facilitated within the proposed built form with commercial bin collection dealt with through the use of a private contractor along Charlotte Street via the car park entry;
- the proposed development utilises appropriate facade materials, window fixtures and fittings to ensure that the acoustic environment will be in accordance with the relevant criteria;
- the proposal incorporated an appropriate quantum of on-site car parking and bicycle parking spaces;
- CPTED has been considered throughout the layout of the building, and the proposal satisfies the relevant criteria;
- the proposed development is unlikely to adversely affect wind conditions at and around the subject land given the openness to the Park Lands and the inclusion of the balcony elements that will interrupt any down-draught effects on the facade; and
- the proposal incorporates appropriate ESD initiatives in its design and can readily employ a number of further ESD initiatives through the detailed design phase.

It is for the reasons discussed herein that the proposal is considered to display sufficient merit and warrants Development Plan consent being granted.

APPENDIX

01

Government of South Australia
Department of Planning, Transport and Infrastructure

Product	Register Search (CT 5945/733)
Date/Time	29/05/2018 12:39PM
Customer Reference	278 South Terrace
Order ID	20180529006451
Cost	$28.25

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.

REGISTRAR - GENERAL SOUTH AUSTRALIA

Certificate of Title - Volume 5945 Folio 733

Parent Title(s) CT 2755/169

Creating Dealing(s) RT 10231347

Title Issued 04/08/2005 **Edition** 3 **Edition Issued** 18/03/2010

Estate Type

FEE SIMPLE

Registered Proprietor

PASTINA PTY. LTD. (ACN: 141 122 698)
OF 147 FROME STREET ADELAIDE SA 5000

Description of Land

ALLOTMENT 306 FILED PLAN 181958
IN THE AREA NAMED ADELAIDE
HUNDRED OF ADELAIDE

Easements

NIL

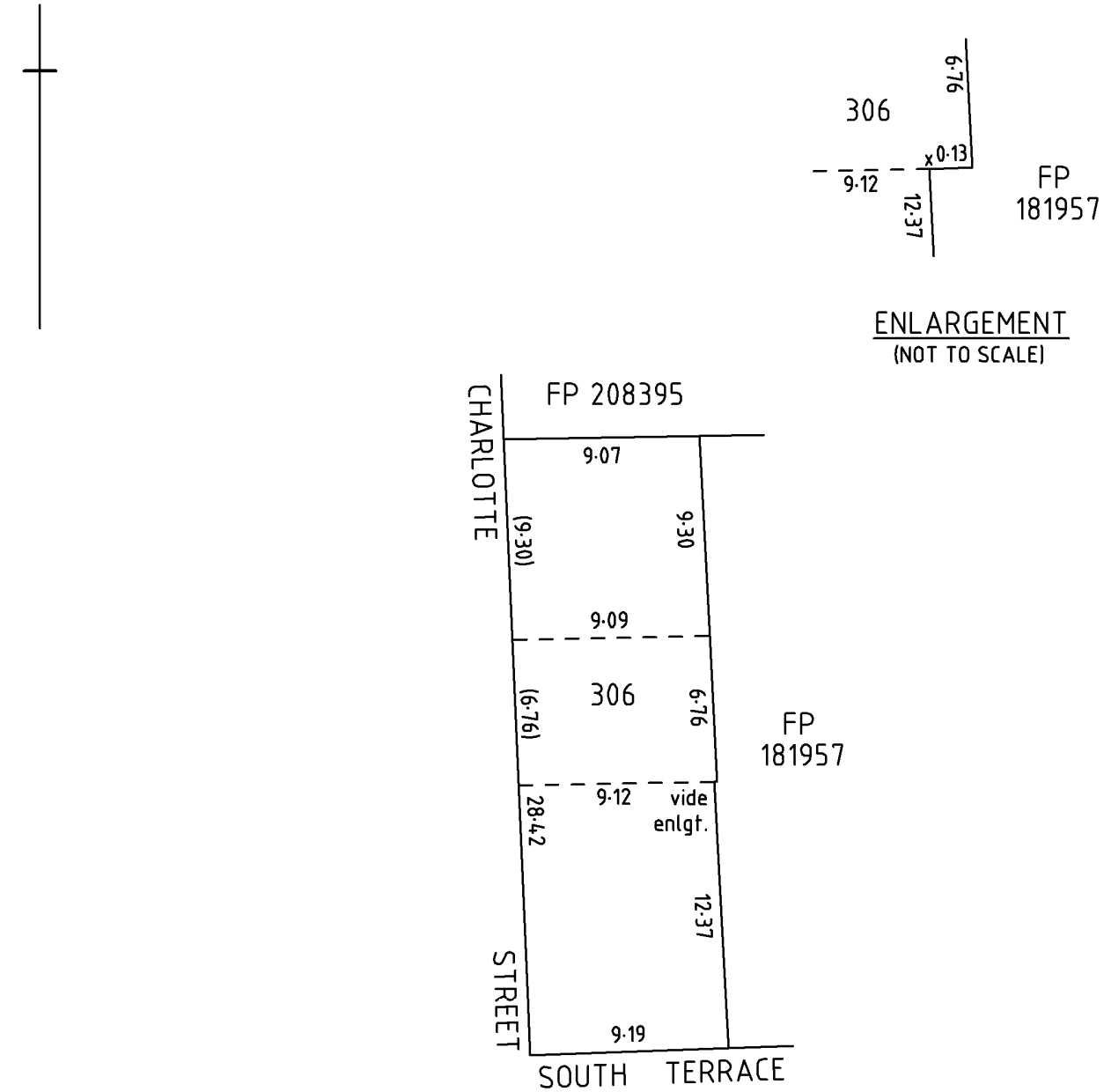
Schedule of Dealings

NIL

Notations

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

Product	Register Search (CT 5945/733)
Date/Time	29/05/2018 12:39PM
Customer Reference	278 South Terrace
Order ID	20180529006451
Cost	$28.25



Government of South Australia
Department of Planning, Transport and Infrastructure

Product	Register Search (CT 5661/707)
Date/Time	29/05/2018 12:41PM
Customer Reference	278 South Terrace 2
Order ID	20180529006508
Cost	$28.25

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 5661 Folio 707

Parent Title(s) CT 1581/95

Creating Dealing(s) CONVERTED TITLE

Title Issued 10/06/1999 **Edition** 3 **Edition Issued** 18/03/2010

Estate Type

FEE SIMPLE

Registered Proprietor

PASTINA PTY. LTD. (ACN: 141 122 698)
OF 147 FROME STREET ADELAIDE SA 5000

Description of Land

ALLOTMENT 305 FILED PLAN 181957
IN THE AREA NAMED ADELAIDE
HUNDRED OF ADELAIDE

Easements

NIL

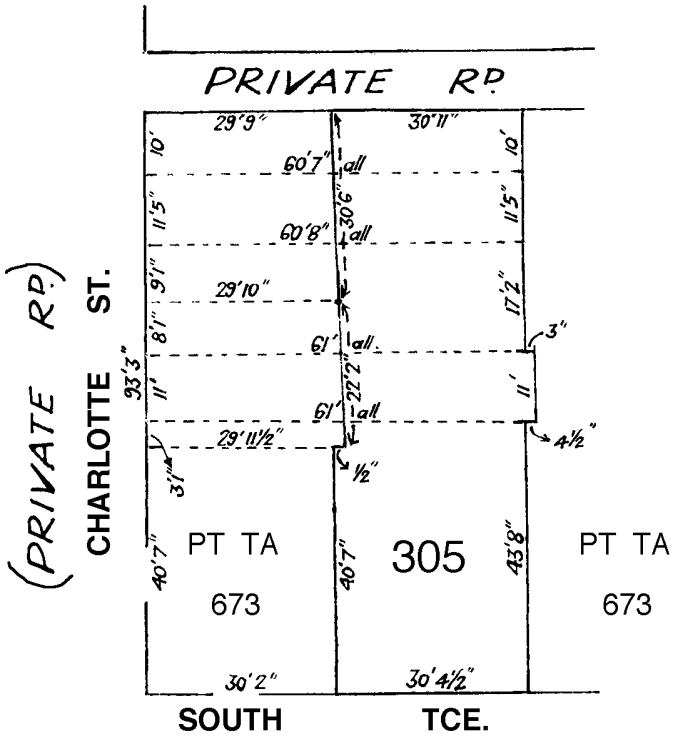
Schedule of Dealings

NIL

Notations

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

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 1581/95



DISTANCES ARE IN FEET AND INCHES
FOR METRIC CONVERSION
1 FOOT = 0·3048 metres
1 INCH = 0·0254 metres

NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION

APPENDIX

02

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

278 SOUTH TERRACE ADELAIDE

FOR DEVELOPMENT APPROVAL
06 FEB 2019

intro.com.co

SHEET LIST DA SERIES

NUMBER	TITLE	REV	ISSUE DATE
DA00	TITLE	E	06/02/2019
DA01	LOCAL CONTEXT PLAN	C	06/02/2019
DA02	SITE PLAN	E	06/02/2019
DA03	SITE IMAGES	B	06/02/2019
DA04	SITE MATERIALS	B	06/02/2019
DA10	GROUND FLOOR PLAN	E	06/02/2019
DA11	MEZZANINE LEVEL CARPARK	E	06/02/2019
DA12	LEVEL 1 CARPARK	E	06/02/2019
DA13	TYPICAL LEVEL 2-6	D	06/02/2019
DA14	LEVEL 7 - PENTHOUSE	D	06/02/2019
DA15	ROOF PLAN	D	06/02/2019
DA50	NORTH ELEVATION	D	06/02/2019
DA51	EAST ELEVATION	D	06/02/2019
DA52	SOUTH ELEVATION	B	06/02/2019
DA53	WEST ELEVATION	B	06/02/2019
DA54	STREET SCAPE ELEVATIONS	B	06/02/2019
DA55	STREET SCAPE ELEVATIONS	B	06/02/2019
DA56	SECTIONS	C	06/02/2019
DA57	SHADOW DIAGRAMS 1	B	06/02/2019
DA58	SHADOW DAIGRAMS 2	B	06/02/2019
DA59	SHADOW DIAGRAMS 3	B	06/02/2019
DA100	PERSPECTIVES 1	D	06/02/2019
DA101	PERSPECTIVES 2	C	06/02/2019
DA120	MATERIAL PALLETTE	D	06/02/2019

FOR DEVELOPMENT APPROVAL

TITLE

DRAWING NUMBER
DA00

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

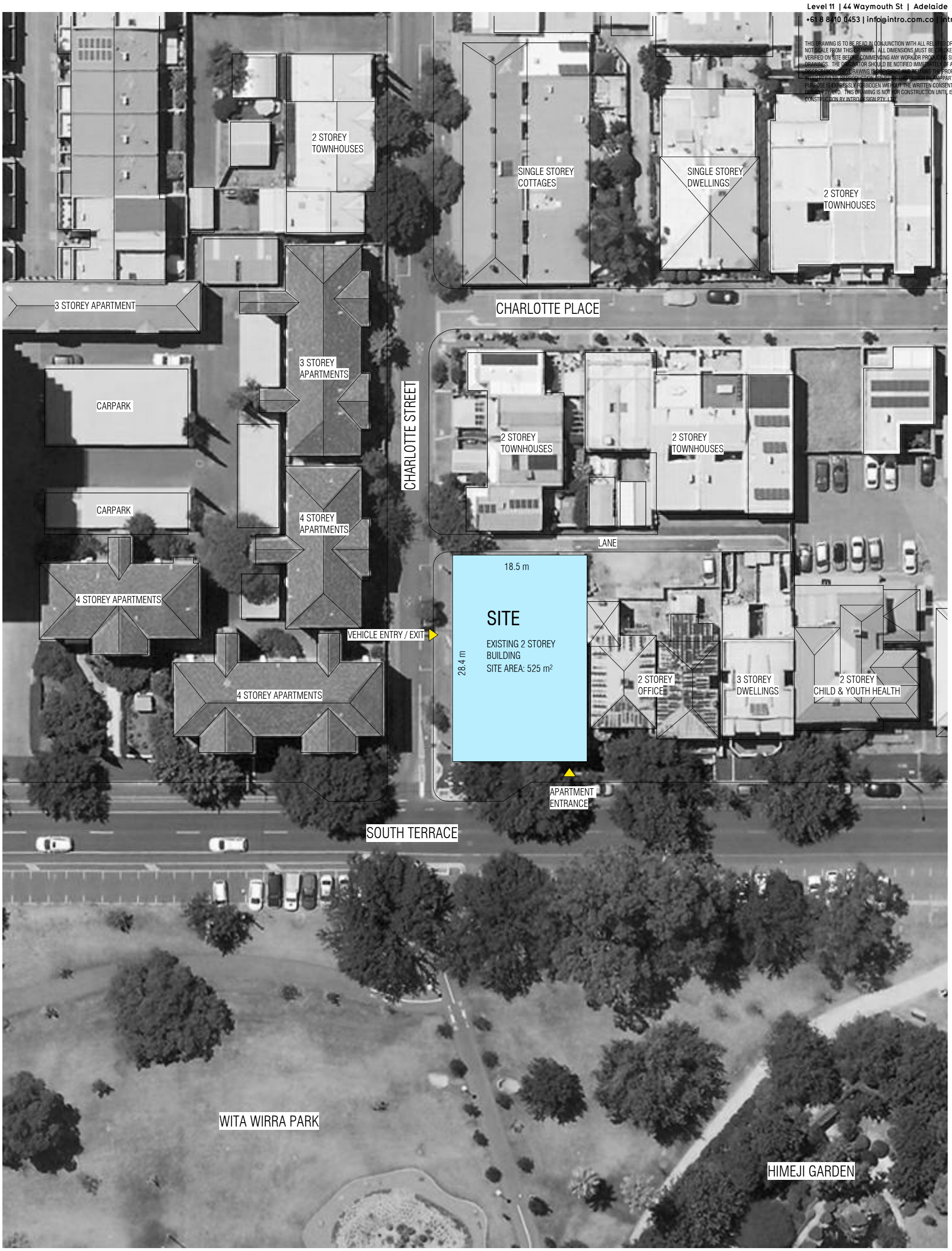
REVISION
E

NTS / as indicated

DATE
06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

LOCAL CONTEXT PLAN

DRAWING NUMBER
DA01

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
C

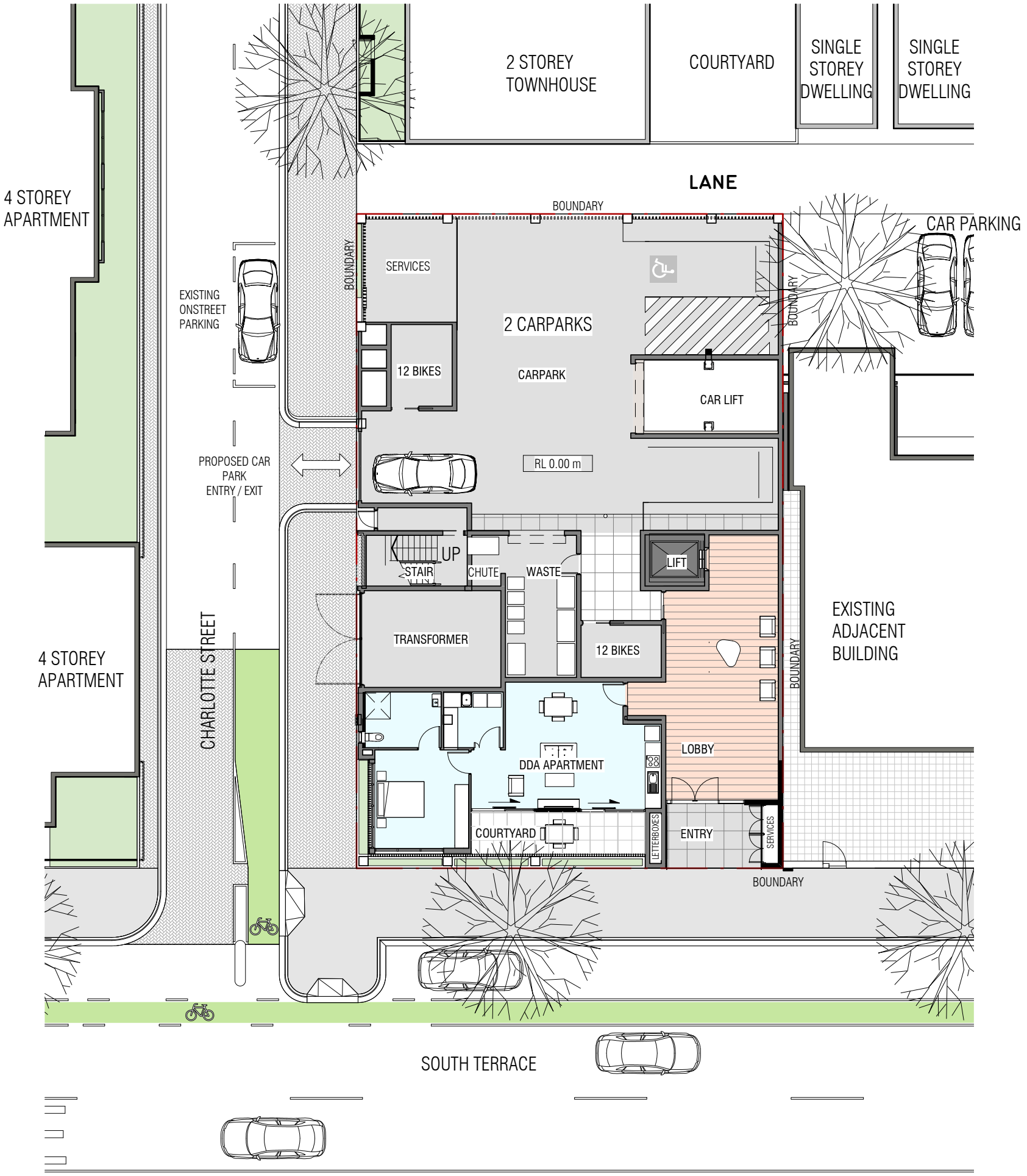
DATE
06/02/2019

5 10 25 50

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

SITE PLAN

DRAWING NUMBER
DA02

1 : 200

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
E

DATE
06/02/2019

2 4 10 20

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

GLENOSMOND ROAD LOOKING EAST

262 SOUTH TERRACE

274 SOUTH TERRACE

SITE CURRENT CONDITION

SITE CURRENT CONDITION

SOUTH TERRACE LOOKING WEST TOWARDS SITE

PARKLANDS LOOKING TOWARDS SITE

PARKLANDS LOOKING ADJACENT BUILDINGS

FOR DEVELOPMENT APPROVAL

SITE IMAGES

DRAWING NUMBER
DA03

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
B

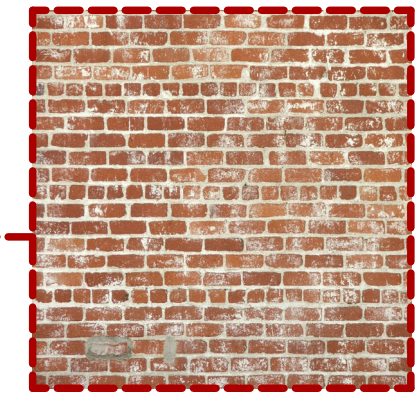
NTS / as indicated

DATE
06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

274 SOUTH TERRACE



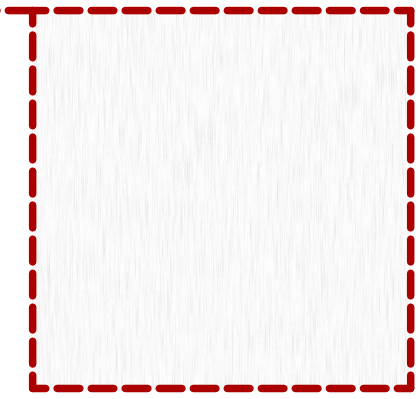
COMMON RED BRICK
RED BRICK IS A WARM AND SUSTAINABLE MATERIAL PROVIDING A STRONG LINK TO THE LOCAL HERITAGE AND URBAN FLAVOUR OF SOUTH TERRACE.

278 SOUTH TERRACE

GLASS FACADE
THE SOUTHERN FACADE PREDOMINANTLY CONSISTS OF GLAZING TO MAXIMISE VIEWS AS WELL AS REFLECT THE QUALITIES OF THE EXISTING BUILDING AND SURROUNDING LANDSCAPE.

262 SOUTH TERRACE

DARK TONES
A NEUTRAL COLOUR SCHEME IS ACHIEVED THROUGH THE USE OF A PRE-FINISHED 'VITRAPANEL' WHICH CREATES A MODERN LINK TO THE RECENT '262 SOUTH TERRACE' PROPOSAL.



WHITE TONES
A NEUTRAL COLOUR SCHEME IS ACHIEVED THROUGH THE USE OF A PRE-FINISHED 'VITRAPANEL' WHICH CREATES A MODERN LINK TO THE RECENT '262 SOUTH TERRACE' PROPOSAL.

FOR DEVELOPMENT APPROVAL

SITE MATERIALS

DRAWING NUMBER
DA04

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
B

NTS / as indicated

DATE
06/02/2019

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

A B C D E

1 1a 2 3 4 5 5a 6

5 DA56

18500

LANE

BOUNDARY

FIRE PUMP

FIRE TANK

BOUNDARY

SERVICES

GAS

SPRINKLER

12 BIKES

2 CARPARKS

CARPARK
201 m²

CAR LIFT
6200

BOUNDARY

3295

CAR PARK
ENTRY / EXIT

3 DA56

LINE OF OVER
BONNET STORAGE

3 DA56

1000

660L

UP

CHUTE

240L

240L

240L

240L

660L

660L

660L

660L

WASTE
22 m²

LIFT
6 m²

BH

TRANSFORMER
25 m²

12 BIKES

LOBBY
54 m²

BH

1450

CHARLOTTE STREET

EXISTING ADJACENT BUILDING

ENS

LDY

1725

DDA APARTMENT
71 m²

BUFFER PLANTING

BED 1

R

COURTYARD
14 m²

LETTERBOXES NBN FIP

ENTRY
12 m²

BOOSTER

MECH

2700

BUFFER PLANTING

BUFFER PLANTING

BUFFER PLANTING

BOUNDARY

900

5 DA56

BH = BULKHEAD

SOUTH TERRACE

FOR DEVELOPMENT APPROVAL

GROUND FLOOR PLAN

DRAWING NUMBER
DA10

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

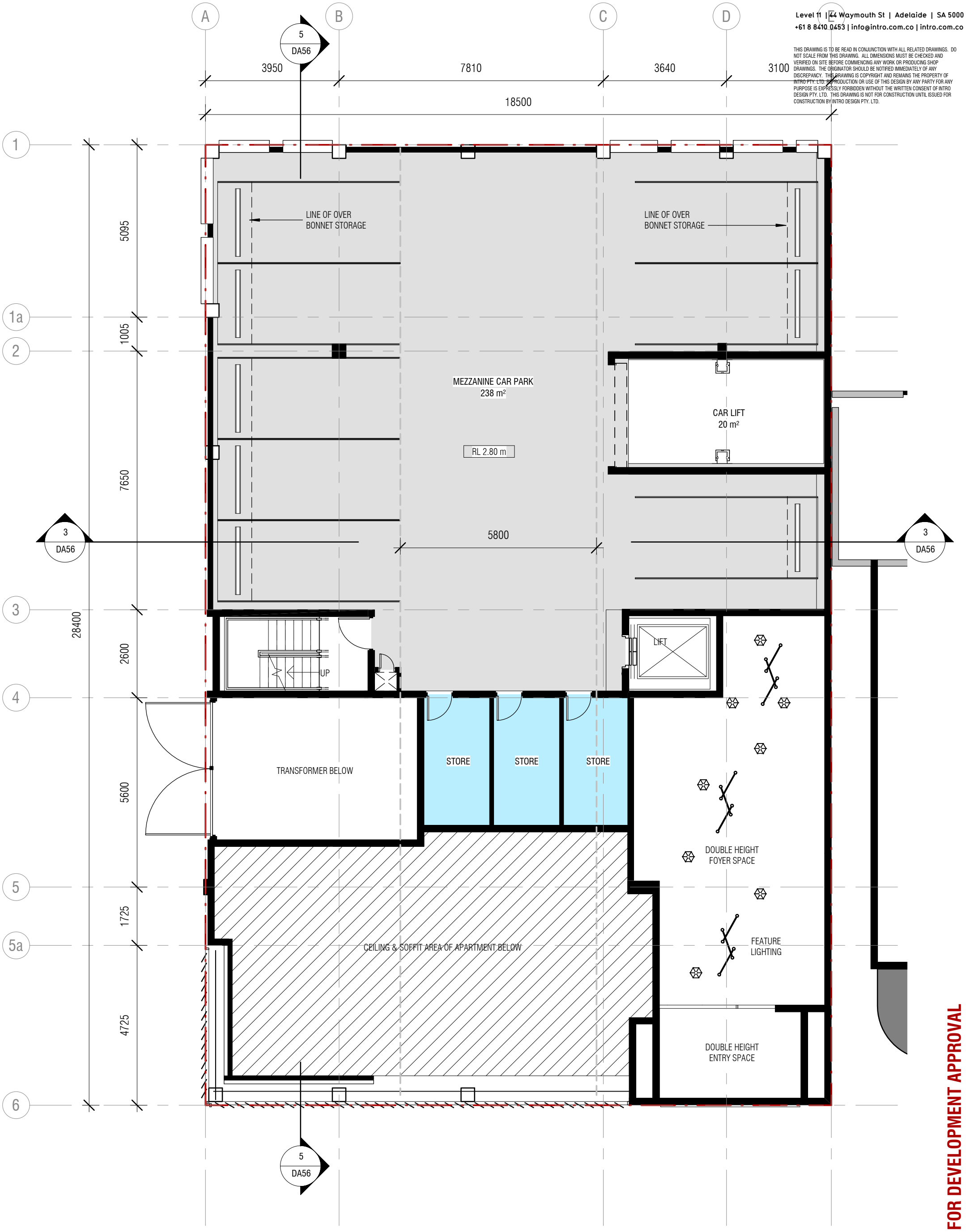
REVISION
E

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

MEZZANINE LEVEL CARPARK

DRAWING NUMBER
DA11

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

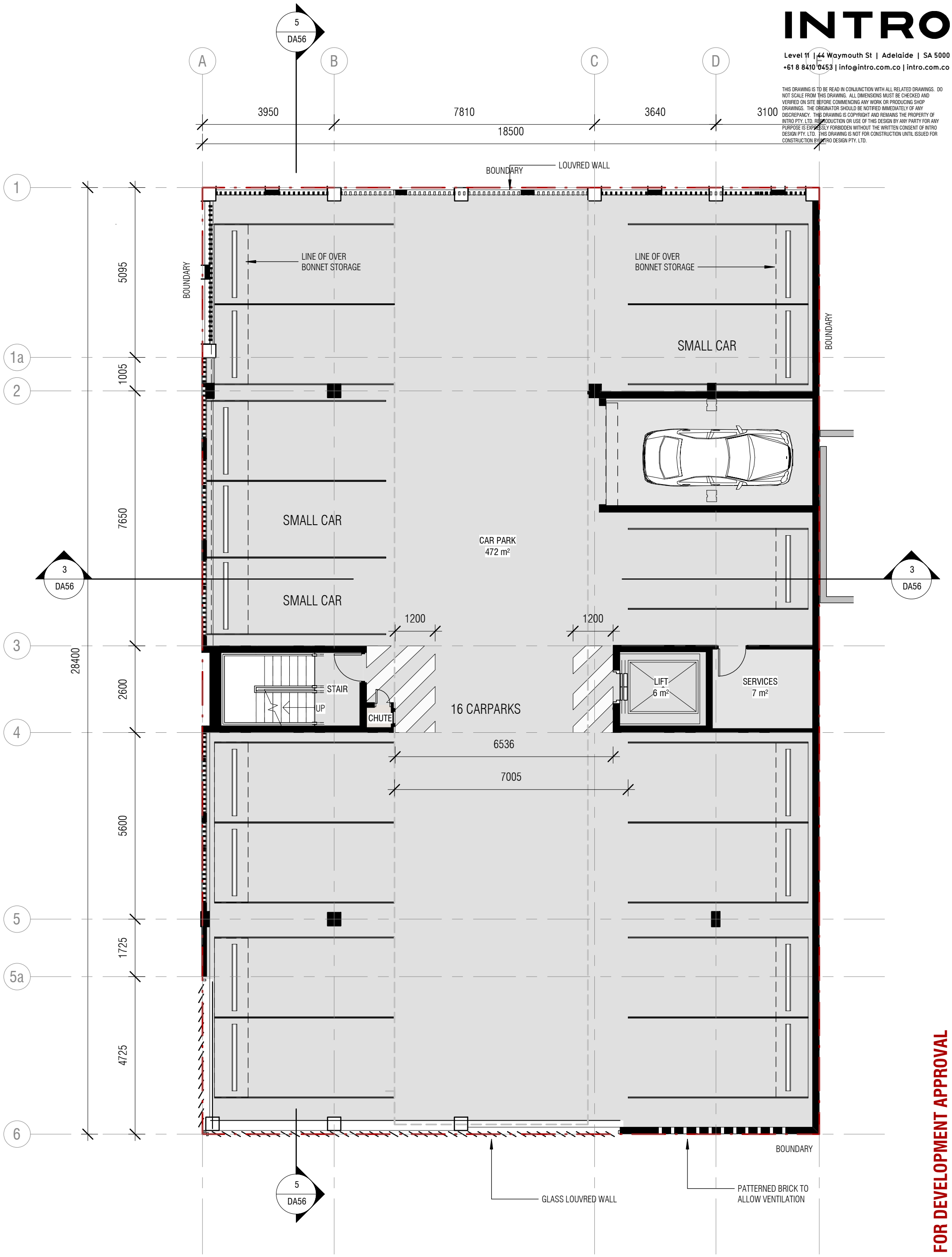
REVISION
E

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

LEVEL 1 CARPARK

DRAWING NUMBER
DA12

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

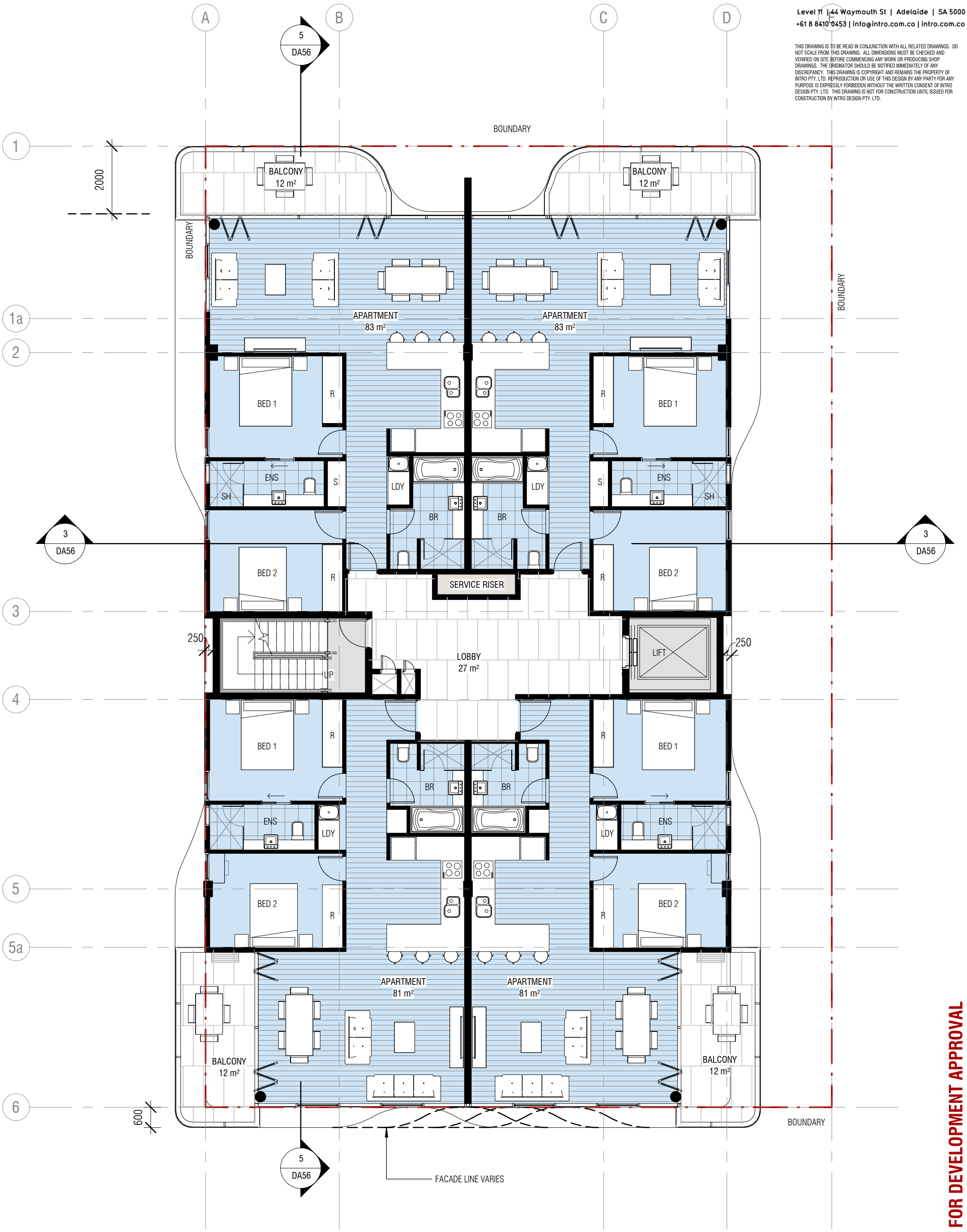
REVISION
E

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

TYPICAL LEVEL 2-6

DRAWING NUMBER
DA13

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

FOR DEVELOPMENT APPROVAL

LEVEL 7 – PENTHOUSE

DRAWING NUMBER
DA14

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

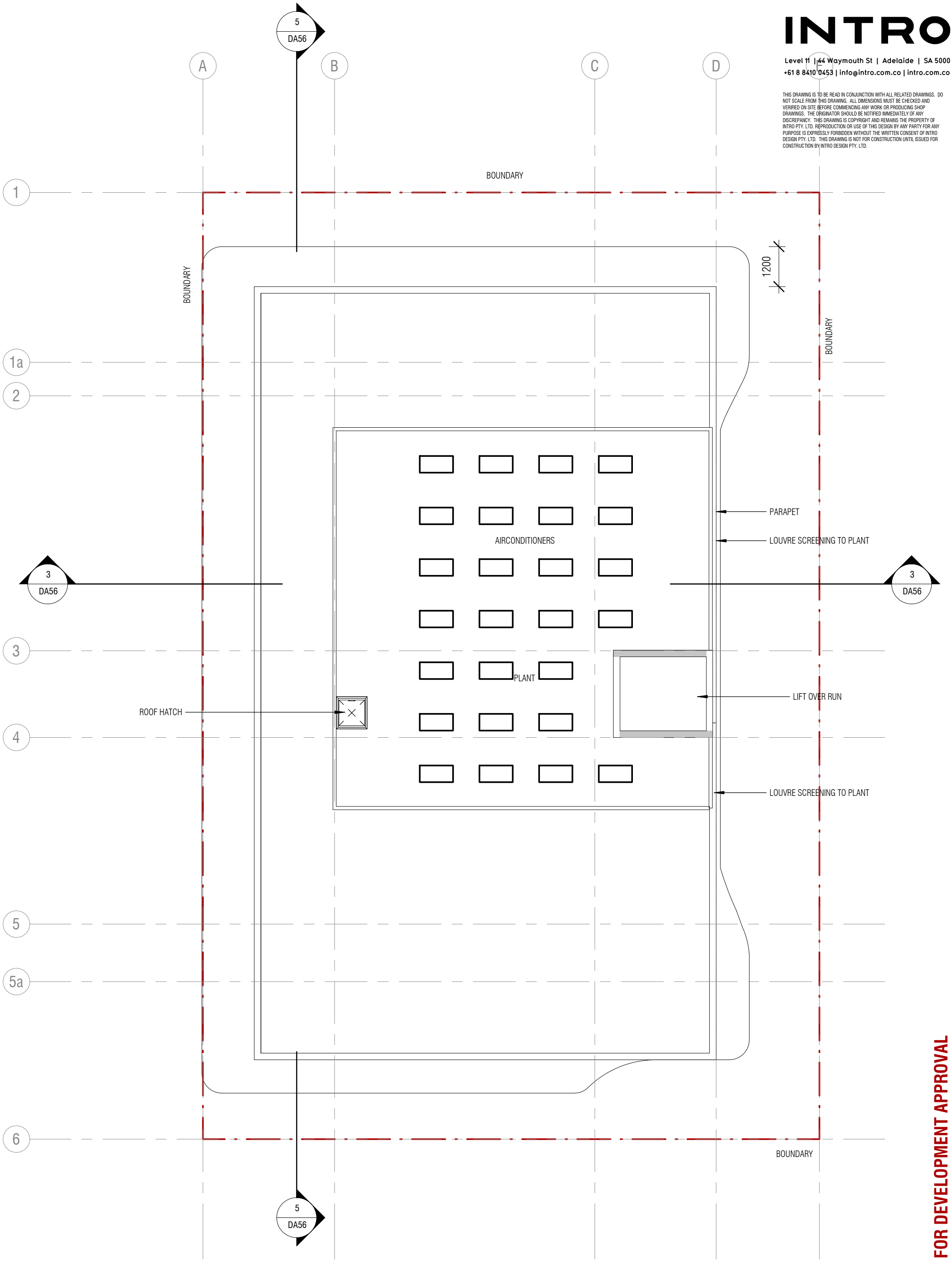
REVISION
D

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

ROOF PLAN

DRAWING NUMBER
DA15

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

DATE
06/02/2019

1 2 5 10

N

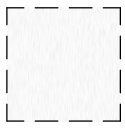
CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

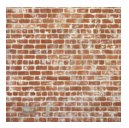
+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"



BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

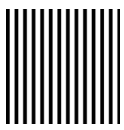
GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

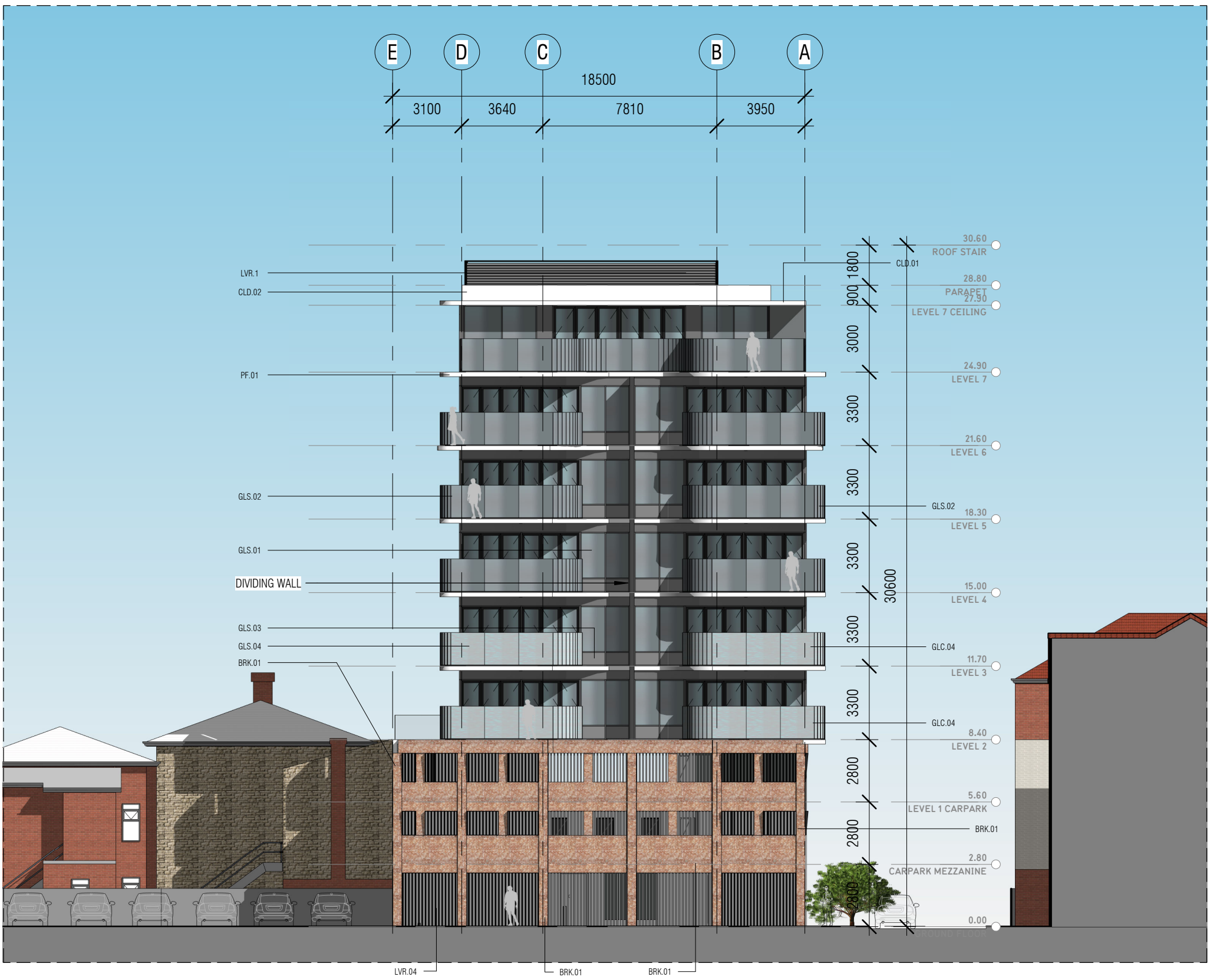
LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



NORTH ELEVATION SK

1 : 200

FOR DEVELOPMENT APPROVAL

NORTH ELEVATION

DRAWING NUMBER
DA50

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

2 4 10 20

DATE
06/02/2019

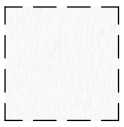
CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

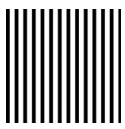
GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

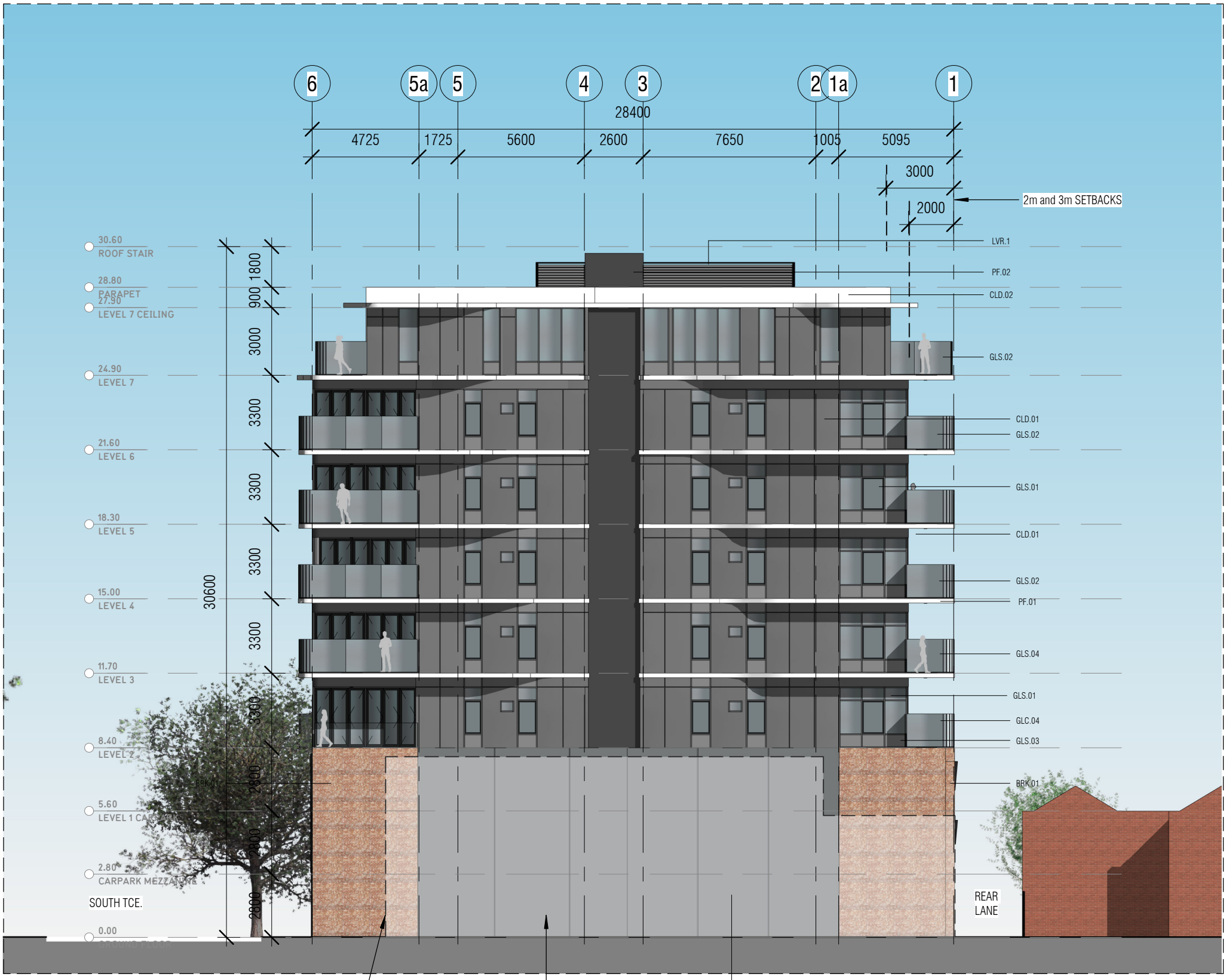
LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



EAST ELEVATION SK

1 : 200

FOR DEVELOPMENT APPROVAL

EAST ELEVATION

DRAWING NUMBER
DA51

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

DATE
06/02/2019

2 4 10 20

CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"

CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE

LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES

SOUTH ELEVATION SK

1 : 200

FOR DEVELOPMENT APPROVAL

SOUTH ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	1 2 5 10
DRAWING NUMBER DA52	As indicated	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019

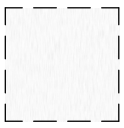
CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

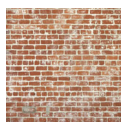
+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"



BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

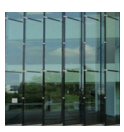
GLS.02
BALCONY GLAZING

GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

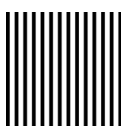
GLS.04
OBSCURE BALCONY GLAZING

LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

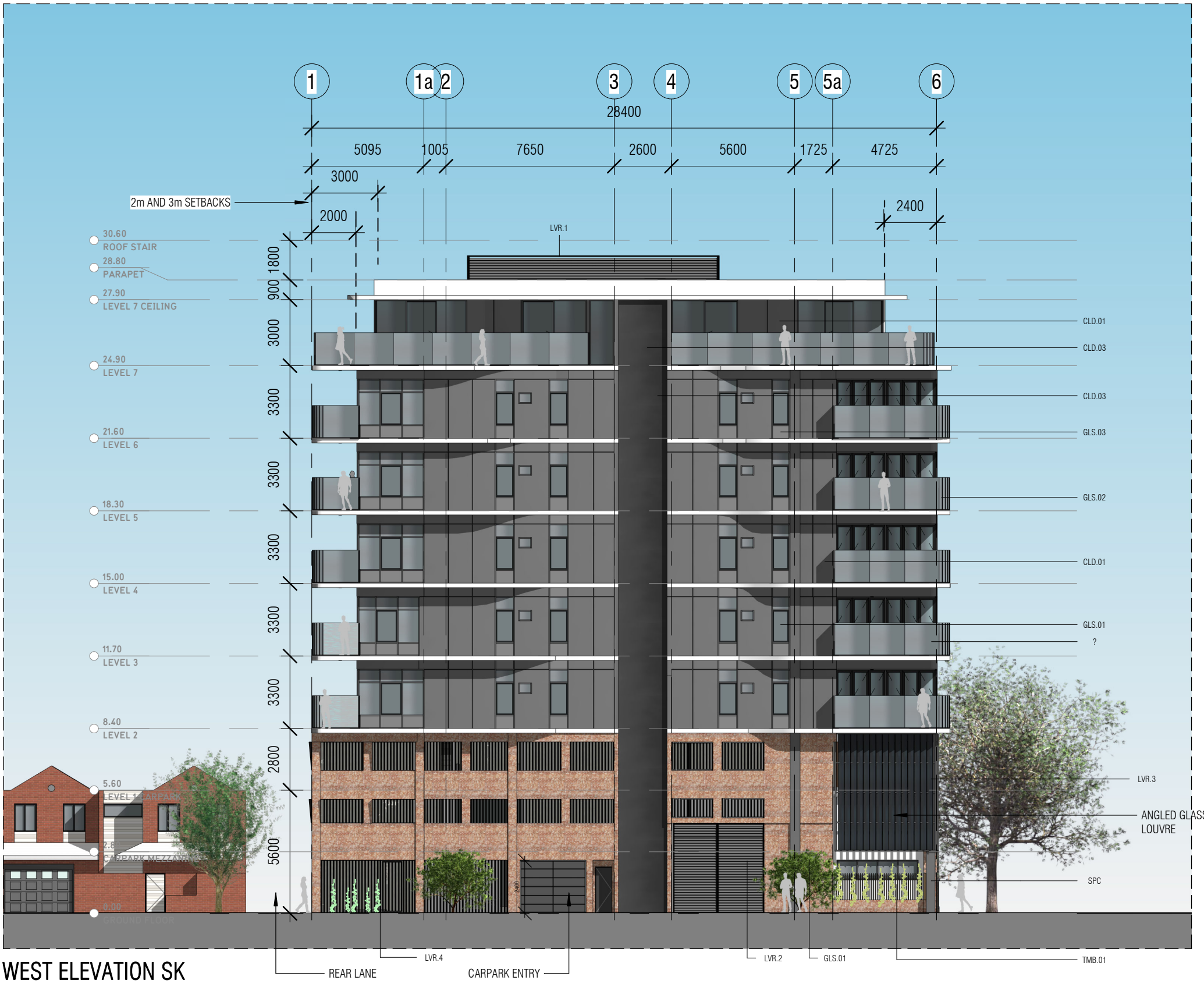
LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH



LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



WEST ELEVATION SK

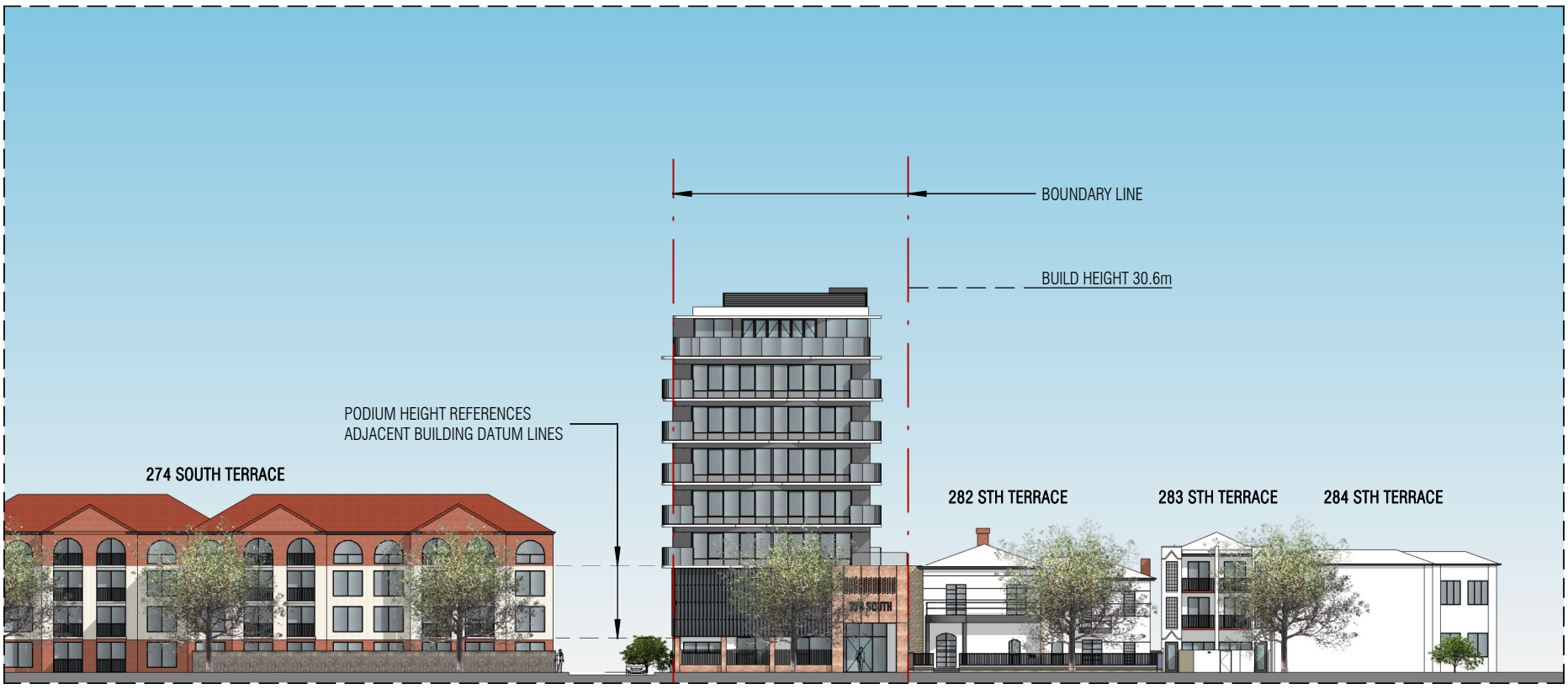
1 : 200

FOR DEVELOPMENT APPROVAL

WEST ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	1 2 5 10	
DRAWING NUMBER DA53	As indicated	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	

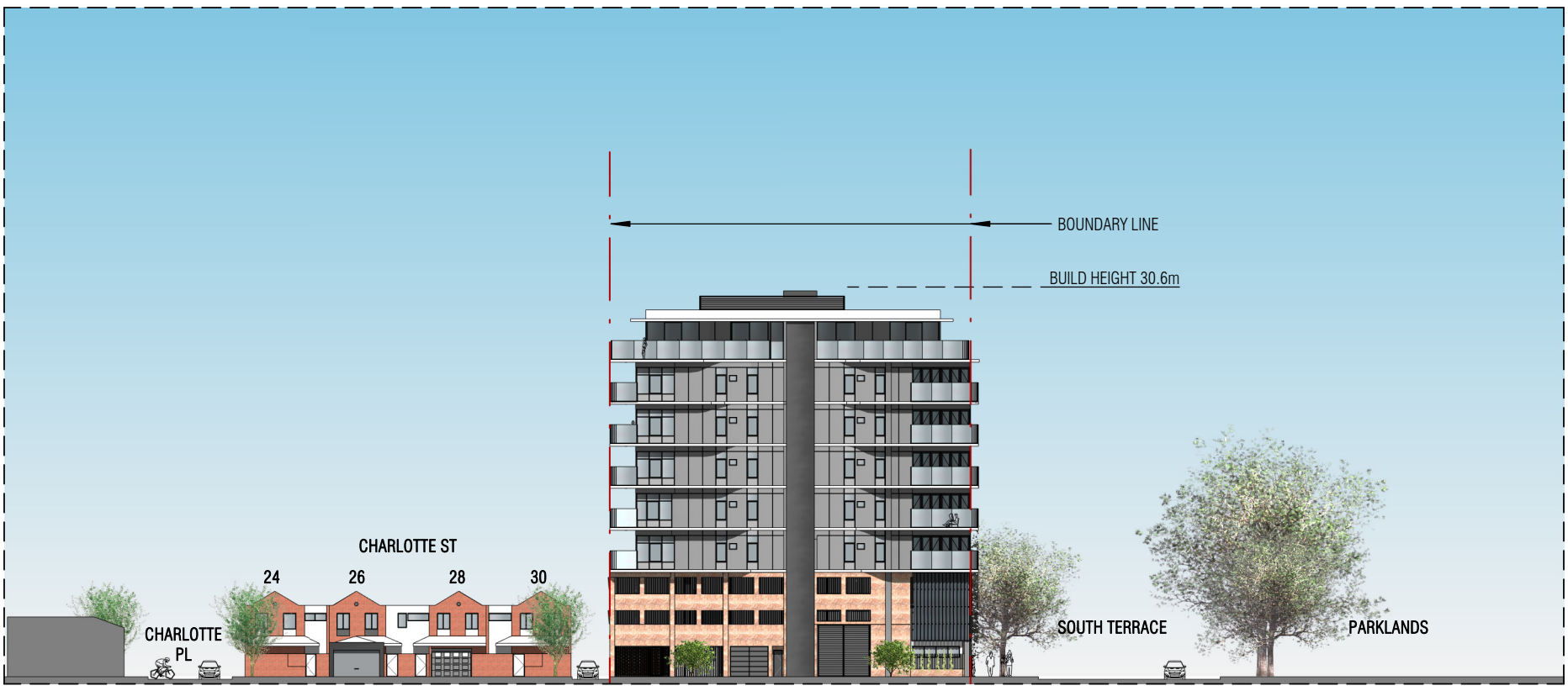
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SOUTH ELEVATION STREETSCAPE

1 : 500



WEST ELEVATION STREETSCAPE

1 : 500

FOR DEVELOPMENT APPROVAL

STREET SCAPE ELEVATIONS

DRAWING NUMBER
DA54

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

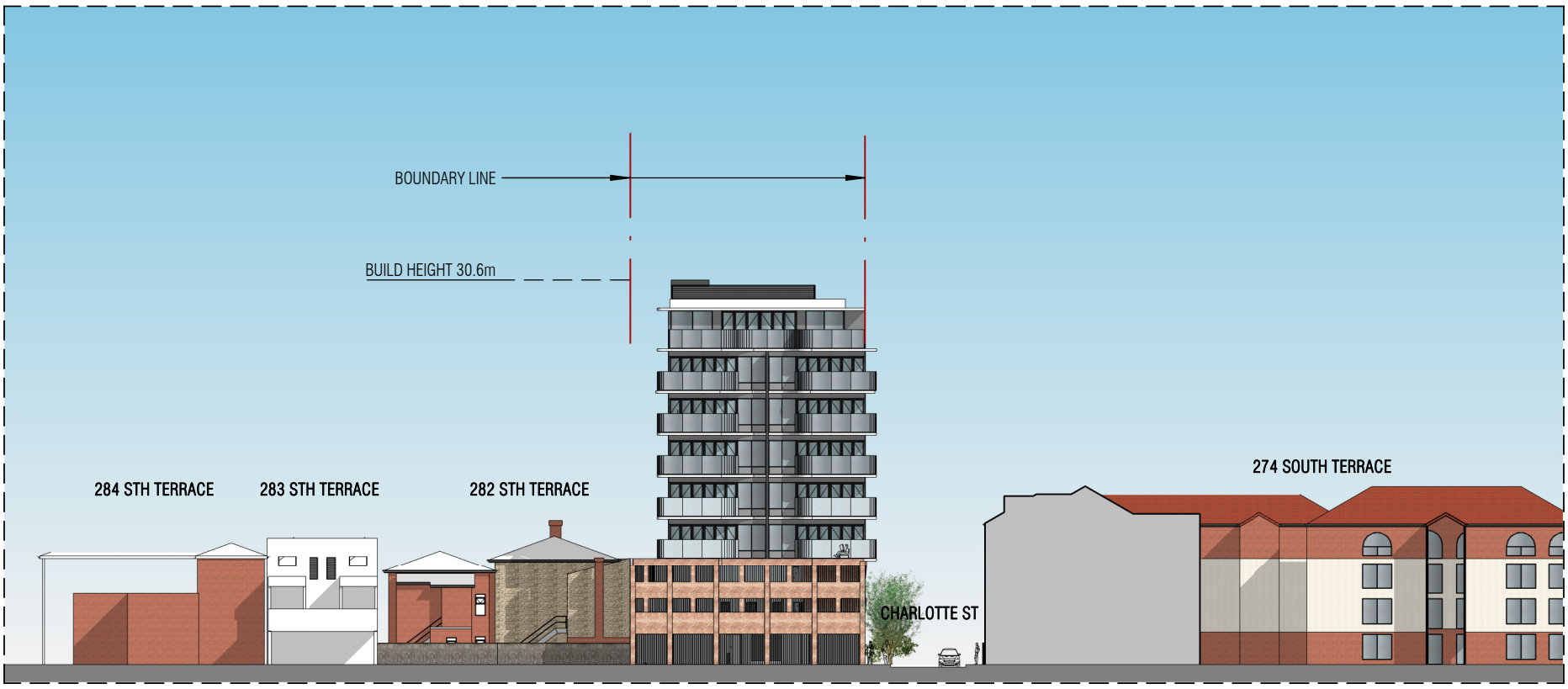
REVISION
B

DATE
06/02/2019

5 10 25 50

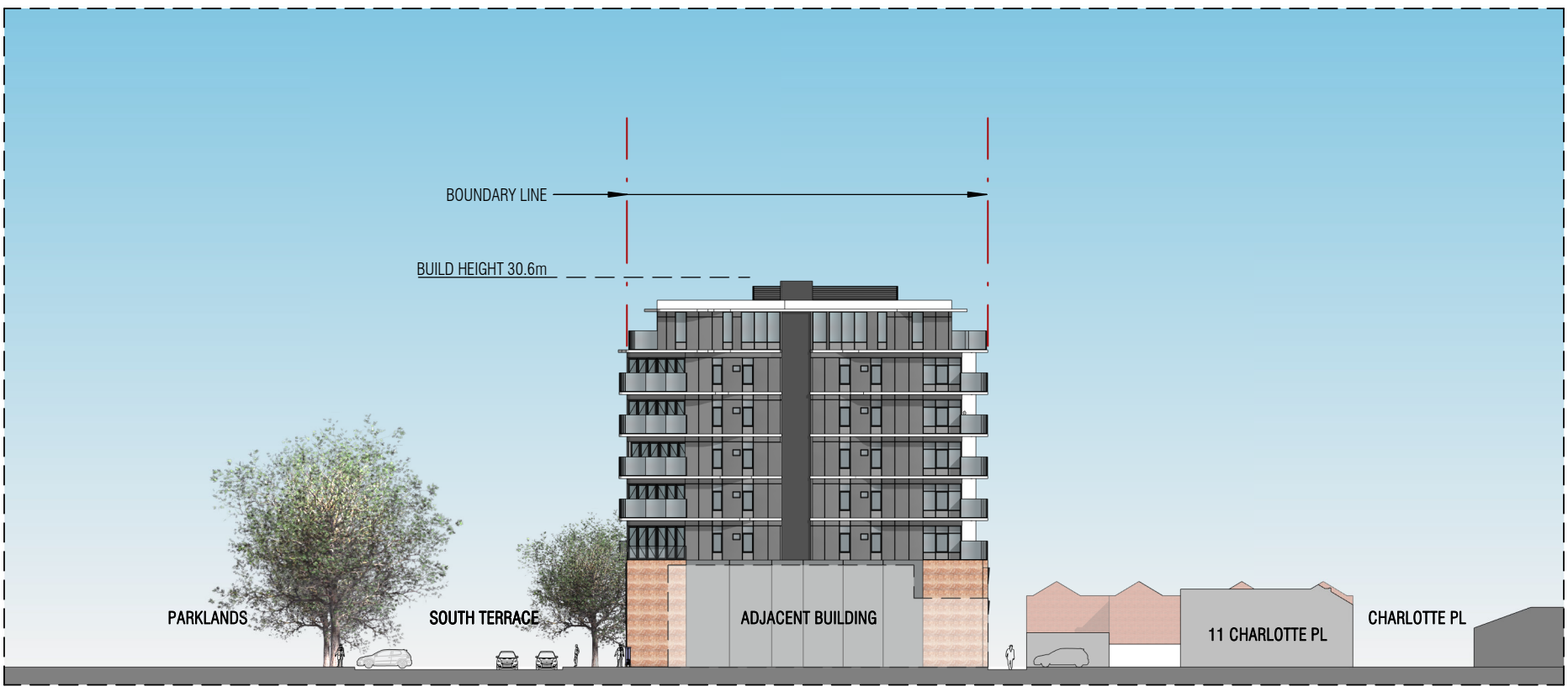
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



NORTH ELEVATION STREETSCAPE

1 : 500



EAST ELEVATION STREETSCAPE

1 : 500

FOR DEVELOPMENT APPROVAL

STREET SCAPE ELEVATIONS

DRAWING NUMBER
DA55

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
B

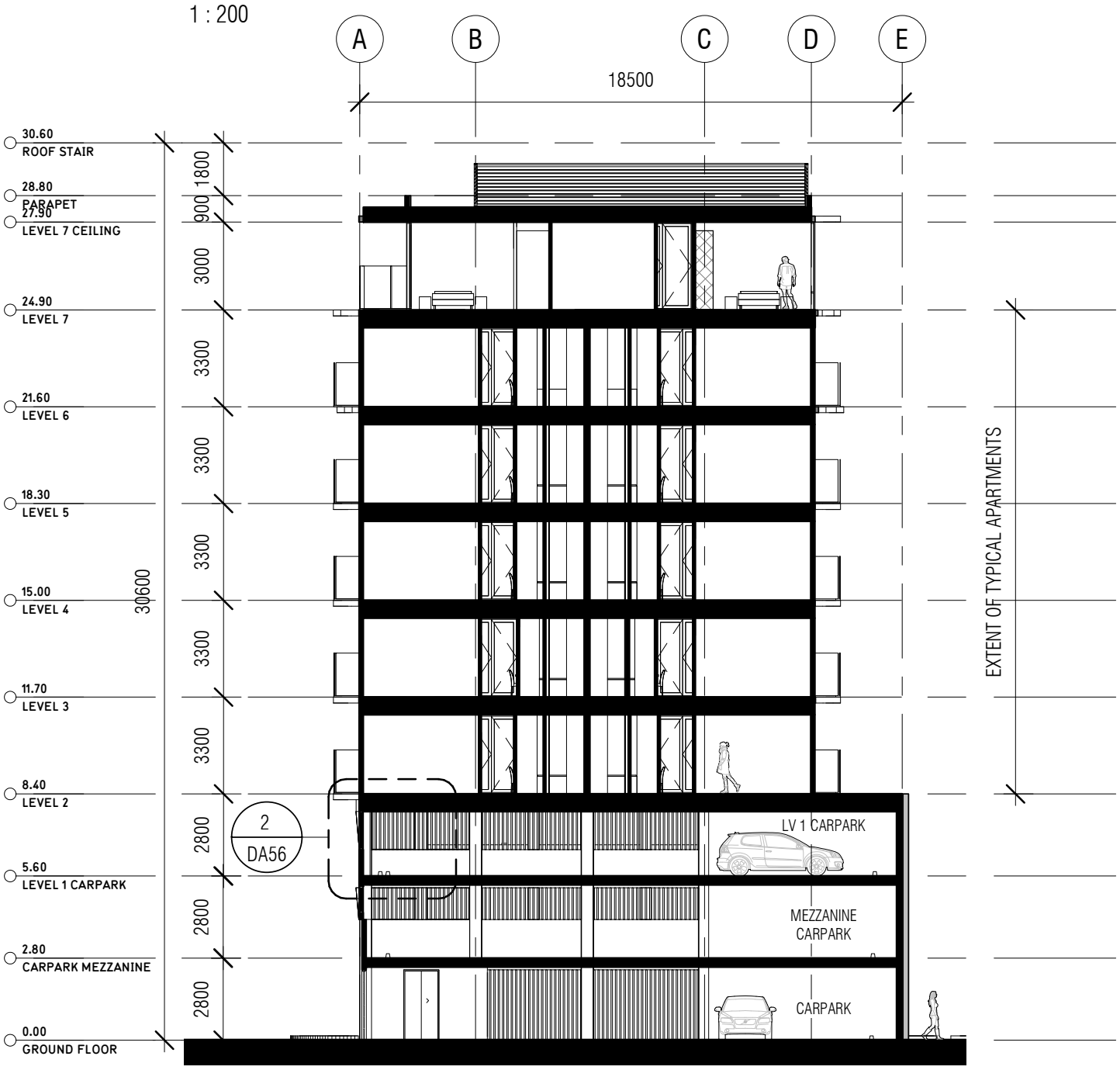
DATE
06/02/2019

1 2 5 10

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

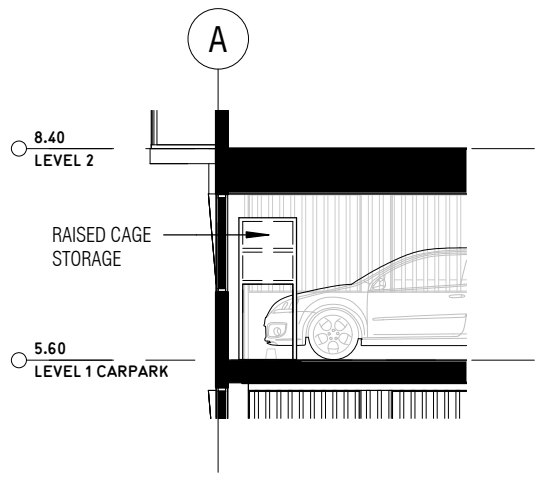
NORTH-SOUTH SECTION

1 : 200



EAST-WEST SECTION

1 : 200



CARPARK OVER-BONNET STORAGE

1 : 100

EXAMPLE STORAGE

FOR DEVELOPMENT APPROVAL

SECTIONS

DRAWING NUMBER
DA56

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

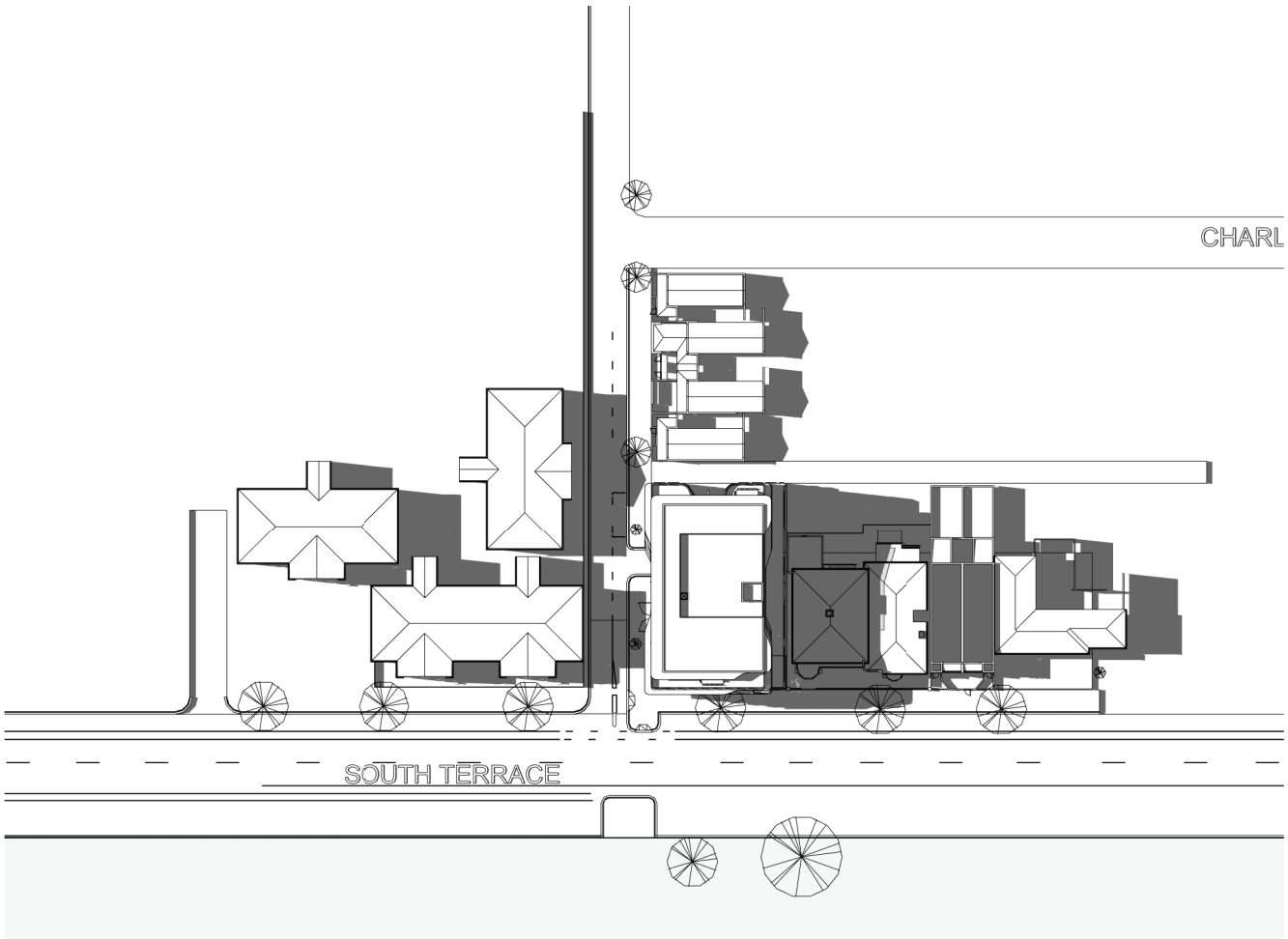
REVISION
C

DATE
06/02/2019

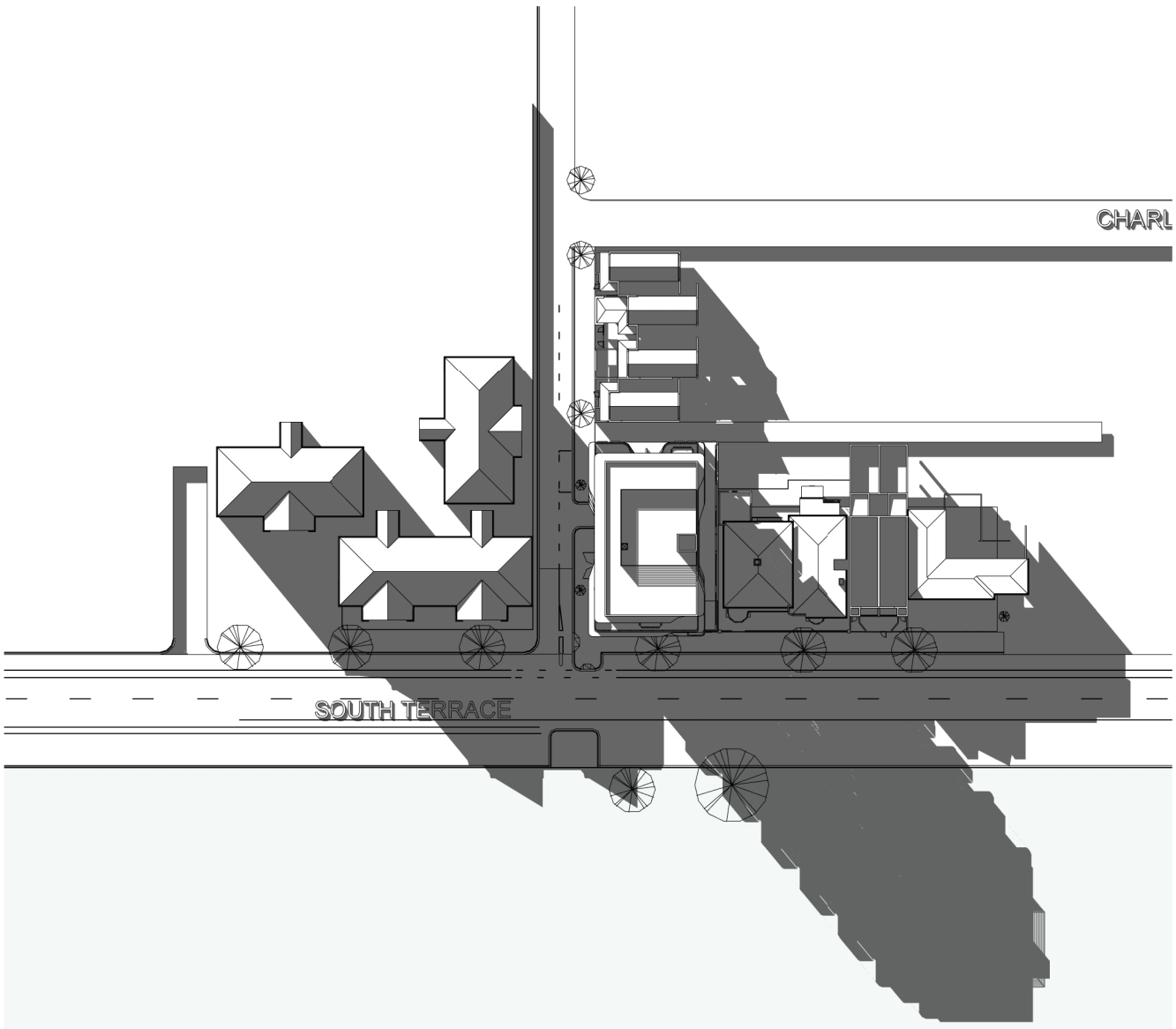
2 4 10 20

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SHADOW DIAGRAM 3PM 21 DECEMBER
1 : 1000



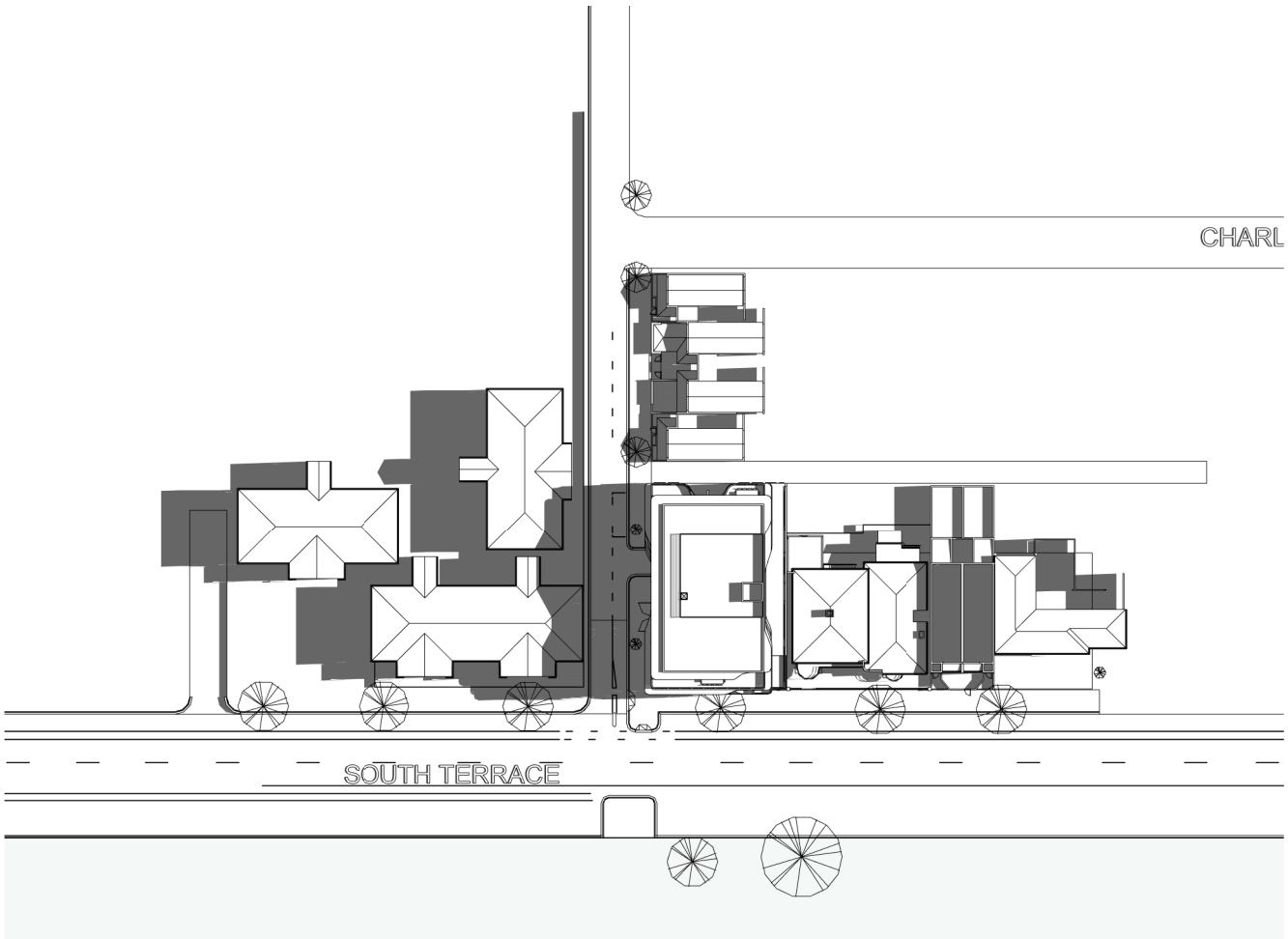
SHADOW DIAGRAM 3PM 21 JUNE
1 : 1000

FOR DEVELOPMENT APPROVAL

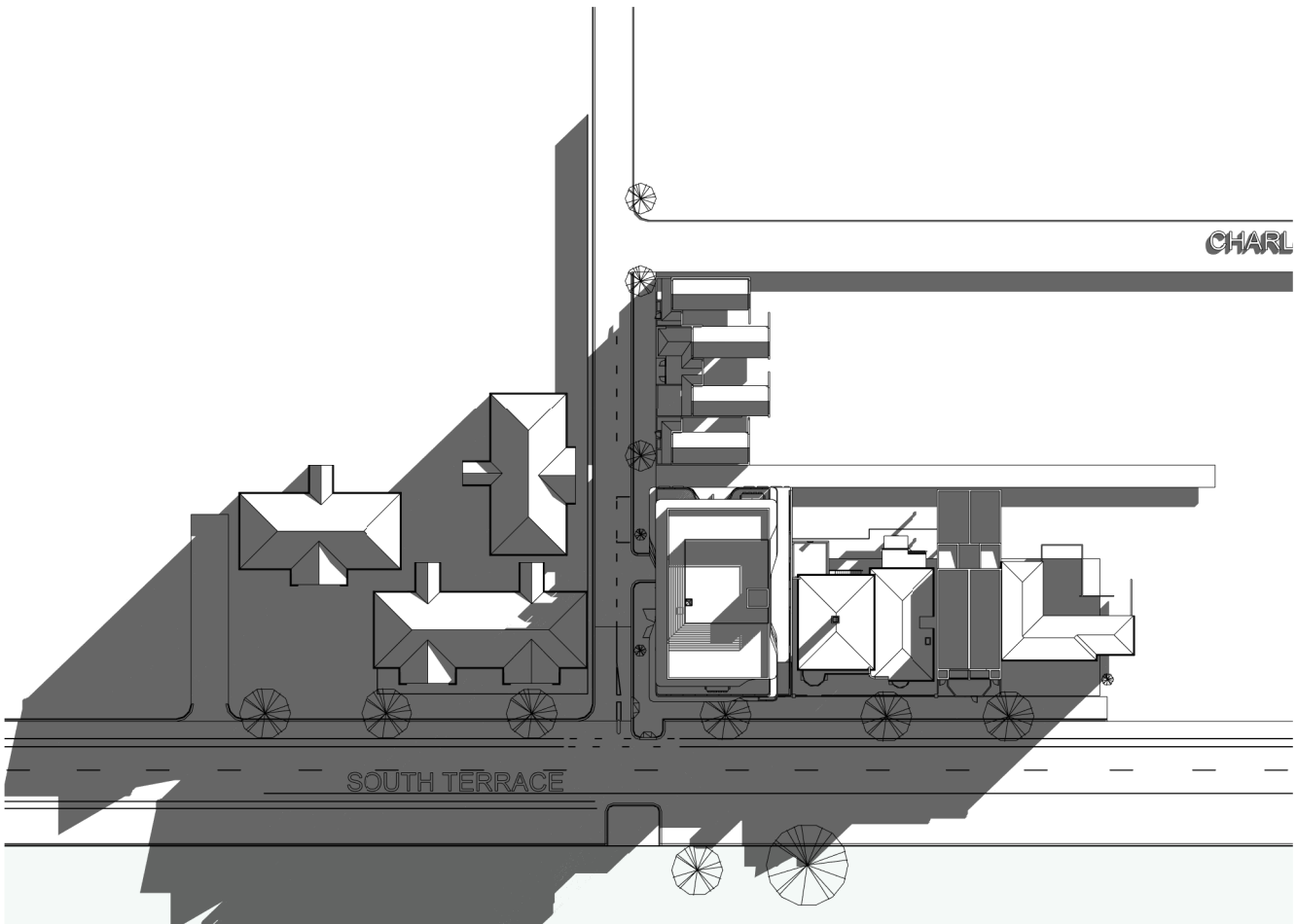
SHADOW DIAGRAMS 1		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	10 20 50 100	
DRAWING NUMBER DA57	1 : 1000	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SHADOW DIAGRAM 9AM 21 DECEMBER
1 : 1000



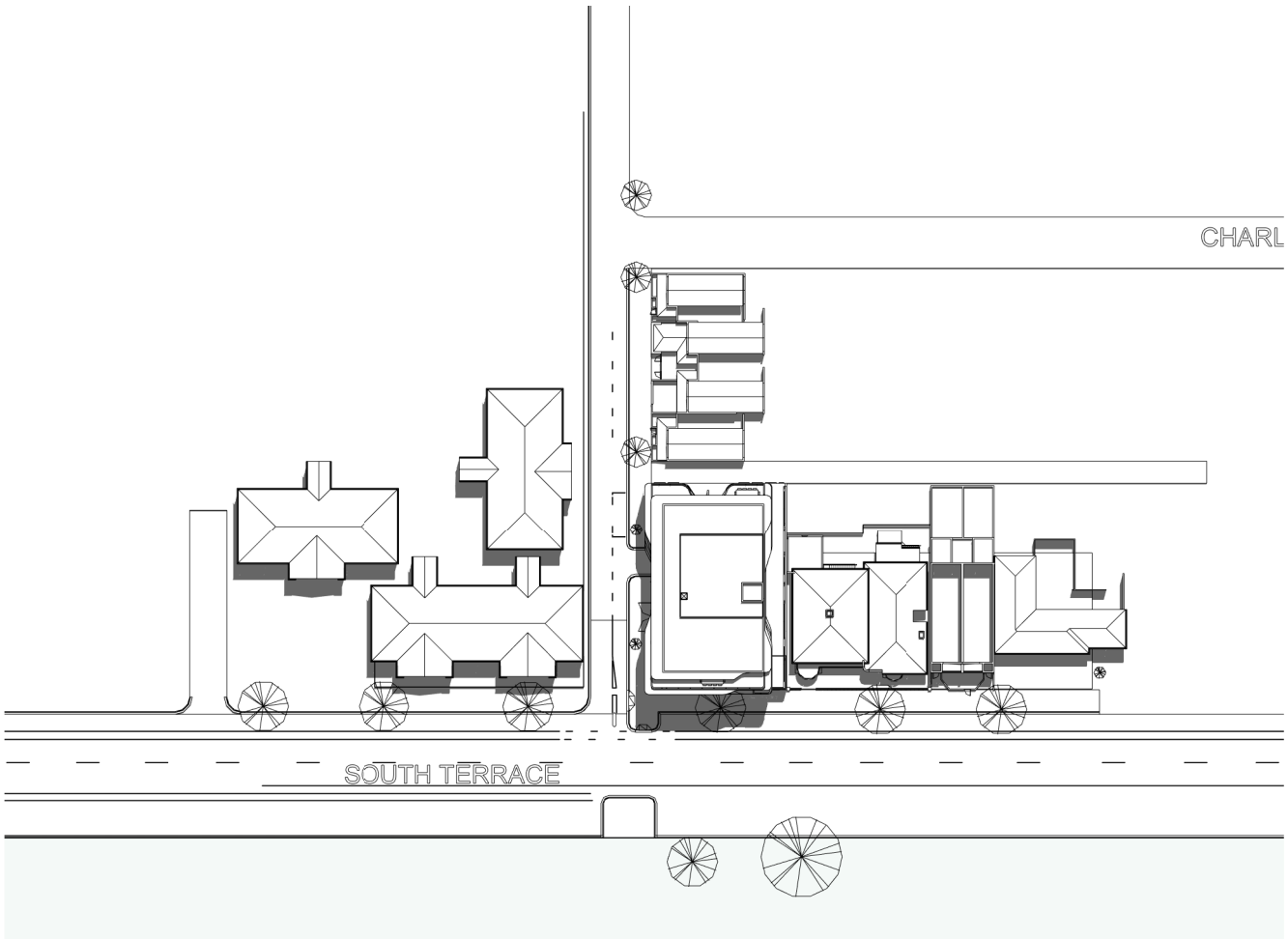
SHADOW DIAGRAM 9AM 21 JUNE
1 : 1000

FOR DEVELOPMENT APPROVAL

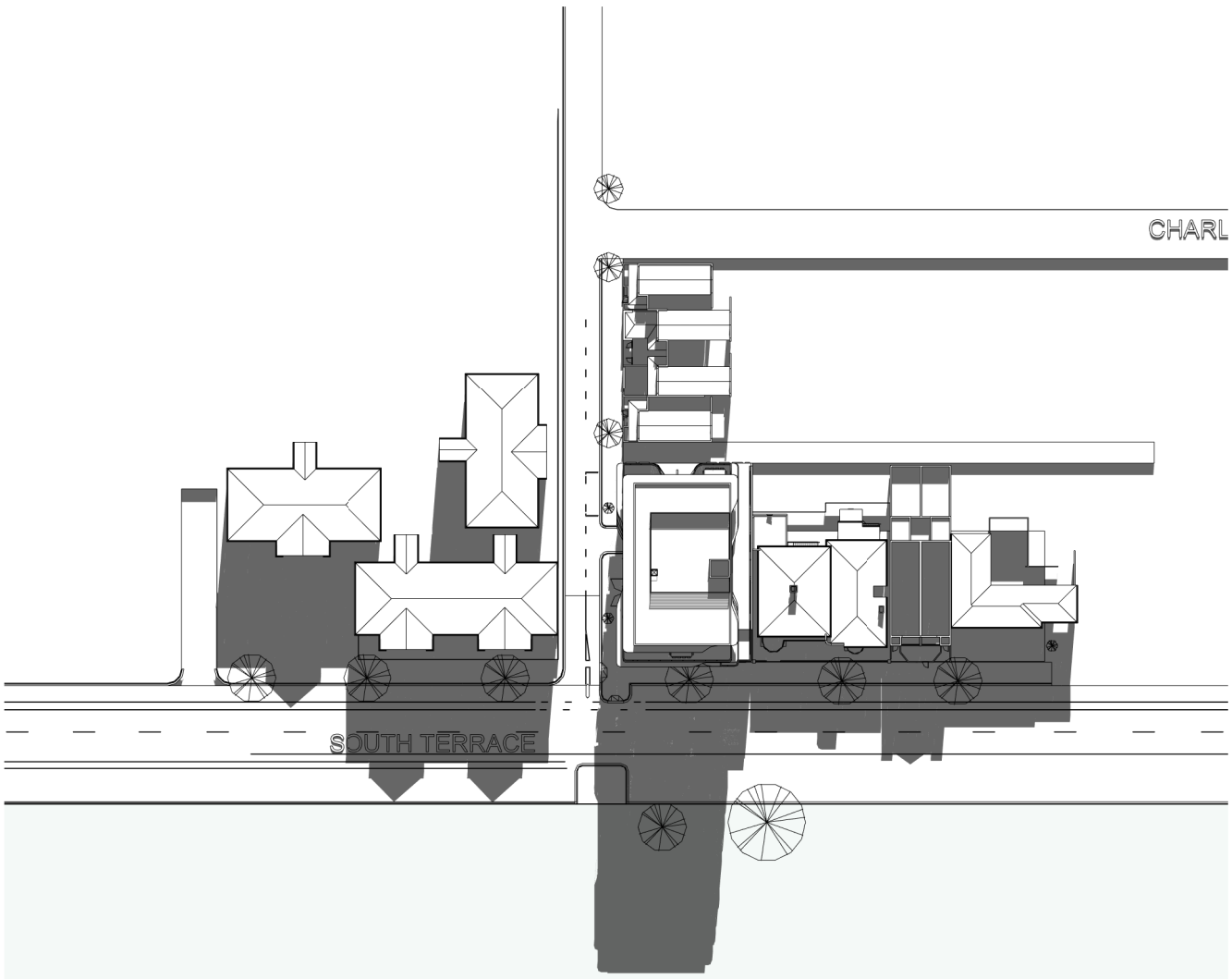
SHADOW DAIGRAMS 2		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	10 20 50 100	
DRAWING NUMBER DA58	1 : 1000	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SHADOW DIAGRAM 12 NOON 21 DECEMBER
1 : 1000



SHADOW DIAGRAM 12 NOON 21 JUNE
1 : 1000

FOR DEVELOPMENT APPROVAL

SHADOW DIAGRAMS 3

DRAWING NUMBER
DA59

1 : 1000

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
B

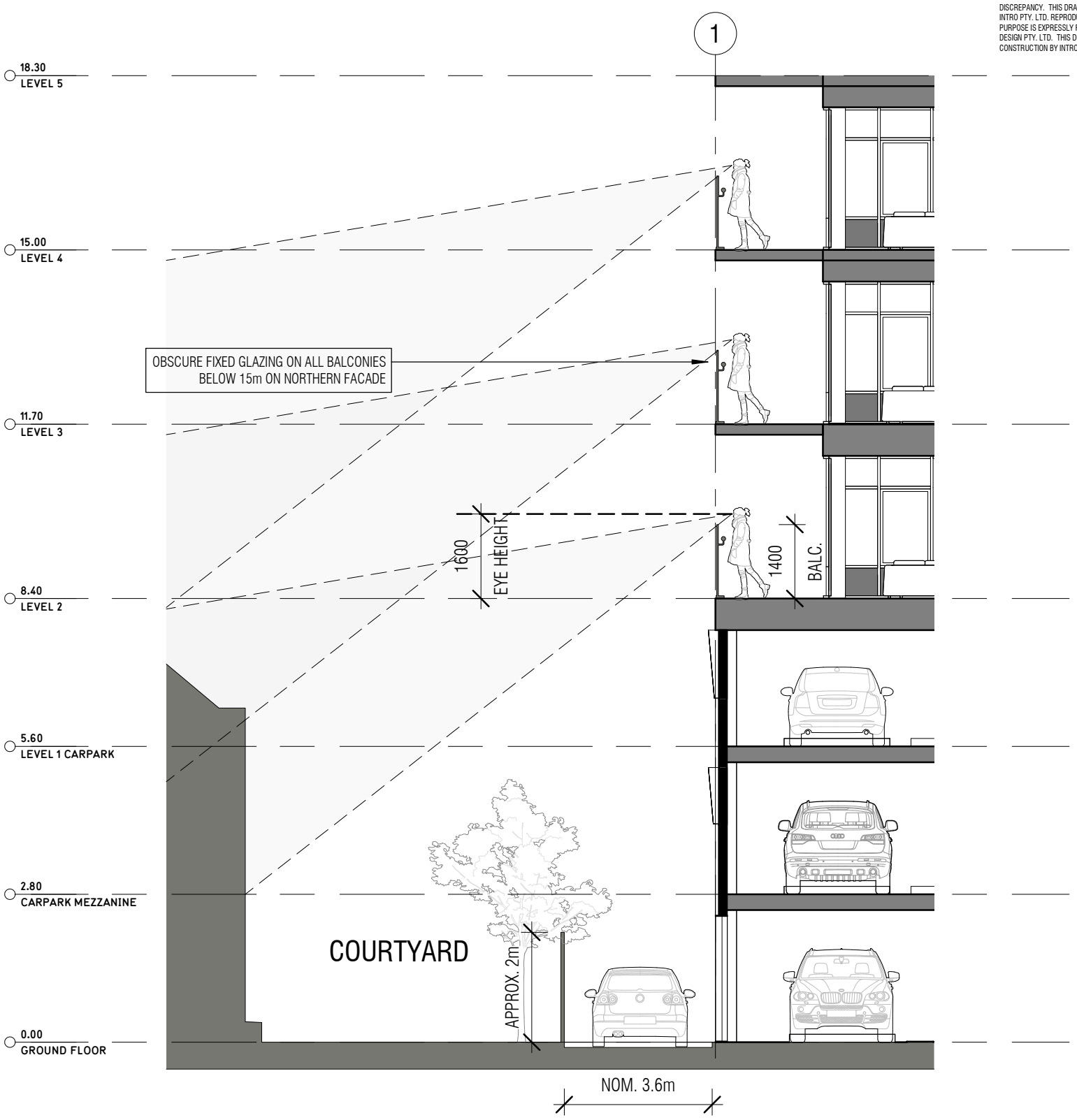
DATE
06/02/2019

10 20 50 100

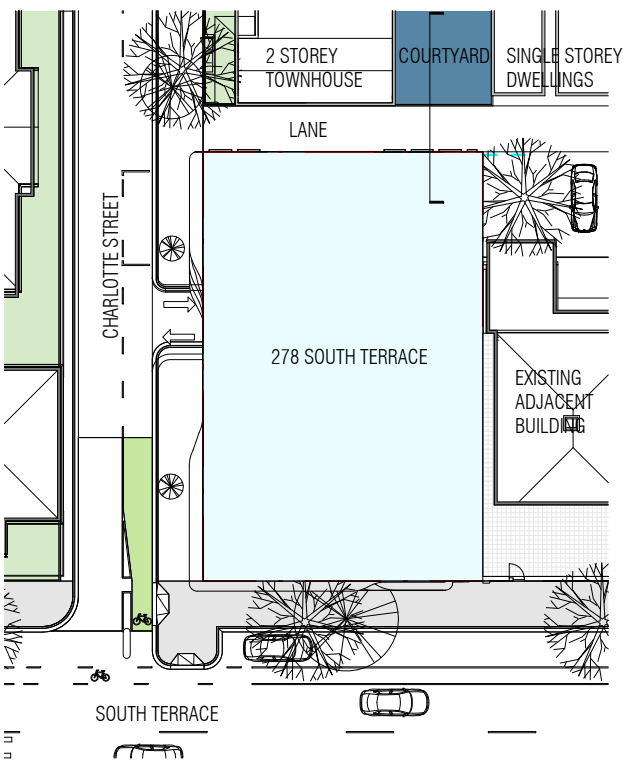
N

INTRO

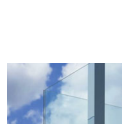
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



1 / DR03 **POS SIGHTLINES**
1 : 100



2 / DA50 **SURROUNDING POS**
1 : 500



GLS.02
BALCONY GLAZING

GLS.04
OBSCURE BALCONY GLAZING

FOR DEVELOPMENT APPROVAL

PRIVACY

DRAWING NUMBER
DA60

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION

DATE

1 2 5 10

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

SOUTH WEST CORNER

NORTH WEST CORNER

FOR DEVELOPMENT APPROVAL

PERSPECTIVES 1

DRAWING NUMBER
DA100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

NTS / as indicated

DATE
06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

SOUTHERN ELEVATION

SOUTH TERRACE ENTRY

FOR DEVELOPMENT APPROVAL

PERSPECTIVES 2

DRAWING NUMBER
DA101

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
C

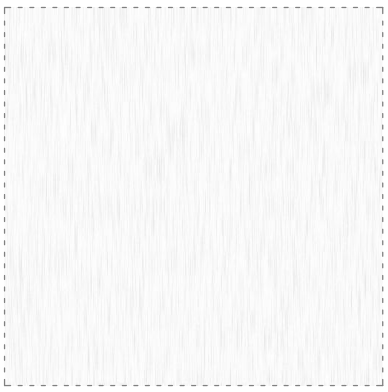
NTS / as indicated

DATE
06/02/2019

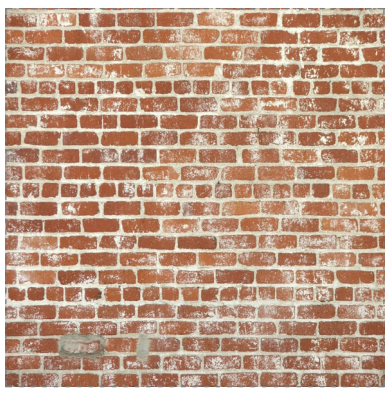
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co


CLD.01


CLD.02


CLD.03


BRK.01


PF.01


PF.02


TMB.01


GLS.01


GLS.02

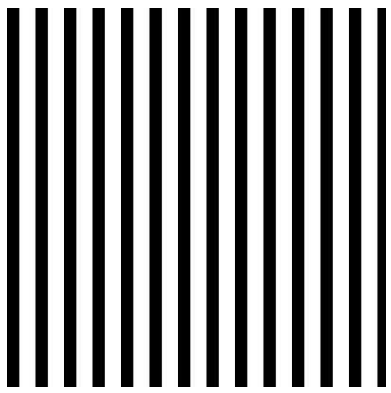

GLS.03


GLS.04


LVR 1


LVR 2


LVR 3


LVR 4

CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "GREY ZINC"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.02	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
GLS.03	COLOURBACK GLASS TO MATCH "GREY ZINC"
GLS.04	OBSCURE BALCONY GLAZING
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM FRAMES TO CARPARK "DARK GREY""

FOR DEVELOPMENT APPROVAL

MATERIAL PALLETTE

DRAWING NUMBER
DA120

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

NTS / as indicated

DATE
06/02/2019

INTRO

13 May 2019

Will Gormly
Senior Planning Officer
City & Inner Metro Development Assessment
Department of Planning Transport and Infrastructure

Via email: will.gormly@sa.gov.au

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

Dear Will,

RE: 278 South Terrace Residential Flat Building – DA 020/A015/19 Further Information

Intro provide a response to the request for information received with respect to the proposed development on behalf of Lustro, the proponent.

This correspondence has been prepared in response to requests for further information from the City of Adelaide, ODASA and the Planning and Development Division in DPTI.

The following specialists have been engaged to inform the response to representations and refined plans:

Traffic and Car Parking:	Phil Weaver & Associates
Waste Management:	Colby Phillips Advisory

ITEM 01: CAR PARK LAYOUT

- *Confirmation of car parking space dimensions.*
- *Traffic consultant report to confirm vehicle movements and proposed car parking layout and rates including size of vehicle lift.*
- *Confirmation that each apartment will be allocated at least one vehicle space.*

Phil Weaver & Associates have reviewed the car parking provision and configuration and has prepared a car parking assessment in consultation with Adelaide City Council traffic engineers. This traffic assessment is attached for your consideration.

The crossover to Charlotte Street has been deliberately limited to a single crossover to prioritise pedestrian movement along Charlotte Street in consultation with Adelaide City Council traffic engineers.

We can confirm that each apartment will be allocated one car parking space at minimum.

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

ITEM 02: WASTE MANAGEMENT

- *Waste consultant report to demonstrate suitability of proposed waste arrangement.*

In consultation with Adelaide City Council waste management staff, Colby Phillips Advisory have prepared a waste management report that has informed some changes to the proposed waste management system, namely:

- the waste chutes have been removed and a waste disposal wall with separate portals for landfill, green and recyclables will be located between the ground floor car parking area and the lobby – this arrangement will comply with DDA access arrangements for the ground floor apartment; and
- the roller door to the waste room has been replaced with hinged doors to improve ease of access for waste collection – this will act as the bin presentation area.

Colby Phillips Advisory's Waste Management Plan is attached for Council's and your own consideration.

ITEM 03: STORAGE

- *Confirmation of volume of over-bonnet storage areas – noting a shortfall of storage volume only in the one-bedroom apartments.*

In order to ensure adequate car park ventilation, the above bonnet storage has been removed from the fourteen mezzanine and first floor car parking spaces abutting the louvers on the west. The over bonnet storage capacity for the remaining ten car parking spaces will be 2-3m^3 each. The selection of the storage will be resolved during detailed design.

Mindful that over bonnet storage has limited accessibility for the DDA apartment, an outdoor storage cupboard has been included in the ground floor apartment terrace which will increase that apartment's storage capacity to 8.5-9m^3 within the range provided by the development plan.

ITEM 04: CAR PARK FAÇADE, VENTILATION AND STREETSCAPE

- *Colour, thickness, and spacing of vertical louvres to car park (annotated as LVR 4 on plans).*
- *Request for typical section details of the glass louvres and over-bonnet storage to the base/south-west corner of the building to review the proposal's intent to create interest at the corner of the building, while concealing the Level 1 cars, over-bonnet storage and also maintaining mechanical ventilation requirements.*

As noted above, the over-bonnet storage has been removed from those car parking spaces adjacent to the louvres on the mezzanine and Level 1 to improve car park ventilation outcomes as well as presentation from the street.

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

ITEM 05: CAR PARK VENTILATION

- *Confirmation that the typical section indicating the metal louvres and over-bonnet storage cages to the west elevation (mezzanine and Level 1) will maintain ventilation requirements.*

As stated above, the over-bonnet storage cages have been removed from those car parking spaces to the west.

ITEM 05: FAÇADE AND MATERIALS

- *Confirmation of the materiality of the south elevation (vertical panels) for levels 2-7; i.e. is type GLS01 proposed for the full panels or are there low-level glass spandrel panels and alternate spandrel and clear glazing?*
- *Request for the provision of a full materials schedule and a physical sample board.*

The elevations have been further documented to detail the façade treatment to the south-western corner of the site.

GLS03 as indicated on the plans and materials schedule is a colour-back glass in a grey tone.

The full materials schedule is included within the attached Architectural Set. A physical sample board will be delivered to your office directly.

CONCLUSION

The traffic, waste management and storage arrangements have been further refined in response to the Request for Further Information in order to fulfil functional, streetscape and ventilation performance outcomes for the car park.

I trust that the response is sufficient for you to put this application out on Category 2 Notification. Should you require further information, please do not hesitate to contact the undersigned on 0406 603 123.

Yours sincerely

Luci Ward
Planning Advisor
ATTACHMENTS

- Amended Plans
- Traffic and Car Parking Assessment
- Waste Management Plan

APPENDIX 01 – AMMENDED PROPOSAL PLANS

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

278 SOUTH TERRACE ADELAIDE

FOR DEVELOPMENT APPROVAL
06 FEB 2019

intro.com.co

SHEET LIST DA SERIES

NUMBER	TITLE	REV	ISSUE DATE
DA00	TITLE	E	06/02/2019
DA01	LOCAL CONTEXT PLAN	C	06/02/2019
DA02	SITE PLAN	E	06/02/2019
DA03	SITE IMAGES	B	06/02/2019
DA04	SITE MATERIALS	B	06/02/2019
DA10	GROUND FLOOR PLAN	E	06/02/2019
DA15	ROOF PLAN	D	06/02/2019
DA50	NORTH ELEVATION	D	06/02/2019
DA51	EAST ELEVATION	D	06/02/2019
DA52	SOUTH ELEVATION	B	06/02/2019
DA53	WEST ELEVATION	B	06/02/2019
DA54	STREET SCAPE ELEVATIONS	B	06/02/2019
DA55	STREET SCAPE ELEVATIONS	B	06/02/2019
DA56	SECTIONS	C	06/02/2019
DA60	SHADOW DIAGRAMS 1	B	06/02/2019
DA61	SHADOW DAIGRAMS 2	B	06/02/2019
DA62	SHADOW DIAGRAMS 3	B	06/02/2019
DA100	PERSPECTIVES 1	D	06/02/2019
DA101	PERSPECTIVES 2	C	06/02/2019
DA120	MATERIAL PALLETTE	D	06/02/2019

FOR DEVELOPMENT APPROVAL

TITLE

DRAWING NUMBER
DA00

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
E

NTS / as indicated

DATE
06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

FOR DEVELOPMENT APPROVAL

LOCAL CONTEXT PLAN

DRAWING NUMBER
DA01

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
C

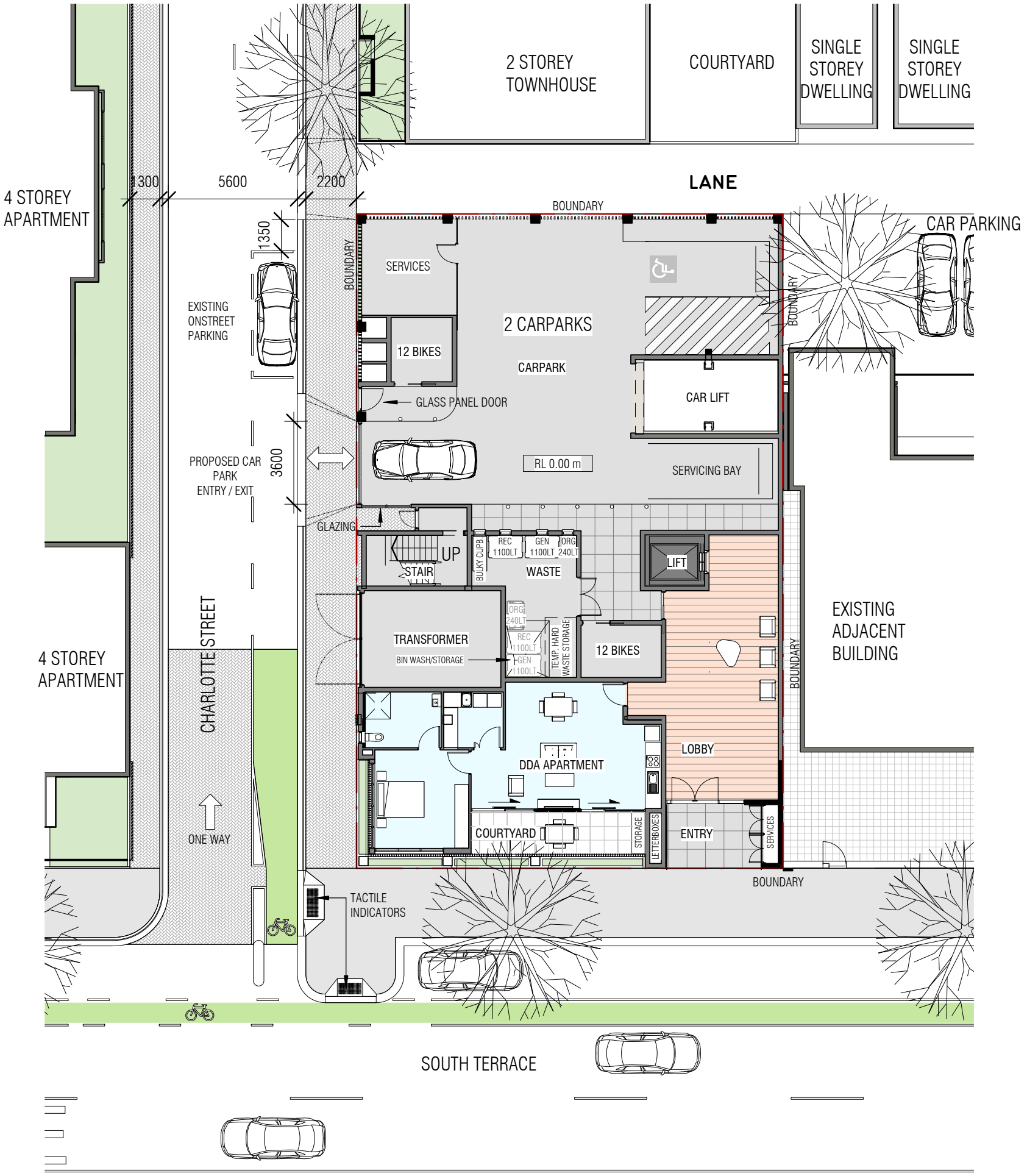
DATE
06/02/2019

5 10 25 50

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

SITE PLAN

DRAWING NUMBER
DA02

1 : 200

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
E

DATE
06/02/2019

2 4 10 20

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

GLENOSMOND ROAD LOOKING EAST

262 SOUTH TERRACE

274 SOUTH TERRACE

SITE CURRENT CONDITION

SITE CURRENT CONDITION

SOUTH TERRACE LOOKING WEST TOWARDS SITE

PARKLANDS LOOKING TOWARDS SITE

PARKLANDS LOOKING ADJACENT BUILDINGS

FOR DEVELOPMENT APPROVAL

SITE IMAGES

DRAWING NUMBER
DA03

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
B

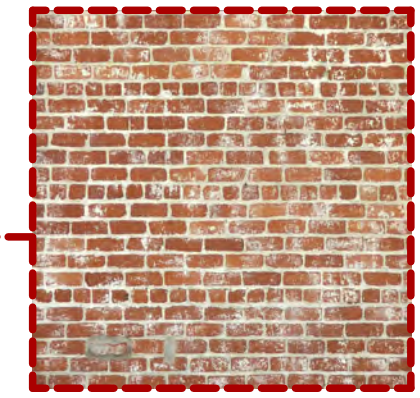
NTS / as indicated

DATE
06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

274 SOUTH TERRACE



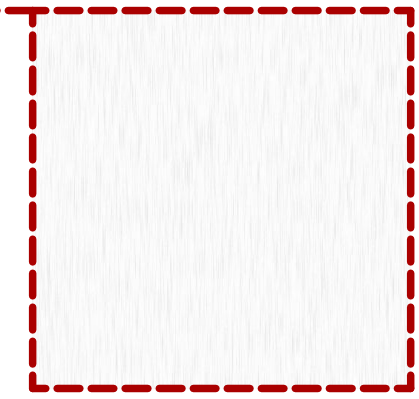
COMMON RED BRICK
RED BRICK IS A WARM AND SUSTAINABLE MATERIAL PROVIDING A STRONG LINK TO THE LOCAL HERITAGE AND URBAN FLAVOUR OF SOUTH TERRACE.

278 SOUTH TERRACE

GLASS FACADE
THE SOUTHERN FACADE PREDOMINANTLY CONSISTS OF GLAZING TO MAXIMISE VIEWS AS WELL AS REFLECT THE QUALITIES OF THE EXISTING BUILDING AND SURROUNDING LANDSCAPE.

262 SOUTH TERRACE

DARK TONES
A NEUTRAL COLOUR SCHEME IS ACHIEVED THROUGH THE USE OF A PRE-FINISHED 'VITRAPANEL' WHICH CREATES A MODERN LINK TO THE RECENT '262 SOUTH TERRACE' PROPOSAL.



WHITE TONES
A NEUTRAL COLOUR SCHEME IS ACHIEVED THROUGH THE USE OF A PRE-FINISHED 'VITRAPANEL' WHICH CREATES A MODERN LINK TO THE RECENT '262 SOUTH TERRACE' PROPOSAL.

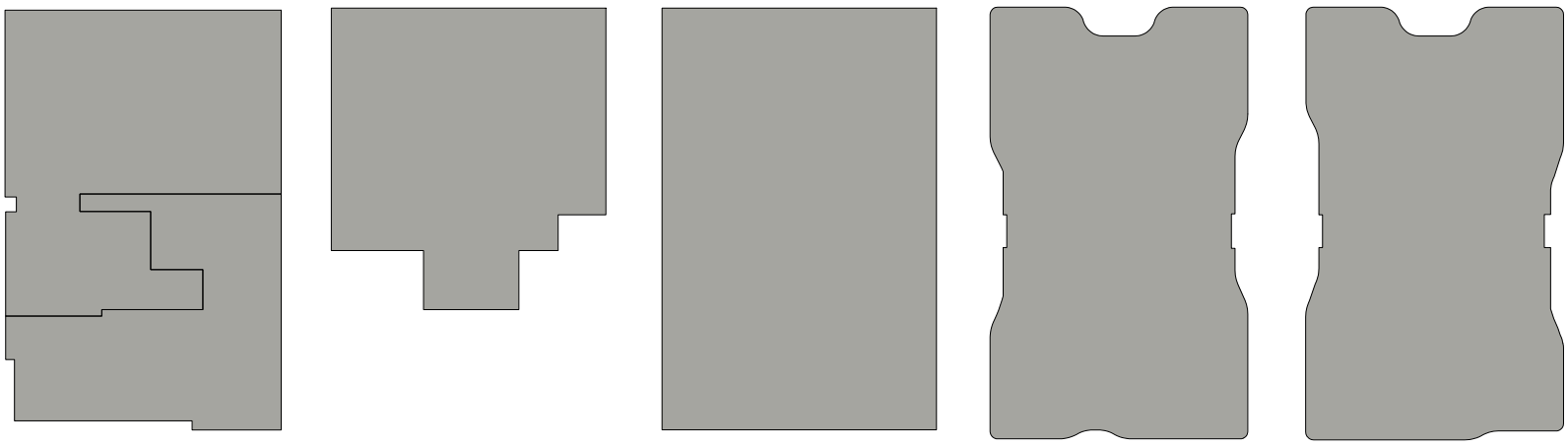
FOR DEVELOPMENT APPROVAL

SITE MATERIALS	PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	**NTS / as indicated**
DRAWING NUMBER DA04	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

GFA/BALCONIES



GROUND
GFA - EXC CARPARK: 201m²
CARPARK: 310m²

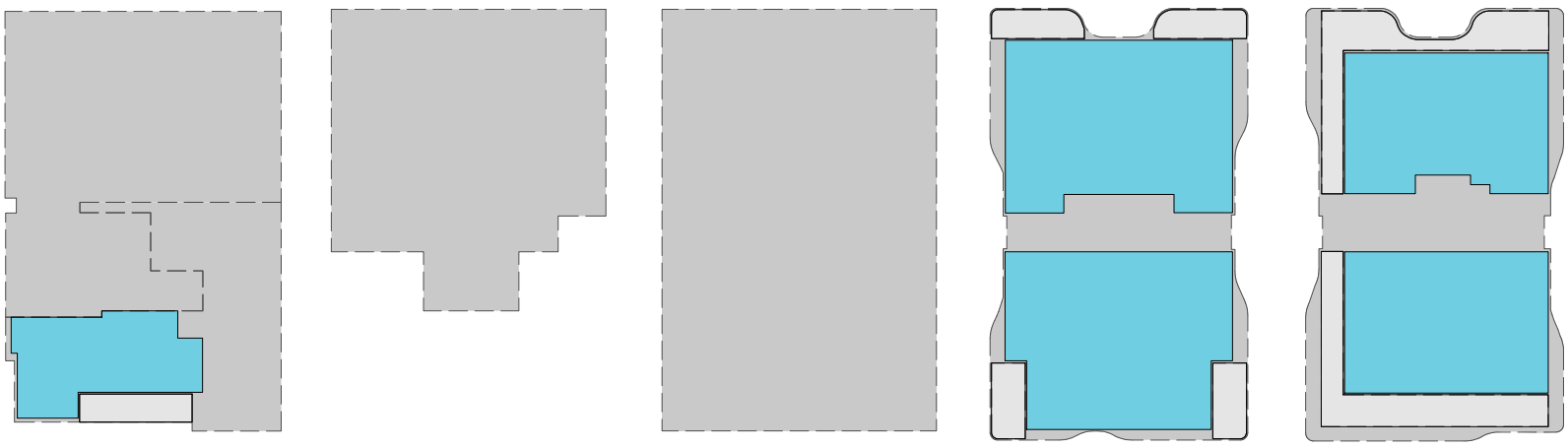
MEZZANINE
GFA: 318m²

LEVEL 1
GFA: 522m²

TYPICAL
GFA 471m²

PENTHOUSE
GFA: 469m²

NSA



GROUND
NSA: 70m²
COURTYARD: 14m²

MEZZANINE
NSA: -

LEVEL 1
NSA: -

TYPICAL
NSA: 337m²
BALCONIES: 46m²

PENTHOUSE
NSA: 254m²
BALCONIES: 92m²

FOR DEVELOPMENT APPROVAL

GFA/NLA

DRAWING NUMBER
DA05

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
A

DATE
12/02/2019

5 10 25 50

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

A B C D E

1 1a 2 3 4 5 5a 6

18500

LANE

BOUNDARY

FIRE PUMP

FIRE TANK

PERFORATED SCREEN

2
DA57

BOUNDARY

SERVICES

GAS

SPRINKLER

12 BIKES

2 CARPARKS

CARPARK
215 m²

GLASS PANEL DOOR

CAR LIFT
6200

BOUNDARY

3600

CAR PARK
ENTRY / EXIT

LINE OF OVER
BONNET STORAGE

BULKY CUPBOARD

REC
1100LT

GEN
1100LT

ORG
240L

UP

LIFT
6 m²

EXISTING ADJACENT BUILDING

CHARLOTTE STREET

WASTE
22 m²

ORG
240LT

ORG
240LT

REC
1100LT

GEN
1100LT

TEMP. HARD
WASTE STORAGE

BH

TRANSFORMER
25 m²

BIN WASH/STORAGE

12 BIKES

LOBBY
54 m²

BH

1450

ENS

LDY

1725

DDA APARTMENT
71 m²

BUFFER PLANTING

BED 1

R

COURTYARD
14 m²

STORAGE

LETTERBOXES NBN FIP

ENTRY
12 m²

BOOSTER

MECH

2700

BUFFER PLANTING

BUFFER PLANTING

BUFFER PLANTING

BOUNDARY

900

TACTILE
INDICATORS

BH = BULKHEAD

SOUTH TERRACE

FOR DEVELOPMENT APPROVAL

GROUND FLOOR PLAN

DRAWING NUMBER
DA10

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

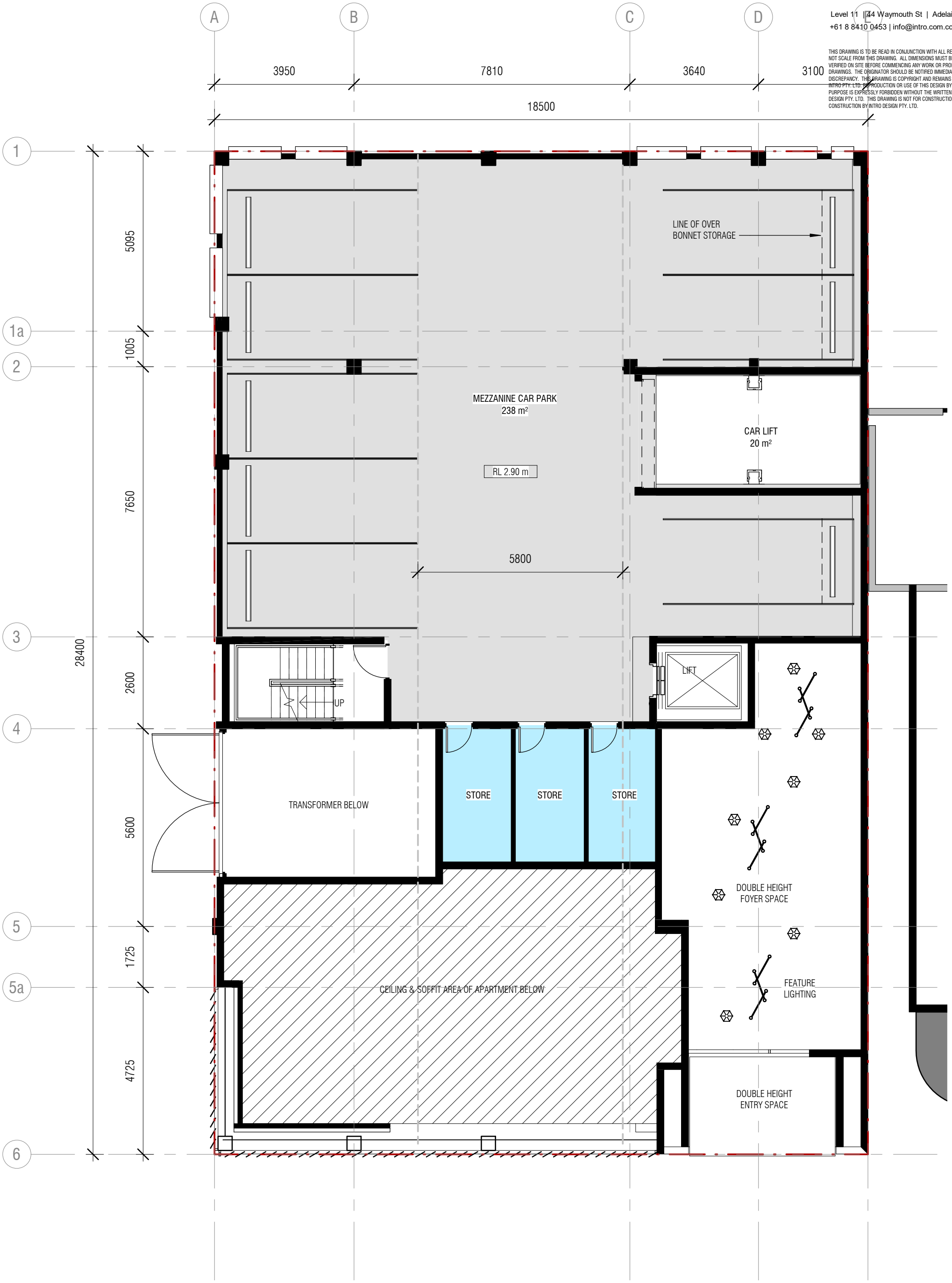
REVISION
E

DATE
06/02/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

MEZZANINE LEVEL CARPARK

DRAWING NUMBER
DA11

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

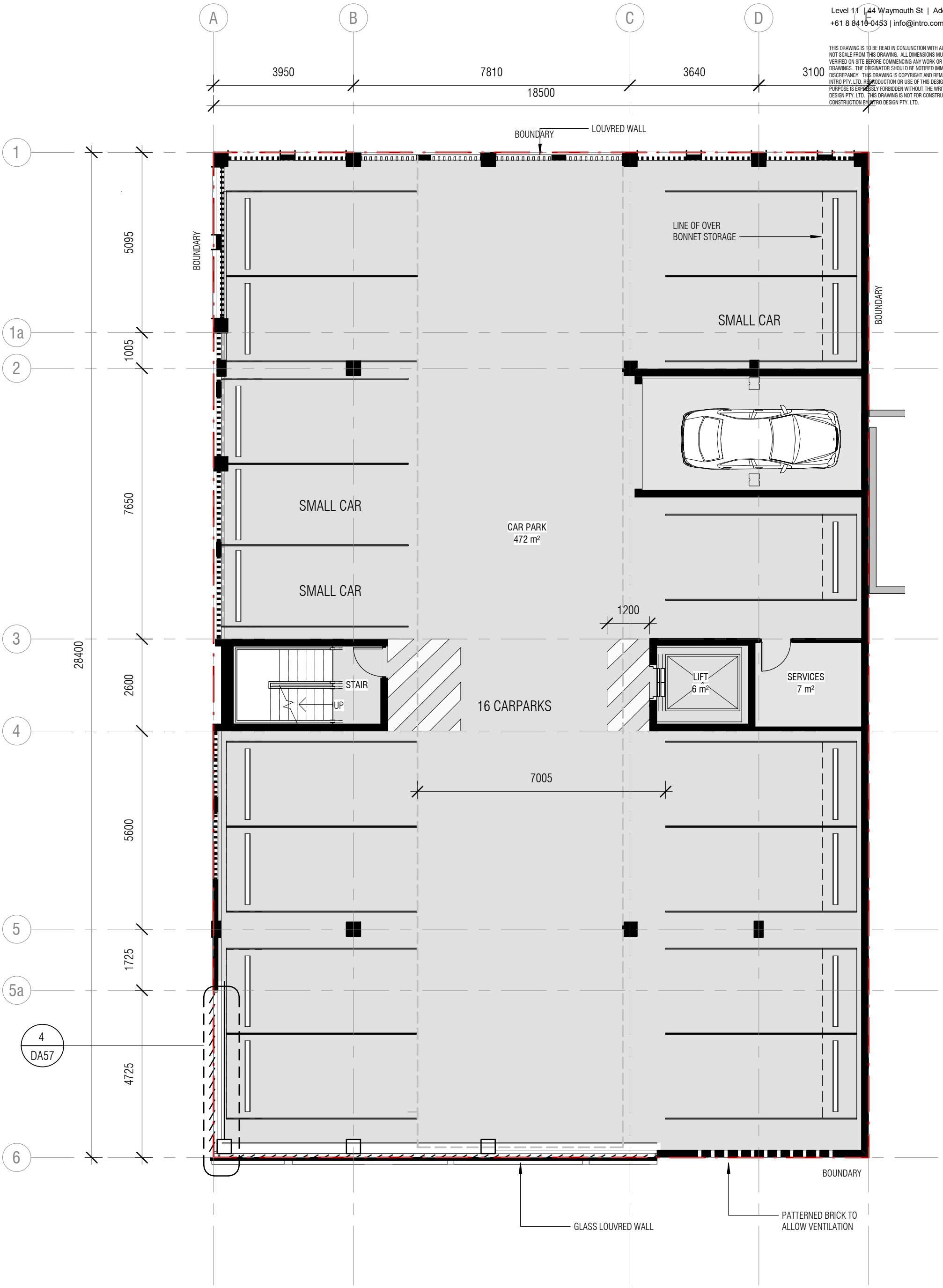
REVISION
F

DATE
09/05/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

LEVEL 1 CARPARK

DRAWING NUMBER
DA12

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

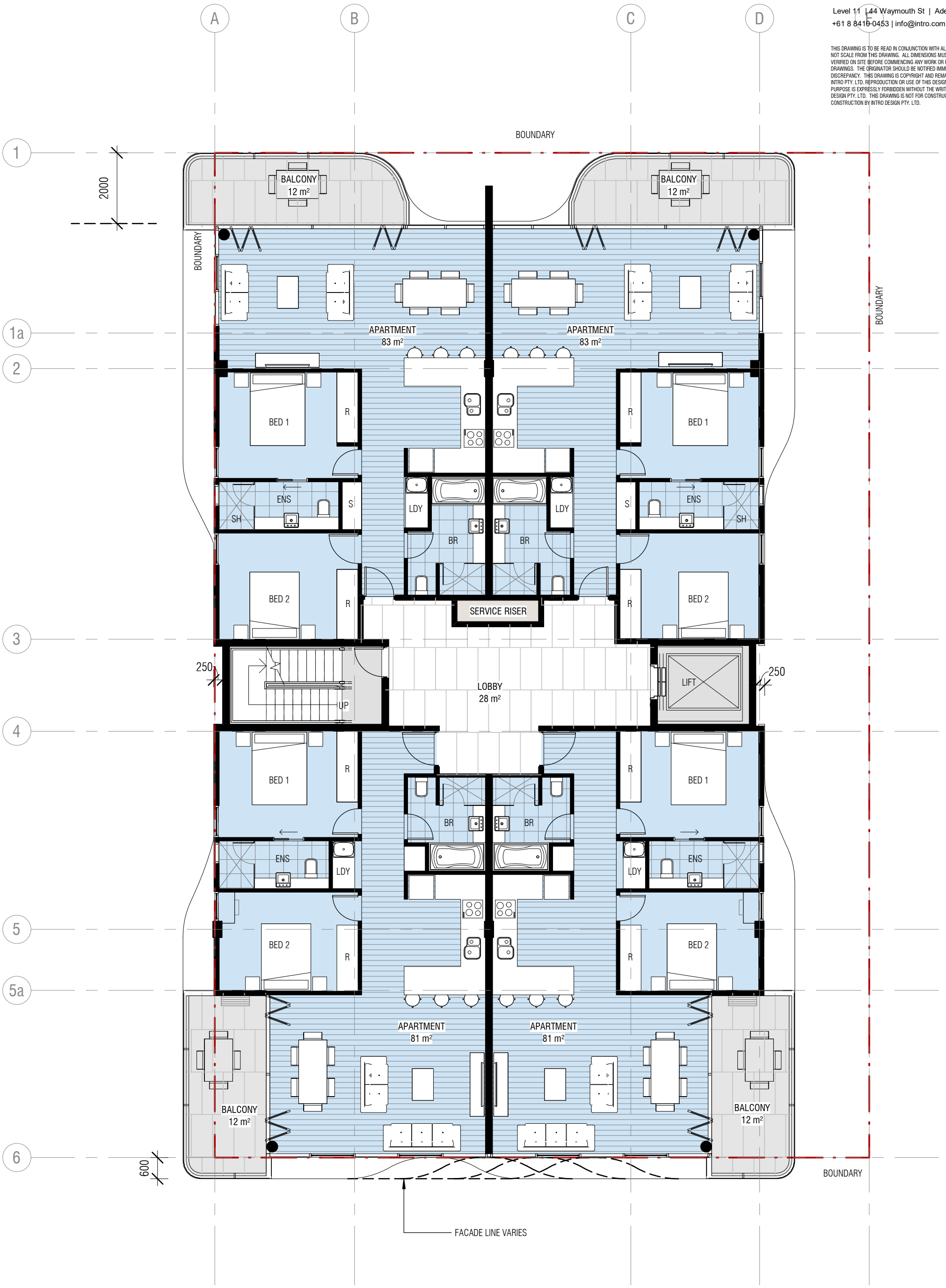
REVISION
F

DATE
09/05/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

TYPICAL LEVEL 2-6

DRAWING NUMBER
DA13

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

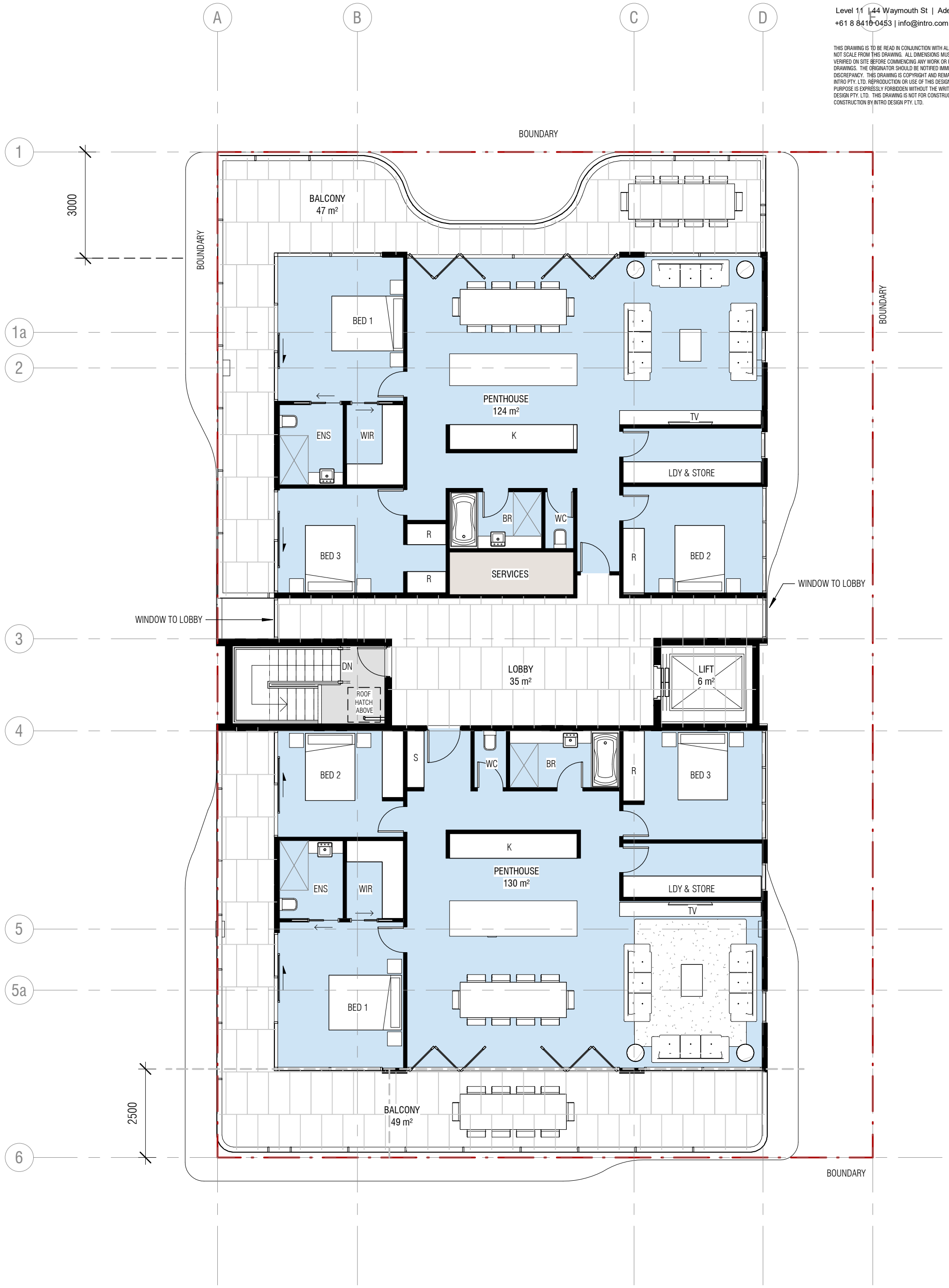
REVISION
E

DATE
09/05/2019

1 2 5 10

N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



FOR DEVELOPMENT APPROVAL

LEVEL 7 - PENTHOUSE		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	1 2 5 10	
DRAWING NUMBER DA14	1 : 100	CLIENT BRUNO MARVEGGIO	REVISION E	DATE 09/05/2019	N

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

FOR DEVELOPMENT APPROVAL

ROOF PLAN

DRAWING NUMBER
DA15

1 : 100

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

DATE
06/02/2019

1 2 5 10

N

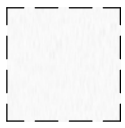
CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

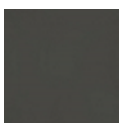
Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"



CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

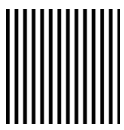
GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

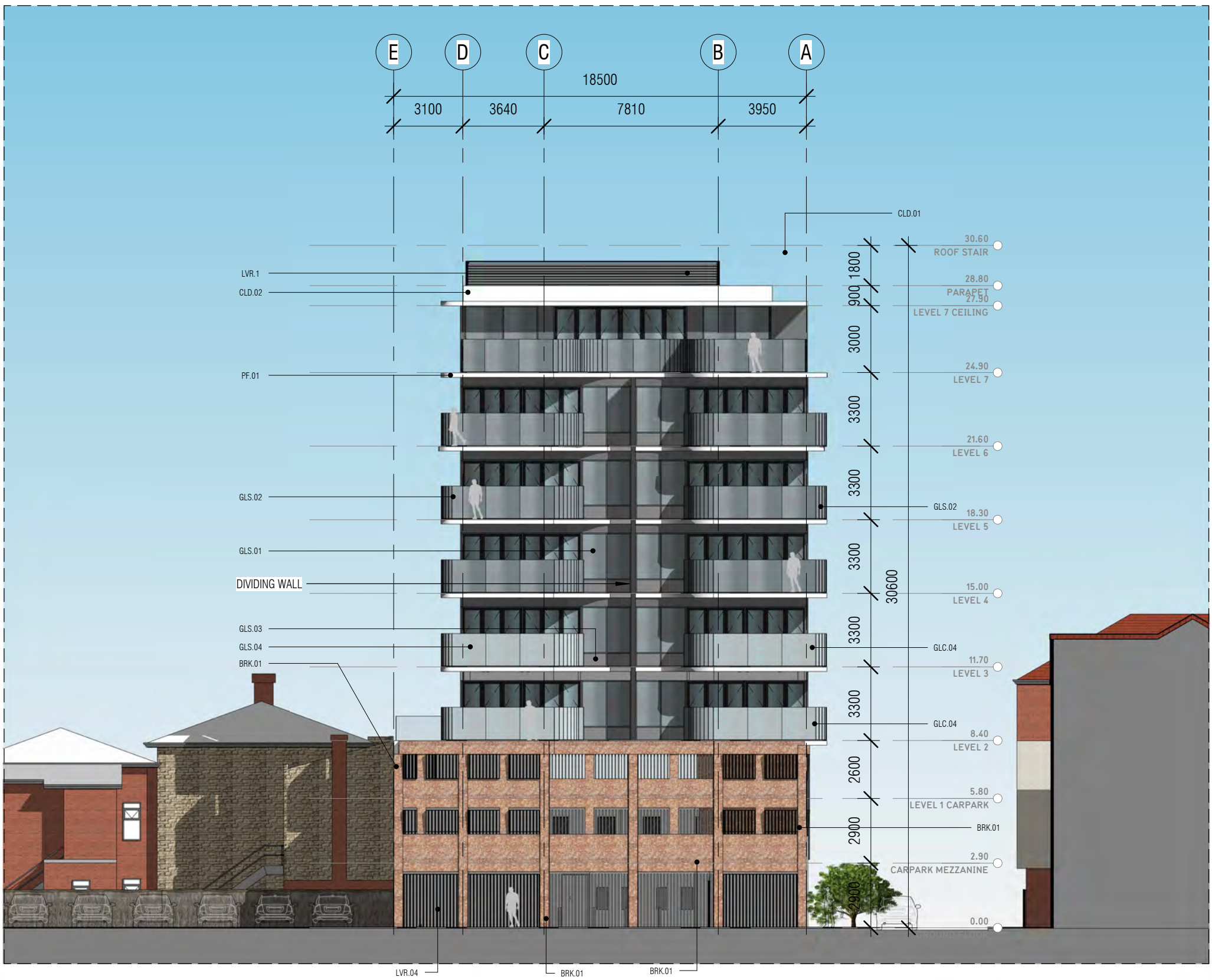
LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



NORTH ELEVATION SK

1 : 200

CHARLOTTE STREET

FOR DEVELOPMENT APPROVAL

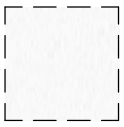
NORTH ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	2 4 10 20
DRAWING NUMBER DA50	As indicated	CLIENT BRUNO MARVEGGIO	REVISION D	DATE 06/02/2019

CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

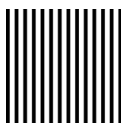
GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

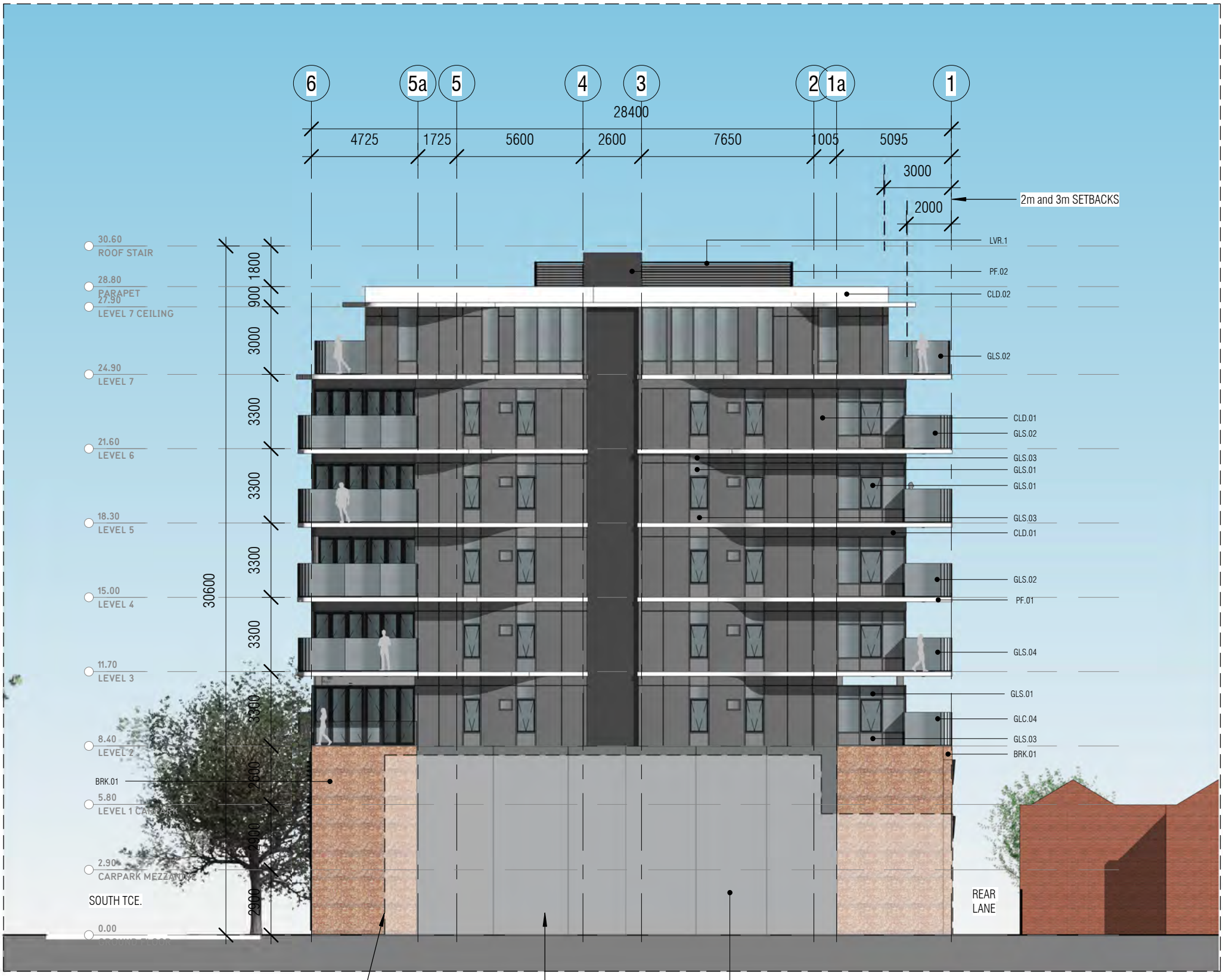
LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



EAST ELEVATION SK

1 : 200

FOR DEVELOPMENT APPROVAL

EAST ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	2 4 10 20
DRAWING NUMBER DA51	As indicated	CLIENT BRUNO MARVEGGIO	REVISION D	DATE 06/02/2019

CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"

CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"

CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED

GLS.02
BALCONY GLAZING

GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE

LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES

SOUTH ELEVATION SK

1 : 200

FOR DEVELOPMENT APPROVAL

SOUTH ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	1 2 5 10
DRAWING NUMBER DA52	As indicated	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019

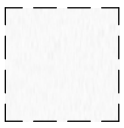
CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	COLOURBACK GLASS TO MATCH "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.01	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM LOUVRES TO CARPARK "DARK GREY"

INTRO

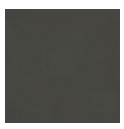
Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

CLD.01
9mm PREFINISHED FC SHEET - VITRAPANEL "GREY ZINC"



CLD.02
9mm PREFINISHED FC SHEET - VITRAPANEL "ICE WHITE"



CLD.03
9mm PREFINISHED FC SHEET - VITRAPANEL "CHARRED FOREST"

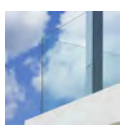
BRK.01
RED BRICK

PF.01
WHITE PAINT FINISH TO EXPOSED CONCRETE

PF.02
MONUMENT PAINT FINISH TO EXPOSED CONCRETE

TMB.01
SLATTED TIMBER FENCE

GLS.01
PERFORMANCE GLAZING. DARK TINTED



GLS.02
BALCONY GLAZING

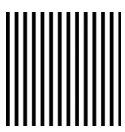
GLS.03
COLOURBACK GLASS TO MATCH "GREY ZINC"

GLS.04
OBSCURE BALCONY GLAZING

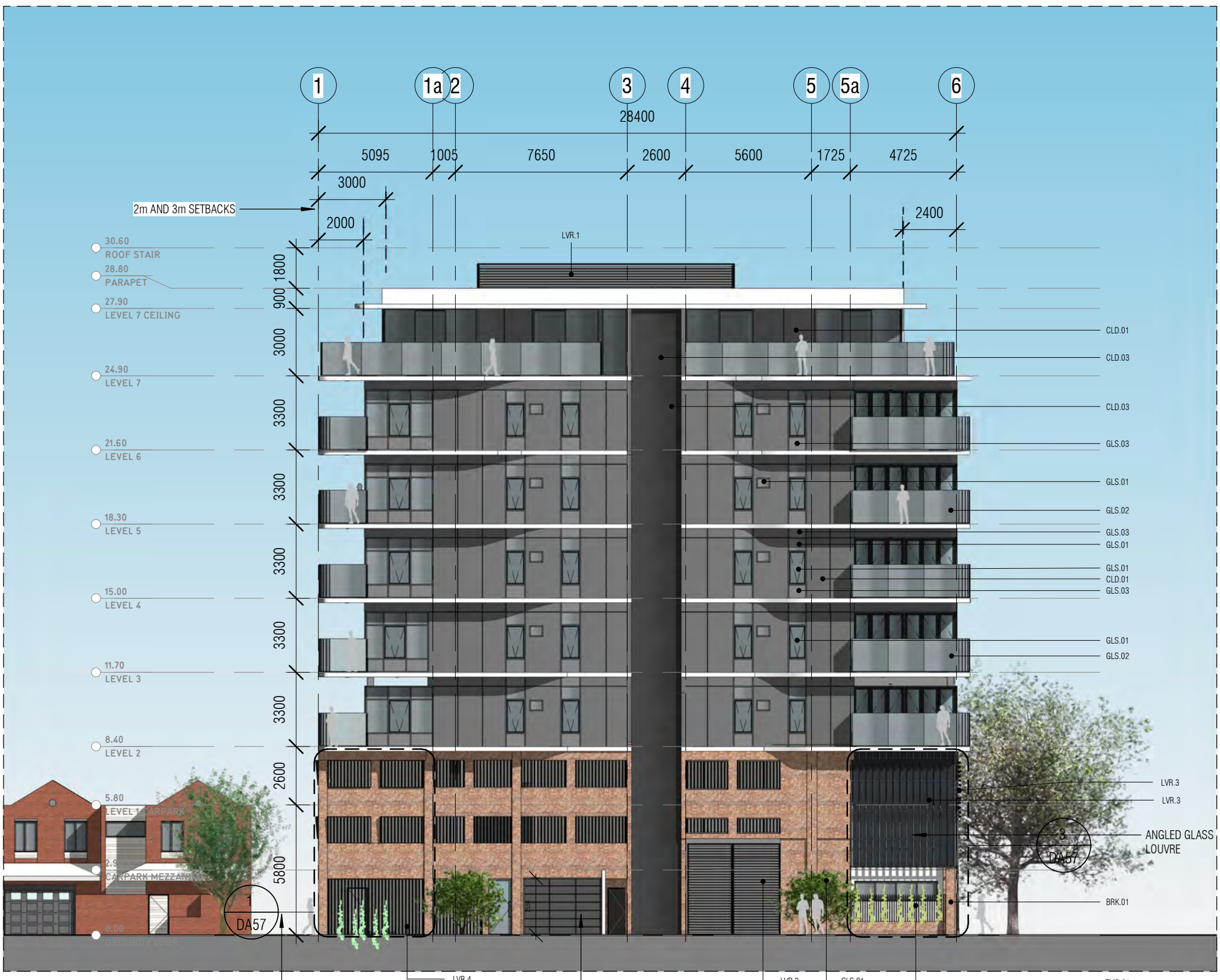
LVR.1
ALUMINIUM LOUVRES TO PLANT -LIGHT GREY FINISH

LVR.2
HORIZONTAL LOUVRES TRANSFORMER -LIGHT GREY FINISH

LVR.3
VERTICAL GLASS LOUVRE



LVR.4
VERTICAL ALUMINIUM CARPARK LOUVRES



WEST ELEVATION SK

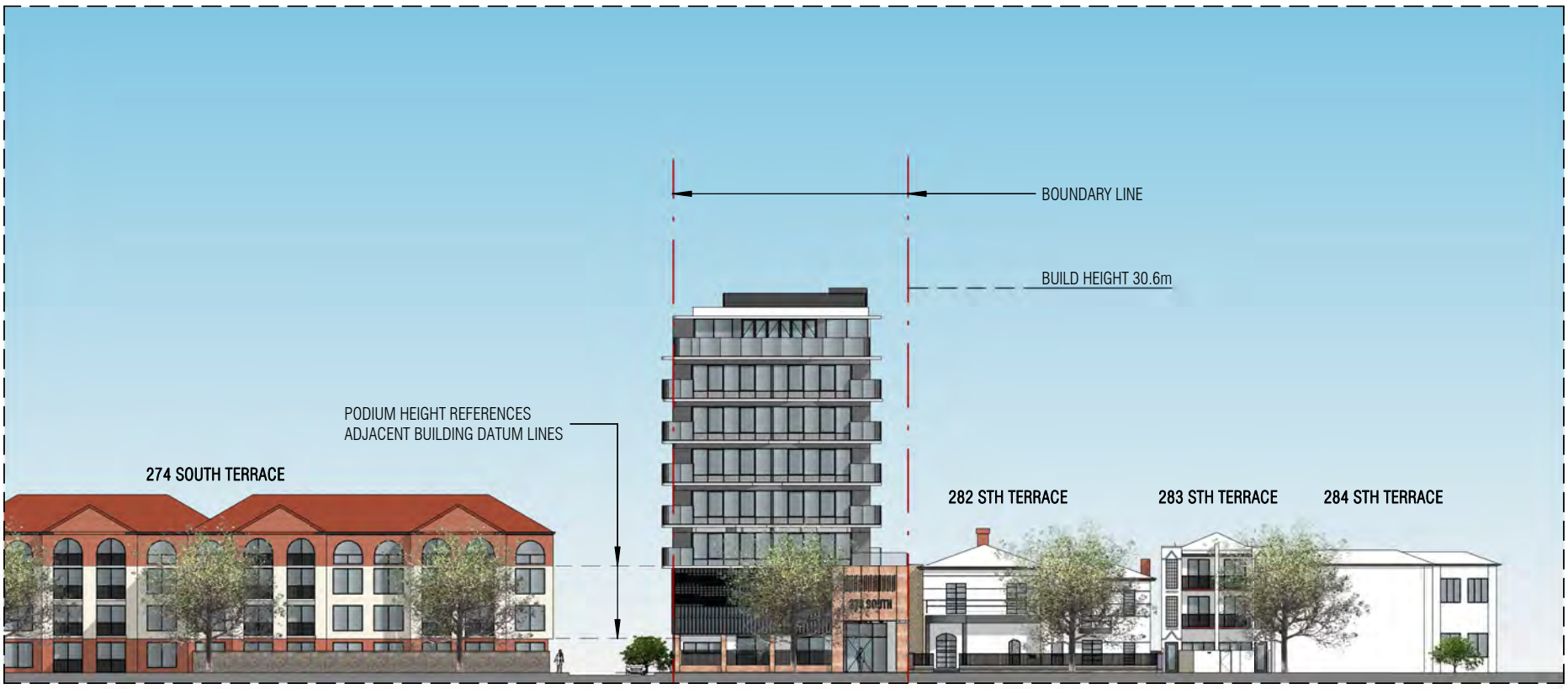
1 : 200

FOR DEVELOPMENT APPROVAL

WEST ELEVATION		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	1 2 5 10
DRAWING NUMBER DA53	As indicated	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019

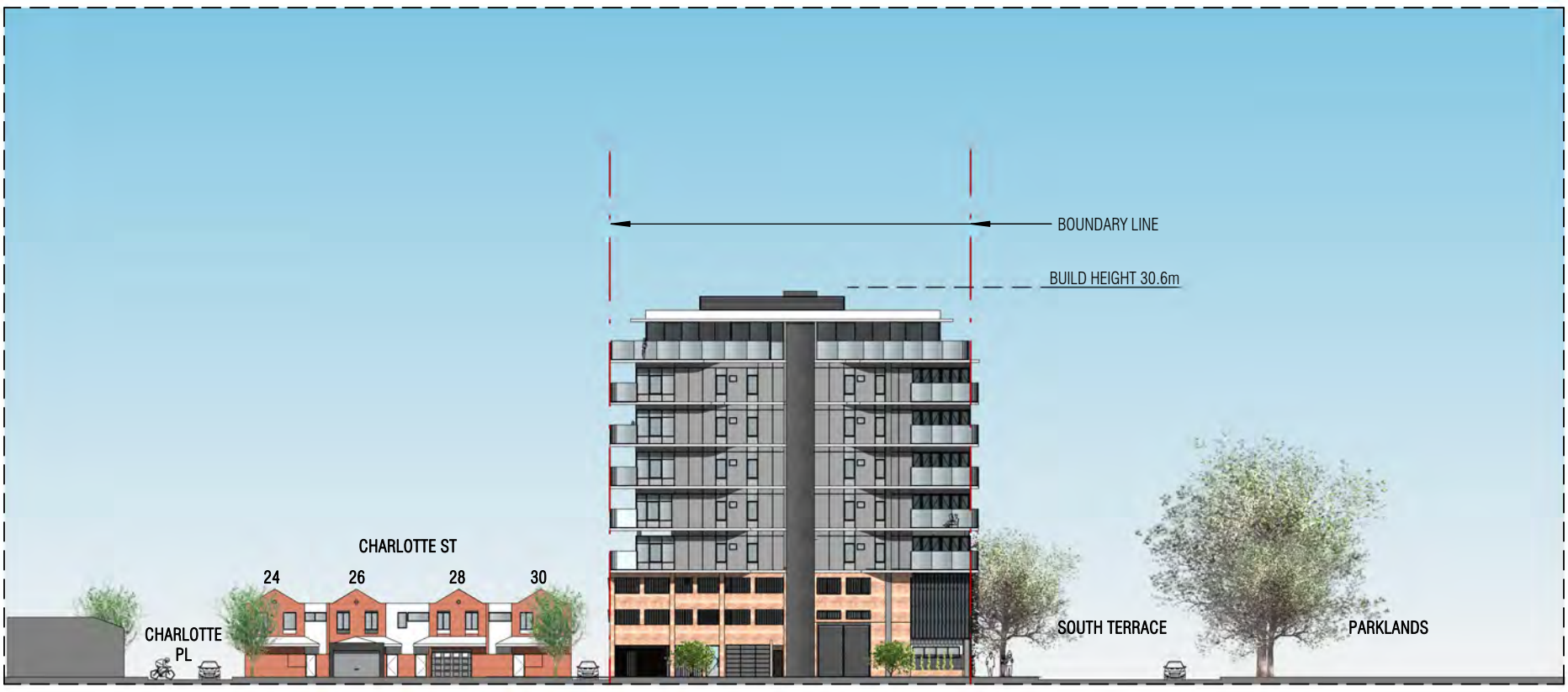
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SOUTH ELEVATION STREETSCAPE

1 : 500



WEST ELEVATION STREETSCAPE

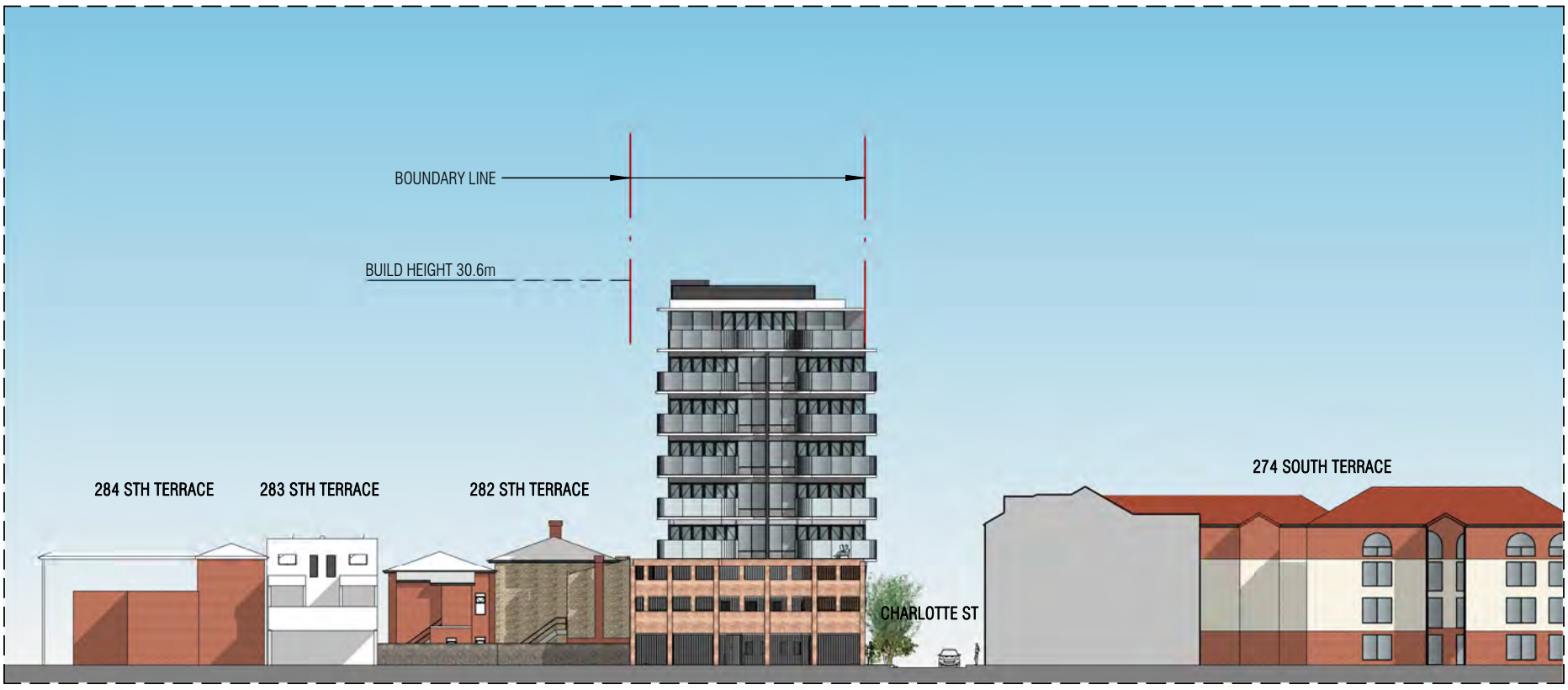
1 : 500

FOR DEVELOPMENT APPROVAL

STREET SCAPE ELEVATIONS		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	5 10 25 50
DRAWING NUMBER DA54	1 : 500	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019

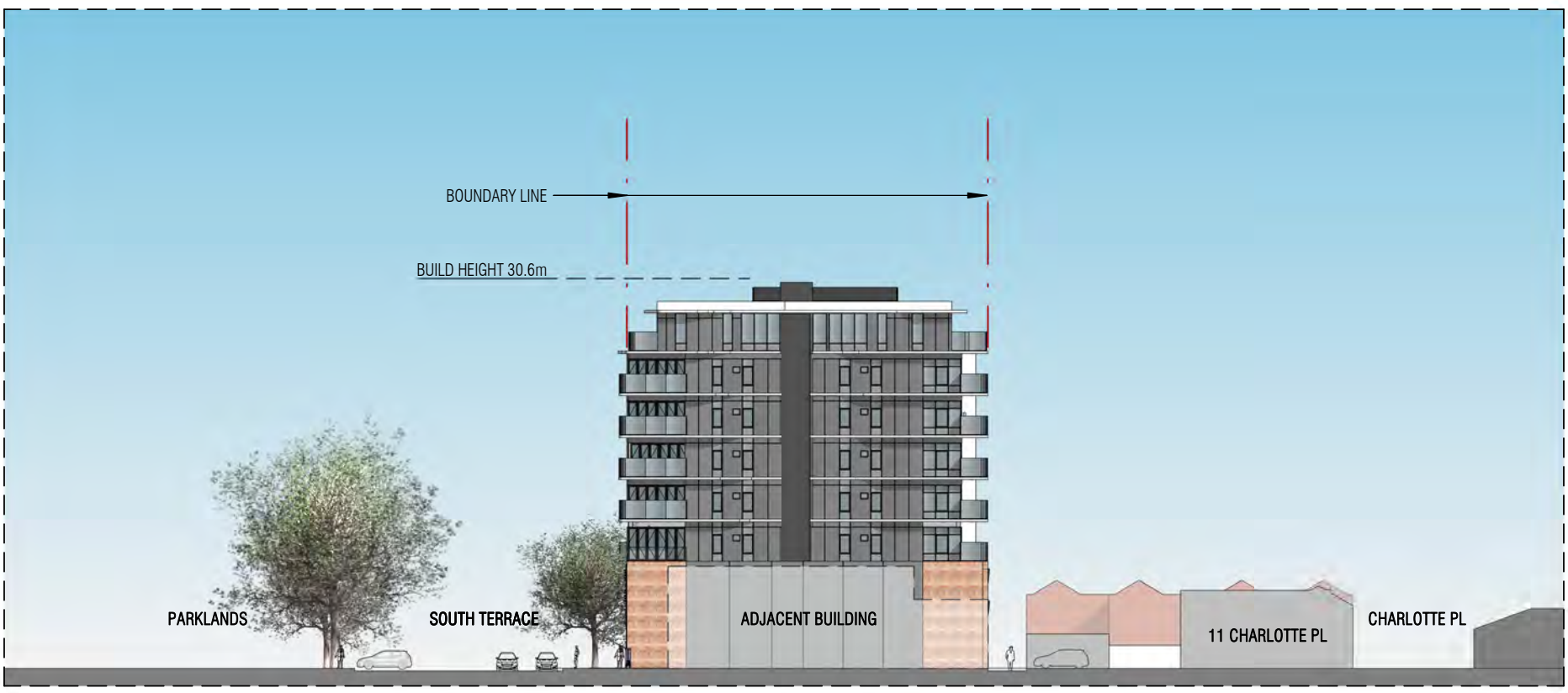
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



NORTH ELEVATION STREETSCAPE

1 : 500



EAST ELEVATION STREETSCAPE

1 : 500

FOR DEVELOPMENT APPROVAL

STREET SCAPE ELEVATIONS

DRAWING NUMBER
DA55

1 : 500

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

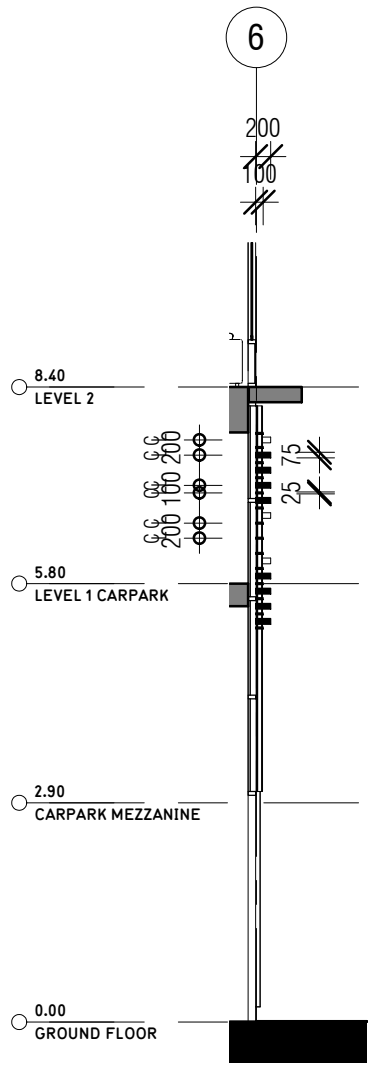
REVISION
B

1 2 5 10

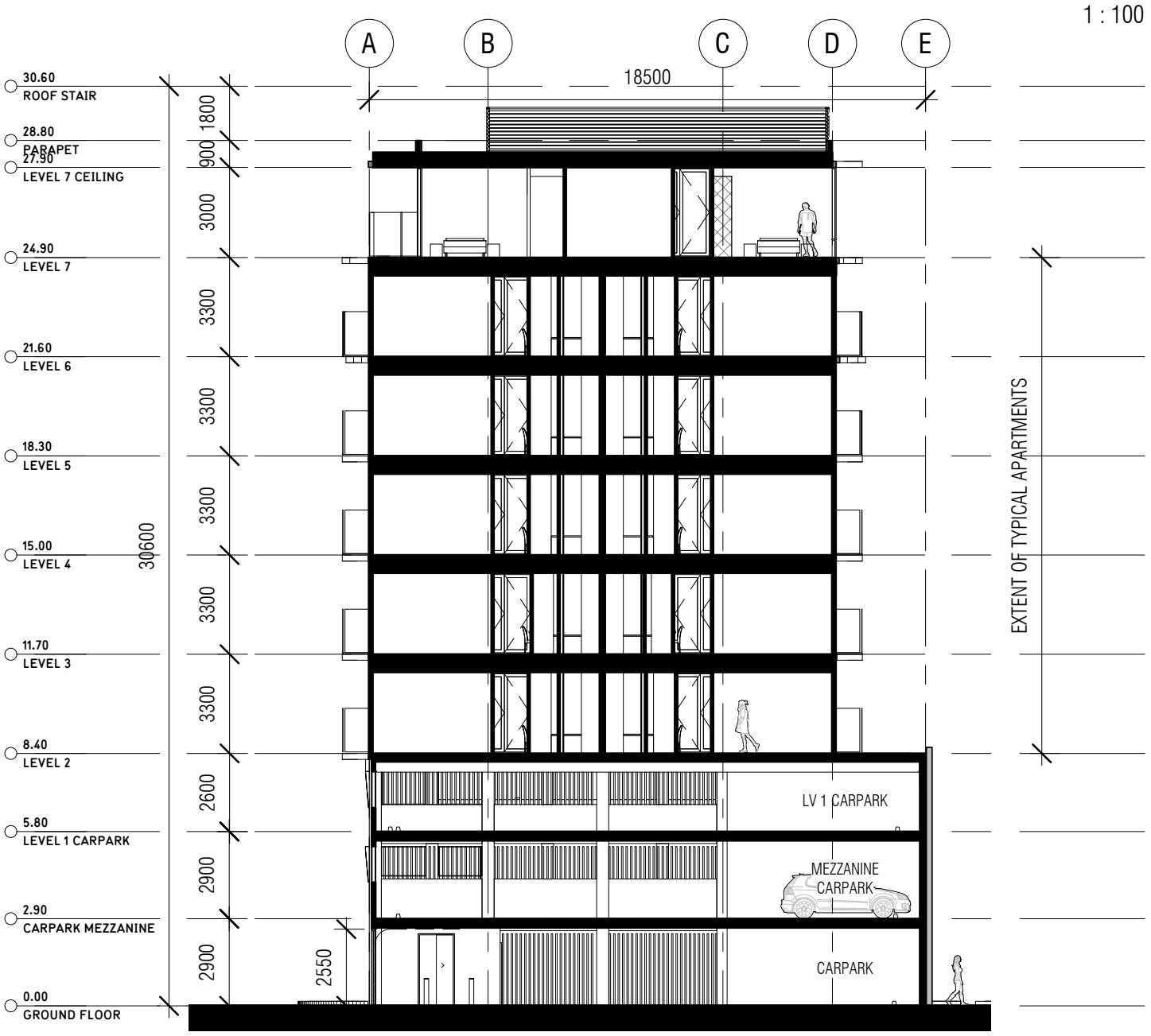
DATE
06/02/2019

INTRO
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

NORTH-SOUTH SECTION
1 : 200



N-S SECTION - LOUVRE
1 : 100



EAST-WEST SECTION
1 : 200

FOR DEVELOPMENT APPROVAL

SECTIONS

DRAWING NUMBER
DA56

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
C

DATE
06/02/2019

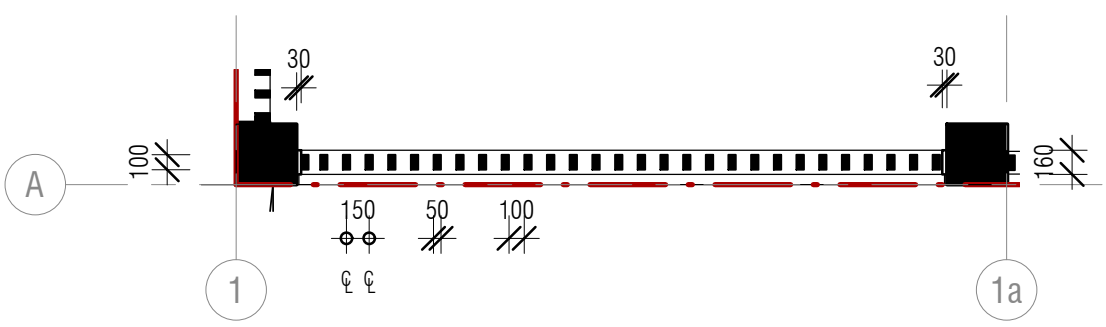
2 4 10 20

INTRO

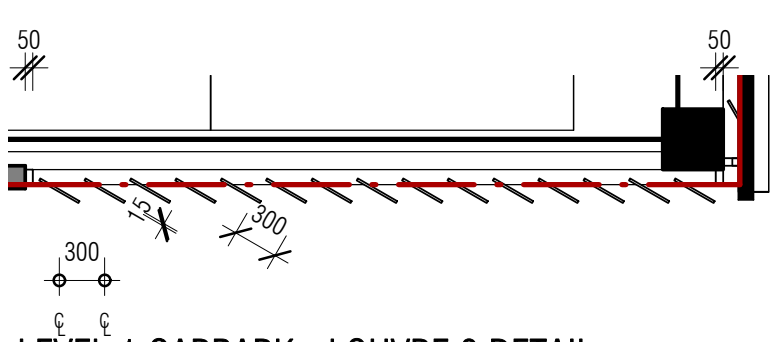
Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

1 DA53 **WEST ELEVATION- LOUVRE 4 DETAIL**
1 : 50

3 DA53 **WEST ELEVATION - LOUVRE 3 DETAIL**
1 : 50



2 DA10 **GROUND FLOOR PLAN - LOUVRE 4 DETAIL**
1 : 50



4 DA12 **LEVEL 1 CARPARK - LOUVRE 3 DETAIL**
1 : 50

FOR DEVELOPMENT APPROVAL

LOUVRE DETAILS

DRAWING NUMBER
DA57

1 : 50

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION

DATE

1 2 5 10

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co

SHADOW DIAGRAM 3PM 21 DECEMBER

1 : 1000

SHADOW DIAGRAM 3PM 21 JUNE

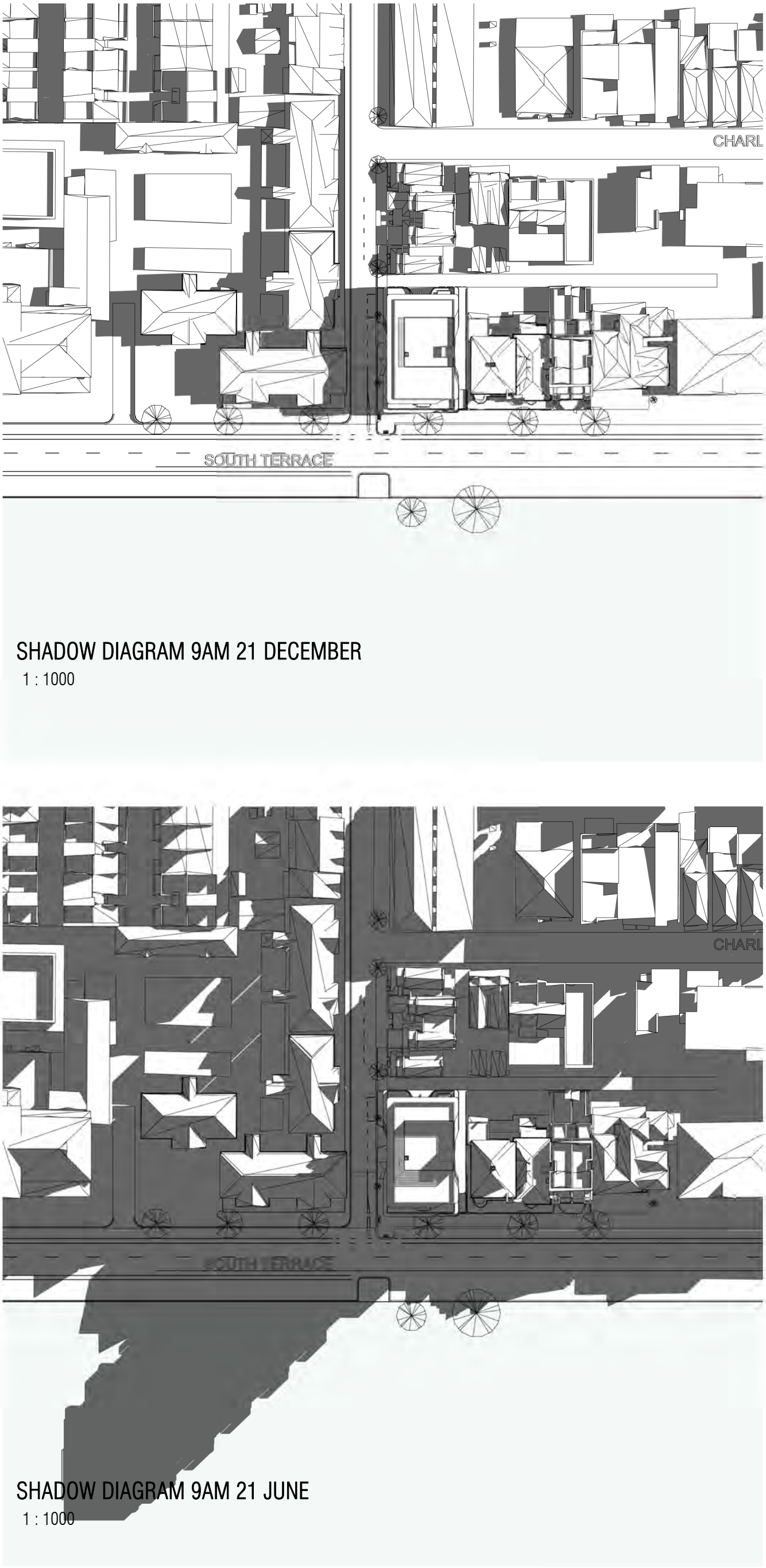
1 : 1000

FOR DEVELOPMENT APPROVAL

SHADOW DIAGRAMS 1		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	10 20 50 100	
DRAWING NUMBER DA60	1 : 1000	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



SHADOW DIAGRAM 9AM 21 DECEMBER
1 : 1000

SHADOW DIAGRAM 9AM 21 JUNE
1 : 1000

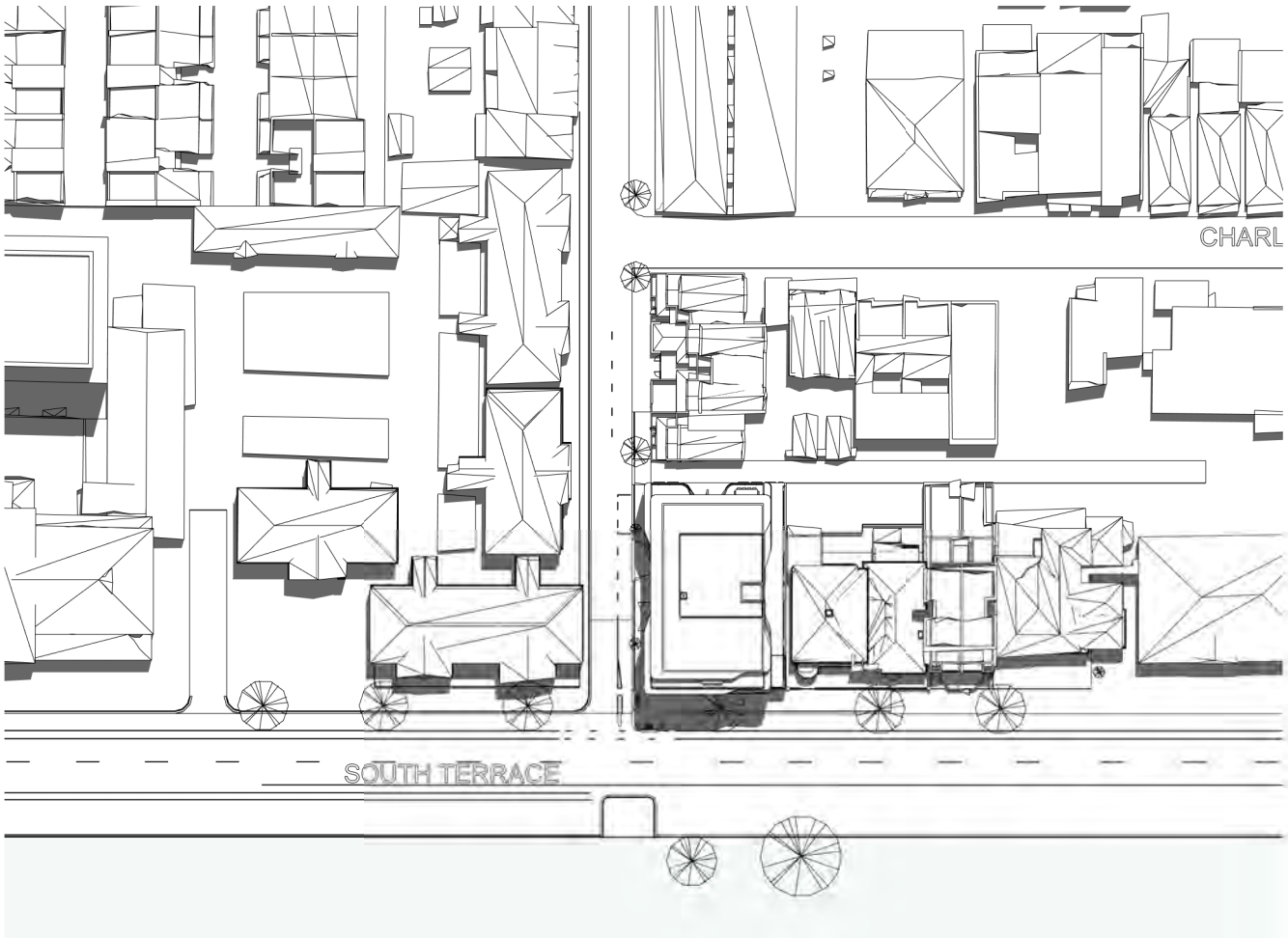
FOR DEVELOPMENT APPROVAL

SHADOW DAIGRAMS 2		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	10 20 50 100	
DRAWING NUMBER DA61	1 : 1000	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	N

INTRO

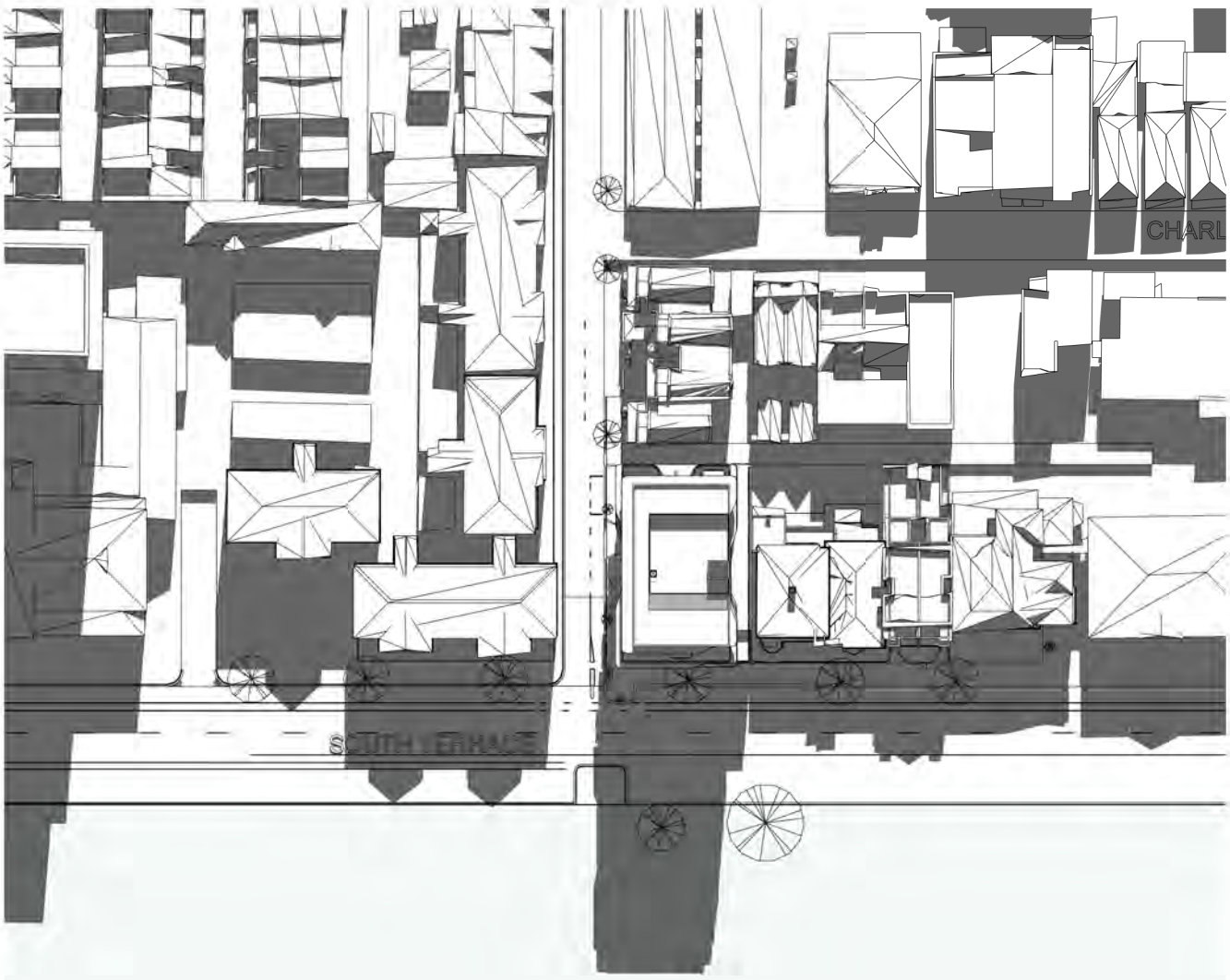
Level 11 | 44 Waymouth St | Adelaide | SA 5000

+61 8 8410 0453 | info@intro.com.co | intro.com.co



SHADOW DIAGRAM 12 NOON 21 DECEMBER

1 : 1000



SHADOW DIAGRAM 12 NOON 21 JUNE

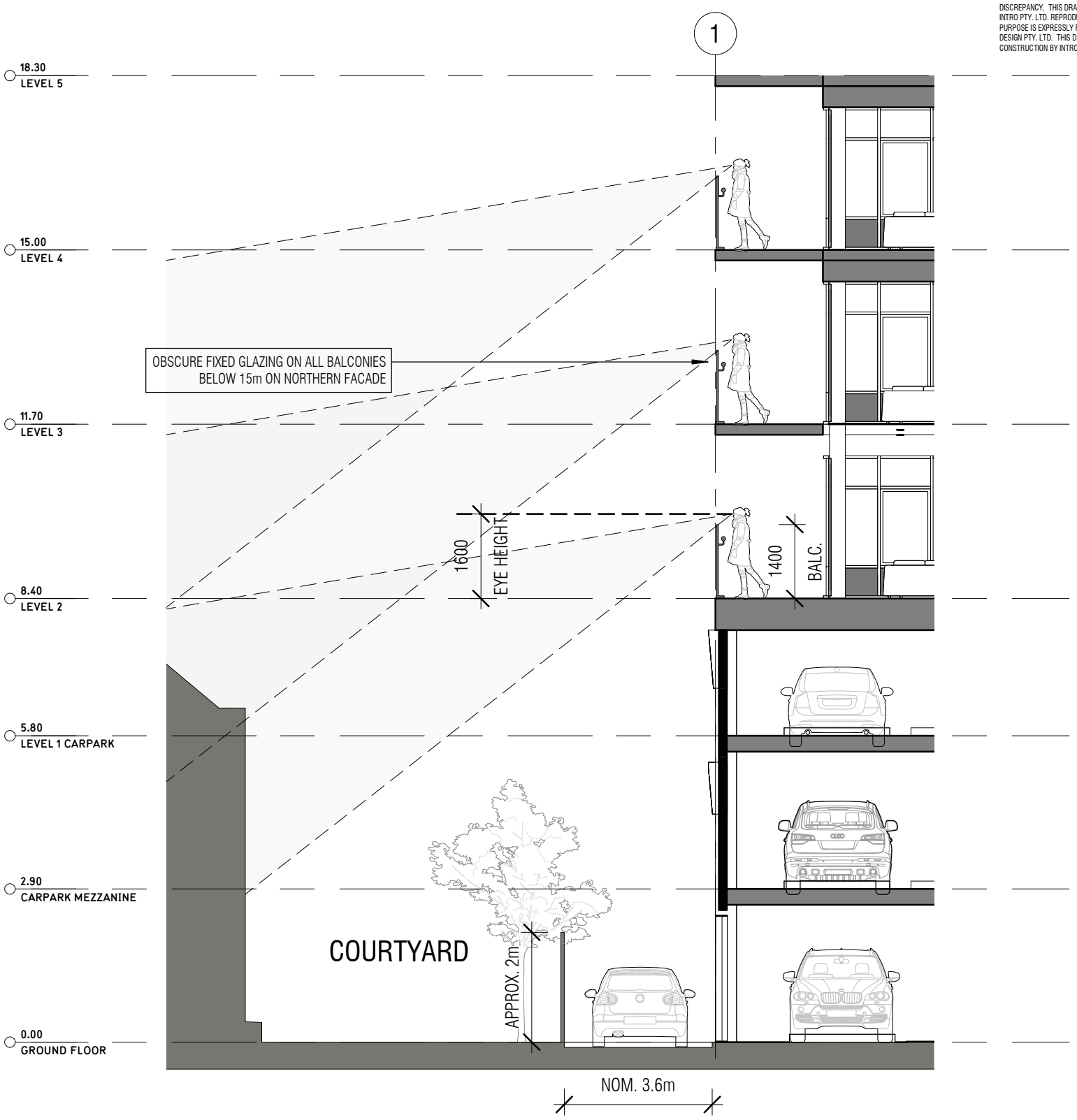
1 : 1000

FOR DEVELOPMENT APPROVAL

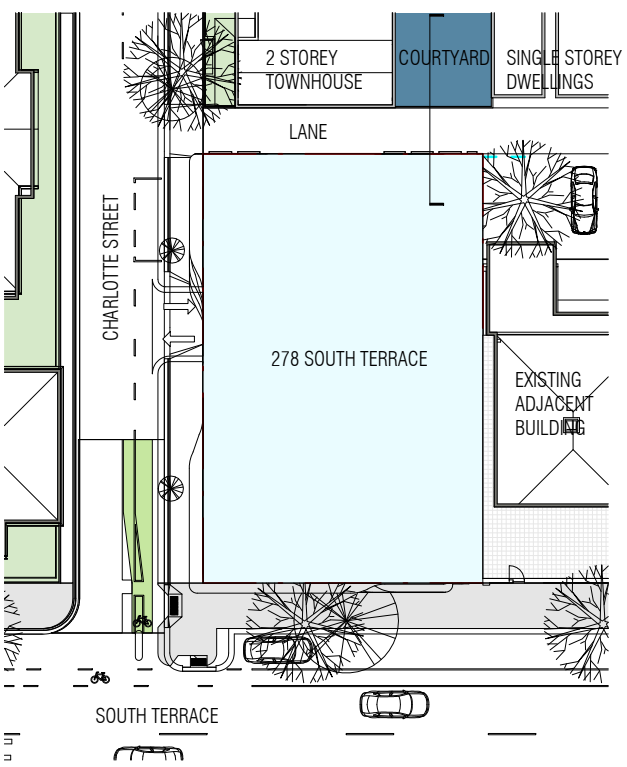
SHADOW DIAGRAMS 3		PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	10 20 50 100	
DRAWING NUMBER DA62	1 : 1000	CLIENT BRUNO MARVEGGIO	REVISION B	DATE 06/02/2019	N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co



1 / DR03 **POS SIGHTLINES**
1 : 100



2 / DA50 **SURROUNDING POS**
1 : 500

GLS.02
BALCONY GLAZING

GLS.04
OBSCURE BALCONY GLAZING

FOR DEVELOPMENT APPROVAL

PRIVACY

DRAWING NUMBER
DA70

As indicated

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION

DATE

1 2 5 10

N

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

SOUTH WEST CORNER

NORTH WEST CORNER

FOR DEVELOPMENT APPROVAL

PERSPECTIVES 1	PROJECT 278 SOUTH TERRACE	PROJECT NO. 18050	**NTS / as indicated**
DRAWING NUMBER DA100	CLIENT BRUNO MARVEGGIO	REVISION D	DATE 06/02/2019

INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co

SOUTHERN ELEVATION

SOUTH TERRACE ENTRY

FOR DEVELOPMENT APPROVAL

PERSPECTIVES 2

DRAWING NUMBER
DA101

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
C

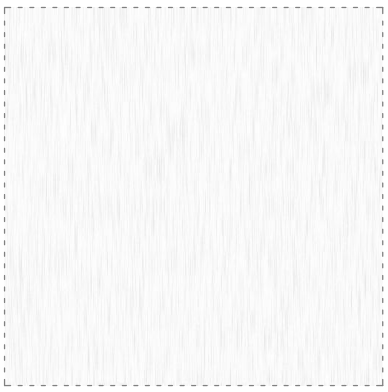
NTS / as indicated

DATE
06/02/2019

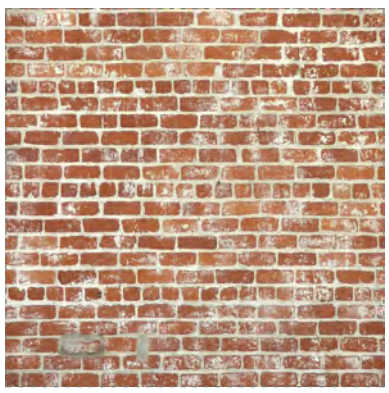
INTRO

Level 11 | 44 Waymouth St | Adelaide | SA 5000
+61 8 8410 0453 | info@intro.com.co | intro.com.co


CLD.01

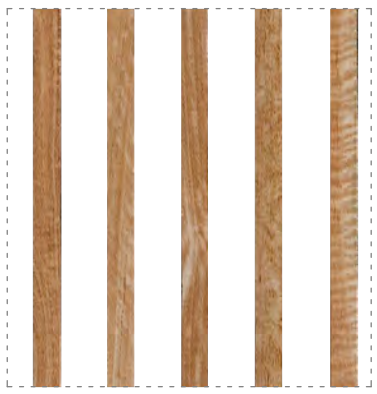

CLD.02


CLD.03


BRK.01


PF.01

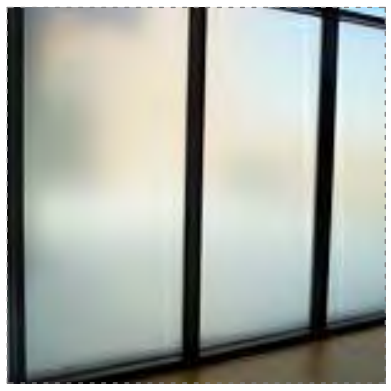

PF.02


TMB.01


GLS.01


GLS.02

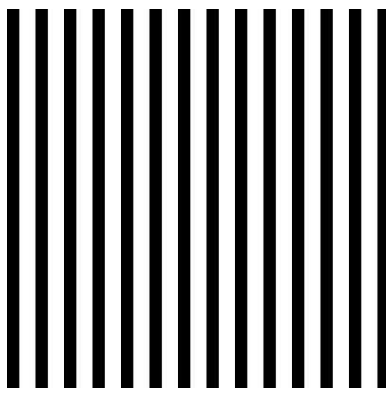

GLS.03


GLS.04


LVR 1


LVR 2


LVR 3


LVR 4

CLD.01	9mm PREFINISHED FC SHEET VITRAPANEL "GREY ZINC"
CLD.02	9mm PREFINISHED FC SHEET VITRAPANEL "ICE WHITE"
CLD.03	9mm PREFINISHED FC SHEET VITRAPANEL "CHARRED FOREST"
BRK.01	RECYCLED RED BRICK
PF.01	WHITE PAINT
PF.02	MONUMENT PAINT
TMB.01	SLATTED TIMBER FENCE
GLS.01	ALUMINIUM FRAMED GLAZING, FLUSH PROFILE, POWDERCOAT BLACK. LOW E GREY TINT GLASS
GLS.02	GLAZED BALUSTRADE
GLS.03	COLOURBACK GLASS TO MATCH "GREY ZINC"
GLS.04	OBSCURE BALCONY GLAZING
LVR.1	ANODISED ALUMINIUM LOUVRES TO SCREEN AC PLANT "DARK GREY"
LVR.2	ANODISED ALUMINIUM LOUVRES TO TRANSFORMER "DARK GREY"
LVR.3	GLASS LOUVRES TO CARPARK
LVR.4	ANODISED ALUMINIUM FRAMES TO CARPARK "DARK GREY""

FOR DEVELOPMENT APPROVAL

MATERIAL PALLETTE

DRAWING NUMBER
DA120

PROJECT
278 SOUTH TERRACE

CLIENT
BRUNO MARVEGGIO

PROJECT NO.
18050

REVISION
D

NTS / as indicated

DATE
06/02/2019

INTRO

APPENDIX 02 – TRAFFIC AND CAR PARKING STATEMENT

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

PHIL WEAVER & ASSOCIATES

Consultant Traffic Engineers
ABN 67 093 665 680

204 Young Street
Unley SA 5061

P: 08 8271 5999
F: 08 8271 5666
E: mail@philweaver.com.au

File: 18-180

13 May 2019

Mr Anthony Gatti
Senior Planning Advisor
Intro Architecture Pty Ltd
PO Box 207 Rundle Mall
ADELAIDE SA 5000

Dear Anthony,

PROPOSED RESIDENTIAL DEVELOPMENT – 278 SOUTH TERRACE, ADELAIDE TRAFFIC ASSESSMENT

I refer to recent discussions with respect to the proposed development on the above site. I understand that it is proposed to construct an eight-storey (with mezzanine parking area) building providing a total of 23 residential dwellings with associated on-site car parking on the above site.

As requested, I have undertaken the following review of the traffic and parking related aspects of the subject development.

EXISTING SITUATION

The subject site is located on the north-eastern corner of the intersection of Charlotte Street with South Terrace, Adelaide. The subject land is located within a 'City Living Zone' as identified on *Adelaide (City) Zones Map Adel/31* within the Adelaide (City) Development Plan consolidated 7th June 2018.

The subject site currently accommodates a two-storey building which was most recently used for various retail and commercial uses, as well as a martial arts studio. The site was previously used as the Girl Guides headquarters. Aerial imagery of the subject site and surrounding locality is shown in *Figure 1* below.

The subject site has frontages of approximately 18m to South Terrace and 28m to Charlotte Street. There are no existing vehicular access points from either Charlotte Street or South Terrace associated with the subject site. As such, there is currently no on-site parking associated with the subject site.

South Terrace, adjacent to the subject site, provides two traffic lanes and a bicycle lane in each direction. Data obtained from *Location SA Map Viewer* identifies a traffic volume estimate of 4,600 vehicles per day (vpd) on this section of South Terrace. The speed limit on South Terrace is 50km/h.

Charlotte Street is one-way (northbound) roadway with a kerb to kerb width of approximately 5m. However, two-way bicycle movements are permitted, as identified by dedicated southbound bicycle lanes at both the northern and southern ends of this roadway. The speed limit on Charlotte Street is 50km/h, although given the relatively narrow road width and provision for two-way bicycle movements, a lower speed would typically occur.

Details of traffic volumes recorded on Charlotte Street, to the north of Charlotte Place, have been provided by the Adelaide City Council.

From a traffic count undertaken at the above location on Tuesday 15th May 2012, it was identified that:-

- the estimated Annual Average Daily Traffic (AADT) volume at the above location was 270 vehicles per day (vpd),
- the five day average daily traffic volume was 315 vpd, and
- the 85th percentile speed on Charlotte Street was only 39.3 km/h i.e. well below the speed limit of 50 km/h on this roadway.

I do not anticipate that there would have been any significant change to the volume of vehicle movements on this road in the period since the above traffic count was undertaken.

There were no recorded road crashes in the five-year period between 2012 and 2016 (inclusive) at the intersection of Charlotte Street with South Terrace, Adelaide.

On the northern side of South Terrace, parallel on-street parking is provided for 2-hour periods between 9:00am and 5:30pm Monday to Friday, and between 9:00am and 12:00pm on Saturdays. Two cars can park in the spaces directly in front of the subject site.

Angled parking is provided on the southern side of South Terrace in the form of 90-degree unrestricted parking. While I note that these unrestricted spaces are typically fully occupied during weekday business hours, surplus capacity is generally available in evening and weekend periods. Seven of these spaces are located directly opposite to the subject site.

No Stopping Anytime restrictions apply on the western side of Charlotte Street, directly opposite the subject site. However, parallel parking spaces are currently provided on the eastern side of Charlotte Street, adjacent to the site. Parking in this area is restricted to one-hour periods between 8:00 am and 6:00 pm Monday to Friday, and between 8:00am and 12:00pm Saturdays, but are otherwise unrestricted.

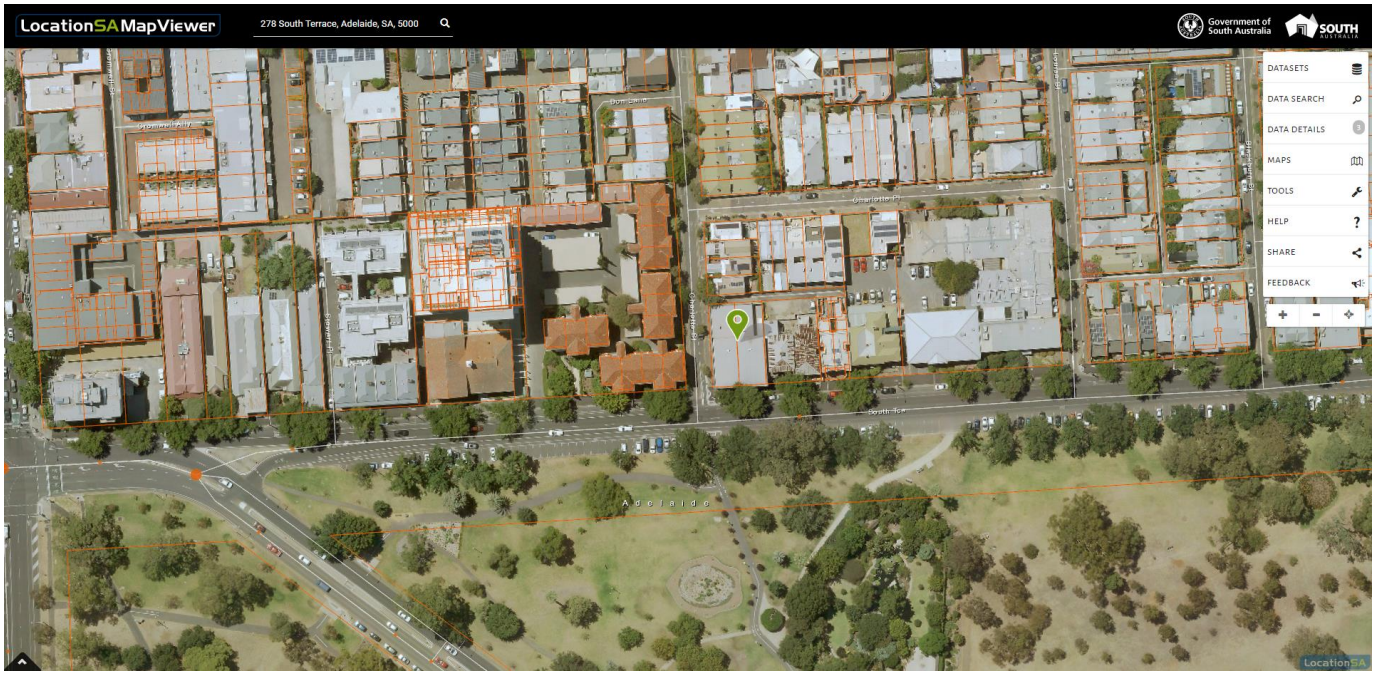


Figure 1: Subject site and surrounding locality (source: Location SA map Viewer)

PROPOSED DEVELOPMENT

The proposed development is identified on a series of plans prepared by your firm including:

- A Site Plan (Project Number 18050 DA 02)
- A Mezzanine Level car park plan (Project Number 18050 DA 11),
- A Level 1 car park plan (Project Number 18050 DA 12).

The proposed development will provide:

<u>Ground Floor</u>

- One 1-bedroom DDA apartment of 66m^2;
- Ancillary services including lobby, fire pumps, transformer, waste storage area and two bicycle storage areas (accommodating up to 24 bicycles);
- One designated accessible (disability) space and associated shared area,
- An additional car parking space to be provided for use as a loading zone / supplementary car lift waiting area; and
- A new single-width vehicular access point to be provided along the Charlotte Street frontage. This access point will be located approximately 9m to the south of the northern boundary of the subject site. The proposed location of this access point will require a reduction in the length, and therefore capacity, of the existing parking area in front of the site.

Mezzanine Floor

- 8 car parking spaces for use by residents of levels two and three.

First Floor

- 16 car parking spaces for use by residents of levels four to seven. Three of these spaces are identified as dedicated small car spaces.

Floors Two to Six

- Four 2-bedroom apartments per level each of 81m^2.

Seventh Floor

- Two 3-bedroom penthouse apartments of 124m^2 and 130m^2 respectively.

The car parking areas on the mezzanine and first floors will be accessible via a car lift to be located directly opposite the access point on the ground floor.

The design of the ground floor car parking area will provide:

- Car parking spaces of 2.4m in width, including the accessible space and associated shared area. The loading bay / lift waiting zone space will be 2.4m in width;
- Spaces of 5.4m in length;
- Aisle width of 7.5m; and
- A single width access driveway width of 3.6m between columns.

The design of the access point onto Charlotte Street includes glazing on both sides of the access point in order to provide pedestrian - vehicular sight lines on both sides of this single width access point.

Vehicular access into and out of the ground floor car park will be controlled by a roller door operated by remote control with the door closed unless drivers are entering or exiting the car park.

The design of the mezzanine floor car parking area will provide:

- Car parking spaces of 2.4m in width;
- Car parking spaces of 5.4m in length; and
- An aisle width of at least 5.8 in the area immediately adjacent to the car lift,

The design of the first-floor car parking area will provide:

- Standard car parking spaces of 2.4m in width and small car parking spaces of 2.3m in width;
- Car parking spaces of 5.4m in length; and
- An aisle width of at least 5.8 in the area immediately adjacent to the car lift.

As such, I consider that the design of the on-site car parking areas would generally conform to the dimensional requirements of the relevant off-streetcar parking standard (*AS/NZS 2890.1:2004* and *AS/NZS 2890.6:2009*).

I understand that the location of the columns will be reviewed during the detailed design phase in order to ensure that these locations fully conform to the geometric requirements of Figures 5.1 and 5.2 of *AS/NZS 2890.1:2004*.

TRAFFIC ASSESSMENT

Trip Generation

The '***Guide to Traffic Generating Developments***' report produced by the (former) Roads and Traffic Authority of NSW identifies the following relevant trip generation rates:

Form of Development	**Peak Hour Vehicle Trips**	***Subject site***	***Resultant peak hour vehicle trips***	***Estimated daily vehicle trips***
Residential (High density residential flat building) – Metropolitan Regional (CBD) Centres	0.24 trips per unit	*23 Proposed*	*6*	*60*
Office	2 per 100m^2 gfa	*740m^2 Existing*	*15*	*74*

The existing site has a ground floor area of approximately 440m^2 and a first-floor area of approximately 300m^2. On the basis that the previous development was originally operated as office space (i.e. Girl Guides headquarters), traffic generated by the proposed development would theoretically decrease compared to this prior land use, despite the building increasing from a two-storey building to an eight-storey building with a mezzanine parking area.

Vehicle Storage Requirements

Assuming all traffic generated by the subject site is utilising the on-site car parking areas on either the mezzanine or first floors, the car lift would need to be able to service an arrival rate (*r*) of 6 veh/h.

Southwell car lifts identify lift speeds of up to 0.2m/s. The heights of floor levels of the various car parking areas are as follows:

- Ground: RL = 0.00m
- Mezzanine Floor = 2.9m
- First Floor = 5.8m

As such, it is calculated that the car lift would require a minimum of 58 seconds to travel from the ground floor to the first floor and back to the ground floor. For the purpose of this assessment, it is assumed that an additional wait time of 20 seconds would be required to allow the lift doors to open, in order to permit a vehicle to exit the lift and let the lift doors close again.

The rate of service(*s*) for such a car lift would therefore be approximately 46 vph assuming an additional 20 seconds is allowed for entry / exit movements and associated car lift door opening and closing. This calculation is based upon a 'worst-case' scenario that all vehicles require access to the first floor. In reality approximately one third of all vehicles would travel over a shorter distance i.e. between the mezzanine level and the ground floor.

The utilisation factor ($\rho = r/s$) would therefore be 0.130, based on the forecast of 6 vehicle movements in peak hour periods and a service rate of 46 vph. This utilisation ratio would result in a storage requirement (at the 98th percentile probability level) equivalent to only one (1) space. On this basis I consider that the level of storage (queuing) space within the access driveway would be suitable for the proposed development.

SWEPT PATH ANALYSIS

Turning path diagrams have been prepared and are attached as an appendix to this report. These diagrams include:

Ground floor

- *Figure 1*: B99 site entry into service bay;
- *Figure 2*: B99 site exit;
- *Figure 3*: B85 site entry into accessible spaces, car lift and service bay;
- *Figure 4*: B85 exit from accessible space and site;
- *Figure 5*: B85 exit from car lift and site;
- *Figure 6*: B85 exit from servicing bay then entry into car lift, and B99 passing a parked MRV on Charlotte Street during waste collection;

Mezzanine Level

- *Figure 7*: B85 exiting car lift and entering critical space A;
- *Figure 8*: B85 exiting critical space A and entering car lift;
- *Figure 9*: B85 exiting car lift and entering critical space B;
- *Figure 10*: B85 exiting critical space B and entering car lift;

Level 1

- *Figure 11*: B85 reversing out of car lift into opposite space C and entering critical space D;
- *Figure 12*: B85 driving forward out of space C into car lift and exiting critical space D;
- *Figure 13*: B85 reversing out of car lift into opposite space E and entering critical space F;
- *Figure 14*: B85 driving forward out of space E into car lift and exiting critical space F; and

- *Figure 15*: B85 exiting critical space G.

PARKING ASSESSMENT

On-site parking was previously not provided on the subject site. Therefore, there would exist a significant car parking credit associated with the subject land. Nevertheless, ***Table Adel/7 - Off Street Vehicle Parking Requirements*** within the Adelaide (City) Council Development Plan identifies car parking provisions for the City Living Zone as follows:

Type of Development	**Minimum Provision of Car Park Spaces**	**Maximum Provision of Car Park Spaces**
Medium to High Scale Residential or Serviced Apartment	1 space per dwelling up to 200 square metres building floor area. 2 spaces per dwelling greater than 200 square metres building floor area. Multi-unit dwellings should provide 1 visitor space for each 4 dwellings	-

On the above basis, the proposed development would require a minimum of 29 on-site car parking spaces, comprising one for each of the 23 apartments and 6 visitor spaces. The subject development will provide a total of 25 car parking spaces, not including the proposed use of one space on the ground floor area as a service bay / waiting area.

I understand that at least one car parking space will be assigned for each apartment with the accessible space available for use by the disabled, resident or otherwise.

Such a provision of car parking, i.e. which would theoretically result in a shortfall of 4 on-site spaces, would be appropriate for the subject development for the following reasons:

- resident car parking requirements will be fully met on-site;

- accessible parking will be provided on-site;

- there is available on-street car parking in the surrounding on-street car parking areas which would be suitable for use by visitors to the subject site. These include, but are not limited to, one space to remain directly adjacent to the subject site and an additional 7 essentially unrestricted spaces directly opposite the subject site on the southern side of South Terrace. These spaces would generally be available (and unrestricted) outside of business hours when visitor demand associated with this proposed residential development would peak,

- the existing land use provides no on-site car parking, effectively creating a car parking credit which would be significantly greater than the theoretical shortfall, as calculated above; and

- the subject site is ideally located with respect to adjacent cyclist and pedestrian facilities, as well as frequent bus services within 400m of the subject site on Pulteney Street, Hutt Street and Halifax Street.

BICYCLE PARKING PROVISIONS

Table Adel/6 - Off Street Vehicle Parking Requirements within the Adelaide (City) Council Development Plan identifies bicycle parking provisions as follows:

Type of Development	Bicycle parking space standard for employees and/or residents	Bicycle parking space standard for customers, visitors and/or shoppers
All Low, Medium, and High Scale Residential	1 for every dwelling/apartment with a total floor area less than 150 square metres. 2 for every dwelling/apartment with a total floor area greater than 150 square metres.	1 for every 10 dwellings

On the above basis, the proposed development would require a total of 23 bicycle parking spaces associated with residents (1 per apartment) and 2-3 visitor bicycle parking spaces.

Resident bicycle parking requirements will be met by the provision of 24 bicycle parking spaces within the bicycle storage areas on the ground floor.

While we would be a theoretical shortfall of three bicycle spaces for use by visitors, I note that there would be opportunity to provide these spaces within the verge areas on either South Terrace or Charlotte Street within close proximity of the site to address this aspect.

Visitor bicycle parking spaces would be appropriate in a more accessible area. Such spaces could be provided adjacent to the lobby entrance or potentially on the wide South Terrace footpath, which could then also be for use by the general public. Such a location would be appropriate given the adjacent bicycle path facilities but would require consultation with / approval from the Adelaide (City) Council.

WASTE AND RECYCLING COLLECTION

A detailed Waste Management Plan has been prepared by **Colby Phillips Advisory** in relation to the subject development. This assessment has identified, inter alia, that waste and recyclables will be stored within the ground level of the building and a loaded into service vehicles parking on the eastern side of Charlotte Street in front of the building. This will require a minor change the hours of operation of the existing parking area directly adjacent to the subject site on Charlotte Street, in order to permit these vehicles to access this area when servicing the subject development. Initial discussions with staff of the Adelaide City Council has indicated that this proposed arrangement is acceptable.

Based on the report by Colby Phillips industries (**High Density Residential Accommodation 278 South Terrace, Adelaide - waste management plan**) dated 8th May 2019, I understand that there will be 3 weekly waste collection movements associated with the subject development. More specifically, these will include:-

- one collection per week of general waste;
- one collection per week of dry comingled recycling; and
- one collection per week of Food Organics.

A dedicated waste storage area is proposed within the ground floor with a capacity to accommodate at least:

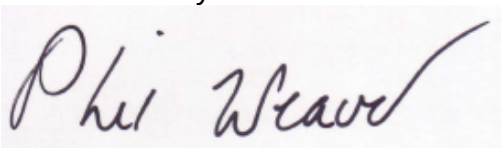
- four (4) 1100 litre bins; and
- three (3) 240 litre organic bins, and
- one bulk bin accommodating cardboard and other paper materials.

SUMMARY AND CONCLUSIONS

In summary, I consider that the proposed development will:

- provide a design standard which is appropriate and essentially meets the requirement of the relevant Australian / New Zealand Standard for off-street car parking areas;
- not result in adverse queuing associated with the on-site car lift;
- provide 26 on-site car parking spaces, including one waiting bay / service area and one accessible space. Whilst this would result in a minor shortfall as per Council's Development Plan requirements, such a provision is considered to be appropriate for the subject site as resident parking will be met on-site, accessible parking will be met on-site, bicycle parking requirements will be met, the previous land use had a significantly greater shortfall of on-site car parking, and the subject site is located such that alternative means of transport (cycling, walking and public transport) are likely to be frequently utilised; and
- not result in adverse traffic impacts on the adjacent road network.

Yours sincerely



Phil Weaver
Phil Weaver and Associates Pty Ltd

Enc: Turning path diagrams for the car parking areas

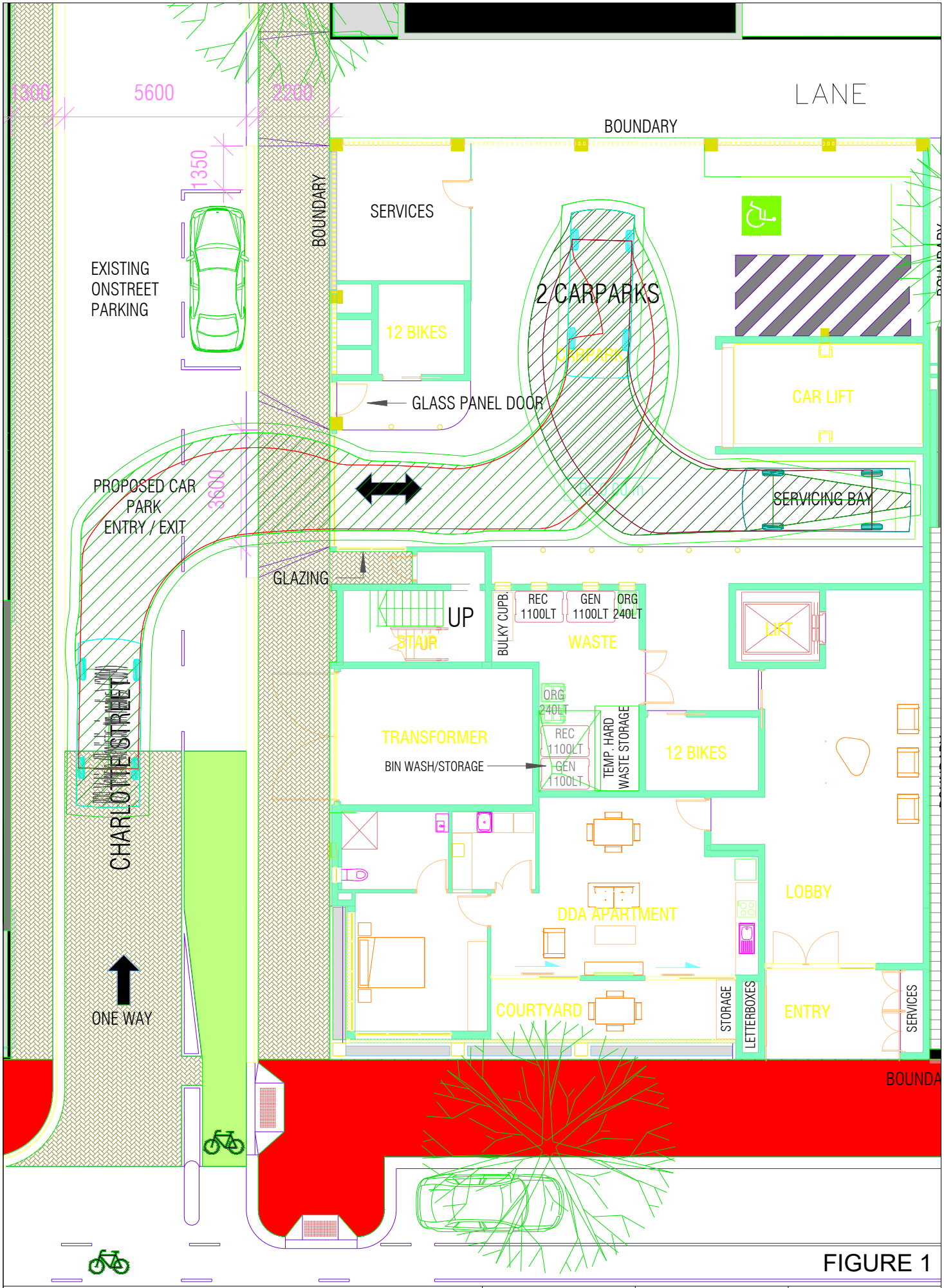


FIGURE 1

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture	REF: 18-180
	DATE: 09/05/19
Address: 278 South Terrace Adelaide	DWG BY: AH
	CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

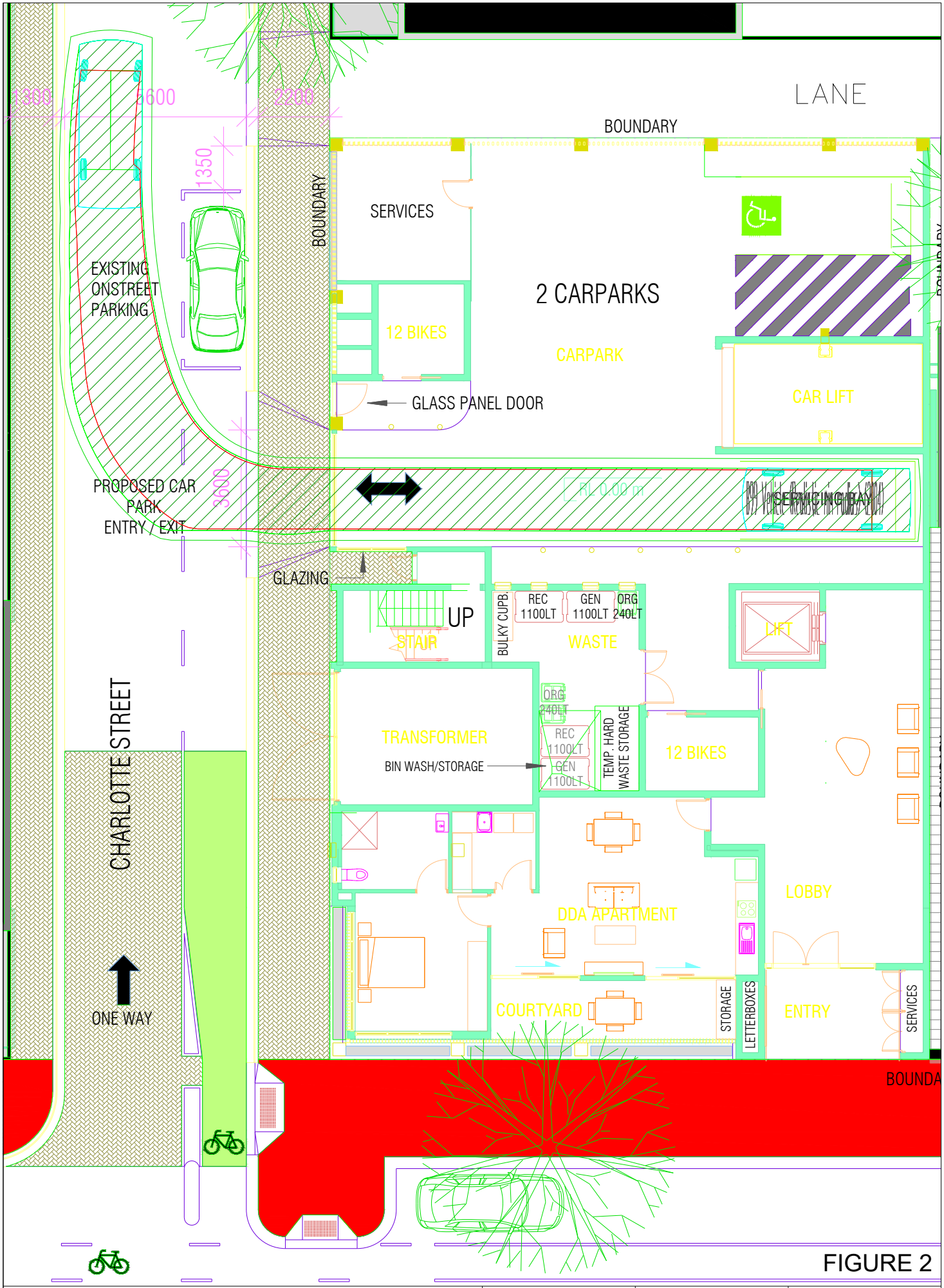


FIGURE 2

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 278 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

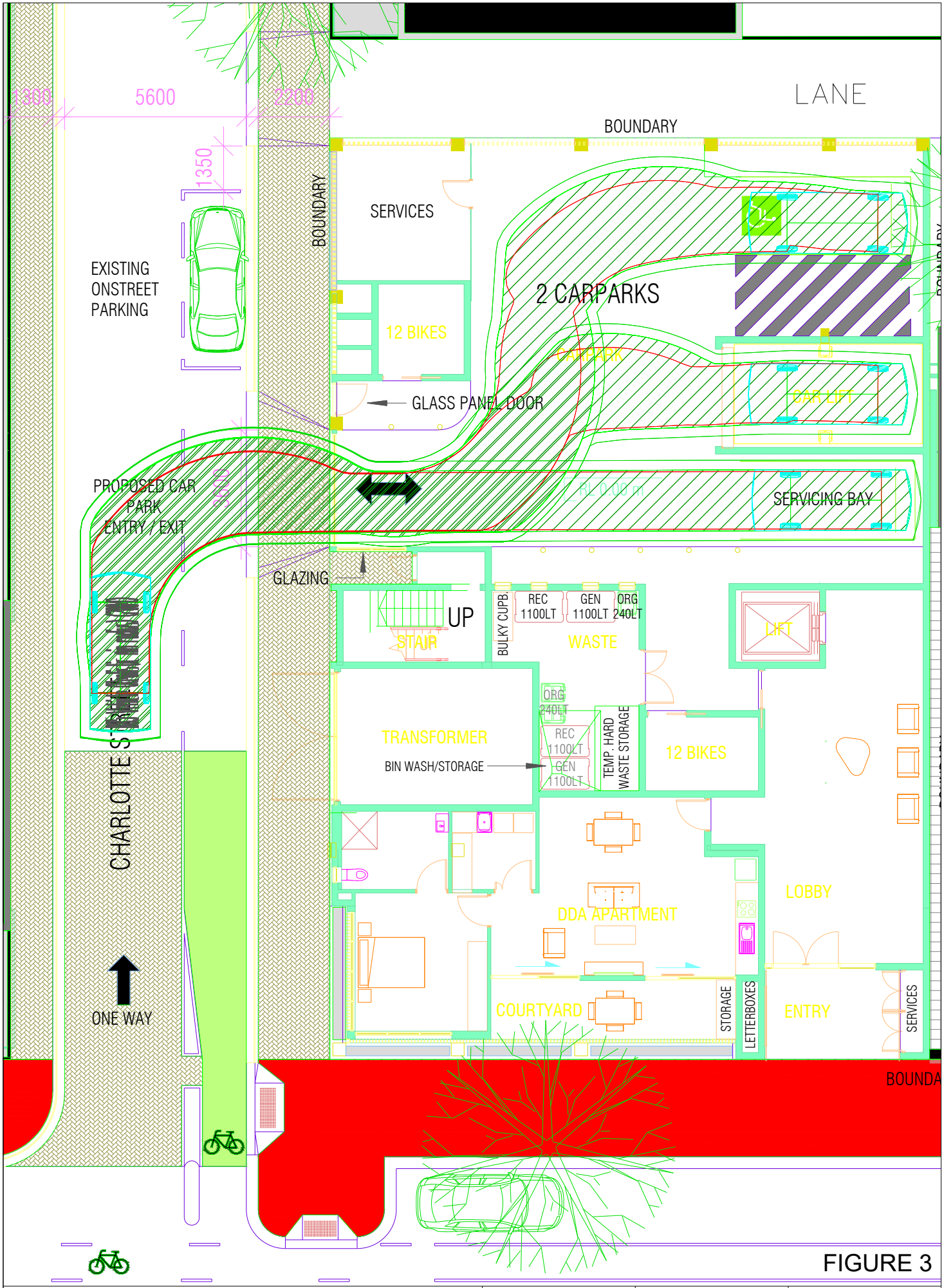


FIGURE 3

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 278 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

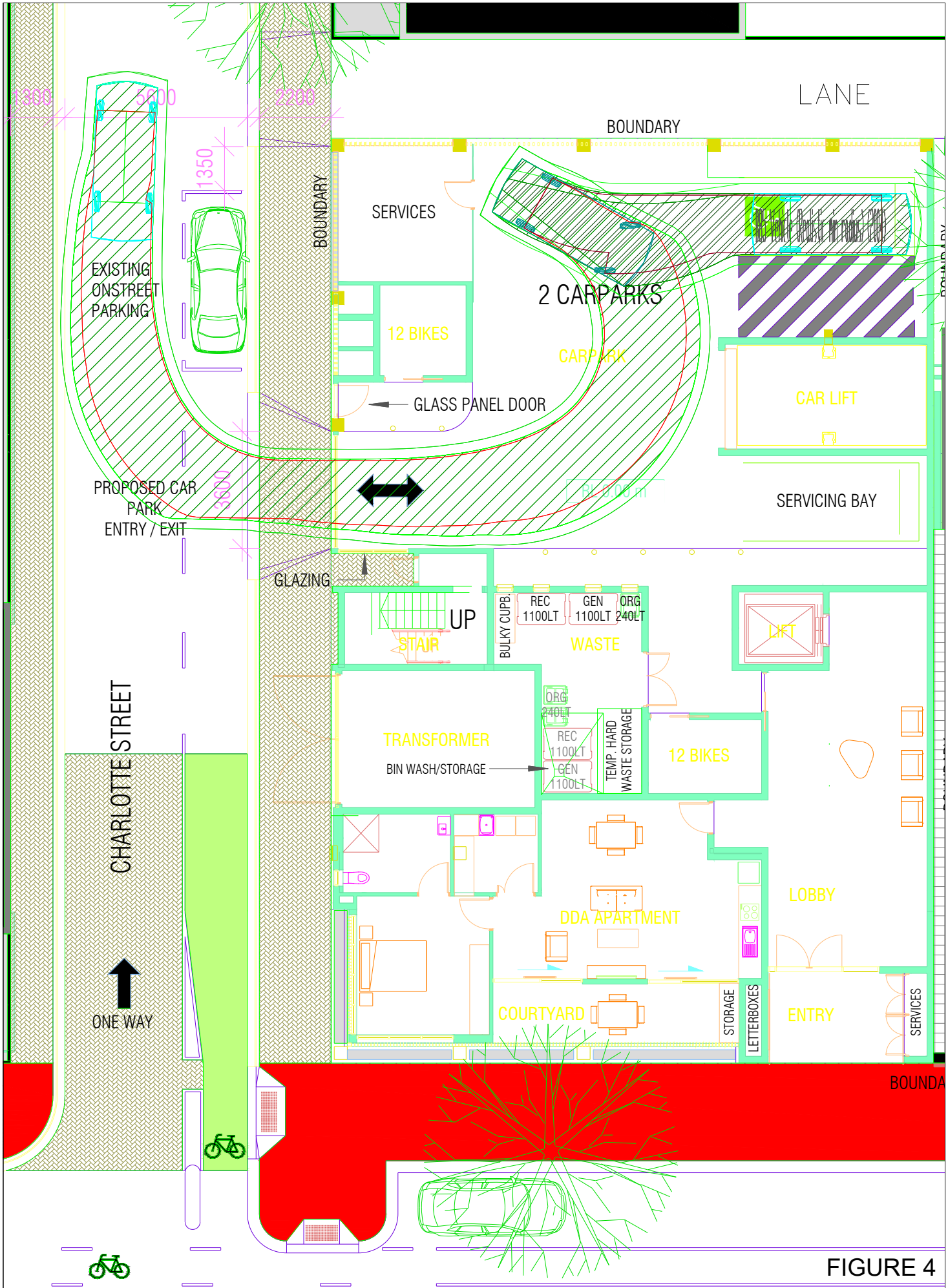


FIGURE 4

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 278 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

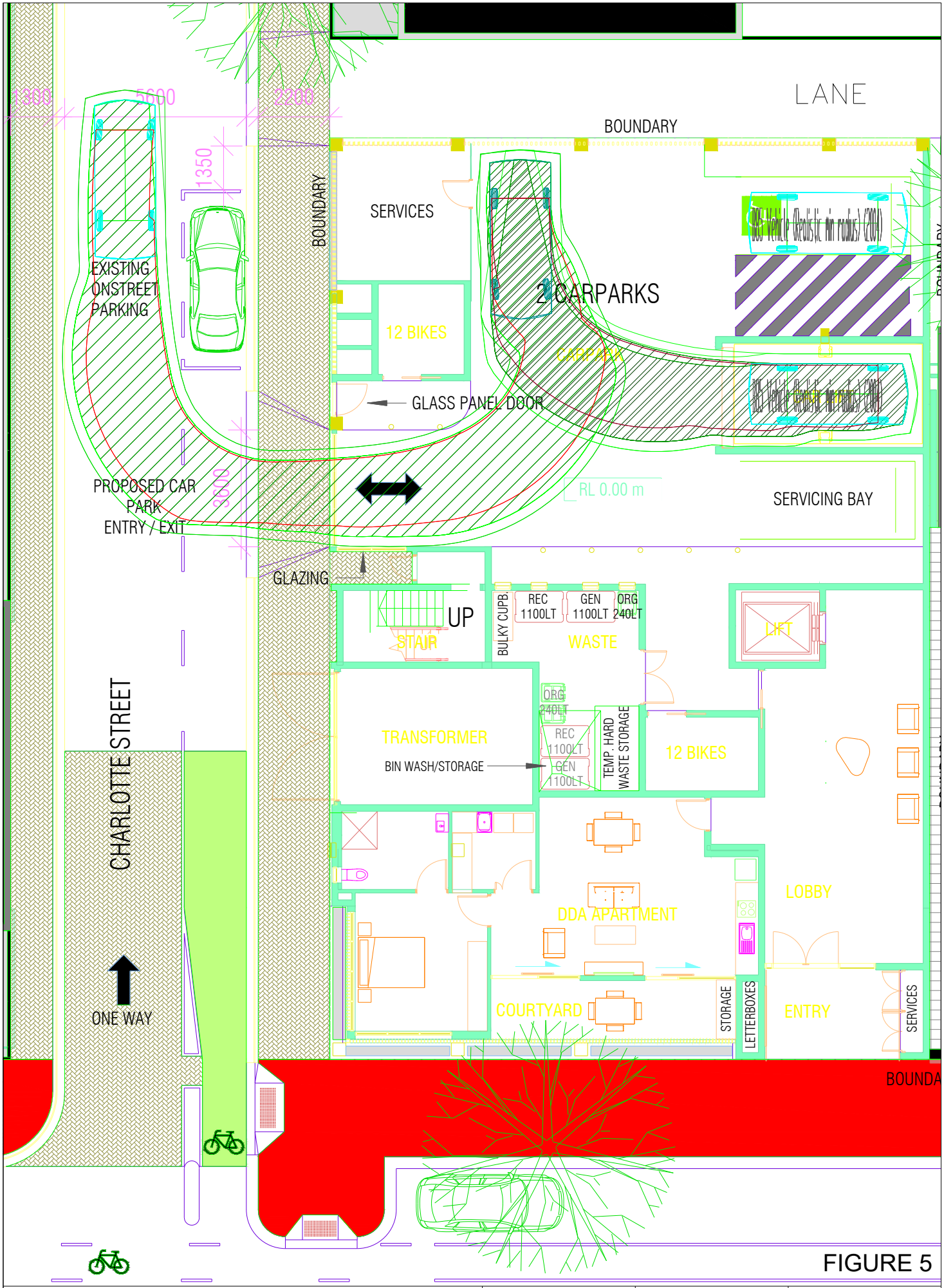


FIGURE 5

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 278 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

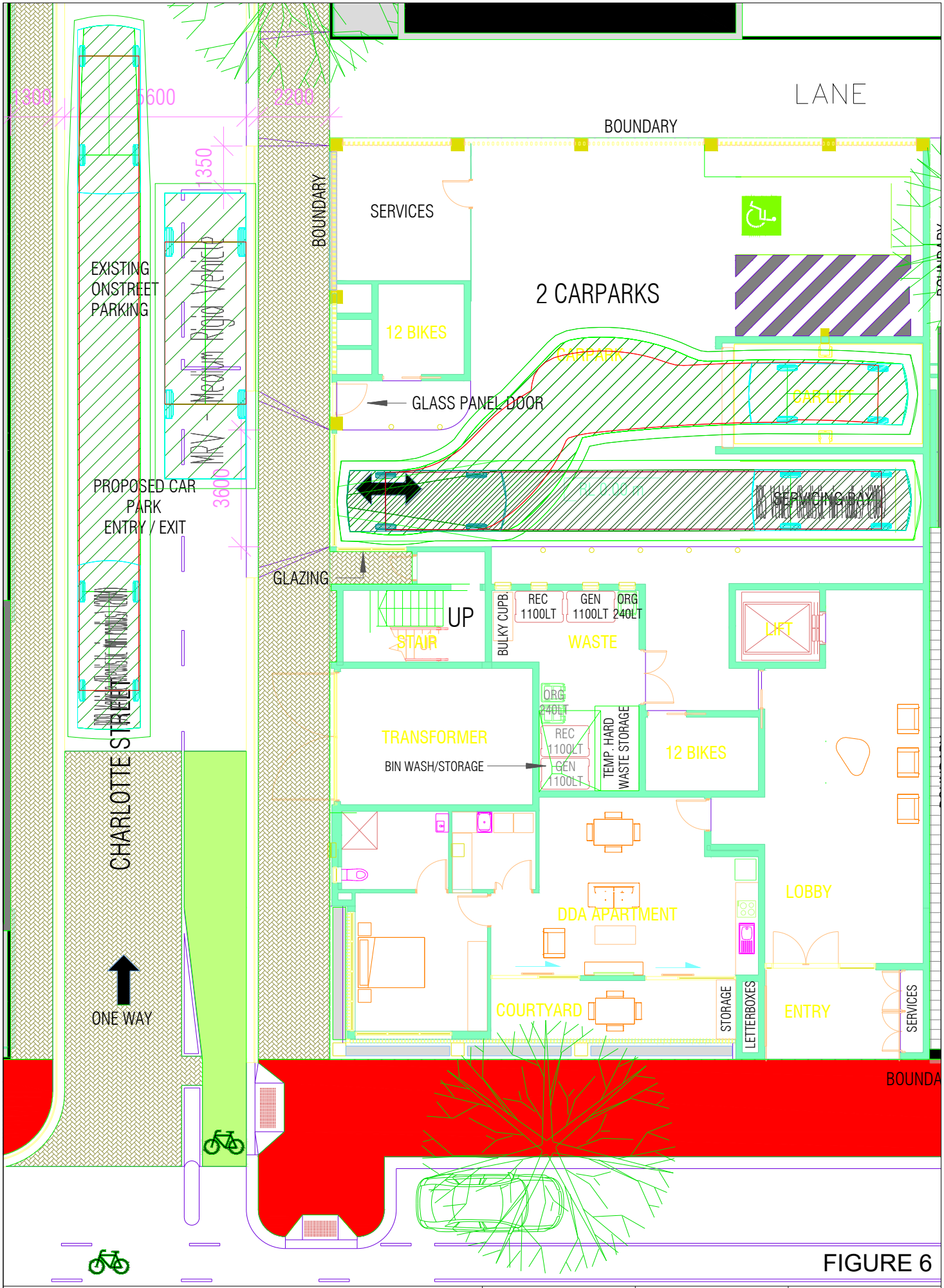


FIGURE 6

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 278 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

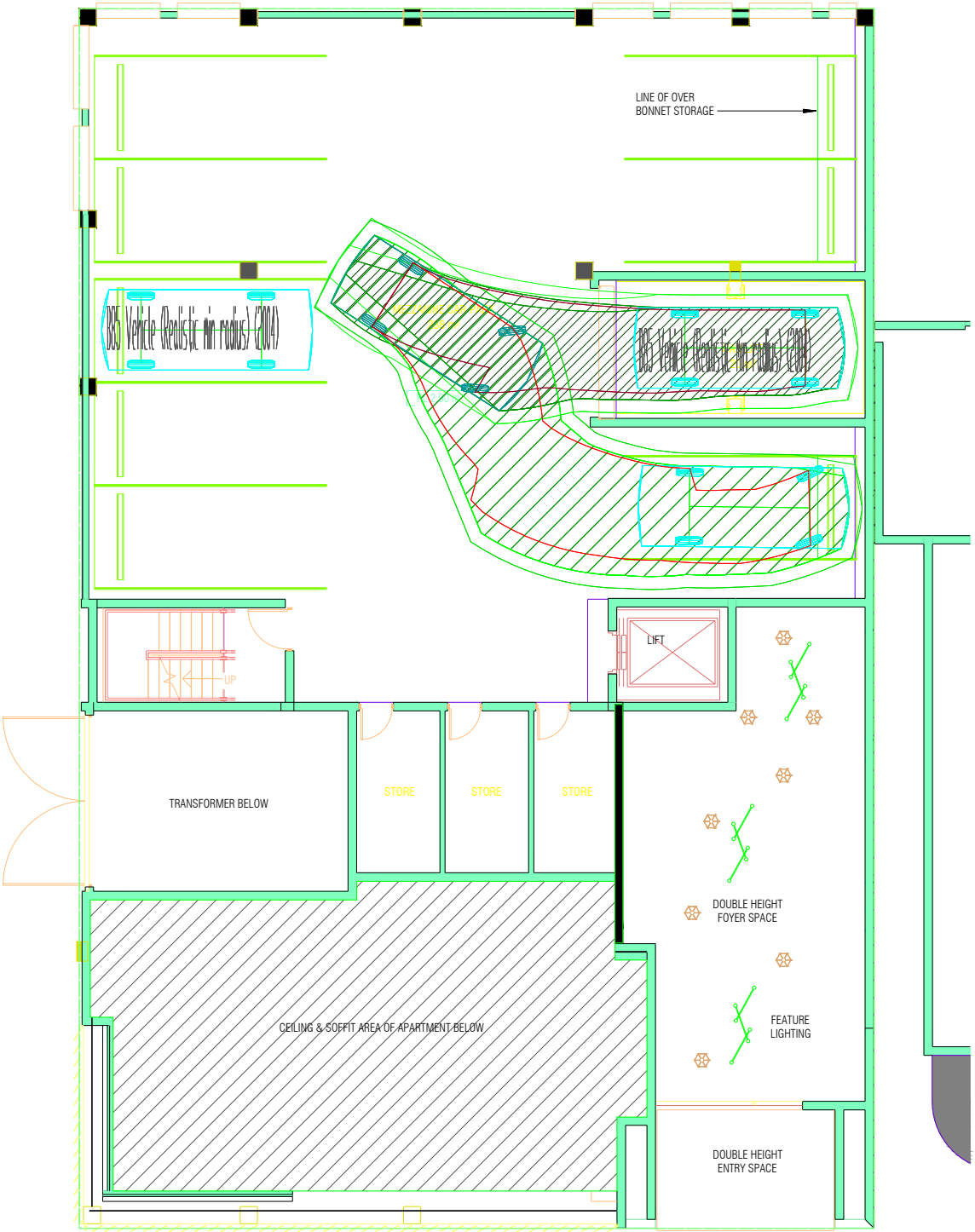


FIGURE 7

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

N
1:150 @ A4

For: Intro Architecture

Address: 287 South Terrace Adelaide

REF:	18-180
DATE:	09/05/19
DWG BY:	AH
CHK BY:	PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

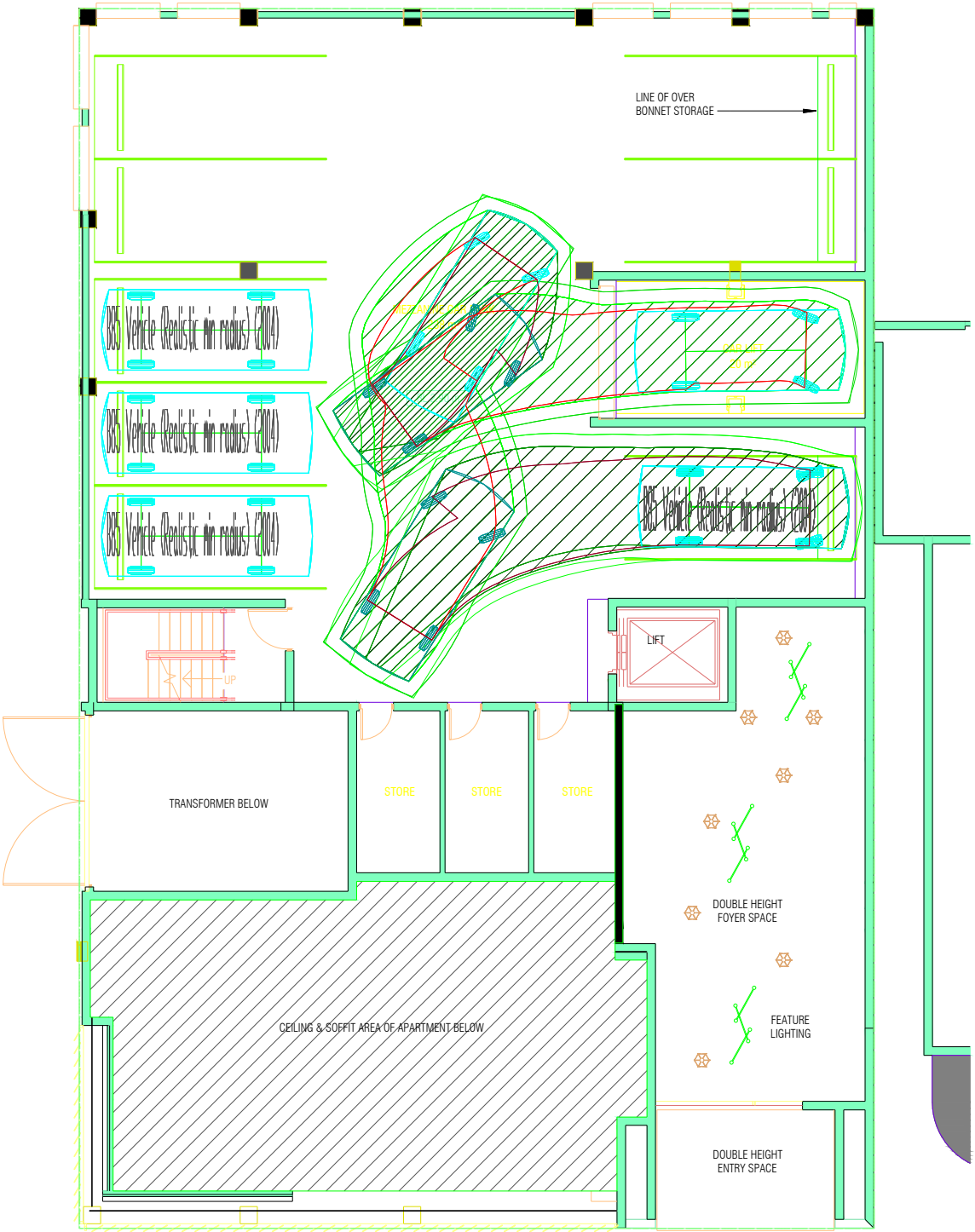


FIGURE 8

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture	REF: 18-180
	DATE: 09/05/19
Address: 287 South Terrace Adelaide	DWG BY: AH
	CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

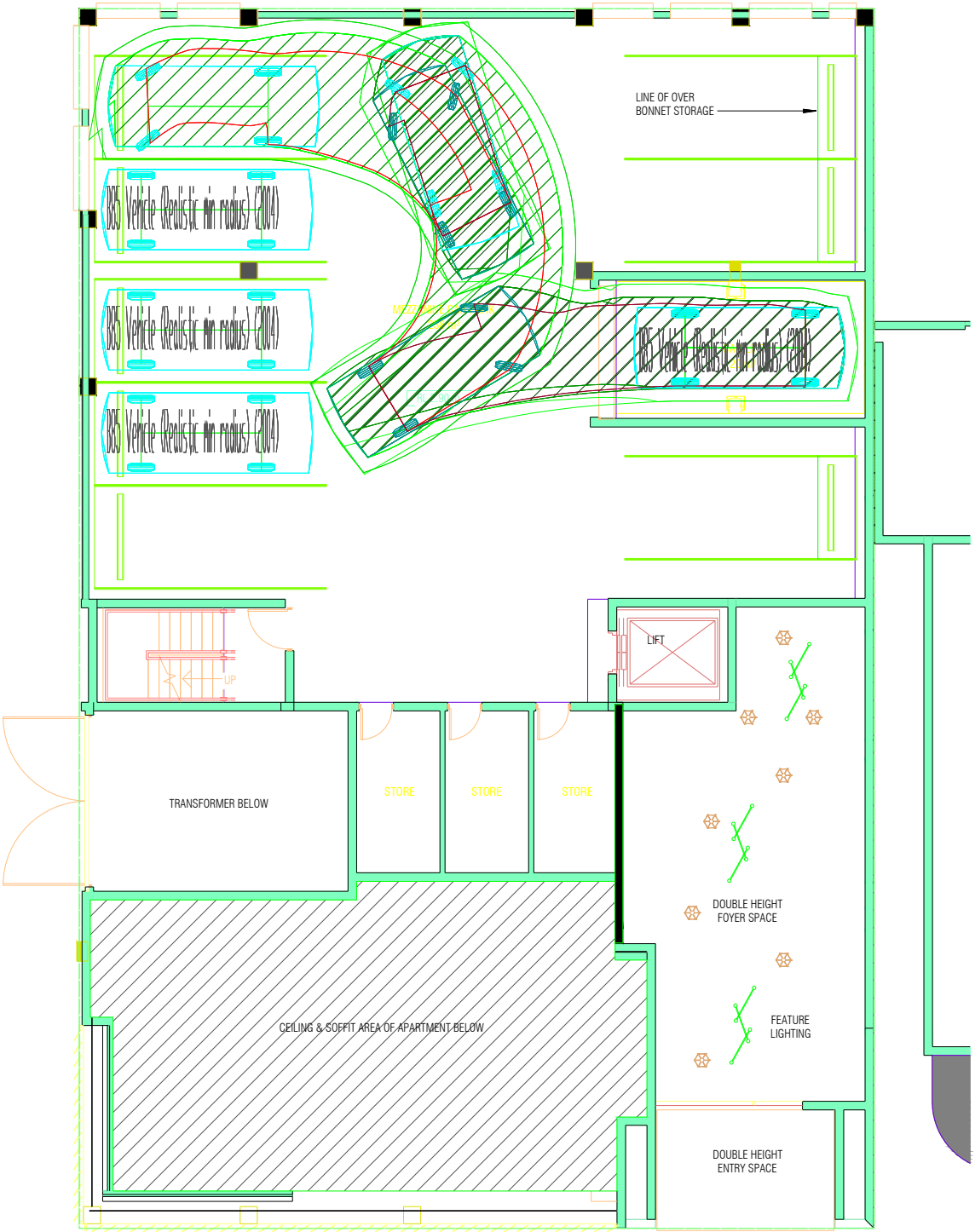


FIGURE 9

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

N
1:150 @ A4

For: Intro Architecture	REF: 18-180
	DATE: 09/05/19
Address: 287 South Terrace Adelaide	DWG BY: AH
	CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

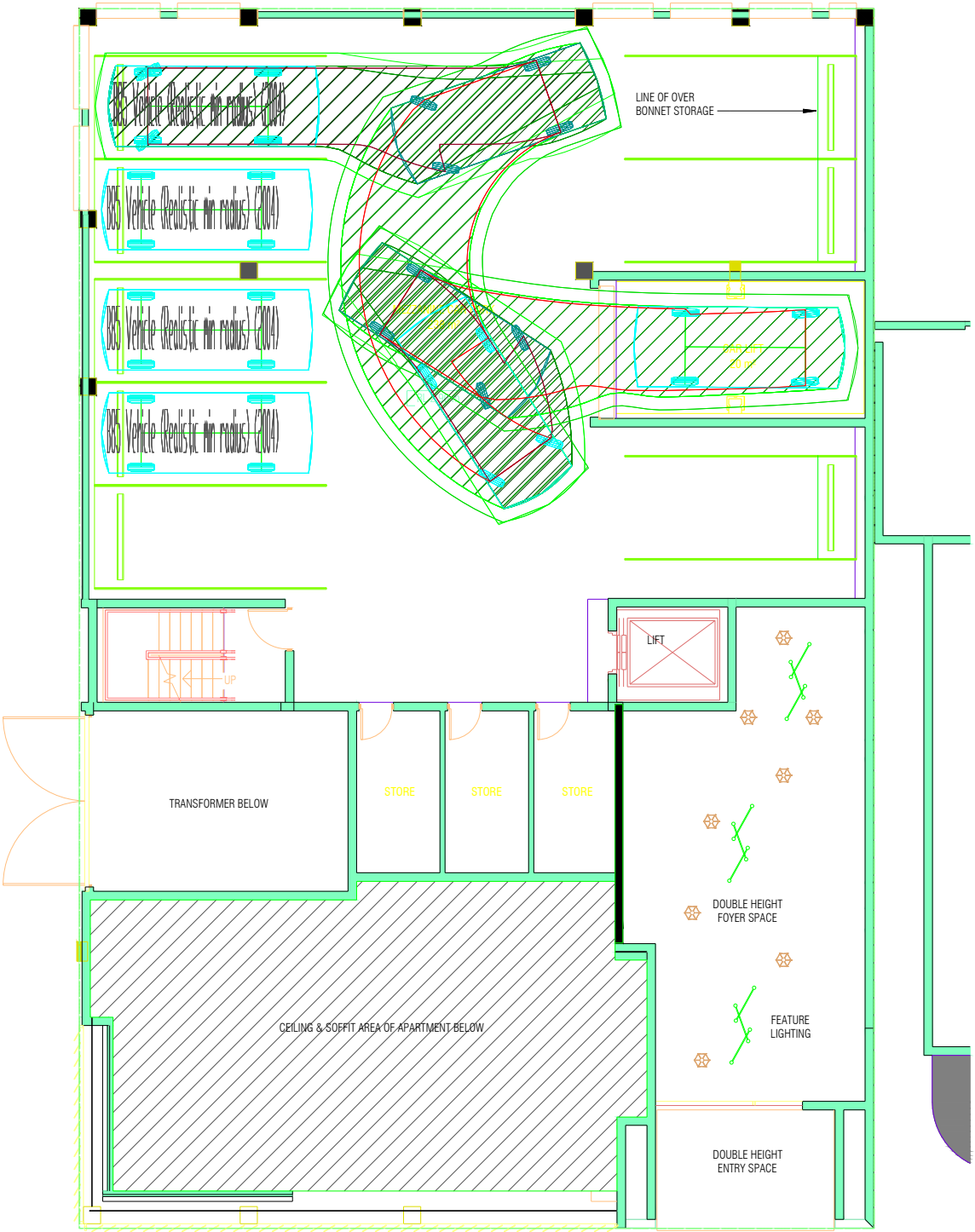


FIGURE 10

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

N
1:150 @ A4

For: Intro Architecture	REF: 18-180
	DATE: 09/05/19
Address: 287 South Terrace Adelaide	DWG BY: AH
	CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

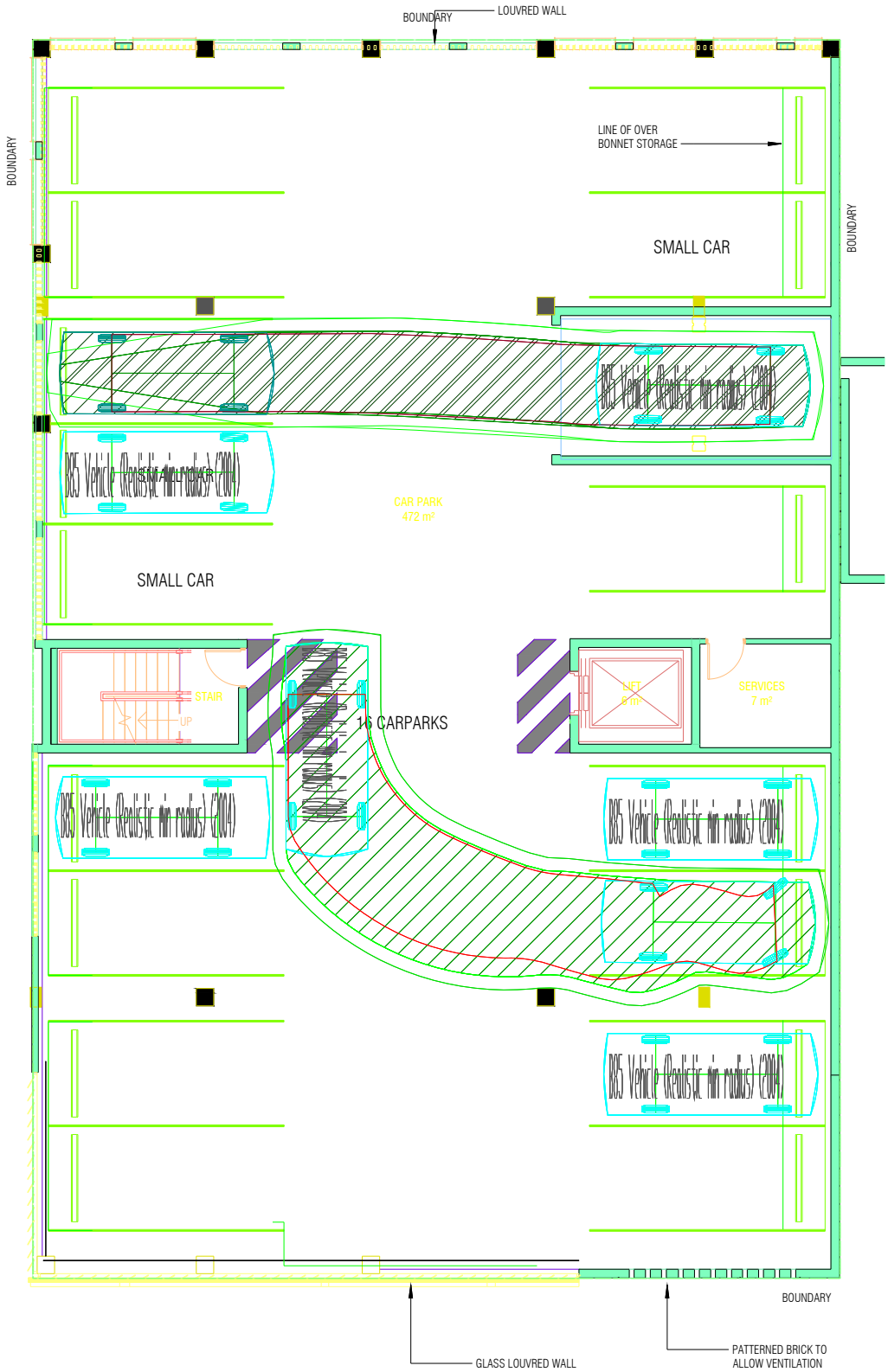


FIGURE 11

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

1:150 @ A4

For: Intro Architecture

Address: 287 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

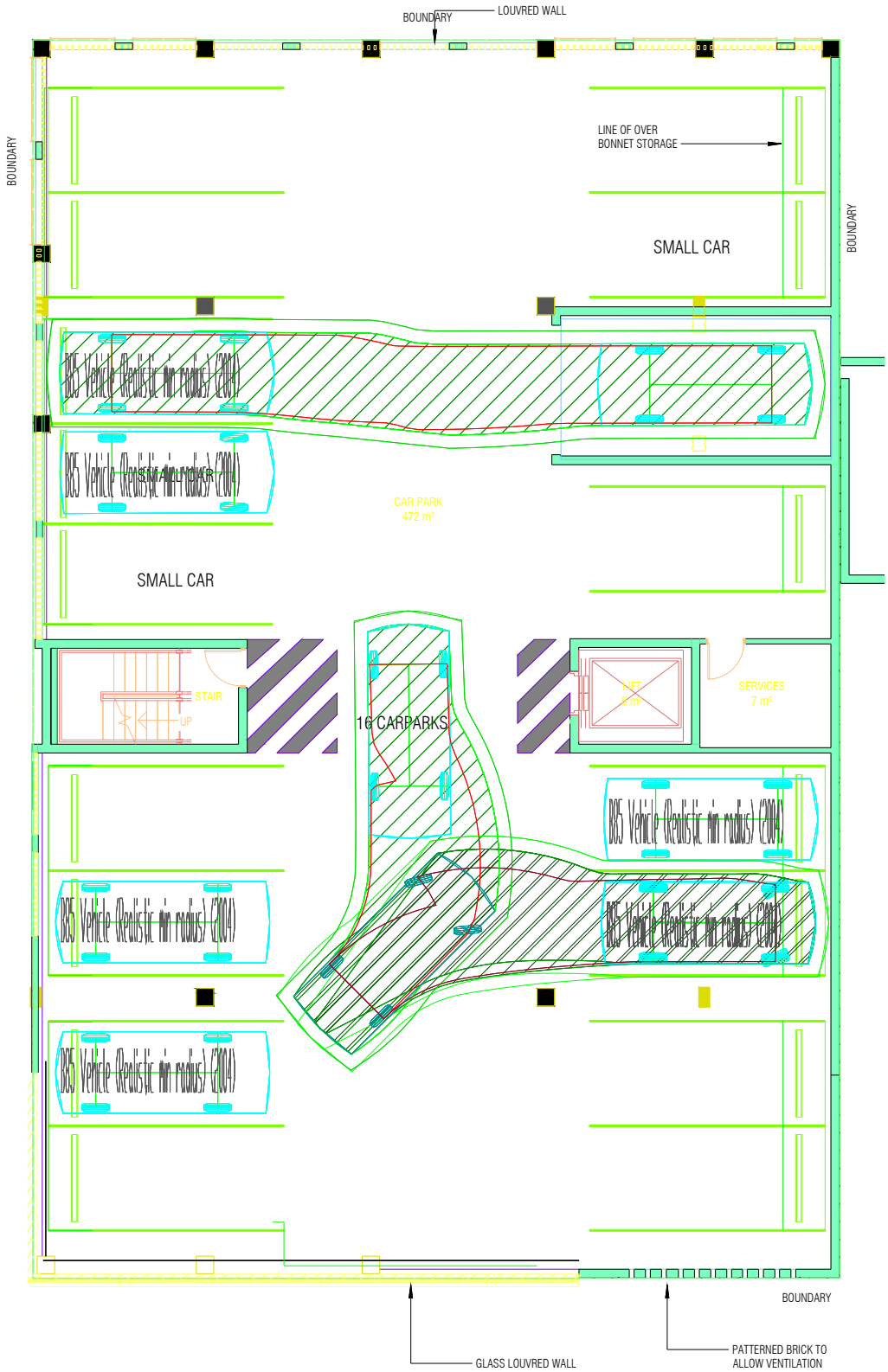


FIGURE 12

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

For: Intro Architecture
Address: 287 South Terrace Adelaide

REF: 18-180
DATE: 09/05/19
DWG BY: AH
CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

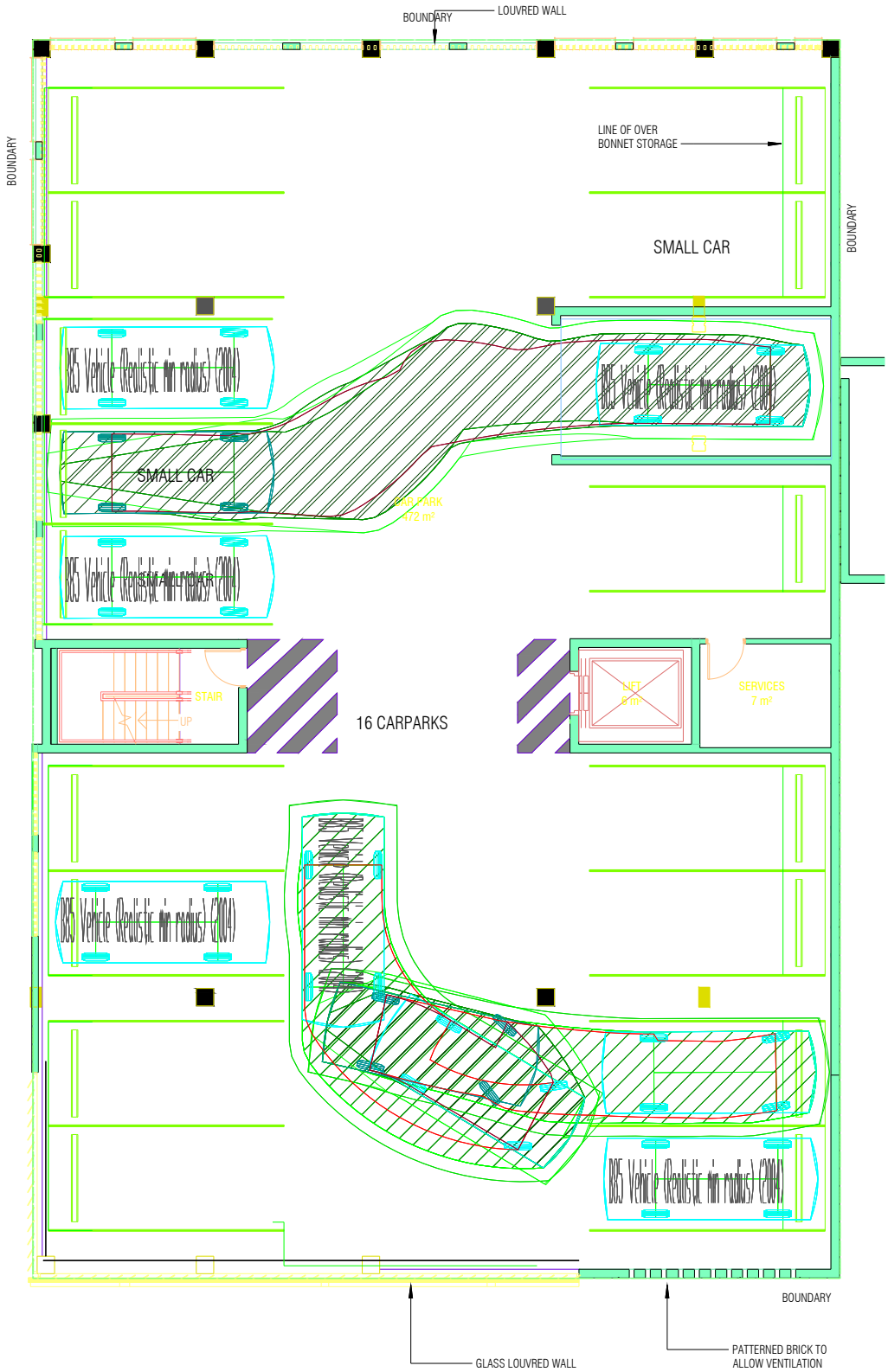


FIGURE 13

PHIL WEAVER & ASSOCIATES TRAFFIC ENGINEERING CONSULTANTS	**For:** Intro Architecture	REF: 18-180 DATE: 09/05/19	204 Young Street UNLEY SA 5061 P: 08 8271 5999 E: mail@philweaver.com.au
	Address: 287 South Terrace Adelaide	DWG BY: AH CHK BY: PW	

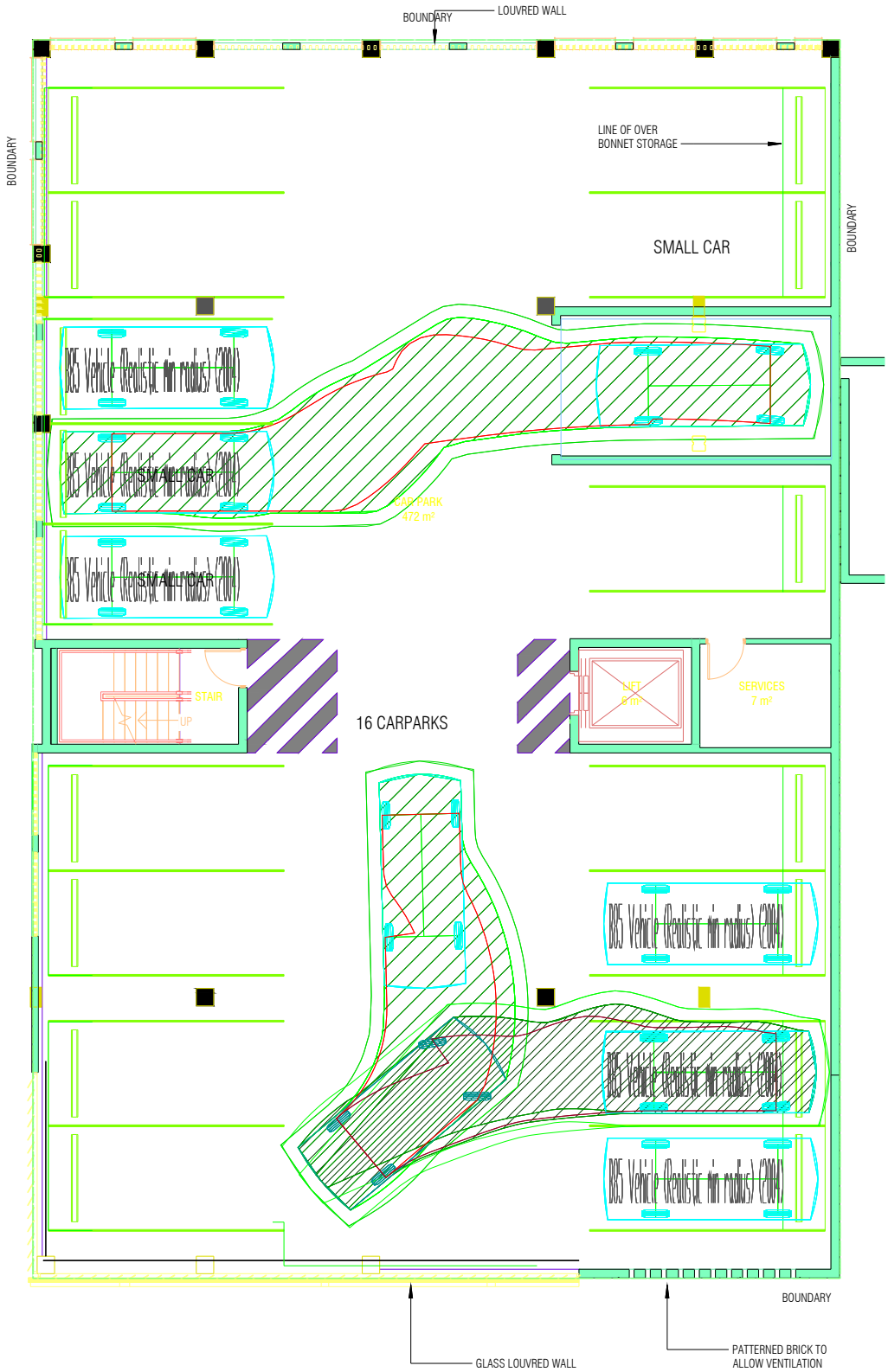


FIGURE 14

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

For: Intro Architecture	REF: 18-180
	DATE: 09/05/19
Address: 287 South Terrace Adelaide	DWG BY: AH
	CHK BY: PW

204 Young Street
UNLEY SA 5061
P: 08 8271 5999
E: mail@philweaver.com.au

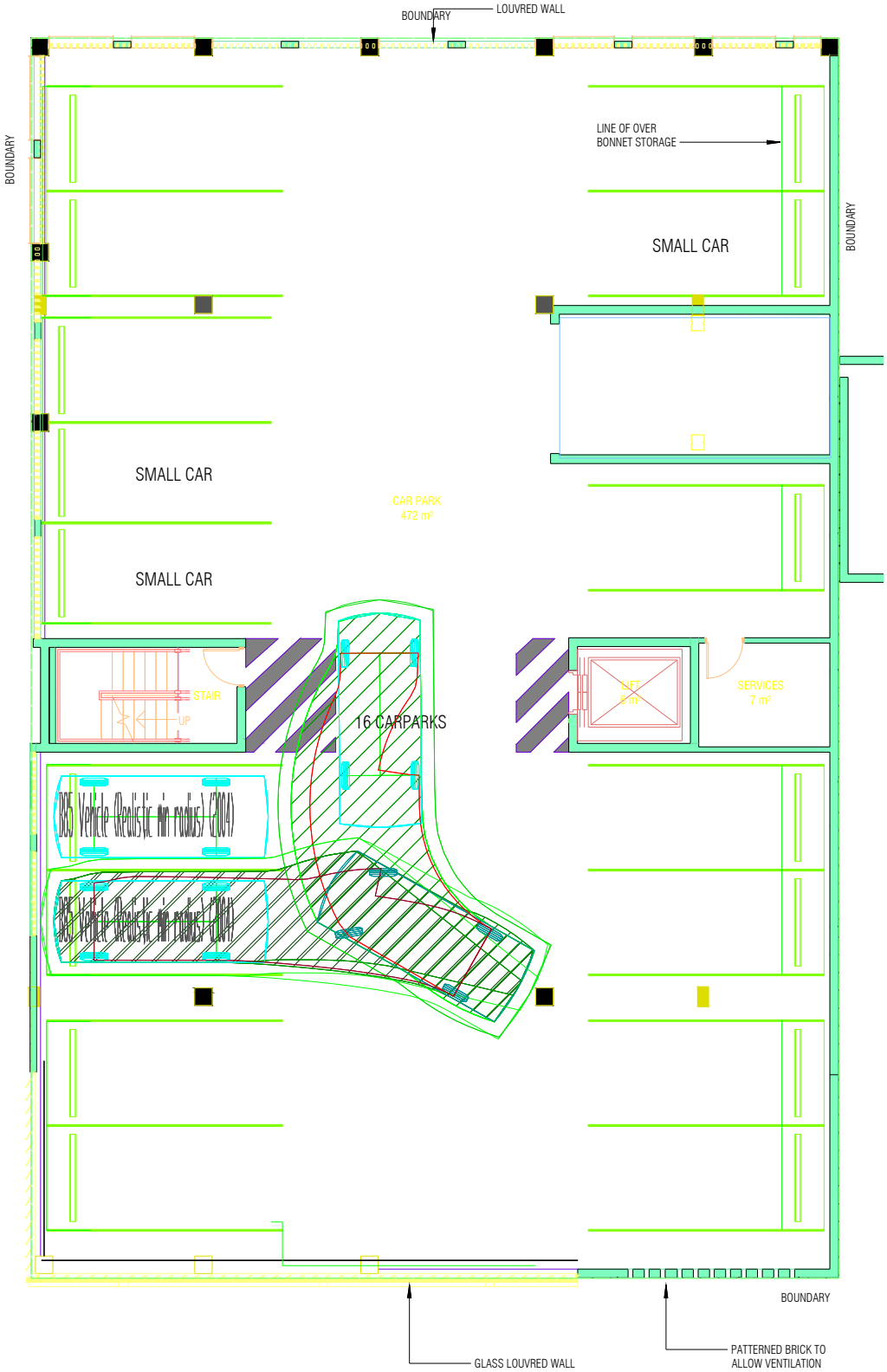


FIGURE 15

PHIL WEAVER & ASSOCIATES
TRAFFIC ENGINEERING CONSULTANTS

For: Intro Architecture	REF: 18-180	204 Young Street UNLEY SA 5061 P: 08 8271 5999 E: mail@philweaver.com.au
	DATE: 09/05/19	
Address: 287 South Terrace Adelaide	DWG BY: AH	
	CHK BY: PW	

INTRO

APPENDIX 03 – WASTE MANAGEMENT PLAN

Intro Design Pty Ltd
L11 44 Waymouth Street
PO Box 207 Rundle Mall
Adelaide SA 5000

T +61 (0)8 8410 0453
info@intro.com.co

intro.com.co

High Density Residential Accommodation
278 South Terrace, Adelaide

Waste Management Plan

Date: 8 May 2019

Prepared for:

Intro Architecture Pty Ltd

Colby Phillips Advisory Pty Ltd

Level 1, 60 Hindmarsh Square

Adelaide, SA 5000

+61 438 800 264

Rev.	*Date*	*Description*	*Doc No./Name*	*Originator*	*Approved*
o	8 May 19	Final for submission	WMP	JPH	JPH

Distribution List

Anthony Gatti	Intro Architecture
Luci Ward	Intro Architecture

Contents

1 INTRODUCTION

This document presents a waste management plan (WMP) for the proposed High Density Residential Accommodation at 278 South Terrace, Adelaide (the "Development"). The project proponent is Bruno Marveggio, the Architect is Intro Architecture, and the Traffic Engineer is Phil Weaver and Associates.

The Development is in the City of Adelaide (Council)

The WMP explains how the Development can manage waste effectively to achieve regulatory requirements and desired design and operating objectives, including those recommended by the South Australian Better Practice Guide (State Guideline) (Zero Waste SA, 2014) and Council expectations for waste management in this type of development. The WMP should be read in conjunction with other planning approval documentation for the Development referenced herein.

2 DEVELOPMENT DESCRIPTION

Per plans provided (Drawings DA02 Revision E, DA 10 Revision E, DA 13 Revision C, and DA14 Revision C), the Development is on a ca. 525m^2 site and would comprise:

- Eight (8) storey apartment block
- One single-bedroom DDA apartment at Ground Level
- Mezzanine and Level 1 carpark
- Twenty 2-bedroom apartments on Levels 2-6
- Two 3-bedroom penthouse apartments on Level 7
- The Development faces onto South Terrace in the City of Adelaide

Figure 2-1 reproduces the Ground Level plan (and illustrates some of the proposed waste management arrangements described later in the waste management plan). The Development faces onto South Terrace with pedestrian access. There is also access to the building garage and services at the side of the property from Charlotte Street. Charlotte Street is a one-way street (northbound).

Table 2.1 (page 5) includes the recommended Waste Resource Generation Rate (WRGR) classification (for each land use) based on the State Guideline (Zero Waste SA, 2014), which are used for estimation of waste and recycling volumes to assess waste storage required for the site.

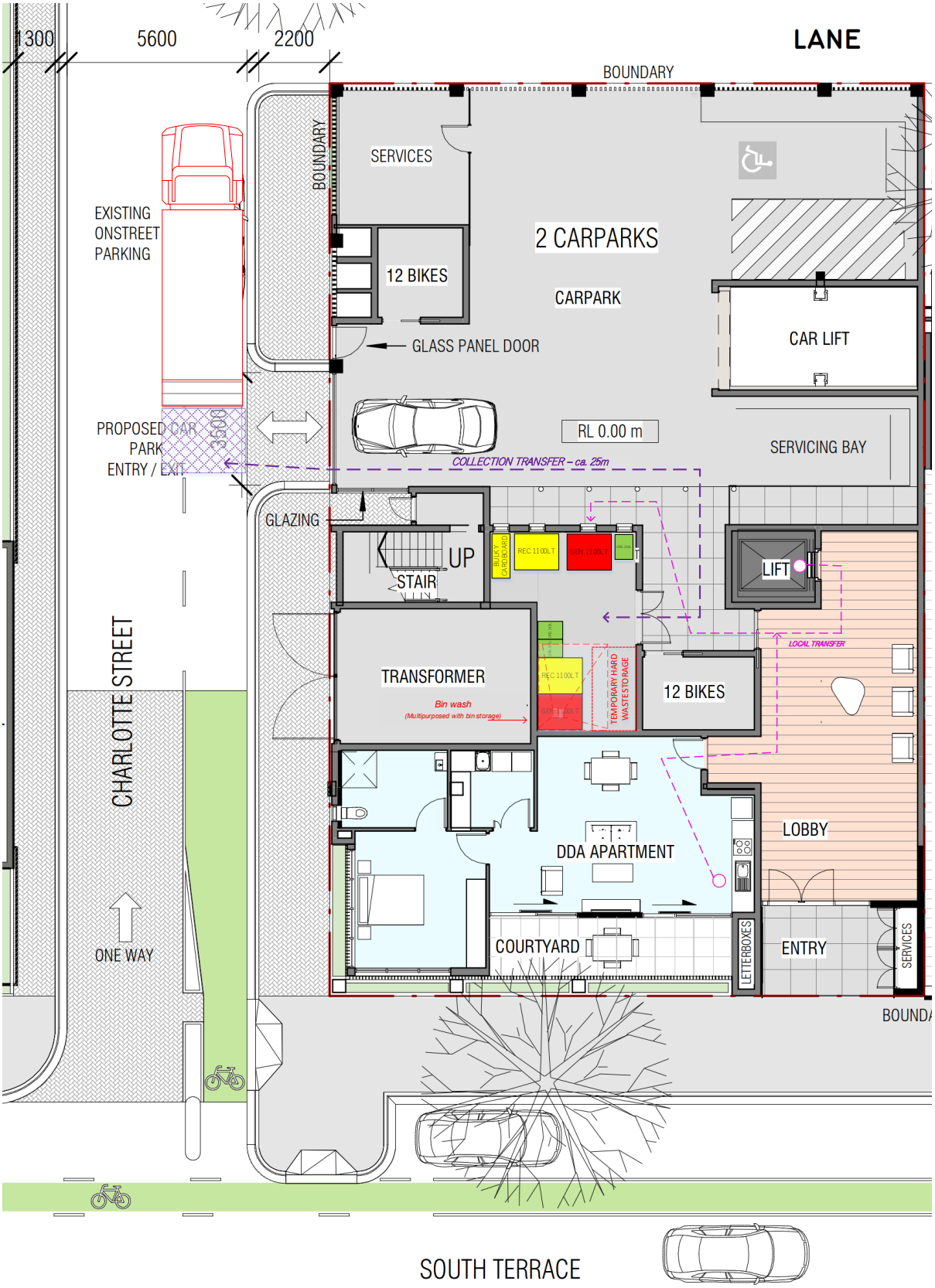


Figure 2-1 *Ground Level plan for Development, reproduced from the Drawings. Includes details of proposed waste system including collection points.*

Table 2.1 Summary of land uses for the Development, their WRGR Description(s) and relevant Development Metric(s).

Land Use	Description	Site Location	Land Use Type/WRGR Classification	Dev. Metric(s)	
Residential	DDA Apartment	Ground Level	High Density Residential Dwelling	1	Dwellings
				1	Bedrooms
	Apartments	Levels 2-6	High Density Residential Dwelling	20	Dwellings
				40	Bedrooms
	Penthouse Apartments	Levels 7	High Density Residential Dwelling	2	Dwellings
				6	Bedrooms
	Public & Common Space Provision	Ground Level Foyer + Car Park Access + Lift Foyers on each Level	Showroom*	50	m^2 GFA*

* Activated area assumed for public spaces

3 STAKEHOLDER ENGAGEMENT

Feedback was sought from Council representatives to determine suitability of the proposed waste management design and serviceability of waste collection with Council / subcontractor trucks. As such, the Proponent's technical team met with council on 15 April 2019 to discuss the proposed scheme.

- Council confirmed that a "pull in / pull out" service could be provided by Council (or Council's subcontractor) for General Waste, Recycling, and Organics for this residential development.
- Council suggested some minor improvements to the waste storage area:
    - Change the orientation of skips to improve how they are filled. This change has been incorporated
    - Add a direct access to the bin storage room from the garage. This could not be incorporated into the design. However, it is noted that the present design results in less than 25m transfer from the bin room to the truck. Also, the operator does not need to enter the building foyer for access - they will walk through an area only used by residents for accessing the garage or bike lock-up.
    - Council was otherwise satisfied with storage space and method of disposal for residents.
    - Council stated a preference for 660L General Waste and Recycling bins, for ease of movement. Subject to minimum ramps and transfer distance, 1,100L bins are acceptable. We have allowed for 1,100L to reduce time for transfer of bins and since waste volumes / storage space are more compatible with 1,100L bins.
    - It was suggested that a storage space be provided for hard containers used for carrying waste to the bin room. It is proposed that over-bonnet storage in the carpark be used for this purpose.

- Council requires a pin-code access for the locked bin room, which will be accommodated.
- The location for truck standing during bin transfer was discussed. It was thought that the existing parking zone (which is proposed to be reduced to a single parking space during development) would be sufficient for the Council collection trucks to stand. The rear of the truck will partially block the building garage access during collection, preventing egress by residents' vehicles. However, this will be less than 5 minutes, three times per week. This was considered by all present to be acceptable. Entrance of residents' vehicles would not be prevented, subject to the vehicle lift being available.

4 WASTE & RECYCLING SERVICE PROVISION

Table 2.2 outlines the recommended waste services by land use per Table 2.1. The different waste service classifications listed in Table 2.2 are explained below.

- *Routine Services* – These require on-site waste storage and routine and regular collections, and would include services for general waste, dry (comingled) recyclables and food waste.
- *At-call services* – These involve non-frequent collections, such as Hard waste and are organised and provided on an as-needed basis.
- *Maintenance services* – Some waste items (e.g. lighting in common areas or commercial tenancies, sanitary waste in public/common toilets) would be removed and disposed of (off-site) by the contractor providing the related maintenance service (and hence on-site waste storage is not usually needed or provided).
- *External Services* – These are where waste items (e.g. printer cartridges, batteries, lighting) that can be dropped off by tenants/residents at external locations (e.g. Officeworks, waste depot) (and thus, separate on-site waste storage is not usually needed or provided).

All collection services to the Development would be provided by a private or commercial service provider.

Table 2.1 Expected or recommended waste & recycling services for the Development

Service Type	Residential	
	Apartments	*Public & Common Space*
Routine (regularly scheduled)	· General Waste · Recycling · Food Organics	· General Waste
On-call (as needed)	· Hard/E-waste	
Maintenance (waste removed by contractor)	· Lighting (where applicable)	
External (by tenant off-site)	· Lighting · Printer Cartridges · Batteries	

4.1 Waste & Recycling Volumes

Table 2.3 estimates expected waste and recycling volumes for the Development (in Litres/week). WRGRs (in the State Guideline) do not exist for lighting, printer cartridge or battery waste. Volumes of these waste items, however, are relatively small, and thus, have not been estimated.

Table 2.2 Estimated waste & recycling volumes (Litres/week) for Development. *N/A – Not Applicable; NE – Not estimated*

Waste/Recycling Service	***Apartments***	***Public & Common Space***
	L/week	*L/week*
General Waste	1,410	184
Dry Comingled Recycling	1,175	N/A
Food/Garden Organics	470	N/A
Hard waste	235	9
E-waste	12	0.7
Lighting waste	NE	
Printer Cartridges/Batteries	NE	
TOTAL	3,302	193

5 WASTE MANAGEMENT SYSTEM

5.1 Waste Storage Area(s)

Waste storage is provided in a room at Ground level – see Figure 2-1 on page 4 – and as described further below. Table 5.1 gives a schedule of recommended bin

storages for Routine Services (based on estimated waste volumes in Table 2.3) and includes for each service:

- *Number and type of bins;*
- *Collection frequency (expected or proposed); and*
- *Service provider.*

Table 5.1 Waste storage and bin schedule for Routine Services, including collection frequency and collection service provider.

Service	Estimated Waste / Recycling Generation (L/wk)	Service Type	Collection Frequency (Events/wk)	Bins/Items Collected (per Event)		
				No.	*Size (L)*	*Type*
General Waste	1,645	Council	Weekly	2	1100	Skip
Dry Comingled Recycling	1,410		Weekly	2	1100	Skip
Food Organics	470		Weekly	2*	240	MGB

* space allowed for storage of 3 x 240L MGBs

Collection (by Council or Council sub-contractor) from the waste storage room would be a pull-in pull-out service via Charlotte Street.

The waste storage room would have mechanical ventilation to remove odours.

- The ventilation would extract to atmosphere, with location selected to avoid impact on residents, tenants and/or neighbours.

Potential bin configurations in the Waste Storage Area for the recommended bin storage (per Table 5.1) is illustrated in Figure 2-1. This illustration demonstrates that adequate space is or can be provided in the Waste Storage Area to meet the site's waste management requirements.

Resident access for disposal to the shared bins would be through a Waste Disposal Wall, consisting of waste chutes (see Figure 5-1) for each service (General Waste, Recycling, Organics). Layout of chutes and bins is shown in Figure 2-1. A separate bulky cardboard slot will be provided for large cardboard items (e.g. furniture packaging and pizza boxes), which will not fit through the recycling waste chute.

Figure 5-1 Typical waste chute door (Source: jdmacdonald.com.au)

5.2 System Operation – Routine Services

5.2.1 User Storage

The following summarises how the waste systems would operate for each land use at the Development.

Residents would be provided suitable kitchen bins with handles to enable easy carriage from apartments to the Waste Storage Area for disposal, e.g. see:

a) *General waste bin – at least 20L in size (bag lined)*
b) *Commingled recycling waste bin - at least 20-30L in size*
c) *Food organics bin (as specified or otherwise agreed with Council) – Kitchen food waste caddy, ca. 6L in size*

Note: Council provides new residents with a voucher to obtain a free kitchen food waste caddy and compostable bags, see:

(a) *(b)*

Figure 5-2– Examples of suitable waste and recycling kitchen bins: *(a) General waste & recycling - 2×20L Buckets in pull-our drawer; and (b): Bench-top food waste kitchen caddy with handles (Source: https://www.cityofadelaide.com.au/city-living/home-property-management/waste-recycling/food-waste/)*

5.3 Local Disposal (Including Transfer Pathways)

The Waste Storage Area (described in Section 5.1) would be the local disposal point as follows. Transfer pathways (from dwellings to local disposal areas) are described below and depicted in Figure 2-1 (page 4)

5.3.1 DDA Apartment

The resident(s) of the DDA Apartment on the Ground Floor would carry waste/recycling/organics via the lobby and the garage entrance area to the waste

disposal wall (see Figure 2-1, page 4). Materials will be disposed to the shared bins using the waste disposal wall (see Figure 5-1).

5.3.2 Other Apartments and Penthouses

The residents would carry waste/recycling/organics via the lift, the lobby, and the garage entrance area to the waste disposal wall . Materials will be disposed to the shared bins using the waste disposal wall (see Figure 5-1). Containers for carrying waste could be stored in over-bonnet storage in the carpark if desired.

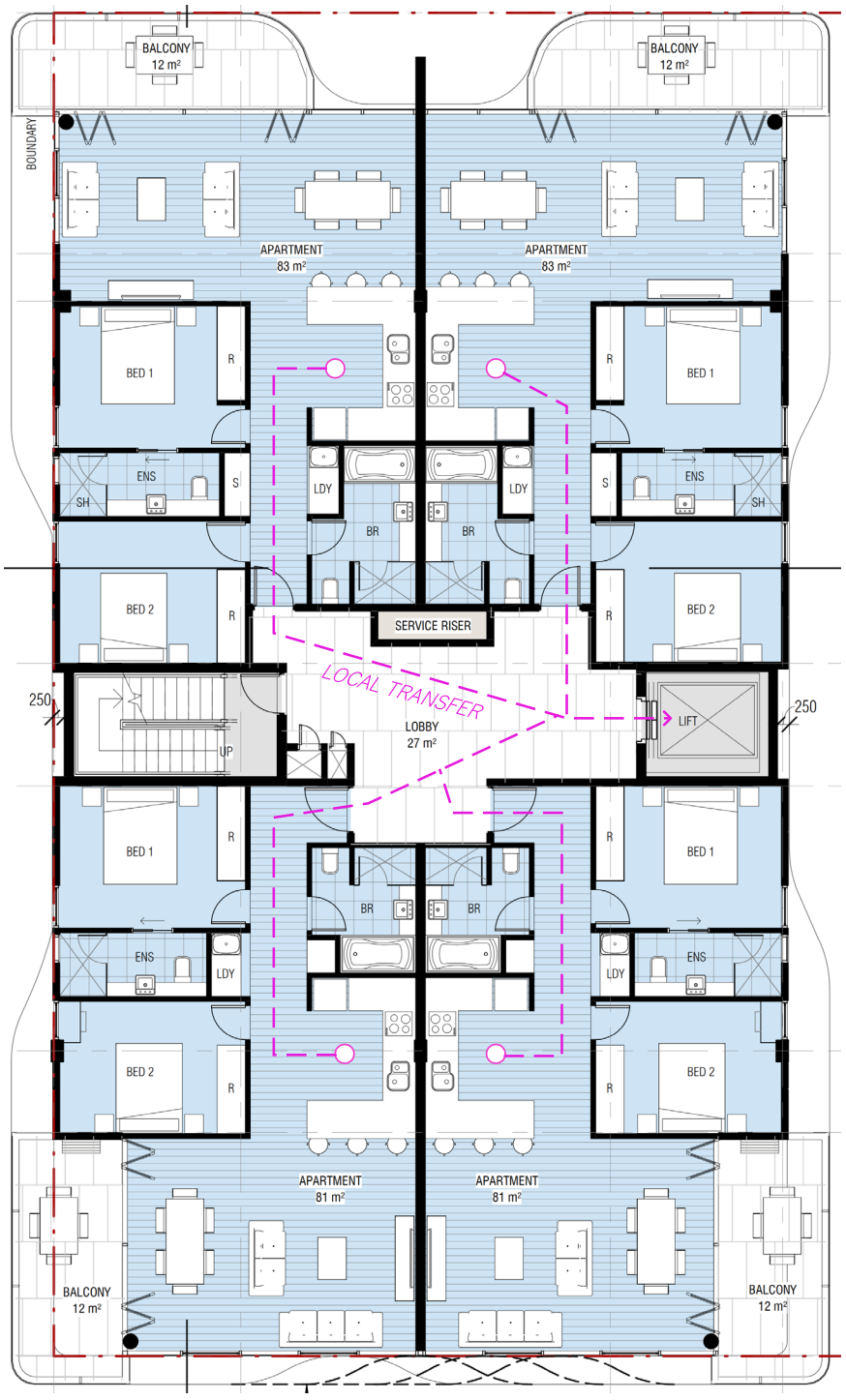


Figure 5-3 Transfer pathway for apartments on Levels 2 – 6

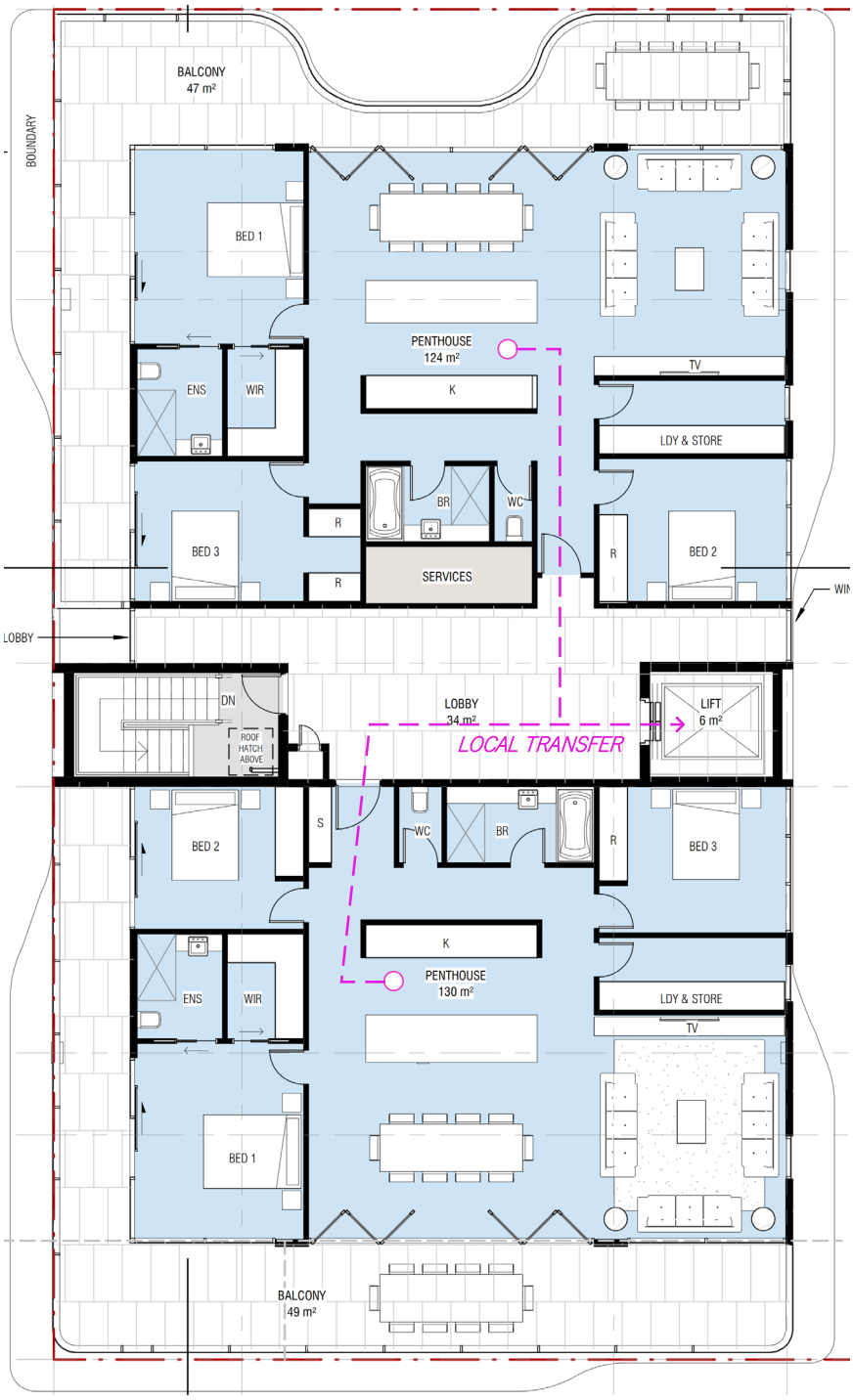


Figure 5-4 Transfer pathways for penthouse apartments on Level 7

5.4 Bin Presentation and Waste/Recycling Collection

The Waste Storage Room would be the presentation area for collection. The waste contractor (Council or subcontractor) would provide a pull in / pull out service from the Waste Storage Room. The waste contractor would temporarily park the rear-lift truck on Charlotte Street, access the Waste Storage Area using secure code, pull (skip and/or MGB) bins out, empty them, then return empty bins back to the Area.

All collection or bin transfer paths should be free of steps, grades ≤ 1:10, with appropriate hard /even surfaces, and wide enough to accommodate the types of bins/skips being transferred.

5.5 Collection

- Would be by the Council contractor or sub-contractor (rear-lift), parking in the parking space provided on Charlotte Street. It is proposed that parking controls be added to the existing short-term parking space to ensure availability for waste collection vehicles at the appropriate times and days.
- Collections would be weekly, and the time required for collection events should be less than 5-7min (per service) to lift all bins (per event for each service).
- These collections would occur at off-peak times for traffic on Charlotte Street and resident vehicle access to and from the property.
- The collection would temporarily (e.g. for up to 5-7 min) block access to the garage.

5.6 At-call services

5.6.1 Hard/E-waste

Residents may be able to access the Council's at-call hard waste collection, where up to 12 collections may be booked each year (see https://www.cityofadelaide.com.au/city-living/home-property-management/waste-recycling/hard-refuse).

The Body Corporate or Community / Strata Corporation (on residents' behalf) should inquire with Council regarding how these residents can access the Council hard waste collection when the building becomes operational, including establishing suitable arrangements and a (kerbside or on-site) presentation location for the service.

The Waste Storage Area includes a temporary (ca. 3.5m^2) area for storage and/or presentation of residential waste

In event that a Council service is not available, the Body Corporate or Community / Strata Corporation would facilitate private hard waste collection services for residents. This would involve at-call hard waste collection by a private contractor organised by residents direct from their dwellings (or using a temporary on-site presentation area, e.g. cordoned -off car park or off internal access road area or verge). The waste contractor could temporarily use the front lane for access and on-property parking to deliver hard waste collection services. The private waste contractor should have access to a ≤8.8m rear-lift or Flat-bed vehicle for this purpose.

The Building User Manual(s) for would advise on availability and/or organizing Hard /E-waste collection services.

5.6.2 Maintenance Services

Waste would be generated by some maintenance services or activities in the Development (e.g. lighting, repair work, etc.). These maintenance-generated waste materials would be handled and disposed of by the contractor undertaking these services. Dedicated on-site storage for these waste materials is therefore not needed.

5.6.3 External

Residents would be able to dispose of smaller waste items, such as printer cartridges, batteries and lighting, to publicly available external drop off points (e.g. supermarkets, Office works, telco retail stores, etc.), which accept these materials.

The Building User Manual(s) for the Development will include advice on external drop-off points for these waste items, which may include reference to Council advice available at their Web site.

5.6.4 Bin cleaning (& On-site Bin Wash Area)

A dedicated on-site bin cleaning area would be provided and multi-purposed with the bin storage area at Ground Level – see Figure 2-1 (page 4).

- This bin wash area would require grading to a sewer drain with basket screen to remove gross solids, tiles or epoxy coating to water-proof adjacent walls and flooring, standard cold-water supply faucet and commercial-grade electrical power supply (if pressure washer system is to be used), plus bunds and screens for use during bin wash events.
- Bin washing would be timed to occur immediately after bins are emptied.

Alternatively, bin cleaning at the Development could be outsourced to an external contractor (e.g. http://binforce.com.au/).

- These external contractors generally have self-contained bin washing systems on back of ute or truck that enable them to clean bins on site – e.g. Figure 5-3 below.
    - Or some will remove bins from site, replacing them with an empty spare, clean the bins, then return them to site.

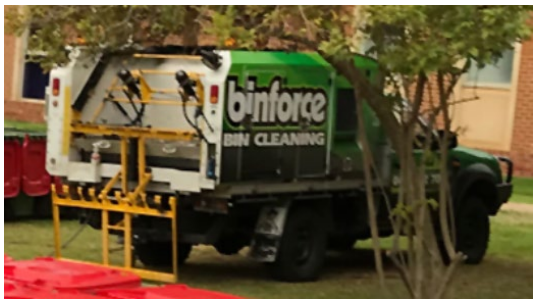


Figure 5-5 On-site bin wash system for rear-lift trucks on back of ute. *Source: http://binforce.com.au/*

5.6.5 Transfer pathways

There are a range of transfer pathways for the waste systems at the Development, which were described in Sections 5.3 and 5.4. The following is provided as a guide for sizing and designing these transfer pathways.

- *Transfer pathways –*
  - *User disposal – less than 30m and free of steps, no grades greater than 1:15, and cater for mobility impaired users.*
  - *Local disposal points to central storage – enough width to accommodate relevant bins, trolley, or waste loads being transferred, free of steps, no grades greater than 1:12*
  - *Collection – less than 35m with no steps or grades greater than 1:10*
- *Corridor widths –*
  - *240L MGBs or smaller bins / loads – min. 1,000 mm (1,200mm preferred)*
  - *660L skip bins – min. 1,200mm (1,400mm preferred)*
  - *1,100L skip skips and/or other waste loads – min. 1,500mm (1,600mm preferred)*
- *Doors –*
  - *Local disposal access – 800mm*
  - *Transfer pathways– Appropriate to the size of bin to be transported, e.g.*
    - *240L MGB (or smaller) – min. 800mm*
    - *660L skip – min. 1,200mm*
    - *1,100L skip – min 1,400mm*
- *Floors – Hard surfaces where bins and skips are to be carted*
- *Lifts – Service lift should be sized to allow for bulky hard waste items.*

Based on current plans, these requirements for transfer pathways in the Development appear to be generally satisfied. All relevant transfer pathways should be reviewed and confirmed at detailed design stage to ensure they are appropriate, including with Council for their residential collection services.

5.7 Collection & Traffic Issues

The waste collection point for the Development introduced above is reiterated below.

- Collections for all services are made by parking in Charlotte Street per Figure 2-1 (page 4). Access into the Waste Room is via the driveway and double doors with secure access code.
- Collection will be completed within 5-7 minutes per service.
- Routine waste collections would be timed to minimise access disruption through Charlotte Street and the Development.

Please refer to Traffic Engineer's report for other comment on traffic issues related to waste collection proposed for the Development.

5.8 Operation, Management & Communication

- *Waste system operation and management* – The Body Corporate or Community / Strata Corporation would be responsible for managing and operating the waste systems at the site.
- *Building User Manual* – Advice and instructions on waste management and using the waste systems should be included by the Developer in the Building

User Manuals developed for residents, including contact information for further information, questions and issues.
    - *Council should be consulted on this advice and instructions and can provide relevant information to include in the Building User Manual.*
    - *This Council information may include advice to residents on how to properly dispose of other waste / recycling items including lighting, batteries and hazardous household waste.*
- ***Obligations for residents –*** to properly access, operate and use the use the waste systems provided would be written into the Community/Strata plan lodged with the Lands Titles Office.
- ***Emergency Response Plan –*** Should include response measures (or contingencies) for:
    - *Waste collection services suspended or not available; and*
    - *For Apartment Building, lift access failure (to Ground Level Waste Storage Areas, with focus on impact and contingency measures for mobility impaired residents).*

5.9 Other Waste System Design or Management Issues

The following would be considered and/or implemented for waste systems at the Development. More details for some of these items can be resolved at detailed design stage with the waste contractor and/or Council.

1) Bins – These would comply with Australian Standard for Mobile Waste Containers (AS 4213).
2) Signage –
    - Appropriate signage in all Local Disposal and Waste Storage Areas should be used to ensure correct disposal of waste and recycling.
    - This signage should conform to the signage requirements of Council and/or the State Guideline (Zero Waste SA, 2014).
3) Vermin, hygiene & odour management (inc. ventilation)
    - *Inspection & Cleaning* –
        - An inspection and cleaning regime would be developed and implemented by the Building / Facilities Manager for waste systems at the Development, including ensuring that surfaces and floors around disposal areas, transfer pathways and waste storage areas are kept clean and hygienic and free of loose waste and recycling materials.
            - *Where putrescible general waste or food waste is being stored, Local Disposal and Waste Storage areas should be graded to a sewer drain with tiling or epoxy coating to floors and adjacent walls to waterproof the area and for cleaning.*
    - *Odour Control* –
        - All Waste Storage Areas –

- *Where putrescible general waste or food waste is being stored, these areas would be mechanically ventilated for control of odours.*
- *The ventilation would extract to atmosphere, to prevent odour build up.*
- *The extraction vent discharge location would be selected to avoid impact on tenants and/or neighbours.*
- *It should be a requirement for food waste bins in Waste Storage areas that lids are closed after use.*

4) Access & security –
    - Waste Storage Room should be secure and only accessible by key or fob or access code.
        - *This key or fob or access codes would be provided to property management staff and/or waste contractor(s) collecting from these areas.*
        - *CCTV is recommended to monitor waste disposal practices in all Waste Storage Areas.*
        -

6 REFERENCES

Adelaide City Council. (2016, September 27). *Guide to waste & recycling bins.*

Zero Waste SA. (2014). South Australian Better Practice Guide – Waste Management in Residential or Mixed Use Developments.