

Loucas Zahos Architects

Variation to DA 020/0023/14A for increase in overall height of development by 3.4 metres, internal floor and layout changes, 66 residential apartments over 18 levels, additional studio space, two basement levels and reduced car parking.

261-263 Pulteney Street Adelaide

DA 020/0023/14A V1

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OVERVIEW

Application No	020/0023/14A V1
Unique ID /KNET ID	2018/039895/01
Applicant	Loucas Zahos Architects
Proposal	Variation to DA 020/0023/14 for increase in overall height of development by 3.4 metres, internal floor and layout changes, 66 residential apartments over 18 levels, additional studio space, two basement levels and reduced car parking
Subject Land	261-263 Pulteney Street Adelaide
Zone/Policy Area	Capital City Zone
Relevant Authority	SCAP – pursuant to Schedule 10 section 4B (1) – development within the Corporation of the City of Adelaide exceeding \$10 million.
Lodgement Date	24/01/2018
Council	Adelaide City Council
Development Plan	Adelaide (City) Consolidated – 20 June 2017
Type of Development	Merit
Public Notification	Category 1
Referral Agencies	Government Architect, City of Adelaide Airports Authorities
Report Author	Yasmine Alliu – Planning Officer
RECOMMENDATION	Development Plan Consent subject to conditions

EXECUTIVE SUMMARY

The development application currently under consideration is for a variation to Development Application (DA) 020/0023/14A which comprises a mixed use residential apartment building of 23 levels, including 66 apartments on 18 levels. There is ground floor retail, studio/office space on 4 levels, a shared roof top deck plus 8 levels of car parking (2 being basement levels plus 1 mezzanine). The residential apartments will be known as *Sky Apartments*.

The variation comprises a revised building height, an apartment within the roof deck level, 2 additional basement levels for car parking, and the incorporation of a third lift, 2 additional studio levels, increased ceiling heights in the studio spaces (levels 1-4), internal layout amendments, a reduced roof garden and a reduction in apartment numbers.

The proposed development is a merit based application that is categorised as category 1 for public notification purposes with statutory referrals to the Government Architect (GA) and Adelaide Airport and a non-mandatory referral to the City of Adelaide. The proposed land-use is considered acceptable and consistent with the land-uses envisaged in the Capital City Zone.

The proposal involves a departure from the maximum building height sought by the Development Plan, but generally satisfies other design, appearance and amenity provisions. The Government Architect's view is that the variation in height does not affect the overall architectural expression as originally intended. The GA also recommended review of the apartment layouts and balcony sizes and acknowledged the refinement and increased balcony sizes in the revised the plans.

Whilst the proposed building exceeds the building height sought in this area, it has an existing approval at only 3.4m less than the current proposed height. The proposal does not entirely satisfy the over height provisions now in effect since the initial approval was granted due to new policy, though it does go some way to achieving them. It does however afford a level of amenity that improves the proposal since its inception. It is considered

that the increase in height whilst not ideal, does not adversely impact on the design quality of the proposed building. The height and scale of the proposed development is considered acceptable. The proposal generally achieved appropriate performance outcomes in respect to technical matters affected by the variation such as bicycle parking, wind analysis, crime prevention and waste management.

On balance, it is considered the proposal satisfies the intent of the Capital City Zone and its focus on high rise development and relevant development control policies. It is consequently considered that the variation is not at significant variance with the Development Plan and warrants Development Plan Consent subject to conditions.

ASSESSMENT REPORT

1. BACKGROUND

1.1 Strategic Context

On 30 May 2017 the Minister for Planning approved the Capital City Policy Review (Design Quality) Development Plan Amendment. The purpose of the DPA was to introduce and reinforce design quality within the Capital City Zone which:

- Reinforce design quality for new development;
- Establish additional requirements for over-height development including zone interface treatments and triggers for over-height allowances;
- Increase greening policy provisions for over-height development and;
- Strengthen the Desired Character Statement along Rundle Street to recognise its important character.

1.2 Pre-Lodgement Process

The applicant did not engage with the Department of Planning, Transport and Infrastructure's pre-lodgement service for the variation application. However, the applicant originally participated in three pre-lodgement panel meetings and three Design Review sessions for the original application which resulted in a pre-lodgement agreement and subsequent granting of Development Plan Consent.

2. DESCRIPTION OF PROPOSAL

Application details are contained in the ATTACHMENTS.

The applicant is seeking to vary the previously approved DA 020/0023/14A.

The original approval was for the demolition of existing building and construction of residential apartments (68 apartments over 17 levels), a retail tenancy on the ground floor, studio space on levels 2 and 3 plus a common use roof terrace, together with associated car parking over 4 levels plus ground floor.

This variation seeks to increase building height by 3.4 metres, provides a number of 3 bedroom apartments, a penthouse on the roof deck level, reduces the number of apartments from 68 to 66, relocates the lift core, increases the number of apartments on various levels, reconfigures internal layouts to improve circulation and increase apartment sizes and balcony sizes, provides a new concierge entrance for both commercial and residential levels, includes two additional studio levels and a dedicated lift for commercial levels, 2 basement levels of car parking and alterations to the roof terrace.

	<i>Proposed</i>	<i>Original</i>
Land Use Description	Apartments, retail tenancy and office space (studios) – to be used as medical consulting rooms (4 levels)	Apartments, retail tenancy, studio over 2 levels
Building Height	74.3m–incl the lift overrun Increase of 3.4m to original	70.9m
Description of levels	23 levels (plus a mezzanine) -66 apartments) over 18 levels Basement 2 – car lift – car parks Basement 1- car lift – car parks Ground floor –car lift, retail (29m²) + bins, lobby residential – commercial entry (concierge area) – residential bin area - transformer Proposed outdoor dining - Ground floor eating area has a 1.8m pedestrian clearance with bike racks Mezzanine – car lift –water tanks –fire pump Level 1 – car park + car lift – studio (144.7m²)- kitchenette- bin area – bike store Level 2- 4 car park + car lift - studio (144.7m²)- kitchenette- bin area Level 5 3 x 2 bed 1 x 1 bed Levels 6, 8,12,14 4 x1 bed 1 x 2 bed Level 7 4 x1 bed 1 x 2 bed Levels 9-17 3 x 2 bed 1 x 1 bed Levels 10-18 1x 1 bed 3 x 2 bed Levels 19 & 21 2 x 3 bed Level 20 2 x 3 bed Level 22 – penthouse 1 x 3 bed Roof deck – 123.6m² Plant	23 levels -68 apartments over 17 levels plus mezzanine No basement car parking No 3 bed apartments or penthouse Level 1 – car park Level 2 – Studio/car park Level 3 – Studio/car park Level 4 - car park Level 5 3 X 1 bed 1 x 2 bed Level 6 2 x 1 bed 2 x 2 bed Levels 7 -21 2 x 1 bed 2 x 2 bed Level 22 Roof deck, plant and tank room

Apartment floor area (excluding balconies)	1 bed- 50m ² – 54.3m ² 2 bed – 65m ² -75.6m ² 3 bed – 130.4m ² -141.8m ²	Apartments were smaller 1 bed - 50.6 - 67m ² 2 bed – 64m-71.5m ²
Apartment Amenity	Improved layouts WC now separated Kitchen corridor now 1200 wide Blade walls replaced with glazing Improved circulation space Waste chute for apartments	WC previously opened onto kitchen area
Private open space	Roof garden reduced – 123.6m ² 1 bed- 6.3m ² – 8.8m ² 2 bed- 8.5m ² -12m ² 3 bed- 16.8m ² -21m ²	Roof garden larger -204m ² 1 bed- 4.3m ² – 9m ² 2 bed- 9-10m ²
Site Access	Via Bath Lane	Same
Car and Bicycle Parking	22 car parks - car parking over 5 levels + 2 basement levels 74 bicycle parks	28 car parks over 5 levels 74 bicycle parks – same
Encroachments	Canopy depth 1.8m - length 11.380m Blade walls –exterior fins- screening – encroach by 1m Balconies – majority of balconies encroach by 1m -1.4 metres dependent on shape	Similar canopy encroachment Blade walls – screening – similar Less encroachment – north eastern and north western balconies encroach by 1m
Materials	Framed glazing, frameless glass balustrade, metal sun shading fin (varying shades of blue, silver), car park metal fins, horizontal metal louvres mid grey, vertical metal louvres-blue gold, precast panels, Glass reinforced concrete	Similar

3. SITE AND LOCALITY

3.1 Site Description

The subject site is located at 261 – 263 Pulteney Street, Adelaide and is described as follows:

Lot No	Plan	Street	Suburb	Hundred	Title
706	FP 181548	Pulteney	Adelaide	Adelaide	CT 5545/337

3.2 Locality

The subject site is located along the western side of Pulteney Street, between Wakefield and Angus Street. The site is bound by a laneway to the north and west of the site known as Bath Lane. The site to the south is enclosed by the two storey building (269 Pulteney Street) and beyond that is the Calvary Hospital development (13 storeys - 59.6 m)

The site contains a two storey building with the ground floor currently being used as a sales and display suite for the future apartment development. On the northern side of Bath Lane is a four storey building containing offices at the upper levels and retail at the ground level. Across the road on eastern side are a number of single storey commercial and retail buildings. To the rear of the site (on the western side of Bath Lane) is the 10 storeys Calvary hospital development. Diagonally to the northwest is the Metropolitan Fire Service headquarters which is two – four storeys in height.

The character of the locality comprises mainly commercial premises and retail development displaying a number of adhoc building styles. At this point in time there appears to be very limited residential development. Pulteney Street is a major transport route, a north/south connector through the city.

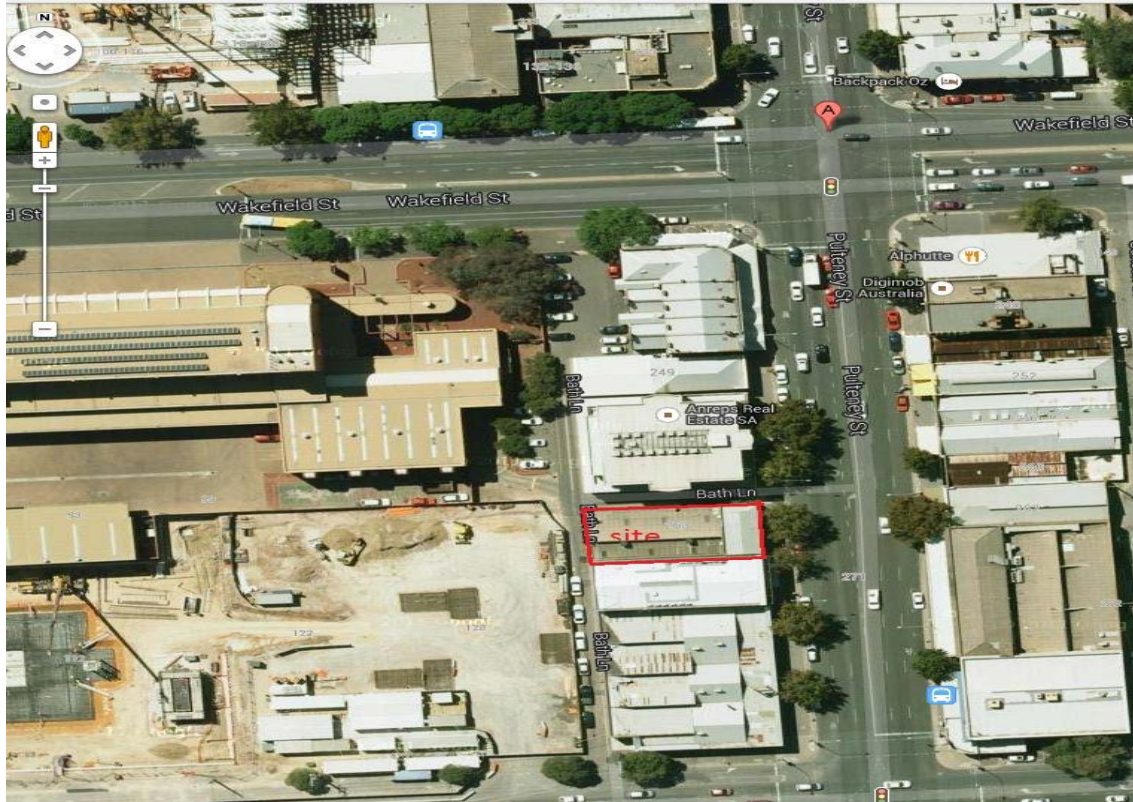


Figure 1 – Location Map

4. COUNCIL COMMENTS or TECHNICAL ADVICE

4.1 City of Adelaide Council

While no statutory referral to Adelaide City Council is required, advice was sought from Council's Administration regarding technical matters.

There are no traffic/transport related objections to this development, subject to the following matters being addressed:

- Insufficient sight distance exists between the driveway exit and Bath Lane. Appropriate measures need to be implemented to address the sight deficiency here to enable the access to operate safely.
- Clarification is required on the provision of bicycle parking at ground level, as described by the traffic report, but not shown in the Architectural drawing set. Visitor bicycle parking at ground floor should be provided.
- Concern is raised about the potential for unwanted activity within the secluded space forward of the fire exit door to Pulteney Street

Council support the balcony and blade wall encroachments. The canopies will only be supported if they meet Councils encroachment policy requirements.

The applicant revised the plans with Council acknowledging that the applicant has addressed the above concerns raised from a traffic perspective.

5. STATUTORY REFERRAL BODY COMMENTS

Referral responses are contained in the ATTACHMENTS.

5.1 Government Architect

Pursuant to Schedule 8 clause 1(5a), there is no mandatory referral to the Government Architect for variation applications. However, given a Pre-lodgement Agreement from the Government Architect was awarded the original application, it was considered necessary to seek further advice regarding this variation and as such the GA recommended review of the following:

- Review of materiality of the garage door on the northern elevation
- Review of the balcony sizes to provide adequately sized private open spaces that offer a high level of residential amenity

The applicant revised the plans with the GA supporting the revised finish to the north facing garage door with vertical metal battens and supports the removal of the horizontal element above the garage door. The GA recommends matching of the metal batten colour/finish to the surrounding metal cladding.

The GA acknowledges and supports the following:

- supports the relocation of bicycle parking from the rooftop and consolidation bike parking spaces on Basement 1 level
- the refinement of apartment and balcony layouts to increase balcony sizes and supports the reconfiguration of the rooftop deck to increase the usable area
- supports the proposed configuration on balance, provided that the encroachments are supported by the Adelaide City Council

5.2 Adelaide Airport

The Adelaide (City) Airport Building Heights Map Adel/1(Overlay 5) shows the Obstacle Limitation Surface (OLS) contours. The OLS for this site is 130 metres AHD. The application has been assessed at a height of RL 122.175m AHD (ground level being 47.6 AHD) and will not infringe the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations. The overall building height is 74.3metres (including the lift overrun).

The Airports authority advises that crane operations associated with construction shall be the subject of separate application. Adelaide Airport Limited requires 48 days prior notice of any crane operations during the construction. Crane assessment may require approval in accordance with the Airports Act Protection of Airspace Regulations 1996

Restrictions may apply to lighting illumination. Any lighting proposed shall conform to airport lighting restrictions and shall be shielded from aircraft flight paths.

6. POLICY OVERVIEW

The subject site is within the Capital City Zone as described within the Adelaide (City) Development Plan Consolidated 20 June 2017.

The relevant planning policies are contained in the Attachments.



Figure 3 – Zoning Map

6.1 Policy Area

The project site is situated within the Capital City Zone as prescribed by the Adelaide (City) Development Plan. The zone encourages a diverse range of land uses with non-residential land uses at ground floor level that generate high levels of pedestrian activity, together with positive activation at street level/street interface. Some key elements of the policies include:

Capital City Zone

- To develop as the economic and cultural focus of the state offering employment, education, tourism & entertainment facilities together with increased opportunities for medium and high density living.
- High scale development including high street walls to frame streets with an interesting pedestrian environment created through careful building articulation and fenestration, frequent building openings, verandahs, balconies and awnings that add a human scale at ground level.
- Land uses that generate high pedestrian activity located at ground level.
- An area that is active during the day, evening and late at night with a rich display of publicly accessible and contextually relevant art.
- Ground level non-residential development will continue to provide visual interest after hours by being well lit and having no external shutters.
- Non-residential land uses at ground floor level that generate high levels of pedestrian activity such as shops and restaurants will also occur throughout the Zone.
- The distinctive grid pattern of Adelaide will be reinforced through the creation of a series of attractive boulevards as shown on Concept Plan Figures CC/1 and 2. These boulevards will provide a clear sense of arrival into the City and be characterised by buildings that are aligned to the street pattern, particularly at ground level.
- A prescribed height of 53 metres applies Concept Plan Figure CC/2, although over-height provisions apply.

The proposal is a Category 1 development and no notification was required (PDC 37 (a)).

6.2 Council Wide

The Council Wide provisions for City Living and Medium to High Scale/Serviced Apartment provide guidance to appropriate housing choice, private open space minimum unit sizes and the extent of natural light, ventilation, outlook, and effective design outcomes. Relevant planning policies are contained in the concluding appendices and relevant zoning maps are in the attachments.

6.3 Overlays

6.3.1 Adelaide City Airport Building Heights

The proposed development does not exceed the OLS Values set out in Airport Building Heights MAP/1 (Overlay5)

7. PLANNING ASSESSMENT

The application has been assessed against the relevant provisions of the Adelaide (City) Development Plan – Consolidated 20 June 2017, which are contained in the Attachments.

7.1 Quantitative Provisions

	Development Plan Guideline	Proposed	Guideline Achieved	Comment
Site Area		370m2 Width 13.080m		N/A
Building Height	maximum building height Adelaide (City) Building Heights Concept Plan Figure CC/2-53 metres	74.3 metres – incl the lift overrun	YES ☐ NO ☒ PARTIAL ☐	Exceeds height requirement note that over height provisions addressed later in this report
Land Use	Zone and Policy area envisages office and retail uses and medium-high density living	Mix-use apartment – retail and office space	YES ☒ NO ☐ PARTIAL ☐	
Car Parking	No minimal parking requirements in Capital City	22 car parking spaces	YES ☒ NO ☐ PARTIAL ☐	
Bicycle Parking	Office / retail 1 per 200m2* 2 plus 1 per 1000m2* (visitor)	Required 78 Proposed 74 bicycle parks in Basements 1 & 2 and level 1	YES ☐ NO ☐ PARTIAL ☒	See section 7.7 for discussion
Setbacks	Zone seeks buildings built to the street frontage Zone generally silent on side and rear setbacks		YES ☒ NO ☐ PARTIAL ☐	
	habitable rooms, window, balcony, roof garden, terrace or deck should be set-back 3 metres from boundaries with adjacent sites	Southern boundary recessed element 1.4 metres to allow glazing on either side	YES ☐ NO ☒ PARTIAL ☐	Until the adjacent site is developed the bedroom and lobby abutting the recessed area will receive access to natural light

Private Open Space (POS)	1 bed (8m ²) 2 bed (11m ²) 3 bed (15m ²) Depth 2m 697m ² required	1 bed - 6.3m ² -8.8m ² 2 bed- 8.5m ² - 12m ² 3 bed-16.8m ² - 21m ² 662.4m² Roof deck – 123.6m²	YES ☐ NO ☐ PARTIAL ☒ 786 proposed An additional 89m²	39 apartments undersized POS – See Section 7.6 for discussion.
Apartment sizes	1 bed-50m ² 2 bed-65m ² 3 bed-80m ²	1 bed-50m ² – 54.3m ² 2 bed-65m ² - 75.6m ² 3 bed- 130.4m ² – 141.8m ²	YES ☒ NO ☐ PARTIAL ☐	More diversity in apartment types and larger apartment sizes than original
Storage	1 bed: 8m ³ 2 bed: 10m ³ 3 bed: 12m ³	72 storage spaces provided Ranging from 4m ³ – 8.2m ³	YES ☒ NO ☐ PARTIAL ☐	50% should be provided within the apartment with the remainder provided elsewhere – this is achieved

Section 39(7) of the *Development Act 1993* provides that the assessment of an application proposing a variation to a development authorisation previously given need only consider elements or aspects of the development proposed to be changed. The changes are discussed below.

7.2 Land Use and Character

The variation seeks to provide more Studio/commercial space than the original DA. The mix of land uses are consistent with those approved previously and the types of uses anticipated in the Capital City Zone. The mixed uses will add to the vibrancy and activation that will increase in Pulteney Street and also provide a comfortable pedestrian environment with a human scale.

The location of a retail tenancy at ground level has the potential to improve the current condition, which is characterised by a relatively 'closed' façade at ground level. The proportions of the proposed retail frontage reflect existing frontages. As per the original proposal the outdoor eating/café area is still a consideration and has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike racks/station without changing the existing line of the pavement /roadway. The provision of active use spaces along the Pulteney Street frontage is supported by the GA.

The variation proposal ensures compatibility of the proposed residential amenity with the commercial and retail functions through separation of the levels and by providing dedicated entrances/lobbies for both the privacy of the residential and commercial uses. The applicant has noted that the studio space will possibly be leased by medical consultants given the Calvary Hospital facility in close proximity to the site. Consulting rooms are envisaged in the Zone.

7.3 Design and Appearance

The variation changes the appearance of the proposed building imperceptibly and in the GA's view does not affect the overall architectural expression as originally intended. As per the original, the proposal comprises a slender concrete and glass tower with a strong built form edge that has a textured quality about it. This is expressed as a single volume extruded from the site dimensions, with contrast between the ground and podium levels (1-5) and the upper levels through a balance of vertical and horizontal facade elements e.g. Above the glass retail frontage at ground level, the podium is

concrete clad for four levels with a large cut out that encompasses the Bath Lane and Pulteney Street corner which provides further interest and is described by the Architect as a peephole into the buildings machinations. This all generally remains the same. The materiality is similar to that previously approved.

The differences are more subtle given the verticality and narrowness of the tower at the long distance view. At the upper levels the balconies encroach further into space outside the site boundaries by approximately 1- 1.4 metres and as discussed in the amenity section creating more useable space than previously approved. The proposed southern façade has reduced articulation than the original iteration. Originally this development would have dominated the locality due to its height and prominence and been especially visible on the southern elevation. However, since consent has been granted the Calvary Hospital has constructed development south of this proposal this is no longer a concern.

The applicant states that the east façade has been redesigned to suit revised uses, i.e. to provide for a lighter, more open façade with additional interest and sculptural relief.

Due to the relocation of the lift core, adjacent the stairs, the residential levels provide a variety of apartment types which is supported in principle by the GA. The apartment sizes are larger than previously with the planning layout such that additional 1 bedroom apartments have been inserted on the majority of floors.

The northern wall where the lift core was located previously is now glazed.

The GA recommended a review of the materiality of the garage door on the northern elevation. This was revised by the applicant to a vertical metal batten sectional door to allow for a level of transparency between the battens to provide visibility and ventilation and is now supported by the GA.

The proposed canopies on the ground level façade have been amended to 3 metres and 3.7 metres respectively falling within the height parameters prescribed by Councils policy.

The proposed configuration on balance is supported by the Government Architect. The variation changes to the external appearance are not dissimilar to the original and still proposes a quality contemporary design. At ground level the provision of canopies and outdoor dining as shown in the perspectives and expresses the intent of quality space within the public realm which is as per the original. The design still proposes sustainable systems as previously. The built form contributes positively to the character of the immediate area.

7.4 Height

The proposed variation seeks to increase the overall height to that previously approved. The Development Plan sets a maximum building height of 53 metres in this part of the Capital City Zone. The proposed development is approximately 74.3m in height overall (this includes the lift overrun), which is an increase of 3.4 metres from the previously approved design. The height increase is due mainly to the incorporation of 4 levels of studio space with increased ceiling heights where previously there was only 2 levels. The ceiling heights have increased by 600mm on Levels 1 through to 4. The rationale for this extra height is it allows for a more adaptable space and flexibility for future tenancies and also to provide a level of car parking.

The Capital City Zone does allow over height development where the following can be achieved:

PDC 21 Development should not exceed the maximum building height shown in Concept Plan Figures CC/1 and 2 unless;

(a) it is demonstrated that the development reinforces the anticipated city form in Concept Plan Figures CC/1 and 2, and

(b) only if:

(i) at least two of the following features are provided:

(1) the development provides an orderly transition up to an existing taller building or prescribed maximum building height in an adjoining Zone or Policy Area;

(2) the development incorporates the retention, conservation and reuse of a building which is a listed heritage place;

(3) high quality universally accessible open space that is directly connected to, and well integrated with, public realm areas of the street;

(4) universally accessible, safe and secure pedestrian linkages that connect through the development site as part of the cities pedestrian network on Map Adel/1 (Overlay 2A);

(5) on site car parking does not exceed a rate of 0.5 spaces per dwelling, car parking areas are adaptable to future uses or all car parking is provided underground;

(6) residential, office or any other actively occupied use is located on all of the street facing side of the building, with any above ground car parking located behind;

(7) a range of dwelling types that includes at least 10% of 3+ bedroom apartments;

(8) more than 15 per cent of dwellings as affordable housing.

(ii) plus all of the following sustainable design measures are provided:

(1) a rooftop garden covering a majority of the available roof area supported by services that ensure ongoing maintenance;

(2) a greenroof, or greenwalls / façades supported by services that ensure ongoing maintenance;

(3) innovative external shading devices on all of the western side of a street facing façade; and

(4) higher amenity through provision of private open space in excess of minimum requirements, access to natural light and ventilation to all habitable spaces and common circulation areas.

The proposal satisfies the following discretionary provisions:

- the residential parking rate is under 0.5% per dwelling and it would not be impossible to adapt the car parks given the increase ceiling height
- potential active uses are located on the street facing side with parking located to the rear
- there is at least 10% of 3 bedroom apartments
- the applicant believes a percentage of the apartments will be made available within the affordable price range
- the roof top garden includes an irrigation and drainage system and easy accessibility for maintenance. Strictly speaking the garden is located around the edges with the useable common area taking up the majority of space.
- the rooftop garden whilst not specifically a *Greenwall* or *green roof* aligns in many respects to a *green roof* or *Greenwall*, and considering South Australia's climate especially in summer would essentially be easier to maintain.
- vertical metal louvres are proposed to protect the bedrooms on the western side
- where balconies are slightly undersized, the roof deck delivers additional accessible and useable private open space for the residents providing a higher level of amenity and potential social benefits. Each apartment has access to natural light and ventilation and the common circulation space provided is an improvement on the previous lobby area.

The proposal displays a number of positives in regard to PDC 21 and is able to meet the provisions from a broader perspective. It should also be noted that this operational consent was granted under previous policy which has since changed and as such it could be considered overly demanding to apply new policy as an essential requirement, particularly given the increased height is in essence providing improved amenity for the future users of the proposed development.

The development has optimal heights and floor space yield to take advantage of the premium city location and sits appropriately within the city context and the desire to strengthen the north-south boulevard character of Pulteney Street. The development under construction to the south west of the site assists this proposals context for the city form with an approved height of 59.7 metres. The development reinforces the city grid pattern by building to the boundary with appropriate composition and proportion in the built form albeit the over height elements as per the desired character sought in the Development Plan. The GA supports the height of the proposed development within the immediate locality.

7.5 Setbacks

The variation has the same footprint as approved, with the addition of a variety of different sized apartments which change the layout of the majority of levels.

According to Council Wide Principle of Development Control 67:

A habitable room window, balcony, roof garden, terrace or deck should be setback 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.

In examining the above mentioned policy, a 3 metre setback is generally required to ensure an acceptable level of amenity and privacy to occupants and that abutting sites are not unduly comprised and can be developed.

The balconies have increased in size to intrude further over the site boundaries. Adelaide Council are supportive of the intrusion subject to further information regarding the treatment/materials used on the underside. The 3 metre setback on the southern boundary is not achieved as per PDC 67. However, the design as it is proposed, means this development doesn't have an impact on the future development of neighbouring sites by virtue of the proposed privacy screens, walls and oblique views.

Other reasons for the close setback are, the proposal has been designed to respond to the restrictive site area of 370 square metres and the narrow width of the allotment (13.080 metres). The applicant has sought to achieve an articulated southern facade to provide interest to the built form rather than a blank wall, and therefore provide some improved visual amenity from a southern approach into the city, keeping in mind the visual amenity from this perspective is more restricted to the viewer, even at a longer distance given the Calvary Hospital building currently being built south of the site will have the most impact. In addition, with regard to the southern façade, the Calvary hospital to the south reaches a building height equivalent to 19 storeys of this proposed building.

The inset on the southern elevation allows a degree of natural light through glass windows within the eastern and western side of the recess. The lobby and a bedroom in apartment 2 on each floor will benefit until such time that the abutting property is developed.

In considering the proposal and the policy, the variance from the Development Plan is considered to be minor. The design approach will not prejudice development on the

abutting site and the extruded balconies are enclosed against the common property boundary.

7.6 Apartment Amenity

The applicant has revised the plans to reflect the GA's comments with the apartment amenity being improved through further refinement of the floor plans to provide better use of shared infrastructure and additional natural flow through ventilation. The reconfiguration has allowed for more apartment choice and diversity with the provision of 3 bedroom apartments and a penthouse. In the original iteration the roof deck was slightly larger with the remainder of the space containing the plant and tank room. The rainwater tanks are now located above the stairway and penthouse within the roof space. The roof deck whilst reduced by 80.4 metres incorporates a more functional and improved layout that includes a kitchen/BBQ area, toilets and plantings that take up one side of the roof space separate to the penthouse. The previous roof deck was elongated and separated into two areas due to the location of the lift and stairway.

The wall on the south elevation has been notched further to create a recessed area of approximately 1.4 metres to provide glazing on the eastern and western side of the recess for additional light into each apartment adjacent and the lobby area.

The variation seeks to amend the internal apartment planning to provide a greater variety in apartment types which is supported in principle by the GA. There is now 3 bedroom and penthouse as well as the 1 and 2 bedroom apartments. The apartments are also slightly larger than the original.

The balconies are larger than the majority of those approved on the original application, this increase in size is achieved by further encroachment over the site boundaries. The provision of the common roof deck compensates for those balconies that are undersized. When quantifying the total amount of private open space the proposal has a surplus of 89m².

The GA supports the configuration on balance, provided the encroachments are supported by the Council. The balcony encroachment is supported by Council subject to further information regarding the treatment/materials used on the underside. There is the potential for some overlooking from balconies above to those balconies below, however, given the height and location of the balconies it would be highly unlikely.

7.7 Traffic Impact, Access and Parking

The variation has led to a reconfiguration of the car parking layout. There are an additional two levels of car parking provided at basement levels 1 and 2. The additional basement levels will provide bicycle parking and storage lockers and some infrastructure. Previously there was no basement level. Whilst there are additional levels for car parking there is a reduction of car parks from 28 (originally approved) to 22 car parks. Given there is no minimum parking rate within the Capital City Zone, the car parks provided are acceptable.

The variation initially proposed car stackers on the ground floor. These have since been deleted. The Ground Floor will provide 1 car space and a waiting bay for use by drivers entering the ground floor to access the car lift. The car lift will service all levels of car parking.

The design of the car parking spaces will conform to relevant off-street car parking standards. The traffic assessment by Phil Weaver states that it is anticipated that there would be a maximum of only 1 vehicle waiting to access the lift at peak periods given the different traffic movements for residents and tenants and the time period it takes to park a car. The number of vehicles accessing the car lift in any 1 hour period would

be 15 vehicles. The traffic report takes into consideration the forecast traffic volumes from the adjoining hospital development and as such the traffic generated by the proposal would not result in any significant increase to the traffic utilising Bath Lane and on the adjoining road network.

Council had concerns regarding vehicle storage space within the circulation area for vehicle manoeuvrability as well as insufficient sight distances between the driveway exit and Bath Lane, advising that appropriate measures need to be implemented to address the sight deficiency here to enable the access to operate safely.

In response the traffic circulation proposed was revised to provide vehicle storage bays and a revised parking layout. Mirrors were also provided either side of the opening to Bath Lane to provide improved sight lines for drivers exiting the car park. Council has since advised the applicant has addressed the concerns raised from a traffic perspective.

Potentially 9 car parks will be allocated to the larger apartments with the remainder being taken up by the tenancies. The Capital City Zone has no minimum or maximum car parking requirements.

Bicycle Parks

Development Plan	Table Adel / 6		
Residential	1 for every dwelling/apartment with a total floor area less than 150 square metres = 66	Visitors – 1 for every 10 dwellings = 7	73 required
Offices/Ancillary Retail Services	1 per 200m ² = 144.7m ² x 4 = 578.8 + 29m ² = 607.8 = 3 bicycle parks required	2 visitor	5 required
			78 required <u>74 proposed</u>
Proposed	74 proposed		Shortfall 4

The variation proposal is short 4 bicycle parks. Given that some residents will park their bikes in their apartments and the frequency and accessibility of public transport to the site means the shortfall of 4 bicycle parks is considered acceptable. Cycle racks are shown at ground level in the public realm area, however, this will need to be agreed upon with Council.

7.8 Environmental Factors

The Wind, Acoustic and ESD components are not affected by the variation, therefore the technical reports are still relevant as approved previously.

7.8.1 Overshadowing

The variation increases the overall height of the building by 3.4 metres and will have negligible impact on potential overshadowing of the neighbouring properties than the original height of 70.9 metres. Overshadowing from the proposal on the adjacent development during summer has minimal impact if any during the day. In winter the building will overshadow buildings to the south of the site (the Calvary Hospital) but still allows for some winter sunlight penetration to portions of the adjacent building at different times of the day. The Calvary Hospital was not approved when this was originally granted Planning Consent.

7.8.2 Crime Prevention

Council raised concern about the potential for unwanted activity within the secluded space forward of the fire exit door to Pulteney Street. The fire door has been revised and moved closer to the site boundary minimising the potential for activity within the exit space.

The development has been designed to maximise passive surveillance of the street at ground floor with floor to ceiling height glazing that faces Pulteney Street and continues along Bath Lane. There is a clear line of sight to both the residential entry and commercial entry.

As per the original application the development has the potential to have a complementary mix of day and night-time activities, such as residential and ground level retail uses, that extend the duration and level of intensity of public activity.

The ground floor lobby and residential apartment levels have been designed to provide relatively directly routes from the lifts to entry doors, thereby reducing the potential for entrapment.

7.8.3 Waste Management

A Waste Management brief was submitted with the variation which speaks of providing services in line with the Adelaide City Council residential recycling plan. The residential and tenant bins are located on the ground floor. The bins will be managed by the Cleaners/Facility Manager and will be serviced via Pulteney Street with the Building supervisor bringing the bins out to the kerb where the waste truck will service the bins utilising the existing loading zone. The frequency of waste collection be dependent on the use (i.e. commercial and retail will be serviced once a week whereas the residential component will be serviced between 3 -4 times a week).

The waste management has been further refined from the original to provide a waste chute for residents on each level.

Council has made no comment regarding the waste.

8 CONCLUSION

The development is considered not to be at variance with the Adelaide City Development Plan and is supported for the following reasons:

The proposal is consistent with the desired character statement of the Capital City Zone in the following ways:

- Reinforces Pulteney Street as a key north-south boulevard. Provides a sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge.
- Provides a design response that through high rise development framing city boulevards reinforces the gridded layout of Adelaide's streets.
- The height and scale of this development responds to the role of the street it fronts, which is a primary concentration transport route through the city

The variation does not satisfy the over height requirements at a fine-grained level but can satisfy them broadly speaking. Whilst the increase in height is less in line with the policy than the current approval, it is not considered detrimental to the overall scheme. The proposal is more considered in the following areas:

- Provides a more functional rooftop garden and deck space
- Affords an increased apartment and balcony sizes, therefore better amenity

- Provides a variety of apartment types within a constrained site
- Allows for more adaptable commercial space

9 RECOMMENDATION

It is recommended that the State Commission Assessment Panel:

- 1) RESOLVE that the proposed development is NOT seriously at variance with the policies in the Development Plan.
- 2) RESOLVE that the State Commission Assessment Panel is satisfied that the proposal generally accords with the related Objectives and Principles of Development Control of the City of Adelaide Development Plan.
- 3) RESOLVE to grant Development Plan Consent to the proposal by Loucas Zahos Architects for a Variation to DA 020/0023/14 demolition of an existing building and construction of a 23 level building comprising 66 residential apartments over 18 levels, a retail tenancy on the ground floor, studio space on levels 1 through to 4 and plus associated parking and two basement levels at 261-263 Pulteney Street Adelaide subject to the following reserved matters and conditions of consent.

PLANNING CONDITIONS

1. That except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans, including the amended plans as submitted in development application number 020/0023/14A V1.

Drawings by Loucas Zahos Architects

Title	Date	Drawing Number	Revision
Location	21/05/18	A001	P14
Streetscape Elevations	21/05/18	A002	P14
Planning	21/05/18	A003	P14
Section & ECO Standards	21/05/18	A004	P14
Vignettes	21/05/18	A005	P14
Floor Plans	21/05/18	A006	P14
Floor Plans	21/05/18	A007	P14
Floor Plans	21/05/18	A007A	P14
Podium Vignettes	21/05/18	A008	P14
Podium Views	21/05/18	A009	P14
Elevations	21/05/18	A010	P14
Roof-Roof Garden & Massing	21/05/18	A011	P14
Street Level Perspectives	21/05/18	A012	P14
Sun Studies	21/05/18	A013	P14
Outdoor Dining	21/05/18	A014	P14
Sky Apartments –	10 April 2018		
Section AA with Basement	12 June 2018		

Reports / Correspondence

- GHD (03 June 2014) Planning Statement for Sky Apartments, 261-263 Pulteney Street, Adelaide, Rev 2, 3317402.
- Vipac Engineers & Scientists Ltd (03 June 2014) Wind Impact Assessment 50B-13-0158-TNT-346423-1.
- Vipac Engineers & Scientists Ltd (02 June 2014) Acoustic Report, 50B-13-0158-GCO-792936-1.
- Phil Weaver & Associates (11 April 2018) Traffic and Parking Assessment; Proposed Mixed Use Development 261-263 Pulteney Street, Adelaide; File: 175-17
- Veolia Environmental Services (April 2018) Submission for Waste Collection Services 261- 263 Pulteney Street, Adelaide.

- Lucid Consulting Engineers Pty Ltd (03 June 2014) ESD Statement, Proposed Residential Development Ecologically Sustainable Design (ESD), LF: 8113-007a.
 - Letter re amended development application – variation to original DA ref 020/0023/14A – dated 20 December 2017 - prepared by Loucas Zahos Architects
 - Letter re clarifications - dated 28 May 2018 – prepared by Loucas Zahos Architects
 - Email dated 12 June 2018 from Louis Petridis regarding PDC21
2. Prior to Development Approval being granted the applicant shall provide a final schedule of external materials and colours for the development to the satisfaction of the State Commission Assessment Panel.
 3. Prior to Development Approval being granted a final waste management plan including supporting documentation and design details shall be provided to the satisfaction of the State Commission Assessment Panel.
 4. The proposed car parking layout and vehicular entry points shall be designed and constructed to conform to the Australian Standard 2890.1:2004 (including clearance to columns and space requirements at the end of blind aisles) for Off-Street Parking Facilities; Australian Standard 2890.6-2009 Parking facilities – Off street commercial vehicle facilities and designed to conform with Australian Standard 2890.6:2009 for Off Street Parking for people with disabilities.
 5. The on-site Bicycle Parking facilities shall be designed in accordance with Australian Standard 2890.3-1993 and the AUSTROADS, Guide to Traffic Engineering Practice Part 14 – Bicycles.
 6. The strategies recommended in the traffic assessment report by Phil Weaver and Associates, dated, forming part of this consent shall be undertaken within the Development to the reasonable satisfaction of the State Commission Assessment Panel. Such measures shall be made operational prior to the occupation or use of the Development.
 7. The acoustic attenuation measures recommended in the Vipac Engineers & Scientists Ltd (June 2014): 262 -263 Pulteney St (Sky Apartments) – Acoustics forming part of this consent shall be undertaken within the Development to the reasonable satisfaction of the State Commission Assessment Panel. Such acoustic measures shall be made operational prior to the occupation or use of the Development and any additional measures implemented as required when plant and equipment details are finalised.
 8. Mechanical plant or equipment, shall be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site shall not exceed:

50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) at the most affected residence when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.
 9. A Construction Environment Management Plan (CEMP) shall be prepared and implemented in accordance with current industry standards – including the EPA publication “Environmental Management of On-site Remediation” - to minimise environmental harm and disturbance during construction.

The management plan must incorporate, without being limited to, the following matters:

- air quality, including odour and dust
- surface water including erosion and sediment control
- soils, including fill importation, stockpile management and prevention of soil contamination
- groundwater, including prevention of groundwater contamination
- noise
- occupational health and safety

For further information relating to what Site Contamination is, refer to the EPA Guideline: '*Site Contamination – what is site contamination?*':

www.epa.sa.gov.au/pdfs/guide_sc_what.pdf

A copy of the CEMP shall be provided to Adelaide City Council prior to construction.

10. The final details of the proposed waste management practices to be adopted by the applicant or the person(s) having the benefit of this consent during the construction of the Development, shall be submitted to Adelaide City Council prior to the granting of development approval to the Development. Such details shall include a Waste Management Plan which shall cover the three phases of the Development, namely:
 - resource recovery during demolition
 - waste minimisation and resource recovery during construction; and
 - resource recovery during occupation or use of the Development including proposed methods of recycling of all recyclable materials.
11. The connection of any storm water discharge from the Land to any part of the Adelaide City Council's underground drainage system shall be undertaken in accordance with the Council Policy entitled 'Adelaide City Council Storm Water Requirements' and be to the reasonable satisfaction of the Adelaide City.
12. Prior to the commencement of construction a dilapidation report (i.e. condition survey) shall be prepared by a qualified engineer to ensure the stability and protection of adjoining buildings, structures and Council assets. A copy of this report shall be provided to the Adelaide City Council.
 - During construction, all materials and goods shall be loaded and unloaded within the boundaries of the subject land.
 - The development and the site shall be maintained in a serviceable condition and operated in an orderly and tidy manner at all times.
 - All trade waste and other rubbish shall be stored in covered containers prior to removal and shall be kept screened from public view.
13. The development and the site shall be maintained in a serviceable condition and operated in an orderly and tidy manner at all times to the satisfaction of the Adelaide City Council.

Advisory Notes:

- a) This Development Plan Consent will expire after 12 months from the date of this Notification, unless final Development Approval from Council has been received within that period or this Consent has been extended by the State Commission Assessment Panel.
- b) The applicant is also advised that any act or work authorised or required by this Notification must be substantially commenced within 1 year of the final Development Approval issued by Council and substantially completed within 3 years of the date of

final Development Approval issued by Council, unless that Development Approval is extended by the Council.

- c) The applicant has a right of appeal against the conditions which have been imposed on this Development Plan Consent. Such an appeal must be lodged at the Environment, Resources and Development Court within two months from the day of receiving this notice or such longer time as the Court may allow. The applicant is asked to contact the Court if wishing to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide, (telephone number 8204 0289).
- d) The proponent may need to obtain approval under the regulations for any equipment or cranes to be used on site that will intrude into prescribed airspace before entering into a commitment to construct any building at the site.
- e) Council maintained infrastructure that is removed or damaged during construction works shall be reinstated to Council specifications. All costs associated with these works shall be met by the proponent.
- f) The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practical measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.

Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site:
<http://www.epa.sa.gov.au/pub.html>

- g) The applicant must ensure there is no objection from any of the public utilities in respect of underground or overhead services and any alterations that may be required are to be at the applicant's expense.
- h) As work is being undertaken on or near the boundary, the applicant should ensure that the boundaries are clearly defined, by a Licensed Surveyor, prior to the commencement of any building work.
- i) If temporary hoarding or site works require modification of existing Council infrastructure, the works will be carried out to meet Councils requirements and costs borne directly by the developer.
- j) A Building Site Management Plan is required prior to construction work beginning on site. The Building Site Management Plan should include details of such items as:
 - Work in the Public Realm
 - Street Occupation
 - Hoarding
 - Site Amenities
 - Traffic Requirements
 - Servicing Site
 - Adjoining Buildings
 - Reinstatement of Infrastructure
- k) Insecure building sites have been identified as a soft target for vandalism and theft of general building materials. The Adelaide Local Service Area Police and the Adelaide City Council are working together to help improve security at building sites. Items most commonly stolen or damaged are tools, water heaters and white goods. To minimise the risk of theft and damage, consider co-ordinating the delivery and installation of the goods on the same day. Work with your builder to secure the site with a fence and lockable gate. Securing the site is essential to prevent unauthorised vehicle access and establishes clear ownership. If you have any further enquiries about ways to reduce building site theft, please do not hesitate to contact the Adelaide Local

Service Area Community Programs Section on 8463 7024. Alternatively, you can contact Adelaide City Council for further assistance and information by calling Nick Nash on 8203 7562.

- l) Pursuant to Regulation 74, the Council must be given one business day's notice of the commencement and the completion of each stage of the building work on the site. To notify Council, contact City Services on 8203 7332.
- m) The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practical measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.

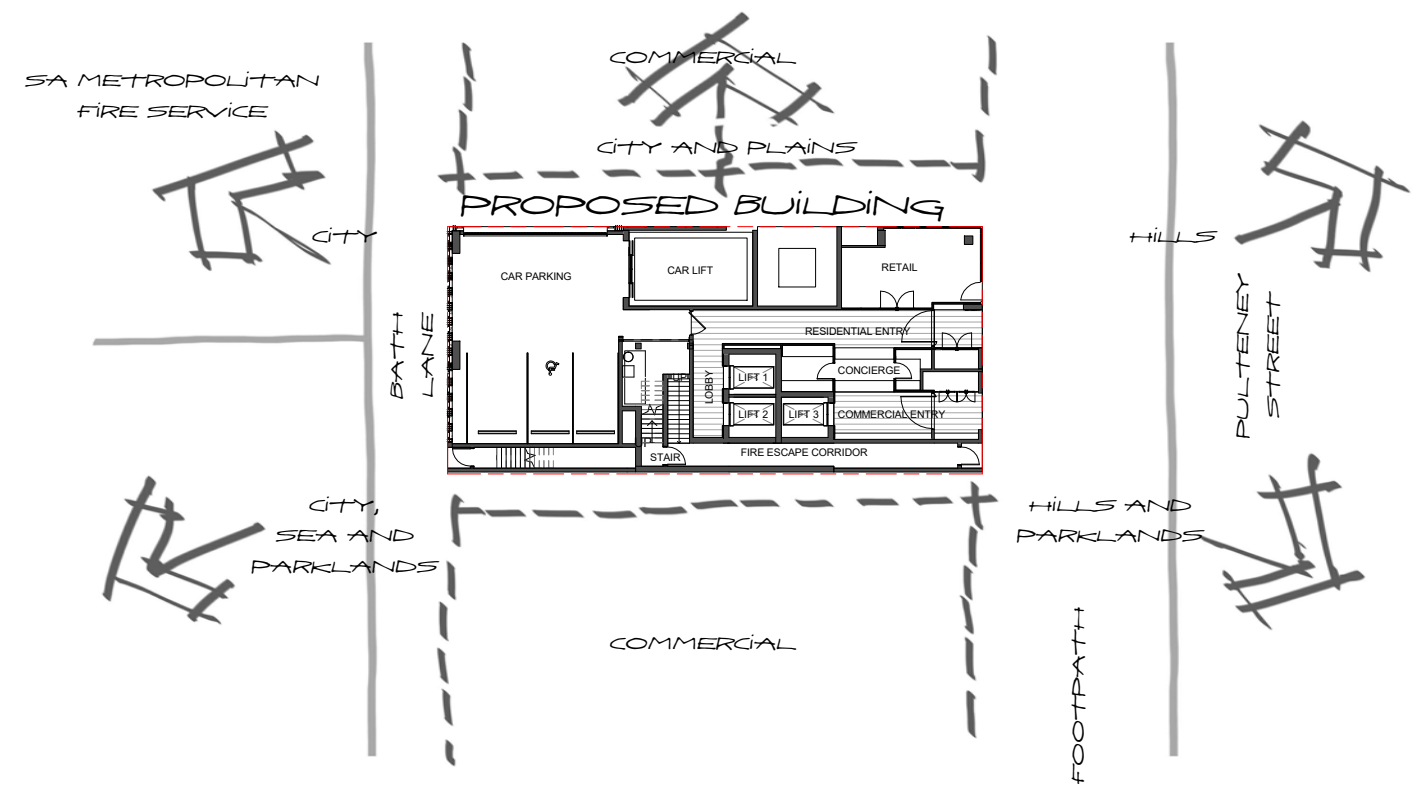
Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site:
<http://www.epa.sa.gov.au/pub.html>

- n) The emission of noise from the premises is subject to control under the Environment Protection Act and Regulations, 1993 and the applicant (or person with the benefit of this consent) should comply with those requirements.
- o) The development must be substantially commenced within one (1) year of the date of this Notification, unless this period has been extended by the State Commission Assessment Panel.
- p) The applicant will need to provide further information regarding the treatment/materials used on the underside to Adelaide City Council.



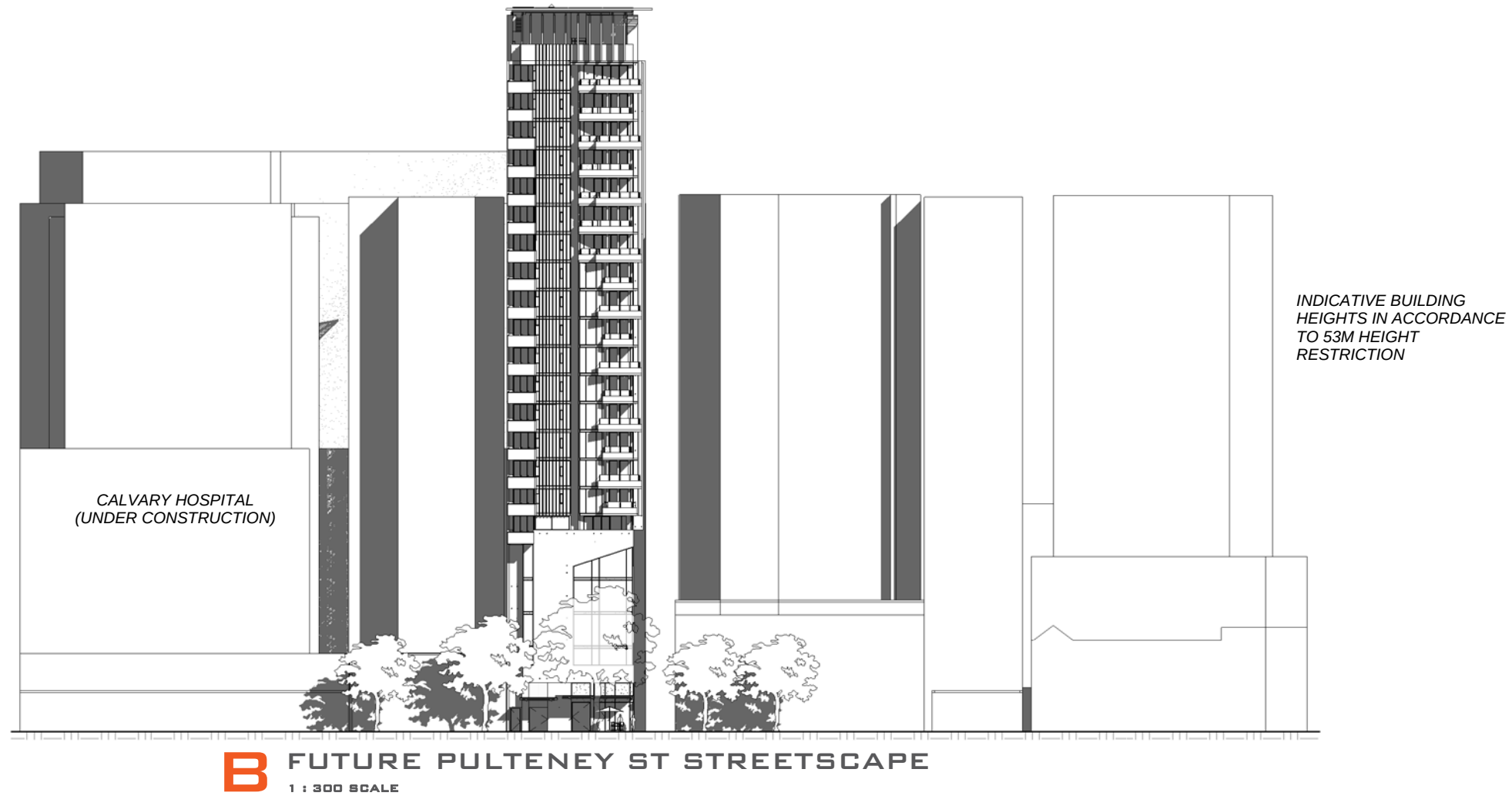
**PLANNING OFFICER
DEVELOPMENT DIVISION
DEPARTMENT OF PLANNING, TRANSPORT and INFRASTRUCTURE**



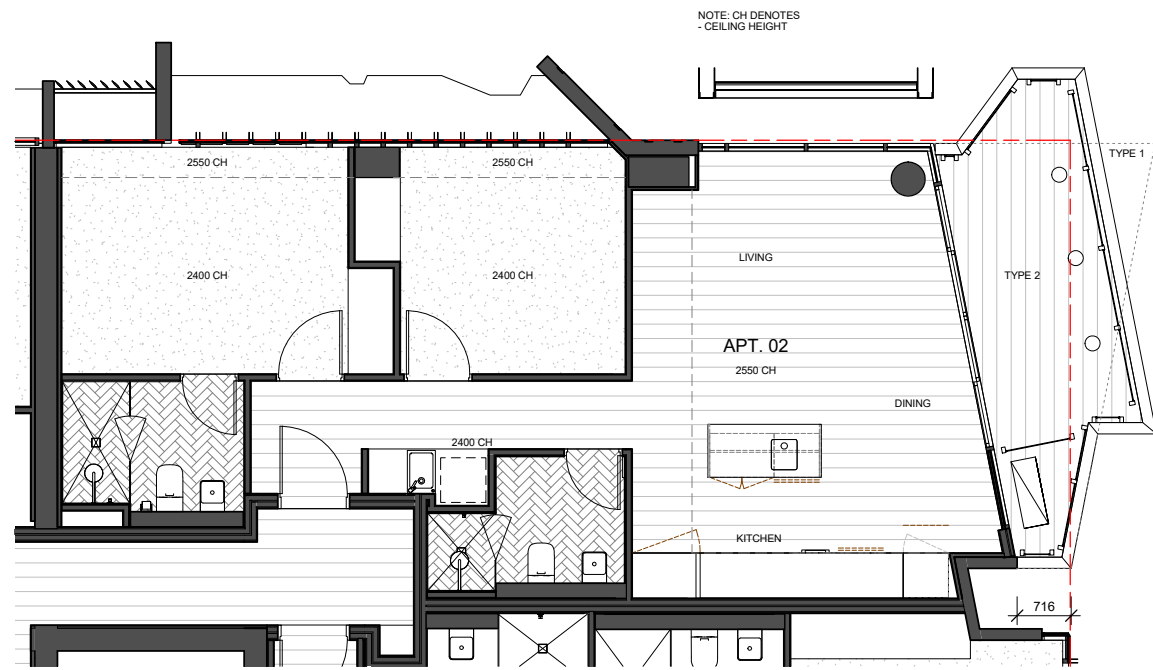


A LOCATION PLAN

B CONTEXT STUDY



RATIONALE FOR CHANGES FROM INITIAL DESIGN RESPONSE TO CURRENT DESIGN RESPONSE

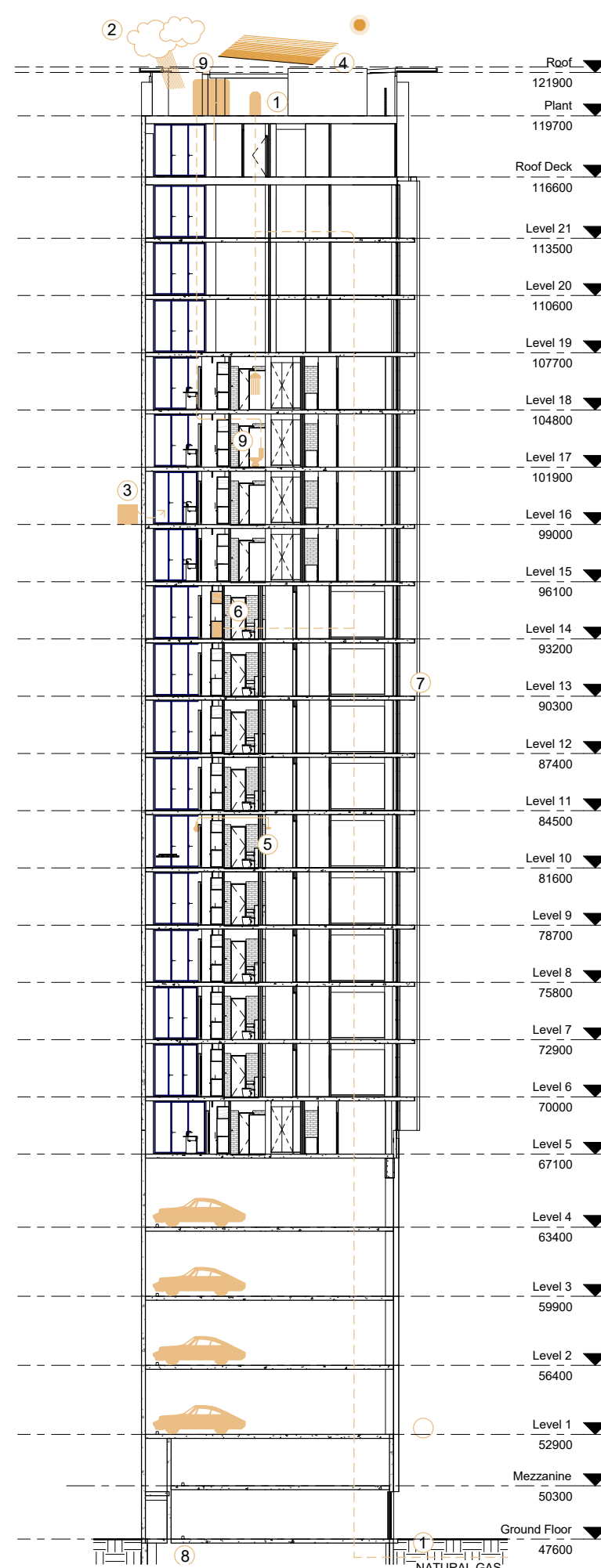


— TYPICAL BALCONY PLAN

- A** Rational for revised building height –The height increase is due mainly to the provision of additional levels of car parking (from 1 levels to 4 levels) and the incorporation of a third lift. In addition, the current design incorporates 4 levels of studio (previously 2 levels) to provide additional activation to the building and the street.
- B** East façade - has been redesigned to suit revised uses and to provide for a lighter, more open façade with additional interest and sculptural relief.
- C** Level 1-4 Ceiling Heights - the ceiling heights in the studio floors have increased by an additional 600mm per floor. This provides future tenants with more flexibility.
- D** Level 5-22 Ceiling -the apartment ceiling heights in living areas remain at 2550 AFL .
- E** South Boundary 3 metre setback - suggested by the Adelaide City Council Development Plan, especially along the southern boundary of site would result in the design only being able to achieve 2 apartments per floor rather than the preferred current configuration of 4 apartments per floor. The provision of 4 apartments per floor provides more opportunity for variety in apartment size and therefore affordability. That is, the current design provides for 3, 2 and 1 bed room apartments.
In addition, with regard to the southern façade, the Calvary hospital to the south reaches a building height equivalent to 19 storeys of our proposed building. This buildings southern façade provides an attractive architectural form rather than a blank wall.
- F** Kitchen and WC relationship - has been amended and resolved to stop WC opening onto the kitchen.
- G** Apartment Corridor Width - kitchens facing a narrow passageway has been amended to 1200mm wide .
- H** Car Lift over run area is now incorporated into level 4 adding a generous height to the studio levels. This provides further flexibility.
- I** Blade Walls on south have been replaced with glazing for additional light into each apartment.
- J** Circulation Area of Apartments - the floor plans provide for a better use of shared infrastructure and additional natural flow through ventilation.
- K** Roof Garden - has remained as a key 'community asset' which can be used as a cinema, bar, entertaining area, etc.
- L** Waste and Traffic circulation issues - have been further refined with a waste chute for residents.
- M** Ground floor outdoor eating/café area - has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike racks/station without changing the existing line of the pavement /roadway.
- N** Bath Lane - further consideration will be given with regard to the development of a shared use space in future negotiations with council.



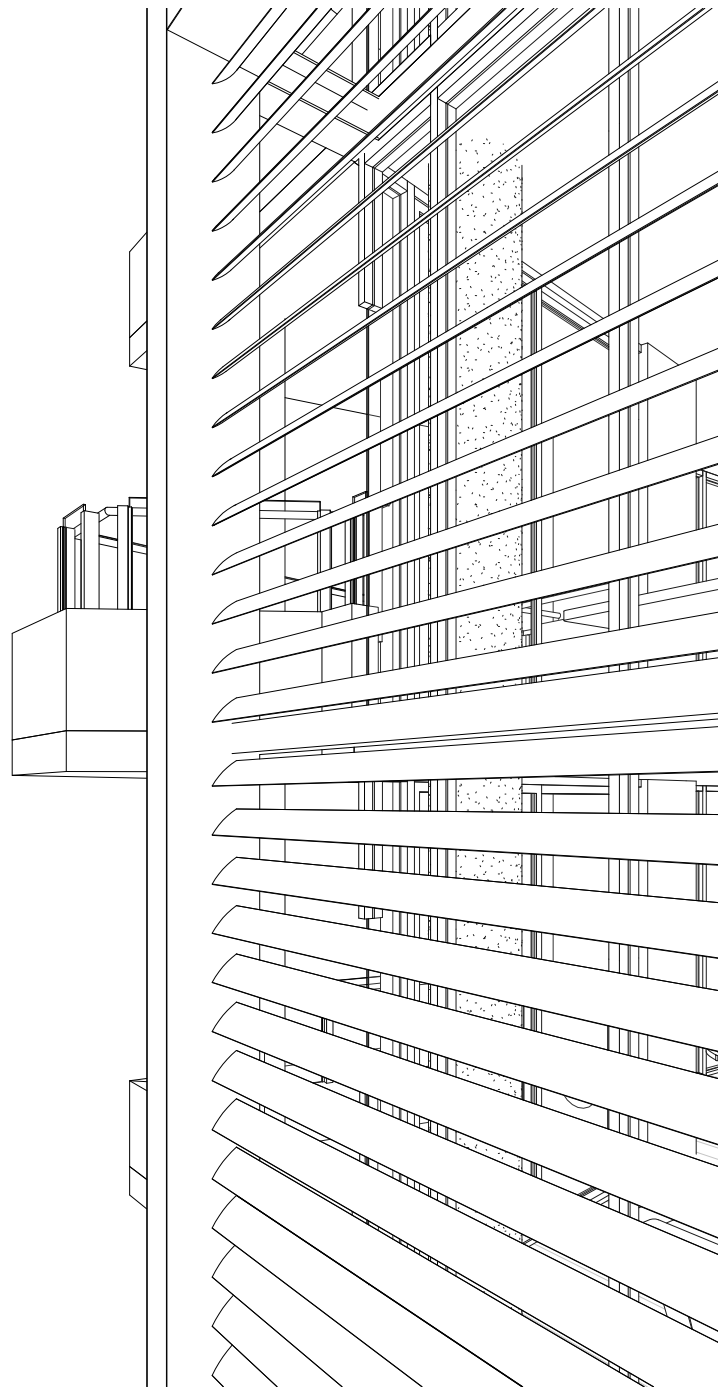
A SECTION AA
1 : 150 SCALE



B ESD MEASURES
1 : 150 SCALE

1. NATURAL GAS FOR HOT WATER
2. RAINWATER HARVESTING FOR RE-USE IN W/C PLUMBING
3. HIGH EFFICIENCY INVERTER AIR CONDITIONER TO APARTMENTS
4. PV CELLS FOR COMMON AREA LIGHTING
5. LIGHT ISOLATION GREEN SWITCH FOR APARTMENTS
6. NATURAL GAS APPLIANCES
7. SUN SCREENING TO THE NORTH
8. CYCLIST FACILITIES IN BASEMENT
9. RAINWATER TANK FOR W/C'S

4



A BALUSTRADE



SOHO CLARION BALUSTRADE



AMBAR STEAKHOUSE ROOFTOP, BANGKOK



EMPIRE HOTEL ROOFTOP LOUNGE, NYC

ROOFTOP EXAMPLES



ROOFTOP & CINEMA, CURTIN HOUSE, MELBOURNE



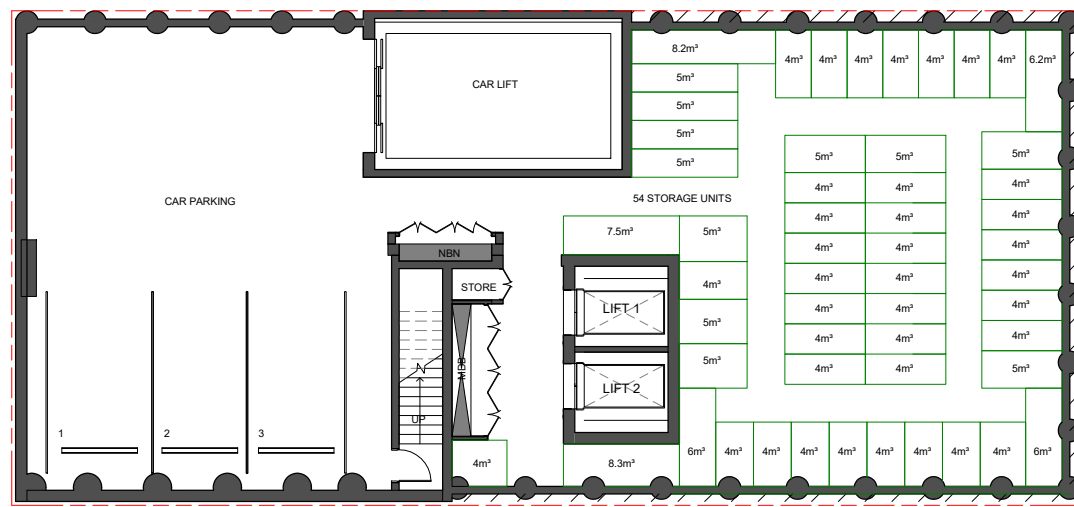
THE BOATBUILDERS YARD ROOFTOP, MELBOURNE



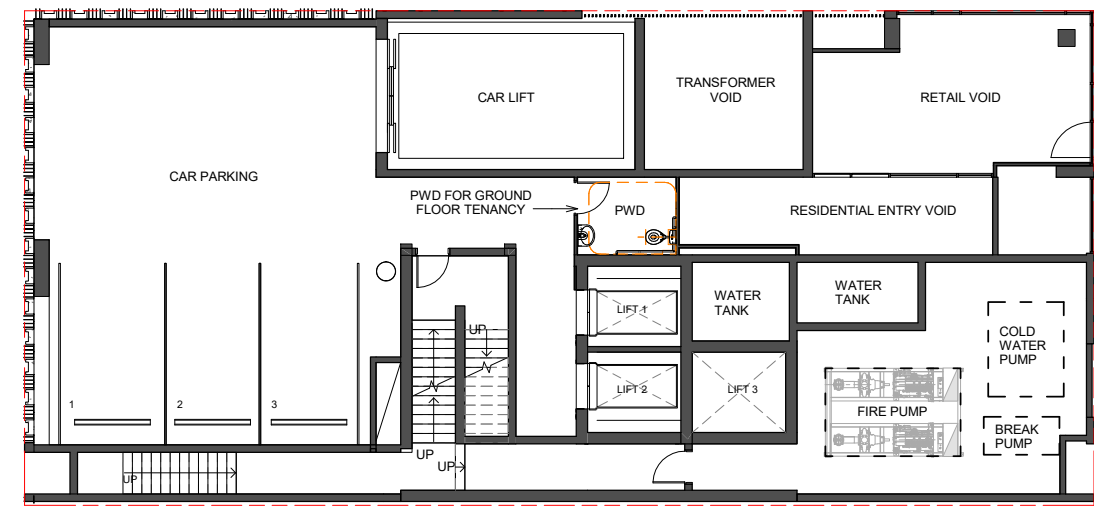
B ROOF DECK
VIEW ONE



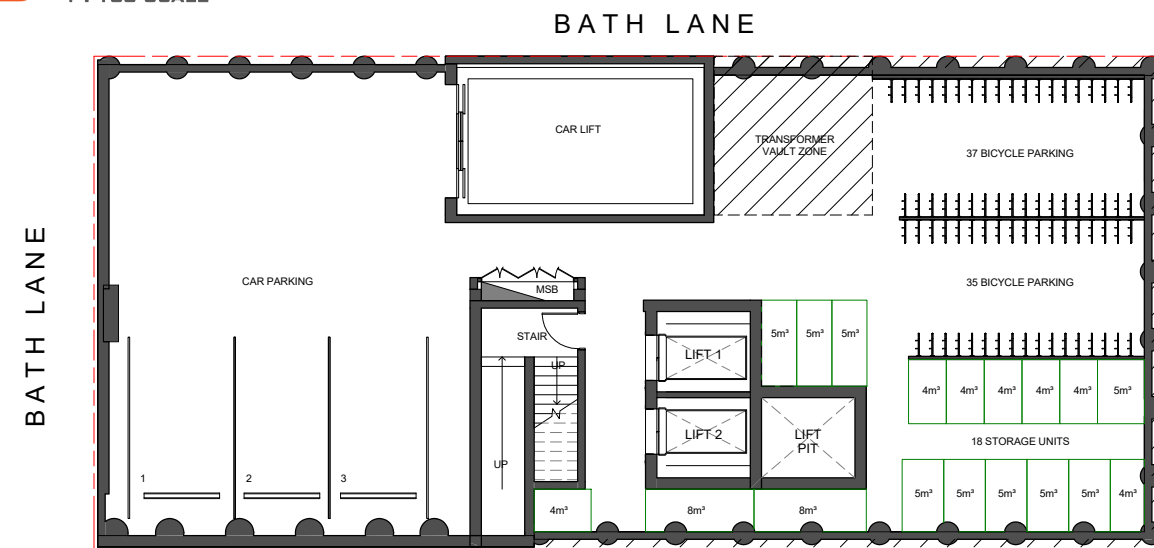
C SOUTH EAST
BALCONY VIEWS



B2 BASEMENT 2 PLAN
1 : 100 SCALE

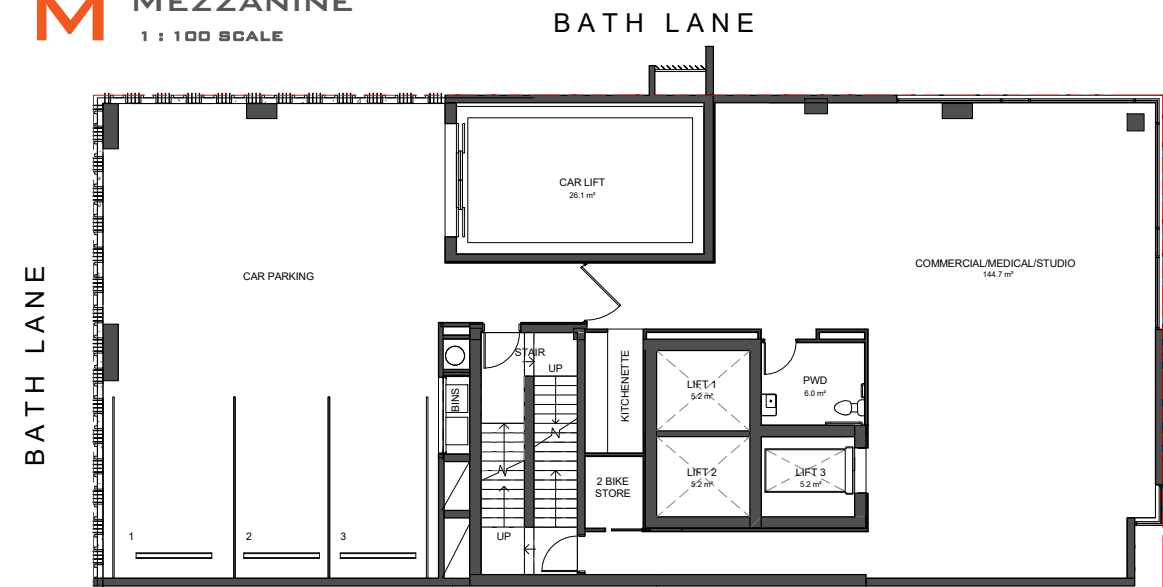


M MEZZANINE
1 : 100 SCALE

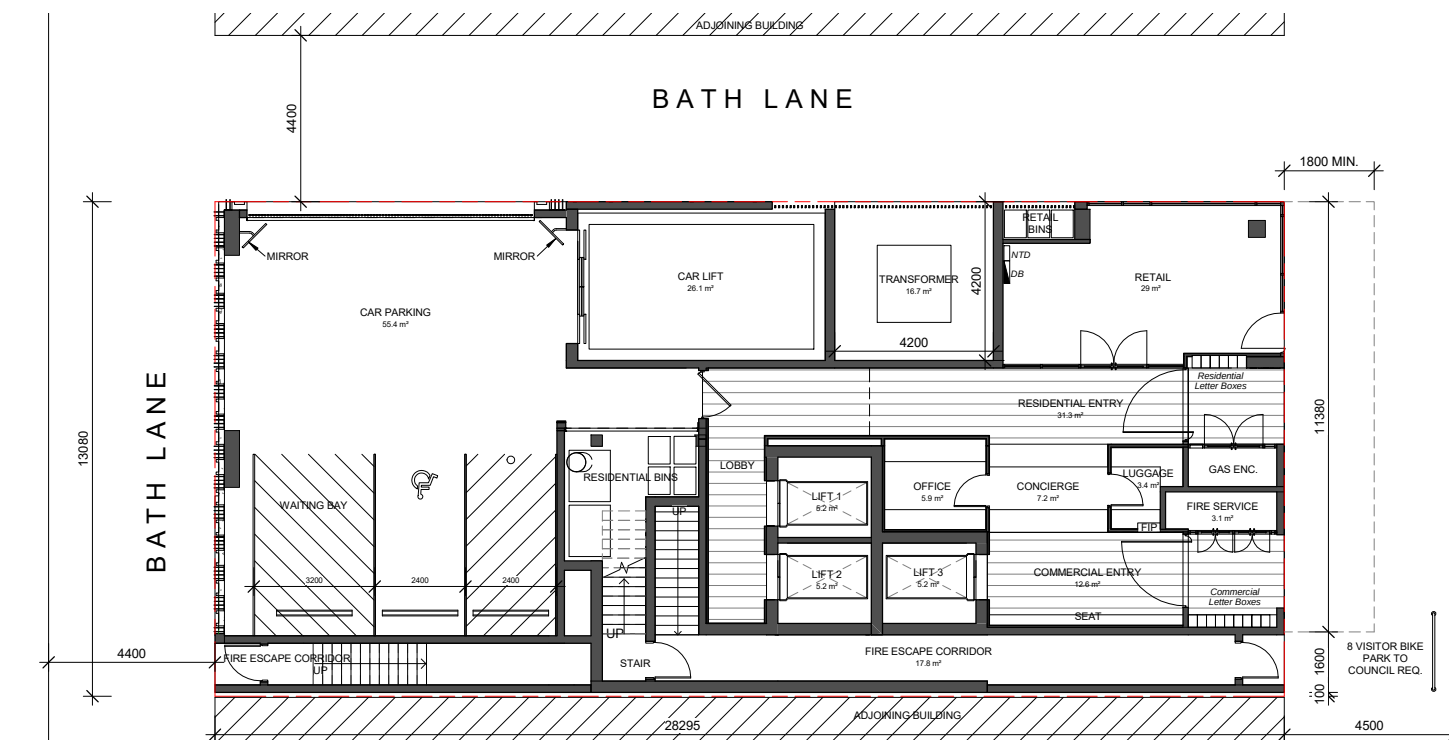


B 1 BASEMENT 1 PLAN

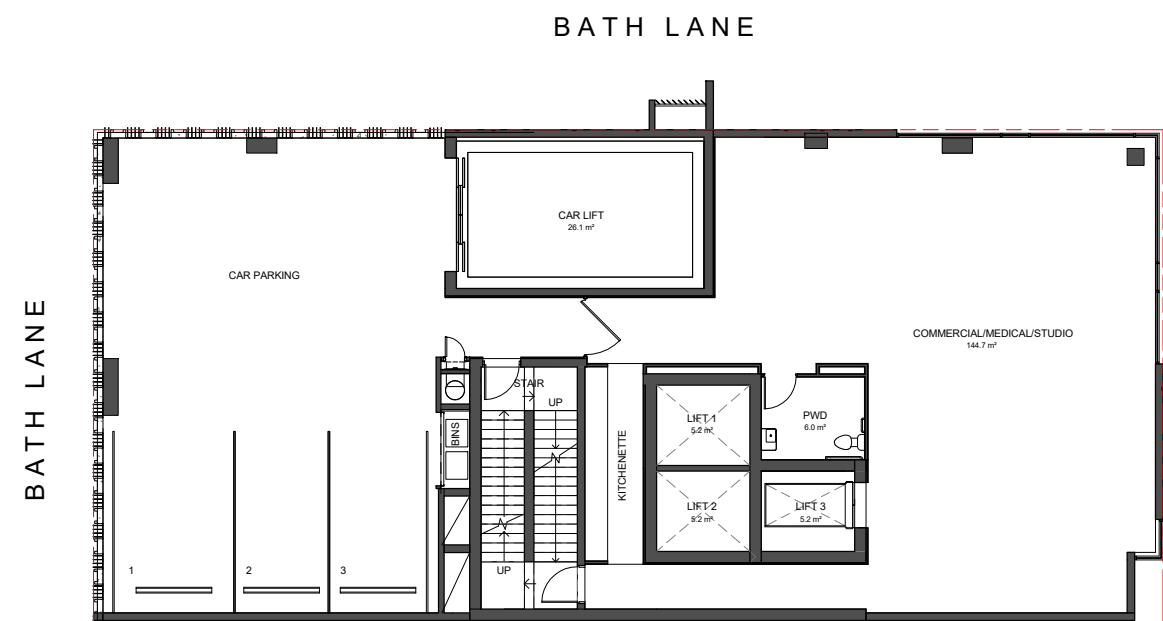
1 : 100 SCALE



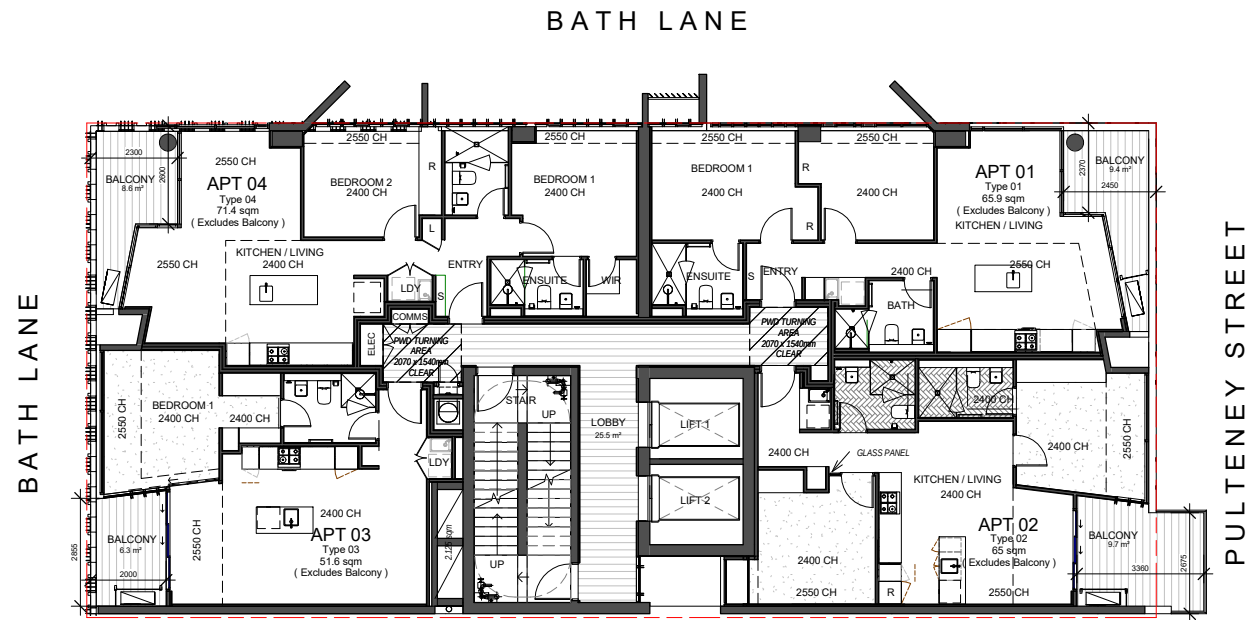
1 LEVEL 1 CARPARK + COMM/MEDICAL/STUDIO



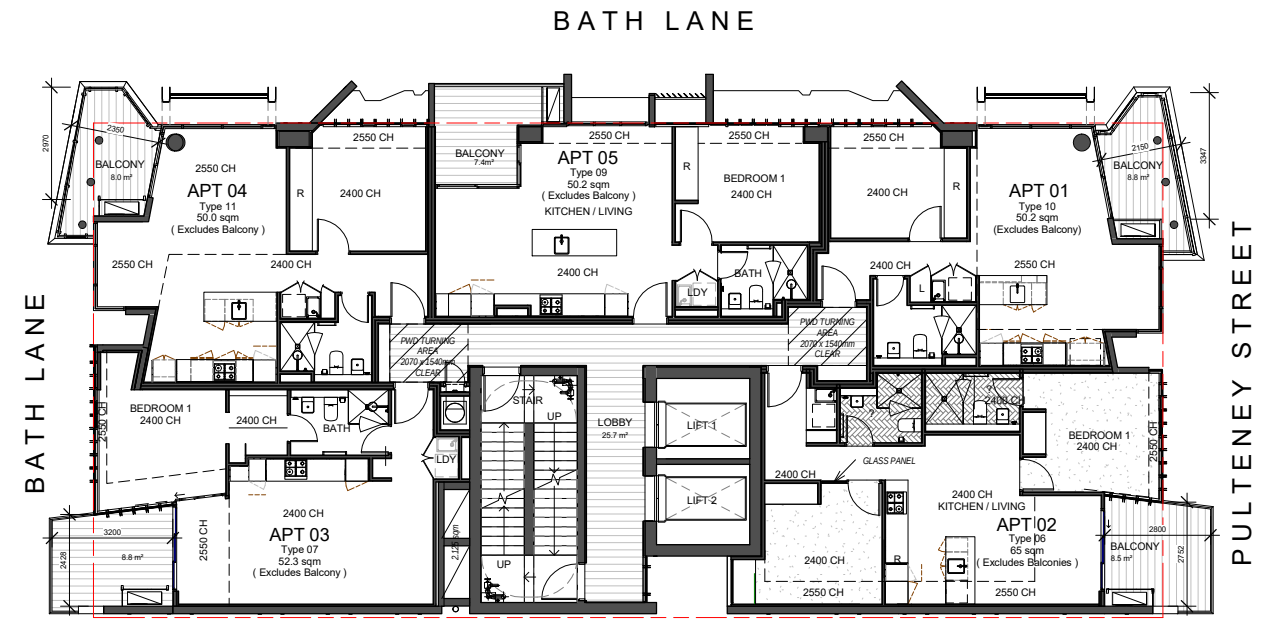
GR GROUND FLOOR & SITE PLAN
1 : 100 SCALE



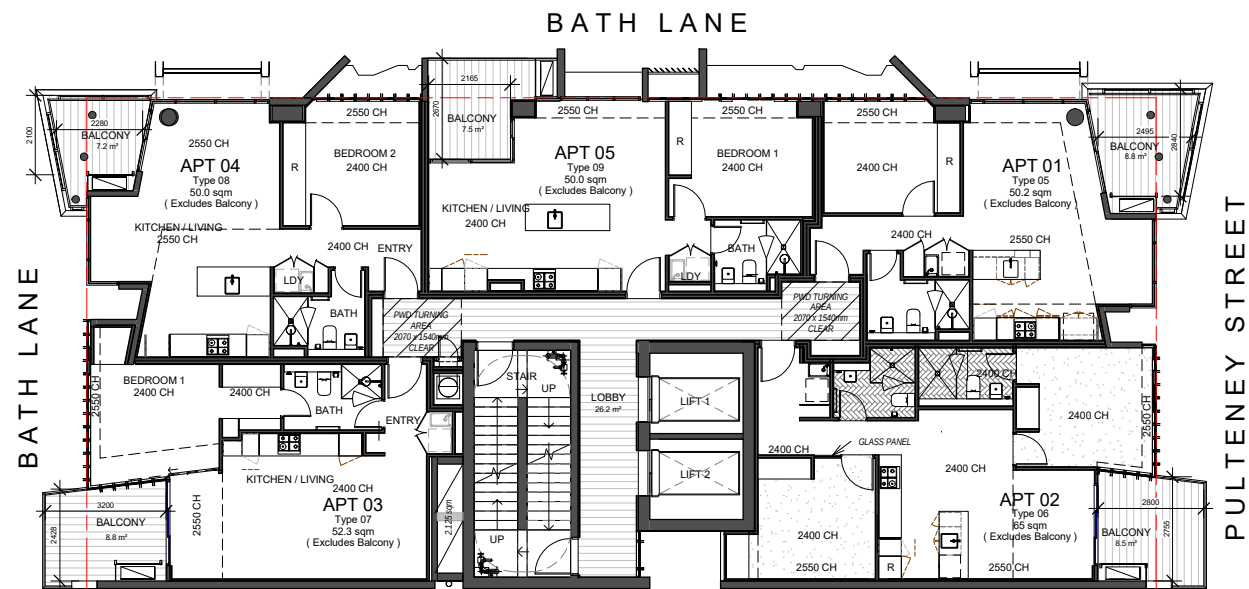
2 LEVEL 2 - 4 CARPARK + COMM/MEDICAL/STUDIO
1 : 100 SCALE



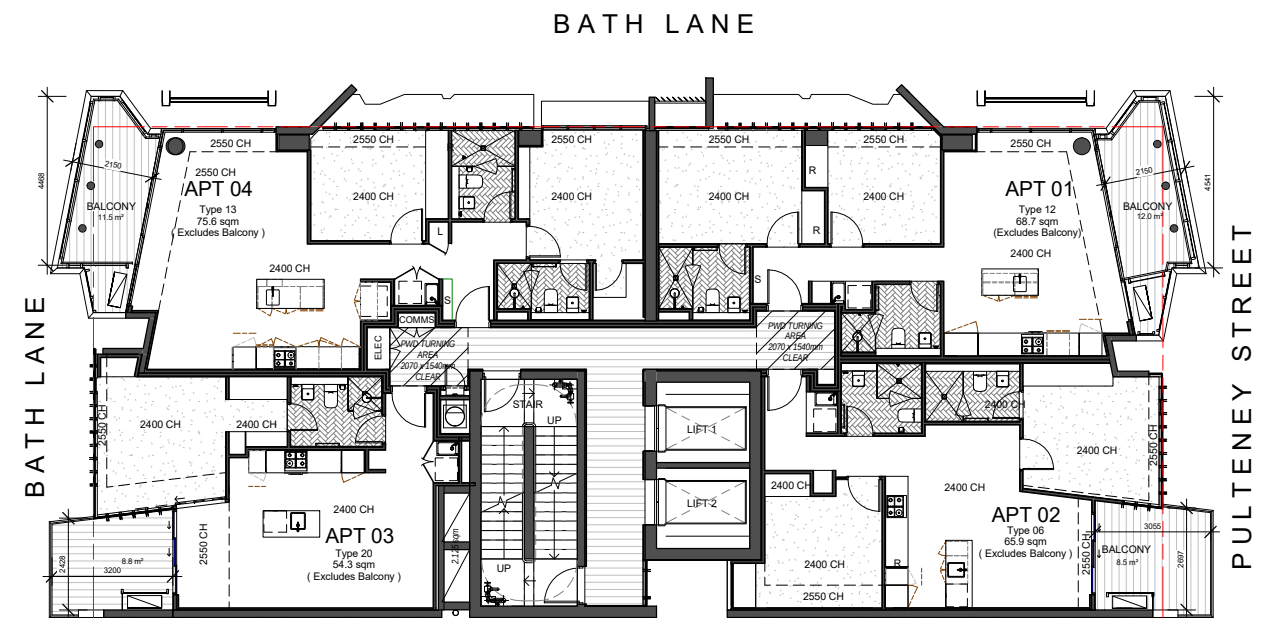
S1 APARTMENTS - LEVEL 5
1 : 100 SCALE



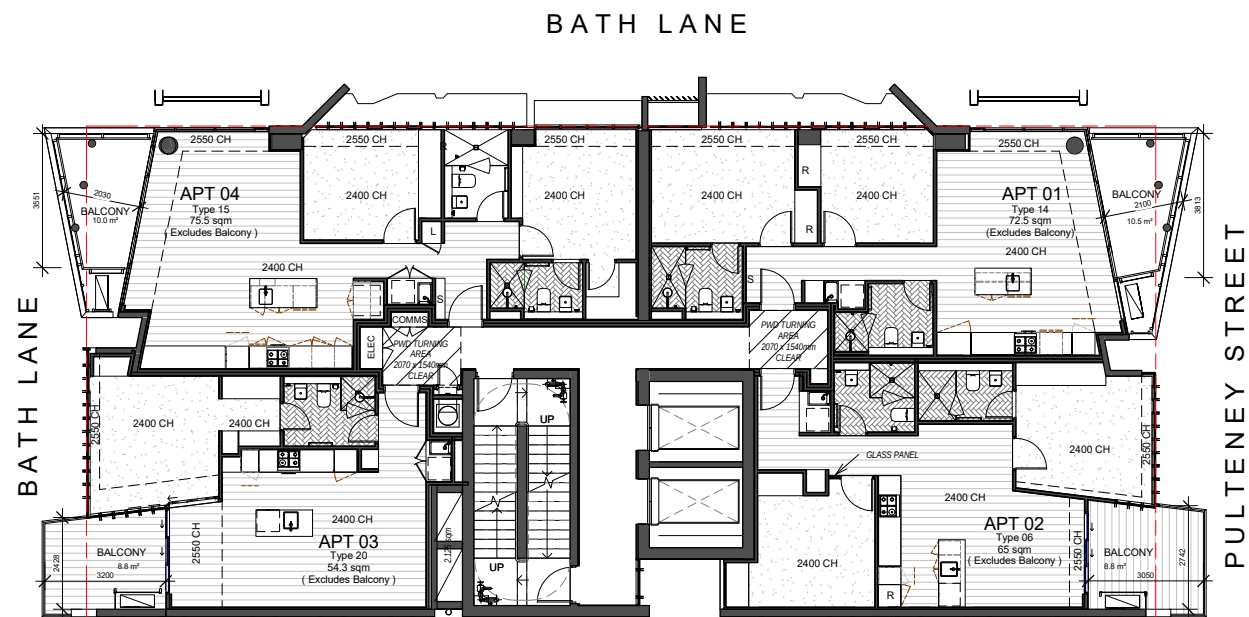
S3 APARTMENTS - LEVEL 7,9,11,13
1 : 100 SCALE



S2 APARTMENTS - LEVEL 6,8,10,12,14
1 : 100 SCALE

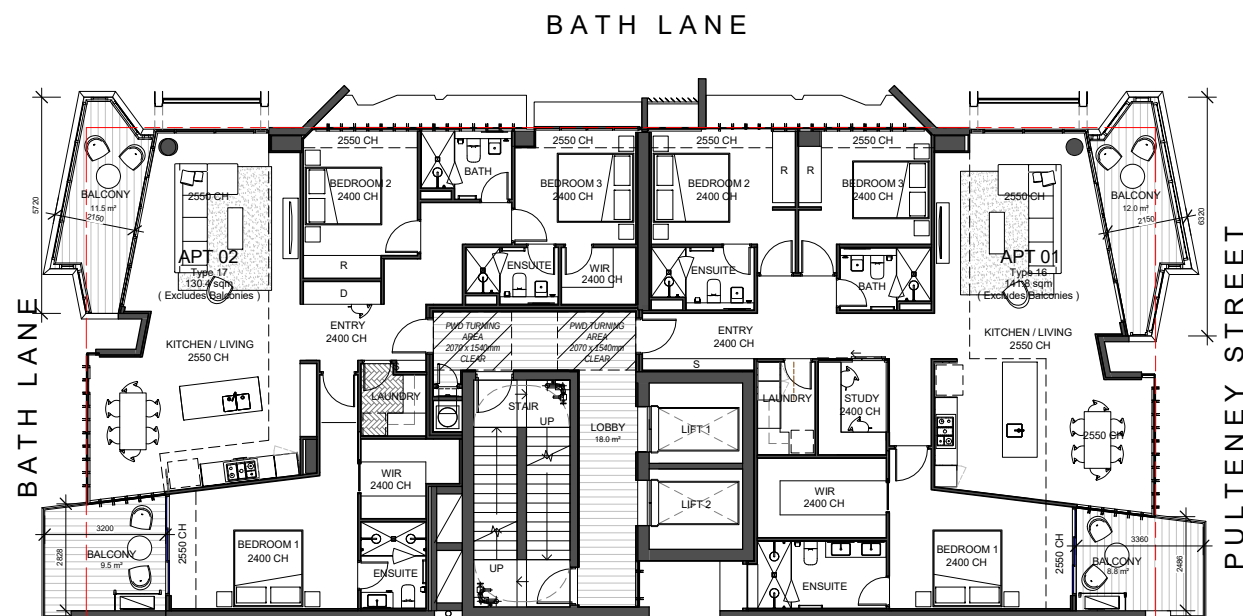


S4 APARTMENTS - LEVEL 15,17
1 : 100 SCALE

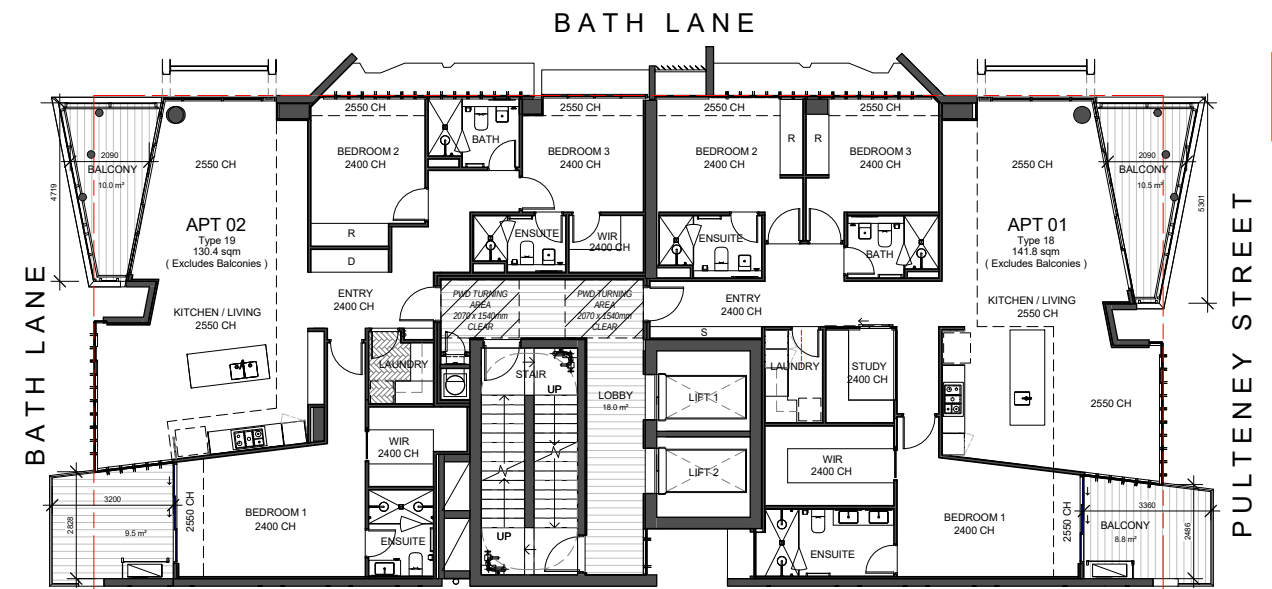


S5 APARTMENTS - LEVEL 16,18
1 : 100 SCALE

EVEN LEVELS



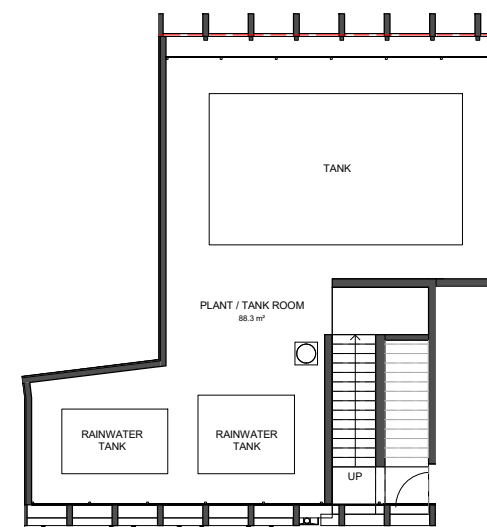
A1 APARTMENTS - LEVEL 19 & 21
1 : 100 SCALE



A2 APARTMENTS - LEVEL 20
1 : 100 SCALE

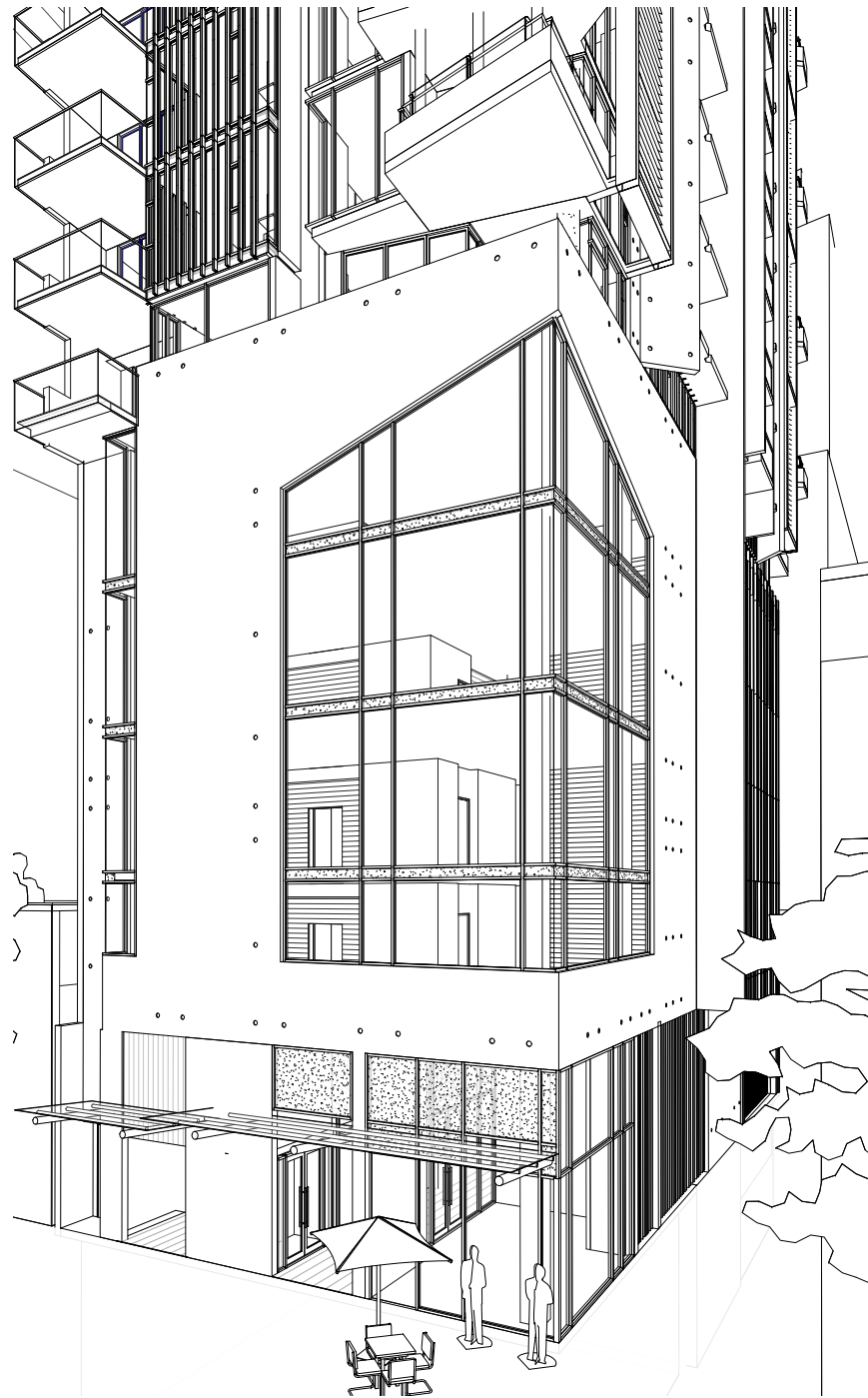


A3 PENTHOUSE APARTMENT - ROOF DECK LEVEL
1 : 100 SCALE



P PLANT
1 : 100 SCALE





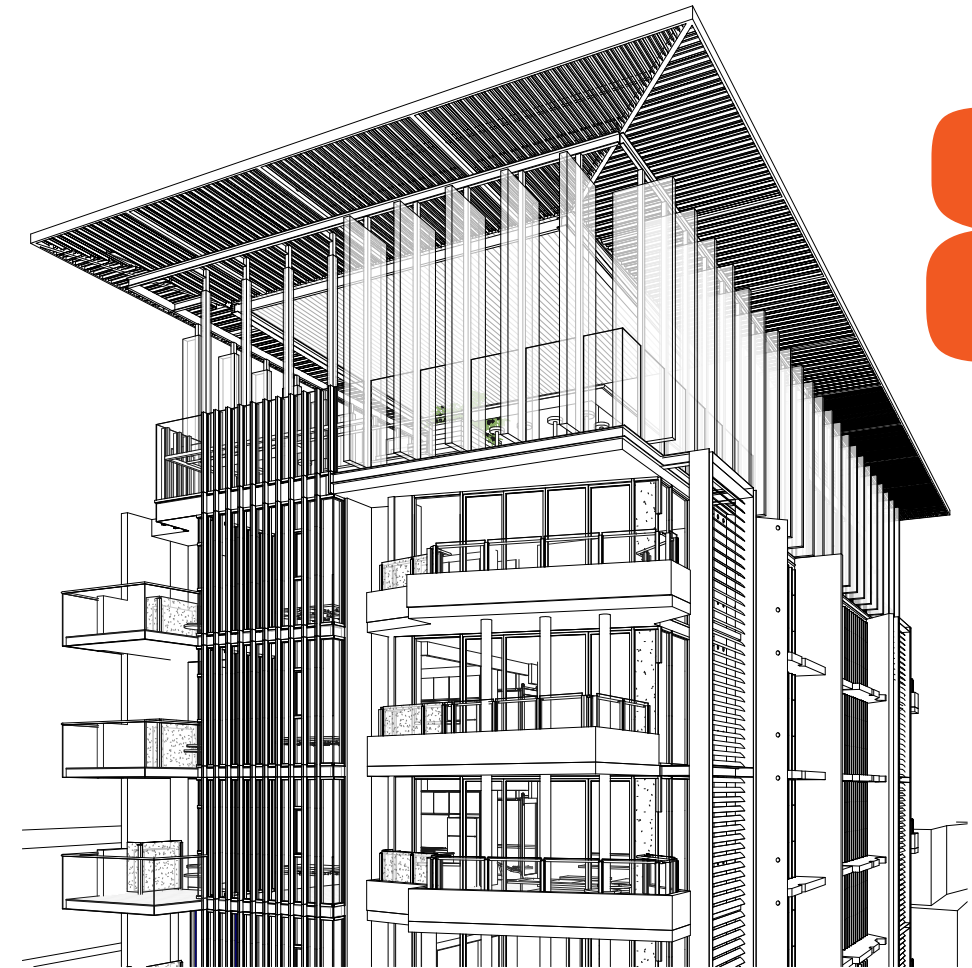
A FACADE



FLINDERS LOFT
EXTERIOR FINS



REPUBLIC TOWER FACADE



B ROOF DECK



C EXTERIOR FINS



A PODIUM VIEW -
NE CORNER

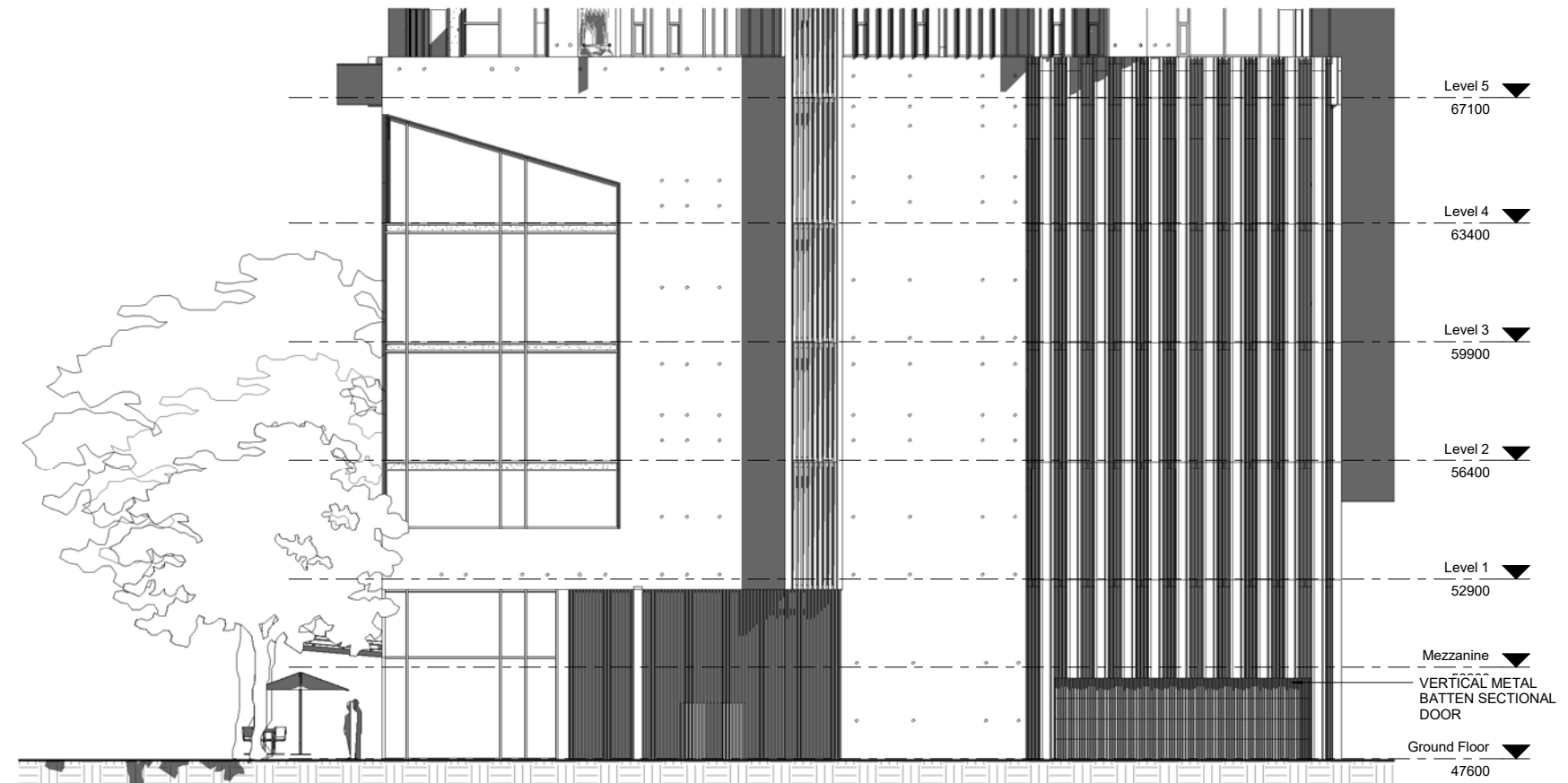
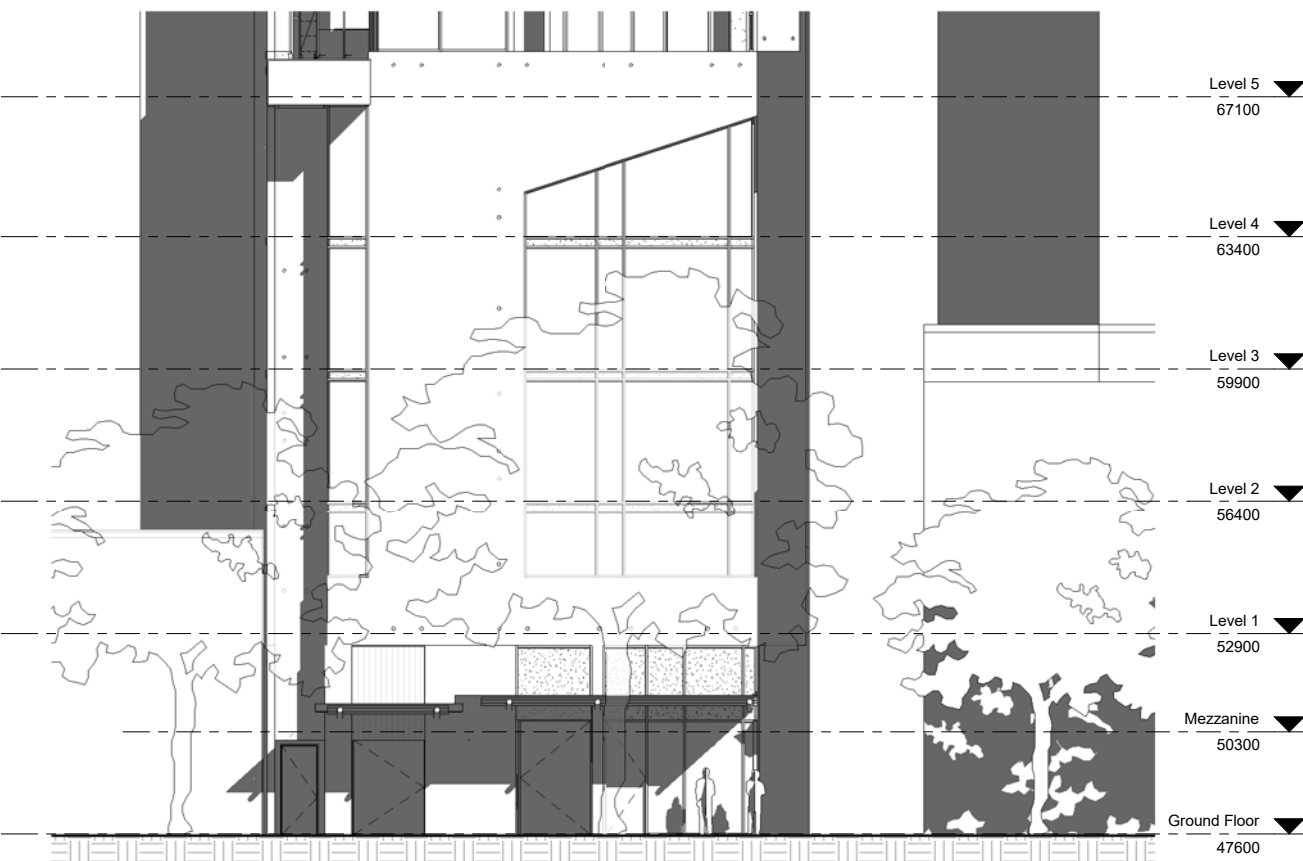
C PODIUM VIEW -
EAST ELEVATION
1:100 SCALE



B PODIUM VIEW -
SE CORNER

D PODIUM VIEW -
NORTH ELEVATION
1:100 SCALE

9



ELEVATION LEGEND

- FG1** Framed glazing
- clear

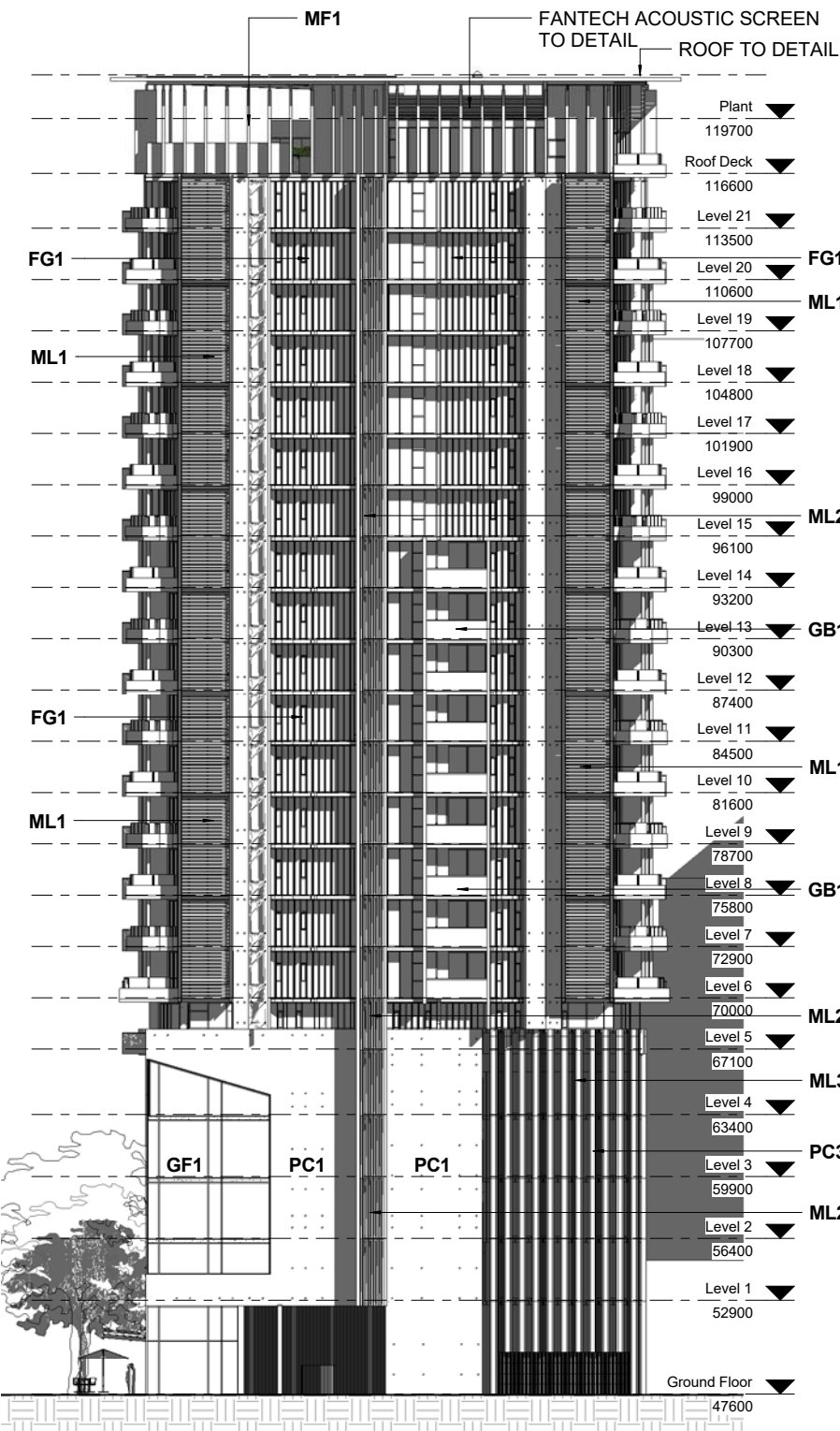
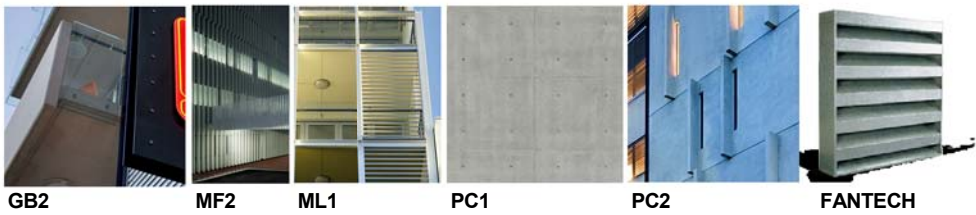
GB1 Frameless glass balustrade
with stainless steel stanchions
- GB2** Frameless glass balustrade 2
- clear glazing with pre-cast panel

MF1 Metal sunshading fin
- Subtle blue, vintage silver,
blue gold, blue
- MF2** Carpark Metal Fins

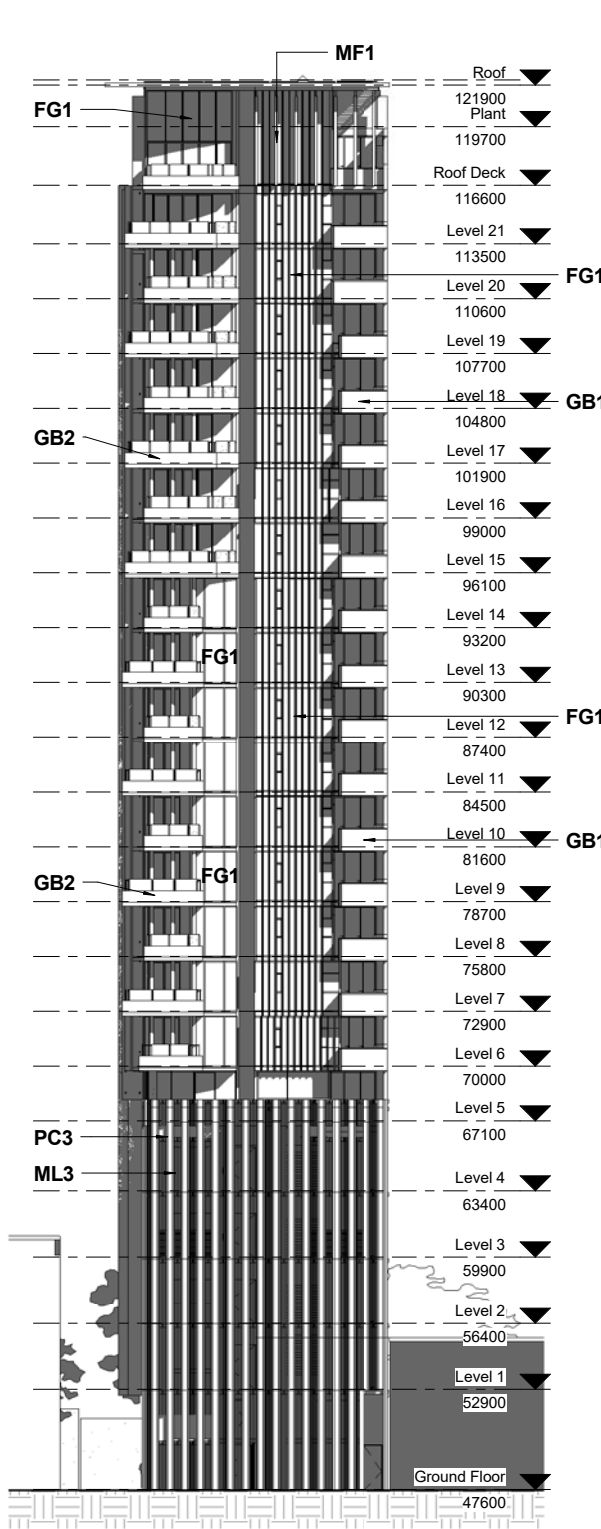
ML1 Horizontal metal louvres to
detail
- mid grey
- ML2** Vertical metal louvres to
detail
- blue gold

PC1 Precast concrete panel
- Off form
- PC2** Precast concrete panel
- natural finish

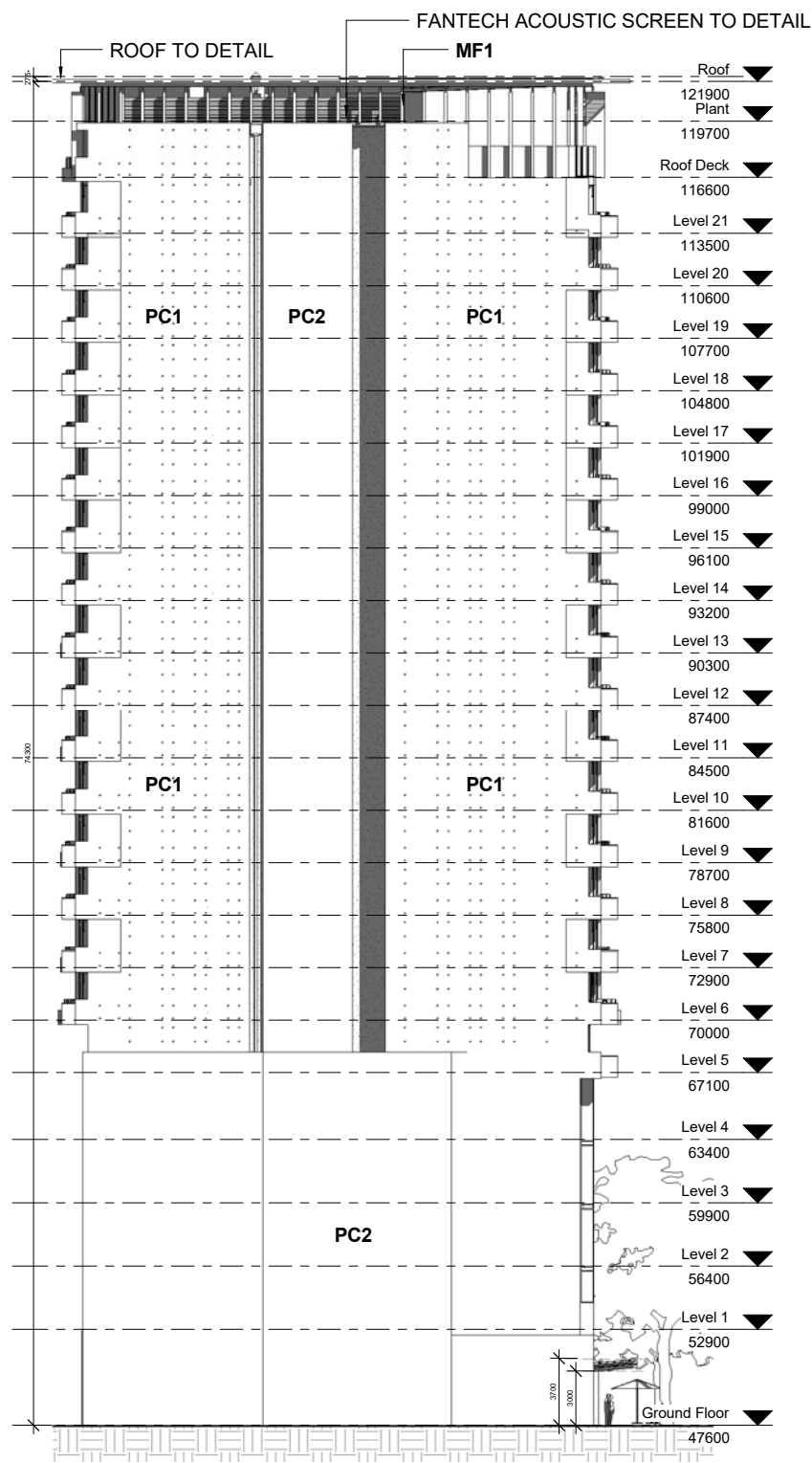
PC3 Precast concrete panel
- Vertical expression



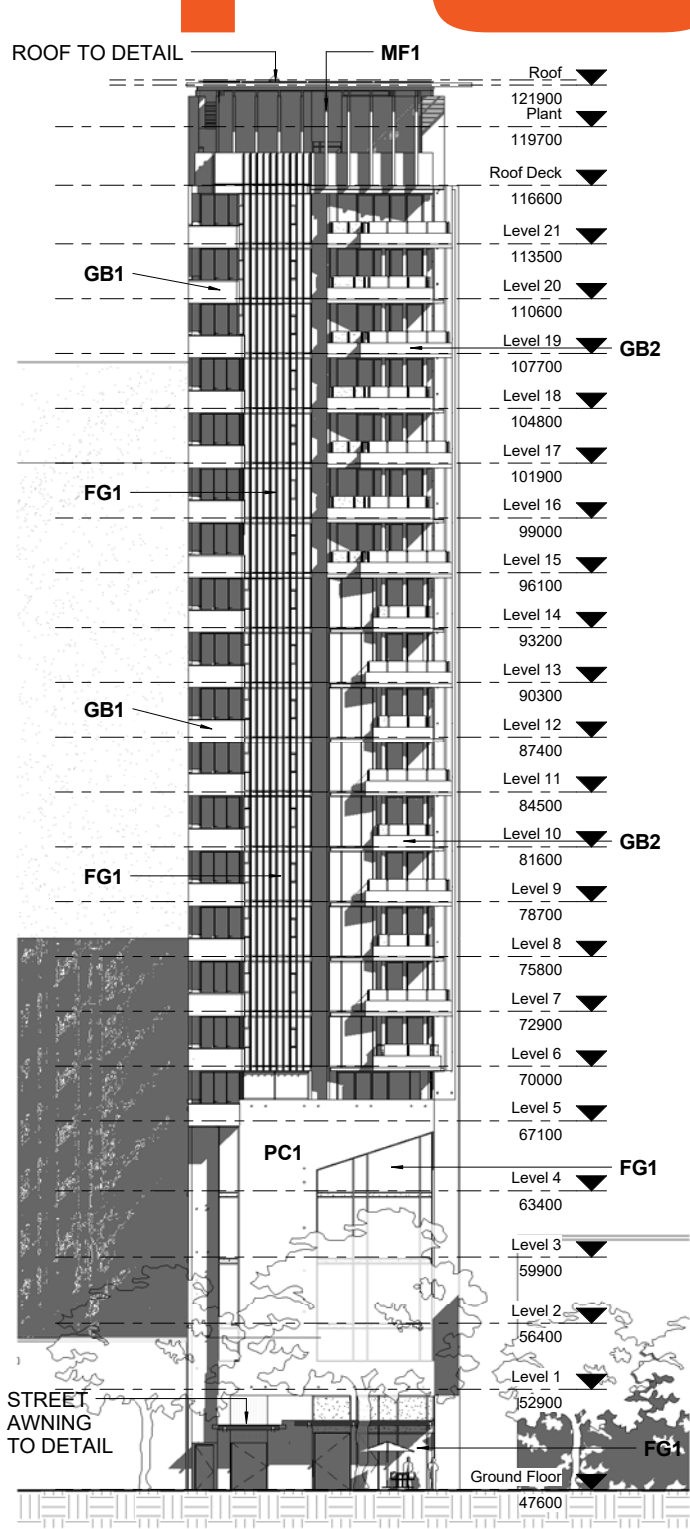
A NORTH - ELEVATION
1 : 200 SCALE



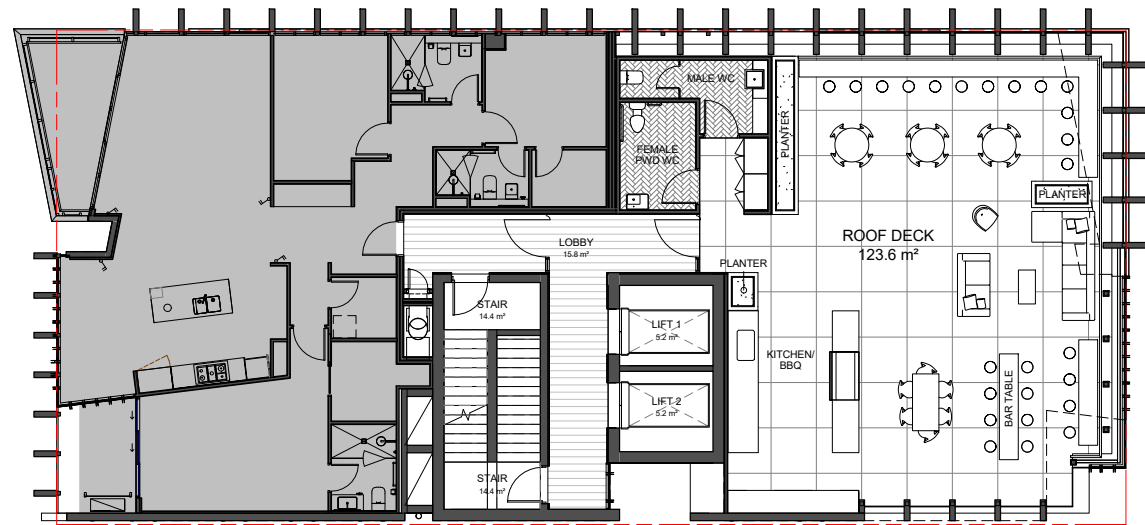
B WEST - ELEVATION
1 : 200 SCALE



C SOUTH - ELEVATION
1 : 200 SCALE

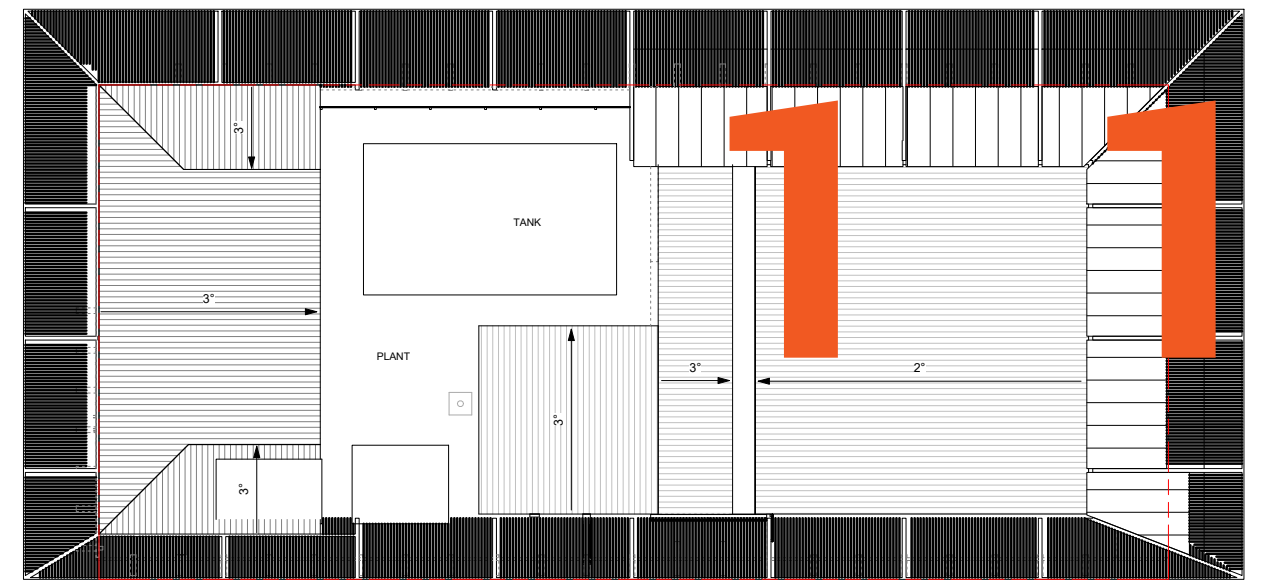


D EAST - ELEVATION
1 : 200 SCALE



A ROOF DECK
1 : 100 SCALE

PROPOSED PLANT SPECIES



B ROOF PLAN
1 : 100 SCALE



C NORTH EAST AERIAL VIEW - EXISTING MASSING



D NORTH EAST AERIAL VIEW - FUTURE MASSING

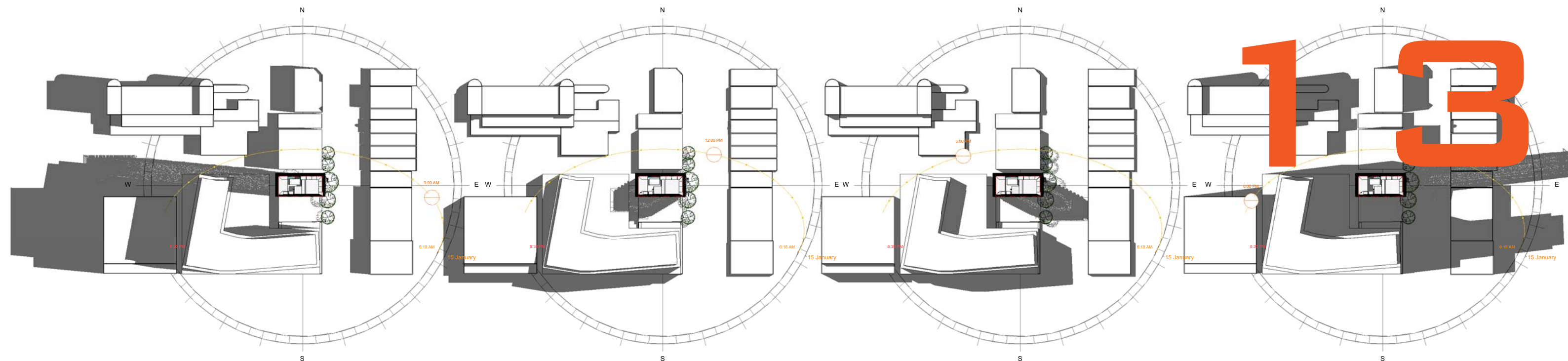


A STREET LEVEL - EXISTING MASSING



B STREET LEVEL - FUTURE MASSING

1 2

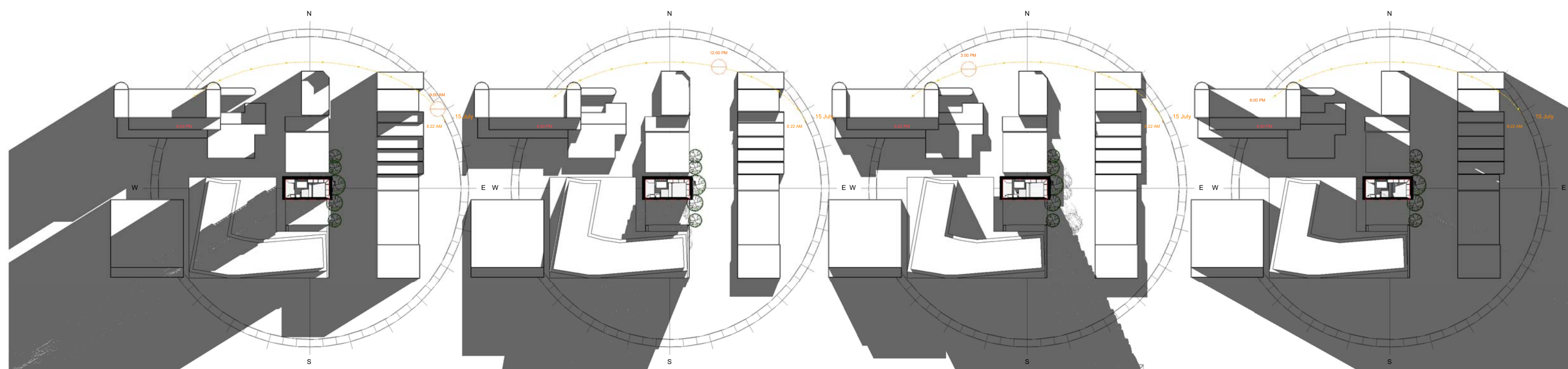


1 SUN STUDY 9AM (SUMMER)
1 : 1200 SCALE

2 SUN STUDY 12PM (SUMMER)
1 : 1200 SCALE

3 SUN STUDY 3PM (SUMMER)
1 : 1200 SCALE

4 SUN STUDY 6PM (SUMMER)
1 : 1200 SCALE

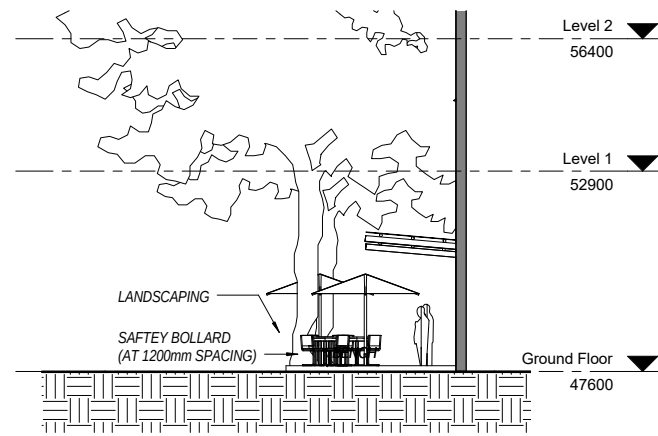


5 SUN STUDY 9AM (WINTER)
1 : 1200 SCALE

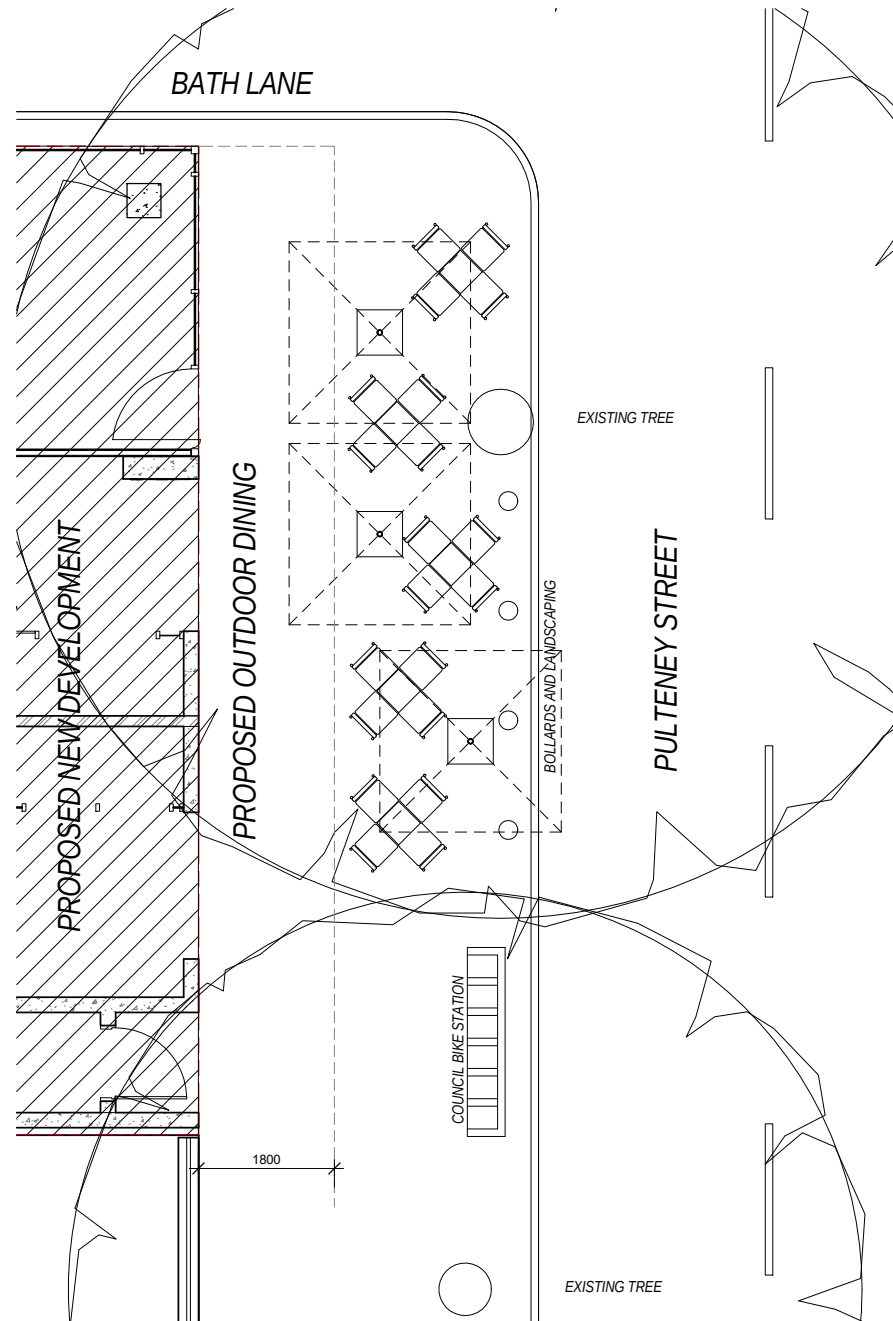
6 SUN STUDY 12PM (WINTER)
1 : 1200 SCALE

7 SUN STUDY 3PM (WINTER)
1 : 1200 SCALE

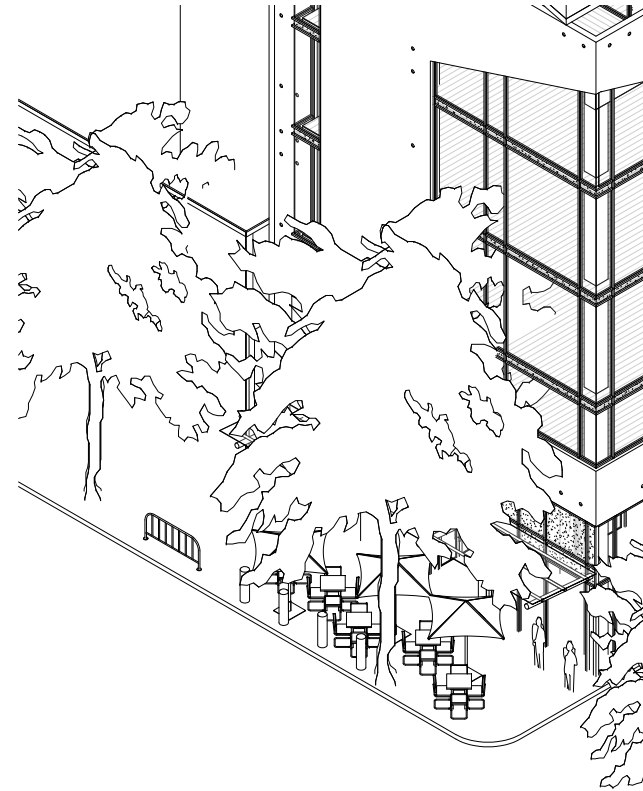
8 SUN STUDY 6PM (WINTER)
1 : 1200 SCALE



6 NORTHERN ELEVATION
1 : 100 SCALE



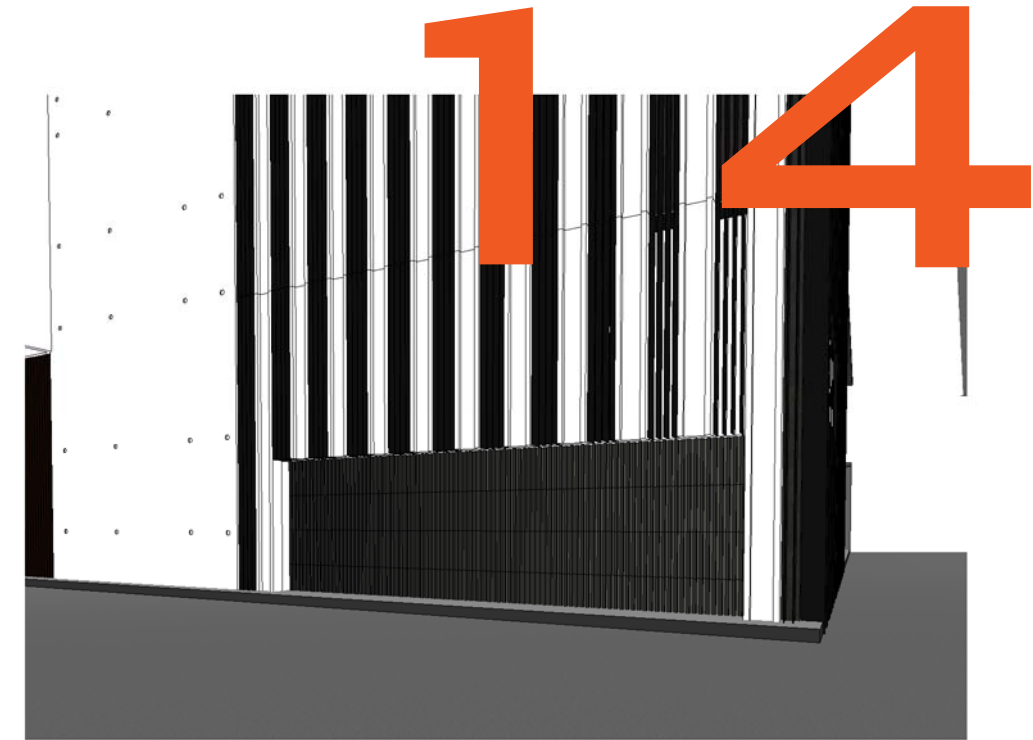
1 GROUND FLOOR
1 : 50 SCALE



2 OUTDOOR DINING AXO



3 PERSPECTIVE A



5 GARAGE DOOR
VERTICAL BATTEN SECTIONAL DOOR



4 PERSPECTIVE B





PROPOSED
BUILDING



APPROVED
BUILDING



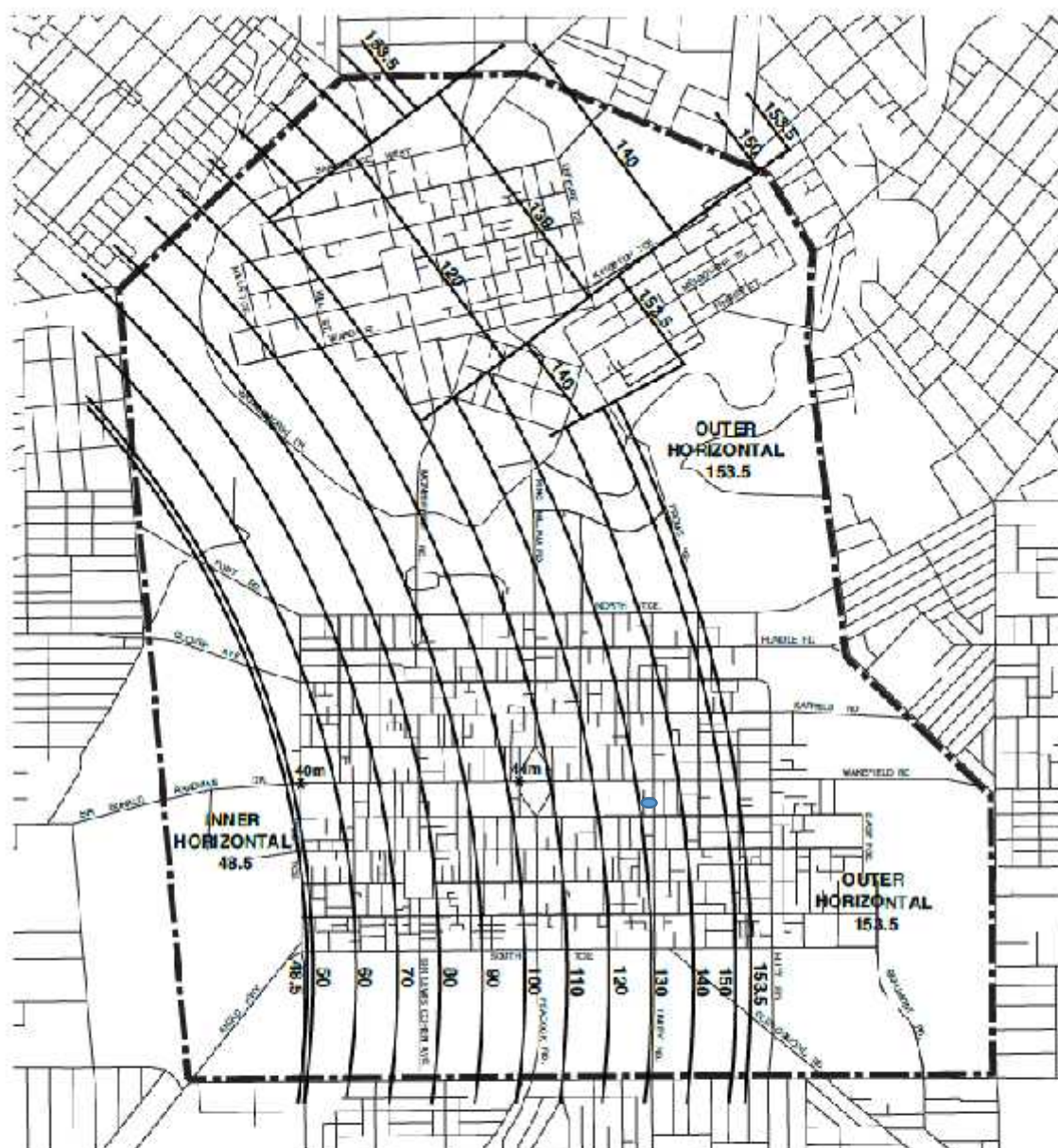
Apart No.	Level	Apart Type	Direction / Facing	Internal Area	External Area	Total Area	Apartment Storage (m³)	Storage Supplied (m³)	Total Storage	Beds No.	Baths No.	Cars No.	Req Balc Area	Difference	Req Store	Difference
501	5	1	NE	65.3	9.4	74.7	8.66	5	13.66	2	2	0	11	-1.6	10	3.66
502	5	2	SE	65.1	9.7	74.8	10.22	5	15.22	2	2	0	11	-1.3	10	5.22
503	5	3	SW	51.6	6.3	57.9	8	4	12	1	1	0	8	-1.7	8	4
504	5	4	NW	70.5	8.6	79.1	10.65	5	15.65	2	2	0	11	-2.4	10	5.65
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602	6	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
603	6	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
604	6	8	NW	50	7.2	57.2	8.02	4	12.02	1	1	0	8	-0.8	8	4.02
605	6	9	N	50.2	7.5	57.7	7.53	4	11.53	1	1	0	8	-0.5	8	3.53
701	7	10	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
702	7	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
703	7	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
704	7	11	NW	50	8	58	8.02	4	12.02	1	1	0	8	0	8	4.02
705	7	9	N	50.2	7.4	57.6	8.03	4	12.03	1	1	0	8	-0.6	8	4.03
801	8	5	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
802	8	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
803	8	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
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805	8	9	N	50.2	7.5	57.7	8.03	4	12.03	1	1	0	8	-0.5	8	4.03
901	9	10	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
902	9	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
903	9	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
904	9	11	NW	50	8	58	8.02	4	12.02	1	1	0	8	0	8	4.02
905	9	9	N	50.2	7.4	57.6	8.03	4	12.03	1	1	0	8	-0.6	8	4.03
1001	10	5	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
1002	10	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
1003	10	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
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1202	12	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
1203	12	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
1204	12	8	NW	50	7.2	57.2	8.02	4	12.02	1	1	0	8	-0.8	8	4.02
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1301	13	10	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
1302	13	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
1303	13	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
1304	13	11	NW	50	8	58	8.02	4	12.02	1	1	0	8	0	8	4.02
1305	13	9	N	50.2	7.4	57.6	8.03	4	12.03	1	1	0	8	-0.6	8	4.03
1401	14	5	NE	50.2	8.8	59	7.54	4	11.54	1	1	0	8	0.8	8	3.54
1402	14	6	SE	65	8.5	73.5	9.19	5	14.19	2	2	0	11	-2.5	10	4.19
1403	14	7	SW	52.3	8.8	61.1	8.67	4	12.67	1	1	0	8	0.8	8	4.67
1404	14	8	NW	50	7.2	57.2	8.02	4	12.02	1	1	0	8	-0.8	8	4.02
1405	14	9	N	50.2	7.5	57.7	8.03	4	12.03	1	1	0	8	-0.5	8	4.03
1501	15	12	NE	68.7	12	80.7	8.66	5	13.66	2	2	0	11	1	10	3.66
1502	15	6	SE	65	8.8	73.8	10.22	5	15.22	2	2	0	11	-2.2	10	5.22
1503	15	20	SW	54.3	8.8	63.1	8.66	4	12.66	1	1	0	8	0.8	8	4.66
1504	15	13	NW	75.6	11.5	87.1	13.76	5	18.76	2	2	0	11	0.5	10	8.76
1601	16	14	NE	68.7	10.5	79.2	8.66	5	13.66	2	2	0	11	-0.5	10	3.66
1602	16	6	SE	65	8.8	73.8	10.22	5	15.22	2	2	0	11	-2.2	10	5.22
1603	16	20	SW	54.3	8.8	63.1	8.66	4	12.66	1	1	0	8	0.8	8	4.66
1604	16	15	NW	75.5	10	85.5	13.76	5	18.76	2	2	0	11	-1	10	8.76
1701	17	12	NE	68.7	12	80.7	8.66	5	13.66	2	2	0	11	1	10	3.66
1702	17	6	SE	65	8.8	73.8	10.22	5	15.22	2	2	0	11	-2.2	10	5.22
1703	17	20	SW	54.3	8.8	63.1	8.66	4	12.66	1	1	0	8	0.8	8	4.66
1704	17	13	NW	75.6	11.5	87.1	13.76	5	18.76	2	2	0	11	0.5	10	8.76
1801	18	14	NE	68.7	10.5	79.2	8.66	5	13.66	2	2	0	11	-0.5	10	3.66
1802	18	6	SE	65	8.8	73.8	10.22	5	15.22	2	2	0	11	-2.2	10	5.22
1803	18	20	SW	54.3	8.8	63.1	8.66	4	12.66	1	1	0	8	0.8	8	4.66
1804	18	15	NW	75.5	10	85.5	13.76	6	19.76	2	2	0	11	-1	10	9.76
1901	19	16	E	141.8	20.8	162.6	20.47	6	26.47	3.5	3	1	15	5.8	12	14.47
1902	19	17	W	130.4	21	151.4	19.75	6.2	25.95	3	3	0	15	6	12	13.95
2001	20	18	E	141.8	19.3	161.1	20.47	7.5	27.97	3.5	3	1	15	4.3	12	15.97
2002	20	19	W	130.4	19.5	149.9	19.75	8	27.75	3	3	1	15	4.5	12	15.75
2101	21	16	E	141.8	20.8	162.6	20.47	8	28.47	3.5	3	1	15	5.8	12	16.47
2102	21	17	W	130.4	21	151.4	19.75	8.2	27.95	3	3	1	15	6	12	15.95
2201	22	17	W	130.4	19.5	149.9	19.75	8.3	28.05	3	3	1	15	4.5	12	16.05
72				4,663	704	5,367	716	72	1,053	112	110	6		7	652	400.89

	Level	Retail	Com	NLA	GFA	Cars No.
	B2				175.9	3
	B1				175.9	3
	GF	1		29	333.1	1
	MEZZ				243	3
	1		1	144.7	323.8	3
	2		1	144.7	323.8	3
	3		1	144.7	323.8	3
	4		1	144.7	323.8	3
		1	4	608	2,223	22

Level	External Area
Roof Deck	125.7

Negative Balance	-50.2
Positive Balance	57.5
Sum of Difference	7
Rooftop Area	125.7
Balance	133

1 Bedroom		8 Sq M
2 Bedroom		11 Sq M
3 Bedroom		15 Sq M



Referral to the Department of Transport and Regional Services through Adelaide Airport Limited is required where a development would exceed the Obstacle Limitation Surface (OLS) contours on this map.

- 100** OLS Value in Australian Height Datum (AHD)
- OLS Contour Boundary
- * 48m** Indicative ground level in AHD. Note: Ground level varies throughout the Council area and accurate ground level in AHD would need to be confirmed.
- Development Plan Boundary



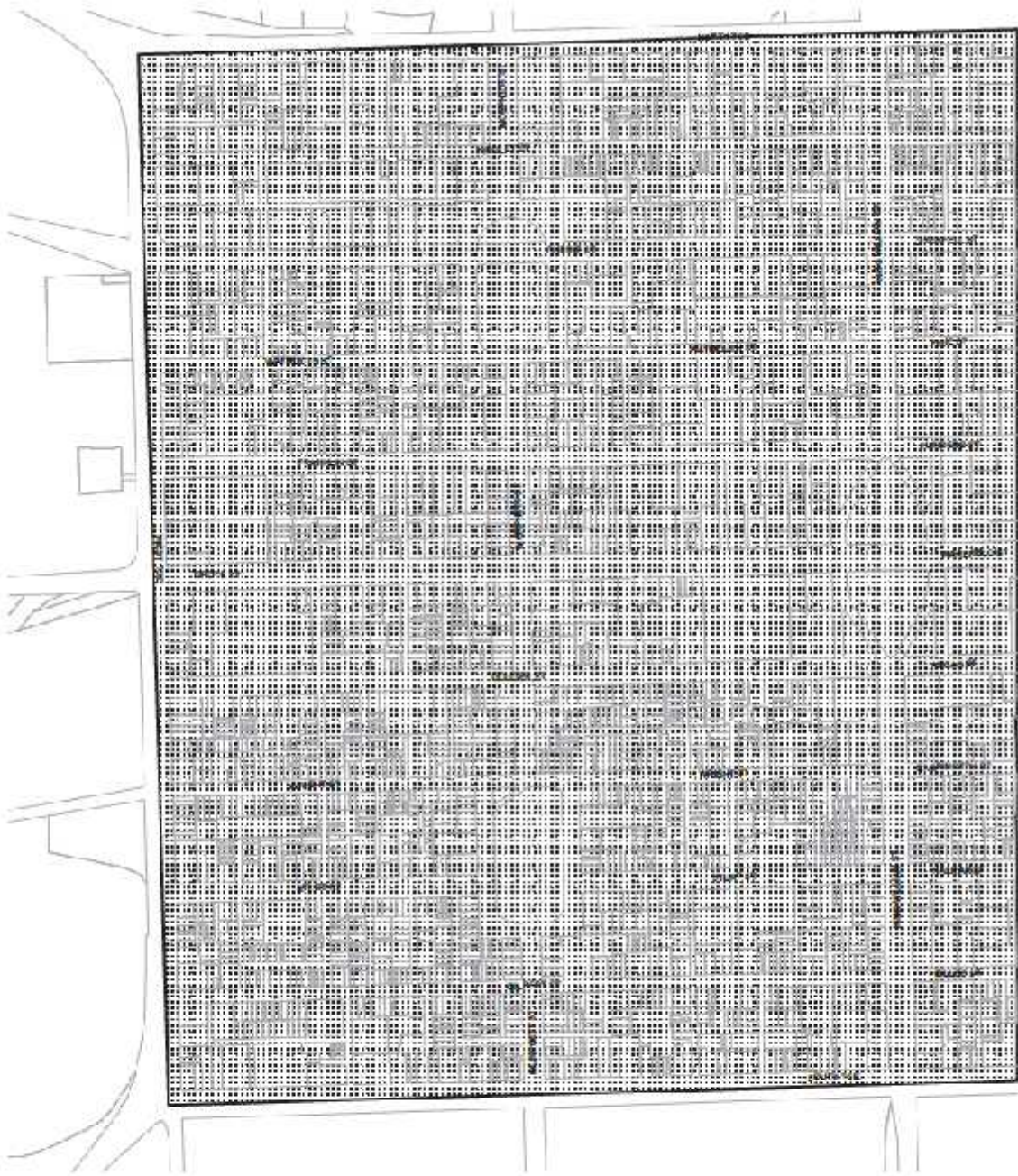
Scale 1:25,000
0metres 500 1000

Note: Approval is required under the Commonwealth Airports Act 1990 for structures and the like that penetrate prescribed air space (as defined in the Airports Act 1996)

ADELAIDE (CITY) AIRPORT BUILDING HEIGHTS MAP Adel/1 (Overlay 5)

Consolidated - 20 June 2017

- Denotes site



 Designated Area



0 120 240 300 400 600 metres

ADELAIDE (CITY)
AFFORDABLE HOUSING
MAP Adel/1 (Overlay 15a)



- 13 Central Business Policy Area
- 30 South Terrace Policy Area
- 31 South East Policy Area
- 32 South Central Policy Area

- Maximum height of 2 storeys
- State Heritage Place
- Local Heritage Place
- Significant Tree

- Existing Pedestrian Link
- Proposed Pedestrian Link

Policy Area Boundary

ADELAIDE (CITY) POLICY AREAS MAP Adel/56

Consolidated - 20 June 2017

• Denotes site

AMENDMENT TO EXISTING APPROVAL. 020/0023/14A.

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: CITY OF ADELAIDE

APPLICANT: 261 PULTENEY ST. P/L

Postal Address: 138 MAGILL ROAD
NORWOOD SA 5067

Owner: PETER KOZNO

Postal Address: 138 MAGILL ROAD
NORWOOD. SA. 5067

BUILDER: NOT YET NOMINATED

Postal Address: _____

Licence No: _____

CONTACT PERSON FOR FURTHER INFORMATION

Name: LOUIS PETRIDIS

Telephone: 0427108 787 [work] 8290 3200 [Ah]

Fax: _____ [work] _____ [Ah]

EXISTING USE: _____

FOR OFFICE USE

Development No: _____

Previous Development No: _____

Assessment No: _____

☐ Complying

☐ Non Complying

☐ Notification Cat 2

☐ Notification Cat 3

☐ Referrals/Concurrences

☐ DA Commission

Application forwarded to DA

Commission/Council on

/ /

Decision: _____

Type: _____

Date: / /

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

DESCRIPTION OF PROPOSED DEVELOPMENT: AMENDMENT TO EXISTING APPROVAL - REFER LETTER

LOCATION OF PROPOSED DEVELOPMENT: 261 PULTENEY ST, ADELAIDE. ATTACHED.

House No: _____ Lot No: A706 Street: PULTENEY Town/Suburb: ADELAIDE

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

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

LAND DIVISION:

Site Area [m²] _____ Reserve Area [m²] _____ No of existing allotments _____

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

BUILDING RULES CLASSIFICATION SOUGHT: _____ Present classification: _____

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

If Class 9a classification is sought, state the number of 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]: \$ 500,000 (PREVIOUSLY)

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: 19 / 12 / 2017

Yasmine Alliu
DPTI - Dept of Planning Transport and Infrastructure
50 Flinders Street,
Adelaide SA 5000

20 Dec 2017

Attention: Yasmine

PROJECT

**Subject: 261 PULTENEY – BUILDING WITH BASEMENT
AMENDED DEVELOPMENT APPLICATION – VARIATION TO ORIGINAL DA
PREVIOUS DA REF 020/0023/14A**

We refer to our previous meeting on 13th Dec 17 in regards to minor amendments to the previously approved Development Application for the above project.

A DOCUMENTS

We submit the following documents as a variation;

- Current Planning Consent
- New Development Application
- Amended set of architectural drawings
- Amended schedule of areas
- Schedule of changes

We further advise that "Phil Weaver and Associates " have been commissioned to provide an amended traffic report. This report will confirm the status of the amendments to the car parking design . Once this report is completed, we will forward to DPTI.

C SUMMARY OF CHANGES

We are providing the following broad summary of changes starting from the basement level.

C1 BASEMENT LEVEL

Basement Level excavation has been extended as a natural result of the added lift and car stacker pits. The new usable area has been allocated to required plant equipment and building services, including a fire pump room and two large water tanks which have been incorporated following additional consultant input.

C2 GROUND LEVEL

The ground level has been amended to suit the adjusted core layout, including a dedicated lift for the Studio levels. Designated residential and commercial (Studio) entrances have been provided, with a shared concierge area servicing both foyers.

The retail area now occupies the North-East corner of the site facing Pulteney Street and Bath Lane, allowing for a more visible frontage for both foot and vehicular traffic, and greater street level activation.

The fire stair configuration has altered and is now a more efficient design following egress and structural advice. This includes an additional 'mezzanine' to the South-West corner of the building which enables fire stair egress from Level 1 to the Bath Lane exit.

The car parking has been replanned to incorporate the altered car lift location and an additional 3 tier car stacker. The transformer location has altered, as has the main switchboard. These changes have been referred to Phil Weaver & Assocs.

C3 STUDIO / CARPARK LEVELS (LEVEL 1 – 4)

The original DA showed Level 1 and 4 as dedicated car parking levels utilising a dual exit car lift to access the entire floorplate, however the relocated car lift and amended core has resulted in a more efficient car parking plan at the rear of the building, thus allowing the Pulteney Street frontage to be returned to Studio space as on Levels 1 - 4.

The Studio planning has been amended to suit the adjusted core and dedicated lift, with the inclusion of a kitchenette, accessible bathroom, and a more generous floor area generally. Associated facades to the North and East have undergone slight adjustments to allow suitable levels of natural light whilst still maintaining sculptural relief.

C4 LOWER APARTMENT LEVELS (LEVEL 5 – 8)

The apartment layouts shown in the original DA (page 7, LO and TR) were dominated by the car lift overrun on Level 5 and the transition of the fire stair on Level 6. By incorporating the car lift overrun into the increased Level 4 ceiling height, these two levels are able to reclaim this space for more efficient apartment layouts.

Level 5 has been redesigned as three x 2 bedroom apartments and one generous 1 bedroom apartment. Accessibility to shared bathrooms has been improved, and walk-in robes have been included where possible to suit the current market. As per the original DA, the balconies on this level are atypical as they form the sculptural podium element that wraps around three sides of the façade.

Level 6 to Level 8 have been redesigned to include four 1 bedroom apartments and one 2 bedroom apartment. This has been driven by purchaser demand for a variety of apartment sizes and price points. Balcony forms on these levels do not extend beyond the balcony extents from the original DA.

C5 TYPICAL APARTMENT LEVELS (LEVEL 9 – 18)

Similar to Level 5, these typical apartment levels have been redesigned as three x 2 bedroom apartments and one generous 1 bedroom apartment, with northern balcony types alternating every level as in the original DA. Balconies to the two southern apartments have been relocated for more efficient planning, resulting in minimal changes to the façade.

As per Level 5, the open plan relationship between the kitchen and the living and dining areas has been improved, as has access to the shared bathrooms. This is more in keeping with market expectations.

Services and amenities have been rationalised, including the addition of a waste chute which is accessible via the lobby on all levels. PWD turning areas have also been included into the lobby design, and lobby widths have generally been increased for greater accessibility.

C6 UPPER APARTMENT LEVELS (LEVEL 19 – 21)

The typical 4 apartment layout from the original DA has been amended to better suit the inner city market, with two x 3 spacious bedroom, 3 bathroom layouts that maximise the premium panoramic views. The inclusion of walk-in robes, studies and full size laundries and generous open plan living create additional opportunities for the location. Balcony designs remain as per the original DA

C7 ROOF DECK LEVEL

The roof deck, bar and amenities have been consolidated to create one rationalised communal roof deck area to the North-East of the building, allowing the addition of 3 bedroom, 3 bathroom apartment to the West. By keeping the ceiling area over

the apartment in accordance with lower level apartments, there is sufficient space over to incorporate the previously allowed plant, tanks or services if required. Maintaining the original proportions and fin design of the roof deck and roof over will ensure that plant equipment in this area will not be visible externally.

C8 NUMBER OF APARTMENTS

The original DA showed 68 apartments with 4 apartments per floor, with the largest apartment being 2 bedrooms. The amended DA shows 66 apartments with a variety of apartment sizes to suit market demand.

C9 ELEVATIONS

The external elevations are largely unchanged in external appearance. Minor amendments to window/wall articulation have been made to incorporate the changes made to the Ground Floor, Studio levels and apartment plans as mentioned previously.

C10 FLOOR LEVELS

The floor levels of the Studio levels have been raised by up to 1100mm in order to better accommodate car stacker and car lift height requirements without compromising the planning of residential levels. These levels have also been coordinated to ensure safe, efficient fire escape egress. This has added 3400mm to the overall height of the building. Apartment level ceiling heights have been maintained.

D CONCLUSION

In conclusion, the changes that have been made are deemed minor in our opinion and are the result of market and/or purchaser requests, structural and building services requirements. As outlined and generally agreed at our last meeting, we request that this development application be treated as a minor variation to the original DA.

E FEES

Please advise of fees applicable to process this application so that we can arrange payment. If you have any further queries please do not hesitate to contact myself or Michael from our office.

Yours Faithfully
Loucas & Zahos Pty Ltd



Louis Petridis
Senior Architect

Sent to:



Yasmine Alliu
Department of Planning Transport and Infrastructure
50 Flinders Street,
Adelaide SA 5000

28 May 2018

Dear Yasmine,

**261 PULTENEY STREET, ADELAIDE
AMENDED DEVELOPMENT APPLICATION
VARIATION TO ORIGINAL DA PREVIOUS DA REF 020/0023/14A**

We refer to the referenced amendment application and following correspondence received in response to this application:

- 28 February 2018, Office for Design & Architecture, letter from Ms Kirsteen Mackay (file no: 2014/11234/01, ref no: 12413285).
- 7 March 2018, City of Adelaide, letter from Ms Rebecca Rutschack (reference: S10/28/2014/A).
- 3 April 2018, Department of Planning Transport and Infrastructure, email from Ms Yasmine Alliu.

We provide the following clarifications and enclosed information in support of the amendment application:

1. Garage Door

The design of the garage door (northern elevation) has been revised to a vertical metal batten sectional door, expressing the vertical cladding of the surrounding facade and allowing for a level of transparency between the battens to provide some visibility and ventilation.

Please refer to drawing Podium View - North Elevation (page 9) and the following reference image:



2. Balconies

Please refer to the enclosed area schedule, identifying the balconies that are below the minimum sizes set by the Adelaide City Council Development (highlighted in red within the “Difference” column). The total shortfall is 50.2m², and in accordance Item 59 (Private Open Space) the rooftop area, 125.7m² in size, is provided to compensate for this shortfall.

The rooftop area is a communal open space accessible to all occupants of the development, and while the size of the rooftop terrace has reduced from the original application, the revised design is substantially larger than the shortfall in balcony areas.

Please note that all balconies comply with the minimum dimension (2m) as prescribed in the Development Plan.

3. Storage

The design has been revised to include adequate and accessible storage facilities for occupants in accordance Adelaide City Council provisions (Council Wide 81). Please refer to drawing Basement 1 Plan, Basement 2 Plan (page 6) and enclosed area schedule, and note that 50% of the required storage space is provided within the dwelling/apartments and remaining 50% provided within Basement 1 & 2.

4. Traffic / Transport

- A. Please note that mirrors have been added to either side of the Ground Floor door opening on the east-west section of Bath Lane in order to permit a driver exiting from the car park to view an oncoming vehicle from either the east or west along Bath lane. Please refer to drawing Ground Floor & Site Plan (page 6).
- B. Please note that visitor bicycle parking has been provided on the Ground Level (on Pulteney Street), as shown on drawing Ground Floor & Site Plan (page 6).
- C. Please note that the fire escape door (on the Ground Floor exiting to Pulteney Street) has been moved forward to reduce the depth of the secluded space to its absolutely minimum. Please also note that lighting will be provided within the space to further deter any unwanted activity within this space. Please refer to drawing Ground Floor & Site Plan (page 6).

5. General Comments

- A. Please refer to materials list (with reference images) and annotated elevations provided on page 10, including details of screening of the rooftop plant.
- B. Please refer to drawing Section AA and AHD Top of Building.
- C. Please refer to proposed plant species for the rooftop terrace planters shown on Roof Deck drawing on page 11.
- D. Please note that all applicable elements of the Penthouse apartments on Level 23 will be design & constructed in accordance with the NCC/BCA and lodged Acoustic Engineers Report. In addition, a lobby door been included to provide further acoustic separation, however this door will not be lockable and therefore not impede access/egress to the fire stairs. Please refer to drawing Roof Deck (page 11).
- E. Please note that bicycle storage has been removed from the rooftop and location entirely Basement 1 & 2. We also confirm that the lifts are large enough to accommodate bicycles and stretchers.

Thank you and please do not hesitate to contact me should you require any further information or clarification on the above.

Kindest Regards,



Louis Petridis
Senior Architect

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: 175-17

11 April 2018

Mr Jeff Bugeja
Development Manager
Guavalime Pty Ltd
Level 1, 276 Flinders St
Adelaide SA 5000

Dear Mr Bugeja,

**PROPOSED MIXED USE DEVELOPMENT - 261 TO 263 PULTENEY STREET, ADELAIDE
(DA S10/28/2014/A) - TRAFFIC AND PARKING ASSESSMENT**

I refer to our recent discussions relating to the proposed mixed use development on the above site.

In particular, I have reviewed the concerns raised by Councils Traffic engineer (Ms Trudy Angrave) relating to the on-site car parking arrangements, as summarised in a letter from Council dated 7th March 2018. The following traffic related aspects were identified:-

- *The car park design does not comply with the Standards for the following reasons:*
 - *AS2890.1 s3.5 states, "Access to mechanical parking installations such as car stackers, shall be by means of access driveways and circulation roadways designed in accordance with this Standard, and providing sufficient vehicle storage to ensure that queues of vehicles awaiting service by the installation do not extend beyond the property boundary of the parking facility under normally foreseeable conditions."*

There is no storage space available within the circulation area, which is required purely for manoeuvring.

Additionally, it is unlikely that anyone approaching from the street would be able to identify and react to a vehicle exiting from the stacker or lift in such a way as to avoid needing to reverse back out to the street to allow them to exit. Whilst any vehicle is manoeuvring on the ground level, it is not possible for another vehicle to enter and any such vehicle will be required to wait on street. There is insufficient width on the adjacent street for one vehicle to store and another vehicle to pass and the road is under no stopping restrictions. A stopped vehicle present in the roadway would unreasonably prevent traffic movement.

- *The swept paths show multiple manoeuvres being required for a B85 vehicle to access a number of these spaces. Whilst the Standard anticipates that vehicles larger than a B85 needing to make a 3-point turn if the manoeuvring space is the minimum allowable (AS2890.1 B4.8), it does not anticipate the number of multiple manoeuvres required of this design. The B85 is still the minimum design vehicle for the layout of parking spaces and parking aisles.*
- *There is insufficient sight distance for vehicles exiting the property to oncoming traffic and any pedestrians.*
- *The position of the driveway is in a “prohibited location” according to AS2890.1 figure 3.1*
- *None of the proposed parking spaces are accessible, or able to be made accessible, if required.*
- *Whilst the sections show that some bicycle parking is provided, this is not evident on any of the floor plans and it is unclear where and how many will be provided.*

In order to address the above matters, the car parking arrangements have been amended and a meeting was held with Ms. Angrave on Thursday, 29 March 2018 with a view to addressing the previously identified concerns.

1.0 Design amendments

As submitted to Council the proposed development included provision of car parking on site in the form of:-

- Nine car parking spaces on the ground floor for use by residents. These spaces were to be provided in the form of car stackers accommodating 3 levels of parking, and
- Three car parking spaces provided on each of the Levels 1 to 4 (a total of 12 spaces) which would be used by staff of the medical consulting rooms.

Given the concerns raised by Council in respect to the proposed combination of the car stackers and the car park lift, the design has since been amended. The amended design will result in the deletion of the previously proposed car stackers on the ground floor with provision of only three spaces on this level comprising:-

- A waiting bay for use by drivers entering the ground floor area to access the car lift,
- An accessible car parking space for use by the disabled together with a shared area adjacent to the space,
- Retention of the car lift which will now service seven levels of car parking with three car parking spaces on each level, including:-
 - Two basement levels,
 - A mezzanine level, and
 - Four upper levels (Floors 1 to 4) of the proposed development.

The redesign of the car parking area deletes one of the two previously proposed car parking components within the subject development, in that the ground floor area of the building will no longer provide car stackers. Consequently the ground floor essentially now provide only a awaiting area / manoeuvring area for access to the car lift / provision of accessible parking for the disabled.

My firm has prepared a series of turning path drawings identifying the ability of drivers to access both the ground floor waiting bay, the car park lift and the individual car parking spaces to be provided on the car parking levels within the building.

These turning path diagrams include potential access at ground floor level by either the B85 design vehicle or the B99 design vehicle. These turning path diagrams include entry and exit both to and from the eastern and the western approaches of Bath Lane to the car parking area.

Copies of the relevant turning path drawings associated with access into and out of the ground floor of the proposed development by the B85 design vehicle are provided as **Appendix A**. The turning path diagrams identify that drivers of the B85 design vehicle should generally be able to manoeuvre within the ground floor area and either reverse into or drive forward into the car park lift without the need to undertake multiple turns.

The turning path diagrams relating to the B99 design vehicle indicate that drivers should also generally be able to manoeuvre within the ground floor area and either reverse into or drive forward into the car park lift without the need to undertake multiple turns. These turning path diagrams are included as **Appendix B**.

Turning path diagrams identifying the ability of drivers of the B85 vehicle to access each car parking space when entering the various car parking levels have also been prepared in relation to the amended design. These drawings are included within **Appendix C**. This analysis identifies that the vehicles would generally be able to access each space and the lift without the need for multiple turns.

Additional modelling of turning paths associated with the B99 design vehicle suggests that in some instances drivers of vehicles may be required to make an additional turning movement when accessing a specific car parking space. However, this is contemplated by the relevant off-street car parking standard.

The design of the car parking spaces on the various car parking levels will now provide:-

- Space widths of 2.5m, with additional manoeuvring space at both ends of the carpark in order to facilitate movement into and out of the end spaces, and
- Space lengths of 5.4m.

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

2.0 Traffic assessment

Traffic generated by the proposed development will primarily relate to the on-site car parking spaces which I understand are to be used by residents (basement levels) and staff of the medical consulting rooms (upper levels).

The “**Guide to Traffic Generating Developments**” report produced by the former Roads and Traffic Authority of NSW (now Roads and Maritime Services) identifies a peak hour traffic generation rate of 0.24 trips per unit for a medium to high density residential development albeit this would assume that each unit would be provided with on-site car parking.

The results of more recent surveys conducted by RMS identified, inter alia, the following trip generation rates:-

- An average of 0.15 trips per car space in the am peak hour,
- A range of between 0.09 and 0.29 trips per car space in the pm peak hour,
- An average of 0.12 trips per car space in the pm peak hour, and
- A range of between 0.05 and 0.28 trips per car space in the pm peak hour.

On the above basis, I therefore consider that the six parking spaces associated with the residential component of the subject development should generate of the order of:-

- 3 trips in the am period i.e. 0.29 trips by 6 spaces, and
- 3 trips in the pm peak hour period i.e. 0.28 trips by 6 spaces.

It is estimated that the staff parking area of the proposed medical centre should conservatively generate one movement per space in both the am and pm peak hour periods. This component of the subject development would therefore generate approximately 12 trips in peak hour periods. In the am period, approximately 80% of these trips would be entry movements, while in the pm peak hour period approximately 70% of these movements would relate to staff exiting the site. Hence, there should be the following trip generation associated with the medical centre, namely:-

- 9 entry / 3 exit movements in the am peak hour, and
- 4 entry / 8 exit movements in the pm peak hour period.

The accessible car parking space should generate minimal traffic movements in peak hour periods

I therefore estimate that this component of the development would generate an addition of approximately 15 trips in any one hour accessing Bath Lane. Such a volume of traffic would be equivalent to less than one vehicle movement in each 4 minute period. I consider that this would have minimal impact on the capacity of this laneway.

Assuming that approximately two thirds of these additional vehicle movements would occur to and from Pulteney Street with the remainder occurring via Angas Street, I consider that:-

- The peak hour traffic movements accessing Bath Lane via Pulteney Street would increase by approximately 10 vph in the am peak hour and 5 vph in the pm peak hour, and
- Peak hour traffic movements accessing Bath Lane via Angas Street would increase by approximately 5 vph in the am peak hour and 10 vph in the pm peak hour.

There would also be of the order of 15 vehicles accessing the car lift in any one hour period. Based on my discussions with a potential supplier of such lifts (Nordic Elevators) I am advised that the subject lift would most likely be hydraulic with a typical operating speed of between 0.3 and 0.6 m/s. Hence, I estimate an average cycle time to call the lift and return to ground level of approximately 1 minute. On this basis, there should be a capacity to accommodate 60 vehicle movements per hour.

Given that the greater proportion of traffic movements generated by tenants will be entry movements in the morning and exit movements in the pm peak hour period, whereas traffic movements generated by residents would be the reverse, it is anticipated that there should be a maximum of only 1 vehicle waiting to access the lift at the 98th percentile level.

Hence, there should be minimal delays associated with cars entering the lift on the infrequent occasions when a vehicle is descending the lift, with drivers entering the lift now able to store within the dedicated waiting bay.

However, in order to minimise delays to traffic accessing the various car parking levels, I recommend that the default position of the car lift should be at ground level.

As identified above, the proposed development will provide a total of 21 car parking spaces on the site and will accommodate the required levels of on-site bicycle parking for residents and visitors to the site.

Analysis of the forecast traffic generation of both the residential apartments and the retail unit has shown that the volumes of traffic to be generated by the subject development will not be significant and will not adversely impact on the adjoining road network. The proposed development will not result in any significant increase in the volumes of traffic on Bath Lane, taking into consideration the forecast volumes of traffic to be generated by the hospital currently being constructed to the south and west of the subject site.

The proposed location of the access point on the design of Bath Lane will constrain sight distance for drivers exiting from the ground floor of the building. Hence it is recommended that mirrors should be installed facing in both directions along Bath Lane in order for drivers exiting the car park to sight oncoming traffic.

3.0 Bicycle parking

In respect to the provision of bicycle parking **Table Adel/6 - Bicycle Parking Provisions** within the Adelaide City Development Plan would require the following provision:-

Residential component

Medium to High Scale Residential Development:

- One space for every dwelling / apartment with a total floor area less than 150m², and
- One space for every 10 dwellings for visitors.

On the above basis, the residential component of the subject development would require a total of 80 on-site bicycle parking spaces, comprising:-

- 72 spaces for residents, and
- 8 spaces for visitors to the apartments.

Commercial component

Type of Development	Bicycle parking space standard for employees and/or residents	Bicycle parking space standard for customers, visitors and/or shoppers
Consulting Rooms / Medical centre/day surgery	1 per 20 employees	1 per 20 consulting rooms
Offices/Ancillary Retail Services	1 per 200 square metres of gross leasable floor area.	2, plus 1 per 1000 square metres of gross leasable floor area.

On the basis of:-

- a ground floor retail area of only 29m², there would be a requirement for only 2 bicycle parking spaces for this component of the subject development, namely one staff and one customer space, and
- less than 20 staff employed within the medical consulting facility, there would also be a requirement for only 2 bicycle parking spaces for this component of the subject development, namely one staff and one client space.

Hence, there would be a total bicycle parking requirement for 84 spaces.

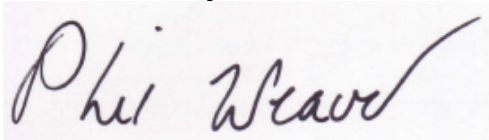
It is proposed to accommodate the above bicycle parking requirement as follows:-

- Provision of 72 bicycle parking spaces for use of the residents within three levels, namely:-
 - 21 spaces in a secured area on the roof deck,
 - 22 spaces within Basement 1, and
 - 29 spaces within Basement 2,
- 2 spaces for the use of tenants of the commercial space within a bicycle store on Level 1, and
- Provision of bicycle racks in front of the building on Pulteney Street for the use of visitors and customers to the proposed development in lieu of providing these spaces within the building given that access for visitors to the parking areas of the building would be difficult and that these spaces could be shared by the wider community if located external to the building.

Summary and Conclusions

In summary I consider that the various concerns previously raised in Council's response to the State Commission Assessment Panel have been appropriately addressed by the redesign of the on-site car parking areas and allocation of on-site bicycle parking spaces.

Yours sincerely,

A handwritten signature in dark ink, reading "Phil Weaver", with a stylized flourish at the end.

Phil Weaver
Phil Weaver and Associates Pty Ltd

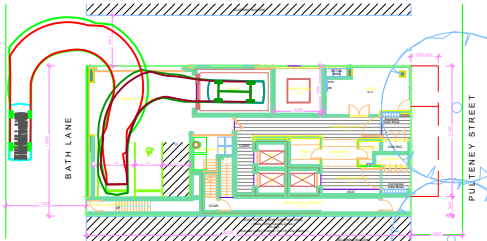
Enc

GROUND FLOOR - B85

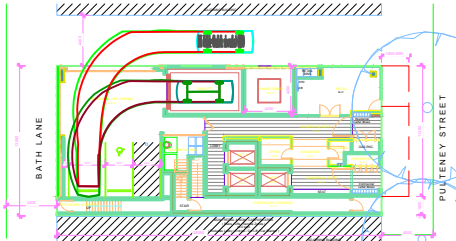
Entering

Exiting

Reverse

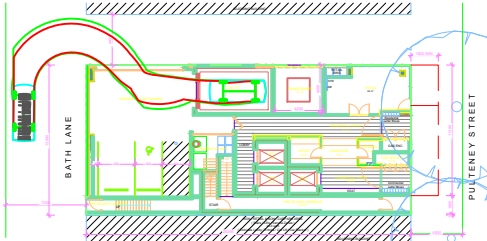


Entering waiting bay from the south along Bath Lane, reversing into lift

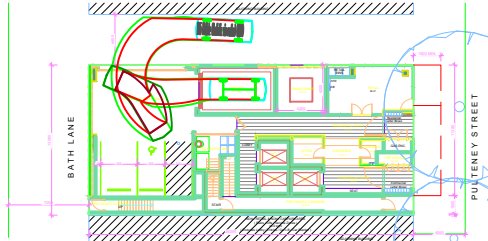


Entering waiting bay from the east along Bath Lane, reversing into lift

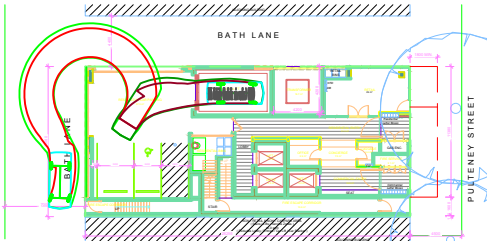
Forward



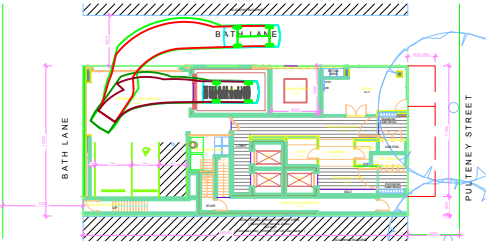
Entering lift forward from the south along Bath Lane



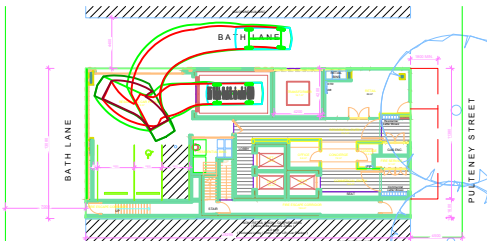
Entering lift forward from the east along Bath Lane



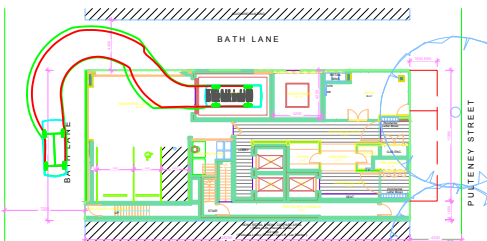
Reversing out of the lift to head south along Bath Lane



Reversing out of the lift to head east into Bath Lane



Exiting the lift forward to head east into Bath Lane



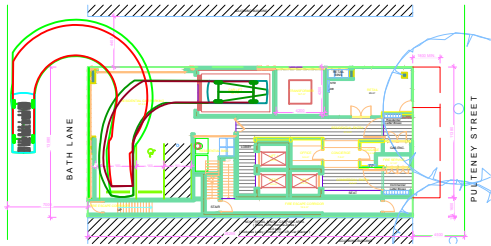
Exiting the lift forward to head south along Bath Lane

GROUND FLOOR - B99

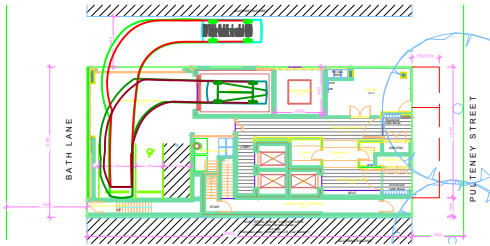
Entering

Exiting

Reverse

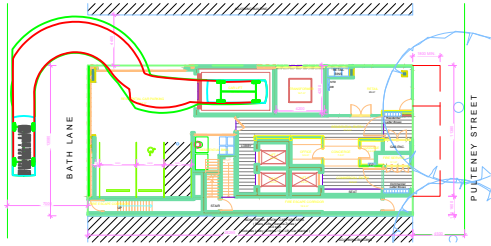


Entering waiting bay from the south along Bath Lane, reversing into lift

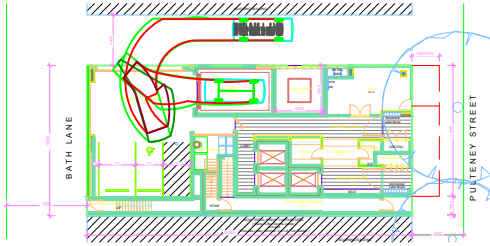


Entering waiting bay from the east along Bath Lane, reversing into lift

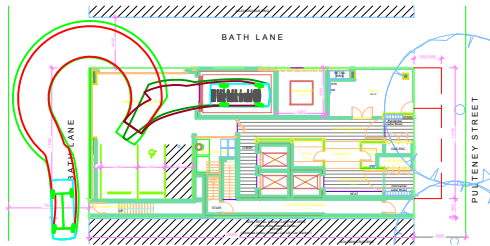
Forward



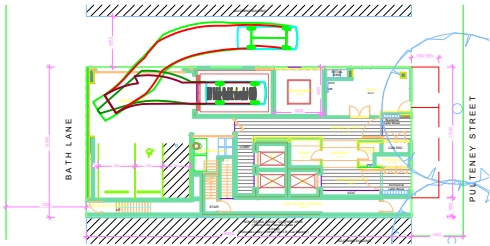
Entering lift forward from the south along Bath Lane



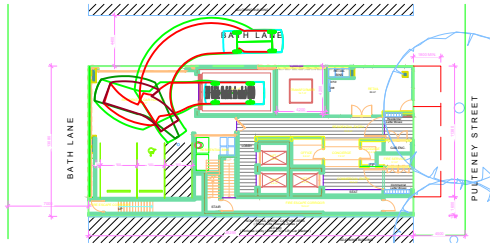
Entering lift forward from the east along Bath Lane (multiple turns - reverse back to Bath Ln)



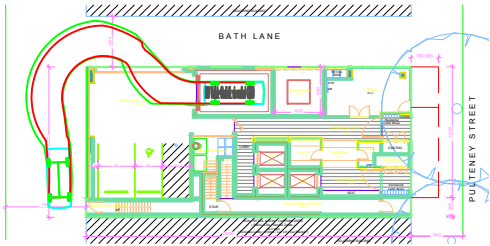
Reversing out of the lift to head south along Bath Lane



Reversing out of the lift to head east into Bath Lane



Exiting the lift forward to head east into Bath Lane (multiple turns)



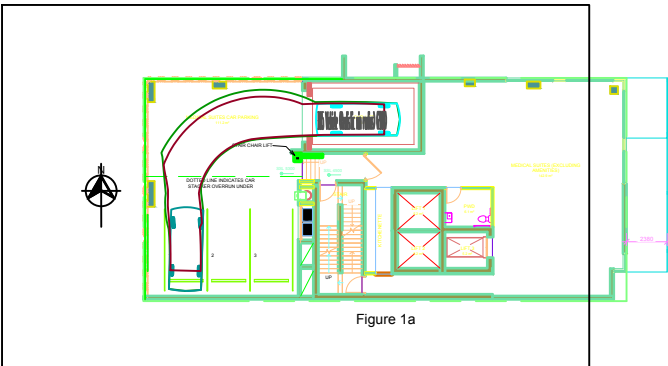
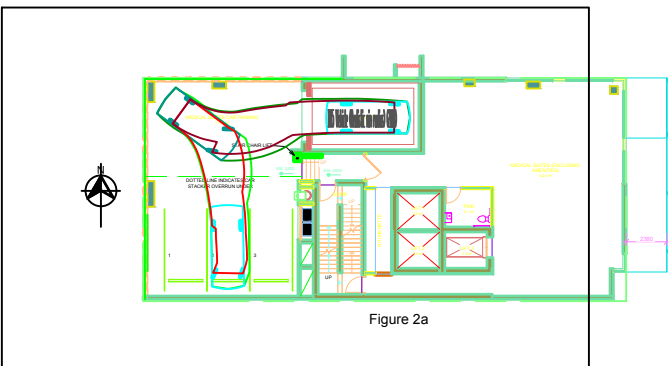
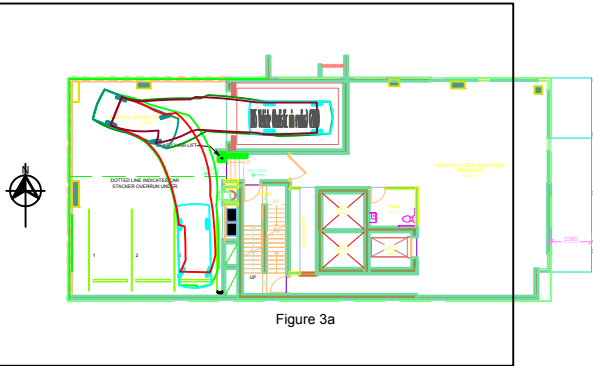
Exiting the lift forward to head south along Bath Lane

B85 - Upper levels

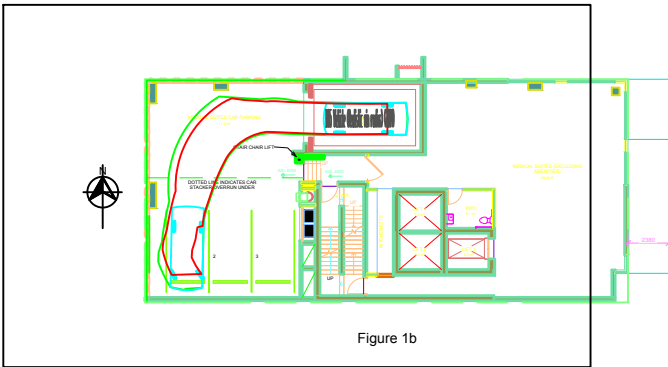
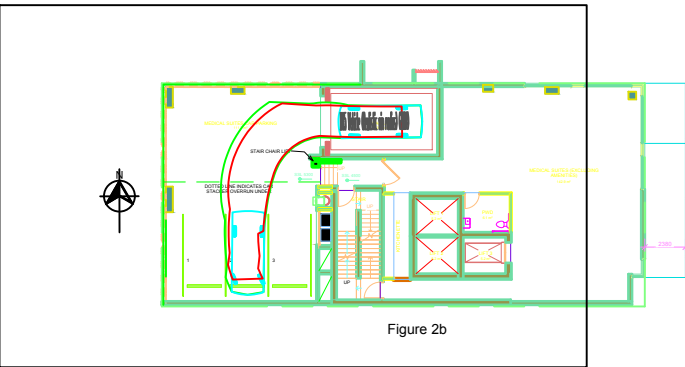
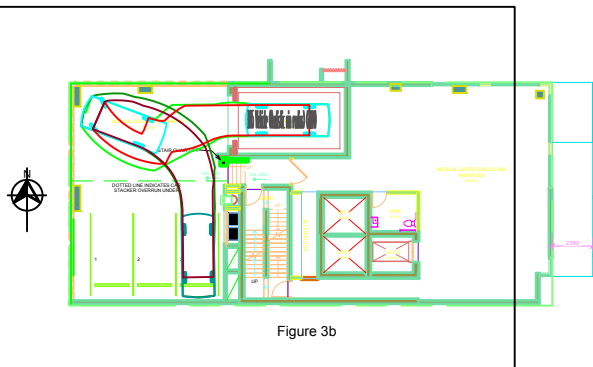
Park 3

Park 2

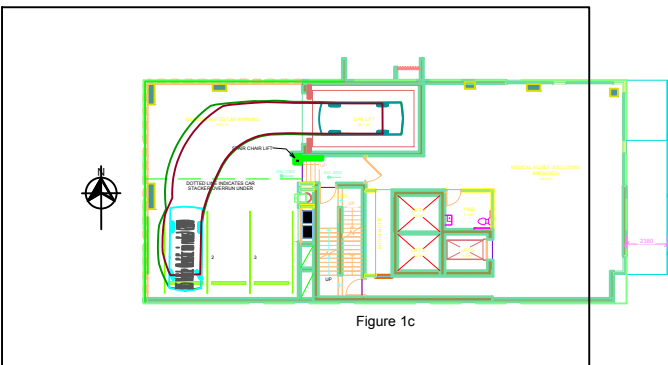
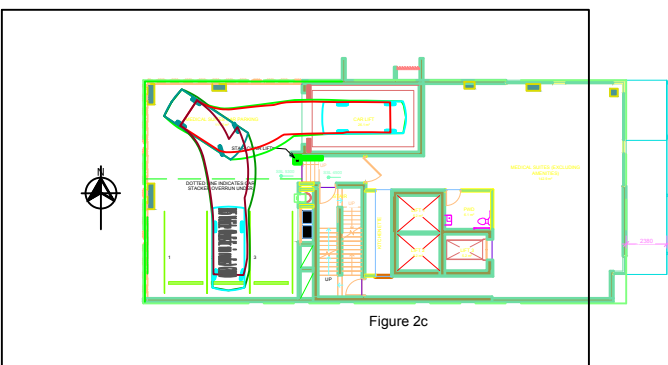
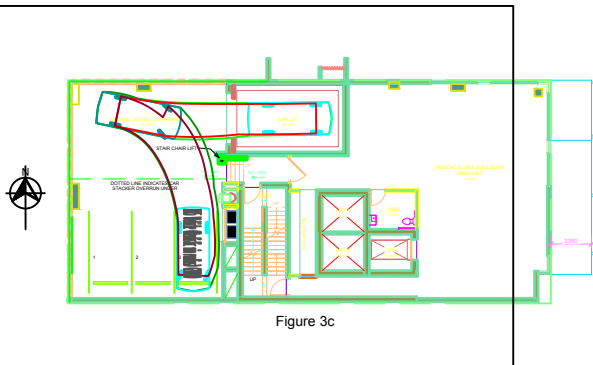
Park 1



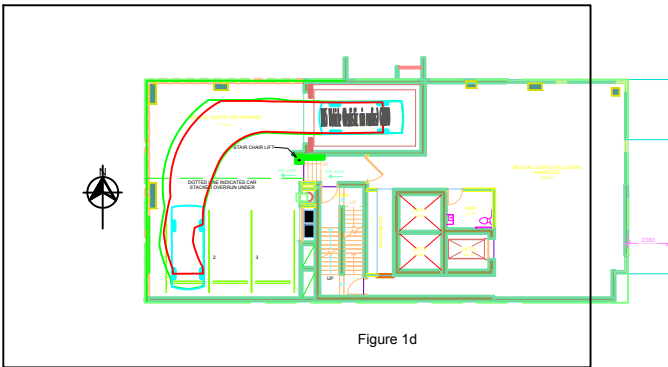
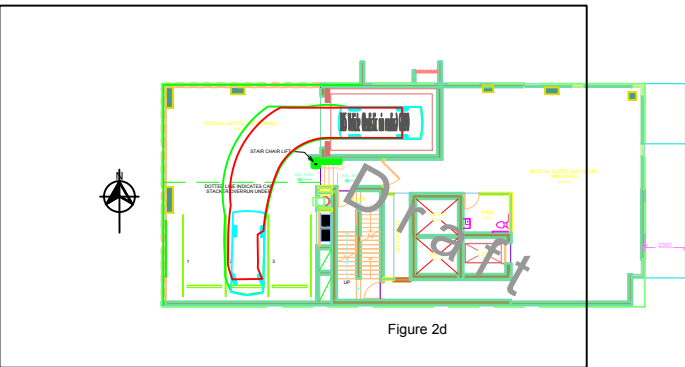
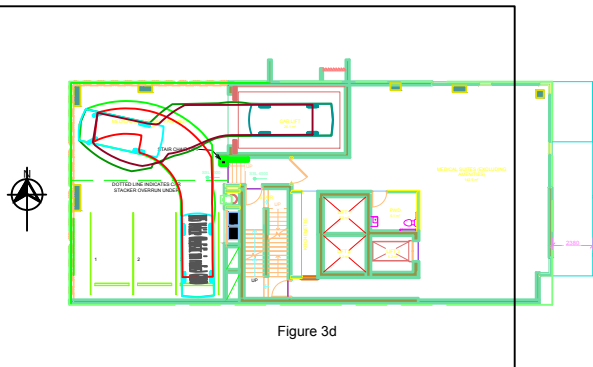
Reverse out of lift into park



Forward out of lift into park



Reverse out of park into lift



Forward out of park into lift



Leader in sustainable waste management and recycling solutions

261 – 263 Pulteney street

Submission for Waste Collection Services

Prepared by Veolia Environmental Services (Australia) Pty Ltd

April 2018





CONFIDENTIALITY CONDITIONS

- (a) All information whether oral, electronic, printed or graphic contained in this document or obtained by you from Veolia (**Information**) is confidential to Veolia and shall not be used by you other than for the purpose of reviewing this document and the proposal contained herein.
- (b) You shall not copy or reproduce any Information except when, and then only to the extent, reasonably necessary for the purpose of reviewing this document and the proposal contained herein.
- (c) Upon receiving notice that our proposal has not been accepted, and if notified by Veolia, you shall destroy, in a secure manner, this document and any Information.
- (d) You shall ensure that any employee or any other person to whom you supply the Information is bound by the terms of these conditions.



Louis Petridis
Level 1, 276 Pirie Street,
Adelaide

Dear Louis,

Veolia is pleased to submit the following Waste Management Plan for the proposed development located in 261-263 Pulteney street, Adelaide.

Veolia will have a strong focus on diverting your waste streams to recycling centres to work towards achieving cost minimisation and increasing diversion from landfill by implementing the following systems:

- Liquid Waste – recycled through our liquid plant.
 - Various sizes
- Organics Bin – all food material from kitchens
 - 240ltr MGB
- General Waste – for all contaminated wet waste streams
 - 1100ltr MGB
- Dry recycling – recycled through IWS recycling centre
 - 1100ltr MGB
- Education Material to help reduce contamination

*All these services are in line with the Adelaide City Council residential recycling plan.

Please see a copy of the waste management plan below for your consideration. I am confident Veolia can implement the above services and systems to work towards achieving cost minimisation and supply the waste management services in a safe & environmentally friendly manner.

We look forward to working with you throughout this process and into the future. Should you require additional information or clarification relating to this document, please do not hesitate to contact myself on 0419 301 449.

Regards

Anton Ianni
Account Manager



Executive Summary

Veolia's aim is to deliver viable collection, handling and transport of all waste streams for all sites whilst diverting 100% of its waste streams through a recycling process.

263-261 Pulteney street Development are also mindful of promoting the correct management of its waste by decreasing the amount of waste going to landfill and increasing the quantity of waste that is recyclable through a "value for money" service.

Veolia Environmental Services (Veolia) is Australia's leading provider of environmental waste management services to industry, commerce and the public. We have worked closely with government, industry and commerce for over 42 years to satisfy people's essential daily needs while respecting natural resources. Our strong and stable management team have taken the organisation from a small operation in 1969 to the current Australia-wide and international network generating Australian revenues in excess of \$700 million per annum from in excess of 100 operating sites.

Veolia is the Australian waste management, industrial cleaning and resource recovery division of the global company Veolia Environnement (VE), generating revenue in excess of AUD \$55 billion annually.

The worldwide strength of Veolia is underpinned by a strategy of long-term investment, continuous innovation and mutual partnering with our customers. Veolia works in partnership with nationally aligned accounts such as Coles, Spotless and Health Scope. Locally, Veolia has forged strong working partnerships with ISS, Burnside Village, Makris Corporation and performs municipal services for Councils such as Mt Barker, Pt Augusta, Whyalla and Pt Lincoln. Veolia has significant experience within the Local Government sector throughout Australia in areas of environmentally recognised and sustainable waste management and recycling services.

This experience enables Veolia to provide the suite of services required by 261 - 263 Pulteney street development, whilst maintaining the necessary standards of environmental health and safety compliance. Veolia is proud of its commitment and compliance to all aspects of Quality, Occupational Health Safety & Welfare and Environmental Management Systems to support our commitment to sustainable development.

Our proposal recognises the need to address the disposal of all waste streams generated from each area of 261-263 Pulteney street development. Our model will focus on effective waste minimisation strategies, including the recycling or beneficial re-use of product wherever appropriate at extremely competitive rates. Veolia has adopted the principle of 'World's Best Practice' and is dedicated to achieving the highest standards in our field.



***Reductions in
landfill will reduce
Carbon Gas
Emissions and
result in lower
costs.***

In the waste management sector, disposal of biodegradable waste will ultimately attract a higher landfill cost at poorly run landfill operations. Government and commerce are becoming increasingly aware of the environmental and economic benefits of sorting all waste streams to recover high yields of recyclable waste. The increased recycling of plastics, paper, cardboard, waste oily waters, sludges, greases and other recyclable materials will improve 261 – 263 Pulteney street life-cycle Greenhouse Gas (GHG) Emissions and ecological footprint. Veolia can provide monthly reports on GHG emission savings, in addition to data on volumes and weights diverted from landfill.

A major component of our proposal provides for not only the minimisation of waste, but more importantly for the diversion from landfill to our recycling facility to ensure where possible 100% of your waste streams are diverted through the recycling process. This is the key to supporting 261-263 Pulteney street commitment to sustainable development and will also assist in the better management of costs. Veolia believes in conducting regular audits of its waste segregation management system to ensure that it complies with 261-263 Pulteney street environmental directives. The evaluation of the effectiveness of this system may be monitored through regular agreed KPI reporting.

The impact of the Australian Carbon Tax on the 261 – 263 Pulteney operations, including the area of waste management, will conceivably be significant. In this resource and carbon constrained world, it is important that 261-263 Pulteney street develops a waste and recycling management program and aligns with an environmental service provider who is strategically positioned to help 261-263 Pulteney street mitigate its environmental footprint.



Cost savings.

Minimise waste to landfill.

A dedicated contract manager focused on exceeding your expectations

The key characteristics of our proposal are:

Deliver Long Term Cost Savings: Through a structured program focusing on waste diversion from conventional landfill, Veolia can deliver cost savings through lower disposal costs across 261 – 263 Pulteney street development. With waste now included in the Australian Carbon Tax, waste sent to conventional landfills will attract a significantly higher carbon emissions penalty than material going through Veolia's resource recovery facilities.

Towards Zero Waste to Landfill: Veolia provides access to various technologies developed both locally and overseas, which are already proven within the Veolia Group. Our proposal offers solutions that address a range of environmental concerns, with the primary focus being the diversion of waste from landfill to a recycling centre. Some sample environmental credentials afforded to 261-263 Pulteney street development include:

- Implement Organics Recycling
- Zero Waste Approved Facility
- Implement Dry Recycling (Rear lift bins)
- Periodical audits performed to promote best practice

One Contact: Veolia is able to provide a dedicated Waste Services Team and we will assign a major account executive to 261-263 Pulteney street development. This provides one point of contact for 261-263 Pulteney street development to monitor waste expenditure costs and recycling performance, enabling real improvements in both over the life of the contract. Veolia will provide one phone number to 261-263 Pulteney street development for all enquiries and this will be operational 24 hours a day, 7 days a week.

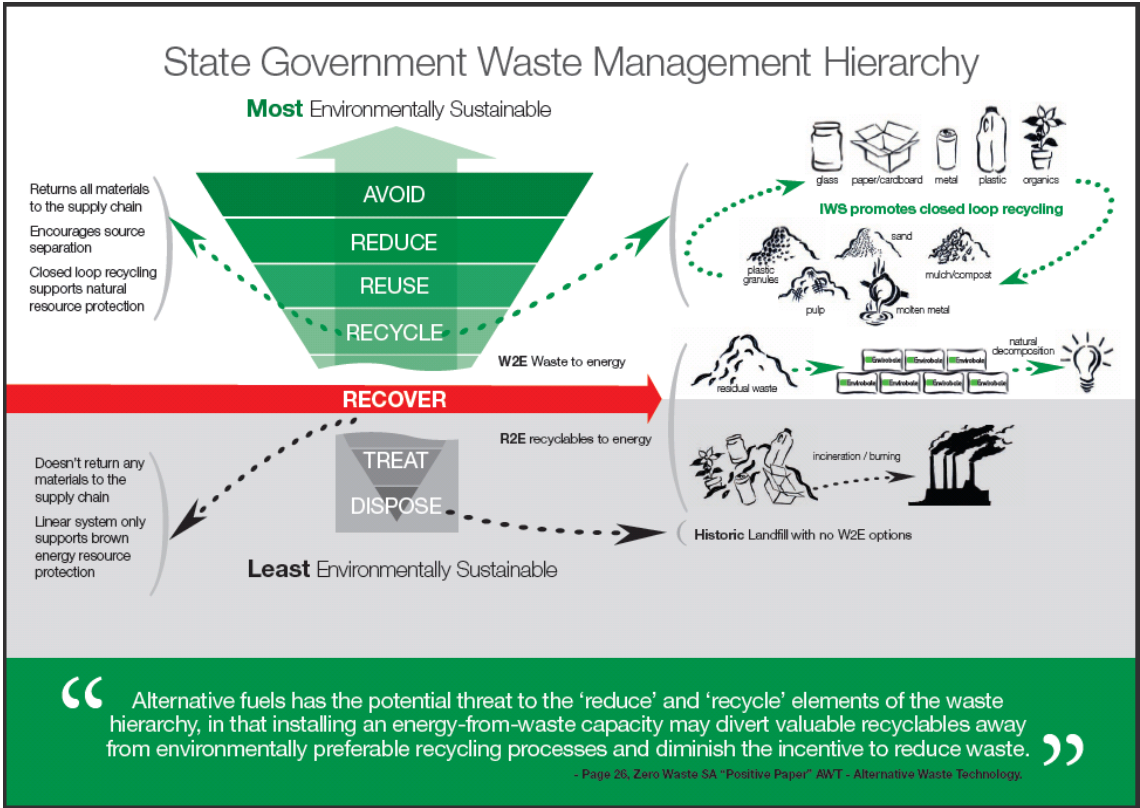
Leading Edge Reports: A monthly national report, which not only captures recycling and waste data, but calculates waste related Greenhouse Gas Emissions and savings from transport and waste disposal is available on a monthly basis for 261-263 Pulteney street development.

We are also able to provide reporting based on:

- Cost Centre volumes and costs, waste volumes & weights, waste types, recycling volumes, recycling types, disposal costs etc.
- A feature of our reporting will be a Green House Gas (GHG) calculation, which will detail what impact 261-263 Pulteney street development has had on the environment and the benefits they have delivered through increased recycling.



Educational Material: Veolia can supply a full range of educational material to help understand and increase the recycling outcomes.



1. Waste Management Hierarchy

Recyclepak

Maximum diversion of resources from burning alternative fuels and historic landfill disposal.

ASK FOR A SITE TOUR OF IWS TODAY!

IWS Recycling Centre Capability Statement and Reporting

Dry Recyclables Process Mechanically pre-sorted and then processed through the IWS Recycling Centre. Recycling Performance 90% of the recyclable content* is extracted by weight. Residual content is largely in garbage bags and is putrescible which cannot be opened due to OHS risks. Presentation to IWS Can contain between 0-30% residual waste by weight due to limited source separation. ☒ Recyclable Content ☒ Zero Waste SA ☒ Recycle at work*	Comingled Recyclables Process Directly processed through the IWS Recycling Centre. Recycling Performance 98% of the recyclable content* is extracted by weight. Residual content is dropped out by screen and largely contains broken glass and food fines which are removed before passing through manual sorting room due to OHS risk management. Presentation to IWS Can contain between 0-15% residual waste by weight, limited contamination due to high level of source separation. ☒ Recyclable Content ☒ Zero Waste SA ☒ Recycle at work*	Mixed Paper & Cardboard Process Directly processed through the IWS Recycling Centre. Recycling Performance 100% of the recyclable content* is processed directly into mixed paper and cardboard baling. Presentation to IWS Required to be 100% paper and cardboard. ☒ Recyclable Content ☒ Zero Waste SA ☒ Recycle at work*	Food & Garden Organics Process Processed through the IWS Composting Process. Recycling Performance 98% of the recyclable content* is extracted by weight. Residual content is dropped out by screen and largely contains broken glass and plastic fines. Presentation to IWS Required to be 100% food organics. ☒ Recyclable Content ☒ Zero Waste SA ☒ Recycle at work*	General Waste Process Putrescible waste processed through carbon efficient Envirobale® System. Recovery Performance Compacted into waste bales and placed in a modular balefill where methane is extracted and converted to energy. Presentation to IWS Contains mixed general waste, no source separation occurs. ☒ Envirobale®	Mixed Waste Process Mechanically pre-sorted and then processed through the IWS Recycling Centre. Recycling Performance 90% of the recyclable content* is extracted by weight. Residual content is dropped out by screening and is minimal by weight due to the high density of recyclables e.g. brick/dirt. Presentation to IWS Can contain between 0-10% residual waste by weight, limited contamination due to source separation and high density of recyclables. ☒ Recyclable Content
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VEOLIA
ENVIRONMENTAL SERVICES

500 Churchill Road
Kilburn, SA 5084
Telephone: 08 8260 2122
Email: sa@veolia.com.au

***Recyclable Content**
(no hidden recycling content in fuels)
C&D: Mixed paper, mixed cardboard, mixed plastic, small timber and green organics, food organics, small metals.
C&D: All C&D recyclable content materials listed, large timber and organics, large metals, soil, brick and concrete.

***Zero Waste SA Recycle at Work**
IWS Recycling Centre is a ZWSA Recycle at Work Program Accredited Facility.

INTEGRATED WASTE SERVICES

Lot 254 Cnr Hines and Wingfield Roads
Wingfield SA 5013
Telephone: 8243 2644
Facsimile: 8243 1299
Email: iws@iwsgrp.com.au
www.iwsgrp.com.au

Printed on 100% recycled paper



2. Recycle Pak – Maximise diversion from landfill with the correct receptacles.

Triple National Certification: 261 – 263 Pulteney street development will have peace-of-mind that their waste is being collected, recycled and disposed of in a safe and environmentally compliant manner. This is backed up by our highly enviable triple certification of ISO 14001 (Environment), ISO 9001 (Quality) and AS 4801 (Safety) management systems.



Award Winning Business: Veolia is the recipient of the Australian Business Award for Environmental Sustainability.



Veolia is also an Australian Quarantine and Inspection Service accredited service provider. The strategic direction of Veolia is one of continuous improvement in environmental technologies for the handling, processing and treatment of waste as well as improvements in education and environmental awareness programs for our customers.

As the organisation has grown, it has earned a reputation for quality, reliability, customer service and commitment to sustainable development based on 'World's Best Practice'. We look forward to working with 261-263 Pulteney street development throughout this period and into the future. Should you require additional information or clarification relating to this document, please do not hesitate to contact myself on (08) 132 955.

Anton Ianni

Account Manager SA

Waste Management Plan – Apartment/Retail/commercial Refuse Area

261-263 Pulteney street, Adelaide

Subject	Details																																																																																		
Development Details	Residential apartments (72x Apartments with 112x bedrooms)																																																																																		
Type of waste Streams & Bin Sizes	Bin room - Organics Bin – All food material from residents 2 x 240ltr MGB 3x per week - General Waste – For all Contaminated/non recyclable waste 1 x 1100ltr MGB 4x per week - Recycling – 1 x 1100ltr MGB 3x week **Please refer to waste generation table attached Bin Dimensions: <table><tr><th colspan="7">Rear Lift Bins (Size Matrix)</th></tr><tr><th>Bin Size (Ltrs)</th><th>Wheel Diameter</th><th>Max weight in Bin</th><th>Bin Weight</th><th>Height (mm)</th><th>Width (mm)</th><th>Depth (mm)</th></tr><tr><td>140</td><td>200</td><td>48kg</td><td>11.4kg</td><td>920</td><td>535</td><td>640</td></tr><tr><td>240</td><td>200</td><td>96kg</td><td>15.5kg</td><td>1060</td><td>580</td><td>730</td></tr><tr><td>660</td><td>200</td><td>265kg</td><td>45kg</td><td>1200</td><td>1360</td><td>770</td></tr><tr><td>1100</td><td>200</td><td>440kg</td><td>58kg</td><td>1390</td><td>1360</td><td>1090</td></tr></table> Rear lift Truck Dimensions: <table><tr><th colspan="8">Rear Lift Truck Specifications</th></tr><tr><th>Size</th><th>length (mtrs)</th><th>width (mtrs)</th><th>height (Mtrs)</th><th>Operating Clearance</th><th>Turning Circle (Mtrs)</th><th>Gross Vehicle Mass (GVM)</th><th>Tare weight</th></tr><tr><td>4x2</td><td>8.65</td><td>2.20</td><td>3.10</td><td>NA</td><td>15.00</td><td>14t</td><td>9.67t</td></tr><tr><td>6x4</td><td>10.10</td><td>2.50</td><td>3.30</td><td>NA</td><td>15.30</td><td>22.5t</td><td>12t</td></tr><tr><td colspan="2">Notes</td><td colspan="6"></td></tr></table>	Rear Lift Bins (Size Matrix)							Bin Size (Ltrs)	Wheel Diameter	Max weight in Bin	Bin Weight	Height (mm)	Width (mm)	Depth (mm)	140	200	48kg	11.4kg	920	535	640	240	200	96kg	15.5kg	1060	580	730	660	200	265kg	45kg	1200	1360	770	1100	200	440kg	58kg	1390	1360	1090	Rear Lift Truck Specifications								Size	length (mtrs)	width (mtrs)	height (Mtrs)	Operating Clearance	Turning Circle (Mtrs)	Gross Vehicle Mass (GVM)	Tare weight	4x2	8.65	2.20	3.10	NA	15.00	14t	9.67t	6x4	10.10	2.50	3.30	NA	15.30	22.5t	12t	Notes							
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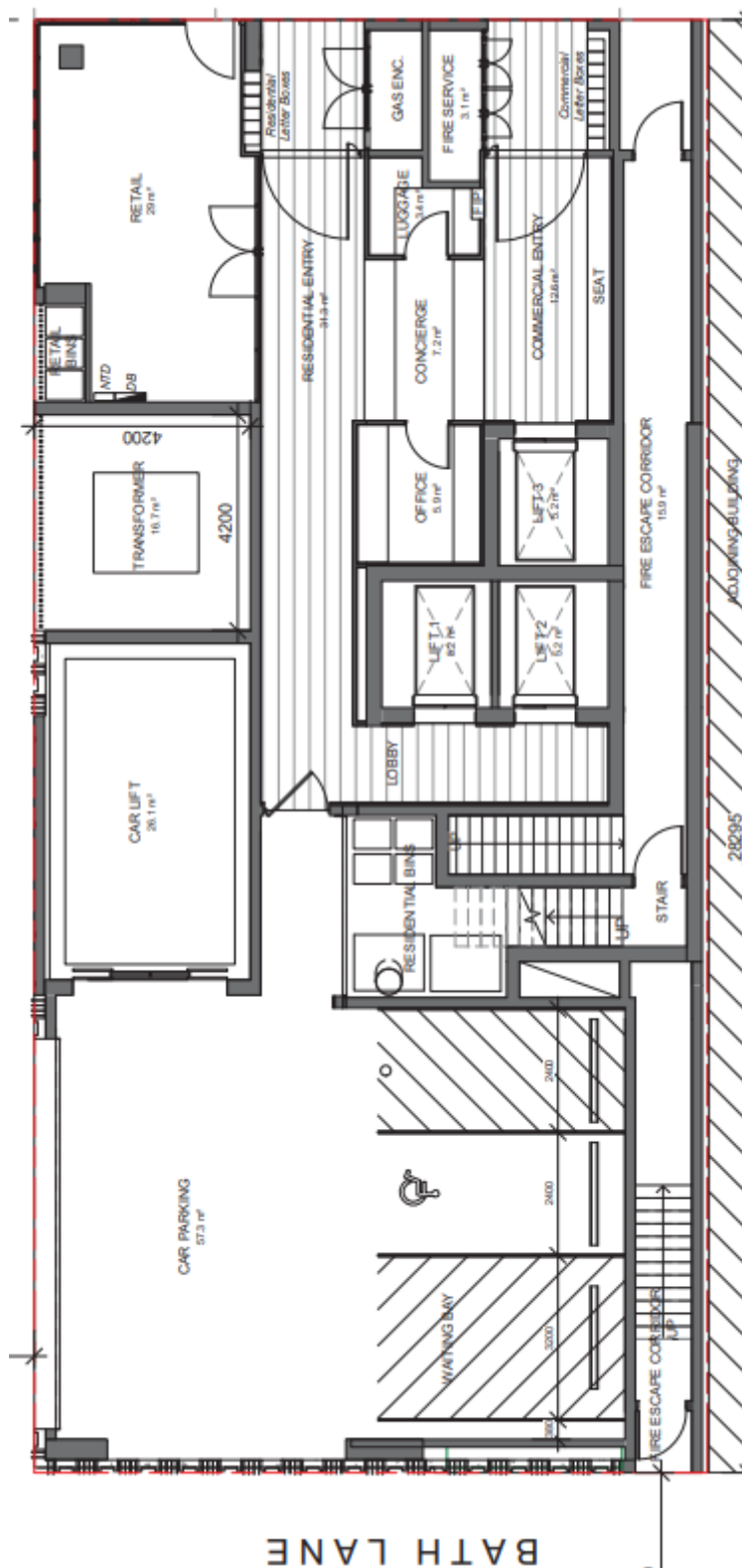
	Residential apartments (72x Apartments with 112x Bedrooms)
Service Frequency & Waste Volumes	General Waste (30ltr per bedroom required) - Volume – 3920ltr per week 1 x 1100ltr bins - Service schedule 4x per week = 4400ltr capacity Dry Recycling (20ltr per bedroom required) - Volume – 2800ltr per week 1 x 1100ltr bins - Serviced 3x per week = 3300ltr capacity Organics (10ltr per bedroom required) - Volume – 1120ltr per week 2x 240ltr bins - Serviced schedule 3x per week = 1440ltrs capacity – <u>6m3 per year</u>. (Need to allow room for this to be stored. (no bin) Council collection
Bin Storage Locations & movement of bins	- Bins will be stored in the ground level bin waste room. The bins will be clearly labelled with signage encouraging the tenants to recycle as much as possible. ** As per plan attached. - The bins will be managed by the Cleaners/Facility Manager– the bins will be serviced via Pulteney Street. Brought out by the Building supervisor. - Bin storage area needs to be large enough to store bins allocated above. Approx. 3m2
Collection Points	Waste & Recycling A waste truck will service bins from loading zone on Pulteney. Bins to be brought to kerb.
Specialised Facilities & Equipment	There will be no specialised equipment for this project
Account Management & Customer Education	If awarded the waste contract, Veolia will have a dedicated Account Manager to oversee the waste management services for the 261-263 Pulteney street development. We can supply signage to help achieve improved recycling.

Waste Management Plan – Retail/Commercial Refuse Area

261-263 Pulteney Street

Subject	Details
Development Details	261-263 Pulteney street – Commercial & Retail
Type of waste Streams & Bin Sizes	<u>Commercial 578.8m2 total commercial space</u> Bin area (will be on commercial floors, and brought to kerb by building for service) • General Waste – For all Contaminated/ non recyclable waste ○ 4 x 240ltr MGB (one on each floor) • Recycling – ○ 4 x 240ltr MGB (one on each floor) <u>Retail – 29m2</u> Bin area (will be on commercial floors, and brought to kerb by building for service) • General Waste – For all Contaminated/non recyclable waste ○ 1 x 240ltr MGB • Recycling – ○ 1 x 240ltr MGB Space needed for bins storage should be able to store 3x 240L MGB bins (extras space for unknown tenant)
Service Frequency & Waste Volumes	<u>Commercial</u> General Waste ○ Volume – 868.2ltr per week ○ 4 x 240ltr bins (1 on each level) ○ Service schedule 1x per week = 960ltr capacity Dry Recycling ○ Volume – 868.2ltr per week ○ 4 x 240ltr bins (1 on each level) ○ Serviced 1x per week = 960ltr capacity <u>Retail</u> General Waste ○ Volume – 101.5ltr per week ○ 1 x 240ltr bins ○ Service schedule 1x per week = 240ltr capacity Dry Recycling ○ Volume – 101.5ltr per week ○ 1 x 240ltr bins ○ Serviced 1x per week = 240ltr capacity

Bin Storage Locations & movement of bins	• Retail bins will be stored in the ground level bin Waste room. The Commercial bins will be stored in waste area, two bins per level. • clearly labelled with signage encouraging the restaurant staff to recycle as much as possible. **As per plan attached • The bins will be managed by the Cleaners/Facility Manager– the bins will be serviced via Pulteney Street • Bin storage area needs to be large enough to store bins allocated above. 2-3 m2
Collection Points	Waste & Recycling • A Veolia truck will service the Waste room and park on 261-263 Pulteney street, bins to be on kerb
Specialised Facilities & Equipment	• There will be no specialised equipment for this project
Account Management & Customer Education	• If awarded the waste contract, Veolia will have a dedicated Account Manager to oversee the waste management services for the Market St development. We can supply signage to help achieve improved recycling.



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Terms & Conditions

1. Definitions

'Agreement' means the agreement and the terms set out in this document.

'Contract Price' means the Contract Price as specified in this document or, if no Contract Price is specified, means the total of the Service Fees multiplied by the corresponding quantities of the Services supplied for the term of the Agreement plus all adjustments and costs in accordance with this Agreement.

'Equipment' means all containers and other plant and equipment supplied by Veolia for or under this Agreement, all of which remain the property of Veolia.

'Site' means those of the Client's premises at which the Services are carried out, and includes any new premises that the Client may relocate to for any reason.

'Service Fee' means the specified rate, price or lump sum amount for the performance of each item of the Services, as adjusted in accordance with this Agreement.

'Services' means all services of the type and nature as described in this Agreement.

2. Client Responsibilities

The Client agrees:

2.1 Service

- (a) that Veolia has the exclusive right to supply all Services to the Site;
- (b) to provide Veolia with reasonable opportunity to offer to provide Services to the Client at premises other than the Site;
- (c) to promptly inform Veolia of any change in the Client's Services' requirements;
- (d) to disclose to Veolia all information in the Client's possession relevant to the provision of the Services;
- (e) to comply with all legal requirements and the requirements of all relevant regulatory authorities relating to the Services;
- (f) that Veolia has the right to suspend the provision of the Services in the event of non-payment for the same by the Client;

2.2 Equipment

- (a) to use the Equipment only for its proper and intended purpose;
- (b) to provide Veolia such access to the Equipment and the Site as is reasonably required to enable Veolia to provide the Services safely and in accordance with this Agreement;
- (c) to maintain the cleanliness of the Equipment;
- (d) not to damage, deface or remove identifying marks from the Equipment;
- (e) to report to Veolia immediately any damage to, misuse of, or unsafe, Equipment;
- (f) to reimburse Veolia for the cost of any stolen Equipment, whether from the Site or the vicinity of the Site;

2.3 Service

- (a) to ensure that all waste supplied for collection is of the type or nature specified in this Agreement and, unless otherwise agreed by Veolia, uncompacted;
- (b) not to overload the Equipment (either by weight or volume)

2.4 Payment

- (a) to pay Veolia:
 - (i) the Contract Price as a debt due and payable to Veolia upon signing of the Agreement, such debt to be paid by monthly instalments payable over the term of this Agreement; and
 - (ii) any adjustments made by Veolia in accordance with this Agreement; and
- (b) any and all amounts invoiced in accordance with this Agreement must be paid within 14 days from the date of the invoice; and
- (c) if this Agreement is renewed, that the provisions of clause 2.4(a) will apply upon renewal to the Contract Price payable in respect of such renewed period.

2.5 Assignment

not to assign its interest under this Agreement without the prior written consent of Veolia.

3. Veolia Responsibilities

Veolia shall perform the Services in accordance with this Agreement.

4. Liabilities

4.1 Additional Charges and Fee Increases

The Client acknowledges that amounts payable by it to Veolia under this agreement may be adjusted from time to time by Veolia, acting reasonably, as a result of:

- (a) Veolia having incurred extra costs or suffered loss and damage as a result of a breach by the Client of its responsibilities under this Agreement;
- (b) the actual weight of the waste the subject of the Services exceeding the estimated weight thereof;
- (c) a change in the nature, density, quantity or timing of the Services (including any change in the type, density, weight or quantity of the waste the subject of the Services);
- (d) any increase in the Service Fees as a result of:
 - (i) any increase in the Adelaide All Groups CPI;
 - (ii) any increase in the cost of the performance of Veolia's obligations under this Agreement (including labour costs, fuel, government taxes or charges, disposal fees); or
 - (iii) any other relevant circumstance.

Veolia undertakes to provide notice to the Client of any such increases.

4.2 Client Indemnity

The Client indemnifies Veolia against loss or damage to Veolia's property and against any claim or action which may be brought or made by any person against Veolia, its employees or agents in respect of personal injury or death of any person or loss of or damage to property caused by a negligent or wrongful act or omission of the Client, its employees, other contractors or agents.

The Client's liability to indemnify Veolia is reduced proportionally to the extent that Veolia, its employees, subcontractors or agents have contributed to the injury, death, loss or damage.

4.3 Veolia Liability

Veolia's liability at law is limited to:

- (a) the resupply of the Services; or
- (b) at Veolia's option, the payment of the cost of resupply of those Services.

Except for this and to the extent permitted by law, Veolia accepts no liability whatsoever for any claim for loss or damage of any kind without limitation. Veolia will not be liable for the non-performance of the Services caused by an act, omission or event beyond its control.

5. Term

5.1 The offer in this document is valid for fourteen (14) days from the date it is made.

5.2 The operation of the Agreement is subject to Veolia having first obtained a satisfactory credit check of the Client.

5.3 The term of this Agreement:

- (a) is an initial fixed period of three (3) years from the Contract Commencement Date ("Initial Period") specified in this Agreement, and thereafter, shall continue for successive fixed periods of three (3) years each, subject to termination in accordance with clause 6.1; or
- (b) where the Services comprise a one-off project, expires upon their completion.

5.4 The term of this Agreement continues regardless of whether the Client moves from one Site to another Site (New Site). In the event of such relocation, Veolia will provide the Services at the New Site, on the terms of this Agreement.

6. Termination

6.1 Either party may terminate the Agreement:

- (a) Immediately by written notice to the other where that other:
 - (i) becomes bankrupt, or insolvent, or becomes subject to external administration; or



Terms & Conditions

(ii) commits a substantial breach or default under the Agreement; or

(iii) repudiates the Agreement; or

(b) by giving to the other party no less than 60 days' written notice of intention to terminate, such notice to take effect at the end of the Initial Period or at the end of any further fixed period pursuant to clause 5.3.

6.2 If the Agreement is terminated by Veolia under clause 6.1(a) or by the Client under clause 6.1(b), the Client must pay Veolia the sum of:

(a) all monies due and payable under any invoices rendered but unpaid; and

(b) as liquidated damages, fifty per cent (50%) of the average monthly revenue for the number of months from termination until expiry of the then current term of the Agreement and which the Client agrees are a genuine pre-estimate of Veolia's loss. 'Average monthly revenue' is the average monthly gross amount paid or payable by the Client to Veolia under the Agreement.

7. Disputes

(a) If any dispute or difference arises between Veolia and the Client, other than pursuant to clause 6, it shall be referred to their respective representatives for resolution. In the event that the representatives are themselves unable to resolve the dispute, the representatives' superiors will attempt to resolve it speedily by negotiation and in good faith.

(b) In the event that Services are terminated or suspended pending resolution of a dispute under this Agreement, at Veolia's sole discretion Veolia's bin/s may remain on the Site and Veolia reserves the right to lock the bin/s until the dispute in question has been resolved or the Agreement terminated. In the event of termination, at Veolia's sole discretion, the bin/s may remain on the Site until payment of all liquidated damages, if applicable, in accordance with clause 6.2(b).



File No:
2014/11234/01

28 February 2018

Ref No:
12413285

Gabrielle McMahon
Principal Planner
Strategic Development Assessment
Planning and Development
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
Adelaide SA 5000

gabrielle.mcmahon@sa.gov.au

For the attention of the State Commission Assessment Panel (SCAP)

261 Pulteney Street, Adelaide

Further to the referral 020/0023/14A V1 received 1 February 2018 pertaining to the application to vary the development previously granted Development Consent DA 020/0023/14A at the above address and in my capacity as a Non-Mandatory referral in the State Commission Assessment Panel (SCAP), I would like to offer the following comments for your consideration.

The proposed changes to the basement level do not affect the building height, form or the architectural expression of the approved scheme, and as such do not raise any concern.

The proposed variation seeks to increase the floor to floor heights of the bottom five floors, resulting in the overall building height increase of 3.4 metres. I have no objection to the increased height, as the increase is minor, and the additional heights of levels one and four are proposed to accommodate studio spaces in lieu of car parking spaces to the eastern half of the floors. In my view, the variation in height does not affect the overall architectural expression as originally intended, and I welcome the provision of active use spaces along the Pulteney Street frontage.

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

DX 171

T- +61(0)8 8402 1884
E- odasa@sa.gov.au

The relocation of the core has resulted in amendments to the ground floor configuration. While I am concerned about the reduction of permeable frontage along the northern frontage, I support the proposal on balance, given the north east corner of the ground floor remains glazed for active use. Any further reduction of the permeable frontage will not be supported. I also note that the extent of the garage door on the northern elevation has significantly increased. Given its width, I recommend review of the materiality to better incorporate the garage door with the vertical expression of the surrounding facade.

The proposed variation seeks to amend the internal apartment planning to provide greater variety of apartment offerings, which I support in principle. However some



File No:
2014/11234/01

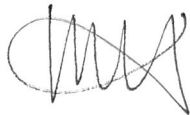
Ref No:
12413285

of the newly configured apartments are below the minimum sizes set by the Adelaide City Council Development Plan. I am also concerned that many of the balconies have been reduced in size and are also below the minimum sizes set by the Adelaide City Council Development Plan. The effect of reduced balcony sizes is further compounded by reduction of the rooftop communal space by half the original area. This is inconsistent with one of the mandatory sustainable measures for over-height development proposals, to provide private open spaces in excess of minimum requirements. I recommend review of the apartment typologies and layouts, including balcony sizes and layouts, to ensure a high level of residential amenity.

To ensure the most successful design outcome is achieved, the State Commission Assessment Panel may like to consider particular aspects of the project, which would benefit from protection as part of the planning permission such as:

- Review of materiality of the garage door on the northern elevation.
- Review of apartment and balcony layouts and sizes.

Yours sincerely



Kirsteen Mackay
South Australian Government Architect

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Government
of South Australia

From: [Shirai-Doull, Aya \(DPTI\)](#)
To: [Alliu, Yasmine \(DPTI\)](#)
Cc: [Chard, Rose \(DPTI\)](#)
Subject: 261 Pulteney Street 020/0023/14 V1
Date: Monday, 4 June 2018 12:37:41 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Yasmine,

This email is in response to the updated drawings and associated documents forwarded on 30 May 2018 to address some of the concerns outlined in the Government Architect's email response dated 17 April 2018.

Garage Door

I support the revised finish to the north facing garage door with vertical metal battens.
I recommend matching of the metal batten colour/finish to the surrounding metal cladding.
I also support the removal of the horizontal element above the garage door.

Balconies

I acknowledge the refinement of apartment and balcony layouts to increase balcony sizes.
I also acknowledge and support the reconfiguration of the rooftop deck to increase the usable area.
I strongly support the relocation of bicycle parking from the rooftop and consolidation bike parking spaces on Basement 1 level.
While I support the increase of balcony sizes in principle, I note that the majority of the increase were achieved by further increasing encroachment over site boundaries.
I support the proposed configuration on balance, provided that the encroachments are supported by the Adelaide City Council.

Kind regards,

Aya Shirai-Doull on behalf of Kirsteen Mackay (South Australian Government Architect)

Aya Shirai-Doull

Senior Design Advisor

Office for Design + Architecture SA

Department of Planning, Transport and Infrastructure

T 08 8402 1853 (internal 21853) • E aya.shirai-doull@sa.gov.au

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collaboration . honesty . excellence . enjoyment . respect

We acknowledge and respect Aboriginal peoples as South Australia's first peoples and nations, we recognise Aboriginal peoples as traditional owners and occupants of land and waters in South Australia and that their spiritual, social, cultural and economic practices come from their traditional lands and waters; and they maintain their cultural and heritage beliefs, languages and laws which are of ongoing importance; We pay our respects to their ancestors and to their Elders.

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From: Helen Dand <H.Dand@cityofadelaide.com.au>
Sent: Friday, 8 June 2018 2:48 PM
To: Alliu, Yasmine (DPTI)
Subject: RE: 020/0023/14A V1 261 Pulteney Street

Hi Yasmine

I have just had a response back from Traffic as below:

The applicant has addressed the concerns raised from a traffic perspective.

With regards to any outdoor dining and associated bollards indicated on the plans, the applicant should be made aware that this will be assessed by the Permits team who will also issue the relevant permit. For further details the applicant should contact the Customer Centre on 8203 7203 or email outdoordining@cityofadelaide.com.au

Kind Regards

Helen Dand
Principal Planner - Development Assessment
Planning Assessment
4th Floor 25 Pirie Street
Adelaide, South Australia, 5000
TEL: +61882037380
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E. H.Dand@cityofadelaide.com.au

Ten Gigabit
Adelaide



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From: Alliu, Yasmine (DPTI) [mailto:Yasmine.Alliu@sa.gov.au]
Sent: Thursday, 7 June 2018 2:11 PM
To: Helen Dand <H.Dand@cityofadelaide.com.au>
Subject: FW: 020/0023/14A V1 261 Pulteney Street

Hi Helen

Just found out this DA has to go to SCAP ... I know Council had 3 issues with this one. Any final comment

From: Helen Dand <H.Dand@cityofadelaide.com.au>
Sent: Monday, 30 April 2018 10:25 AM
To: Miller, Brett (DPTI); Jeff Bugeja
Subject: Council comments - 261 Pulteney Street - SCAP ref. 020/0023/14A V1

Good morning gentlemen

Thank you for your patience. Council's traffic team have now had the opportunity to view the amended details. There are no traffic/transport related objections to this development, subject to the following matters being addressed:

- Insufficient sight distance exists between the driveway exit and Bath Lane. Appropriate measures need to be implemented to address the sight deficiency here to enable the access to operate safely.
- Clarification is required on the provision of bicycle parking at ground level, as described by the traffic report, but not shown in the Architectural drawing set. Visitor bicycle parking at ground floor should be provided.
- Concern is raised about the potential for unwanted activity within the secluded space forward of the fire exit door to Pulteney Street.

Please contact Council with any queries or concerns.

Kind Regards

Helen Dand
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From: Miller, Brett (DPTI) [mailto:Brett.Miller@sa.gov.au]
Sent: Friday, 27 April 2018 10:02 AM
To: Jeff Bugeja <jeff@guavalime.com.au>
Subject: RE: 020/0023/14A V1



CITY OF
ADELAIDE

25 Pirie Street, Adelaide
GPO Box 2252 Adelaide
South Australia 5001

T (08) 8203 7203
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ABN 20 903 762 572

Enquiries: Helen Dand 8203 7380

Reference: S10/28/2014/A

7 March 2018

045



State Commission Assessment Panel
GPO Box 1815
Adelaide SA 5001

Attention: Robert Kleeman

Dear Mr Kleeman

Application: S10/28/2014/A
Applicant: LOUCAS ZAHOS ARCHITECTS
Address: 261-263 Pulteney Street, ADELAIDE SA 5000
Description: Demolish existing building and construct 23 level building comprising 68 apartments over 17 levels, retail tenancy on the ground floor, studio space on levels 2 and 3 plus a common use roof terrace together with associated car parking over 4 levels plus ground floor - Variation - reduce apartments from 68 to 66, re-configuration of apartments, addition of lift and car stacker, relocation of plant equipment and building services in basement, new retail tenancy to ground and new concierge entrance for commercial and residential levels with additional dedicated lift for commercial levels, and alterations to roof terrace.

Council has the following comment(s) to make on the above application:

TRAFFIC COMMENTS

- The car park design does not comply with the Standards for the following reasons:
 - AS2890.1 s3.5 states, "Access to mechanical parking installations such as car stackers, shall be by means of access driveways and circulation roadways designed in accordance with this Standard, and providing sufficient vehicle storage to ensure that queues of vehicles awaiting service by the installation do not extend beyond the property boundary of the parking facility under normally foreseeable conditions." There is no storage space available within the circulation area, which is required purely for manoeuvring. Additionally, it is unlikely that anyone approaching from the street would be able to identify and react to a vehicle exiting from the stacker or lift in such a way as to avoid needing to reverse back out to the street to allow them to exit. Whilst any vehicle is manoeuvring on the ground level, it is not possible for another vehicle to enter and any such vehicle will be required to wait on street. There is insufficient width on the adjacent street for one vehicle to store and another vehicle to pass and the road is under no stopping restrictions. A stopped vehicle present in the roadway would unreasonably prevent traffic movement.
 - The swept paths show multiple manoeuvres being required for a B85 vehicle to access a number of these spaces. Whilst the Standard anticipates that vehicles

larger than a B85 needing to make a 3-point turn if the manoeuvring space is the minimum allowable (AS2890.1 B4.8), it does not anticipate the number of multiple manoeuvres required of this design. The B85 is still the minimum design vehicle for the layout of parking spaces and parking aisles.

- There is insufficient sight distance for vehicles exiting the property to oncoming traffic and any pedestrians.
- The position of the driveway is in a "prohibited location" according to AS2890.1 figure 3.1
- None of the proposed parking spaces are accessible, or able to be made accessible, if required.
- Whilst the sections show that some bicycle parking is provided, this is not evident on any of the floor plans and it is unclear where and how many will be provided.

If you have any further enquiries relating to these comments, please contact Ms Trudy Angrave, Senior Transport Designer directly either by email t.angrave@cityofadelaide.com.au or by phone 8203 7032.

ENCROACHMENT MATTERS

Council had provided advice regarding encroachments on the original proposal. These comments stated:

- *"The glass canopies extending over the footpath have a height ranging between 3 – 3.7 metres above the footpath therefore complying with Council's Encroachment Policy*
- *The balconies also comply with Council's Encroachment Policy and are supported subject to further information regarding the treatment/materials used on the underside*
- *Feature blade wall elements over Bath Lane have a clearance of over 5 metres over the roadway and comply with Council's Encroachment Policy*
- *Feature fin elements on the southern end of the building over Bath Lane and Pulteney Street do not comply with Council's Encroachment Policy however they are authorised, by Council Administration, under delegation as a minor variation."*

Whilst we previously advised that the canopies met the Encroachment Policy, it appears that they exceeded the maximum height of 3.7 metres above the footpath. The variation now has both canopies located more than 4.5 metres above the footpath. This is contrary to Council's Encroachment Policy which states that canopies should be between 3 and 3.7 metres above the footpath. The canopies will only be supported if they meet the policy or, at a maximum, are located at the height as previously approved.

Yours faithfully

Rebecca Rutschack

MANAGER - PLANNING ASSESSMENT

5 June 2018

Yasmine Alliu
Department of Planning, Transport & Infrastructure
GPO Box 1815
ADELAIDE SA 5001

Dear Yasmine,

DEVELOPMENT NUMBER: 020/0023/14A V1
APPLICANT: 261 Pulteney Street Pty Ltd C/- Loucas Zahos Architects
NATURE OF DEVELOPMENT: Variation to DA020/0023/14A for a 23 level building
SUBJECT LAND: 261 PULTENEY STREET, ADELAIDE, SOUTH AUSTRALIA, 5000

The application has been assessed and at a height of RL 122.175m AHD will not infringe the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations.

Crane operations associated with construction shall be the subject of separate application. Adelaide Airport Limited requires 48 days prior notice of any crane operations during the construction. Crane assessment may require approval in accordance with the Airports Act Protection of Airspace Regulations 1996

Restrictions may apply to lighting illumination. Any lighting proposed shall conform to airport lighting restrictions and shall be shielded from aircraft flight paths.

Should you require any additional information or wish to discuss this matter further please contact the undersigned on 8308 9245.

Yours sincerely,



Brett Eaton
Airside Operations Manager

THE RELEVANT DEVELOPMENT PLAN PROVISIONS

Adelaide (City) – consolidated 20 June 2017

CAPITAL CITY ZONE

Introduction

The Desired Character, Objectives and Principles of Development Control that follow apply in the whole of the Capital City Zone shown on [Maps Adel/17 to 20, 23 to 26 and 29 to 31](#). They are additional to those expressed for the whole of the Council area and in cases of apparent conflict, take precedence over the more general provisions. In the assessment of development, the greatest weight is to be applied to satisfying the Desired Character for the Zone.

DESIRED CHARACTER

This Zone is the economic and cultural focus of the State and includes a range of employment, community, educational, tourism and entertainment facilities. It is anticipated that an increased population within the Zone will complement the range of opportunities and experiences provided in the City and increase its vibrancy.

The Zone will be active during the day, evening and late night. Licensed entertainment premises, nightclubs and bars are encouraged throughout the Zone, particularly where they are located above or below ground floor level to maintain street level activation during the day and evening.

High-scale development is envisaged in the Zone with high street walls that frame the streets. However an interesting pedestrian environment and human scale will be created at ground floor levels through careful building articulation and fenestration, frequent openings in building façades, verandahs, balconies, awnings and other features that provide weather protection.

In important pedestrian areas, buildings will be set back at higher levels above the street wall to provide views to the sky and create a comfortable pedestrian environment. In narrow streets and laneways the street setback above the street wall may be relatively shallow or non-existent to create intimate spaces through a greater sense of enclosure. In the Central Business Policy Areas, upper level setbacks are not envisaged.

Non-residential land uses at ground floor level that generate high levels of pedestrian activity such as shops, cafés and restaurants will occur throughout the Zone. Within the Central Business Policy Area, residential land uses at ground level are discouraged. At ground level, development will continue to provide visual interest after hours by being well lit and having no external shutters. Non-residential and / or residential land uses will face the street at the first floor level to contribute to street vibrancy.

New development will achieve high design quality by being:

- (a) **Contextual** – so that it responds to its surroundings, recognises and carefully considers the adjacent built form, and positively contributes to the character of the immediate area.
- (b) **Durable** – by being fit for purpose, adaptable and long lasting, and carefully considers the existing development around it.
- (c) **Inclusive** – by integrating landscape design to optimize pedestrian and cyclist usability, privacy, and equitable access, and also promote the provision of quality spaces integrated with the public realm that can be used for access and recreation and help optimize security and safety both internally and into the public realm, for occupants and visitors alike.
- (d) **Sustainable** – by integrating sustainable systems into new buildings and the surrounding landscape design to improve environmental performance and minimise energy consumption.
- (e) **Amenable** – by providing natural light and ventilation to habitable spaces.

Contemporary juxtapositions will provide new settings for heritage places. Innovative design is expected in areas of identified street character with an emphasis on contemporary architecture that responds to site context and broader streetscape, while supporting optimal site development. The addition of height, bulk and massing of new form should be given due consideration in the wider context of the proposed development.

There will also be a rich display of art that is accessible to the public and contextually relevant.

Adelaide's pattern of streets and squares

The distinctive grid pattern of Adelaide will be reinforced through the creation of a series of attractive boulevards as shown on Concept Plan [Figures CC/1 and 2](#). These boulevards will provide a clear sense of arrival into the City and be characterised by buildings that are aligned to the street pattern, particularly at ground level.

Views to important civic landmarks, the Park Lands and the Adelaide Hills will be retained as an important part of the City's charm and character.

The City's boulevards, terraces and Squares will be developed as follows:

- (a) North Terrace will be reinforced as an important pedestrian promenade and cultural boulevard that provides an important northern edge to the City square mile.
- (b) King William Street will be enhanced as the City's principal north-south boulevard and will be reinforced as the City's commercial spine.
- (c) Grote Street-Wakefield Street will be enhanced as the City's principal east-west boulevard and will be developed to provide a strong frame that presents a sense of enclosure to the street.
- (d) East Terrace will be characterised by buildings that maximise views through to the Park Lands and provide a distinct City edge.
- (e) West Terrace will be reinforced as the western 'gateway' to the City centre and will form an imposing frontage to the western City edge. Buildings will be constructed to the front and side boundaries, and designed to maximise views through to the Park Lands. Corner sites at the junctions of West Terrace and the major east-west streets will be developed as strongly defined visual gateways to the City. This will provide an imposing frontage to the western edge of the City, which comprises a mixture of commercial, showroom and residential development.
- (f) Pulteney and Morphett streets are key north-south boulevards. A sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge. Pulteney Street will include residential, office and institutional uses, and retail activities. These boulevards will become important tree-lined commercial corridors.
- (g) Currie, Grenfell, Franklin and Flinders streets, as wider east-west boulevards provide important entry points to the City. Currie and Grenfell streets will become a key focus for pedestrians, cycling and public transport. These streets also provide long views to the hills as their closing vistas and these view corridors should remain uncluttered.
- (h) Victoria, Hindmarsh and Light Squares will have a continuous edge of medium to high-scale development that frames the Squares and increases ground level activity.

The Zone also includes a number of Main Street areas, encompassing Rundle Mall, Rundle Street, Hindley Street and Gouger Street, which are envisaged to have a wide range of retail, commercial and community uses that generate high levels of activity. These areas will have an intimately scaled built form with narrow and frequent building frontages. These areas are shown on Concept Plan [Figures CC/1 and 2](#).

Development fronting North Terrace, King William Street, Wakefield Street, Grote Street, the Squares, and in the Main Street Policy Area, will reflect their importance through highly contextual design that reflects and responds to their setting and role.

Minor streets and laneways will have a sense of enclosure (a tall street wall compared to street width) and an intimate, welcoming and comfortable pedestrian environment with buildings sited and composed in a way that responds to the buildings' context. There will be a strong emphasis on ground level activation through frequent window openings, land uses that spill out onto the footpath, and control of wind impacts.

Development in minor streets and laneways with a high value character will respond to important character elements and provide a comfortable pedestrian environment, particularly in the following streets: Gray, Leigh, Union, Chesser, Coromandel, Tucker, Cardwell, Kenton, Market, Ruthven, Cannon, Tatham, Bentham streets, Murrays Lane and Wright Court.

A comprehensive, safe and convenient movement network throughout the City will develop, focusing on the provision of linkages on both public and private land between important destinations and public transport. A high quality system of bicycle or shared pedestrian and bicycle routes will be established within the Zone.

OBJECTIVES

General

- Objective 1:** The principal focus for the economic, social and political life of metropolitan Adelaide and the State.
- Objective 2:** A vibrant mix of commercial, retail, professional services, hospitality, entertainment, educational facilities, and medium and high density living.
- Objective 3:** Design and management of City living to ensure the compatibility of residential amenity with the essential commercial and leisure functions of the Zone.
- Objective 4:** City streets that provide a comfortable pedestrian environment.
- Objective 5:** Innovative design approaches and contemporary architecture that respond to a building's context.
- Objective 6:** Buildings that reinforce the gridded layout of Adelaide's streets and respond to the underlying built-form framework of the City.
- Objective 8:** Development that contributes to the Desired Character of the Zone.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

- 1** The following types of development, or combinations thereof, are envisaged:

- Affordable housing
- Aged persons accommodation
- Community centre
- Consulting room
- Convention centre
- Dwelling
- Educational establishment
- Emergency services facility
- Hospital
- Hotel
- Indoor recreation centre

Licensed entertainment premises
Library
Motel
Office
Pre-school
Personal service establishment
Place of worship
Serviced apartment
Restaurant
Residential flat building
Student accommodation
Shop or group of shops
Tourist accommodation

- 2** Land uses that are typically closed during the day should be designed to maximise daytime and evening activation at street level and be compatible with surrounding land uses, in particular residential development.

Form and Character

- 5** Development should be consistent with the Desired Character for the Zone.

Design and Appearance

- 6** Development should be of a high standard of architectural design and finish which is appropriate to the City's role and image as the capital of the State.
- 7** Buildings should achieve a high standard of external appearance by:
- (a) the use of high quality materials and finishes. This may be achieved through the use of materials such as masonry, natural stone, prefinished materials that minimise staining, discolouring or deterioration, and avoiding painted surfaces particularly above ground level;
 - (b) providing a high degree of visual interest through articulation, avoiding any large blank facades, and incorporating design features within blank walls on side boundaries which have the potential to be built out;
 - (c) ensuring lower levels are well integrated with, and contribute to a vibrant public realm; and
 - (d) ensuring any ground and first floor level car parking elements are sleeved by residential or non-residential land uses (such as shops, offices and consulting rooms) to ensure an activated street frontage.
- 8** Buildings should present an attractive pedestrian-oriented frontage that adds interest and vitality to City streets and laneways.
- 9** 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.
- 10** Providing footpath widths and street tree growth permit, development should contribute to the comfort of pedestrians through the incorporation of verandahs, balconies, awnings and/or canopies that provide pedestrian shelter.
- 11** Buildings should be positioned regularly on the site and built to the street frontage, except where a setback is required to accommodate outdoor dining or provide a contextual response to a heritage place.
- 12** Buildings should be designed to include a podium/street wall height and upper level setback (in the order of 3-6 metres) that:
- (a) relates to the scale and context of adjoining built form;

- (b) provides a human scale at street level;
- (c) creates a well-defined and continuity of frontage;
- (d) gives emphasis and definition to street corners to clearly define the street grid;
- (e) contributes to the interest, vitality and security of the pedestrian environment;
- (f) maintains a sense of openness to the sky for pedestrians and brings daylight to the street;
and
- (g) achieves pedestrian comfort by minimising micro climatic impacts (particularly shade/shelter, wind tunnelling and downward drafts);

other than (h) or (i):

- (h) in the Central Business Policy Area;
- (i) where a lesser (or zero) upper level setback and/or podium height is warranted to correspond with and complement the form of adjacent development, in which case alternative design solutions should be included to achieve a cohesive streetscape, provided parts (b) to (g) are still achieved.

- 14** Buildings, advertisements, site landscaping, street planting and paving should have an integrated, coordinated appearance and should enhance the urban environment.
- 15** Building façades should be strongly modelled, incorporate a vertical composition which reflects the proportions of existing frontages, and ensure that architectural detailing is consistent around corners and along minor streets and laneways.
- 16** Development that exceeds the maximum building height shown in Concept Plan [Figures CC/1 and 2](#), and meets the relevant quantitative provisions should demonstrate a significantly higher standard of design outcome in relation to qualitative policy provisions including site configuration that acknowledges and responds to the desired future character of an area but that also responds to adjacent conditions (including any special qualities of a locality), pedestrian and cyclist amenity, activation, sustainability, and public realm and streetscape contribution.

Building Height

- 21** Development should not exceed the maximum building height shown in Concept Plan [Figures CC/1 and 2](#) unless;
 - (a) it is demonstrated that the development reinforces the anticipated city form in Concept Plan [Figures CC/1 and 2](#), and
 - (b) only if:
 - (i) at least two of the following features are provided:
 - (1) the development provides an orderly transition up to an existing taller building or prescribed maximum building height in an adjoining Zone or Policy Area;
 - (2) the development incorporates the retention, conservation and reuse of a building which is a listed heritage place;
 - (3) high quality universally accessible open space that is directly connected to, and well integrated with, public realm areas of the street;

- (4) universally accessible, safe and secure pedestrian linkages that connect through the development site as part of the cities pedestrian network on [Map Adel/1 \(Overlay 2A\)](#);
 - (5) on site car parking does not exceed a rate of 0.5 spaces per dwelling, car parking areas are adaptable to future uses or all car parking is provided underground;
 - (6) residential, office or any other actively occupied use is located on all of the street facing side of the building, with any above ground car parking located behind;
 - (7) a range of dwelling types that includes at least 10% of 3+ bedroom apartments;
 - (8) more than 15 per cent of dwellings as affordable housing.
- (ii) plus all of the following sustainable design measures are provided:
- (1) a rooftop garden covering a majority of the available roof area supported by services that ensure ongoing maintenance;
 - (2) a greenroof, or greenwalls / façades supported by services that ensure ongoing maintenance;
 - (3) innovative external shading devices on all of the western side of a street facing façade; and
 - (4) higher amenity through provision of private open space in excess of minimum requirements, access to natural light and ventilation to all habitable spaces and common circulation areas.

22 Development should have optimal height and floor space yields to take advantage of the premium City location and should have a building height no less than half the maximum shown on Concept Plan [Figures CC/1 and 2](#), or 28 metres in the Central Business Policy Area, except where one or more of the following applies:

- (a) a lower building height is necessary to achieve compliance with the Commonwealth Airports (Protection of Airspace) Regulations;
- (b) the site is adjacent to the City Living Zone or the Adelaide Historic (Conservation) Zone and a lesser building height is required to manage the interface with low-rise residential development;
- (c) the site is adjacent to a heritage place, or includes a heritage place;
- (d) the development includes the construction of a building in the same, or substantially the same, position as a building which was demolished, as a result of significant damage caused by an event, within the previous 3 years where the new building has the same, or substantially the same, layout and external appearance as the previous building.

32 Vehicle parking spaces and multi-level vehicle parking structures within buildings should:

- (a) enhance active street frontages by providing land uses such as commercial, retail or other non-car park uses along ground floor street frontages;
- (b) complement the surrounding built form in terms of height, massing and scale; and
- (c) incorporate façade treatments along major street frontages that are sufficiently enclosed and detailed to complement neighbouring buildings consistent with the Desired Character of the locality.

OBJECTIVE

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.

PRINCIPLES OF DEVELOPMENT CONTROL

Building Entrances

- 1** 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.
- 2** 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; andavoid the creation of potential areas for entrapment.

Daylight, Sunlight and Ventilation

- 3** 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.

Design Technique (this is ONE WAY of meeting the above Principle)

50.1 Design solutions may include:

- (a) corner dwelling/apartment

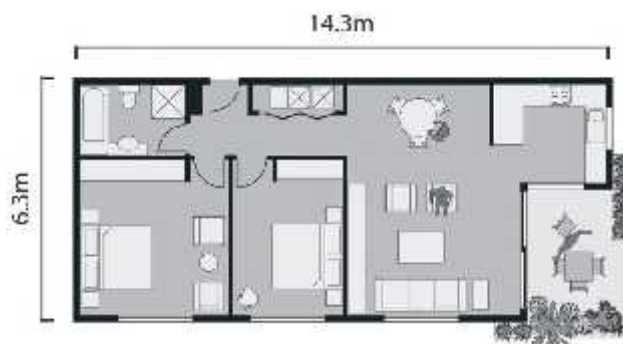


Figure 50.1 - two bedroom corner dwelling.

(b) *double aspect dwelling/apartment.*

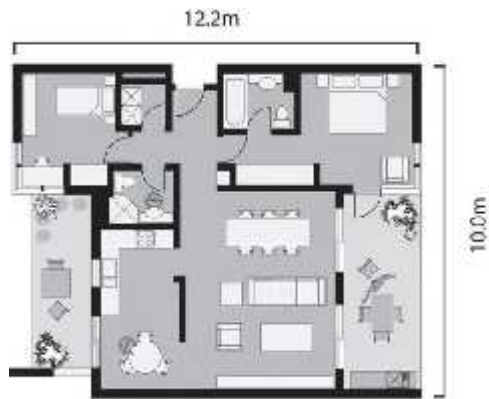


Figure 50.2 - two bedroom double aspect dwelling/apartment.

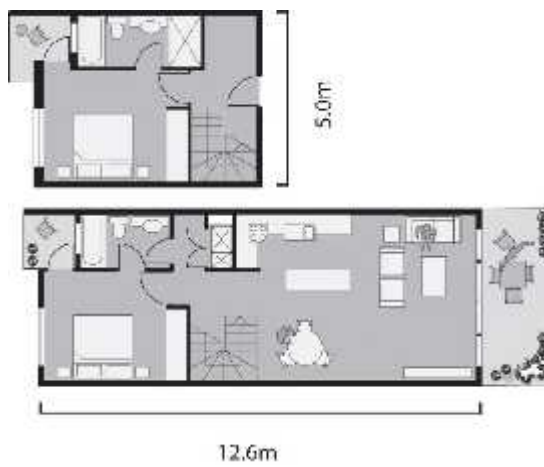


Figure 50.3 - two bedroom double aspect dwelling/apartment.



Figure 50.4 - one bedroom double aspect dwelling/apartment.

(c) *split level dwelling/apartment.*

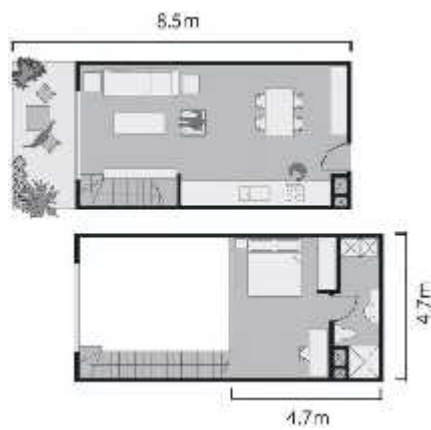


Figure 50.5 - one bedroom split level dwelling/apartment.

- (d) shallow, single aspect dwelling/apartment limited in depth to 8 metres from a window



Figure 50.6 - one bedroom single aspect dwelling/apartment.

Note: If over 15 metres deep, the width of the dwelling/apartment should be 4 metres or greater to ensure sufficient natural daylight.

- 4 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 norther facade.
- 5 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.

Design Technique (this is ONE WAY of meeting the above Principle)

52.1 Design solutions may include:

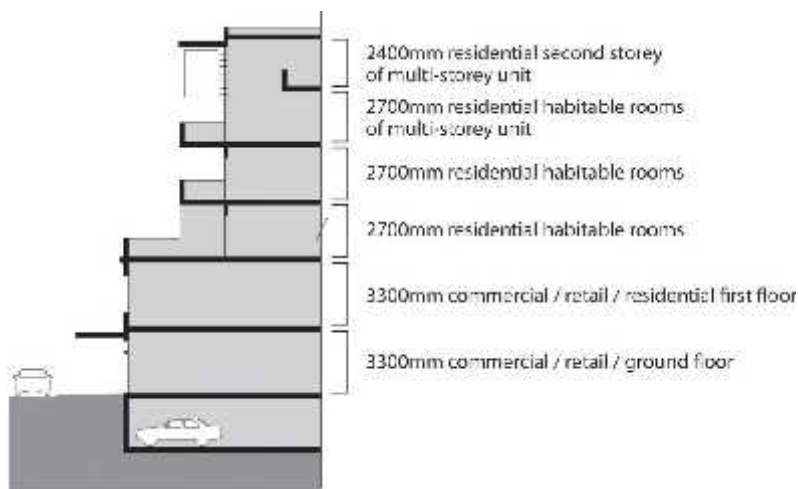


Figure 52.1 - appropriate ceiling heights for mixed use buildings.

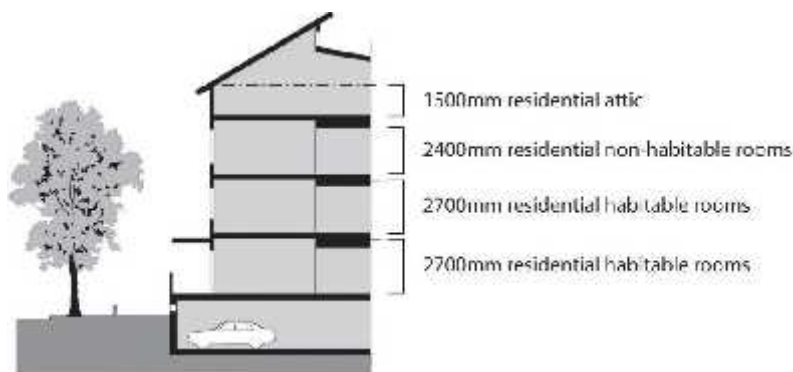


Figure 52.2 - appropriate ceiling heights for medium to high scale residential or serviced apartment development.

- 6 All new medium to high scale residential or serviced apartment development should have direct ventilation and natural light.
- 7 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.
- 8 Light wells should not be used as the primary source of daylight for living rooms to ensure a sufficient level of outlook and daylight.
- 9 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.
- 10 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
 - (c) communal open space, where such communal open space provides the primary private open space for any adjacent residential development.
- 11 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 louvered, 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 Techniques (these are ONE WAY of meeting the above Principle)

58.1 In relation to *Principle of Development Control 58(e)*:

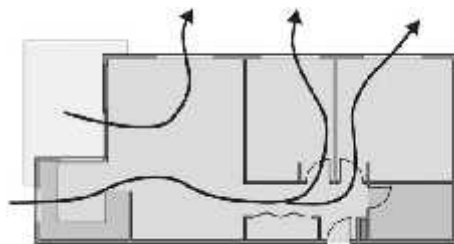


Figure 58.1 - effective layout for an upper level corner dwelling/apartment.



Figure 58.2 - optimal layout allowing air flow directly from one side of a dwelling/apartment to the other.

Private Open Space

- 12** Medium to high scale residential development and serviced apartments should provide the following private open space:
- (a) studio (where there is no separate bedroom): no minimum requirement but some provision is desirable.
 - (b) 1 bedroom dwelling/apartment: 8 square metres.
 - (c) 2 bedroom dwelling/apartment: 11 square metres.
 - (d) 3+ bedroom dwelling/apartment: 15 square metres.

A lesser amount of private open space may be considered appropriate in circumstances where the equivalent amount of open space is provided in a communal open space accessible to all occupants of the development.

Private open space for 2 or more bedroom dwellings/apartments may be divided into different areas whilst private open space for studios or 1 bedroom dwelling/apartments should be in a single area.

Areas used for parking of motor vehicles are not included as private open space.

Note: In the City Living, Main Street and Institutional Zones, specific landscaped open space and private landscaped open space provisions apply.

- 13** 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.
- 14** 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.

Design Techniques (these are ONE WAY of meeting the above Principle)

61.1 Design solutions for balconies may include:

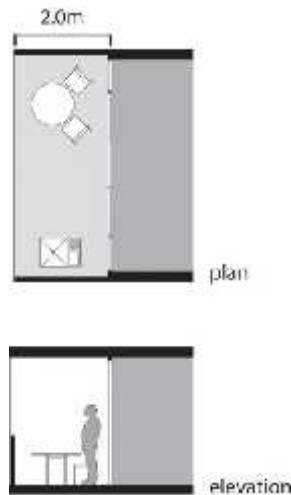


Figure 61.1 - a minimum depth of 2 metres

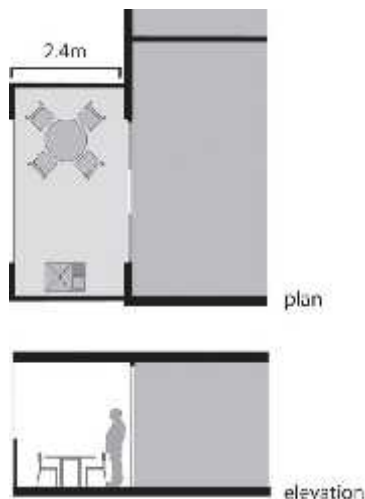


Figure 61.2 - a 2.4 metre deep balcony is needed for a table and four chairs.

- 15** 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.
- 16** Secondary balconies, including Juliet balconies or operable walls with balustrades should be considered, subject to overlooking and privacy, for additional amenity and choice.
- 17** For clothes drying, balconies off laundries or bathrooms and roof top areas should be screened from public view.

- 18** The incorporation of roof top gardens is encouraged providing it does not result in unreasonable overlooking or loss of privacy.

Visual Privacy

- 19** 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.
- 20** 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.

Noise and Internal Layout

- 21** 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.
- 22** 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.

Minimum Unit Sizes

- 23** Medium to high scale residential or serviced apartment development should provide a high quality living environment by ensuring the following minimum internal floor areas:
- (a) studio (where there is no separate bedroom): 35 square metres.
 - (b) 1 bedroom dwelling/apartment: 50 square metres
 - (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.

Note: Dwelling/apartment "unit size" includes internal storage areas but does not include balconies or car parking as part of the calculation.

- 24** Internal structural columns should correspond with the position of internal walls to ensure that the space within the dwelling/apartment is useable.

Adaptability

- 25** 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
 - (d) the future reuse of student accommodation as residential apartments through a design and layout that allows individual apartments to be reconfigured into a larger dwelling or other alternative use.

Design Technique (this is ONE WAY of meeting the above Principle)

72.1 Design solutions may include:

- (a) windows in all habitable rooms and to the maximum number of non-habitable rooms;
- (b) adequate room sizes or open plan dwellings which provide a range of furniture layout options; and/or
- (c) dual master bedrooms that can support two independent adults living together or a live/work situation.

Outlook

- 26** 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.

Note: Outlook is a short range prospect and is distinct from a view which is more extensive and long range to particular objects or geographic features.

- 27** Light wells may be used as a source of daylight, ventilation, outlook and sunlight for medium to high scale residential or serviced apartment development provided that:
- (a) living rooms do not have lightwells as their only source of outlook;
 - (b) lightwells up to 18 metres in height have a minimum horizontal dimension of 3 metres or 6 metres if overlooked by bedrooms; and
 - (c) lightwells higher than 18 metres in height have a minimum horizontal dimension of 6 metres or 9 metres if overlooked by bedrooms.

On-Site Parking and Fencing

OBJECTIVE

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

PRINCIPLES OF DEVELOPMENT CONTROL

- 28** 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](#).
- 29** 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.
- 30** 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.

31 Where garages are located within a basement or undercroft:

- (a) the width of access driveways should be kept to a minimum and should not detract from the streetscape;
- (b) driveways should be designed to ensure safe and convenient access and egress;
- (c) access should be restricted to one driveway or one point of access and egress;
- (d) vehicles should be able to safely exit in a forward direction and should not compromise pedestrian safety or cause conflict with other vehicles; and
- (e) the height of the car park ceiling should not exceed one metre above the finished ground floor level to ensure minimal impact on the streetscape.

32 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.

Storage Areas

33 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.

34 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:

- (a) studio: 6 cubic metres
- (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.

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

35 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) positioning recreational and public space areas so they are bound by roads on at least two road frontages or overlooked by development;
 - (v) 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;
 - (vi) locating public toilets, telephones and other public facilities with direct access and good visibility from well-trafficked public spaces;
 - (vii) ensuring that rear service areas and access lanes are either secured or exposed to surveillance; and
 - (viii) ensuring the surveillance of isolated locations through the use of audio monitors, emergency telephones or alarms, video cameras or staff eg by surveillance of lift and toilet areas within car parks.
- (b) provide access control by facilitating communication, escape and path finding within development through legible design by:
 - (i) incorporating clear directional devices;
 - (ii) avoiding opportunities for concealment near well travelled routes;
 - (iii) closing off or locking areas during off-peak hours, such as stairwells, to concentrate access/exit points to a particular route;

- (iv) use of devices such as stainless steel mirrors where a passage has a bend;
 - (v) locating main entrances and exits at the front of a site and in view of a street;
 - (vi) providing open space and pedestrian routes which are clearly defined and have clear and direct sightlines for the users; and
 - (vii) locating elevators and stairwells where they can be viewed by a maximum number of people, near the edge of buildings where there is a glass wall at the entrance.
- (c) promote territoriality or sense of ownership through physical features that express ownership and control over the environment and provide a clear delineation of public and private space by:
- (i) clear delineation of boundaries marking public, private and semi-private space, such as by paving, lighting, walls and planting;
 - (ii) dividing large development sites into territorial zones to create a sense of ownership of common space by smaller groups of dwellings; and
 - (iii) locating main entrances and exits at the front of a site and in view of a street.
- (d) 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.
- 36** Residential development should be designed to overlook streets, public and communal open space to allow casual surveillance.

Design Technique (this is ONE WAY of meeting the above Principle)

83.1 *Residential development adjacent to public or communal open space or streets having at least one habitable room window facing such areas with a sill height no greater than 1.5 metres.*

- 37** To maximise security and safety, buildings should be designed to minimise access between roofs, balconies and windows of adjacent buildings.
- 38** Security features should be incorporated within the design of shop fronts to complement the design of the frontage and allow window shopping out of hours. If security grilles are provided, these should:
- (a) be transparent and illuminated to complement the appearance of the frontage;

- (b) provide for window shopping; and
- (c) allow for the spill of light from the shop front onto the street.

Solid shutters with less than 75 percent permeability are not acceptable.

39 Public toilets should be designed and located to:

- (a) promote the visibility of people entering and exiting the facility by avoiding recessed entrances and dense shrubbery which obstructs passive surveillance;
- (b) limit opportunities for vandalism through the use of vandal proof lighting on the public toilet buildings and nearby;
- (c) avoid features which facilitate loitering, such as seating or telephones immediately adjacent the structure; and
- (d) maximise surveillance through location near public transport links, pedestrian and cyclist networks.

Noise Emissions

OBJECTIVES

Objective 26: Development that does not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise.

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.

PRINCIPLES OF DEVELOPMENT CONTROL

Noise Sources

- 40** Development with potential to emit significant noise (including licensed entertainment premises and licensed premises) should incorporate appropriate noise attenuation measures in to their design to prevent noise from causing unreasonable interference with the amenity and desired character of the locality, as contemplated in the relevant Zone and Policy Area.

Noise Receivers

- 41** 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.
- 42** 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.
- 43** 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 (L_{10}) from existing entertainment premises, being:
 - (i) less than 8 dB above the level of background noise ($L_{90,15 \text{ min}}$) in any octave band of the sound spectrum; and
 - (ii) less than 5 dB(A) above the level of background noise ($L_{A90,15 \text{ min}}$) 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.

Note: The report prepared by a suitably qualified acoustic engineer at the planning application submission stage should identify existing noise sources, identify the appropriate level of sound attenuation required and specify the noise attenuation measures that will be applied to the proposal. The noise attenuation measures might include:

- (a) siting and orientating the building away from the noise source and/or providing an external area that limits noise levels to World Health Organisation recommendations for residential areas;
- (b) sensitive internal layout of rooms, by locating noise sensitive rooms such as bedrooms and secluded private open space areas away from the noise source;
- (c) locating and designing entrances to be sealed and to provide air lock entries to sensitive rooms;
- (d) window location and design through thicker glass or double glazing of windows in recognition of the noise source;
- (e) sloping of roof or flat roof/parapet design to assist in noise passing overhead rather than penetrating through the roof of the dwelling;
- (f) selecting appropriate construction materials, such as sound absorbing materials and materials that reduce sound transmission;
- (g) installing door seals;
- (h) creation of hybrid buildings that serve as a buffer between different uses, eg the location of offices between residential and entertainment uses, can be vertically or horizontally applied;
- (i) adequate separation between residential and noise generating uses;
- (j) acoustic separation of ducts, fans etc;
- (k) constructing shared walls and floors between dwellings/apartments in a way which minimises the transmission of noise; or
- (l) separating openings of adjacent dwellings/apartments by a distance of a least three metres.

OBJECTIVE

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.

PRINCIPLES OF DEVELOPMENT CONTROL

- 44** A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development.
- 45** 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.

Energy Efficiency

OBJECTIVE

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.

PRINCIPLES OF DEVELOPMENT CONTROL

All Development

- 46** Buildings should provide adequate thermal comfort for occupants and minimise the need for energy use for heating, cooling and lighting by:
 - (a) providing an internal day living area with a north-facing window, other than for minor additions*, by:
 - (i) arranging and concentrating main activity areas of a building to the north for solar penetration; and
 - (ii) placing buildings on east-west allotments against or close to the southern boundary to maximise northern solar access and separation to other buildings to the north.
 - (b) efficient layout, such as zoning house layout to enable main living areas to be separately heated and cooled, other than for minor additions;
 - (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;

* Minor additions have a floor area less than 50 percent of the existing dwelling and do not include a day living area.

- (g) providing an external clothes line for residential development; and
- (h) use of landscaping.

Design Techniques (these are ONE WAY of meeting part of the above Principle)

106.1 In relation to Principle 106(a), facing the length of the development to the north to maximise solar access with day living areas incorporating a window that faces between 20° west and 30° east of true north; or

106.2 In relation to Principle 106(b):

- (a) grouping rooms with similar uses and heating and cooling needs;
- (b) incorporating doors between living areas and other rooms and corridors; and
- (c) placing utility areas such as bathrooms, toilets and laundries as buffer zones to the west.

106.3 In relation to Principle 106(c):

- (a) dwellings and additions (other than minor additions) having a total window area (including glass doors) of less than 30 percent of the total wall area of the dwelling;
- (b) dwellings and additions (other than minor additions) having a total window area facing east and west not exceeding 50 percent of the total window area of the dwelling to avoid heat gain during the summer months and reduce heat loss during the winter months;
- (c) shading of north facing windows to allow winter sun access but providing complete shading during summer, such as by eaves overhang, awnings, adjustable louvres, pergola's, shutters or planting of deciduous trees and vines;
- (d) external shading is provided to west facing windows; and
- (e) designing skylights and high level windows with adjustable louvres, double glazing and shading to minimise heat gain or loss.

106.4 In relation to Principle 106(d):

- (a) positioning windows and doors to encourage cross ventilation for summer cooling as illustrated below.

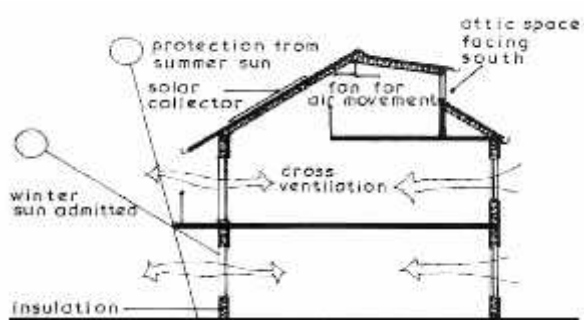


Figure 106.1 - appropriate orientation and design for residential development

106.5 In relation to Principle 106(h):

- (a) using appropriate landscaping to assist in microclimatic management of a site by:

- (i) *planting of evergreen trees along the eastern and western boundaries to protect from eastern and western sun providing it poses no undue risk of damage to footings; or*
- (ii) *incorporating low shrubs, lawns, ponds and pools to cool summer breezes.*

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

48 Energy reductions should, where possible, be achieved by the following:

- (a) appropriate orientation of the building by:
 - (i) maximising north/south facing facades;
 - (ii) designing and locating the building so the north facade receives good direct solar radiation;
 - (iii) minimising east/west facades to protect the building from summer sun and winter winds;
 - (iv) narrow floor plates to maximise the amount of floor area receiving good daylight; and/or
 - (v) 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.

Design Techniques (these are ONE WAY of meeting part of the above Principle)

108.1 In relation to Principle 108(b) (refer Figure 108.1):

- (a) *shading for all windows except for south facing elevation against summer sun penetration, by means such as vegetation, external louvres, external blinds, structural overhangs, low emittance glazing, spectrally-selective glazing and/or window films;*
- (b) *maximising natural daylight while limiting glare through the incorporation of narrow floor plates, light shelves, shaded skylights, light shafts and/or atriums with daylight sensing control of electric lighting;*

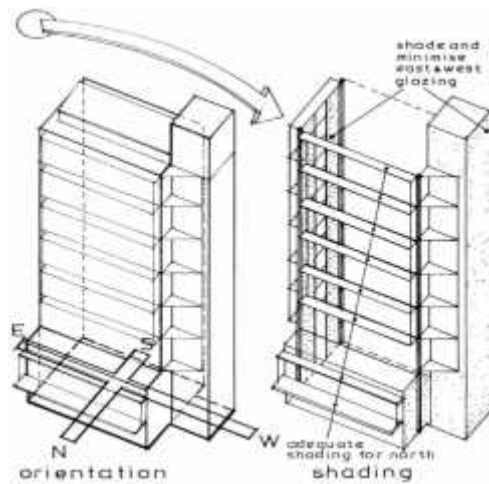


Figure 108.1 - appropriate orientation and shading for commercial buildings.

- (c) integration of solar shading with solar energy collection technology such as solar heat pumps and photovoltaic cells; and/or
- (d) use of high performance glazing.

108.2 In relation to Principle 108(c):

- (a) night purging and fan assisted thermal chimneys to remove heat stored in the building during the day and the recirculation of warm air during winter; and
- (b) adjustable air flow rates for high, but variable, occupancy rates (ie office and conference areas).

108.3 In relation to Principle 108(f):

- (a) use of materials and light colours that reflect rather than absorb solar radiation, whilst ensuring reflective material avoids transferring heat and glare to adjoining properties and/or the pedestrian environment;
- (b) use of well insulated materials; and
- (c) light coloured internal walls and ceilings to assist with effective distribution of daylight.

108.4 In relation to Principle 108(g), geexchange heating and cooling systems including closed loop and open loop systems.

- 49** Orientation and pitch of the roof should facilitate the efficient use of solar collectors and photovoltaic cells.

Design Techniques (these are ONE WAY of meeting the above Principle)

109.1 A roof incorporating an area of at least 10 square metres which:

- (a) faces between 30° east and 20° west of north respectively; and
- (b) has a pitch of greater than 18°.

- 50** Buildings, where practical, should be refurbished, adapted and reused to ensure an efficient use of resources.

- 51** New buildings should be readily adaptable to future alternative uses.

Design Techniques (these are ONE WAY of meeting part of the above Principle)

111.1 Design solutions may include:

- (a) a structural grid which accommodates car parking dimensions, retail, commercial and residential uses vertically throughout the building;
- (b) the alignment of structural walls, columns and service cores between floor levels;
- (c) minimisation of internal structural walls;
- (d) higher floor to floor dimensions on the ground and first floor;
- (e) knock-out panels between dwellings to allow two adjacent dwellings to be amalgamated;
- (f) design for disassembly by selecting systems/materials that can be deconstructed at the end of the projects useful life; and/or
- (g) the use of products with high post-consumer recyclable content.

- 52** 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.

Design Techniques (these are ONE WAY of meeting part of the above Principle)

112.1 The use of:

- (a) oil based floor sealers; and/or
- (b) natural materials for floor linings such as plywood flooring, linoleum and wool carpet.

Residential Development

- 53** New residential development and residential extensions should be designed to minimise energy consumption and limit greenhouse gas emissions.
- 54** 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.

Office Development

- 55** The following principles of sustainable design and construction are required for new office development, and additions and refurbishments to existing office development, to minimise energy consumption and limit greenhouse gas emissions:
- (a) passive solar consideration in the design, planning and placement of buildings;
 - (b) re-using and/or improving existing structures or buildings;
 - (c) designing for the life-cycle of the development to allow for future adaptation;
 - (d) considering low levels of embodied energy in the selection and use of materials;
 - (e) developing energy efficiency solutions including passive designs using natural light, solar control, air movement and thermal mass. Systems should be zoned to minimise use of energy;

- (f) using low carbon and renewable energy sources, such as Combined Heat and Power (CHP) systems and photovoltaics; and
- (g) preserving and enhancing local biodiversity, such as by incorporating roof top gardens.

Design Techniques (*this is ONE WAY of meeting part of the above Principle*)

115.1 *In relation to Principle 115(d):*

- (a) *re-using materials and recycled building materials such as:*
 - (i) *recycled and/or plantation timbers;*
 - (ii) *recycled content in steel reinforcing;*
 - (iii) *60 percent or more recycled aggregate in concrete; and*
 - (iv) *recycled cork and/or rubber flooring;*
- (b) *materials derived from renewable resources; and*
- (c) *durable and low-maintenance materials to minimise replacement intervals and maintenance requirements.*

115.2 *In relation to Principle 115(e):*

- (a) *lighting management systems that employ both motion and lighting level sensors that can be updated;*
- (b) *mixed mode or hybrid comfort control systems (natural and mechanical ventilation systems) which comprise both manually operable openings and automatically controlled openings, utilising temperature sensors and zoned heating areas;*
- (c) *energy efficient fittings;*
- (d) *closed or open loop geexchange systems providing space cooling, space heating and domestic hot water.*

Built Form and Townscape OBJECTIVES

Objective 46: Reinforcement of the city's grid pattern of streets through:

- (a) high rise development framing city boulevards, the Squares and Park Lands
- (b) vibrant main streets of a more intimate scale that help bring the city to life
- (c) unique and interesting laneways that provide a sense of enclosure and intimacy.

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

Objective 48: Development which incorporates a high level of design excellence in terms of scale, bulk, massing, materials, finishes, colours and architectural treatment.

PRINCIPLES OF DEVELOPMENT CONTROL

- 56** 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.

Height, Bulk and Scale

PRINCIPLES OF DEVELOPMENT CONTROL

- 57** 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;
- 58** 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 \(Overlay 1\)](#).
- 59** 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;
 - (ii) 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
 - (iii) 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.
- 60** Buildings and structures should not adversely affect by way of their height and location the long-term operational, safety and commercial requirements of Adelaide International Airport. Buildings and structures which exceed the heights shown in [Map Adel/1 \(Overlay 5\)](#) and which penetrate the Obstacle Limitation Surfaces (OLS) should be designed, marked or lit to ensure the safe operation of aircraft within the airspace around the Adelaide International Airport.

OBJECTIVE

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

PRINCIPLES OF DEVELOPMENT CONTROL

- 61** Where a prevailing pattern of roof form assists in establishing the desired character of the locality, new roof forms should be complementary to the shape, pitch, angle and materials of adjacent building roofs.
- 62** 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) contribute to the architectural quality of the building;
 - (d) provide a compositional relationship between the upper-most levels and the lower portions of the building;
 - (e) provide an expression of identity;
 - (f) articulate the roof, breaking down its massing on large buildings to minimise apparent bulk;
 - (g) respond to the orientation of the site; and
 - (h) create minimal glare.

Design Techniques (these are ONE WAY of meeting the above Principle)

193.1 *Design solutions may include:*

- (a) *articulating form and surface by large, simple features that can be recognised from a distant view point;*
- (b) *tapering towers by stepping back floor plates;*
- (c) *integrating plant and fixtures within the roof top design; and/or*
- (d) *incorporating an architectural roof feature within the design of the building by:*
 - (i) *creating a feature that forms part of its overall architectural form and composition;*
 - (ii) *ensuring visual compatibility with nearby towers and other structures whilst maintaining architectural distinction;*
 - (iii) *providing sky line features capable of being viewed over great distances;*
 - (iv) *including modelled parapets;*
 - (v) *ensuring compatibility of podia height at street alignment; and/or*
 - (vi) *incorporating roof top gardens and terraces.*

- 63** 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.
- 64** 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.

Active Street Frontages

OBJECTIVES

- 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.

PRINCIPLES OF DEVELOPMENT CONTROL

- 65** 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.

Design Techniques (these are ONE WAY of meeting the above Principle)

196.1 Design solutions may include:

- (a) Well designed and legible entrances, lobbies and commercial uses at ground level.
- (b) Window displays of merchandise or open shopfronts, well lit panel displays, corporate identity and/or artworks.
- (c) Avoiding vast expanses of blank walls presenting flat surfaces without detailing, openings or activity.
- (d) Orientating active parts of a building to the street frontage.
- (e) Incorporating uses such as retailing, food and drink outlets, counter services and cafés/restaurants particularly with outdoor seating areas.

- 66** Retail frontages should be designed to provide interest to passing pedestrians at street level and relief to building mass.

Design Techniques (these are ONE WAY of meeting the above Principle)

197.1 Design solutions may include:

- (a) Providing views into and out of buildings.
- (b) Providing interesting and active window displays.
- (c) Providing external light fittings, particularly where street lighting is blocked eg under verandahs.
- (d) Using transparent glass, open mesh or transparent security shutters that allow views into and out of the building.
- (e) Illuminating shop windows until 12.00pm.
- (f) Incorporating detailed architectural facade treatment.

- 67** Commercial buildings should be designed to ensure that ground floor facades are rich in detail so they are exciting to walk by, interesting to look at and to stand beside.

Design Techniques (these are ONE WAY of meeting the above Principle)

198.1 Design solutions may include:

- (a) Providing well designed legible entrances and lobbies that address the street.
- (b) Creating richness and detail at street level through methods such as artwork (including animating spaces with water), use of high quality materials and variation in materials, wall and window detailing and decoration.
- (c) Locating lively interior activities along street frontages so they are visible from outside e.g. employee canteens or reception areas oriented towards the street;
- (d) Cafés and restaurants utilising footpath space; and/or
- (e) Providing designs which incorporate places for people to sit and watch.

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

Design Techniques (these are ONE WAY of meeting the above Principle)

199.1 Design solutions may include:

- (a) Using transparent glass along street frontages.
- (b) Maximising the number of windows and doors.
- (c) Enlivening building edges with balconies, bays, porches, awnings or other projections.
- (d) Designing interesting and innovative fencing and walls.
- (e) Incorporating transparent fencing and walls that enable presentation of the building to the street eg use of mesh fencing rather than blank solid walls.

- (f) *Avoiding blank high walls and elevations unbroken by architectural detail which prevents community interaction and resident surveillance of the street.*
- (g) *Avoiding car parking in front of buildings.*
- (h) *Addressing housing on corner sites to both street frontages by establishing prominent entrances and/or windows at the apex of buildings.*
- (i) *Incorporating compatible non-residential uses such as home offices, art/craft workshops and galleries at ground floor level.*

OVERLAYS

Overlay 1 – Affordable Housing

The following Objectives and Principles of Development Control apply to the designated areas marked on [Map Adel/1 \(Overlays 15a, 15b and 15c\)](#). They are additional to those expressed for the whole of the Council area and those expressed for the relevant Zone and, if applicable, Policy Area.

INTERPRETATION

Where the Objectives and/or Principles of Development Control that apply in relation to this Overlay are in conflict with the relevant Council wide, Zone or Policy Area Objectives and/or Principles of Development Control in the Development Plan, the Overlay will prevail.

OBJECTIVES

- Objective 1:** Affordable housing that is integrated with residential and mixed use development.
- Objective 2:** Development that comprises a range of affordable dwelling types that cater for a variety of household structures.
- Objective 3:** Affordable housing that deliver whole-of-life cost savings to the occupants.
- Objective 4:** Affordable housing that is provided in a wide range of locations and integrated into the City.

PRINCIPLES OF DEVELOPMENT CONTROL

- 1** Development comprising 20 or more dwellings should include a minimum of 15 percent affordable housing.
- 2** Where development includes affordable housing, then the quantitative provisions in respect to the following elements are not applicable to the affordable housing component provided the qualitative outcomes can be achieved:
 - (a) allotment area and dimensions;
 - (b) building height;
 - (c) site area and dimensions;
 - (d) site coverage;
 - (e) front, side and rear setbacks to boundaries;
 - (f) area and dimensions of private open space;
 - (g) minimum unit sizes;

- (h) minimum storage areas;
- (i) plot ratio;
- (j) dwelling unit factor; and
- (k) landscaped open space.

Overlay 2 – Noise and Air Emissions

The following Objectives and principles of Development Control apply to the 'designated area' marked on [Map Adel/1 \(Overlay 16\)](#). They are additional to those expressed for the whole of the Council area and those expressed for the relevant Zone and, if applicable, Policy Area.

INTERPRETATION

Where the Objectives and/or Principles of Development Control that apply in relation to this Overlay are in conflict with the relevant Council wide, Zone or Policy Area Objectives and/or Principles of Development Control in the Development Plan, the Overlay will prevail.

OBJECTIVES

- Objective 1:** Protect community health and amenity from adverse impacts of noise and air emissions.

PRINCIPLES OF DEVELOPMENT CONTROL

- 1** Noise and air quality sensitive development located adjacent to high noise and/or air pollution sources should:
 - (a) shield sensitive uses and areas through one or more of the following measures:
 - (i) placing buildings containing less sensitive uses between the emission source and sensitive land uses and areas
 - (ii) within individual buildings, place rooms more sensitive to air quality and noise impacts (e.g. bedrooms) further away from the emission source
 - (iii) erecting noise attenuation barriers provided the requirements for safety, urban design and access can be met
 - (b) use building design elements such as varying building heights, widths, articulation, setbacks and shapes to increase wind turbulence and the dispersion of air pollutants provided wind impacts on pedestrian amenity are acceptable
 - (c) locate ground level private open space, communal open space and outdoor play areas within educational establishments (including childcare centres) away from the emission source.

IMDAC AGENDA ITEM 3.1

Officer: Yasmine Alliu

Statutory Planning Branch - Planning Division

Department of Planning, Transport & Infrastructure

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IMDAC AGENDA ITEM 3.1

Application Summary	
Application No	020/0023/14A
Relevant Authority	Inner Metropolitan Development Assessment Committee of the Development Assessment Commission, pursuant to Schedule 10 section 4B (1) – development within the Corporation of the City of Adelaide exceeding \$10 million.
Applicant/Proponent	Peter Kozno C/- Michael Loucas of Loucas & Zahos Pty (Architects)
Subject Land	261 – 263 Pulteney Street, Adelaide
Proposal Description	Demolition of existing building and construction of a 23 level building comprising 68 residential apartments over 17 levels, a retail tenancy on the ground floor, studio space on levels 2 and 3 , plus a common use roof terrace, together with associated car parking over 4 levels plus ground floor
Development Plan:	Adelaide (City) Development Plan – Consolidated 30 January 2014
Zone / Policy Area	Capital City Zone
Public notification	Category 1
Assessment Officer	Yasmine Alliu
Recommendation	Grant Development Plan Consent subject to conditions

EXECUTIVE SUMMARY

The development application, currently under consideration, proposes the demolition of an existing building at 261-263 Pulteney Street and the corner of Bath Lane to construct a mixed use/residential apartment building of 23 levels, including 68 apartments over 17 levels, ground floor retail, commercial space on two levels, a shared roof top terrace plus five levels of car parking (28 car parks). The residential apartments will be known as *Sky Apartments*.

The project is supported by the Government Architect and it has the potential to provide a bench-mark for inner-city apartment development in Adelaide. The project is consistent with the desired character for the zone, in particular the project:

Further, the proposal provides the first transition of its type and height in the Pulteney Street location that contributes to the desired future character of the zone.

It is therefore recommended to the Commission, that the application be APPROVED subject to conditions.

ASSESSMENT REPORT

1. BACKGROUND / INTRODUCTION

Pre-lodgement process

The project has progressed through three pre-lodgement panel meetings, with representation from all referral bodies and staff from Adelaide City Council. The project has also progressed through three Design Review sessions. Through this process a number of improvements were made to the project:

- Improved articulation of the southern elevation.
- The north east corner facade provides for a more open and lighter appearance with additional interest and sculptural relief.
- An outdoor canopy has been provided to the Pulteney Street frontage.
- Ceiling heights have been increased to improve the amenity of internal spaces.
- General improvements to the internal layout of apartments.
- Circulation area in apartments has improved natural flow through ventilation and allows for better use of shared infrastructure.
- Improved pedestrian accessibility at street level.

The development proposed is now supported by all referral agencies.

Policy overview

The project site is situated within the Capital City Zone as prescribed by the Adelaide (City) Development Plan.

The zone encourages a diverse range of land uses with non-residential land uses at ground floor level that generate high levels of pedestrian activity, together with positive activation at street level/street interface.

Some key elements of the policies include:

Capital City Zone

- To develop as the economic and cultural focus of the state offering employment, education, tourism & entertainment facilities together with increased opportunities for medium and high density living.
- High scale development including high street walls to frame streets with an interesting pedestrian environment created through careful building articulation and fenestration, frequent building openings, verandahs, balconies and awnings that add a human scale at ground level.
- Land uses that generate high pedestrian activity located at ground level.
- An area that is active during the day, evening and late at night with a rich display of publicly accessible and contextually relevant art.
- Ground level non-residential development will continue to provide visual interest after hours by being well lit and having no external shutters.
- Non-residential land uses at ground floor level that generate high levels of pedestrian activity such as shops and restaurants will also occur throughout the Zone.
- The distinctive grid pattern of Adelaide will be reinforced through the creation of a series of attractive boulevards as shown on Concept Plan Figures CC/1 and 2. These boulevards will provide a clear sense of arrival into the City and be characterised by buildings that are aligned to the street pattern, particularly at ground level.

- A prescribed height of 53 metres applies Concept Plan Figure CC/2, although over-height provisions apply.

The proposal is a Category 1 development and no notification was required (PDC 37 (a)).

Council Wide

The Council Wide provisions for City Living and Medium to High Scale/Serviced Apartment provide guidance to appropriate housing choice, private open space, minimum unit sizes and the extent of natural light, ventilation, outlook, and effective design outcomes. Relevant planning policies are contained in the concluding appendices and relevant zoning maps are in the attachments.

2. DESCRIPTION OF PROPOSAL

Application details are contained in the ATTACHMENTS.

The proposal includes the demolition of the existing building and the construction of a 23 level building with retail space on the ground floor, studio space on levels 2 -3, with 17 levels of residential apartments and a common use roof terrace.

Land use description	Demolition of existing building and construction of residential apartments (68 apartments over 17 levels), a retail tenancy on the ground floor and mezzanine, plus a common use roof terrace, together with associated car parking over 4 levels
Building height	Maximum building height of 70.9m (RL 114.9 AHD). It is 23 levels including the rooftop.
Description of levels	Ground Floor: retail (floor space 42m²), entry/lobby, 2 x lifts, mailboxes, common bin area, toilets, car lift , car parks (including 1 disabled), transformer and fire escape/service entry. Level 1: Car parking, mechanical services and bicycle parking Level 2: Car parking, store and studio space (125m²) Level 3: Car parking, store and void to studio Level 4: Car parking, mechanical services and bicycle parking Level 5: Car lift overrun, residential apartments 1- 4 Level 6 -21: residential apartments Level 22 - Roof Terrace: (204m²) community use space – cinema bar /entertaining area and landscaping <u>Residential Apartment Type 1</u> 1 bedroom

	Floor area – 50.6 - 67m² Balconies – 4.3 - 9m², minimum dimension 700 m <u>Residential Apartment Type 2</u> 2 bedroom Floor area - 64 – 71.5m² Balconies – 9 - 10m², minimum dimension 720m
Site Access	Residential (vehicular) access is proposed from Bath Lane, which runs to the north and to the west of the site. Service access will be from Pulteney Street – approval will be sought from Council to amend the loading zones in front of the site.
Encroachments	Encroachments include the canopy, blade walls and balconies.

Site description

The subject site is located at 261 – 263 Pulteney Street, Adelaide and is described as follows:

Lot No	File Plan	Street	Suburb	Hundred	CT Reference
a706	FP 181548	Pulteney Street	Adelaide	Adelaide	Vol 5545 Folio 337

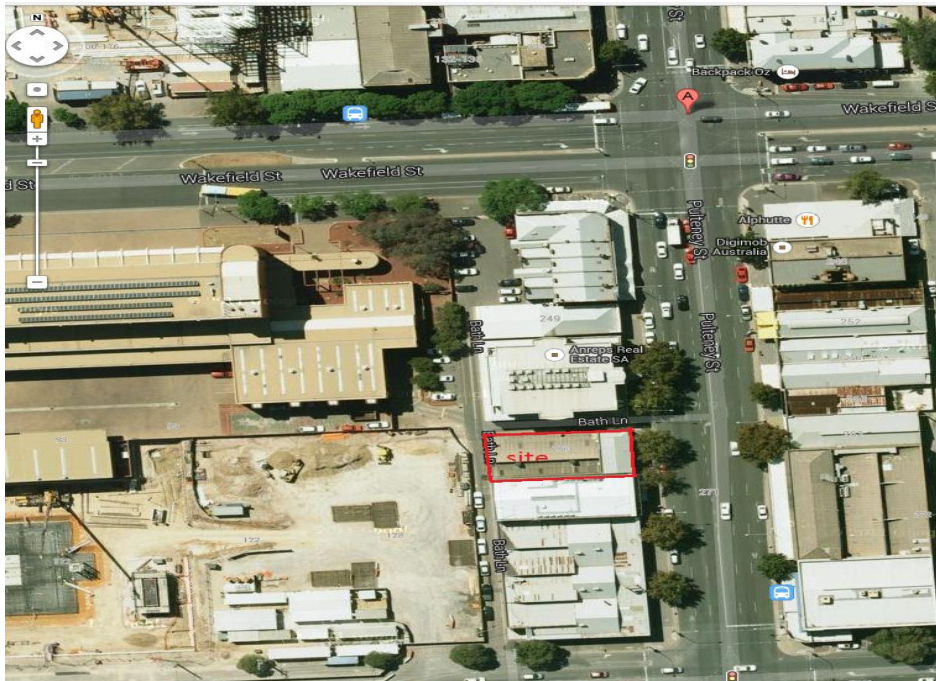


Figure 1: Site Location

Site context and locality

Locality Plans and photographs are contained in the ATTACHMENTS.

The subject site is located along the western side of Pulteney Street, between Wakefield and Angas Street. The site is bound by a laneway to the north and west of the site

known as Bath Lane. The site to the south is enclosed by the two storey Hayes Knight building (269 Pulteney Street).

The site contains a two storey building, the Quick Steps Dance Club Studio. On the northern side of Bath Lane is a four storey building containing offices at the upper levels and retail at the ground level. Across the road on eastern side are a number of single storey commercial and retail buildings. To the rear of the site (on the western side of Bath Lane) is a bitumised car park (privately owned) and ancillary to the SAPOL headquarters which is an eight (8) storey building. Diagonally to the northwest is the Metropolitan Fire Service headquarters which is two – four storeys in height.

The character of the locality comprises mainly commercial premises and retail development. The street at this particular location displays a number of adhoc building styles ranging from the 1800s to present day with 70s and 80s façades dominating. At this point in time there appears to be very limited residential development. Pulteney Street is a major transport route, a north/south connector through the city.



Figure 2: Pulteney Street frontage of existing site (right of Hayes Knight building).

3. AGENCY/REFERRAL BODY COMMENTS

Government Architect

A referral was not required as the applicant entered into a pre-lodgement agreement with the Government Architect in accordance with section 37AA of the *Development Act 1993*.

The pre-lodgement agreement states that the proposal has the potential to offer a benchmark for inner-city apartment development in Adelaide in relation to its response to site and context. No conditions or reserve matters were recommended.

The Pre-lodgement agreements are contained in the ATTACHMENTS.

Adelaide City Council

While there is no statutory referral to Adelaide City Council, Council's Administration have been informally consulted on the proposal through the case managed pre-lodgement process, specifically with regard to traffic and access (as far as that may impact on Council's assets), waste management and encroachments over Council land.

The proposed waste management is supported by Council's Waste Officer.

Council's Administration has commented on each of the encroachments proposed as part of the development as detailed below:

- The glass canopies extending over the footpath have a height ranging between 3 – 3.7 metres above the footpath therefore complying with Council's Encroachment Policy.
- The balconies also comply with Council's Encroachment Policy and are supported subject to further information regarding the treatment/materials used on the underside.
- Feature blade wall elements over Bath Lane have a clearance of over 5 metres over the roadway and comply with Council's Encroachment Policy.
- Feature fin elements on the southern end of the building over Bath Lane and Pulteney Street do not comply with Council's Encroachment Policy however they are authorised, by Council Administration, under delegation as a minor variation.

Council's Administration also does not object to the proposals relating to traffic and waste management.

4. PLANNING ASSESSMENT

The application has been assessed against the relevant provisions of the Adelaide (City) Development Plan. The application is consistent with the majority of the provisions, with the exception of a few where the level of variation is considered minor. A detailed assessment of the development against the development plan policy is provided within the ATTACHMENTS.

Of particular note, the proposal demonstrates policy alignment in the following key areas:

- The mix of land uses are consistent with those anticipated in the Capital City Zone and will add to the vibrancy and activation that will increase in Pulteney Street and also provide a comfortable pedestrian environment with a human scale. In particular, the location of a retail tenancy at ground level and the possibility of a licensed entertainment premise – nightclub/bar, cafe/restaurant with extended hours during the day early evening, and proposed outdoor eating area will improve the current condition, which is characterised by a relatively 'closed' façade at ground level. The proportions of the proposed retail frontage reflect existing frontages.
- The proposal includes an elegant tower that adds to the Pulteney Street boulevard character and reinforces the southern gateway entry into the city.
- The proposal is supported by the Government Architect and achieves the desire for high design quality.
- Pulteney Street is a key north-south boulevard. A sense of further activation of this portion of the street will be enhanced through mixed use development with a strong built form edge. Pulteney Street currently includes office, retail and very little residential. This boulevard will become an important tree-lined commercial corridor with increased residential/mixed use components in the future.

- The apartments have an excellent level of amenity and functionality and exceed Development Plan requirements (with the exception of the setback requirements discussed below).
- Car parking is provided within the development proposal even though it is not required. The increased vehicle movement to the site will have minimal impact on the existing vehicle movement around the site.

Areas for further discussion are described below:

Built Form and Townscape

The Development Plan seeks to reinforce the city's grid pattern, encourage the desired character through a high quality of design excellence and appropriate composition and proportion in the built form. The built form is acceptable for the following reasons:

- The proposal reinforces the city grid pattern of streets through high rise development framing city boulevards.
- The height and scale of this development responds to the role of the street it fronts, which is a primary concentration transport route through the city.
- The design breaks up the building facade into distinct elements and avoids massive unbroken facades.

The proposal is for an elegantly designed slender concrete and glass tower with a strong built form edge that has a textured quality about it. This is expressed as a single volume extruded from the site dimensions, with contrast between the ground and podium levels (1-4) and the upper levels through a balance of vertical and horizontal facade elements. Those elements on the upper levels comprise a continuous serrated edge concrete blade on the south eastern and south western edge, articulated aluminium louvres and horizontal layered zig zag balconies on the eastern and western facade.

Instead of a blank wall on the southern facade the architect has perforated openings to allow directed light into the living rooms and bedrooms and in doing so has created additional visual interest. The northern facade comprises a series of vertical fins and horizontal sun shading devices. Above the glass retail frontage at ground level the podium is concrete clad for four levels with a large cut out that encompasses the Bath Lane and Pulteney Street corner that provides further interest and is described by the Architect as a peephole into the buildings machinations.

The tower allows for views to the sea in the west and the hills in the east. At street level existing trees provide streetscape character which will be further enhanced by the canopied frontage, ground level retail activation, window openings and outdoor area.

ESD

The proposal includes a number of Ecologically Sustainable Design (ESD) initiatives through the National House Energy Rating Scheme (NatHERS) and seeks to achieve a minimum rating of 5.0 stars for each apartment and a minimum development rating of 6.0 stars.

Setbacks to the Southern Property Boundary

According to Council Wide Principle of Development Control 68:

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 proposal incorporates balconies which will be located between zero to 2.0 metres from the southern boundary. There are two primary reasons for the close setback:

- The proposal has been designed to respond to the restrictive site area of 370 square metres and the narrow width of the allotment (13.080 metres).
- The design team has sought to achieve an articulated southern facade to provide an attractive architectural form rather than a blank wall, and therefore provide some improved visual amenity from a southern approach into the city, as this will be one of the most prominent buildings in the locality until such time the abutting sites are developed. This approach has been strongly supported during the Design Review panel sessions.

In examining the above mentioned policy, a 3 metre setback is generally required to ensure:

- An acceptable level of amenity and privacy to occupants.
- That abutting sites are not unduly restricted and can be developed.

In considering the proposal and the policy, the variance from the Development Plan is considered to be minor because:

- The apartments to the southern side will receive adequate natural light and ventilation due to the considered design approach to floor layouts (this is still the case should a development occur on the abutting site).
- The design approach will not prejudice development on the abutting site as the balconies are enclosed against the common property boundary.

Height

The proposed building height will be 70.9 metres.

The Development Plan sets a maximum building height of 53 metres in this part of the Capital City Zone. However, PDC 19 part (a)(iii) allows for development to exceed this guideline if the proposed building:

is located within 200 metres of a high concentration public transport route identified on Map del/1 (Overlay 4)

The site is located within 200 metres of a high concentration public transport route and therefore is subject to the over-height provisions.

The over-height was considered during the Design Review process and was supported given the overall design merit of the proposal.

The development has optimal heights and floor space yield to take advantage of the premium city location and sits appropriately within the city context and the desire to strengthen the north-south boulevard character of Pulteney Street and one of the city's commercial spines.

In addition, the Adelaide (City) Airport Building Heights Map Adel/1(Overlay 5) shows the Obstacle Limitation Surface (OLS) contours. The OLS for this site is 130 metres AHD. The ground level in AHD for the site is approximately 44 metres and with the maximum height to the top of the roof at 70.9 metres the building will sit 15.1 metres within the OLS contour and is supported by Principal of Development Control 20.

Traffic and Access

The applicant has provided a Traffic Assessment Report. There is no minimum car parking rate for development in the Capital City Zone, and therefore defaults to Building Code of Australia requirements which as a Class 2 building also means there is no minimum parking rate. However, the applicant has proposed 28 car parks and 68 bicycle parks.

Access to the site is via Bath lane which is 4.4 metres wide and too narrow for on street car parking which is prohibited. Notwithstanding the narrow width of Bath Lane, two way traffic movements are accommodated. Bath Lane can be accessed via both Angas Street and Pulteney Street. The parking area within the building would be accessed via a 6 metre access point on the east west section of Bath Lane. This leads to the ground level car park and car lift. Parking is provided on the site with 28 car parks at ground level and levels 1 – 4. Two car spaces (and a shared zone) are located at ground level – eight car spaces at level 1 and 4 - five car spaces and levels 2 – 3. Smaller car parks will be allocated at the western end of the upper level car parks due to column locations. Exiting is from the same access point on Bath Lane.

A car lift is used to access levels 1- 4. It is predicted that eight vehicles may access the car lift in any one hour (as per the Traffic Assessment). One vehicle would be waiting to access the lift at peak times. The default position of the car lift would be at ground level to offset waiting period. One space at ground level would be used as a waiting bay. The lift is capable of containing a small SUV and has a capacity of 60 vehicle movements per hour.

The traffic report reveals a low frequency of vehicle movements throughout the day, within a maximum eight movements anticipated within peak traffic times. These traffic volumes are considered low, and as such are not likely to have an adverse impact on the function of Bath Lane or Pulteney Street.

Bicycle parking as per able **Adel 6/ Bicycle Parking Provisions** requires 68 bicycles for the residents and 6 parks for visitors (a total of 74 bicycle parks are required). Given that some residents will park their bikes in their apartments and the frequency and accessibility of public transport to the site means the shortfall of 6 bicycle parks is considered acceptable.

Servicing of the development would occur from Pulteney Street via the use of an existing loading zone in front of the subject building with the loading zone hours to be stipulated by Council.

Waste Management

The waste management provisions of the Development Plan have been addressed in the attached Table and the approach is considered acceptable by officers from the Adelaide City Council. Detail is also provided in the attached Waste Management Plan.

5. CONCLUSION

The development is considered not to be at variance with the Adelaide City Development Plan and is supported for the following reasons:

- The proposal is consistent with the desired character statement of the Capital City Zone in the following ways:

- Reinforces Pulteney Street as a key north-south boulevard. Provides a sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge.
 - Includes high-scale development with high street walls that frame the street.
 - Includes retail at the ground floor level to improve activation of the street and provides a comfortable pedestrian environment through purposed canopied shelters.
 - Provides a high quality design response that reinforces the boulevard streetscape and reinforces the gridded layout of Adelaide's streets.
 - Ensures the compatibility of the proposed residential amenity with the commercial and retail functions.
- Provides appropriately articulated facades that give emphasis and definition to the street corner of Pulteney Street /Bath Lane to clearly define the street grid.
 - Provides apartments with natural light and ventilation regardless of side boundary constraints.
 - Manages the interface with adjacent land by not prejudicing any future development to those sites given the existing prevailing pattern of boundary to boundary development.

6. RECOMMENDATION

It is recommended that the Development Assessment Commission:

- 1) RESOLVE that the proposed development is NOT seriously at variance with the policies in the Development Plan.
- 2) RESOLVE to grant Development Plan Consent to the proposal by Mr Peter Kosnos for the demolition of the existing building and construction of residential apartments (68 apartments over 17 levels), a retail tenancy on the ground floor and mezzanine, plus a common use roof terrace, together with associated car parking over 4 levels at 261 -263 Pulteney Street subject to the following conditions of consent.

Planning Conditions:

1. That except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans, including the amended plans as submitted in development application number 020/0023/14A.

Plans by Loucas Zahos Architects, dated 04/06/14

Title	Date	Drawing Number
Context Plans	04/06/14	1
Proposed Streetscape	04/06/14	2
Planning	04/06/14	3
Building Section and ECO Standards	04/06/14	4
Vignettes	04/06/14	5
Option F Floor Plans	04/06/14	6

Option F Floor Plans	04/06/14	7
Podium Plans	04/06/14	8
Podium Plans	04/06/14	9
Elevations	04/06/14	10
Roof Plans and Massing	04/06/14	11
Street Level Perspectives	04/06/14	12
Sun Study	04/06/14	13
Outdoor Dining	04/06/14	14

Reports / Correspondence

- GHD (03 June 2014) Planning Statement for Sky Apartments, 261-263 Pulteney Street, Adelaide, Rev 2, 3317402.
 - Vipac Engineers & Scientists Ltd (03 June 2014) Wind Impact Assessment 50B-13-0158-TNT-346423-1.
 - Vipac Engineers & Scientists Ltd (02 June 2014) Acoustic Report, 50B-13-0158-GCO-792936-1.
 - Phil Weaver & Associates (17 June 2014) Traffic and Parking Assessment; Proposed Mixed Use Development 261-263 Pulteney Street, Adelaide; File: 205-13
 - Rawtec (June 2014) Waste Management Plan: Sky Apartments Development, 261 Pulteney Street, Adelaide.
 - Lucid Consulting Engineers Pty Ltd (03 June 2014) ESD Statement, Proposed Residential Development Ecologically Sustainable Design (ESD), LF: 8113-007a.
2. The applicant shall provide a final schedule of external materials and colours for the development.
 3. A final waste management plan including supporting documentation and design details shall be provided to the satisfaction of the Development Assessment Commission.
 4. The proposed car parking layout and vehicular entry points shall be designed and constructed to conform to the Australian Standard 2890.1:2004 (including clearance to columns and space requirements at the end of blind aisles) for Off-Street Parking Facilities; Australian Standard 2890.6-2009 Parking facilities – Off street commercial vehicle facilities and designed to conform with Australian Standard 2890.6:2009 for Off Street Parking for people with disabilities.
 6. The on-site Bicycle Parking facilities shall be designed in accordance with Australian Standard 2890.3-1993 and the AUSTROADS, Guide to Traffic Engineering Practice Part 14 – Bicycles.
 7. The strategies recommended in the traffic assessment report by Phil Weaver and Associates, dated 17 June 2014, forming part of this consent shall be undertaken within the Development to the reasonable satisfaction of the Development Assessment Commission. Such measures shall be made operational prior to the occupation or use of the Development.
 8. The acoustic attenuation measures recommended in the Vipac Engineers & Scientists Ltd (June 2014): 262 -263 Pulteney St (Sky Apartments) – Acoustics forming part of this consent shall be undertaken within the Development to the reasonable satisfaction of the Development Assessment Commission. Such acoustic measures shall be made operational prior to the occupation or use of the Development and any

additional measures implemented as required when plant and equipment details are finalised.

9. Mechanical plant or equipment, shall be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site shall not exceed:

50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) at the most affected residence when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.

10. A Construction Environment Management Plan (CEMP) shall be prepared and implemented in accordance with current industry standards – including the EPA publication “Environmental Management of On-site Remediation” - to minimise environmental harm and disturbance during construction.

The management plan must incorporate, without being limited to, the following matters:

- air quality, including odour and dust
- surface water including erosion and sediment control
- soils, including fill importation, stockpile management and prevention of soil contamination
- groundwater, including prevention of groundwater contamination
- noise
- occupational health and safety

For further information relating to what Site Contamination is, refer to the EPA Guideline: *'Site Contamination – what is site contamination?'*:

www.epa.sa.gov.au/pdfs/guide_sc_what.pdf

A copy of the CEMP shall be provided to Adelaide City Council prior to construction.

11. The final details of the proposed waste management practices to be adopted by the applicant or the person(s) having the benefit of this consent during the construction of the Development, shall be submitted to Adelaide City Council prior to the granting of development approval to the Development. Such details shall include a Waste Management Plan which shall cover the three phases of the Development, namely:

- resource recovery during demolition
- waste minimisation and resource recovery during construction; and
- resource recovery during occupation or use of the Development including proposed methods of recycling of all recyclable materials.

12. The connection of any storm water discharge from the Land to any part of the Adelaide City Council's underground drainage system shall be undertaken in accordance with the Council Policy entitled 'Adelaide City Council Storm Water Requirements' and be to the reasonable satisfaction of the Adelaide City.

13. Prior to the commencement of construction a dilapidation report (i.e. condition survey) shall be prepared by a qualified engineer to ensure the stability and protection of adjoining buildings, structures and Council assets. A copy of this report shall be provided to the Adelaide City Council.

- During construction, all materials and goods shall be loaded and unloaded within the boundaries of the subject land.
 - The development and the site shall be maintained in a serviceable condition and operated in an orderly and tidy manner at all times.
 - All trade waste and other rubbish shall be stored in covered containers prior to removal and shall be kept screened from public view.
14. The development and the site shall be maintained in a serviceable condition and operated in an orderly and tidy manner at all times to the satisfaction of the Adelaide City Council.

Advisory Notes:

- a) The proponent may need to obtain approval under the regulations for any equipment or cranes to be used on site that will intrude into prescribed airspace before entering into a commitment to construct any building at the site.
- b) Council maintained infrastructure that is removed or damaged during construction works shall be reinstated to Council specifications. All costs associated with these works shall be met by the proponent.
- c) The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practical measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.

Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site: <http://www.epa.sa.gov.au/pub.html>

- d) The applicant must ensure there is no objection from any of the public utilities in respect of underground or overhead services and any alterations that may be required are to be at the applicant's expense.
- e) As work is being undertaken on or near the boundary, the applicant should ensure that the boundaries are clearly defined, by a Licensed Surveyor, prior to the commencement of any building work.
- f) If temporary hoarding or site works require modification of existing Council infrastructure, the works will be carried out to meet Councils requirements and costs borne directly by the developer.
- g) A Building Site Management Plan is required prior to construction work beginning on site. The Building Site Management Plan should include details of such items as:
 - Work in the Public Realm
 - Street Occupation
 - Hoarding
 - Site Amenities
 - Traffic Requirements
 - Servicing Site
 - Adjoining Buildings
 - Reinstatement of Infrastructure
- h) Insecure building sites have been identified as a soft target for vandalism and theft of general building materials. The Adelaide Local Service Area Police and the

Adelaide City Council are working together to help improve security at building sites. Items most commonly stolen or damaged are tools, water heaters and white goods. To minimise the risk of theft and damage, consider co-ordinating the delivery and installation of the goods on the same day. Work with your builder to secure the site with a fence and lockable gate. Securing the site is essential to prevent unauthorised vehicle access and establishes clear ownership. If you have any further enquiries about ways to reduce building site theft, please do not hesitate to contact the Adelaide Local Service Area Community Programs Section on 8463 7024. Alternatively, you can contact Adelaide City Council for further assistance and information by calling Nick Nash on 8203 7562.

- i) Pursuant to Regulation 74, the Council must be given one business day's notice of the commencement and the completion of each stage of the building work on the site. To notify Council, contact City Services on 8203 7332.
- j) The applicant is reminded of its general environmental duty, as required by Section 25 of the *Environment Protection Act 1993*, to take all reasonable and practical measures to ensure that the activities on the whole site, including during construction, do not pollute the environment in a way which causes or may cause environmental harm.

Any information sheets, guidelines documents, codes of practice, technical bulletins etc. that are referenced in this response can be accessed on the following web site: <http://www.epa.sa.gov.au/pub.html>

- k) The emission of noise from the premises is subject to control under the Environment Protection Act and Regulations, 1993 and the applicant (or person with the benefit of this consent) should comply with those requirements.
- l) The development must be substantially commenced within one (1) year of the date of this Notification, unless this period has been extended by the Development Assessment Commission.
- m) You are also advised that any act or work authorised or required by this Notification must be completed within three (3) years of the date of the Notification unless this period is extended by the Commission.
- n) You will require a fresh consent before commencing or continuing the development if you are unable to satisfy these requirements.
- o) You have a right of appeal against the conditions which have been imposed on this Development Plan Consent or Development Approval. Such an appeal must be lodged at the Environment, Resources and Development Court within two months of the day on which you receive this notice or such longer time as the Court may allow. Please contact the Court if you wish to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide, (telephone number 8204 0300).



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Yasmine Alliu

**SENIOR PLANNING OFFICER
STATUTORY PLANNING DIVISION
DEPARTMENT FOR PLANNING TRANSPORT & INFRASTRUCTURE
DETAILED ASSESSMENT REPORT**

ATTACHMENT A

The Objectives and Principles of Development Control in the Adelaide (City) Development Plan (consolidated version 30 January 2014) relevant to the assessment of this application are outlined as follows:

Capital City Zone Policies

POLICY INTENT	COMPLIANCE	ASSESSMENT NOTES
Desired Character Statement Pulteney and Morphett streets are key north-south boulevards. A sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge. Pulteney Street will include residential, office and institutional uses, and retail activities. These boulevards will become important tree-lined commercial corridors.	YES ✓	The proposal accords with the Desired Character of the Zone in that it achieves the following: • a building of high design quality which will complement the range of opportunities and experiences provided in the Capital City Zone and increase its vibrancy • retail on the ground floor that activates Pulteney Street • increases the residential population of the city by providing a residential accommodation • provides a benchmark for inner city apartment development in Adelaide in relation to its response to site and context • strengthens the strong built form edge that denotes the desired Pulteney Street north – south boulevard.
Objectives The objectives of the zone encourage a diverse mix of land uses that add to the vibrancy of the city. Policies reinforce the. O 1-8	YES ✓	The proposal is consistent with the Zone objectives in the following ways: • the land uses proposed support the social and economic life of the city (ground floor retail, upper level studio space and residential apartments above) • a comfortable pedestrian environment with canopied shelters minimising micro-climatic impacts • A vibrant mix of retail in the form of possible night club/restaurant/cafe and high density residential living

		- to ensure the compatibility of residential amenity with the essential commercial functions of the Zone the building will be suitably attenuated with building services managed on a daily basis - the contemporary and elegant design is suitable to the locality - The building design reinforces the grid layout and framework of the city with its high scale walling and human scale street frontages.
Envisaged use The Zone envisages a diverse range of land uses. PDC 1	YES ✓	The proposed land uses are all listed as desired uses in PDC 1: - serviced apartment - shop (cafe/restaurant)
Form and character PDC 5	YES ✓	The proposed development is consistent with the desired character of the zone.
Design and appearance A high standard of architectural design is sought. Development that reinforces the north –south boulevards and has a strong built form edge. PDC 6-14 PDC 11 Other than in the Central Business Policy Area, buildings should be designed to include a podium/street wall height and upper level setback (in the order of 3-6 metres)	YES ✓	The proposal is consistent with PDCs 6 -10 and 12-18 in that the high standard of architectural design proposed accommodates at streetscape level, suitable pedestrian amenity and streetscape activation with canopied frontages to Pulteney Street. Architectural detailing is consistent around the corner into Bath Lane with the emphasis on addressing the corner interface with the podium cut out. While the proposal does not include a setback of 3 metres above the podium, the proposal includes a strong design response to the base of the building.
Building height The building height limit 53 metres Adelaide City Building Heights Concept Plan figure CC/2 Adelaide City Airport Building Heights Map Adel/1 (Overlay 5)	YES ✓	While the building height is above the prescribed 53 metres, over-height provisions apply to this site. The height is supported given the city context. Importantly, this is the first building of this height in this portion of Pulteney Street and a forerunner to change that is envisaged (i.e. high

(PDC 19-20)		rise development) in the Capital City Zone. This building will be visible in Adelaide's skyline from the southern side of Pulteney Street whether it is within the prescribed 53 metres or the 70.9 metres. The building has been designed to be viewed in the round and makes a positive contribution to the city form.
Movement Strong emphasis on the safety of pedestrian movement through the zone and the design of car parking. There are no minimum required carparking spaces (refer to Table Adel/7). (PDC 25-29)	IN PART ✓	Parking is provided on the site with 28 car parks at ground level and levels 1 – 4. Two car spaces are located at ground level – eight car spaces at level 1 and 4 - five car spaces and levels 2 – 3. This is below the minimum requirement of one bicycle space per apartment. Nevertheless, each apartment is of a considerable size, and as such, should occupants choose to store a bicycle; there is capacity to do so within each residence.

Affordable Housing Overlay

POLICY INTENT	COMPLIANCE	ASSESSMENT NOTES
Objectives That development includes a range of affordable housing options that deliver whole-of-life cost savings to occupants.	NO X	This proposal does not specifically include affordable housing, but will include some apartments that are affordable at the lower end of the market scale, thus offering a specific type of accommodation that is required in the city. To provide an affordable product some of the smaller apartments will have no car parking.
Principles of Development Control Require 15% affordable housing to be provided.	NO X	As above.

Council Wide Policies

POLICY RELEVANT	INTENT AND POLICY	POLICY ACHIEVED	ASSESSMENT
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REFERENCES		
City living		
Housing Choice The provision of a range of housing options which supplement the existing housing types (O6, PDC 5)	YES ✓	This proposal provides a form of residential accommodation that adds to the range of housing options within the city. The proposal includes a total of 68, apartments. There are 34 x 1 bedroom apartments and 34 x 2 bedroom apartments. There is limited diversity in the apartment mix as it has been designed with a specific target market in mind – in this case home ownership – new owner occupiers and partial empty nesters.
Medium to High Scale Residential / Serviced Apartment		
Building Entrances and Active Street Frontages Clear, accessible and convenient street entrances and apartment entries from the lift / lobby. (Ob 22 and PDC 49-50)	IN PART ✓	The apartments have a high standard of amenity and it would appear environmental performance; functional internal layouts, though with limited storage areas. The apartments are aimed at a specific accommodation type so could potentially be limited in their adaptability. Building entrances are oriented to the street, highly visible; provide shelter and a sense of personal address as required by PDC 49. Entrances can be practically accessed from the lift and are clearly identifiable (PDC 50).
Daylight, Sunlight and Ventilation Apartment designed to maximise their environmental benefits PDC 51-59 <i>Note: refer p27-29 for suggested Sunlight design solutions</i> <i>Note: refer p30 for suggested Ventilation design solutions</i>	YES ✓	All the residential apartments have been designed with access to natural light and ventilation with the bedrooms and living areas having access to a window and direct access to natural light and ventilation their adjacent balconies or on the northern facade from a window. The southern facade shows a very directed and contained space for the purposes of obtaining light and ventilation into a balcony area that also maintains privacy. The distance to the bedrooms being 4.1 - 7.3 metres. This is under the maximum distance of 8

		metres. The proposal provides for natural light and ventilation to all habitable spaces and therefore accords with PDC 55. The development meets the specific requirements of PDC 58 which requires living areas, private/communal open space to maintain at least 2 hours of direct sunlight solar time on 22 June to: a) at least one habitable window (excluding bathroom, toilet, laundry, storage room) b) at least 20% of private open space						
Private Open Space Private open space for use and enjoyment by the occupants PDC 60-66	YES ✓	PDC 60 includes a minimum provision of private open space of 8m² for a 1 bedroom apartment and 11m² for a 2 bedroom apartment. A lesser amount may be considered if an appropriate amount is provided in a communal open space. The proposal has a north facing communal roof space of approximately 204m². A minimum dimension of 2 metres is required (PDC 62): The minimum dimension in some instances is 1.8m or in the case of the Juliette balcony 900mm. <table><tr><th>Apartment Type</th><th>Balcony Min Dimension</th></tr><tr><td>1 bedroom Floor area – 50.6 - 67m²</td><td>4.3 - 9m²</td></tr><tr><td>2 bedroom Floor area - 68.3 – 71.5m²</td><td>9 -10m²</td></tr></table> Level 5 only 1 bedroom – floor area 44.7 -57.4m² 2 bedroom – floor area 68.5m² Given the communal roof terrace, there is ample private open space, that is north facing and functional so a lesser amount of balcony space and minimum dimension in some cases is not an issue.	Apartment Type	Balcony Min Dimension	1 bedroom Floor area – 50.6 - 67m ²	4.3 - 9m ²	2 bedroom Floor area - 68.3 – 71.5m ²	9 -10m ²
Apartment Type	Balcony Min Dimension							
1 bedroom Floor area – 50.6 - 67m ²	4.3 - 9m ²							
2 bedroom Floor area - 68.3 – 71.5m ²	9 -10m ²							

		Levels 5 -21 only have two apartments on each level that have north facing or northerly aspects to their balconies. The remainder of balconies have western or eastern facing aspects due to the east/west alignment to Pulteney Street. The majority of balconies are recessed into the building form to enable each apartment to have direct access to the private open space from their living area and in some instances the bedroom. PDC 66 also encourages a rooftop garden which has been provided. The garden is around 204m² of functional open space. Importantly the balconies are integrated into the overall architectural form and detail of the development as required by PDC 63 and add to the casual surveillance of the street.
Visual Privacy / setbacks Preservation of residential amenity and privacy. PDC 67-68	IN PART ✓	PDC 67 requires the protection of visual privacy from adjacent residential development. There is no residential development that can be impacted by this development. PDC 68 reads as follows: <i>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.</i> This is discussed in the body of the report.
Noise and Internal Layout Attenuating potential noise impacts through building design and internal layout PDC 69-70	YES ✓	With regards to internal noise transmission between dwellings (PDC 70), the application includes confirmation that the development is designed to be constructed to meet BCA requirements. Further, the internal layout has been designed to include four levels of separation between the higher impact

		uses (i.e. the night club, restaurant/cafe and the residential apartments). An acoustic report has also been provided by Vipac Engineers and Scientists Pty Ltd. The report provides methodology for minimising any unreasonable noise impacts either externally or internally. A condition has been recommended to reinforce this report.
Minimum Unit Size The provision of suitable minimum residential floor area PDC 71-72	IN PART ✓	PDC 71 recommends a minimum unit size of 50m² for a one bedroom apartment and 65m² for a two bedroom apartment. The one bedroom apartments generally range from 50.6 - 67m² with the two bedroom apartments ranging from 68.3 – 71.5m² Two of the one bedroom apartments on Level 5 do not meet the PDC 71 requirement. The lift overrun has meant the apartment configurations are slightly smaller with floor areas of 44.7 -48.5m² 66 apartments meet the requirement for minimum residential floor space.
Adaptability An adaptable floor plan and layout to accommodate a range of activities over the life of the building. PDC 73 <i>Note: See p33 for suggested Design Techniques</i>	IN PART ✓	The apartment layouts have been specifically designed to meet a specific type. The design meets the desire for windows to all habitable rooms. The room sizes and plans provide three layout options. The floor plans show different activities and privacy levels between different spaces with efficient circulation to optimise the functionality of floor space within rooms.
Outlook Maintenance of residential amenity by way of ensuring a pleasant outlook from living spaces. PDC 74-75	YES ✓	The majority of residential apartment living spaces have large glazed sliding doors that open directly into a balcony area and if not windows that enable views to the sea (looking west), to the hills (looking east) and into the CBD.

Car Parking Aside from hospital development, Car parking is not envisaged for development in the Capital City Zone O23, PDC 76 - 78 <i>Note: see p393 - TABLE Adel/7 – for on-site car parking provisions</i>	YES ✓	Whilst car parking is not required, the proposal provides 28 car parks (includes 1 disabled car park) on site. Car parking is located on four levels plus ground level via a car lift. The car park does not dominate the street frontage. The car park is naturally ventilated through a perforated building fabric panel with pre-cast concrete on the front and perforated panels on the side.
Storage Areas Site facilities will be readily accessible to all occupants and complement the development's locality. PDC 81-82	YES ✓	PDC recommends a rate of 8 cubic metres of storage for a 1 bedroom apartment and 10 cubic metres for a 2 bedroom apartment. The applicant has not specified storage measurements for individual apartments; however, the void above the car lift will be used to provide additional storage for residents. Storage will also be available in the roof top terrace. Common letterboxes are located in the main pedestrian entrance. A waste collection and bin area is located on the ground floor with separate facilities for recycling and service areas on each residential floor.

Environmental Assessment		
Crime Prevention Through Environmental Design (CPTED) Minimising criminal and anti-social behaviour through tangible environmental and urban design outcomes. O24 PDC 83-87	YES ✓	The development has been designed to maximise passive surveillance of the street at ground floor with floor to ceiling height glazing that faces Pulteney Street and continues along Bath Lane. There is a clear line of sight to the residential entry. The development has the potential to have a complementary mix of day and night-time activities, such as residential and ground level retail uses, that extend the duration and level of intensity of public activity. The ground floor lobby and residential apartment levels have been designed to provide relatively direct routes from the lifts to entry doors, thereby reducing the potential for entrapment.

		Access to the building is via swipe card. CCTV cameras may be installed at each level.
Noise Minimising adverse amenity impacts on neighbouring noise-sensitive development. Noise sensitive development should incorporate appropriate noise attenuation measures into the technical building design. O26-27, PDC 90-101 <i>Note: Acoustic Levels need to be demonstrated through an acoustic Report. See p39-41 for more information.</i>	YES ✓	An acoustic report has been provided by Vipac Engineers and Scientists Pty Ltd, which identifies the following typical treatments to be required: • To control noise ingress from the existing noise environment, specific external glazing is required to the bedrooms and living areas of the residential parts of the development as well as the roof terrace • Acoustic wall separation treatments between apartments and in general between lift systems and public areas, car parks, retail etc • Attenuated facade treatments • Attenuated Roof/ceiling structure to roof garden • Attenuation to Plant room, hydraulics and mechanical services A condition of approval is recommended that limits Noise levels generated by the external plant to 55 dB(A) during the day (7 am to 10 pm) and 45 dB(A) at night (10 pm to 7 am) at the most affected residence, when assessed in accordance with the South Australian Environment Protection (Noise) Policy 2007.
Waste Management Dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development. Large sites should provide dedicated area for onsite waste storage, with commercial waste management contracts in place. O28, PDC 102-105	YES ✓	A waste report has been prepared by Rawtec, which demonstrates that waste can be appropriately managed on the site. In accordance with the policies there are dedicated waste and recycling storage facilities that are of an appropriate capacity considering the site is not large. Council's Administration does not object to the proposal relating to waste management. Waste collection would occur for a half hour period between 6.00am and 7.00am Monday – Friday. The collection point and loading zone is on Pulteney Street directly out the front of the site. A Building Manager will be employed on-site to oversee general maintenance and

		waste collection.
Energy Efficiency Internal thermal comfort that minimises the need for artificial heating and cooling, and maximises natural ventilation and access to natural light. O30, PDC 107-116 <i>Note: See p43-48 for suggested design techniques</i>	YES ✓	The building is oriented east/west with all main bedrooms, apartment living areas facing east, west with some having northern aspects. All bedrooms in the apartments face either north or south dependant on the corner of the building the apartment occupies. The northern elevations are provided with fixed shading devices over all residential floors. Shading devices in the form of fins are provided on the eastern and western facades as well as overhanging balconies. The design also allows for some natural cross ventilation. The main and second bedrooms as well as living areas allow for open-able windows (shugg windows) on 90 degree walls as well as ventilation through the living area to the balcony.
Micro-climate and Sunlight Buildings designed to minimise micro-climatic and solar access impact on adjacent land. O33, PDC 120-127, 174, 222 <i>Note: See p49-50 for suggested design techniques</i>	YES ✓	A wind impact assessment has been provided by Vipac Engineers & Scientists Ltd in accordance with PDC 126. The study shows that the proposed building will be expected to generate wind conditions: • in adjacent ground level footpath areas within the 'walking criterion' • in the building entrance within the 'standing criterion' • rooftop terrace within the walking criterion The proposed design incorporates a number of wind mitigating features. However, all areas of the development will be expected to satisfy the recommended criteria. Overshadowing in summer from the building on adjacent development has marginal impact if any during the day. In winter the building will overshadow buildings to the south of the site but still allows for some winter sunlight penetration to portions of the adjacent building at different times of the day. With regards to PDC 124 two canopies are proposed at a height of 3.0 – 3.7 metres above the footpath for pedestrian shelter.

Stormwater Development maximises the use of stormwater and minimises pollution into the stormwater and minimise flooding risk. O35-36, PDC127-132	YES ✓	The design proposes rainwater harvesting and tanks for reuse in toilet plumbing. Stormwater will connect into Councils system.
Infrastructure Provision should be made for utility services. Service structures, plant and equipment should be an integral part of the development and suitably screened from public spaces or streets. O40-41, PDC 133-136	YES ✓	Infrastructure is located on the roof top and will be screened from public view.
Built Form & Townscape		
Height, Bulk and Scale Buildings to demonstrate design excellence that reinforces desired character of zones, maintains openness at a pedestrian scale and provides transition between zone building height guidelines. O46-48, P168-174 <i>Note: See p406 for MAP Adel/1 (Overlay 5) – Airport Building Heights for developments that penetrate the Obstacle Limitation Surfaces (OLS)</i>	IN PART	The development supports the objectives by reinforcing the city's grid pattern of streets. The proposal includes high rise development framing city boulevards as anticipated in Ob 46. The development is considered to incorporate a high level of design excellence in terms of scale, bulk, massing, materials, finishes and architectural treatment and avoids massive unbroken facades. The prevailing pattern of visual subdivision is low compared to other parts of the city and as such the development will not reflect this at the transition stage. PDC 170(b)(i) building ground level to the street frontage where zero set-backs prevail. The proposal is within the Obstacle Limitation Surfaces (OLS) contour and as such did not need to be referred to Adelaide Airport Limited.
Building Setbacks to the street edge Buildings should maintain prevailing set-backs of adjoining buildings and reinforce the street edge with added interest,	YES ✓	The development is proposed to be built to the street edge in accordance with PDC 181.

vitality and safety. PDC 181 <i>Note: see p60 for suggested design techniques</i>		
Composition & Proportion Developments should be consistent with their streetscape character, establish visual links, define ground, middle and rooftop levels and establish building features that define edges, create interest and introduce elements for future neighbouring buildings. PDC182-183	YES ✓	In accordance with PDC 182, the new development contributes significantly to Pulteney Street through creating a strong street presence that activates the pedestrian interface at ground level and by establishing a more substantial edge to the street. The decorative façade treatment provides clear definition to the ground and podium/base levels and upper levels of the building. The zig zag layering of the balconies, the fins, louvres, and blade walls assist in activating the building frontages, avoiding any blank unrelieved walls. This includes the southern wall which will be visible until the adjoin site is developed in the future In accordance with PDC 183, the building façade is articulated with sufficient interest on all four sides. The Bath Lane/Pulteney Street corner of the building has been articulated to provide further interest with sculptural relief in a cut out facade that allows a view into the machinations of the building (the studio area).
Articulation & Modelling Building facades and access ways should reflect the use of the building, the desired character of the locality and the proportions and modelling of adjacent buildings. P184-188 <i>Note: see p61 for suggested design techniques</i>	YES ✓	In accordance with PDC 184, the façade at ground level has been designed to ensure a scale consistent with other built form on Pulteney Street whilst ensuring identifiable elements to relate to the uses at ground floor level. The canopies proposed are a common element along Pulteney Street and add to the human scale of the streetscape. In accordance with PDC 186, the majority of the balconies are internal to the site. However, there is some overhang of the balconies on the north eastern and north western corners (levels 7 – 22). These overhangs create articulation and interest as well as providing shade and privacy to the lower levels. The layering of the balconies is both functional and forms part of the overall design approach. In accordance with PDC 188, the building services are designed to be concealed

		from view. The mechanical condensers for the apartments will be roof mounted, with screening provided on the roof.
Materials, Colours & Finishes The design and external finish of buildings will regard their locality and surrounding environments. P189-192	YES ✓	The external building materials and finishes have been selected to ensure a high quality, low maintenance and durable finish that will contribute to the desired character of the locality. However, given that this is the first tall building in the immediate locality, it will be creating some of that character. The design avoids large expanses of highly reflective materials.
Sky & Roof Lines The provision of innovative and interesting skylines which contribute to the overall design and performance of the building. O49, P194-197 <i>Note: see p63 for suggested design techniques</i>	YES ✓	In accordance with Objective 49, the skyline as viewed along Pulteney Street when entering the CBD from the south will have some visual impact. Therefore given the design and articulation of those facades, the visual amenity of the skyline will only be enhanced especially as the southern wall is sufficiently articulated and not left blank for that very reason. The roof top terrace will possibly facilitate a roof top garden as well as solar panels and rainwater tanks as part of the developments ESD approach. Any roof top plant and ancillary equipment will be screened from view.
Active street frontages Developments will enhance the public environment through provision of street level activity and interest that promotes pedestrian activity in City residents, workers and visitors. O50-51, P198-201 <i>Note: see p64-66 for suggested design techniques</i>	YES ✓	The building incorporates retail functions at street level frontage. Lighting from within the building will create interest at street level at night. Further, the incorporation of residential and retail development on this site along a defined pedestrian route will create a level of interest and enlivenment of this part of Pulteney Street.

Transport and Access The provision of safe and convenient movement within and around the city for vehicles and pedestrians. Pedestrian and cyclist safety must be considered for developments incorporating vehicle access and car parking. O70 PDC 226-266	IN PART	Pedestrian sightlines have been maintained in both directions on Bath Lane and Pulteney Street to mitigate the likelihood of conflict with vehicles exiting or entering the site the site. The traffic report reveals a low frequency of vehicle movements throughout the day, within a maximum eight movements anticipated within peak traffic times. These traffic volumes are considered low, and as such are not likely to have an
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		adverse impact on the function of Bath Lane or Pulteney Street. The restricted footprint of the site means that traditional unloading/loading of vehicles is problematic. In this case there is a reliance this will occur in designated areas such as the existing loading zone directly out the front on Pulteney Street. The ground floor outdoor eating/cafe area has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike/rack station without changing the existing line of the pavement roadway and to allow for ease of pedestrian movement.
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COUNCIL WIDE

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.*

Objective 8: *A broad range of accommodation to meet the needs of low income, disadvantaged and groups with complex needs whilst ensuring integration with existing residential communities.*

- 5** *Development should comprise of a range of housing types, tenures and cost, to meet the widely differing social and economic needs of residents.*
- 6** *Development should provide a variety of accommodation to meet the needs of low income people, student housing, social housing, housing for single people, large and small families, people with disabilities and people with other complex needs. These forms of housing should be distributed throughout the Council area to avoid over-concentration of similar types of housing in a particular area and should be of a scale and appearance that reinforces and achieves the desired character of the locality, as expressed in the relevant Zone and Policy Area.*
- 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.*

Medium to High Scale Residential/Serviced Apartment

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.

Building Entrances

- 49** *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.

- 50** 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.

Daylight, Sunlight and Ventilation

- 51** 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.
- 52** 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.
- 53** 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.
- 54** All new medium to high scale residential or serviced apartment development should have direct ventilation and natural light.
- 55** 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.
- 56** Light wells should not be used as the primary source of daylight for living rooms to ensure a sufficient level of outlook and daylight.
- 57** 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.
- 58** 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
 - (c) communal open space, where such communal open space provides the primary private open space for any adjacent residential development.
- 59** 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.

Private Open Space

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

- (a) studio (where there is no separate bedroom): no minimum requirement but some provision is desirable.
- (b) 1 bedroom dwelling/apartment: 8 square metres.
- (c) 2 bedroom dwelling/apartment: 11 square metres.
- (d) 3+ bedroom dwelling/apartment: 15 square metres.

A lesser amount of private open space may be considered appropriate in circumstances where the equivalent amount of open space is provided in a communal open space accessible to all occupants of the development.

Private open space for 2 or more bedroom dwellings/apartments may be divided into different areas whilst private open space for studios or 1 bedroom dwelling/apartments should be in a single area.

Areas used for parking of motor vehicles are not included as private open space.

Note: In Residential, Main Street and Institutional Zones, specific landscaped open space and private landscaped open space provisions apply.

61 Medium to high scale residential (other than student accommodation) or serviced apartment development in the Capital City Zone 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.

62 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.

63 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.

64 Secondary balconies, including Juliet balconies or operable walls with balustrades should be considered, subject to overlooking and privacy, for additional amenity and choice.

65 For clothes drying, balconies off laundries or bathrooms and roof top areas should be screened from public view.

66 The incorporation of roof top gardens is encouraged providing it does not result in unreasonable overlooking or loss of privacy.

Visual Privacy

- 67** 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.
- 68** 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.

Noise and Internal Layout

- 69** 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.
- 70** 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.

Minimum Unit Sizes

- 71** Medium to high scale residential or serviced apartment development should provide a high quality living environment by ensuring the following minimum internal floor areas:
- (a) studio (where there is no separate bedroom): 35 square metres.
 - (b) 1 bedroom dwelling/apartment: 50 square metres
 - (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.

Note: Dwelling/apartment "unit size" includes internal storage areas but does not include balconies or car parking as part of the calculation.

- 72** Internal structural columns should correspond with the position of internal walls to ensure that the space within the dwelling/apartment is useable.

Adaptability

- 73** 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
 - (d) the future reuse of student accommodation as residential apartments through a design and layout that allows individual apartments to be reconfigured into a larger dwelling or other alternative use.

Outlook

- 74** 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.

Note: Outlook is a short range prospect and is distinct from a view which is more extensive and long range to particular objects or geographic features.

- 75** *Light wells may be used as a source of daylight, ventilation, outlook and sunlight for medium to high scale residential or serviced apartment development provided that:*
- (a) living rooms do not have lightwells as their only source of outlook;*
 - (b) lightwells up to 18 metres in height have a minimum horizontal dimension of 3 metres or 6 metres if overlooked by bedrooms; and*
 - (c) lightwells higher than 18 metres in height have a minimum horizontal dimension of 6 metres or 9 metres if overlooked by bedrooms.*

On-Site Parking and Fencing

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

- 77** *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.*
- 78** *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.*
- 79** *Where garages are located within a basement or undercroft:*
- (a) the width of access driveways should be kept to a minimum and should not detract from the streetscape;*
 - (b) driveways should be designed to ensure safe and convenient access and egress;*
 - (c) access should be restricted to one driveway or one point of access and egress;*
 - (d) vehicles should be able to safely exit in a forward direction and should not compromise pedestrian safety or cause conflict with other vehicles; and*
 - (e) the height of the car park ceiling should not exceed one metre above the finished ground floor level to ensure minimal impact on the streetscape.*
- 80** *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.*

Storage Areas

- 81** *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.*

- 82** *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:*
- (a) studio: 6 cubic metres*
 - (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.*

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.*
- 83** *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) positioning recreational and public space areas so they are bound by roads on at least two road frontages or overlooked by development;*
 - (v) 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;*
 - (vi) locating public toilets, telephones and other public facilities with direct access and good visibility from well-trafficked public spaces;*
 - (vii) ensuring that rear service areas and access lanes are either secured or exposed to surveillance; and*
 - (viii) ensuring the surveillance of isolated locations through the use of audio monitors, emergency telephones or alarms, video cameras or staff eg by surveillance of lift and toilet areas within car parks.*
 - (b) provide access control by facilitating communication, escape and path finding within development through legible design by:*
 - (i) incorporating clear directional devices;*
 - (ii) avoiding opportunities for concealment near well travelled routes;*
 - (iii) closing off or locking areas during off-peak hours, such as stairwells, to concentrate access/exit points to a particular route;*
 - (iv) use of devices such as stainless steel mirrors where a passage has a bend;*
 - (v) locating main entrances and exits at the front of a site and in view of a street;*

- (vi) *providing open space and pedestrian routes which are clearly defined and have clear and direct sightlines for the users; and*
 - (vii) *locating elevators and stairwells where they can be viewed by a maximum number of people, near the edge of buildings where there is a glass wall at the entrance.*
- (c) *promote territoriality or sense of ownership through physical features that express ownership and control over the environment and provide a clear delineation of public and private space by:*
- (i) *clear delineation of boundaries marking public, private and semi-private space, such as by paving, lighting, walls and planting;*
 - (ii) *dividing large development sites into territorial zones to create a sense of ownership of common space by smaller groups of dwellings; and*
 - (iii) *locating main entrances and exits at the front of a site and in view of a street.*
- (d) *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.*
- 84** *Residential development should be designed to overlook streets, public and communal open space to allow casual surveillance.*
- 85** *To maximise security and safety, buildings should be designed to minimise access between roofs, balconies and windows of adjacent buildings.*
- 86** *Security features should be incorporated within the design of shop fronts to complement the design of the frontage and allow window shopping out of hours. If security grilles are provided, these should:*
- (a) *be transparent and illuminated to complement the appearance of the frontage;*
 - (b) *provide for window shopping; and*
 - (c) *allow for the spill of light from the shop front onto the street.*

Solid shutters with less than 75 percent permeability are not acceptable.

Noise Emissions

Objective 26: *Development that does not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise.*

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 nonresidential uses contemplated within the relevant Zone or Policy Area.

Noise Sources

- 90** *Development with potential to emit significant noise (including licensed entertainment premises and licensed premises) should incorporate appropriate noise attenuation measures in to their design to prevent noise from causing unreasonable interference with the amenity and desired character of the locality, as contemplated in the relevant Zone and Policy Area.*
- 92** *Development of licensed premises or licensed entertainment premises or similar in the Capital City, Main Street and City Frame Zones should include noise attenuation measures to achieve the following when assessed at:*
- (a) the nearest existing noise sensitive location in or adjacent to that Zone:*
 - (i) music noise (L10, 15 min) less than 8 dB above the level of background noise (L90,15 min) in any octave band of the sound spectrum; and (ii) music noise (LA10, 15 min) 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; or*
 - (b) the nearest envisaged future noise sensitive location in or adjacent to that Zone:*
 - (i) music noise (L10, 15 min) less than 8dB above the level of background noise (L90,15 min) in any octave band of the sound spectrum and music noise (L10, 15 min) less than 5dB(A) above the level of background noise (LA90,15 min) for the overall (sum of all octave bands) A-weighted levels; or*
 - (ii) music noise (L10, 15 min) less than 60dB(Lin) in any octave band of the sound spectrum and the overall (LA10,15 min) noise level is less than 55 dB(A).*
- 93** *Speakers should not be placed on the fascias of premises or on the pavement adjacent to the premises to ensure development does not diminish the enjoyment of other land in the locality.*
- 94** *Mechanical plant or equipment, should be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site should not exceed:*
- (a) 55 dB(A) during daytime (7.00am to 10.00pm) and 45 dB(A) during night time (10.00pm to 7.00am) when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.*
 - (b) 50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) in or adjacent to a Residential Zone, the North Adelaide Historic (Conservation) Zone or the Park Lands Zone when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.*
- 95** *To ensure minimal disturbance to residents:*
- (a) ancillary activities such as deliveries, collection, movement of private waste bins, goods, empty bottles and the like should not occur:*
 - (i) after 10.00pm; and*

- (ii) before 7.00am Monday to Saturday or before 9.00am on a Sunday or Public Holiday.
- (b) typical activity within any car park area including vehicles being started, doors closing and vehicles moving away from the premises should not result in sleep disturbance when proposed for use after 10.00pm as defined by the limits recommended by the World Health Organisation.

Noise Receivers

- 96** 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.
- 97** 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.
- 98** 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
(LA90, 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

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

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.*

- 102** *A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development.*
- 103** *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.*
- 104** *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.
- 105** *Development should not result in emission of atmospheric, liquid or other pollutants, or cause unacceptable levels of smell and odour which would detrimentally affect the amenity of adjacent properties or its locality. Land uses such as restaurants, shops, cafés or other uses that generate smell and odour should:*
(a) ensure extraction flues, ventilation and plant equipment are located in appropriate locations that will not detrimentally affect the amenity of adjacent occupiers in terms of noise, odours and the appearance of the equipment;
(b) ensure ventilation and extraction equipment and ducting have the capacity to clean and filter the air before being released into the atmosphere; and
(c) ensure the size of the ventilation and extraction equipment is suitable and has the capacity to adequately cater for the demand generated by the potential number of patrons.

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.*

All Development

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

- (a) *providing an internal day living area with a north-facing window, other than for minor additions*, by:*
 - (i) *arranging and concentrating main activity areas of a building to the north for solar penetration; and*
 - (ii) *placing buildings on east-west allotments against or close to the southern boundary to maximise northern solar access and separation to other buildings to the north.*
- (b) *efficient layout, such as zoning house layout to enable main living areas to be separately heated and cooled, other than for minor additions;*
- (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) *providing an external clothes line for residential development; and*
- (h) *use of landscaping.*

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

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

- (a) *appropriate orientation of the building by:*
 - (i) *maximising north/south facing facades;*
 - (ii) *designing and locating the building so the north facade receives good direct solar radiation;*
 - (iii) *minimising east/west facades to protect the building from summer sun and winter winds;*
 - (iv) *narrow floor plates to maximise the amount of floor area receiving good daylight; and/or*
 - (v) *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.*

110 *Orientation and pitch of the roof should facilitate the efficient use of solar collectors and photovoltaic cells*

111 *Buildings, where practical, should be refurbished, adapted and reused to ensure an efficient use of resources.*

112 *New buildings should be readily adaptable to future alternative uses.*

- 113** *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.*

Residential Development

- 114** *New residential development and residential extensions should be designed to minimise energy consumption and limit greenhouse gas emissions.*
- 115** *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.*

- 120** *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.*
- 121** *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.*
- 122** *Development should not significantly reduce daylight to private open space, communal open space, where such communal open space provides the primary private open space, and habitable rooms in adjacent Residential Zones.*
- 123** *Glazing on building facades should not result in glare which produces discomfort or danger to pedestrians, occupants of adjacent buildings and users of vehicles.*
- 124** *Buildings within the Core and Primary Pedestrian Areas identified in [Map Adel/1 \(Overlays 2, 2A and 3\)](#), unless specified otherwise within the relevant Zone or Policy Area, should be designed to provide weather protection for pedestrians against rain, wind and sun. The design of canopies, verandahs and awnings should be compatible with the style and character of the building and adjoining buildings, as well as the desired character, both in scale and detail.*
- 125** *Weather protection should not be introduced where it would interfere with the integrity or heritage value of heritage places or unduly affect street trees.*
- 126** *Development that is over 21 metres in building height and is to be built at or on the street frontage should minimise wind tunnel effect.*

Stormwater Management

Objective 35: *Development which maximises the use of stormwater.*

Objective 36: *Development designed and located to protect stormwater from pollution sources.*

Surface water (inland, marine, estuarine) and ground water has the potential to be detrimentally affected by water run-off from

development containing solid and liquid wastes. Minimising and possibly eliminating sources of pollution will reduce the potential for degrading water quality and enable increased use of stormwater for a range of applications with environmental, economic and social benefits.

Objective 37: *Development designed and located to protect or enhance the environmental values of receiving waters.*

Objective 38: *Development designed and located to prevent erosion.*

Development involving soil disturbance may result in erosion and subsequently sedimentation and pollutants entering receiving waters. Design techniques should be incorporated during both the construction and operation phases of development to minimise the transportation of sediment and pollutants off-site.

Objective 39: *Development designed and located to prevent or minimise the risk of downstream flooding.*

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

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

129 *Development should incorporate appropriate measures to minimise any concentrated stormwater discharge from the site.*

130 *Development should incorporate appropriate measures to minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria and litter and other contaminants to the stormwater system and may incorporate systems for treatment or use on site.*

131 *Development should not cause deleterious affect on the quality or hydrology of groundwater.*

132 *Development should manage stormwater to ensure that the design capacity of existing or planned downstream systems are not exceeded, and other property or environments are not adversely affected as a result of any concentrated stormwater discharge from the site.*

Infrastructure

Objective 40: *Minimisation of the visual impact of infrastructure facilities.*

Objective 41: *Provision of services and infrastructure that are appropriate for the intended development and the desired character of the Zone or Policy Area.*

133 *Provision should be made for utility services to the site of a development, including provision for the supply of water, gas and electricity and for the satisfactory disposal and potential re-use of sewage and waste water, drainage and storm water from the site of the development.*

- 134** *Service structures, plant and equipment within a site should be designed to be an integral part of the development and should be suitably screened from public spaces or streets.*
- 135** *Infrastructure and utility services, including provision for the supply of water, gas and electricity should be put in common trenches or conduits.*
- 136** *Development should only occur where it has access to adequate utilities and services, including:*
 - (a) electricity supply;*
 - (b) water supply;*
 - (c) drainage and stormwater systems;*
 - (d) effluent disposal systems;*
 - (e) formed all-weather public roads;*
 - (f) telecommunications services; and*
 - (g) gas services.*

General

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*
- (b) vibrant main streets of a more intimate scale that help bring the city to life*
- (c) unique and interesting laneways that provide a sense of enclosure and intimacy.*

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.*

Objective 48: *Development which incorporates a high level of design excellence in terms of scale, bulk, massing, materials, finishes, colours and architectural treatment.*

Height, Bulk and Scale

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, City Frame and Residential Zones;*
- (b) the less intense and more informal groupings of buildings set within the landscaped environment of the Institutional Zones;*
- (c) The historic character of the North Adelaide Historic (Conservation) Zone; and*
- (d) the open landscape of the Park Lands Zone.*

- 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 \(Overlay 1\)](#).
- 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;
 - (ii) 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
 - (iii) 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.

Building Set-backs

- 181** Buildings within the Capital City Zone should be built to the street edge to reinforce the grid pattern, create a continuity of frontage and provide definition and enclosure to the public realm whilst contributing to the interest, vitality and security of the pedestrian environment.

Composition and Proportion

- 182** 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.
- 183** Where there is little or no established building pattern, new buildings should create new features which contribute to an areas desired character and the way the urban environment is understood by:
- (a) frontages creating clearly defined edges;
 - (b) generating new compositions and points of interest;
 - (c) introducing elements for future neighbouring buildings; and
 - (d) emphasising the importance of the building according to the street hierarchy.

Articulation and Modelling

- 184** 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
- 185** Balconies should be designed to give shelter to the street or public space at first floor levels.

- 186** *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.*
- 187** *No part of any fully enclosed building should extend over property boundaries, including streets and public spaces, whether above a balcony at a lower level or not.*
- 188** *Building services such as drainage pipes together with security grills/screens, ventilation louvers and car park entry doors, should be coordinated and integrated with the overall facade design.*

Materials, Colours and Finishes

- 189** *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.*
- 190** *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.*
- 191** *Materials and finishes that are easily maintained and do not readily stain, discolour or deteriorate should be utilised.*
- 192** *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).*

Corner Sites

- 193** *New development on major corner sites should define and reinforce the townscape importance of these sites with appropriately scaled buildings that:*
(a) *establish an architectural form on the corner;*
(b) *abut the street frontage; and*
(c) *address all street frontages.*

Sky and Roof Lines

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

- 194** *Where a prevailing pattern of roof form assists in establishing the desired character of the locality, new roof forms should be complementary to the shape, pitch, angle and materials of adjacent building roofs.*
- 195** *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) *contribute to the architectural quality of the building;*
(d) *provide a compositional relationship between the upper-most levels and the lower portions of the building;*
(e) *provide an expression of identity;*

- (f) articulate the roof, breaking down its massing on large buildings to minimise apparent bulk;
- (g) respond to the orientation of the site; and
- (h) create minimal glare.

- 196** 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.
- 197** 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.

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.
- 198** 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.
- 199** Retail frontages should be designed to provide interest to passing pedestrians at street level and relief to building mass.
- 200** Commercial buildings should be designed to ensure that ground floor facades are rich in detail so they are exciting to walk by, interesting to look at and to stand beside
- 201** Residential development should be designed to create interesting pedestrian environments and resident surveillance of any street, accessway and driveway.

Demolition

Objective 53: Where demolition of an existing building is proposed, the replacement building is designed and sited to achieve the purposes of the relevant Zone and Policy Area and to provide for quality urban design.

- 205** The demolition of any building should not occur unless Development Approval for a replacement development has been granted. Exceptions may only be granted:
- (a) for documented reasons of public health or safety agreed by the planning authority or alternatively agreed by a statutory order; or
 - (b) where located within the Park Lands Zone.

Should the replacement development not commence within 12 months of the granting of Development Approval, then landscaping of the site should be undertaken.

Landscaping

Objective 55: *Water conserving landscaping that enhances the local landscape character and creates a pleasant, safe and attractive living environment.*

209 *Landscaping should:*

- (a) be selected and designed for water conservation;*
- (b) form an integral part of the design of development; and*
- (c) be used to foster human scale, define spaces, reinforce paths and edges, screen utility areas and enhance the visual amenity of the area.*

210 *Landscaping should incorporate local indigenous species suited to the site and development, provided such landscaping is consistent with the desired character of the locality and any heritage place.*

211 *Landscaping should be provided to all areas of communal space, driveways and shared car parking areas.*

Transport and Access

Access and 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.*

226 *Development should provide safe, convenient and comfortable access and movement.*

227 *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.*

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

228 *Development should reflect the significance of the paths and increase the permeability of the pedestrian network identified within [Map Adel/1 \(Overlay 2\)](#) by ensuring:*

- (a) pedestrians are not disrupted or inconvenienced by badly designed or located vehicle access ramps in footpaths or streets; and*
- (b) vehicle and service entry points are kept to a minimum to avoid adverse impact on pedestrian amenity.*

- 229** Within the Core, Primary and Secondary Pedestrian Areas identified within [Map Adel/1 \(Overlays 2, 2A and 3\)](#), development should be designed to support the establishment and maintenance of continuous footpaths so that pedestrian flow is free and uninterrupted. Pedestrian access should be provided at ground level mid-block between all streets.
- 230** Development should provide and maintain pedestrian shelter, access and through-site links in accordance with the walking routes identified within [Map Adel/1 \(Overlays 2, 2A and 3\)](#) and the provisions of the Zone or Policy Area in which it is located. Such facilities should be appropriately designed and detailed to enhance the pedestrian environment, have regard to the mobility needs of people with disabilities, and be safe, suitable and accessible.
- 232** Permanent structures over a footpath should have a minimum clearance of 3.0 metres above the existing footpath level, except for advertisements which should have a minimum clearance of 2.5 metres and temporary structures and retractable canopies which should have a minimum clearance of 2.3 metres above the existing footpath level.
- 233** Where posts are required to support permanent structures, they should be located at least 600 millimetres from the kerb line.
- 234** 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.

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.

- 235** 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.
- 236** 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](#).
- 237** 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.

238 Onsite secure bicycle parking facilities for short stay users (i.e. bicycle rails) should be:

- (a) directly associated with the main entrance;
- (b) located at ground floor level;
- (c) located undercover;
- (d) well lit and well signed;
- (e) located where passive surveillance is possible, or covered by CCTV; and
- (f) accessible by cycling along a safe, well lit route.

239 Access to bicycle parking should be designed to:

- (a) minimise conflict with motor vehicles and pedestrians;
- (b) ensure the route is well signed and well lit including the use of road markings such as a bicycle logo if appropriate to help guide cyclists; and
- (c) ensure the route is unhindered by low roof heights.

Public Transport

Objective 66: Development that promotes the use of sustainable transport consistent with State Government objectives and initiatives.

Objective 67: Accessible public transport for all metropolitan residents and visitors and safe and attractive facilities for public transport users.

241 Development along a high concentration public transport route should be designed to ensure that activity and interest for public transport passengers is maximised through the incorporation of active street frontages.

242 Development along high concentration public transport routes identified in [Map Adel/1 \(Overlay 4\)](#) should:

- (a) ensure there are pedestrian links through the site if needed to provide access to public transport;
- (b) provide shelter (e.g. verandahs) for pedestrians against wind, sun and rain;
- (c) provide interest and activity at street level; and
- (d) where possible, avoid vehicle access across high concentration public transport routes identified in [Map Adel/1 \(Overlay 4\)](#). Where unavoidable, vehicle access should be integrated into the design of the development whilst retaining active street frontages.

Traffic and Vehicle Access

Objective 68: Development that supports a shift toward active and sustainable transport modes (i.e. public transport, cycling and walking).

Objective 69: An enhanced City environment and the maintenance of an appropriate hierarchy of roads to distribute traffic into the City to serve development in preference to through traffic.

Objective 70: Adequate off-street facilities for loading and unloading of courier, delivery and service vehicles and access for emergency vehicles.

243 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.

- 244** Facilities for the loading and unloading of courier, delivery and service vehicles and access for emergency vehicles should be provided on-site as appropriate to the size and nature of the development. Such facilities should be screened from public view and designed, where possible, so that vehicles may enter and leave in a forward direction.
- 245** Where practicable, development sites should contain sufficient space for the location of construction equipment during the course of building construction, so that development does not rely on the use of Council road reserves to locate such equipment.
- 246** Vehicular access to development located within the Core and Primary Pedestrian Areas identified in [Map Adel/1 \(Overlay 2A\)](#) should be limited and designed to minimise interruption to street frontages.
- 248** 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.
- 249** Buildings located along primary and secondary access roads should be sited to avoid the need for vehicles to reverse on to the road (unless the dimensions of the site make this impractical).

OVERLAYS

Overlay 1 - Affordable Housing

The following Objectives and Principles of Development Control apply to the designated areas marked on [Map Adel/1 \(Overlays 15a, 15b and 15c\)](#). They are additional to those expressed for the whole of the Council area and those expressed for the relevant Zone and, if applicable, Policy Area.

INTERPRETATION

Where the Objectives and/or Principles of Development Control that apply in relation to this Overlay are in conflict with the relevant Council wide, Zone or Policy Area Objectives and/or Principles of Development Control in the Development Plan, the Overlay will prevail.

Objective 1: Affordable housing that is integrated with residential and mixed use development.

Objective 2: Development that comprises a range of affordable dwelling types that cater for a variety of household structures.

Objective 3: Affordable housing that deliver whole-of-life cost savings to the occupants.

Objective 4: Affordable housing that is provided in a wide range of locations and integrated into the City.

- 1** Development comprising 20 or more dwellings should include a minimum of 15 percent affordable housing..

- 2** *Where development includes affordable housing, then the quantitative provisions in respect to the following elements are not applicable to the affordable housing component provided the qualitative outcomes can be achieved:*
- (a) allotment area and dimensions;*
 - (b) building height;*
 - (c) site area and dimensions;*
 - (d) site coverage;*
 - (e) front, side and rear setbacks to boundaries;*
 - (f) area and dimensions of private open space;*
 - (g) minimum unit sizes;*
 - (h) minimum storage areas;*
 - (i) plot ratio;*
 - (j) dwelling unit factor; and*
 - (k) landscaped open space.*



Pulteney Street frontage eastern view



Directly across Pulteney St from the site



Bath Lane looking east towards Pulteney St



Bath Lane northern side of the sit



The boulevard Pulteney St





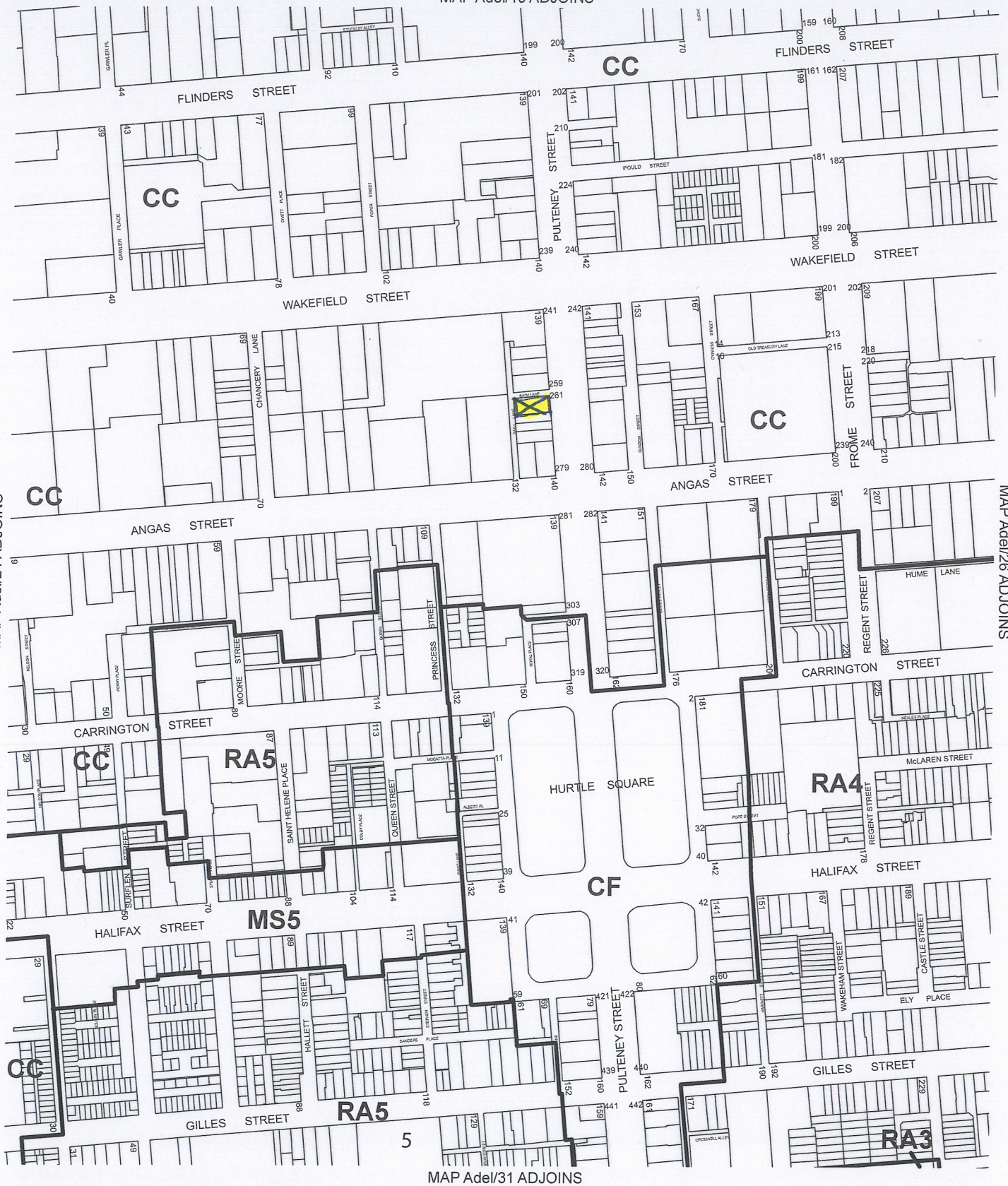
To the west of the site ...the SAPOL site



Looking west down Bath Lane towards the CBD

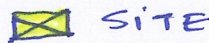


The rear of the site



NOTE : For Policy Areas See MAP Adel/56

- CC Capital City Zone
- CF City Frame Zone
- MS5 Main Street (Adelaide) Zone
- RA3 Residential (Waverly) Zone
- RA4 Residential (Hurtle East) Zone
- RA5 Residential (Hurtle West) Zone



Scale 1:4150
0metres 100 200 300

ADELAIDE (CITY) ZONES MAP Adel/25

- Zone Boundary
- Development Plan Boundary



13 Central Business Policy Area



- State Heritage Place
- Local Heritage Place
- ▲ Significant Tree

- Existing Pedestrian Link
- Proposed Pedestrian Link

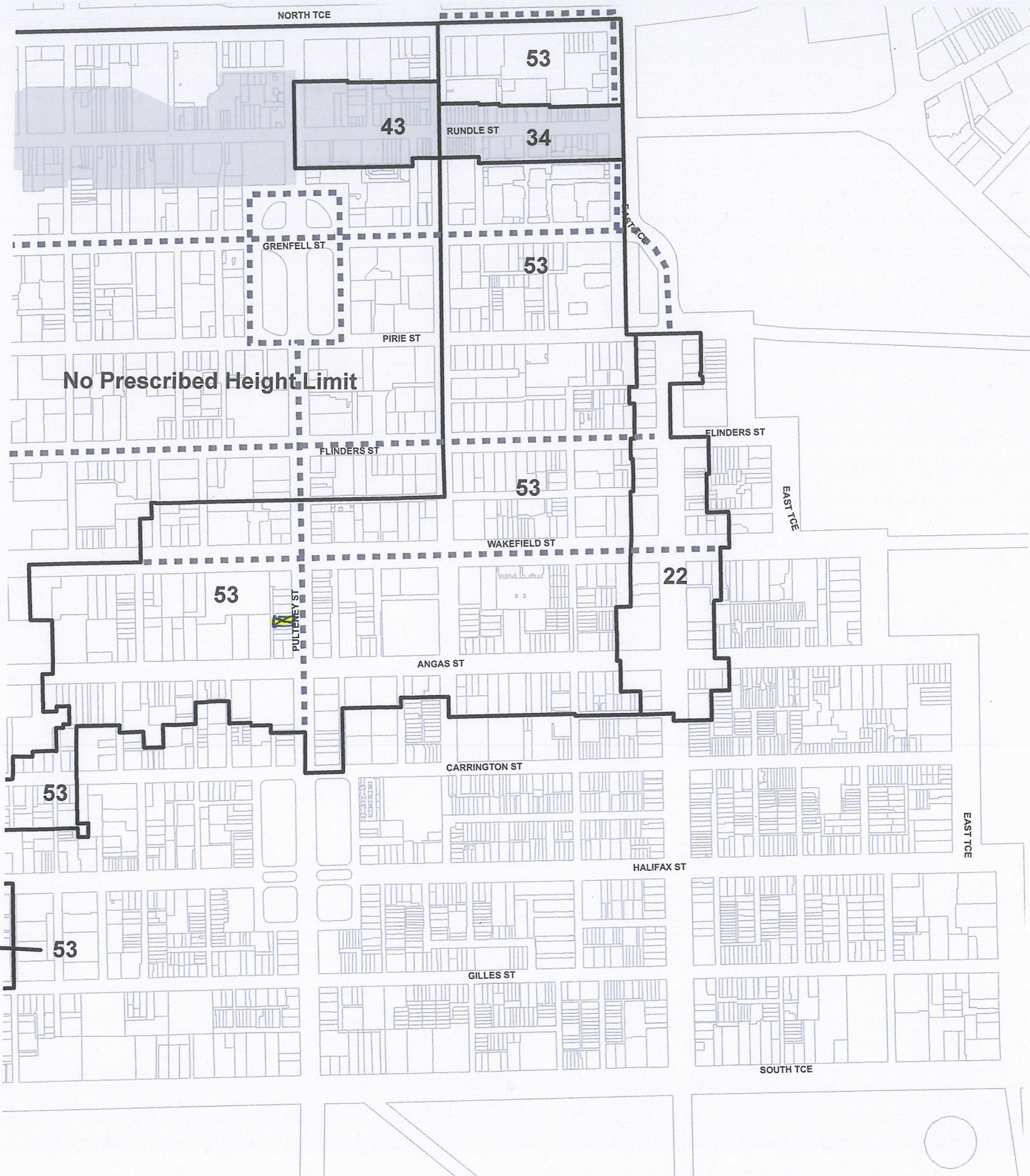
Policy Area Boundary

Scale 1:4150

0metres 100 200 300



ADELAIDE (CITY) POLICY AREAS MAP Adel/56



 SITE



1:8000

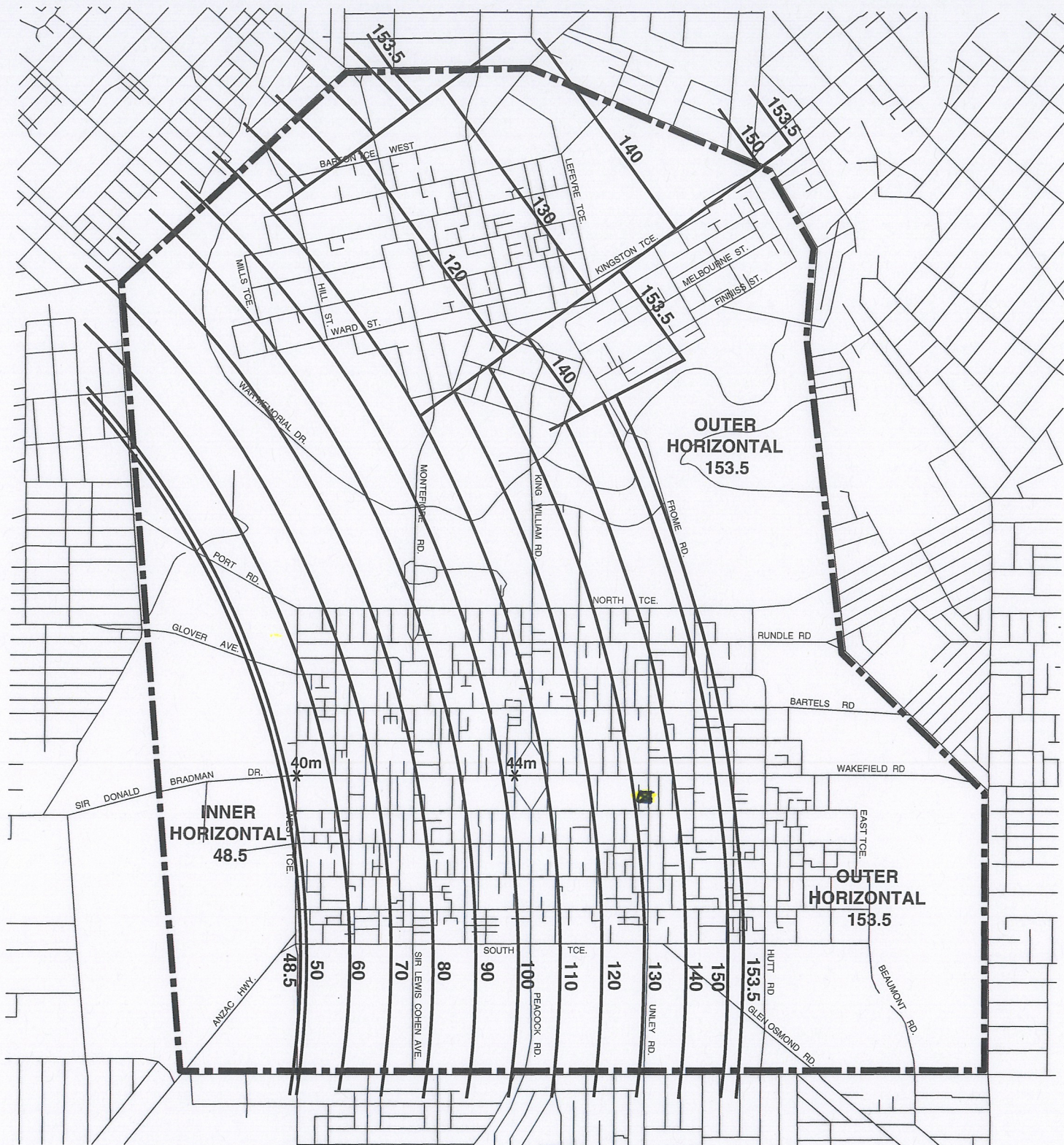
0 120 240 360 480 600 metres

 Maximum Building Height (Metres)
within Capital City Zoned land
Note: Airport Building Height Restrictions Apply.
Refer Map Adel/1 (Overlay 5).

 City Boulevards and Terraces

 Policy Areas of a 'main Street' type

ADELAIDE (CITY) **BUILDING HEIGHTS** **Concept Plan Figure CC/2**



Referral to the Department of Transport and Regional Services through Adelaide Airport Limited is required where a development would exceed the Obstacle Limitation Surface (OLS) contours on this map.

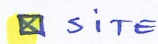
100 OLS Values in Australian Height Datum (AHD)

— OLS Contour Boundary

*** 40m** Indicative ground level in AHD. Note: Ground level varies throughout the Council area and accurate ground level in AHD would need to be confirmed

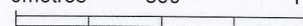
- - - Development Plan Boundary

Note: Approval is required under the Commonwealth Airports Act 1996 for structures and the like that penetrate prescribed air space (as defined in the Airports Act 1996)

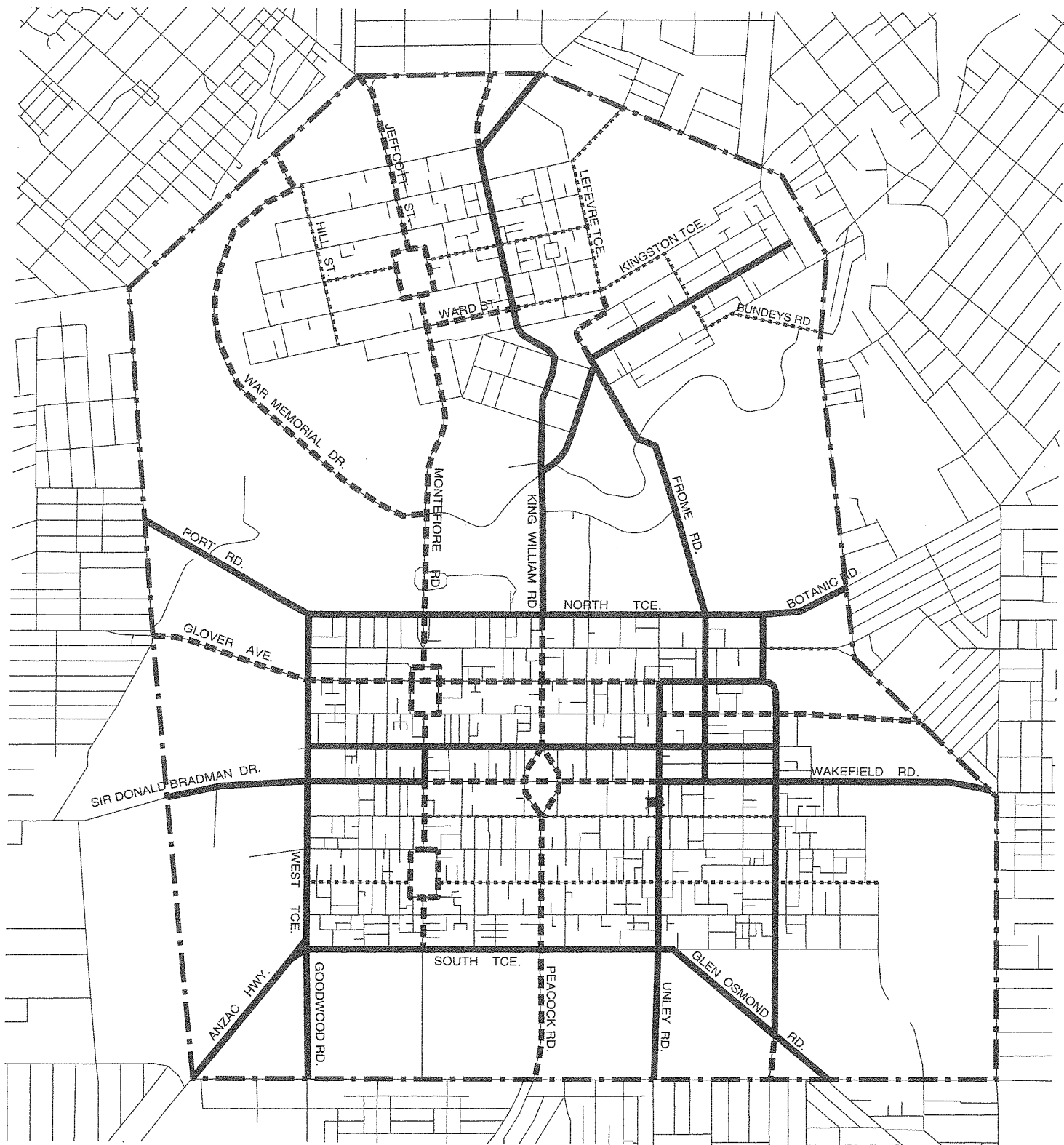


Scale 1:26,000

0metres 500 1000



ADELAIDE (CITY) AIRPORT BUILDING HEIGHTS MAP Adel/1 (Overlay 5)



■ SITE .

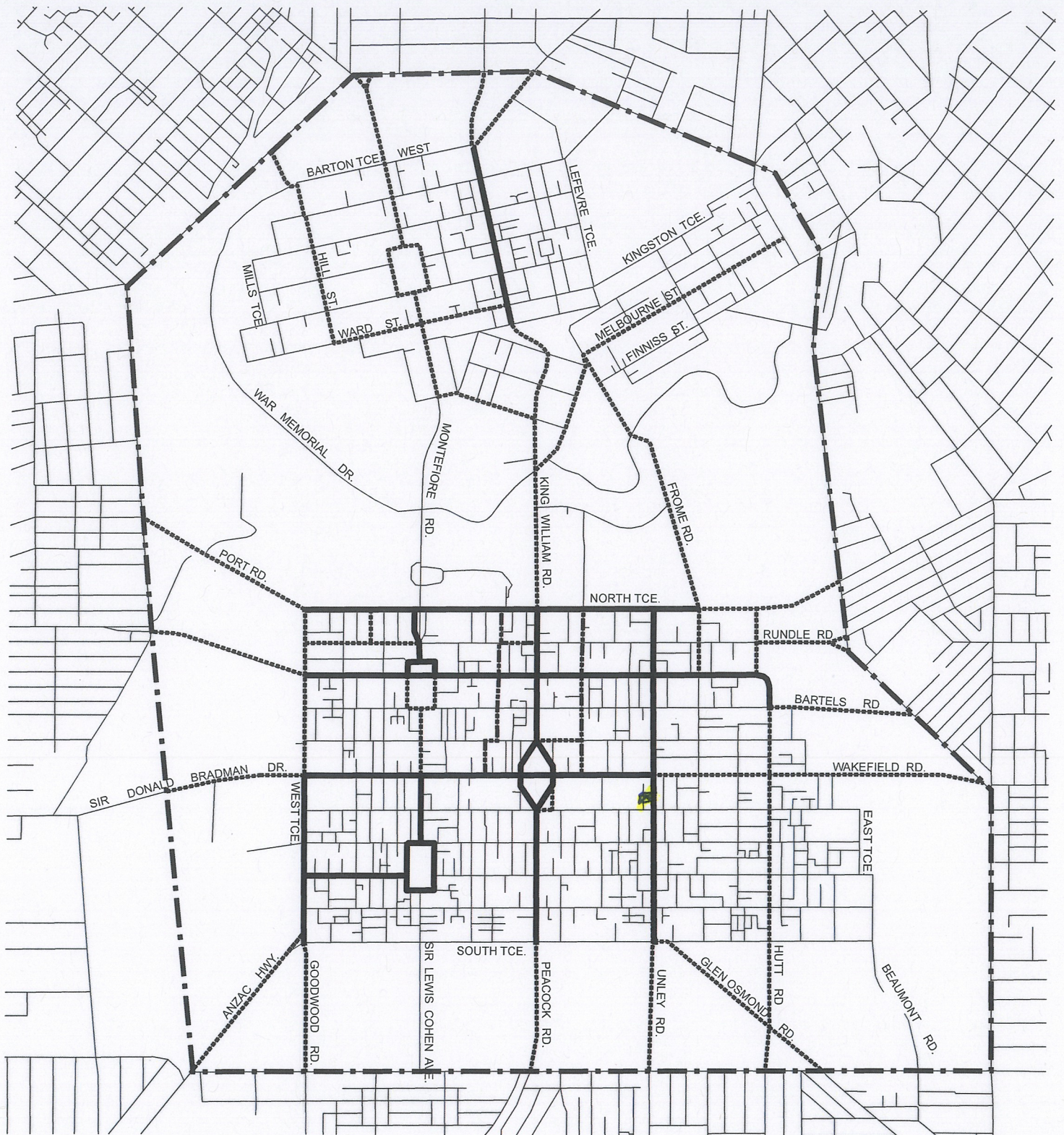


Scale 1:26,000
0metres 500 1000

- Primary City Access
- - - Secondary City Access
- Local Connector
- . - . Development Plan Boundary

ADELAIDE (CITY) **CITY ROAD NETWORK** **MAP Adel/1 (Overlay 1)**

Consolidated - 30 January 2014



 SITE

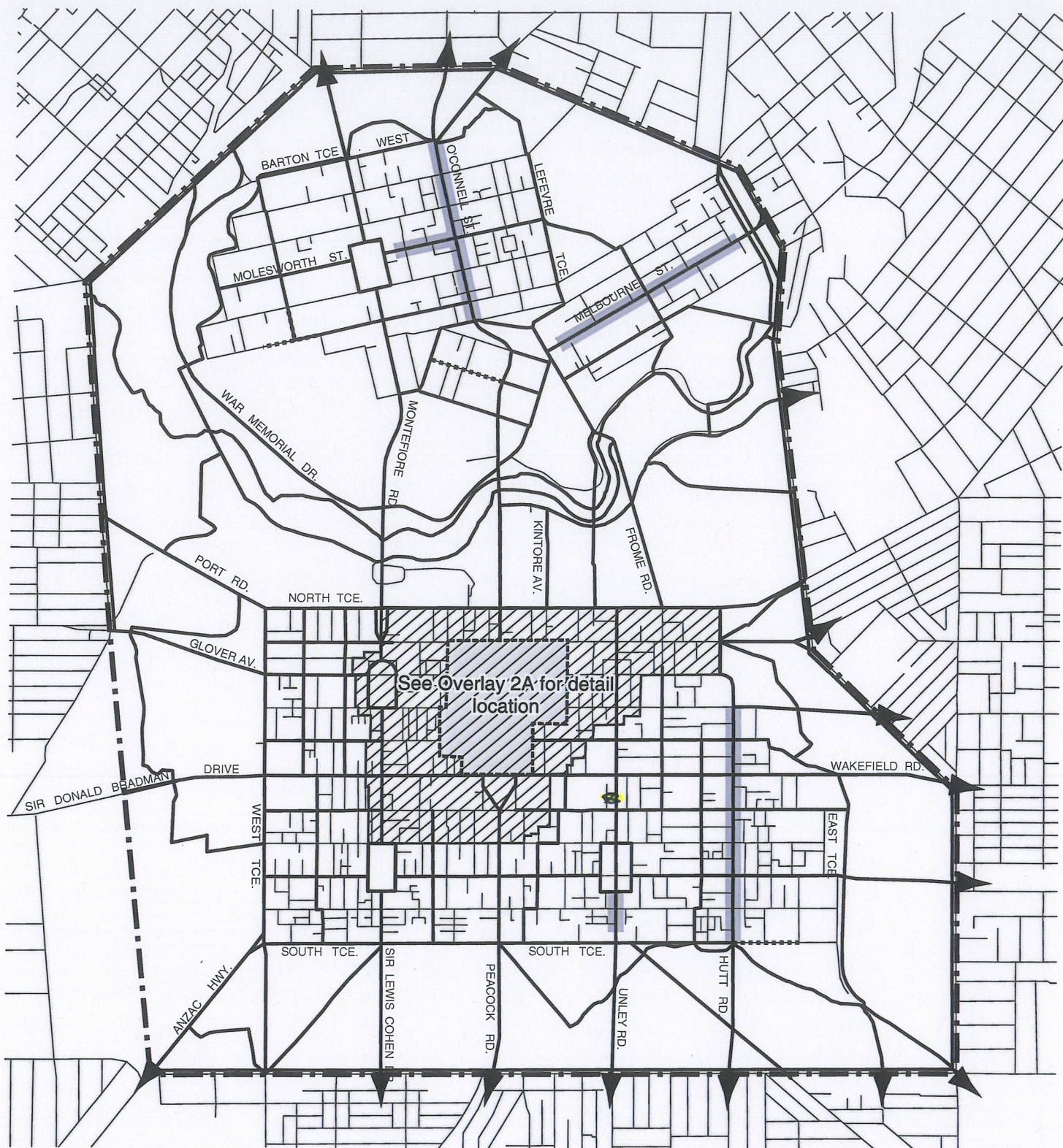
-  High Concentration Public Transport Route
-  Public Transport Pedestrian Route
-  Bus Route

-  Development Plan Boundary



Scale 1:26,000
0metres 500 1000

ADELAIDE (CITY) **PUBLIC TRANSPORT NETWORK** **MAP Adel/1 (Overlay 4)**



 SITE

-  Primary Pedestrian Area [See Map Adel /1 (Overlay 2A) for detail]
-  Core Pedestrian Area (non-ancillary car park non-complying)
-  Secondary Pedestrian Area
-  Localised Walking Route
-  Major Walking Route
-  Development Plan Boundary



Scale 1:26,000
0metres 500 1000

ADELAIDE (CITY) PEDESTRIAN NETWORK MAP Adel/1 (Overlay 2)

DEVELOPMENT APPLICATION FORM

OFFICE USE ONLY

Precinct:

Heritage:

Trim:

DA Number: 020/6023/14A



10 9909

APPLICATION TYPE *

☒ Development Plan Consent

(Planning only & includes removing / pruning a significant tree or heritage conservation works)

☐ Encroachment Consent

(Required if building work is proposed in the public realm)

☐ Building Rules Consent

(please answer Q1 below)

☐ Development Approval

(Tick for planning AND building)

Q1: Will the Building Rules be Privately Certified? Yes ☐ No ☐ N/A ☐

LOCATION OF PROPOSED DEVELOPMENT *

Unit / Level / Street Number: 261 - 263

Street Name: PUTNEY STREET

Adelaide ☒ North Adelaide ☐

Volume:

Folio:

DETAILS OF PARTIES

APPLICANT *

Title: Mr ☒ Miss ☐ Ms ☐ Mrs ☐ Dr ☐

Name: PETER KOZNO

Address: 138 MAGILL ROAD,
NORWOOD SA 5067

Telephone:

E-mail: % MLOUCAS @ adel.12.com.au.

Mobile / Fax: 0422

OWNER *

Title: Mr ☐ Miss ☐ Ms ☐ Mrs ☐ Dr ☐

Name:

Address: AS PER APPLICANT

Telephone:

E-mail:

Mobile / Fax:

CONTACT

Title: Mr ☒ Miss ☐ Ms ☐ Mrs ☐ Dr ☐

Name: MICHAEL LOUCAS

Address: 1/276 FLINDERS STREET
ADELAIDE

Telephone: 8290 3200

E-mail: MLOUCAS @ adel.12.com.au.

Mobile / Fax: 0412 804 281

BUILDER ☐ ARCHITECT ☒ BUILDING DESIGNER ☐

Title: Mr ☐ Miss ☐ Ms ☐ Mrs ☐ Dr ☐

Name:

Address: AS PER CONTACT

Telephone:

E-mail:

Mobile / Fax:

DESCRIPTION OF PROPOSED WORKS *

MIXED USE COMMERCIAL AND
APARTMENTS.

PROPOSED HERITAGE WORKS **

RECEIVED

19 JUN 2014

Administrative Branch

COST OF PROPOSED DEVELOPMENT *

COST OF PROPOSED HERITAGE WORKS **

TOTAL COST OF PROPOSED WORKS *

\$ 20,000,000

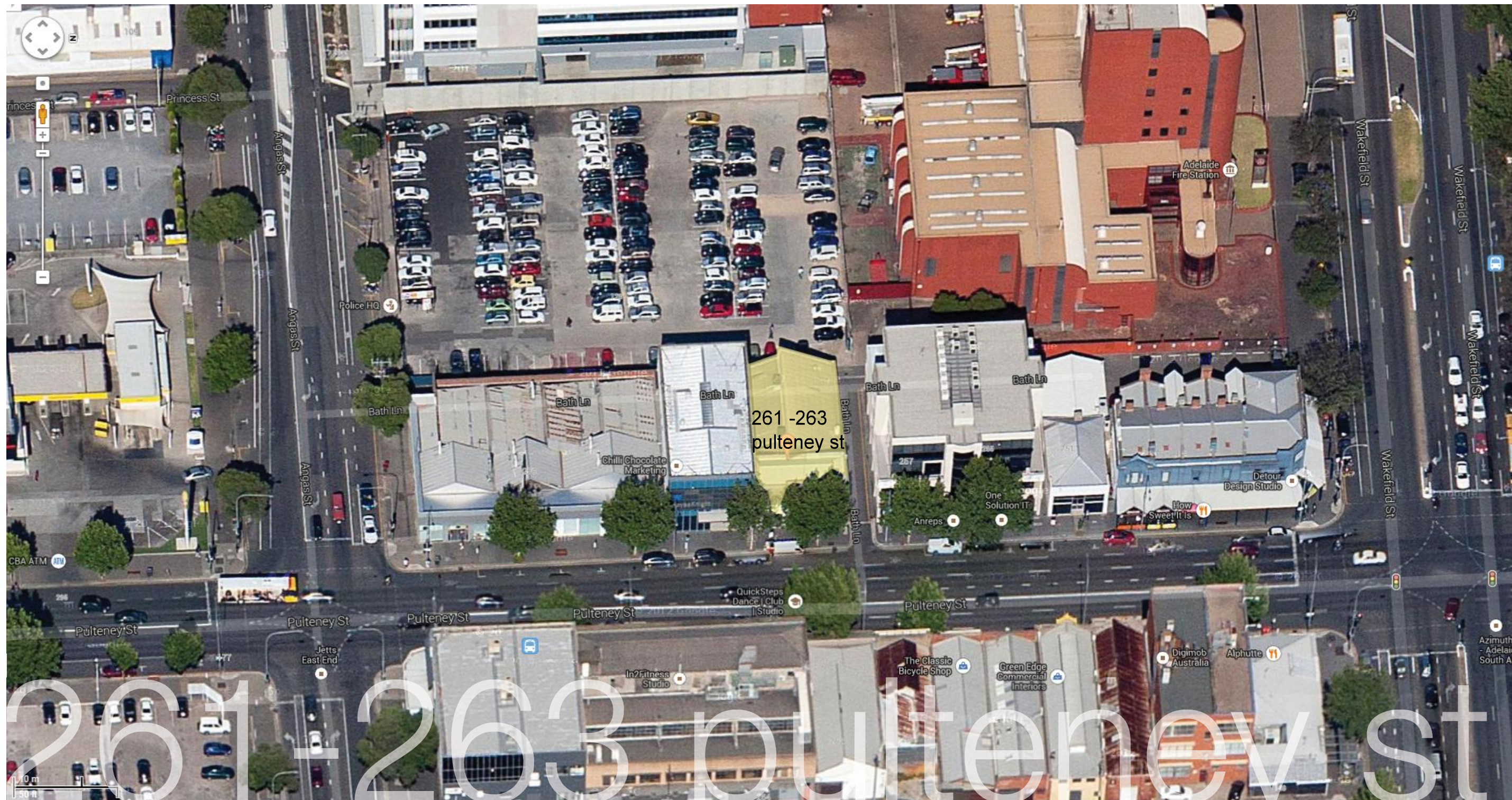
\$

\$ 20,000,000

Please Note: If dual works are required, please split costs accordingly

LAND USE / OCCUPIER INFORMATION		
Current land use: *	DANCE STUDIO	Proposed land use: RESIDENTIAL MIXED USE.
Current occupier:	CLASS 6.	Proposed occupier: CLASS 2
BUILDING CLASSIFICATION (See Table Below)		
Current:	Proposed:	If Class 5, 6, 7, 8 or 9 is proposed, number of employees:
If Class 9a is proposed, number of persons whom accommodation is provided: N/A		
If Class 9b is proposed, number of occupants: N/A		
OTHER INFORMATION *		
Does Schedule 21 or 22 of the Development Regulations 2008 apply?		Yes ☐ No ☒
Has the Construction Industry Training Act 1993 levy been paid?		Yes ☐ No ☐
Has the Signed Declaration Form for clearances to powerlines been included with the development application?		Yes ☒ No ☐
Will Heritage Incentive Scheme funding be sought?		Yes ☐ No ☐
(Please note: Works carried out prior to a HIS allocation being approved by Council are considered retrospective and therefore ineligible for funding under the scheme)		
3D City Model **		
Is the application over \$4.5M or 3 or more storeys (includes new building or addition to existing building)? If YES, please answer Q1 and Q2 below. If NO, disregard.		Yes ☐ No ☒
Q1: Has the 3d Building Model Terms of Submission been included with the Development Application?		Yes ☐ No ☒
Q2: Has the 3D Building Model Development Proposal Checklist been included with the Development Application?		Yes ☐ No ☒
Please Note: If you are required to submit a 3D digital model of the proposed building, please refer to the following documents, available online at www.adelaidecitycouncil.com , in the Development / Planning and Building / 3D City Model section:		
3D Model Development Information Guide 3D Model Checklist		
DECLARATION / SIGNATURE *		
I, the applicant have obtained consent from relevant rights holders to reproduce documents in support of my development application, and further indemnify Council for any alleged breach of copyright in relation to the electronic publication of documents furnished in support of this development application lodged by me.		
Signature: *		Date: *
[Signature] ARCHITECT.		18-6-2014
Please note that fees will be determined once the application has been received. A tax invoice will then be forwarded to the applicant. Assessment of application will not take place until all relevant fees have been paid		

BUILDING CODE OF AUSTRALIA CLASSIFICATIONS	
Class 1	Class 1a - a single dwelling including detached houses, town houses and villa units. Class 1b - guest house, boarding house or the like accommodating not more than 12 persons and not exceeding 300 square metres.
Class 2	A building containing 2 or more separate dwellings, excluding building of Class 1.
Class 3	A residential building, other than Class 1 or Class 2, which is a common place of living for a number or unrelated persons.
Class 4	A dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.
Class 5	An office building for professional or commercial purposes, excluding building of Class 6, 7, 8 or 9.
Class 6	A shop or other building for the sale of goods by retail or the supply of services direct to the public.
Class 7	A building which is a public carpark, or for storage of goods for sale by wholesale.
Class 8	A factory or a laboratory.
Class 9	A building of a public nature:- - Class 9a - health care building. - Class 9b - an assembly building. - Class 9c - an aged care building.
Class 10	A non-habitable building or structure:- - Class 10a - an open or private garage, shed or the like. - Class 10b - a fence, mast, antenna, retaining or freestanding wall, swimming pool or the like.



Loucas Zahos - Planning Statement for Sky Apartments

Rev 2 03 June 2014 | 33 17402



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Context of report

EXECUTIVE SUMMARY

The Sky Apartments proposal is for a mixed use residential apartment building of 23 levels overall, including 17 levels of apartments, ground floor retail with car parking to rear of Pulteney Street and access from Bath Lane, additional 4 levels of car parking with studio space and a roof garden. The approximate construction cost is in the order of \$19.0 million (the previous initial cost estimate was \$17.5 million).

The site is located within Lot 706 Pulteney Street and is approximately 370 square metres with CTs - Volume 5545 Folio 337. Number 261-263 Pulteney Street is located within the Capital City Zone of the current Adelaide City Development Plan consolidated in October 2013. The Land Use proposed is for Mixed Use (Residential and Retail). The total height of the apartment building is 70.4 metres (at top of roof garden canopy – which is 15.6 metres within the obstacle limitation surface contour).

The final revised design of 261-263 Pulteney Street - Sky Apartments - (Option F: dated 28.05.2014) incorporates suggestions from the Pre-lodgement meeting No 1 on Thursday 23 January 2014, the Design Review Panel No 1 on Wednesday 5 February 2014, Design Review Panel No 2 on Wednesday 9 April and round table discussions with DPTI (Department for Planning, Transport and Infrastructure) on Monday 19 April and ODASA (Office for Design and Architecture SA) on Thursday 22 May 2014.

The following is a summary of the design issues that were raised at the Design Review Panel meetings with ODASA and DPTI:

- a) Revised building height – the height increase (23 levels and 70.4 m height) is due to the need for an additional number car parks (from 3 levels to 5 levels) and the incorporation of a 2nd lift, resulting in the loss of overall apartment floor areas (53 metres is the suggested maximum building height - refer to Concept Plan figures CC/1 and 2 and PDC 19) in sect 3).
- b) North East façade corner - has been redesigned to provide for a lighter, more open façade with additional interest and sculptural relief.
- c) Level 1 - 4 Ceiling Heights - the apartment ceiling heights in the new studio floors have increased by an additional 300mm per floor providing future tenants with more flexibility when a potential change in use.
- d) Level 5 - 22 Ceiling - the apartment ceiling bulkheads have been further modified to increase ceiling heights in living areas to 2550 AFL.
- e) South Boundary 3 - 6 metre setback would restrict the design in only being able to achieve 2 apartments per floor rather than 4 apartments per floor. In addition, the southern boundary will form part of the future gateway into city, therefore it needs to provide an attractive architectural form rather than a blank wall.
- f) Kitchen and WC relationship - has been amended and resolved to stop WC opening onto the kitchen.
- g) Apartment Corridor Width - kitchens facing a narrow passageway has been amended to 1200mm wide.
- h) Car Lift over run area - is to become a resident/retail tenant storage area and plant area.
- i) Blade Walls on south - are designed to maximise living rooms and provide an increased level of light and interest. Note that the blade walls are actually perforated and not solid - to allow more light into the living areas and bed rooms.
- j) Circulation Area of Apartments - the floor plans provide for a better use of shared infrastructure and additional natural flow through ventilation.
- k) Roof Garden - has remained as a key 'community asset' which can be used as a cinema, bar, entertaining area, etc.

l) Waste and Traffic circulation issues - will be further refined with additional input from specialist consultants to minimise potential security and safety issues and ensure that adequate storage and rubbish areas are provided for commercial, retail and residential uses.

m) Ground floor outdoor eating/café area - has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike racks/station with an outdoor covered way to Pulteney street.

ARCHITECT'S DESIGN STATEMENT

Design Intent - The overall design intent is to provide a high quality architectural design that provides for a mixed use building, predominately residential apartments with a retail component at the ground floor to encourage street activation and a roof garden/community hub.

Built Form - The concept design allows for 22 levels above ground (a total of 23 levels, including a roof garden). Ground floor has retail and car parking, level 1 & 2 retail/studio with car parking, levels 3 & 4 car parking and bike parking, including bike lockers for each apartment. The design incorporates 17 levels of apartments with a total height of 70.4 metres above ground level – which is 15.6 metres within the obstacle limitation surface contour (refer to Map Adel/1 (Overlay 5) in sect 3).

There are 4 apartments per level with a total of 68 apartments.

34 apartments will be 1 bed room and the remainder 34 apartments will be 2 bed room.

The apartments vary in size with the 1 bed room apartments being a total of 50.6 - 67 sq metres plus 4.3 - 9 sq metres outdoor balcony areas.

The 2 bed room apartments are 64 - 71.5 sq metres plus 9 - 10 sq metre outdoor balcony areas. The current two storey brick building on the subject site is being used as a dance studio.

Site Context - The subject site is located at 261 - 263 Pulteney Street, within the heart of the Adelaide CBD with lane way access from Bath Lane to the north and to the west of the site. This provides critical off-street access and allows for access to northerly light and ventilation to the proposed apartments.

The site is within Lot 706 and is approximately 370 square metres in area.

Access - Pulteney Street has good access to public transport and residents in this location and are less reliant on private vehicle and parking in order to travel to work or play. Therefore, the design of the proposed apartment building has taken into account alternative options for providing residents with access off Bath Lane.

The apartment building will make use of 5 levels of car parking.

Sustainability - The concept will incorporate solar panels on the roof, a roof garden with potential for community garden plots. In addition, storm-water runoff will be contained using a underground tank and waste will be disposed of via a centralized system at ground floor level. The building facade will incorporate sun shades and blades that allow views to the hills to the east and the sea to the west whilst blocking out the early morning and late afternoon sun.

Public Realm - The design intent provides street level activation during the day/evening through - incorporating a retail component at the ground floor and mezzanine level, licensed entertainment premises, nightclub/bar- providing all day breakfast I lunch and dinner to residents/visitors for extended hours during the day/early evening. There is a proposed outdoor eating area with removable outdoor furniture, providing vitality to the street creating a 'community hub' for local residents.

1. Description of project

1.1 INTRODUCTION

This Planning Statement outlines and summarises the recommendations of the design review process through the Office for Design and Architecture SA and DPTI and the design merits of the proposal including the following:

- A description of the project (location, title, nature of land use, key physical attributes)
- A description of the general locality (precinct, access, adjacent uses)
- A statement of the key Development Plan elements (zone, key policy aims, key standards stated)
- A short summary of the design review and pre-lodgement process and key issues.

1.2 LOCATION

The subject site is located at 261 – 263 Pulteney Street, within the heart of the Adelaide CBD. The proposed site is positioned equally between Wakefield Street and Angus Street on the western side of Pulteney Street. The site is provided with laneway access from Bath Lane to the north and to the west of the site. This not only provides critical off-street access but allows for access to northerly light and ventilation to the proposed apartments.

The site is within Lot 706 and is approximately 370 square metres in area.

1.3 DEVELOPMENT PLAN

1.1.1 Adelaide City Council Development Plan

The current Adelaide City Council Development Plan consolidated on 17 October 2013 locates the subject site within Concept Plan Figure CC/2 and is referred to under the Capital City Zone policy area.

Refer to figure 1 below for location of subject site within Concept Plan Figure CC/2 in the current Adelaide City Council Development Plan.

Building height limit

Concept Plan Figure CC/2 prescribes a height limit of 53 metres for the proposed Pulteney Street site.

Pulteney Street - City Boulevard and Terrace

In addition, Pulteney Street is designated as a City Boulevard and Terrace. This has further implications regarding impacts on the proposal with regard to possible height limitations and potential land uses and issues of parking and access which will be discussed in section 3 below.

1.3 TITLES

The current titles are included within Appendix A. There are no easements shown on the current titles.

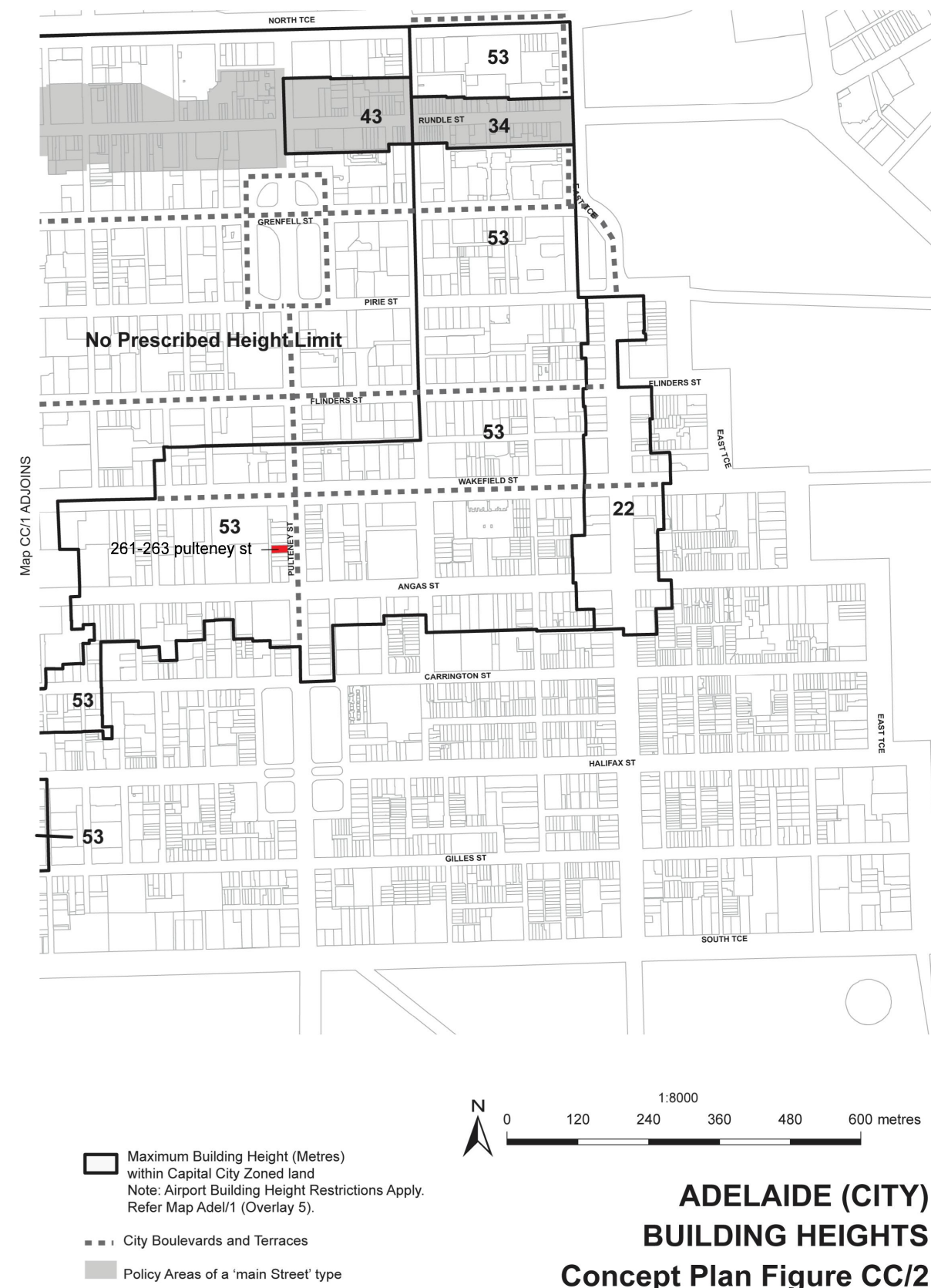


FIGURE 1 : CONCEPT PLAN CC/2

Consolidated - 17 October 2013

1.4 NATURE OF LAND USE

The site is currently used for commercial purposes – as a dance studio – within a two storey brick building fronting Pulteney Street with a single storey at the back facing Bath Lane.

The concept design allows for 22 levels above ground (23 levels in total), including a ground floor retail component with a podium consisting of 5 levels of car parking (including ground).

1.5 KEY PHYSICAL ATTRIBUTES

1.5.1 Site area

The site is a rectangular shape bounded by Bath Lane (28.295 m depth) to the north, Bath Lane to the west (13.081 m width), Pulteney Street to the east (13.3157 m width) and abuts an adjoining building to the south (28.295 m depth). The site is within Lot 706 and is approximately 370 square metres in area.

1.5.2 Ground & Level 1 - 4 Car Parking

Car parking strategy

Pulteney Street is designated as a high concentration public transport route on Map Adel/1 (Overlay 4) - refer to figure 2 below. In other words, Pulteney Street has good access to public transport and residents in this location and are less reliant on private vehicle and parking in order to travel to work or recreation.

In addition, car parking in the Adelaide CBD can cost in the order of \$50 to \$60,000 per car park which is extremely expensive and cost prohibitive, especially in regard to providing affordable housing options. Therefore, the design of the proposed apartment building has taken into account alternative options for providing residents with access into the city and beyond the CBD.

The car parking system incorporated into the apartment building will have access off Bath Lane.

The apartment building will make use of a

innovative 5 level car parking system utilising a 'staging lift technology' where cars will be able to be stacked on top of each other using a lift system developed in Germany (refer to diagram to right). In addition, the concept allows for the following parking numbers (including bikes):

- 42% of apartments with car parks
- 58% apartments without car parks
- Total number of car parks provided = 29 car parks in total over 5 floors
- Electric community car – providing access to all apartments
- Total number of bicycle parks - 68
- Total number of bicycle lockers - 68

1.5.3 Level 5 – 21 Apartments

The design of the apartment building hinges on the provision of four apartments per floor with 17 levels of apartments - a total of 68 apartments. Two apartments will have views to Pulteney Street and the hills to the east while the other two apartments will face Bath Lane and have views to the west of the CBD.

The floor plans provide for a medium size apartment with 2 bath rooms, single bed room and study or a smaller option.

In addition each apartment is provided with a balcony in the order of 4.3 - 9 sq metres outdoor balcony areas for 1 bed room apartments and 9 - 10 sq metre outdoor balcony areas for 2 bed room apartments.

The design intent is for a slight overhang to each of the balconies over the current boundary lines over Bath Lane.

1.5.4 Level 22 Roof top garden restaurant / night beacon

The design intent is for the roof garden to be visible from underneath through incorporating up-lighting

and acting like a beacon which can be seen from far away, especially at night.

1.4.5 Design Elements / façade treatment

Balconies through the use of Fins or blade elements articulate architectural elements to the façade to articulate the building through the ground, mid and upper levels on both sides of the building.



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2. General Locality

2.1 GENERAL LOCALITY

A description of the general locality is contained within the Capital City Zone in the Adelaide City Development Plan consolidated 17 October 2013.

Concept Plan Figure CC/2 prescribes a south eastern area with a height limit of 53 metres for the proposed Pulteney Street site. In addition, Pulteney Street is designated as a City Boulevard and Terrace.

The current Development Plan's Principles of Development Control (PDC) 19 stipulates that Development should generally be compatible with the overall desired city form and not exceed the maximum building height shown in Concept Plan Figures CC/1 and 2; unless it meets the following:

(PDC 19) (iii) within 200 metres of a high concentration public transport route identified on Map Adel/1 (Overlay 4).

Therefore, the current height limit of 53 metres can be increased if desired as the site is located adjacent (within 200 metres) of Pulteney Street (designated as a high concentration public transport route).

Refer to figure 2 - Map Adel/1 (Overlay 4).

2.2 THE PRECINCT

- 261-263 Pulteney Street is contained within the Adelaide CBD and as such is envisioned as contributing to:
- ▶ The economic and cultural focus of the State,
 - ▶ providing high-scale development
 - ▶ Ground floor level that generate high levels of pedestrian activity such as shops, cafés and restaurants
 - ▶ A rich display of art and Exemplary and outstanding building design with Innovative forms
 - ▶ a distinctive grid pattern
 - ▶ Minor streets and laneways, and
 - ▶ access
- 2.2.1 Economic and cultural focus of the State**
- The site is within the general locality envisioned in the Adelaide City Development Plan as an economic and cultural focus of the State.
- 2.2.2 Street level activation during the day and evening**
- The Zone identifies the precinct as being *active during the day, evening and late night. Licensed entertainment premises, nightclubs and bars are encouraged throughout the Zone, particularly where they are located above or below ground floor level to maintain street level activation during the day and evening.*
- The design intent provides for street level activation during the day and evening along Pulteney Street through - incorporating a retail component at the ground floor and mezzanine level – a licensed entertainment premises, nightclub and/or bar - that will provide all day breakfast / lunch and dinner to residents and visitors for extended hours during the day and early evening. This will provide vitality to the street and create a 'community hub' for local residents.

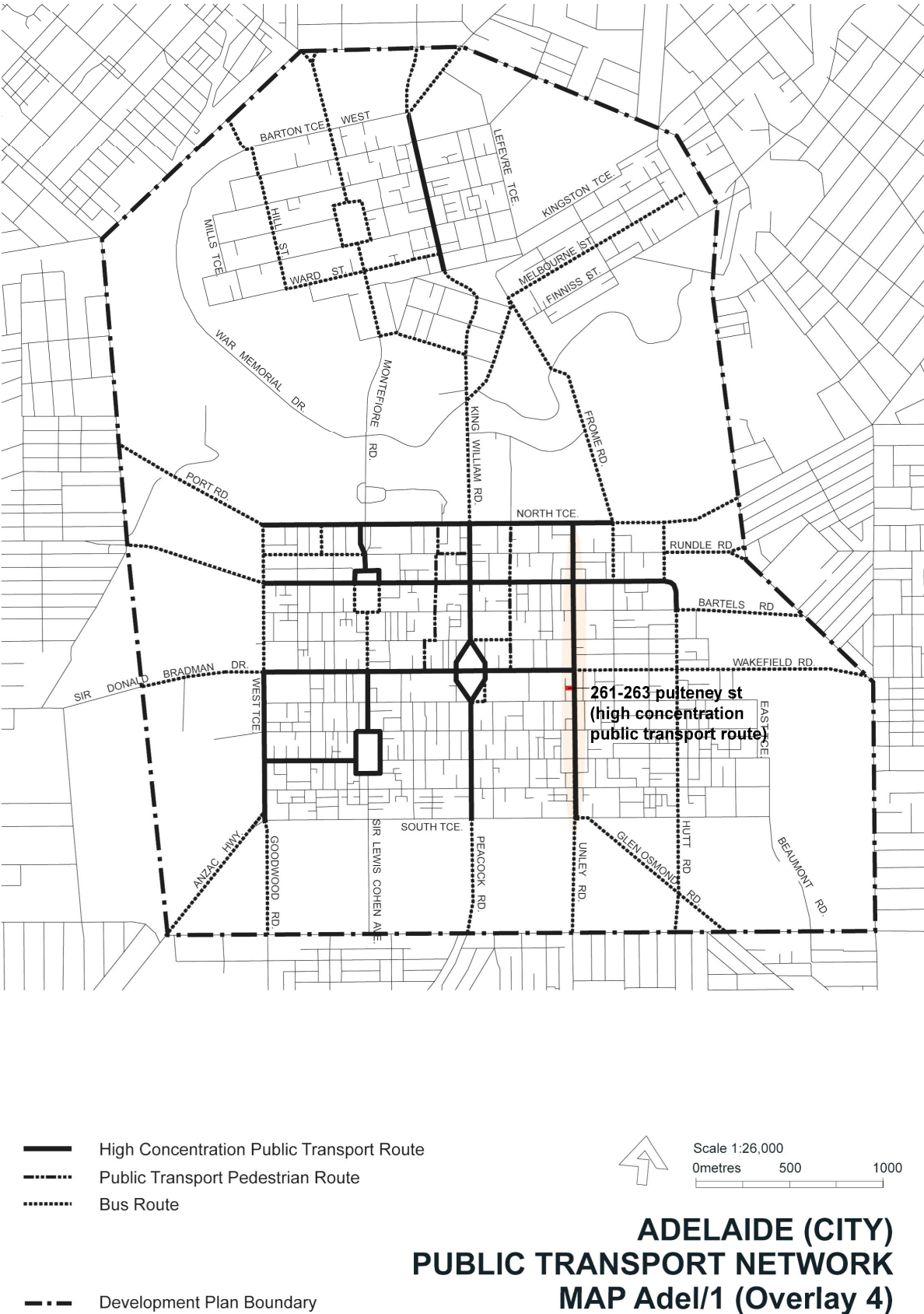


FIGURE 2 : MAP ADEL/1 (OVERLAY 4)

Consolidated - 17 October 2013

2. General Locality

2.2.3 High-scale development

The Capital City Zone envisions a higher scale development than what is currently present in the CBD.

High-scale development is envisaged in the Zone with high street walls that frame the streets.

The concept design allows for approximately 22 levels, including ground floor and mezzanine retail component with 5 levels of car parking.

The design proposes 22 levels above ground level (a total of 23 levels) with an overall height of 70.4 metres. The current Development Plan Capital City Zone provision calls for a height limit of 53 metres. The overall building height is therefore 17.4 metres above the building height limit of 53 metres.

The concept reinforces the intention of the zone to provide a High-scale development that is envisaged with high street walls that frame the streets.

2.2.4 Ground floor level that generates high levels of pedestrian activity such as shops, cafés and restaurants

Ground floor activation is envisioned within the Capital City Zone.

Non-residential land uses at ground floor level that generate high levels of pedestrian activity such as shops, cafés and restaurants will occur throughout the Zone. At ground level, development will continue to provide visual interest after hours by being well lit and having no external shutters.

The proposal aligns with the Capital City Zone above by providing a ground floor retail area (42 sq metres) and mezzanine/studio (Studios at 115/125 sq metres on Levels 1 and 2) which will activate the streetscape. In addition, the proposal also incorporates a roof garden which will also provide vitality and a sense of place for the site.

2.2.5 A rich display of art and Exemplary and outstanding building design with Innovative forms

The Zone also envisions best practice development which exemplifies outstanding building design, acknowledges the local context and provides for opportunities to incorporate public art.



The overall design intent is to provide a high quality architectural design that provides for a mixed use building, predominately residential apartments with a retail component at the ground floor to encourage street activation and a community hub.

In addition, the design of the tower has been developed to provide a highly sculptured and textured modern design-based response that provides for optimal northerly solar access and views to the hills and the sea.

2. General Locality

2.3 REINFORCING THE BUILT FORM CHARACTER OF THE PRECINCT

2.3.1 A distinctive grid pattern

The Adelaide City Development Plan describes the Adelaide CBD as *having a distinctive grid pattern of Adelaide will be reinforced through the creation of a series of attractive boulevards as shown on Concept Plan Figures CC/1 and 2.*

Pulteney and Morphett streets are key north-south boulevards. A sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge. Pulteney Street will include residential, office and institutional uses, and retail activities. These boulevards will become important tree-lined commercial corridors.

The proposal for 261 -263 Pulteney Street provides mixed used development with a strong built form edge and incorporates a retail component on the ground floor to encourage street activation day and night.

The site is currently tree lined with mature plane trees providing shade a strong sense of enclosure.

2.3.2 Minor streets and laneways

There will be a strong emphasis on ground level activation through frequent window openings, land uses that spill out onto the footpath, and control of wind impacts.

The proposal responds to the ground level activation through window openings, retail and uses and a ground level entry foyer that provides a strong northerly connection to Bath Lane.

2.3.3 Access

In addition, immediately to the west of Bath Lane is located adjacent to a significant public car park and is on a main Public Bus route.

The site is only 5 minutes away from the CBD and the Adelaide Park Lands and recreation trails and reserves and is well serviced by public transport.

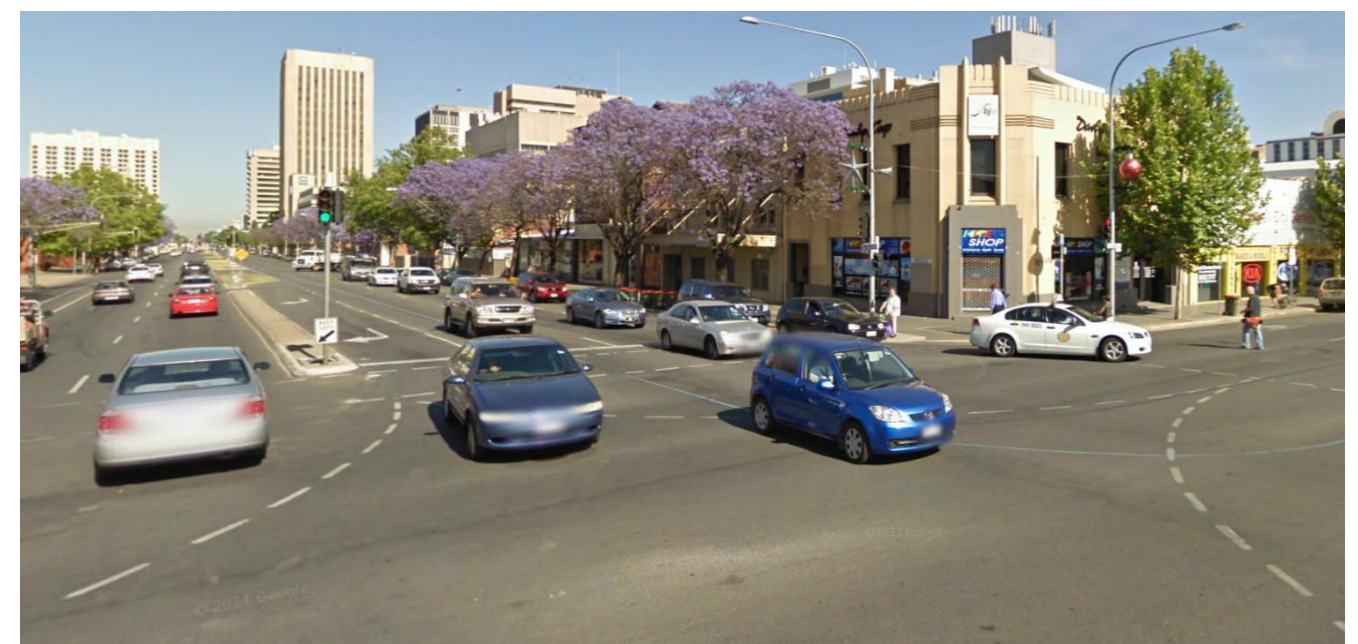
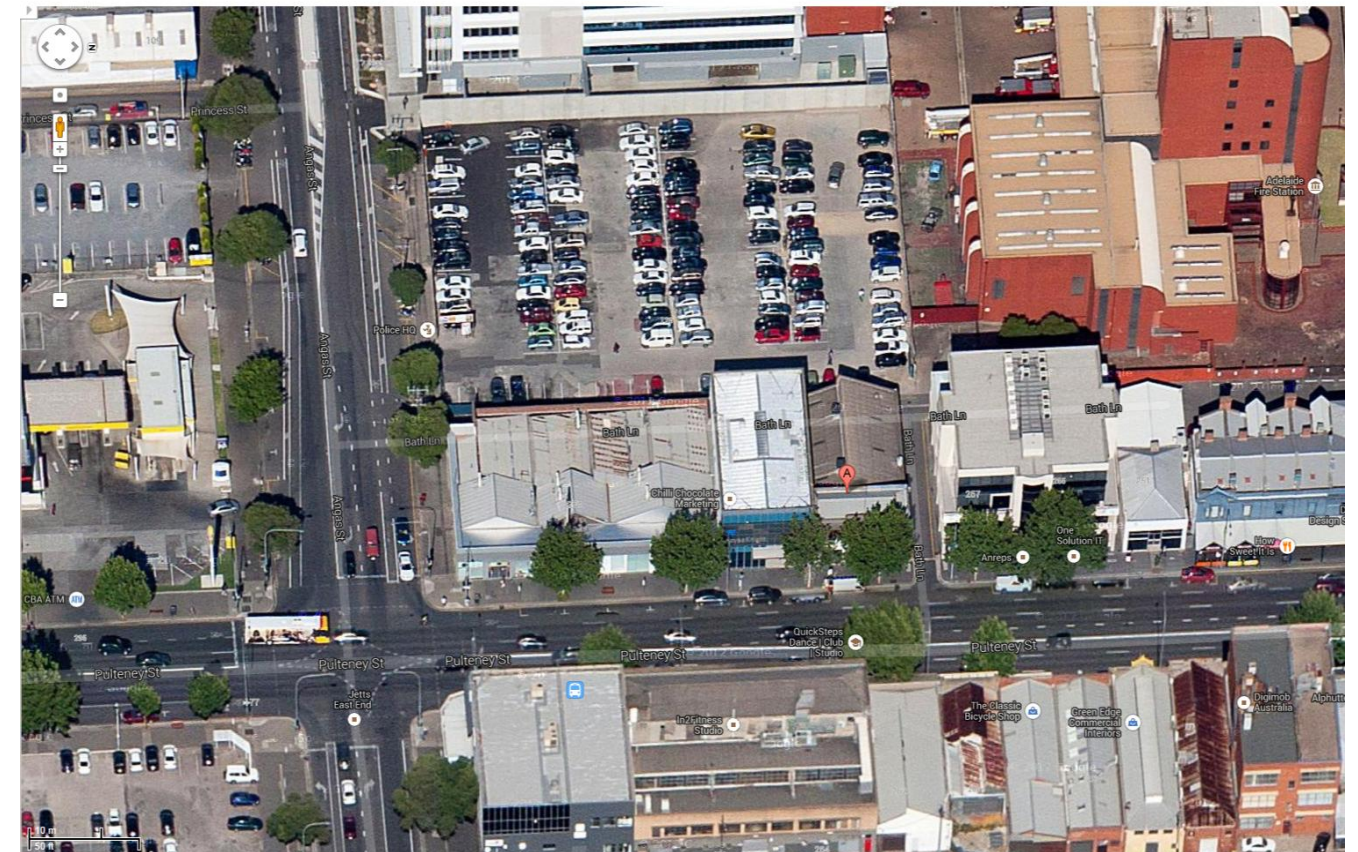
2.4 ADJACENT LAND USES

The proposed site is located adjacent a mixer of land uses, including the Adelaide Fire Station, shops and offices, One Solution IT, In2 Fitness Studio, chilli Chocolate Marketing, The Classic Bicycle Shop, a dance studio and the Alphutte Restaurant – one of Adelaide's premier restaurants. In addition, immediately to the west of Bath Lane is located adjacent to a significant public car park and is on a main Public Bus route.

The site is only 5 minutes away from the CBD and the Adelaide Park Lands and recreation trails and reserves.

2.3.4 Adjoining Residential Uses

The site does not adjoin any residential land uses.



3. Key Development Plan Elements

3.1 CAPITAL CITY ZONE

The current Adelaide City Council Development Plan consolidated on 17 October 2013 locates the subject site within Concept Plan Figure CC/2 and is referred to under the Capital City Zone policy area (pages 179 – 188).

Refer to figure 1 below for location of subject site within Concept Plan Figure CC/2 in the current Adelaide City Council Development Plan.

Concept Plan Figure CC/2 prescribes a height limit of 53 metres for the proposed Pulteney Street site. In addition, Pulteney Street is designated as a City Boulevard and Terrace. This has further implications regarding impacts on the proposal with regard to possible height limitations and potential land uses and issues of parking and access which will be discussed in further chapters below.

3.1.1 Desired Character

The economic and cultural focus of the State

This Zone is envisioned as *the economic and cultural focus of the State and includes a range of employment, community, educational, tourism and entertainment facilities. It is anticipated that an increased population within the Zone will complement the range of opportunities and experiences provided in the City and increase its vibrancy.*

Street level activation during the day and evening

The Zone will be active during the day, evening and late night. Licensed entertainment premises, nightclubs and bars are encouraged throughout the Zone, particularly where they are located above or below ground floor level to maintain street level activation during the day and evening.

High-scale development

High-scale development is envisaged in the Zone with high street walls that frame the streets. However an interesting pedestrian environment and human scale will be created at ground floor levels through careful building articulation and fenestration, frequent openings in building

façades, verandahs, balconies, awnings and other features that provide weather protection.

In important pedestrian areas, buildings will be set back at higher levels above the street wall to provide views to the sky and create a comfortable pedestrian environment. In narrow streets and laneways the street setback above the street wall may be relatively shallow or non-existent to create intimate spaces through a greater sense of enclosure.

The design proposes 22 levels above ground level (a total of 23 levels) with an overall height of 70.4 metres. The current Development Plan Capital City Zone provision calls for a height limit of 53 metres. The overall building height is therefore 17.4 metres above the building height limit of 53 metres.

The concept reinforces the intention of the zone to provide a High-scale development is envisaged with high street walls that frame the streets.

Ground floor level that generates high levels of pedestrian activity such as shops, cafés and restaurants

Non-residential land uses at ground floor level that generate high levels of pedestrian activity such as shops, cafés and restaurants will occur throughout the Zone. Within the Central Business Policy Area, residential land uses at ground level are discouraged. At ground level, development will continue to provide visual interest after hours by being well lit and having no external shutters.

The concept design allows for a ground floor retail area (42 sq metres) and mezzanine/studio (Studios at 115/125 sq metres on Levels 1 and 2) designed to provide continuous street activation throughout the day and into the evening.

A rich display of art and Exemplary and outstanding building design with Innovative forms

There will also be a rich display of art that is accessible to the public and contextually relevant. Exemplary and outstanding building design is desired in recognition of the location as South Australia's capital. Contemporary juxtapositions will provide new settings for heritage places.

Innovative forms are expected in areas of identified street character, referencing the past, but with emphasis on modern design-based responses that support optimal site development.

The Zone also envisions best practice development which exemplifies outstanding building design, acknowledges the local context and provides for opportunities to incorporate public art.

The architectural design provides for a modern based language which reinforces the streetscape character by contrasting the ground and level with the upper levels to create interest and visual richness through the vertical facade elements.

3.2 KEY POLICY AIMS

3.2.1 Reinforcement of Adelaide's pattern of streets and squares

The desired character for the Capital City Zone is described as *reinforcing the distinctive grid pattern of Adelaide will be reinforced through the creation of a series of attractive boulevards as shown on Concept Plan Figures CC/1 and 2. These boulevards will provide a clear sense of arrival into the City and be characterised by buildings that are aligned to the street pattern, particularly at ground level.*

Views to important civic landmarks, the Park Lands and the Adelaide Hills will be retained as an important part of the City's charm and character.

Given the proposal site is located on Pulteney Street and adjoins Bath Lane, the following policy provisions apply:

Pulteney and Morphett streets are key north-south boulevards. A sense of activation and enclosure of these streets will be enhanced through mixed use development with a strong built form edge. Pulteney Street will include residential, office and institutional uses, and retail activities. These boulevards will become important tree-lined commercial corridors.

The proposal for 261 -263 Pulteney Street provides mixed used development with a strong built form

edge and incorporates a retail component on the ground floor to encourage street activation day and night.

The site is currently tree lined with mature plane trees providing shade a strong sense of enclosure and streetscape character.

Development in minor streets and laneways

Minor streets and laneways will have a sense of enclosure (a tall street wall compared to street width) and an intimate, welcoming and comfortable pedestrian environment with buildings sited and composed in a way that responds to the buildings' context. There will be a strong emphasis on ground level activation through frequent window openings, land uses that spill out onto the footpath, and control of wind impacts.

The proposal responds to the ground level activation through window openings, retail uses and a strong connection to Bath Lane via a north facing entry foyer.

A high quality system of bicycle or shared pedestrian and bicycle routes will be established within the Zone

A comprehensive, safe and convenient movement network throughout the City will develop, focusing on the provision of linkages on both public and private land between important destinations and public transport. A high quality system of bicycle or shared pedestrian and bicycle routes will be established within the Zone.

The design proposal provides for 68 bicycle parks and 68 bike lockers on the ground floor.

A high quality system of bicycle or shared pedestrian and bicycle routes will be established within the Zone

A comprehensive, safe and convenient movement network throughout the City will develop, focusing on the provision of linkages on both public and private land between important destinations and public transport. A high quality system of bicycle or shared pedestrian and bicycle routes will be established within the Zone.

3. Key Development Plan Elements

3.3 KEY STANDARDS

3.3.1 Key Policy Objectives

Key policy objectives of the Capital City Zone include the following:

Objective 1:

The principal focus for the economic, social and political life of metropolitan Adelaide and the State.

Objective 2:

A vibrant mix of commercial, retail, professional services, hospitality, entertainment, educational facilities, and medium and high density living.

Objective 3:

Design and management of City living to ensure the compatibility of residential amenity with the essential commercial and leisure functions of the Zone.

Objective 4:

City streets that provide a comfortable pedestrian environment.

Objective 5:

Innovative design approaches and contemporary architecture that respond to a building's context.

Objective 6:

Buildings that reinforce the gridded layout of Adelaide's streets and respond to the underlying built-form framework of the City.

Objective 7:

Large sites developed to their full potential while ensuring a cohesive scale of development and responding to a building's context.

Objective 8:

Development that contributes to the Desired Character of the Zone.

3.3.2 Principles of Development Control (PDC)

Land Use

1. The following types of development, or combinations thereof, are envisaged:

Affordable housing, Aged persons accommodation, Community centre, Consulting room, Convention centre, Dwelling, Educational establishment, Emergency services facility, Hospital, Hotel, Indoor recreation centre, Licensed entertainment premises, Library, Motel, Office, Pre-school, Personal service establishment, Place of worship, Serviced apartment, Restaurant, Residential flat building, Student accommodation, Shop or group of shops and Tourist accommodation.

2. Land uses that are typically closed during the day should be designed to maximise daytime and evening activation at street level and be compatible with surrounding land uses, in particular residential development.

3. Low impact industries should be located outside the Central Business Policy Area and have minimal off-site impacts with respect to noise, air, water and waste emissions, traffic generation and movement.

4. Development listed as non-complying is generally inappropriate.

The proposed mixed uses at 261-263 Pulteney Street comprising of residential serviced apartments and ground floor retail/shops are considered to be complying forms of development.

Form and Character

5. Development should be consistent with the Desired Character for the Zone.

The proposed mixed land uses at 261-263 Pulteney Street comprising 68 - 1 bed rm and 2 bed rm residential serviced apartments with ground floor and mezzanine retail/shops, incorporating 22 levels above ground with a maximum of height of 70.4 metres, high quality architectural elements, are considered to be consistent with the Desired Character of the Capital City Zone.

Design and Appearance

6. Development should be of a high standard of architectural design and finish which is appropriate to the City's role and image as the capital of the State.

7. Buildings should present an attractive pedestrian-oriented frontage that adds interest and vitality to City streets and laneways.

8. 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.

9. Providing footpath widths and street tree growth permit, development should contribute to the comfort of pedestrians through the incorporation of verandahs, balconies, awnings and/or canopies that provide pedestrian shelter.

10. Buildings should be positioned regularly on the site and built to the street frontage, except where a setback is required to accommodate outdoor dining or provide a contextual response to a heritage place.

11. Other than in the Central Business Policy Area, buildings should be designed to include a podium/street wall height and upper level setback (in the order of 3-6 metres) that:

(a) relates to the width of the street and achieves a suitable level of enclosure to the public realm;

(b) provides a human scale at street level;

(c) creates a well-defined and continuity of frontage;

(d) gives emphasis and definition to street corners to clearly define the street grid; (e) contributes to the interest, vitality and security of the pedestrian environment;

(f) maintains a sense of openness to the sky for pedestrians and brings daylight to the street; and

(g) achieves pedestrian comfort by minimising micro climatic impacts (particularly wind tunnelling and downward drafts).

The suggested 3-6 metre upper level setback is considered too restrictive, given that the site is restricted in area, it is considered that this would limit the number of apartment per floor from 4 to 2 per floor.

13. Building façades should be strongly modelled, incorporate a vertical composition which reflects the proportions of existing frontages, and ensure that architectural detailing is consistent around corners and along minor streets and laneways.

Building Height

PDC 19 stipulates that Development should generally be compatible with the overall desired city form and not exceed the maximum building height shown in Concept Plan Figures CC/1 and 2; unless it meets one or more of the following:

(iii) within 200 metres of a high concentration public transport route identified on Map Adel/1 (Overlay 4);

PDC 20 Development should have optimal height and floor space yields to take advantage of the premium City location and should have a building height no less than half the maximum shown on Concept Plan Figures CC/1 and 2, or 28 metres in the Central Business Policy Area, except where one or more of the following applies:

(a) a lower building height is necessary to achieve compliance with the Commonwealth Airports (Protection of Airspace) Regulations;

(b) the site is adjacent to a Residential Zone and a lesser building height is required to manage the interface with low-rise residential development;

(c) the site is adjacent to a heritage place, or includes a heritage place;

The design proposes 22 levels above ground level (a total of 23 levels) with an overall height of 66.65 metres. The current Development Plan Capital City Zone provision calls for a height limit of 70.4 metres. The overall building height is therefore 17.4 metres above the building height limit of 53 metres. PDC 20 (a) calls for a lower building height to achieve compliance with Commonwealth Airports Protection of Airspace Regulations. Map Adel/1(Overlay 5) indicates Obstacle Limitation Surface contour of 130 m (aligning with Unley Road). Assuming that our indicative ground level in AHD is approx. 44 m – the difference is approx. 86 m. The maximum height to top of roof is 70.4 m – **which is 15.6 m within the obstacle limitation surface contour.**

3. Key Development Plan Elements

Interface

PDC 21 Development should manage the interface with Residential Zones in relation to building height, overshadowing, massing, building proportions and traffic impacts and should avoid land uses, or intensity of land uses, that adversely affect residential amenity.

Movement

PDC 23 Pedestrian movement should be based on a network of pedestrian malls, arcades and lanes, linking the surrounding Zones and giving a variety of north-south and east-west links.

PDC 24 Development should provide pedestrian linkages for safe and convenient movement with arcades and lanes clearly designated and well-lit to encourage pedestrian access to public transport and areas of activity. Blank surfaces, shutters and solid infills lining such routes should be avoided.

PDC 25 Development should ensure existing through-site and on-street pedestrian links are maintained and new pedestrian links are developed in accordance with Map Adel/1 (Overlay 2A).

PDC 26 Car parking should be provided in accordance with Table Adel/7.

PDC 27 Multi-level car parks should locate vehicle access points away from the primary street frontage wherever possible and should not be located:

- (a) within any of the following areas:
 - (i) the Core Pedestrian Area identified in Map Adel/1 (Overlays 2, 2A and 3)
 - (ii) on frontages to North Terrace, East Terrace, Rundle Street, Hindley Street, Currie Street, Waymouth Street (east of Light Square), Victoria Square or King William Street;
- (b) where they conflict with existing or projected pedestrian movement and/or activity;
- (c) where they would cause undue disruption to traffic flow; and
- (d) where it involves creating new crossovers in North Terrace, Rundle Street, Hindley Street, Currie Street and Waymouth Street (east of Light Square), Grenfell Street and Pirie Street (west of Pulteney Street),

Victoria Square, Light Square, Hindmarsh Square, Gawler Place and King William Street or access across primary City access and secondary City access roads identified in Map Adel/1 (Overlay 1).

PDC 28 Multi-level, non-ancillary car parks are inappropriate within the Core Pedestrian Area as shown on Map Adel/1 (Overlays 2, 2A and 3).

PDC 29 Vehicle parking spaces and multi-level vehicle parking structures within buildings should:

- (a) enhance active street frontages by providing land uses such as commercial, retail or other non-car park uses along ground floor street frontages;
- (b) complement the surrounding built form in terms of height, massing and scale; and
- (c) incorporate façade treatments along major street frontages that are sufficiently enclosed and detailed to complement neighbouring buildings consistent with the Desired Character of the locality.

Advertising

PDC 30 Other than signs along Hindley Street, advertisements should use simple graphics and be restrained in their size, design and colour.

PDC 31 In minor streets and laneways, a greater diversity of type, shape, numbers and design of advertisements are appropriate provided they are of a small-scale and located to present a consistent message band to pedestrians.

PDC 32 There should be an overall consistency achieved by advertisements along individual street frontages.

3.3.3 Procedural Matters

Complying Development

PDC 35 Complying developments are prescribed in Schedule 4 of the Development Regulations 2008.

In addition, the following forms of development are assigned as complying:

(a) Other than in relation to a State heritage place, Local heritage place (City Significance), or Local heritage place, work undertaken within a building which does not involve a change of use or affect the external appearance of the building;

(b) Temporary depot for Council for a period of no more than 3 months where it can be demonstrated that appropriate provision has been made for

- (i) dust control;
- (ii) screening, including landscaping;
- (iii) containment of litter and water; and
- (iv) securing of the site.

(c) Change in the use of land from a non-residential use to an office, shop or consulting room (excluding any retail showroom, adult entertainment premises, adult products and services premises or licensed premises).

The proposed mixed land uses at 261-263 Pulteney Street comprising residential serviced apartments and ground floor retail/shops, incorporating 23 levels, high quality architectural elements, are considered to be consistent and comply with the Capital City Zone.

Non-complying Development

PDC 36 The following kinds of development are non-complying:

A change in use of land to any of the following:

Amusement machine centre

Advertisements involving any of the following:

- (a) Third party advertising except on Hindley Street, Rundle Mall or on allotments at the intersection of Rundle Street and Pulteney Street frontages (except where fronting King William Street), or temporary advertisements on construction sites;
- (b) Advertisements located at roof level where the sky or another building forms the background when viewed from ground level;
- (c) Advertisements in the area bounded by West Terrace, Grote Street, Franklin Street and

Gray Street;

(d) Animation of advertisements along and adjacent to the North Terrace, King William Street and Victoria Square frontages.

Demolition of a State heritage place (as identified in Table Adel/1) Vehicle parking except:

- (a) where it is ancillary to an approved or existing use;
- (b) it is a multi-level car park located outside the Core Pedestrian Area as indicated on Map Adel/1 (Overlay 2, 2A and 3); or
- (c) it is within an existing building located outside the Core Pedestrian Area as indicated on Map Adel/1 (Overlay 2, 2A and 3).

Public Notification

PDC 37 Categories of public notification are prescribed in Schedule 9 of the Development Regulations 2008.

In addition, the following forms of development, or any combination of (except where the development is non-complying), are assigned:

(a) Category 1, public notification not required:

All forms of development other than where it is assigned Category 2.

(b) Category 2, public notification required. Third parties do not have any appeal rights.

Any development where the site of the development is adjacent land to land in a Residential Zone and it exceeds 22 metres in building height.

Note: For Category 3 development, public notification is required. Third parties may make written representations, appear before the relevant authority on the matter, and may appeal against a development consent. This includes any development not classified as either Category 1 or Category 2.

3. Key Development Plan Elements

3.4 HERITAGE

Reference to the Adelaide City Development Plan Policy Areas Map Adel/56 (refer to figure 3) indicates that the subject site does not appear to contain a State Heritage Place or Local Heritage Place significance. That is, the site does not appear to have any heritage buildings which need to be retained for their heritage value.

A review of the Mastrcorp Real Property SA (the sole agent selling the property by Public Auction on Tuesday 30th August 2005) Local Government Search provide the following recommendations:

Local Government Search

Under the previous Development Plan, Development Act 1993, Local Government Act 1934, country fires Act 1989, Animal and Plant Control Act 1986, Health Act 1935 and Food Act 1985, the title is not designated as State Heritage Place or Local Heritage Place with Nil conditions applying.

The Certificate of Classification under the building Act 1970-1971 reveals the following:

The ground floor as:

Class V1 - shops and other building for the sale of goods by retail or the supply of services,

Class V11 - warehouse being buildings for the storage of goods only for the display of goods for sale by wholesale, public garages, etc,

Class V111a - factories and certain laboratories, and

With the first floor classed as:

Class V - office buildings for professional of commercial purposes

A review of the Mastrcorp Real Property SA (the sole agent selling the property by Public Auction on Tuesday 30th August 2005) Memorandum of Information, Section 7 Statement report provide the following recommendations:

Section 7 Statement:

Heritage South Australia (DEH) has no record of registration affecting this title, no record of any stop order or 'No Development' orders, or Heritage Agreements affecting this title.

The Development Assessment Commission (DAC) has no record of any requirement or agreement affecting this title.

The division of State Aboriginal Affairs has no record of any Aboriginal sites or objects affecting this title.

Native Vegetation Council (The Department of Water, Land and Biodiversity conservation) has no record of any refusal or condition of consent affecting this title.

Transport SA (Department of Transport, Urban Planning and the Arts) has no record of the Act applying to this title or record of any control over access under Part 11A of the highways Act affecting this title.

Primary Industries and Resources SA has no record of any proclamation with respect to a private mine affecting this title.

In summary, there are no Government Departments such as The Department of Water, Land and Biodiversity Conservation, SA Water or the Environment Protection Agency or Acts which affect this title.

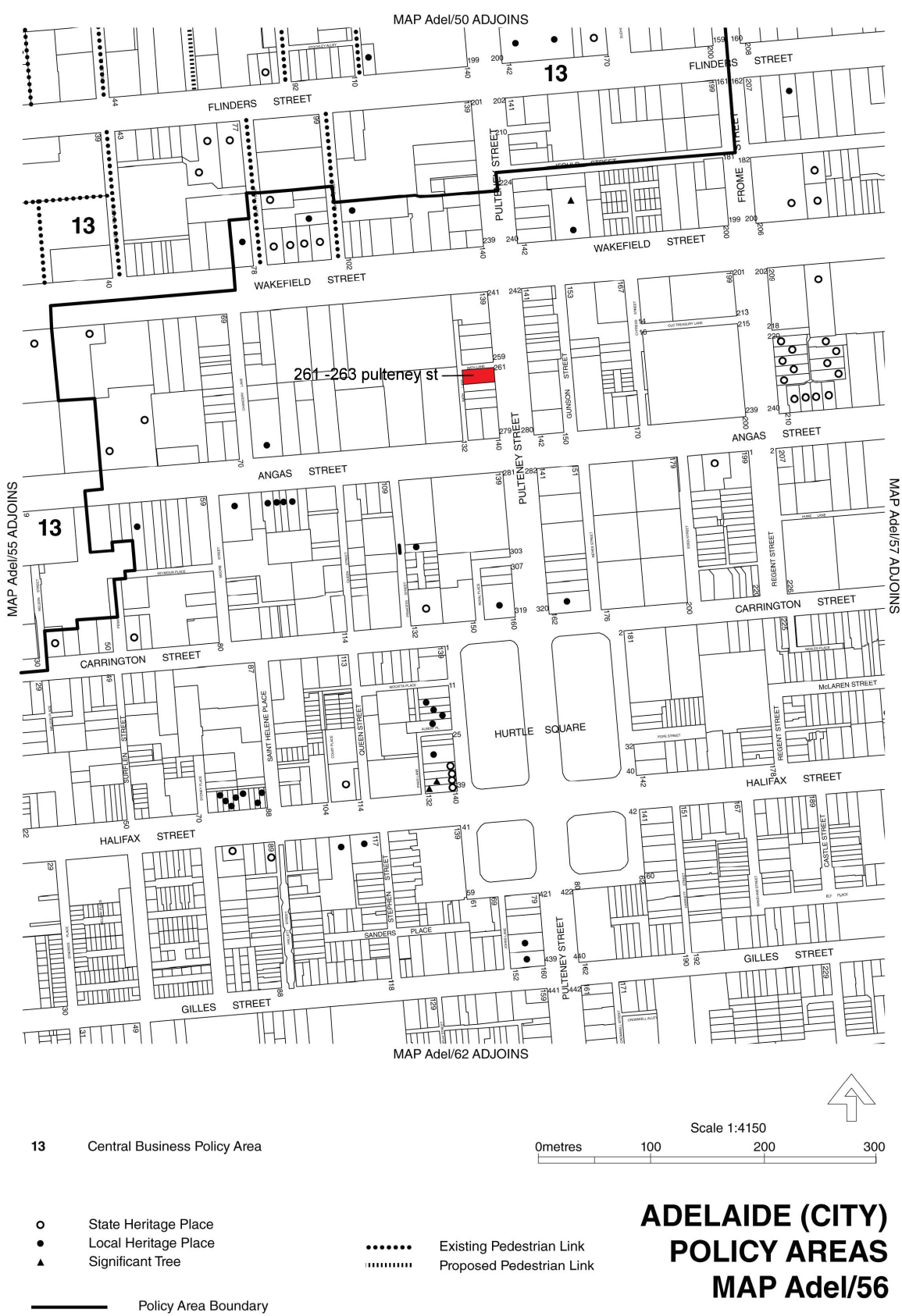


FIGURE 3 : MAP ADEL/56

3. Key Development Plan Elements

3.6 ADELAIDE BUILDING HEIGHTS

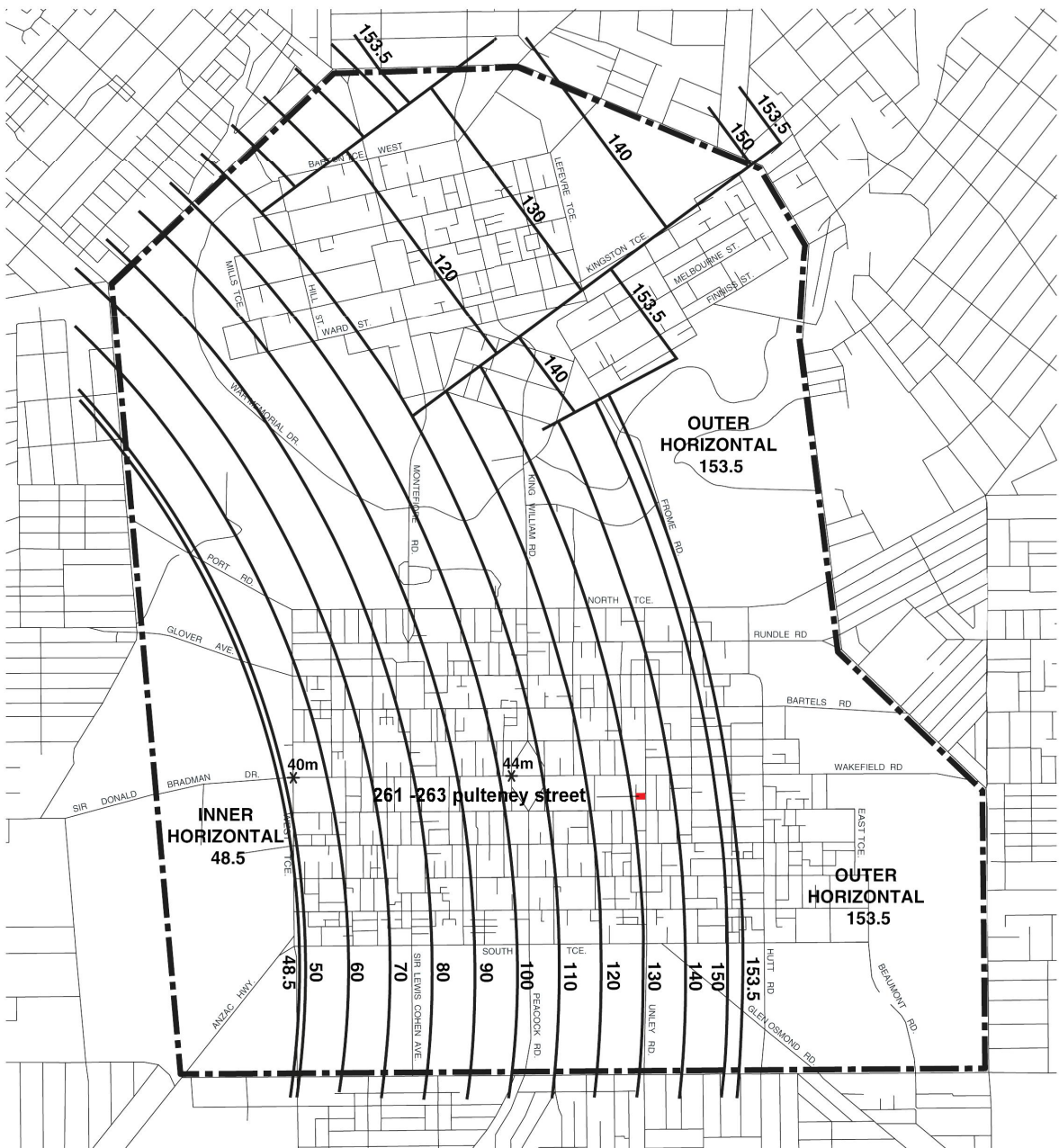
Rational for revised building height –The height increase of 13.5 m (from 18 levels and 56 m height to 23 levels and 70.4 m height) is due mainly to the provision of additional levels of car parking (from 3 levels to 5 levels) and the incorporation of a 2nd lift (ODASA recommendation). This has meant an increased cost of \$250,000 for the extra lift and subsequent loss of overall apartment floor areas per floor. In addition, the current design incorporates 2 additional levels of studio space to provide additional activation to the building and the street.

PDC 20 (a) calls for a lower building height to achieve compliance with Commonwealth Airports Protection of Airspace Regulations.

Map Adel/1(Overlay 5) (refer to figure 4) indicates Obstacle Limitation Surface contour of 130 metre (aligning with Unley Road).

Assuming that our indicative ground level in AHD is approximately 44 metres – the difference is approximately 86 metres.

The maximum height to the top of roof is 70.4 metres – which is 15.6 metres within the obstacle limitation surface contour.



Referral to the Department of Transport and Regional Services through Adelaide Airport Limited is required where a development would exceed the Obstacle Limitation Surface (OLS) contours on this map.

- 100 OLS Values in Australian Height Datum (AHD)
- OLS Contour Boundary
- * 40m Indicative ground level in AHD. Note: Ground level varies throughout the Council area and accurate ground level in AHD would need to be confirmed
- Development Plan Boundary

Note: Approval is required under the Commonwealth Airports Act 1996 for structures and the like that penetrate prescribed air space (as defined in the Airports Act 1996)

Scale 1:26,000
0metres 500 1000

ADELAIDE (CITY)
AIRPORT BUILDING HEIGHTS
MAP Adel/1 (Overlay 5)

Consolidated - 17 October 2013

FIGURE 4 : MAP ADEL/1 (OVERLAY 5)

4. Summary of Building Elements

PULTENEY STREET APARTMENTS				22 May 2014
OPTION F - 21 STOREY (GROUND + 4 LEVEL CARPARK)				
AREAS (SqMtrs)				
No.	Quantity	(sqm)	TOTAL (sqm)	Car Parks
GROUND				
Carpark + Car Lift	X	144.5		2
Retail	1	42		
Lobby/Entry	1	27.5		
Circulation/Stairs/Lift/Services		135.5		
TOTAL		349.5		2
LEVEL 1				
Carpark + Car Lift	X	317.5		8
Stairs/Lift/Services		48.5		
TOTAL		366		5
LEVEL 2				
Carpark + Car Lift	X	183		5
Studio	1	125		
Lobby	1	14		
Stairs/Lift/Services		48.5		
		370.5		5
LEVEL 3				
Carpark + Car Lift	X	183		5
Studio	1	115		
Lobby	1	14		
Stairs/Lift/Services		48.5		
		360.5		8
LEVEL 4				
Carpark + Car Lift	X	317.5		8
Stairs/Lift/Services		48.5		
		366		8
Quantity		TOTAL (sqm)		Carparks
GRAND TOTAL		X	1812.5	28

PULTENEY STREET APARTMENTS											22 May 2014
OPTION F - 21 STOREY (GROUND + 4 LEVEL CARPARK)											
AREAS (SqMtrs)											
APARTMENT	UNIT	AREAS (SqMtrs)				FEATURES/COMMENTS					
No.	Quantity	TYPE	Apartment (sqm)	Balcony (sqm)	TOTAL (sqm)	1 Bed	2 Beds	Study Room	Baths	Car Parks	
LEVEL 5											
5.01	1	9	64	9.5	73.5	X	1	X	2	TBA	
5.02	1	10	57.5	9.5	67	1	X	1	2	TBA	
5.03	1	11	48.5	7.5	56	1	X	X	1	TBA	
5.04	1	12	44.7	5.9	50.6	1	X	X	1	TBA	
Car Lift Overrun			30.5								
Stair/Lift/Circulation			73								
(Not included in Total)											
TOTAL		4	214.7	32.4	247.1	3	1	1			
LEVEL 6											
6.01	1	5	68.5	9	77.5	X	1	X	2	TBA	
6.02	1	6	68.3	9	77.3	X	1	X	2	TBA	
6.03	1	7	51	4.4	55.4	1	X	X	1	TBA	
6.04	1	8	53.3	4.4	57.7	1	X	X	1	TBA	
Stair/Lift/Circulation			89.5								
(Not included in Total)											
TOTAL		4	241.1	26.8	267.9	2	2				
LEVEL 7											
7.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
7.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
7.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
7.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation			67.5								
(Not included in Total)											
TOTAL		4	259.5	28.6	288.1	2	2				
LEVEL 8											
8.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
8.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
8.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
8.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation			67.5								
(Not included in Total)											
TOTAL		4	259.5	26.6	286.1	2	2				
LEVEL 9											
9.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
9.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
9.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
9.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation			67.5								
(Not included in Total)											
TOTAL		4	259.5	28.6	288.1	2	2				
LEVEL 10											
10.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
10.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
10.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
10.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation			67.5								



4. Summary of Building Elements

PULTENEY STREET APARTMENTS											22 May 2014
OPTION F - 21 STOREY (GROUND + 4 LEVEL CARPARK)											
(Not included in Total)											
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 11											
11.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
11.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
11.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
11.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
LEVEL 12											
12.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
12.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
12.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
12.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 13											
13.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
13.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
13.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
13.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
LEVEL 14											
14.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
14.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
14.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
14.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 15											
15.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
15.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
15.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
15.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
LEVEL 16											
16.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
16.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
16.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
16.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								

PULTENEY STREET APARTMENTS											22 May 2014
OPTION F - 21 STOREY (GROUND + 4 LEVEL CARPARK)											
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 17											
17.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
17.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
17.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
17.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
LEVEL 18											
18.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
18.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
18.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
18.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			68								
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 19											
19.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
19.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
19.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
19.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
LEVEL 20											
20.01	1	1	68.5	9	77.5	X	1	X	2	TBA	
20.02	1	2	71.5	9	80.5	X	1	X	2	TBA	
20.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
20.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	26.6	286.1	2		2			
LEVEL 21											
21.01	1	1	68.5	10	78.5	X	1	X	2	TBA	
21.02	1	2	71.5	10	81.5	X	1	X	2	TBA	
21.03	1	3	58	4.3	62.3	1	X	X	1	TBA	
21.04	1	4	61.5	4.3	65.8	1	X	1	1	TBA	
Stair/Lift/Circulation (Not included in Total)			67.5								
TOTAL	4		259.5	28.6	288.1	2		2			
	Quantity		Apartment (sqm)	Balcony (sqm)	TOTAL (sqm)	1 Bed	2 Beds			Carparks	
GRAND TOTAL	68		4348.3	474.2	4822.5	35	33			TBA	

Note: Unresolved Areas NOT included in Grand Total



5. Design Review No 1 recommendations

5.1 DESIGN REVISION NO 1

The following is a summary of the design issues that were raised at the Design Review Panel meetings with ODASA and DPTI:

- a) Revised building height – the height increase from the initial design to the current scheme (from 18 levels and 56 m height to 22 levels and 70.4 m height) is due to the need for an additional number car parks (from 3 levels to 5 levels) and the incorporation of a 2nd lift, resulting in the loss of overall apartment floor areas.
- b) North East façade corner - has been redesigned to provide for a lighter, more open façade with additional interest and sculptural relief.
- c) Level 1 - 4 Ceiling Heights - the apartment ceiling heights in the new studio floors have increased by an additional 300mm per floor providing future tenants with more flexibility when a potential change in use.
- d) Level 5 - 22 Ceiling - the apartment ceiling bulkheads have been further modified to increase ceiling heights in living areas to 2550 AFL .
- e) South Boundary 3 metre setback would restrict the design in only being able to achieve 2 apartments per floor rather than 4 apartments per floor. In addition, the southern boundary will form part of the future gateway into city, therefore needs to provide an attractive architectural form rather than a blank wall.
- f) Kitchen and WC relationship - has been amended and resolved to stop WC opening onto the kitchen.
- g) Apartment Corridor Width - kitchens facing a narrow passageway has been amended to 1200mm wide .
- h) Car Lift over run area - is to become a resident/ retail tenant storage area and plant area .
- i) Blade Walls on south - are designed to maximise living rooms and provide an increased level of light and interest. Note that the blade walls are actually perforated and not solid - to allow more light into the living areas and bed rooms.
- j) Circulation Area of Apartments - the floor plans provide for a better use of shared infrastructure and additional natural flow through ventilation.
- k) Roof Garden - has remained as a key 'community asset' which can be used as a cinema, bar, entertaining area, etc.
- l) Waste and Traffic circulation issues - will be further refined with additional input from specialist consultants to minimise potential security and safety issues and ensure that adequate storage and rubbish areas are provided for commercial, retail and residential uses.
- m) Ground floor outdoor eating/café area - has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike racks/station with an outdoor covered way to Pulteney street.

5. Design Review No 1 recommendations

Issue	Office for Design and Architecture SA (ODASA) Recommendations	Design Response / discussion
General	There is general support of the initial design approach proposal from ODASA. This proposal has the potential to offer a benchmark for inner city apartment development in Adelaide particularly in relation its response to site and context	
1 height	The overall height of the first proposal is 56 meters.	The revised design proposes 22 levels above ground level (a total of 23 levels) with an overall height of 66.5 metres. The overall building height is therefore 13.5 metres above the building height limit of 53 metres. Rational for revised building height –The height increase of 13.5 m (from 18 levels and 56 m height to 23 levels and 66.65 m height) is due mainly to the provision of additional levels of car parking (from 3 levels to 5 levels) and the incorporation of a 2nd lift (ODASA recommendation). This has meant an increased cost of \$250,000 for the extra lift and subsequent loss of overall apartment floor areas per floor. In addition, the current design incorporates 2 additional levels of studio space to provide additional activation to the building and the street.
2 modelling	Zoning conditions for this site stipulate buildings should not exceed 53 metres and that additional height must be justified in terms of overall design merit. In principle support for additional height where the increased height contributes to apartment amenity rather than commercial yield.	
3 podium	Support for the design approach to proportions and overall modelling and architectural expression	The subject site is approximately 370 sq. meters. The proposal is expressed as a tower with a base articulated to reflect a continuation of the adjacent roof line at 2 storeys. The Capital City Zone calls for a podium with upper levels setback 3-6 metres. The setbacks would reduce the capacity of each floor to provide 4 apartments
4 pedestrian amenity	I support the approach to optimizing this constrained site. I am of the opinion that the tower with a base meets the intent of the Development Plan. However, as this proposal will help determine the future character of Pulteney Street it should therefore demonstrate innovative and generous approach to pedestrian amenity and public realm. I recommend further development in the articulation of the tower base to improve amenity for pedestrians and a distinctive sense of address.	Refer to wind modelling report
5 setbacks	Pedestrian amenity will be affected by potential downdrafts created by the tower. I anticipate wind analysis will be presented at a future design review session in order to evaluate the relative success of the overall modelling.	Refer to wind modelling report
6 mixed use	I recommend consideration of minor setbacks at the upper levels as well as integrating canopy elements to strengthen the expression of the base and to help mitigate possible downdrafts from the tower. Canopy elements will also help to support good pedestrian amenity.	The revised proposal includes a ground floor retail area (53 sq metres) and mezzanine/studio (Studios at 123.5 sq metres on Levels 1 and 2) with 5 levels of car parking (a total of 29 car parks and 68 bicycle parks) with access from Pulteney Street to the east and Bath Lane to the north and west. The design incorporates 17 levels of apartments. There are 4 apartments per level with a total of 68 apartments. Out of the 68 total number of apartments, a total of 34 are proposed to be 1 bed room and the remainder 34 apartments will be 2 bed room.

5. Design Review No 1 recommendations

Issue	Office for Design and Architecture SA (ODASA) Recommendations	Design Response / discussion
7 Bath Lane access	The initial proposal is for 19 levels overall, including 1 basement level, ground floor and mezzanine retail component with 3 levels of car parking and bike parking, including bike lockers for each apartment. The mezzanine level has the potential to be an active part of the streetscape and to express the nature of the building as an environmentally sensitive contribution to the city- eg. by including visible bicycle related uses. To that end, I recommend pursuing the option to locate plant and services in the basement to retain the mezzanine floor for visibly active uses. I also recommend further exploring opportunities for fire escape corridors to lead onto Bath Lane in order to maximize the potential area for commercial tenancy at street level.	The ground floor plan has been redesigned to locate the plant and services from visibly active uses
8	While I support the residential entry wrapping around the corner of Pulteney Street and Bath Lane (north), the recessed lobby and entry spaces require further development in order to achieve a clear sense of address. I am also concerned that the current scale of the lobby is too small to cater to the anticipated population of residents who will bring bicycles and furniture through this entry area. I recommend further exploration of alternative locations for fire services booster and gas meter enclosure to further strengthen a clear and distinct sense of address.	The design of the proposed apartment building provides residents pedestrian access via Bath Lane (north) and Pulteney Street.
9 apartments	While I support the provision of a large lift to accommodate bicycles, furniture moving and emergency services, I am concerned that a single lift may be inadequate to service a building of this height and with bicycle parking at level one. I recommend further consideration of lift size and location to provide better access for all floors and to maximise lobby and internal circulation spaces.	Lobby area has been increased in size. A second lift has been added to the revised design layout
10 floor heights	I support the design direction of the overall floor layouts in terms of maximizing the opportunities of the constrained site. However, further development of apartment configuration is required to convincingly demonstrate the overall amenity of each apartment type. While kitchen areas are efficient in terms of overall floor layout. The current location of kitchen areas in the north facing apartments in a corridor in line with the main entrance is not supported. I recommend reconsideration of the kitchen configuration to accommodate clear access through the corridor and a safer kitchen space.	The floor plans have been re configured so that the toilets do not face the kitchen areas. In addition, the corridors adjacent kitchen areas have been increased in width.
11 balconies	While the resulting internal heights of 2.4m for bathroom ceilings and 2.7m for living areas are acceptable, overall apartment quality will rely on successful detail design of spatial sequencing and glazing. Given the tight proportions of each apartment space in plan, apartment amenity would be greatly enhanced by increased ceiling overall. I recommend further exploration of additional height for apartments and, subject to sighting drawings; I would support additional height to the building as a result.	The floor to ceiling heights have been increased to 2550 AFL
12 air-conditioning	However, the current angle of the fin walls will result in poor quality balcony space and light access for bedrooms on the southern side, particularly in the likely event of the southern boundary being built out by future development. While I support the intent to optimize light access, I recommend that the fin walls should be set at an alternate angle that will allow optimal light access to bedrooms on the south side as well as the east and west facing living rooms. I also recommend that the articulation of proposed fins and the southern facade should be further developed to strengthen overall modelling.	The initial scheme for the residential tower included 16 levels of apartments with 4 apartments per level. The current proposal calls for 17 levels with 4 apartments per level. In addition, the internal design of the apartments has been reconfigured.

6. Conclusion

6.1 ODASA RECOMMENATIONS

General Support for Architectural Design Philosophy

Generally, the outcomes of the two design reviews with the ODASA Design Review Panel and the Pre-lodgement meetings with DPTI were positive and encouraging of the general design philosophy for the Sky Apartments proposal for 261 -263 Pulteney Street. There was overall encouragement of a mixed used development that incorporates a retail component on the ground floor to facilitate street activation day and night along Pulteney Street with additional studio type uses above on Levels 1 and 2 which further provide activity which will also enhance activation at street level.

6.2 BUILDING HEIGHT & SETBACK REQUIREMENTS

6.2.1 Building Height

The Capital City Zone calls for a maximum building of 53 metres. However, the policy also permits an additional height due to the site being located on a high concentration public transport route. In addition, the Design Review Panel acknowledged that the proposal has sufficient design merits, which allows for a height increase (refer to Concept Plan figures CC/1 and 2 and PDC 19).

The maximum height to the top of roof is 70.4 metres – is 15.6 metres within the obstacle limitation surface contour.

The rational for the building height of 70.4 metre height and total of 23 levels (including ground floor and roof garden with 17 levels of apartments and 4 levels of car parking/studios) is due mainly to a number of constraints which need to be balanced with commercial drivers:

a) Restrictive Site area of 370 sq m constrains the ability to provide viable numbers of apartments per floor. It also restricts the number of requisite car parking spaces that can be achieved through a typical ramping or on ground system. However, the current design achieves 4 apartments per floor and achieves a significant number of car spaces through the use of innovative 5 level car parking system utilising a 'staking lift technology' where cars will be able to be stacked on top of each other using a lift system developed in Germany (refer to diagram to right). In addition, the concept allows for bikes for each apartment:

b) Incorporation of a 2nd lift (ODASA recommendation). This has meant an increased cost for the extra lift and subsequent loss of overall apartment floor areas per floor. In addition, the current design incorporates 2 levels of studio space to provide activation to the building and the street and also provides for a roof top garden.

6.3 CONCLUSION

The revised architectural design for Sky Apartments provides for a modern based language which reinforces the streetscape character by contrasting the ground and levels 1 - 4 (the podium) with the upper levels to create interest and visual richness through the vertical facade elements. The concept reinforces the intention of the zone to provide a High-scale development with high street walls that frame the streets.

The proposal provides a strong built form edge and acknowledges the need for architectural articulation of the southern facade that will form part of a future southern gateway into the city centre.

The site is currently tree lined with mature plane trees providing shade a strong sense of enclosure and streetscape character. This will be further enhanced with an additional glass canopy to the Pulteney Street frontage and outdoor dining areas.

In addition, the design incorporates a roof garden providing multiple community and resident uses in the form of a cinema, bar or out door community garden area which will provide an opportunity to create a unique destination, a point of difference and a community hub.

The proposal is therefor considered, on balance, to align with the Capital City Zone policy provisions by providing a high quality architectural outcome with sufficient design merits. In addition, the design delivers a mixed use development that achieves ground floor retail activation, studio spaces and roof garden that aims to add vitality to the streetscape character, create a unique destination and a key southern gateway into the centre of the city.

6.2.2 3 to 6 metre Setbacks

The Adelaide City Development Plan calls for 3 to 6 metre setbacks on the higher floors of the development (PDC 11). However, the Southern Boundary 3 metre setback would restrict the design to achieving 2 apartments per floor rather than 4 apartments per floor. In addition, the southern boundary will form part of the future gateway into city, therefore needs to provide an attractive architectural form rather than a blank wall.

The proposal for 261 -263 Pulteney Street provides for a mixed used development with a strong built form edge and incorporates a retail component on the ground floor to encourage street activation day and night.

7. Appendix A - Title



Title Register Search
LANDS TITLES OFFICE, ADELAIDE
For a Certificate of Title issued pursuant to the Real Property Act 1886

REGISTER SEARCH OF CERTIFICATE OF TITLE * VOLUME 5545 FOLIO 337 *

COST : \$25.75 (GST exempt)
REGION : EMAIL
AGENT : PUSH BOX NO : 000
SEARCHED ON : 13/11/2013 AT : 10:28:12
PARENT TITLE : CT 3516/8
AUTHORITY : CONVERTED TITLE
DATE OF ISSUE : 16/06/1998
EDITION : 6

REGISTERED PROPRIETORS IN FEE SIMPLE

P J K PTY. LTD. OF 3 UNDIVIDED 4TH PARTS AND LJS KOZ PROPERTY PTY. LTD. OF
1 UNDIVIDED 4TH PART BOTH OF LEVEL 1/125B THE PARADE NORWOOD SA 5067

DESCRIPTION OF LAND

ALLOTMENT 706 FILED PLAN 181548
IN THE AREA NAMED ADELAIDE
HUNDRED OF ADELAIDE

EASEMENTS

NIL

SCHEDULE OF ENDORSEMENTS

11861280 MORTGAGE TO BENDIGO & ADELAIDE BANK LTD.

NOTATIONS

DOCUMENTS AFFECTING THIS TITLE

NIL

REGISTRAR-GENERAL'S NOTES

NIL

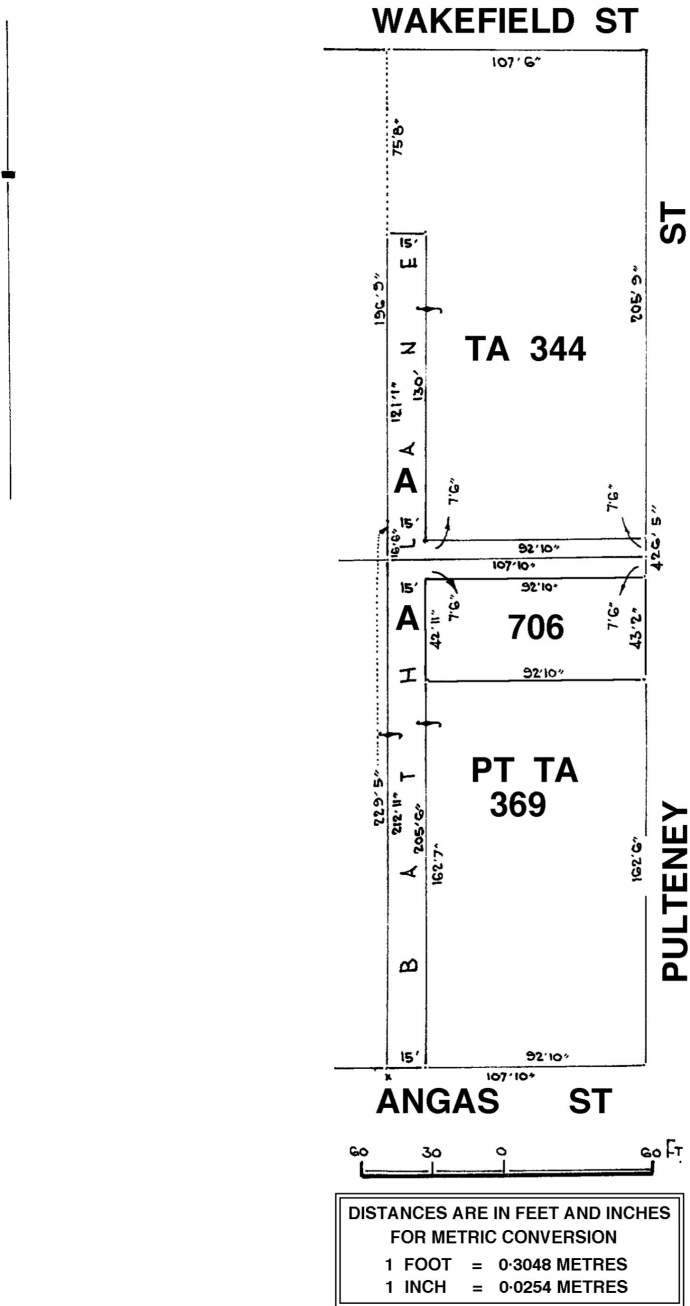
END OF TEXT.

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.



LANDS TITLES OFFICE ADELAIDE SOUTH AUSTRALIA
DIAGRAM FOR CERTIFICATE OF TITLE VOLUME 5545 FOLIO 337
SEARCH DATE : 13/11/2013 TIME: 10:28:12

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 3516/8
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NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION



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00	M.Separovic	J.Schmidt		J.Schmidt		15.01.2014
01	M.Separovic	J.Schmidt		J.Schmidt		07.04.2014
02	M.Separovic	J.Schmidt		J.schmidt		03.06.2014

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Loucas Zahos Architects

270 Flinders Street

Adelaide SA 5000

2 June 2014

Ref: 50B-13-0158-GCO-792936-1

Attention: Louis Petridis

Dear Sir,

Re: 261-263 Pulteney St (Sky Apartments)– Acoustics

ViPAC Engineers and Scientists Ltd were engaged to provide acoustic engineering services on the proposed mixed use development at 261-263 Pulteney St (Sky Apartments), Adelaide. This report presents the proposed acoustic criteria for the development as well as the results of our preliminary acoustic review.

1 REFERENCES

- [1] AS 2107-2000 "*Acoustics – Recommended design sound levels and reverberation times for building interiors*".
- [2] World Health Organisation (1999) *Guidelines for Community Noise*
- [3] National Construction Code 2014 (NCC)
- [4] *Adelaide (City) Council Development Plan*, consolidated 17 October 2013
- [5] Environmental Protection (Noise) Policy 2007
- [6] Architectural Drawings, provided by email correspondence 28 January 2014, 17 March 2014, 29 May 2014 and
- [7] Google Earth Software, last accessed 2 June 2014
- [8] Environmental Protection (Noise) Policy 2007
- [9] AS 12239:2004 *Fire detection and alarm systems - Smoke alarms (ISO 12239:2003, MOD)*.
- [10] Minister's Specification SA 78B February 2013 – "*Construction requirements for the Control of External Sound*"
- [11] *Technical Information Sheet 8 – Noise and Air Emissions – Overlay 3*, South Australian Planning Policy Library, April 2013.
- [12] http://www.transport.sa.gov.au/transport_network/facts_figures/traffic_pdfs/aadt_mt11_colour.pdf, Last accessed 4 February 2014

2 EXISTING SITE

The current development site consists of a dance studio.

The boundaries of the proposed development site are as follows:

- North - Bath Lane, separating the proposed development from commercial tenancies and a carpark.
- South – adjacent building accommodating Hayes Knight accountancy agency.
- East –Pulteney Street, separating the proposed development from various commercial tenancies.
- West –Bath Lane separating the proposed development from commercial tenancies and a large block of land, which is currently under construction site/unused.

3 PROPOSED DEVELOPMENT

It is understood that the development is for mixed use as follows:

- Ground level:
 - Retail Area facing onto Pulteney Street, Fire Service booster and Gas enclosures, car lifts systems and standard car parking, transformer zone.
- First Floor:
 - Car lifts systems and standard car parking.
- Second Floor and Third Floor
 - Car lifts systems and standard car parking, Studio spaces.
- Fourth Floor:
 - Car lifts systems and standard car parking and services.
- Fifth Floor:
 - Lift overrun space, Four apartments
- Sixth Floor:
 - Stair Transition above lift overrun, Four apartments
- Seventh to 21st Floor:
 - Full apartment levels, Four per floor
- Roof Level
 - Roof garden/courtyard/Roof Top Bar

4 NOISE SURVEY

A noise survey was undertaken between 17:30 and 18:00 and between 24:00 and 01:00 on 22nd and 23rd February 2014, in order to determine the existing noise levels (and identify the dominant noise sources) in the vicinity of the development site. The survey was conducted using a Brüel & Kjaer Type 2250 Sound Level Meter (serial number 3002841, last calibrated on 31st January 2013, due for calibration 31st January 2015) equipped with one ½” condenser microphone, and fitted with an approved windshield. The sound level meter was spot-calibrated before and after the measurements and no drift in the measured noise levels was observed.

The location of the measurements is shown in Figure 4-1 below.



Figure 4-1: Proposed Development and Measurement Locations

- Red star – Location 1, intersection of Angas Street and Pulteney Street
- Blue star – Location 2, directly in front of the proposed development location
- Yellow star – Location 3, intersection of Wakefield Street and Pulteney Street

Table 4-1: Summary of attended noise measurements at proposed site.

Location	Time	L_{Aeq} , dB(A)	L_{Amax} , dB(A)	L_{A10} , dB(A)	L_{A90} , dB(A)	Notes
1	5:51 pm Monday	69	83	72	63	Traffic noise, high maximum due to vehicle take off at lights.
	12:36 am Tuesday	62	77	66	51	Low traffic volume. Pedestrian traffic light sound audible.
2	5:44 pm Monday	70	85	73	62	Traffic noise predominant along Pulteney St.
	12:42 am Tuesday	64	76	68	51	Low traffic volume. Wind and tree leaves noise dominant
3	5:57 pm Monday	70	83	73	63	Traffic noise, high density traffic. see above
	12:47 am Tuesday	65	81	67	52	see above.

5 DESIGN CRITERIA

5.1 INTERNAL CONTINUOUS NOISE

Principles of Development Control 96 and 98 in the Adelaide City Council development plan [4] state that:

“96 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.”

“98 Noise sensitive development adjacent to noise sources should include noise attenuation measures to achieve the following:

- (a) Satisfaction of the sleep disturbance criteria in 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’; ...”

AS/NZS 2107:2000 [1] sets out the design criteria for steady state noise such as from air-conditioning systems and road traffic depending upon the type/use of the different rooms. Recommendations for each space are provided in Table 5-1 in terms of an A-weighted equivalent continuous sound pressure level (L_{Aeq}).

Table 5-1: Recommended internal continuous noise levels for spaces within proposed development.

Type of Occupancy / Activity	Background Noise, dB(A)
Living areas (near major roads)	35 – 45
Sleeping areas (near major roads)	30 – 40
Work areas (near major roads)	35 – 45
Apartment common areas (e.g. foyer, lift lobby)	45 – 55
Small Retail areas (General)	45 – 50
Dance/Drama Studio	40 – 45

Table 5-2 details the subjective response of individuals to the proposed sound levels for interpretation of the recommendations.

Table 5-2: Subjective response of individuals to average sound pressure levels.

Average Sound Pressure Level, dB(A)	Subjective Rating
35 – 40	Audible but unobtrusive
40 – 45	Moderate but unobtrusive
45 – 50	Unobtrusive with low levels of surrounding activities
50 – 55	Unobtrusive with high levels of surrounding activities

5.2 Minister's Specification SA 78B

The Minister's Specification SA 78B [10], stipulates that for traffic noise, the source level for an acoustic assessment is determined from Table 3: Road sound source levels. This requires that the road source be a Type A, B or R road, as indicated by the council development plan applicable at the site. The Adelaide (City) Council Development Plan [4] does not specify any particular rating for Pulteney Street.

The Technical Information Sheet regarding noise and air emissions [11] states that there are several criteria that can be used to determine a road's classification Type. For a road traffic density of 50 000 vehicles per day, a road is given Type A and for 25 000 - 50 000 vehicles per day, Type B. Although there are no particular road traffic densities published for Pulteney Street [12], or other roads within the City zone, comparison with entering traffic from surrounding roads, travelling into the city zone, flow of traffic would be greater than 25 000 vehicles per day, but less than 50 000. Therefore for the purposes of this assessment, we will apply the following source noise levels for Type B roads as set out within section B5 of the Minister's Specification 78B [10]:

- Traffic Speed Limit - 60 km/h¹
 - o $L_{eq\ 9hr}$ - 68 dB(A) at 10m
 - o $L_{eq\ 15hr}$ - 73 dB(A) at 10m

For the purposes of this assessment, the following criteria from the Minister's Specification 78B [10] are used:

- Bedroom
 - o Maximum allowable for individual rooms: 35dB(A) $L_{Aeq,9hr}$ between 10pm to 7am,
 - o Average for all bedrooms in the building: 30dB(A) $L_{Aeq,9hr}$ between 10pm to 7am.
- Other living spaces:
 - o Maximum allowable for individual rooms: 40dB(A) $L_{Aeq,9hr}$ between 7am to 10pm,
 - o Average for all bedrooms in the building: 35dB(A) $L_{Aeq,9hr}$ between 7am to 10pm.

5.3 ACOUSTIC SEPARATION BETWEEN APARTMENTS

The National Construction Code 2014 (NCC) [3] stipulates the required weighted sound reduction index (R_w), weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) and weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w} + C_i$) for building elements separating sole-occupancy units. We note that the proposed residential apartments would be classified as Class 2 or 3 buildings, and therefore note the following criteria are applicable to the proposed development:

- A floor in a Class 2 or 3 building must have an $R_w + C_{tr}$ (airborne) not less than 50 and an $L_{n,w} + C_i$ (impact) not more than 62 if it separates:
 - o Sole-occupancy units, or
 - o A sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby, carpark or the like, or parts of a different classification.
- A wall in a Class 2 or 3 building must:
 - o Have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates sole-occupancy units, and

¹ Note: The theoretical noise levels above indicated are for a 60 km/h road. Pulteney Street has a 50 km/h speed limit, however 60 km/h is the lowest speed available within the Minister's Specification 78B [10], Table 3, Road sound source levels.

- o Have an R_w (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification, and
- o Must be of discontinuous construction where it separates a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or where it separates a sole-occupancy unit from a plant room or lift shaft.
- A door incorporated in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like must have an R_w not less than 30.
- Where a wall required to have sound insulation has a floor above, the wall must continue to the underside of the floor above, or have a ceiling that provides the sound insulation required for the wall.
- Where a wall required to have sound insulation has a roof above, the wall must continue to the underside of the roof above, or have a ceiling that provides the sound insulation required for the wall.
- If a duct, soil, waste or water supply pipe, including a duct or pipe located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w + C_{tr}$ (airborne) not less than:
 - o 40 if the adjacent room is a habitable room (other than a kitchen); or
 - o 25 if the adjacent room is a kitchen or non-habitable room.
- A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.

5.4 ENVIRONMENTAL CONTINUOUS NOISE

5.4.1 ADELAIDE CITY COUNCIL DEVELOPMENT PLAN

The proposed development is located within the Capital City Zone of the Adelaide City Council. Principles of Development Control 94 and 95 of the Adelaide City Council Development Plan [4] provides noise criteria for assessment of noise impact of the proposed development to nearby noise-sensitive premises:

“94 Mechanical plant or equipment, should be designed, sited and screened to minimise noise impact on adjacent premises or properties. The noise level associated with the combined operation of plant and equipment such as air conditioning, ventilation and refrigeration systems when assessed at the nearest existing or envisaged noise sensitive location in or adjacent to the site should not exceed:

- (a) *55 dB(A) during daytime (7.00am to 10.00pm) and 45 dB(A) during night time (10.00pm to 7.00am) when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.*
- (b) *50 dB(A) during daytime (7.00am to 10.00pm) and 40 dB(A) during night time (10.00pm to 7.00am) in or adjacent to a Residential Zone, the North Adelaide Historic (Conservation) Zone or the Park Lands Zone when measured and adjusted in accordance with the relevant environmental noise legislation except where it can be demonstrated that a high background noise exists.*

95 To ensure minimal disturbance to residents:

- (a) *ancillary activities such as deliveries, collection, movement of private waste bins, goods, empty bottles and the like should not occur:*
 - (i) *after 10.00pm; and*

- (ii) *before 7.00am Monday to Saturday or before 9.00am on a Sunday or Public Holiday.*
- (b) *typical activity within any car park area including vehicles being started, doors closing and vehicles moving away from the premises should not result in sleep disturbance when proposed for use after 10.00pm as defined by the limits recommended by the World Health Organisation.”*

5.4.2 ENVIRONMENT PROTECTION (NOISE) POLICY 2007

The Environment Protection (Noise) Policy 2007 (EPP 2007) [8] sets out the maximum allowable L_{Aeq} noise levels based on the time of day and zoning / use of land in which the noise source and receiver are located. With reference to the Adelaide City Council Development Plan [4], we note that the proposed development is located within the Capital City Zone. The Capital City Zone is an essentially Mixed Use zone comprising a mixture of Commercial and Residential uses. Table 5-3 shows the indicative noise factors based on time of day and land-use as stipulated in Table 2 of the EPP 2007 [8].

Table 5-3: Indicative noise factors based on time of day and land use

Land use category	Day-time (7:00 a.m. to 10:00 p.m.)	Night-time (10:00 p.m. to 7:00 a.m.)
Commercial	62	55
Residential	52	45

Since the Mixed Use area is intended for commercial and residential purposes, the Environment Protection (Noise) Policy [8] states that the indicative noise level is the average of the indicative noise factors for the land use categories. In addition, the EPP 2007 states that predicted continuous noise due to the proposed development (for application for development authorisation) should not exceed the indicative noise level, minus 5dB(A). Based on the average of the “Commercial” and “Residential” land use categories, minus 5dB(A) for planning purposes, the applicable day and night time noise criteria are as follows:

- Mixed Use zone impacting on adjacent Mixed Use Zone:
 - Day-time (7:00 a.m. to 10:00 p.m.): 57dB(A)
 - Night-time (10:00 p.m. to 7:00 a.m.): 49dB(A)

Note that if noise emitted by the proposed development contains any tones, modulation, impulsive or low frequency characteristics, the continuous noise level of the noise source must be adjusted as follows:

- Noise containing 1 characteristic – 5dB(A) penalty added to source continuous noise level;
- Noise containing 2 characteristics – 8dB(A) penalty added to source continuous noise level;
- Noise containing 3 or 4 characteristics – 10dB(A) penalty added to source continuous noise level.

For the purposes of assessment of night-time continuous environmental noise levels, we note that the EPP [8] criterion is the same as the Adelaide City Council Development Plan [4] criterion.

5.5 INTERMITTENT NOISE LEVELS AND WHO

The criteria provided in Sections 5.1 and 5.4 relate to continuous noise sources, and do not cater for intermittent noise events, such as slamming of car doors, car horns sounding, etc. We recommend the use of the World Health Organisation (WHO) guidelines [2], which recommends a maximum noise level,

L_{Amax} of 45dB(A) in a bedroom, which is equivalent to approximately 55dB(A) to 60dB(A) at the façade of the residential building with windows partially open.

In addition, the EPP 2007 provides assessment criterion of L_{Amax} of 60dB(A) for night-time for the proposed development (for application for development authorisation) [4], which agrees with the criterion stipulated by the WHO [2].

5.6 SMOKE ALARMS

Two optional sound output levels are specified in this Australian Standard AS 12239:2004 *Fire detection and alarm systems - Smoke alarms*. The options allow national regulators to specify minimum sound output levels [70dB(A) or 85dB(A)] as required under national regulations. In the absence of regulations, the louder of the two options should be installed.

- **85dB(A) Sound output — Optional function:**

To demonstrate that the smoke alarm shall be capable of providing an output of at least 85 dB(A) and no more than 105 dB(A) at 3 m while connected to a source of rated voltage and frequency and mounted on a wooden board as specified in EN 54-3 with the front of the smoke alarm at 90° to the horizontal and facing the microphone.

For battery-operated smoke alarms, the sound output shall be at least 85dB(A) and no more than 105dB(A) after 1 min of alarm operation and at least 82dB(A) after 4 min of alarm operation. For mains-powered smoke alarms, the sound output shall be at least 85dB(A) and no more than 105dB(A) after 4 min of alarm operation.

- **70dB(A) Sound output — Optional function:**

To demonstrate that the smoke alarm shall be capable of providing an output of at least 70dB(A) and no more than 105dB(A) at 3 m while connected to a source of rated voltage and frequency and mounted on a wooden board as specified in EN 54-3 with the front of the smoke alarm at 90° to the horizontal and facing the microphone.

For battery-operated smoke alarms, the sound output shall be at least 70dB(A) and no more than 105dB(A) after 1 min of alarm operation and at least 67dB(A) after 4 min of alarm operation.

For mains-powered smoke alarms, the sound output shall be at least 70dB(A) and no more than 105dB(A) after 4 min of alarm operation.

NOTE: Research indicates that a minimum of 75dB(A) is required to wake sleeping persons; however, this option has been included to permit smoke alarms to comply with this International Standard where local regulations permit a lower sound output.

6 PRELIMINARY ASSESSMENT AND RECOMMENDATIONS

Based on the preliminary architectural drawings provided [6] and noise measurements as shown in Section 4, we provide the following recommendations:

6.1 BUILDING ENVELOPE/FAÇADE CONSTRUCTION

Assessment of the noise impact of the external environment onto the internal spaces was undertaken. We provide the following recommendations for building façade construction in order to achieve the recommended design criteria that are detailed above in Sections 5.1, 5.2 and 5.5. The predominant

noise source in question was stipulated to be from Pulteney Street and the neighboring intersections of Angas and Wakefield Street.

External Glazing:

- Ground level:
 - For the retail component of the structure, we recommend minimum 10.38 mm laminated glass.
- First Floor:
 - No specific acoustic requirements.
- Second Floor and Third Floor
 - For the Dance Studio Components, we recommend a minimum 10.38 laminated glass for both levels.
- Fourth Floor:
 - No specific acoustic requirements.
- Fifth Floor:
 - We recommend 6.38 mm laminated glass throughout.
- Sixth Floor:
 - We recommend 6.38 mm laminated glass throughout.
- Seventh to 21st Floor:
 - We recommend 6.38 mm laminated glass throughout.
- Roof Level
 - We recommend 6.38 mm laminated glass throughout.

Façade:

The following are acceptable alternatives for the construction of the building façade:

- Precast concrete panel - 150mm thick,
- Lightweight construction - 1 layer of 9mm FC externally on 92mm steel studs - 1 layer of 13mm FRPB to the internal side, with cavity infill of 50mm, 12kg/m3 glasswool.

Roof / ceiling structure to Roof Garden:

We recommend conventional profiled roof decking with R1.5 insulation, 200mm purlins and ceiling of 1 layer of 13mm plasterboard. If a mechanical services plant is installed on the roof, it is likely that additional acoustic treatment consisting of 1-2 layers of 13mm FRPB fixed to the underside of the purlins will be required.

Precast cast concrete slab with also be sufficient as the deck for the roof garden and roof bar, 150 mm thick. In regards to footfall and impact noise from people using the roof garden, please also refer to Section 6.2 below.

6.2 SEPARATION BETWEEN APARTMENTS/RESIDENTIAL AND RETAIL COMPONENTS

We note that the apartments have a combined open plan kitchen and living area and therefore recommend the following constructions to achieve the NCC requirements:

Walls (between apartments)

We recommend construction consisting of 2 rows of 64mm steel studs separated by minimum 20mm gap, with minimum 2 layers of 13mm fire-rated plasterboard to each side of the separate studs, and insulation in the cavity of 50mm, 12kg/m³ glasswool. The wall should extend full height from floor to the underside of the floor slab above, and from floor to the underside of the roof sheeting above.

Walls separating apartments from public corridors/foyers

We recommend construction consisting of 1 layer of 13mm FRPB to one side of 64mm staggered studs in minimum 92mm track and 2 layers of 13mm fire-rated plasterboard to the other side, with cavity of 50mm, 12kg/m³ glasswool. The wall should extend full height from floor to the underside of the floor slab above, and from floor to the underside of the roof sheeting above.

Walls separating lift shafts and stairwells from apartments

Assuming that the lift shafts and stairwell walls would be minimum 150mm thick precast concrete panels, we recommend construction consisting of minimum 13mm plasterboard installed to one side (i.e. apartment side) of 64mm steel studs offset from the precast concrete panel by minimum 20mm gap, with cavity infill of 50mm, 12kg/m³ glasswool.

Walls separating car lift systems from surrounding spaces; Ground and lvls 1-4

Sound Pressure levels of the proposed Combilift 413, 0 were obtained from the operation of a car lift in a separate development. These measurements yielded a continuous sound pressure level, $L_{Aeq} = 60$ dB(A), with a maximum, L_{Amax} of 68 dB(A) taken at 1m. Based on these levels, 150 mm precast concrete panel construction will be sufficient.

Walls separating car lift systems from surrounding spaces; lvls 2,3 and overrun lvl 5

Recommendations should be as stated for: Walls separating lift shafts and stairwells from apartments, based on sound pressure levels as described above.

Floor / ceiling construction separating retail, studios, car parks and apartments.

We recommend the floor / ceiling system separating the apartments vertically to be constructed of one of the following alternative structures (minimum requirements)

- Either 150mm thick in-situ concrete slab, with 13mm thick flush plasterboard ceiling on 50mm furring channels and resilient mounts to the underside of the floor slab. The cavity between the 13mm plasterboard ceiling and the floor slab should be installed with 50mm, 32kg/m³ polyester insulation; or
- BONDEK or Kingspan steel pan with 150mm thick concrete topping, with 13mm thick flush plasterboard ceiling on suspension system (minimum 300mm air gap between the ceiling and the underside of the concrete floor slab).

Also note the treatment required for waste water pipes for the kitchen, laundry and bathroom areas as detailed in the Hydraulics section.

Where a hard floor finish is used in a room above habitable spaces (bedrooms and open plan living / kitchen areas), for NCC compliance they must be installed on *resilient underlay* (e.g. Thermotec Impact Foam, Regupol, Construction Chemicals, Damtec). The resilient underlay is not required for where bathrooms and balconies exist above/below each other on adjacent floors of the building.

Plant Room on Roof Deck

We recommend precast concrete panel - 150mm thick to control noise to the surrounding bar space. To control reverberation time within the room, we recommend internally lining with minimum 50 mm thick, 48 kg/m³ insulation glasswool insulation. For the access door we recommend that minimum 55mm thick solid core door be installed complete with heavy duty acoustic perimeter seals (e.g. Raven RP47Si, RP70 and RP16Si).

Apartment entry doors

We recommend that entry doors to the apartments be minimum 45mm thick solid core doors with properly fitted medium duty acoustic seals (Raven RP10 and RP8).

Stairwell/Lift Lobby doors

We recommend the stairwell doors to be 55 mm solid core. In order to avoid noise from slamming of stairwell doors into the apartment lobbies, we recommend installing a soft closer mechanism (e.g. damping piston) to the stairwell doors.

Hydraulics

Where a wall separates a room of a sole-occupancy unit from a duct, soil, waste or water pipe serving or passing through more than one sole-occupancy unit, we recommend the following constructions:

- Where the adjacent room is a habitable room (i.e. bedroom, open plan living room, etc.), the pipes should be lagged with Soundlag 4525C or equivalent and enclosed with 1 layer of 13mm fire-rated plasterboard with cavity infill as specified. (See Figure A - 1 attached).
- Where a waste water pipe is running within the ceiling space of a habitable room or the waste water pipe is running within the ceiling space next to a habitable room, the pipes should be lagged with Soundlag 4525C or equivalent with ceiling overlay of 100mm, 32kg/m³ polyester extending minimum 1,500mm each side of the pipe. Please note that down lights should be avoided in these areas (See Figure A – 2 attached).

We note that the specified constructions above will achieve a rating of $R_w + C_{tr}$ 40, and will meet the NCC requirements for a services riser adjoining a habitable space.

- Where the room is a non-habitable room (See Figure A – 3 attached):
 - o The pipes should be lagged with Soundlag 4525C or equivalent, and the wall construction would be as per architectural requirements, or
 - o The pipes left unlagged and enclosed with 1 layer of 13mm fire-rated plasterboard with cavity infill as specified.

We note that both the constructions specified will achieve a rating of $R_w + C_{tr}$ 25, and will meet the NCC requirements for services riser adjoining a kitchen or non-habitable room.

6.3 Environmental noise emissions

6.3.1 Carpark and Car Lift Stacker Systems

Preliminary environmental noise assessment of the car-stacker has been conducted, based on the Sound pressure level information provided within Section 6.2 and the recommended construction of the surrounding walls. Our assessment revealed the neighboring tenancies will be subject to the follow noise levels at their respective boundaries, assuming a sufficient noise propagation path²:

- Western Boundary - 35 dB(A)
- Eastern Boundary – 25 dB(A)

² All Environmental Noise Criteria are readily achieved

- Northern Boundary – 36 dB(A)
- Southern Boundary – 37 dB(A)

6.3.2 MECHANICAL SERVICES

During design development, all mechanical noise will be assessed and noise control designed to ensure compliance with the environmental noise criteria.

6.4 SMOKE ALARMS

Based on the two optional sound output levels [70dB(A) or 85dB(A)] as specified in the AS 12239:2004 Fire detection and alarm systems - Smoke Alarms and based on hollow cores doors and sliding doors within apartments, the sound level of the smoke detection system inside the bedrooms achieved the requirements for to wake sleeping persons.

We trust the information provided is satisfactory, however if you have any queries or require any further information, please do not hesitate to contact us.

Sincerely,

Vipac Engineers & Scientists Ltd

A handwritten signature in black ink, appearing to read "Reece Pruis".

Reece Pruis

Project Engineer

Attachments:

Appendix A – Standard Design of Duct lagging

Appendix B – Glossary of Acoustic Terminology

2 June 2014

Appendix A: Pipework details to achieved NCC compliance

Pipework lagged (4kg/m² loaded vinyl on 25mm backing)

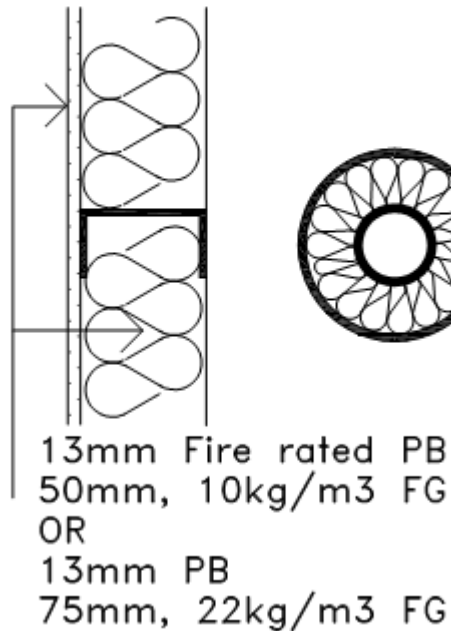


Figure A- 1: Construction to achieve R_w+C_{tr} 40, for pipes running adjoining habitable spaces (Bedroom, Living)

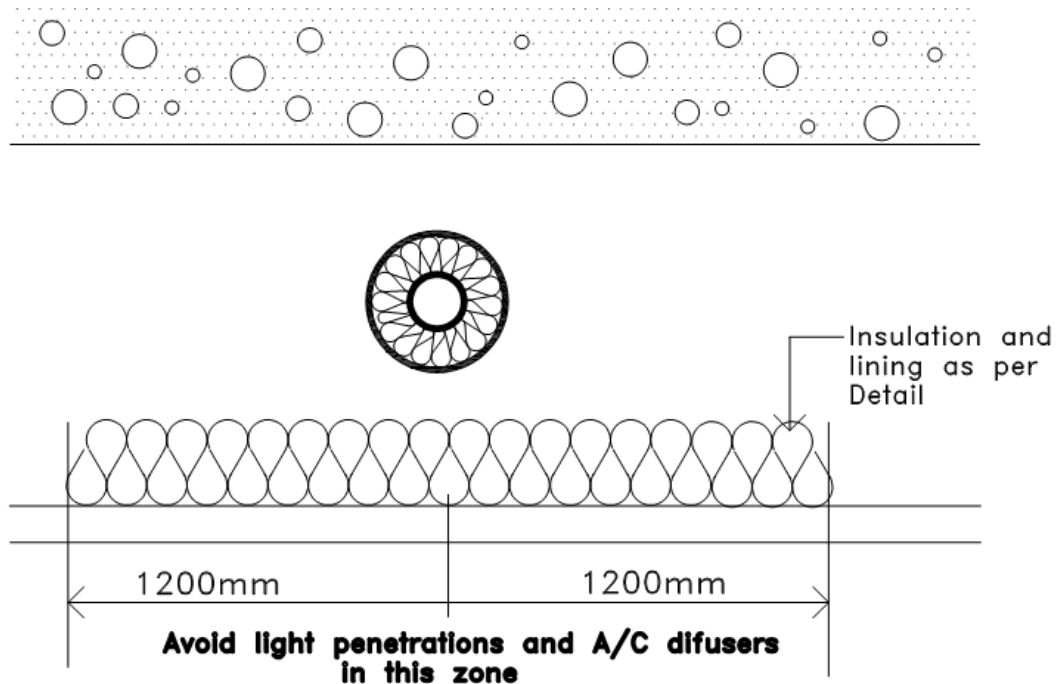
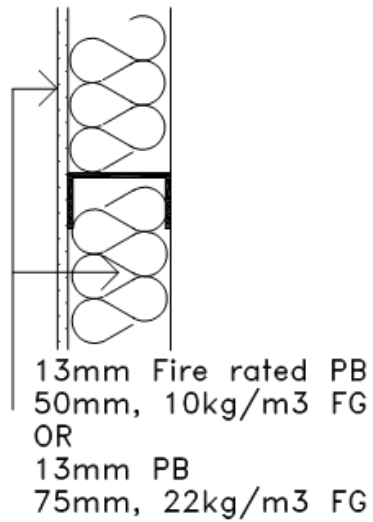


Figure A- 2: Construction for pipes running through ceiling of habitable spaces

2 June 2014

Pipework unlagged



Pipework lagged (4kg/m² loaded vinyl on 25mm backing)

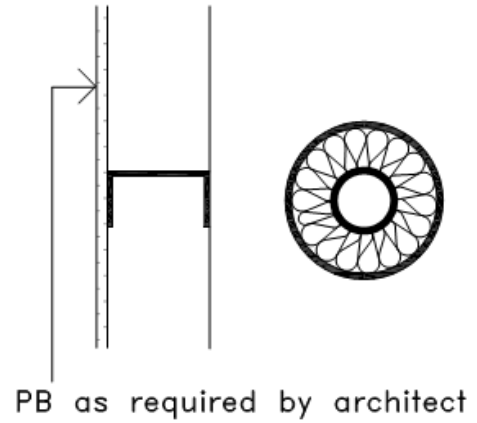
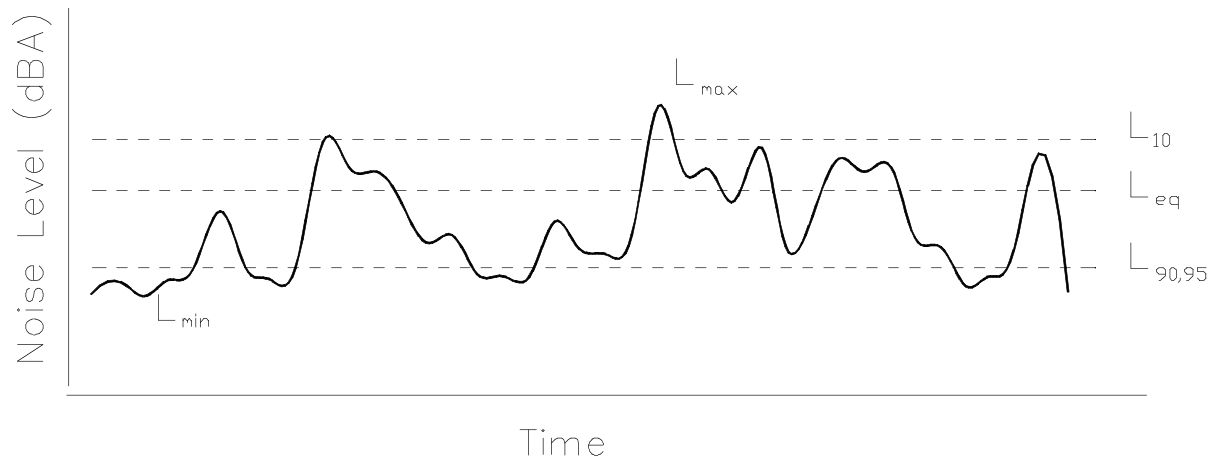


Figure A- 3: Construction to achieve R_w+C_{tr} for pipes adjoining non-habitable spaces (e.g. Bathroom, Laundry)

Appendix B – Glossary of Acoustic Terminology

dB(A)	A unit of measurement, decibels(A), of sound pressure level which has its frequency characteristics modified by a filter ("A-weighted") so as to more closely approximate the frequency response of the human ear.
L₁	The noise level which is equalled or exceeded for 1% of the measurement period. L ₁ is an indicator of the impulse noise level, and is used in Australia as the descriptor for intrusive noise (usually in dBA).
L₁₀	The noise level which is equalled or exceeded for 10% of the measurement period. L ₁₀ is an indicator of the mean maximum noise level, and is used in Australia as the descriptor for intrusive noise (usually in dBA).
L₉₀	The noise level which is equalled or exceeded for 90% of the measurement period. L ₉₀ or L ₉₅ is an indicator of the mean minimum noise level, and is used in Australia as the descriptor for background or ambient noise (usually in dBA).
L_{eq}	The equivalent continuous noise level for the measurement period. L _{eq} is an indicator of the average noise level (usually in dBA).
L_{max}	The maximum noise level for the measurement period (usually in dBA).



Note: - The *subjective reaction or response to changes in noise levels can be summarised as follows*: A 3 dBA increase in sound pressure level is required for the average human ear to notice a change; a 5 dBA increase is quite noticeable and a 10 dBA increase is typically perceived as a doubling in loudness

STC/Rw

Sound Transmission Class or Weighted Sound Reduction Index. Provides a single number rating (from the sound transmission loss or sound reduction index for each frequency band) of the sound insulation performance of a partition. The higher the value, the better the performance of the partition. The subjective impression of different ratings is shown in the table below.

Type of noise source	STC/Rw Rating				
	40	45	50	55	60
Normal Speech	Audible	Just Audible	Not Audible		
Raised speech	Clearly Audible	Audible	Just Audible	Not Audible	
Shouting	Clearly Audible	Clearly Audible	Audible	Just Audible	Not Audible
Small television/small entertainment system	Clearly Audible	Clearly Audible	Audible	Just Audible	Not Audible
Large television/large hi-fi music system	Clearly Audible	Clearly Audible	Clearly Audible	Audible	Just Audible
DVD with surround sound	Clearly Audible	Clearly Audible	Clearly Audible	Audible	Audible
Digital television with surround sound	Clearly Audible	Clearly Audible	Clearly Audible	Audible	Audible

FSTC/Rw'

The equivalent of STC/Rw, but the performance is for the building element measured in the field.

C1, Ctr

The ratings (Rw, DnTw, LnTw) are weighted according to a spectrum suited to speech. This term modifies the overall rating to account for noise with different spectra, such as traffic (Ctr) or footfalls (C1). The ratings may be written as Rw+Ctr, or DnTw/LnTw+C1.

NNIC/DnTw

Normalised Noise Isolation Class, or Weighted Standardised Sound Level Difference. Provides a single number rating of the sound level difference between two spaces, and incorporates the effects of flanking noise between two spaces. This rating is generally accepted to be about 5 points less than the STC/Rw rating.

IIC/Lnw

Impact Insulation Class, or Weighted Normalised Impact Sound Level. Ln_w=110-IIC. The higher the IIC rating, or the lower the Ln_w rating the better the performance of the building element at insulating impact noise. The table below gives the subjective impression of different ratings:

IIC	Ln _w	Subjective Rating
40	70	Clearly Audible
45	65	Clearly Audible
50	60	Audible
55	55	Audible
60	50	Just Audible
65	45	Inaudible

FIIC/LnTw'

The equivalent of IIC/Ln_w, but the performance is for the building element measured in the field.

dBA

A-weighted noise level. The A-weighting corrects for the lack of response of the human ear to low frequency sounds. The subjective rating of different ambient noise levels is shown in the table below.

Noise Level (dBA)	Subjective Rating
25-30	Barely audible and very unobtrusive.
30-35	Audible but very unobtrusive.
35-40	Audible but unobtrusive.
40-45	Moderate but unobtrusive.
45-50	Unobtrusive with low levels of surrounding activity.
50-55	Unobtrusive with high levels of surrounding activity.

MEMORANDUM

To: Loucas Zahos Architects

Attention: Louis Petridis Pages: Page 1 of 1

From: Luke Faranda Reference: 8113-006a

Project: 261 Pulteney Street Development Date: 3 June 2014

Subject: Ecologically Sustainable Design (ESD) – NatHERS Initiatives

CC: Rigas Atsidaftis

Louis,

Herewith we outline the Ecologically Sustainable Design (ESD) initiatives to be undertaken for the proposed residential apartment development at 261 Pulteney Street through the National House Energy Rating Scheme (NatHERS).

The Building Code of Australia does not nominate specific building thermal properties for Class 2 buildings, however requires a building fabric (NatHERS) assessment to be undertaken on each individual dwelling. A NatHERS assessment will be undertaken utilising a formally recognised "Second Generation Software" in accordance with Australian Building Codes Board protocol. The NatHERS assessment will form the basis for the building thermal properties required to meet a National House Energy Rating standard, and as such the required properties may differ to that required for other building classifications such as class 5 buildings, class 9 buildings, etc. The minimum requirements may also differ between apartments, depending on orientation, surroundings, and location within the building.

It is proposed, in accordance with the 2013 BCA, to achieve a minimum rating of 5.0 stars to each apartment and a minimum development rating of 6.0 stars.

Trusting the above is satisfactory. Should you have any further queries in relation to this assessment, please do not hesitate to contact the undersigned.

Regards

LUCID CONSULTING ENGINEERS



LUKE FARANDA

Mechanical/Vertical Transportation Services Engineer

03 June 2014

Loucas Zahos Architects
270 Flinders Street
ADELAIDE SA 5000

ATTENTION: MR L Petridis

LF: 8113-007a

Dear Louis

**261 PULTENEY STREET, ADELAIDE – PROPOSED RESIDENTIAL DEVELOPMENT
ECOLOGICALLY SUSTAINABLE DESIGN (ESD)**

One aspect of ecologically sustainable design focuses on improving the efficiency of energy consumption within a building, with a primary intent to minimise CO₂ emissions and the impact of inefficient buildings harming the environment.

The importance of energy efficiency in the building industry has increased significantly in recent years, to the point now that the Building Code of Australia (BCA) has introduced energy performance requirements for all classifications of buildings. Regardless of legislative requirements, the benefits of ecologically sustainable design (ESD) extend to long term energy cost savings as well as a public perception of environmental responsibility.

With this in mind, the design team have developed the below energy efficiency/sustainability initiatives. These initiatives intend to reduce the building energy consumption beyond the Building Code of Australia "Deemed-to-Satisfy" approach to Energy Efficiency, leading to a further reduction of CO₂ emissions.

The features outlined below are to be investigated further during the design development phase of the project and considered for inclusion in the development subject to feasibility and cost effectiveness.

Energy

- Incorporate high efficiency, inverter driven, low-static pressure type air conditioning systems.
- Design air conditioning systems to be zoned and sized as day/night (living & kitchen/bedrooms) as opposed to conditioning the whole apartment simultaneously.
- Incorporate high efficiency lighting systems such as LED fittings where appropriate and cost effective.

Water

- Specify bathroom taps with a WELS rating of not less than 6 Stars (4.5 L/min)
- Specify shower heads with a WELS rating of not less than 3 Stars (9 L/min)
- Specify washing machines with a WELS rating of not less than 5 Stars (61 L/wash)

Indoor Air Quality

- Incorporate kitchen rangehoods with exhaust discharged to outside via ductwork in lieu of recirculating type hoods.

Please do not hesitate to contact the undersigned should you require further information.

Regards

LUCID CONSULTING ENGINEERS



LUKE FARANDA

Mechanical/Vertical Transportation Services Engineer



Vipac Engineers & Scientists Ltd.

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Vipac Engineers & Scientists

Loucas Zahos Architects

261-263 Pulteney St, Adelaide

Wind Impact Assessment

50B-13-0158-TNT-346423-1

03 Jun 2014

Report Title: Wind Impact Assessment Job Title: 261-263 Pulteney St, Adelaide																				
DOCUMENT NO: 50B-13-0158-TNT-346423-1 PREPARED FOR: Loucas Zahos Architects 270 Flinders Street Adelaide SA 5000 CONTACT: Louis Petridis Tel: 61 8 8290 3200 Fax: 61 8 82232265	REPORT CODE: TNT PREPARED BY: Vipac Engineers & Scientists Ltd. 17-19 King William Street, Kent Town, SA 5067, Australia Tel: +61 8 8362 5445 Fax: +61 8 8362 0793																			
PREPARED BY: Author:  Date: 03 Jun 2014 Sophie Lamande Wind Group Leader																				
REVIEWED BY: Reviewer:  Date: 03 Jun 2014 Zhuyun Xu Senior Wind Engineer																				
AUTHORISED BY:  Date: 03 Jun 2014 Sophie Lamande Wind Group Leader																				
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EXECUTIVE SUMMARY

Loucas Zahos Architects commissioned Vipac Engineers and Scientists Pty Ltd to prepare a statement of wind effects for the ground level of the proposed development at **261-263 Pulteney St, Adelaide**. This appraisal is based on Vipac's experience as a wind-engineering consultancy.

Drawings of the proposed Development were supplied by **Loucas Zahos Architects** dated **14 March 2014**, as described in Section 2 of this report.

The findings of this study can be summarised as follows:

- The proposed development incorporates a number of wind mitigating features, including the set back entrances; the canopy at ground level and the rough articulation of the façade, which will act to minimise the impact of the development on the wind environment of adjacent private land and public access ways.
- The proposed development would be expected to generate wind conditions in the ground level footpath areas within the recommended walking criterion.
- The proposed development would be expected to generate wind conditions in the building entrance areas within the recommended standing criterion.
- The rooftop garden may have wind conditions exceeding the recommended walking criterion. Vipac has made some generalized recommendations.
- As a general statement for any residential development, educating occupants about wind conditions at open terraces/balconies during high-wind events and tying down loose lightweight furniture are highly recommended.

The assessments provided in this report have been made based on experience of similar situations in Adelaide, Melbourne and around the world. As with any opinion, it is possible that an assessment of wind effects based on experience and without wind tunnel model testing may be in error.

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1 INTRODUCTION

Vipac Engineers and Scientists has been commissioned by **Loucas Zahos Architects** to carry out an appraisal of the pedestrian wind effects at the ground level and rooftop terraces of the proposed development at **261-263 Pulteney St, Adelaide**.

Strong winds in pedestrian areas are frequently encountered in central business districts of cities around the world; including Adelaide, Sydney, and Melbourne. Wind characteristics such as the mean speed, turbulence and ambient temperature determine the extent of disturbance to users of pedestrian areas. These disturbances can cause both comfort and safety problems and require careful consideration to mitigate successfully.

The proposed development is a 21-storey residential building with maximum height of approximately 66 m from the ground level. The site is bounded by Pulteney St to the east; Bath Lane in the north and west; and existing buildings in the south. A satellite image of the proposed development site and the north elevation of the building are shown in Figure 1 and Figure 2 below.

This report details the opinion of Vipac as an experienced wind engineering consultancy regarding the wind effects in ground level footpath areas adjacent to the development as proposed. The communal terrace areas have also been assessed. No wind tunnel testing has been carried out for this development at this stage. Vipac has carried out wind tunnel studies on a large number of developments of similar shape and having similar exposure to that of the proposed development. These serve as a valid reference for the prediction of wind effects. Empirical data for typical buildings in boundary layer flows has also been used to estimate the likely wind conditions on the ground level areas of the proposed development [2] & [3].

Drawings of the proposed development were supplied to Vipac by **Loucas Zahos Architects** dated 14 Mar 2014. A list of drawings supplied is provided in Section 2 of this report.

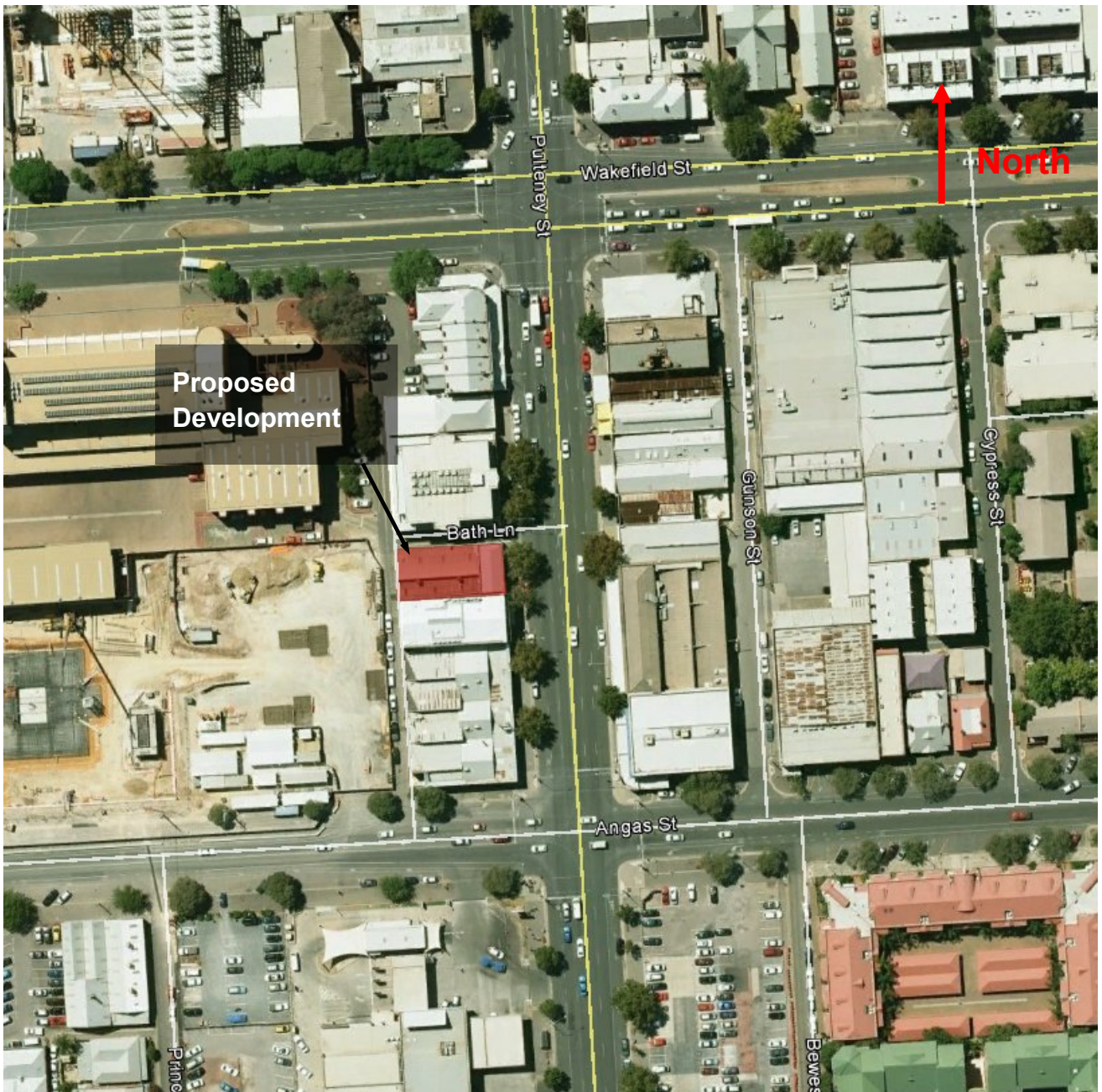


Figure 1: Aerial view of the proposed development at 261-263 Pulteney St, Adelaide

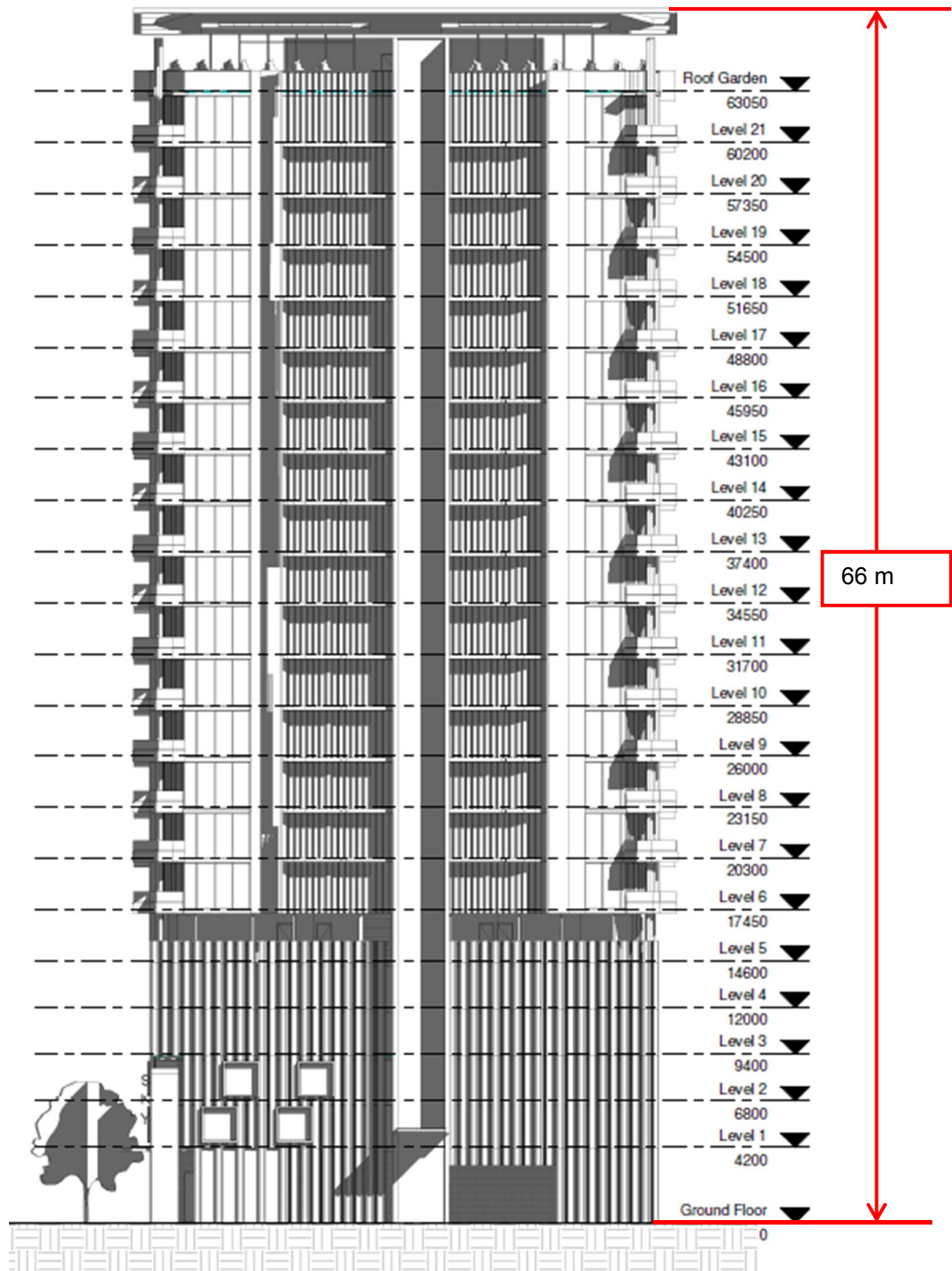


Figure 2: North elevation of the proposed development

2 REFERENCES

- [1] *Structural Design Actions, Part 2: Wind Actions*, Australian/New Zealand Standard 1170.2:2011
- [2] *Wind Effects on Structures* E. Simiu, R Scanlan, Publisher: Wiley-Interscience
- [3] *Architectural Aerodynamics* R. Aynsley, W. Melbourne, B. Vickery, Publisher: Applied Science Publishers
- [4] Drawings: A1920 – Option F_140314_P7, A1920 – A301 P3 (20-3-14)

3 ANALYSIS APPROACH

In assessing whether a proposed development is likely to generate adverse wind conditions in ground level footpath areas, Vipac has considered five main points:

- The exposure of the proposed development to wind
- The regional wind climate
- The geometry and orientation of the proposed development
- The interaction of flows with adjacent developments
- The assessment criteria, determined by the intended use of the areas affected by wind flows generated or augmented by the proposed development.

The pedestrian wind comfort at specific locations of ground level footpath areas may be assessed by predicting the worst annual 3-second wind gust expected at that location. The location may be deemed generally acceptable for its intended use if the annual 3-second gust is within the threshold values noted in Section 2.5. Where Vipac predicts that a location would not meet its appropriate comfort criterion, the use of wind control devices and/or local building geometry modifications to achieve the desired comfort rating may be recommended. For complex flow scenarios or where predicted flow conditions are well in excess of the recommended criteria, Vipac recommend scale model wind tunnel testing to determine the type and scope of the wind control measures required to achieve acceptable wind conditions.

3.1 Site Exposure

The proposed development is located on a relatively flat terrain, surrounded within a 3 km radius by suburban housing, open parkland and the Adelaide CBD is approximately 400 m to the NW of the site. A satellite image showing these site surroundings is shown in Figure 3.

Considering the immediate surroundings and terrain, the site of the proposed development is assumed to be within Terrain Category 3 for all directions (Figure 3).

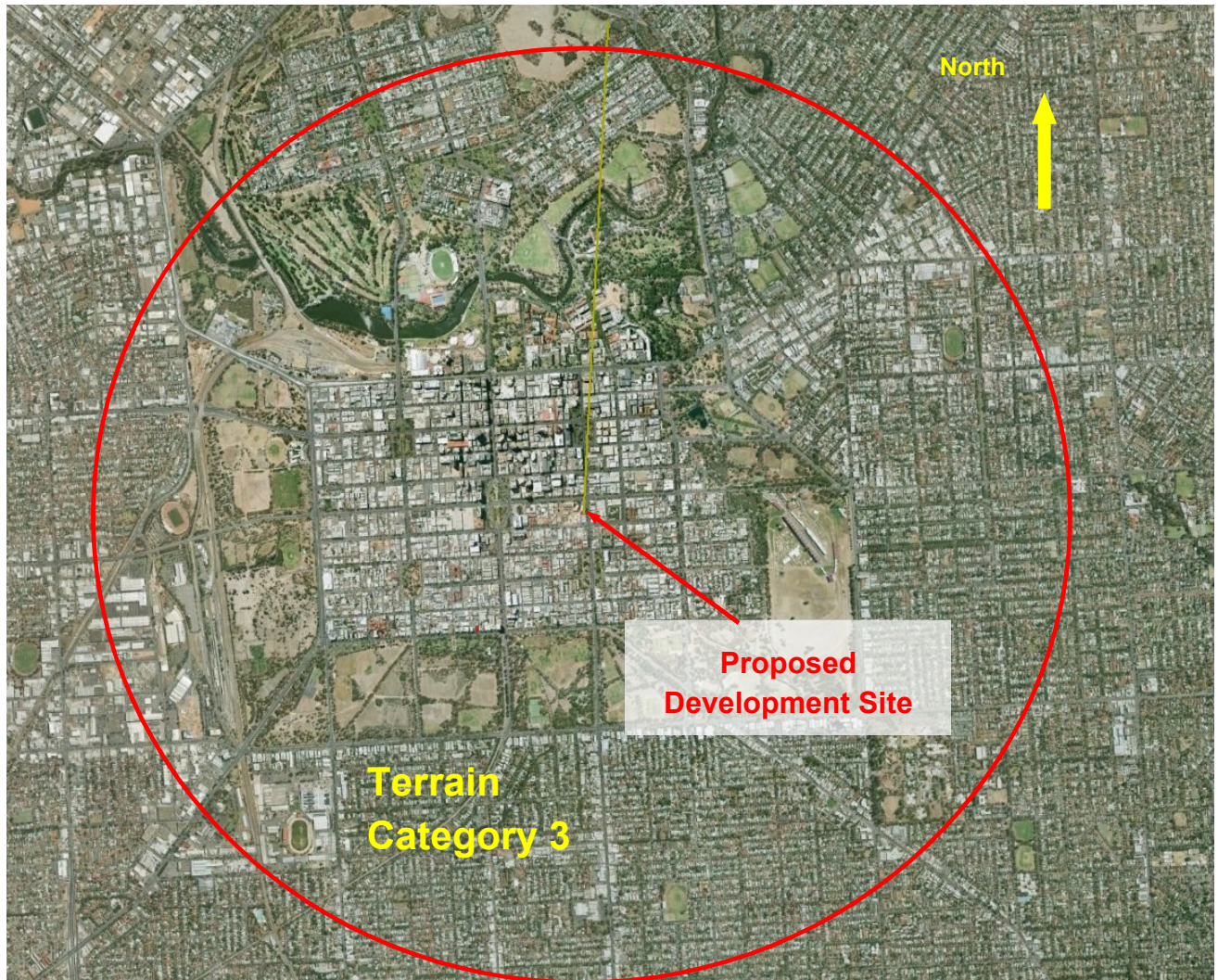


Figure 3: Assumed terrain roughness for wind speed estimation

3.2 Regional Wind Climate

The mean and gust wind speeds have been recorded in the Adelaide area for over 30 years. These data have been analysed and the directional probability distribution of wind speeds has been determined. The directional distribution of hourly mean wind speed at the gradient height, with a probability of occurring once per year (i.e. 1 year return period) is shown in Figure 4. The wind data at this free stream height is common to all Adelaide city sites and may be used as a reference to assess ground level wind conditions at the Site. The winds from the southwest are the strongest, followed by those from the WNW, then the winds from the west.

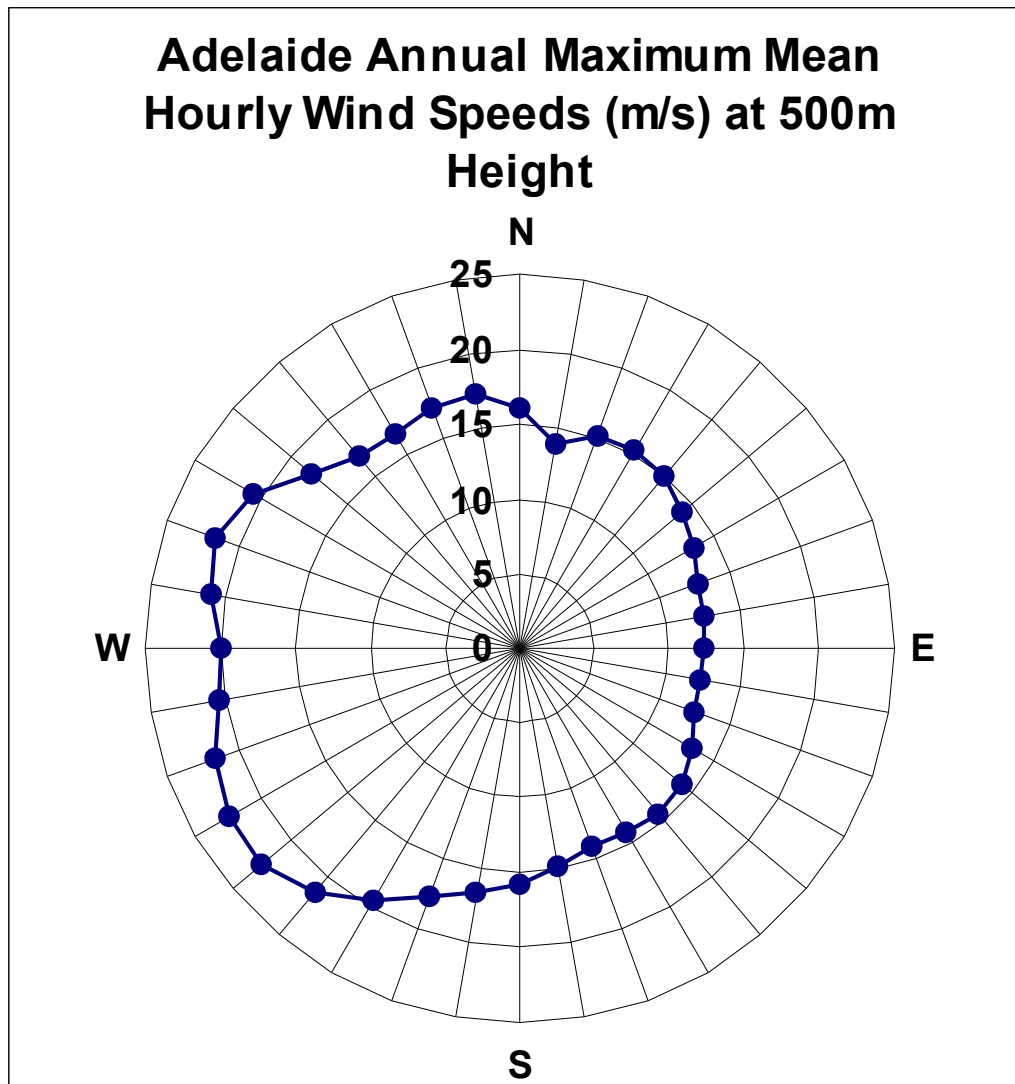


Figure 4: Directional Distribution of Annual Return Period Mean Hourly Wind Velocities (m/s) at 500m for Adelaide

3.3 Building Geometry and Orientation

The proposed development has a rectangular plan, with the dimensions of 13.1 m x 28.3 m shown in Figure 5. The long side runs east to west. The building has a maximum height of approximately 28.5 m (Figure 2).

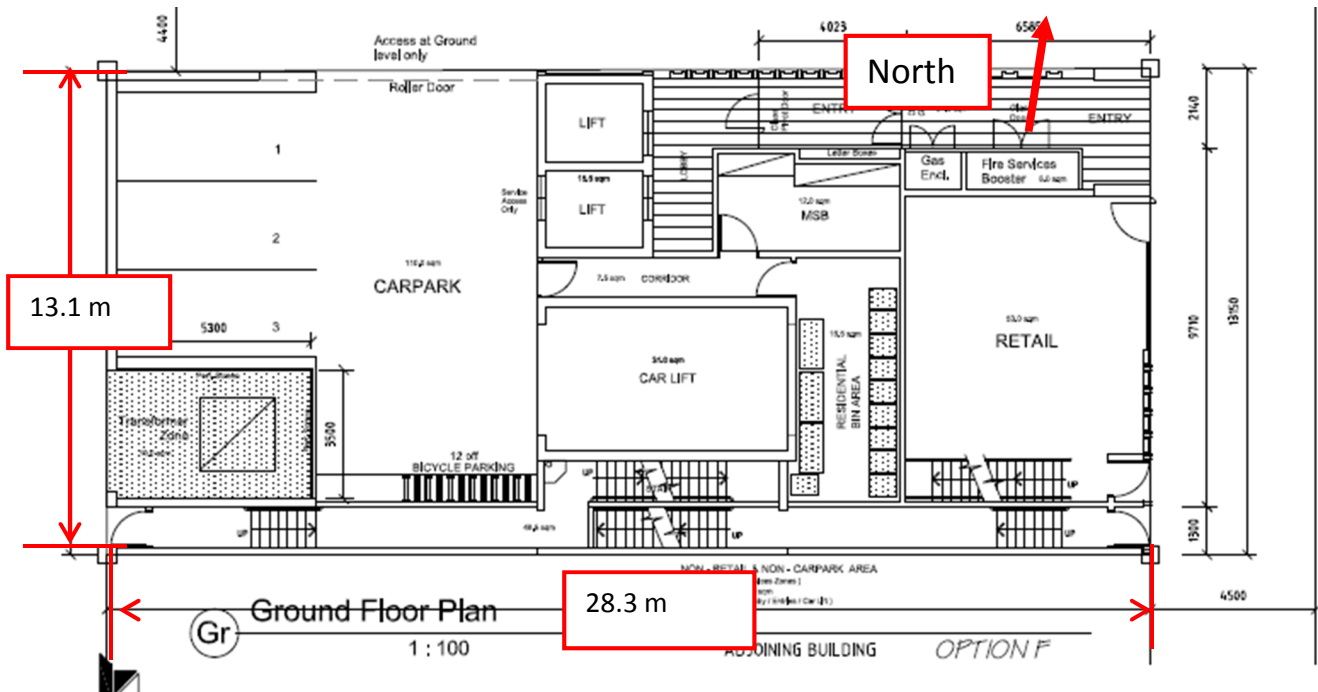


Figure 5: Ground level plan of the proposed development

3.4 Flow Interactions with Adjacent Developments

Immediately adjacent developments are shown in Figure 6. There are buildings with heights varying from 3-15 m surrounding the development in all directions, which provide good shielding for the ground level. There is a 2-4 storey carpark directly adjacent to the west, which will be porous and allow winds to flow through, which has been considered in the analysis.

The proposed development is relatively exposed to winds approaching from all directions at a height greater than 10 m (ie. from Level 4 and up). As such balconies and terraces at levels higher than L4 will be above the shielding influence of the surrounding buildings.



Figure 6: Immediately adjacent surroundings and their number of storeys.

3.5 Assessment Criteria

With some consensus of international opinion, pedestrian wind comfort is rated according to the suitability of certain activities at a site in relation to the expected annual peak 3-second gust velocity at that location for each wind direction. Each of the major areas around the site are characterised by the annual maximum gust wind speeds. Most patrons may consider a site generally unacceptable for its intended use if it were probable that during one annual wind event, a peak 3-second gust occurs which exceeds the established comfort threshold velocity. If that threshold is exceeded once per year then it is also likely that during moderate winds, noticeably unpleasant wind conditions may result, and the windiness of the location may be voted as unacceptable.

The threshold gust velocity criteria are:

Table 1: Gust Velocity Criteria - Recommended Wind Speeds for Comfort and Safety

Annual Maximum Gust Speed	Result on Perceived Pedestrian Comfort
>23m/s	Unsafe (frail pedestrians knocked over)
<16m/s	Acceptable for Walking (steady steps for most pedestrians)
<13m/s	Acceptable for Standing (window shopping, vehicle drop off, queuing)
<11m/s	Acceptable for Sitting (outdoor cafés, pool areas, gardens)

In a similar manner, a set of hourly mean velocity criteria with a 0.1% probability of occurrence are also applicable to ground level areas in and adjacent to the proposed Development. An area should be within both the relevant mean and gust limits in order to satisfy the particular human comfort and safety criteria in question.

The threshold mean velocity criteria are:

Table 2: Mean Velocity Criteria - Recommended Wind Speeds for Comfort and Safety

Mean Wind Speed Exceeded 0.1% of the Time	Result on Perceived Pedestrian Comfort
>15m/s	Unsafe (frail pedestrians knocked over)
<10m/s	Acceptable for Walking (steady steps for most pedestrians)
<7m/s	Acceptable for Standing (window shopping, vehicle drop off, queuing)
<5m/s	Acceptable for Sitting (outdoor cafés, pool areas, gardens)

The Beaufort Scale is an empirical measure that related the wind speed to observed conditions on the land and sea. Table 3 describes the categories of the Beaufort Scale. The comparison between these observed conditions and the comfort criteria described above can be found in Table 4.

Table 3: Beaufort Scale - empirical measure relating wind speed to observed conditions on land

Beaufort Number	Descriptive Term	Wind Speed at 1.75 m height (m/s)	Specification for Estimating Speed
0	Calm	0-0.1	
1	Light Air	0.1-1.0	No noticeable wind
2	Light Breeze	1.1-2.3	Wind felt on face
3	Gentle Breeze	2.4-3.8	Hair disturbed, clothing flaps, newspapers difficult to read
4	Moderate Breeze	3.9-5.5	Raises dust and loose paper; hair disarranged
5	Fresh Breeze	5.6-7.5	Force of wind felt on body, danger of stumbling when entering a windy zone
6	Strong Breeze	7.6-9.7	Umbrellas used with difficulty, hair blown straight, difficult to walk steadily, sideways wind force about equal to forwards wind force, wind noise on ears unpleasant
7	Near Gale	9.8-12.0	Inconvenience felt when walking
8	Gale	12.1-14.5	Generally impedes progress, great difficulty with balance in gusts
9	Strong Gale	14.6-17.1	People blown over

Table 4: Comparison between Mean comfort criteria and the observed conditions

Comfort Criteria	Beaufort Scale Equivalent
Safety	9 – Strong Gale
Walking	5 – Fresh Breeze
Standing	4-5 – Moderate to Fresh Breeze
Sitting	<4 – Moderate Breeze

3.5.1 Use of Adjacent Pedestrian Occupied Areas & Recommended Comfort Criteria

The following table lists the specific areas adjacent to the proposed development and the corresponding recommended criteria (see Figure 7).

Table 5: Recommended application of criteria

Area	Specific location	Recommended Criteria
Public Footpaths and Access ways	Around the proposed development on all sides	Walking
Terraces and Balconies	Rooftop Garden	Walking (refer to discussion below)
Building entrances	Several locations (Figure 7)	Standing

Apartment Balcony/terrace Recommended Criterion Discussion

Vipac recommend as a minimum the apartment balcony and podium rooftop terrace areas meet the criterion for walking since,

- these areas are not public spaces,
- the use of these areas is optional,
- many similar developments in Adelaide and other Australian capital cities experience wind conditions on balconies and elevated deck areas in the vicinity of the criterion for walking.

Vipac wish to clearly state that meeting the walking criterion on elevated recreation areas will be no guarantee that occupants will find wind conditions in these areas acceptable at all times

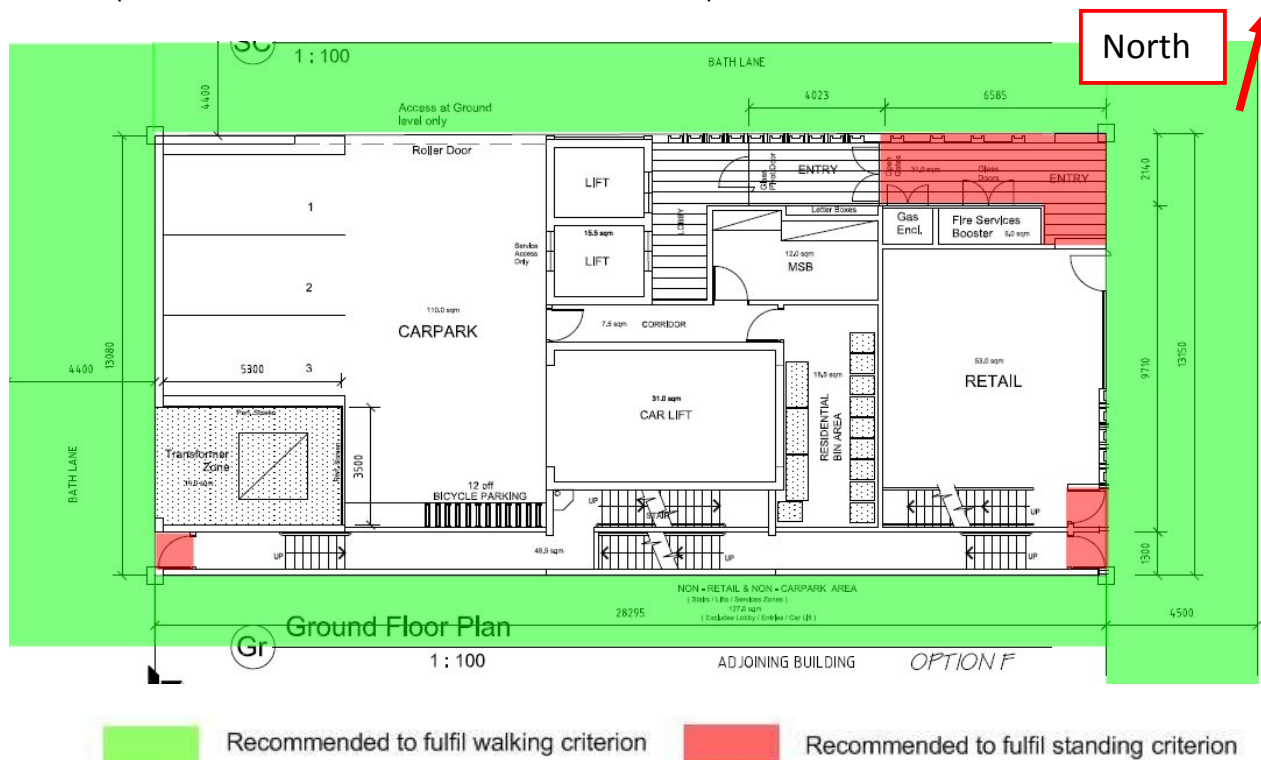


Figure 7: Schematic plan view of the ground floor of the proposed development with the recommended wind criteria overlaid

03 Jun 2014

4 PEDESTRIAN LEVEL WIND EFFECTS

4.1 Discussion

The proposed development incorporates a number of wind mitigating features, including

- the set back design for the main entrance;
- the canopy at ground level
- balconies increasing the roughness of the façade, reducing downwash;

Ground Level

The building is well shielded by adjacent buildings for the ground level for winds from all directions. The pathways on Pulteney St, Bath Lane and to the access lane on the south side of the development are not expected to have wind levels above the walking criterion. Additionally, there are street trees on Pulteney St that will act to ameliorate ground level wind conditions further.

The main building entrances are located on the east and west sides of the development and are well set back. There is also a canopy that will act to deflect downwash from the building façade. These areas are not expected to have wind levels exceeding the standing criterion.

Rooftop Garden

Drawings of the rooftop garden have not been supplied, however based on the height of the terrace level, Vipac can provide some general advice for the wind environment amelioration at this high level communal area. It would be expected that winds approaching from the North, through West to South directions would possess high velocities that might decrease the amenity of the rooftop garden. The winds from the SW and West are particularly elevated. Recommendations have been made in this regard in the following section.

Apartment Balconies

Whilst wind conditions on the proposed apartment balconies will frequently be acceptable for outdoor recreation, during moderate to strong winds, conditions in these areas may exceed human comfort criteria. Balcony areas on similar developments in many major Australian capital cities typically experience similar elevated wind conditions. High exposure, corner acceleration flows and standing vortices would sometimes preclude these areas from use for outdoor recreation.

4.2 Recommendations

After careful consideration of the areas at the base of the proposed development, Vipac predicts that the proposed development will present some changes to existing wind conditions in adjacent ground level areas. However, Vipac does not predict any exceedance of the various recommended criteria for the pedestrian level winds at the ground level.

In order to improve the amenity of the rooftop garden, the following measures can be adopted: higher than typical balustrades to shield this area from northerly, westerly and southerly winds; concentrating landscaping to also shield areas from these winds, particularly where seating is proposed.

As a general statement, educating residents about wind conditions at high-level balconies and terrace areas during high-wind events is recommended.

It should be noted that this study is based on experience only and has not utilised any experimental data for the analysis.

5 CONCLUSIONS

An appraisal of the likely wind conditions at pedestrian level and rooftop terrace of the proposed development at **261-263 Pulteney St, Adelaide** has been made.

Vipac have carefully considered the form and exposure of the proposed development, nominated criteria for various public areas according to their function and referred to past experience to produce our opinion of likely wind conditions.

The proposed development incorporates a number of wind mitigating features, including the set back entrances; the canopy at ground level; and the rough articulation of the façade, which will act to minimise the impact of the development on the wind environment of adjacent private land and public access ways.

The proposed development would be expected to generate the wind conditions in the ground level footpath areas within the recommended walking criterion.

The proposed development would be expected to generate the wind conditions in the building entrance areas within the standing criterion.

Vipac notes that there is a rooftop garden proposed, however these plans have not been supplied. Some generalized recommendations have been made to assist with the design of this area. Educating occupants about wind conditions at open terrace/balcony areas during high-wind events and fixing light-weight furniture on the terrace are highly recommended.

The recommendations and assessments provided in this report have been made based on experience of similar situations in Adelaide, Melbourne and around the world. As with any opinion, it is possible that an assessment of wind effects based on experience and without wind tunnel model testing may be in error.

This Report has been Prepared

For

Loucas Zahos Architects

By

VIPAC ENGINEERS & SCIENTISTS LTD.

03 Jun 2014

Appendix A: ENVIRONMENTAL WIND EFFECTS

Atmospheric Boundary Layer

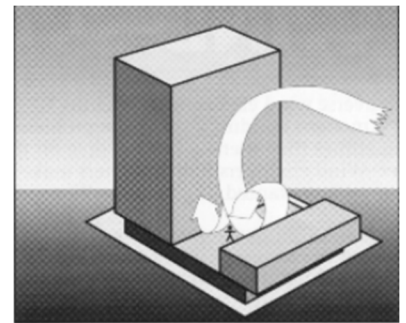
As wind flows over the earth it encounters various roughness elements and terrain such as water, forests, houses and buildings. To varying degrees, these elements reduce the mean wind speed at low elevations and increase air turbulence. The wind above these obstructions travels with unattenuated velocity, driven by atmospheric pressure gradients. The resultant increase in wind speed with height above ground is known as a wind velocity profile. When this wind profile encounters a tall building, some of the fast moving wind at upper elevations is diverted down to ground level resulting in local adverse wind effects.

The terminology used to describe the wind flow patterns around the proposed Development is based on the aerodynamic mechanism, direction and nature of the wind flow.

Downwash – refers to a flow of air down the exposed face of a tower. A tall tower can deflect a fast moving wind at higher elevations downwards.

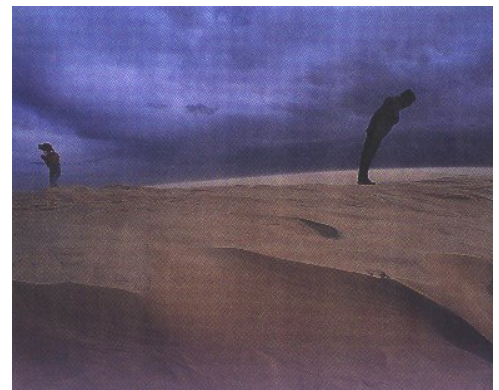
Corner Accelerations – when wind flows around the corner of a building it tends to accelerate in a similar manner to airflow over the top of an aeroplane wing.

Flow separation – when wind flowing along a surface suddenly detaches from that surface and the resultant energy dissipation produces increased turbulence in the flow. Flow separation at a building corner or at a solid screen can result in gusty conditions.



Flow channelling – the well-known “street canyon” effect occurs when a large volume of air is funnelled through a constricted pathway. To maintain flow continuity the wind must speed up as it passes through the constriction. Examples of this might occur between two towers, in a narrowing street or under a bridge.

Direct Exposure – a location with little upstream shielding for a wind direction of interest. The location will be exposed to the unabated mean wind and gust velocity. Piers and open water frontage may have such exposure.





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Loucas Zahos Architects

Waste Management Plan:

Sky Apartments Development

June 2014

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Document Verification

Page 1 of 1

Job title				Job number	
Document title		Waste Management Plan for Loucas Zahos Architects		File reference	
Document ref					
Revision	Date	Filename	261 Pulteney Street WMP		
Preliminary Draft	16/05/14	Description	Waste Management Plan Preliminary Draft to be Reviewed		
			Prepared by	Checked by	Approved by
		Name			
		Signature			
Revision	Date	Filename			
Final	02/06/14	Description	Waste Management Plan for Sky Apartments		
			Prepared by	Checked by	Approved by
		Name			
		Signature			

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1 Introduction

1.1 Purpose

This document provides a waste management plan (WMP) for the following proposed development. This WMP will be included with building plans for the development lodged with the Development Assessment Commission to obtain Development Planning Consent.

Table 1.1: Details of Sky Apartments Development

Site Location	261-263 Pulteney Street, Adelaide
Development Project	Sky Apartments
Developer	261 Pulteney Street Pty Ltd
Project Architect	Loucas Zahos Architects
Traffic Consultant	Phil Weaver & Associates

1.2 What this Waste Management Plan Contains

This WMP contains the information summarised in the table below.

Table 1.2: Waste Management Plan overview

Section 2 – Description of Development	Provides details of the development relevant to preparation of the WMP.
Section 3 – Design Approach & Assumptions	Sets out the design approach and assumptions that have been used in preparing this WMP.
Section 4 –Waste Services & Volumes	Indicates the waste & recycling collection services proposed for the development and provides estimates of the volumes of waste & recycling volumes likely to be generated and which will require collection and disposal.
Section 5 – Waste Management System	Provides an overview of the proposed Waste Management System (WMS), including main elements important design requirements, and how these systems should operate.
Section 6 – Collection Requirements	This section includes relevant information on collection requirements, including provision for access and estimated collection frequency.
Section 7 – Supporting Documentation & Design Details	This section outlines the required supporting documentation & design details that need to be confirmed in addition to the WMS outlined in this WMP.

1.3 WMP Status

1.3.1 Currently proposed Waste Management System & WMP

This WMP has been developed for the planning stage of this development. It provides a preliminary design for the waste management system (WMS) for this site and is intended to demonstrate that successful management of waste at the proposed development can be achieved. To support this WMP, the developer will need to provide the additional documentation or details on their plans as listed in Section 7. This covers information for design of key elements for the proposed waste management system that will need to be incorporated into the building and site, including access arrangements for collection vehicles which are being addressed separately by Phil Weaver & Associates, the traffic consultant for this project.

1.3.2 Further development of WMS & Finalisation of WMP

The suggested arrangements in this WMP are preliminary and reflect one possible configuration for the waste management system at this site. These arrangements could evolve and be refined before the construction takes place. This may affect the WMP for the site, which should be updated accordingly.

1.4 Important Note

This WMP has been developed in conjunction with the Developer and Project Architect, who have indicated the intended site uses of the development, occupancy data, and also requirements for how waste should be managed. If future proposed uses and waste management arrangements for the development are altered, the WMP may need to be reconsidered.

2 Description of Development

2.1 Land Use & Occupancy

Loucas Zahos Architects have provided Rawtec with a description of the development and plans showing the proposed layout of the site and buildings on it, including drawings specifically sent to Rawtec on 28th May 2014. These drawings include SKA25A, dated 28th May 2014, SK26, dated 16th May 2014, and A301, dated 28th May 2014. Based on this information, the following has been adopted for waste system design purposes.

Table 2.1: Land use and occupancy overview

Land Use	Occupancy Data
Residential	• Residential (Level 5) ○ ca. 1 Apartment x 2 bedroom (2 bedrooms in total), ○ ca. 3 Apartments x 1 bedroom (3 bedrooms in total) • Residential (Levels 6 - 21) ○ ca. 32 Apartments x 2 bedroom (64 bedrooms in total), ○ ca. 32 Apartments x 1 bedroom (32 bedrooms in total)
Café/ Restaurant	• Café/ Restaurant tenancy (Ground Floor) ○ ca. 42m²
Offices	• Office tenancy (Level 2) ○ ca. 125m² • Office tenancy (Level 3) ○ ca. 115m²

Note: the proposed land uses outlined in this WMP are based on those potential expected land uses for the development that would present the highest waste resource generation rates for design purposes. It is likely that the actual land uses (particularly on the Ground Floor Café/Restaurant) could be different to these proposed land uses, and thus, lower waste resource generation rates would occur.

2.2 Site Requirements

The following waste management & operational arrangements were indicated for the site by the Developer &/or Project Architects. These arrangements have been considered when developing the design of the proposed waste management system.

Table 2.2: Site requirement summary

Waste Management Requirement	Description
1. Waste disposal from Residential Areas	A Building Manager will move waste from the local bin storage areas on the Residential levels to the Waste & Recycling Aggregation/Storage Area on Ground Floor as required (up to once per day).
2. Local waste disposal from Office Areas	Office tenancies would have to provide their own on-site local storage of bins/containers for disposal & collection of confidential paper, used printer cartridge recycling and battery recycling. A requirement of the tenancy agreement should be to ensure they provide space in their fit-out for these services.
3. Collection service type	A 'pull-in, pull-out' service would be used, where waste contractors would collect waste from the development's Waste & Recycling Storage/Aggregation Room &/or directly from tenancies to collection vehicle parked in a proposed Loading Zone on Pulteney Street.

3 Design Approach & Assumptions

3.1 Overarching Approach

The proposed waste management system for this site has been designed in accordance with the recommended methodology and approach set out in the Adelaide City Council (ACC) Design Guidelines for Residential Recycling. In particular, this includes considering the following.

- Council's Waste Management Objective per the ACC Development Plan;
- Waste management obligations under the South Australian Environment Protection (Waste to Resources) Policy (EPA, 2010);
- Recommended 'design' waste resource generation rates (WRGRs) by land use per ACC Guidelines for Residential Recycling (2013);
- Ensuring appropriate provision of recycling services expected by tenants;
- Minimising truck movements for waste collection;
- Existing or proposed site constraints and/or requirements that could affect waste management.

3.2 Waste & Recycling Volumes

This WMP includes an estimate of the waste & recycling volumes likely to be generated by the development at this site. This estimate is based on:

- The number of bedrooms in the Residential areas, the advised footprint for the Café/Restaurant tenancy and the footprint for the Office tenancies, as provided to Rawtec by project architects, Loucas Zahos Architects (refer Section 2);
- Regulatory &/or Council and resident/tenant expected services for different land uses in the development; and
- Estimated waste and recycling generation volumes (see Section 4) derived from:
 - Adelaide City Council (ACC) recommended Waste Resource Generation Rates (ACC, Residential Waste and Resource Recovery Design Guidelines, 2013); supplemented with
 - Rawtec's own proprietary data¹ for waste and recycling generation rates and compositions of waste & recycling streams expected to occur for different development types and land uses.

¹ This includes relevant data on waste and recycling generation rates and composition for the Adelaide City area.

4 Waste Services & Volumes

4.1 Services

Table 4.1 below summarizes the waste & recycling services proposed for the development according to site use. These are separated into waste streams which are collected by Routine Services and by On-Call Services. Section 5.1 provides more information on how operation of these services would be configured at the site.

Table 4.1: Potential service requirements by type of development activity at the Development

Waste Stream	Residential	Café/Restaurant	Office
<i>Routine Services</i>			
Residual/general	X	X	X
Co-mingled recycling	X	X	X
Food/green organics	X	X	
Cardboard		X	
Paper			X
CDL/Bottles & cans		X	
<i>On-Call Services</i>			
Hard waste	X	X	X
E-waste	X	X	X
Confidential Paper			X

4.2 Volumes

Table 4.2 below provides the estimated weekly generation rate of waste & recycling for each of the services (Routine & On-Call) for the different site uses at the development. These generation rates have been used to size bins, equipment and storage areas for the proposed waste management system.

Table 4.2: Preliminary estimate of (uncompacted) waste and recycling volumes at the Development (litres/week)

Waste Stream	Residential	Café/Restaurant	Office	Total
<i>Routine Services</i>				
Residual/general	3,030	680	167	3,877
Co-mingled recycling	2,525	202	70	2,796
Food/green organics	1,010	1,008	-	2,018
Cardboard	-	50	-	50
Paper	-	-	84	84
CDL/Bottles & cans	-	76	-	76
<i>On-Call Services</i>				
Hard waste	657	5	26	687
E-waste	101	2	12	115
Confidential Paper	-	-	10	10

Refer to Appendix 1 for further information about these waste and recycling volumes and services.

Note: The volumes in Table 4.2 are for uncompacted waste & recycling. A commercial service provides flexibility to increase collection frequency during peak periods of waste generation, should this be required (which it may not).

5 Waste Management System

5.1 Overview of System

The table overleaf gives an overview of the main elements of the proposed WMS for the development. The table shows the differing elements by site use and also where these elements will be shared across the site uses. Additional detail around sizing, design and operation of these elements in the proposed WMS is addressed in the next section (Section 5.2). The system is also separated into the following service categories (based on required services in Table 4.1):

- **Routine Services** – This includes most of the services at the site, which involve collection of waste & recycling on a regular basis throughout the year:
 - General waste,
 - Comingled recycling,
 - Organics recycling,
 - Cardboard recycling
 - Paper recycling, and
 - CDL cans & bottles recycling.
- **On-call services** –collection times would be decided by Building Management &/or tenants. These services include:
 - Hard waste & e-waste,
 - Confidential paper,
 - Printer cartridge recycling, and
 - Battery recycling.

For details of sizing, design &/or operation refer to Section 5.2.

Table 5.1: Overview of waste system by land use of site

Main Element	Residential	Café/Restaurant	Office
ROUTINE SERVICES			
Residential/ Tenancy Storage	Residential bins in dwelling kitchens	Bins located within each tenancy	
Transfer Pathway to Local Disposal Point	Residential bins emptied by resident into the Local Disposal Point on their Level	Tenancy bins emptied by cleaners using cleaner trolley or by tenant to Waste & Recycling Storage/Aggregation Area on Ground Floor	
Local Disposal Point	Local Disposal Point provided on each Residential Level for use by residents		
Transfer to Storage/ Aggregation Area	Local bins emptied by Building Manager up to once a day into Waste & Storage Aggregation/Storage Area on Ground Floor		
Storage/ Aggregation Area	Waste & Recycling Storage/Aggregation Area located on Ground Floor		
Transfer to Collection Point	'Pull-in, pull-out' service from Waste & Recycling Storage/ Aggregation Area		
Collection	Loading Zone on Pulteney Street		
ON-CALL SERVICES			
Hard Waste & E-waste	Common Hard Waste & E-waste Storage Area (Location TBC). Transfer of hard waste and e-waste to Common Hard Waste & E-waste Storage Area to be managed by Building Management: Collection scheduled as required.		
Confidential Paper	Bin/containers stored in Office Storage Area , to be transferred & collected directly from Office tenancies (most likely located in stationary/photocopy room, as per tenancy agreement) by 'pull-in, pull-out' service managed tenant.		
Printer Cartridge Recycling			
Battery Recycling			

5.2 Sizing, Design & Operational Details for Main Elements

The following sections provide relevant advice on sizing, design & operation of the main elements for the proposed waste management system in Table 5.1. This advice generally reflects currently expected “better-practice” waste management arrangements based on our experience.

5.2.1 Residential/Tenancy Waste/Recycling Storage

The recommended residential/tenancy storage needed for each land use, including space provision where relevant is summarised below. Final building plans should include space and proposed locations for local storage suggested below (or as otherwise decided).

5.2.1.1 Residential

In dwelling kitchen:

- 20L General Waste Bin
- 20L Comingled Recycling Bin
- 6L Organics recycling on bench-top or under-desk caddy

5.2.1.2 Café/Restaurant

Space in back of Café/Restaurant tenancy required to be able to manage waste. Number and type of bins to be finalised during tenancy fit-out to suit local activities. May need to include a range of different sized bins or space allowed for:

- General waste (e.g. 60-80L)
- Comingled recycling (e.g. 60-80L)
- Organics recycling (e.g. 50-60L)
- Container deposit (CDL) recycling (e.g. Up to 80L)
- Cardboard recycling (e.g. loose)

Type & size of these storage bins to be suitable for tenant staff to tip into bigger bins in Waste & Recycling Storage/Aggregation Room.

5.2.1.3 Offices

Under office desks local waste bins (emptied by cleaners or tenants):

- 10-20L Paper recycling bin

Shared Communal bin stations (emptied by cleaners or tenants) for:

- 40-80L General waste bin
- 40-80L Comingled recycling bin
- 6-10L Organics recycling bin (optional in kitchen)

Office Storage Area in stationery/photocopying room (allow **3-4m²**) for Office tenancies. This is to house on-call service bins for the collection of the below services for each tenancy:

- Confidential paper recycling (pull-in pull-out service)
 - 1 x 240L bin
- Non-confidential paper bin (routine service)
 - 1-2 x 60-80L bin (number depends on tenancy size, emptied by cleaners)
- Printer cartridge recycling (on-site pick-up)

- Small box or container (e.g. 6L bin)
- Battery recycling (on-site pick-up)
 - Small box or container (e.g. 3.5-20L polycarbonate tube)

5.2.2 Transfer Pathway(s) to Local Disposal Point

The relevant design details & operational requirements for the transfer pathway to the local disposal point for each site use are detailed below. There are to be no steps and grades >5% along any of the waste transfer pathways.

5.2.2.1 Residential

Residents to empty their residential bins into bins in Local Disposal Point on their floor. Pathway to be less than 30m from apartment door to Local Disposal Point.

5.2.2.1 Offices & Café/Restaurant

Tenant, or cleaner(s) to use a trolley to transfer waste from tenancy bins directly to Waste & Recycling Storage/Aggregation Area on Ground Floor. Main lift to be used for this transfer pathway (if on Level other than Ground).

5.2.3 Local Disposal Points

The Local Disposal Point(s) for the Residential apartments are summarised below. The local disposal point for waste for the Office and Café/Restaurant areas would be the Waste & Recycling Storage/Aggregation Area on Ground Floor (as noted above).

5.2.3.1 Residential

Local Disposal Point to be located in a common area on each apartment level in development:

- Bins required in each **Local Disposal Point**;
 - 2 x 60-80L General waste (to be emptied up to once a day or as required)
 - 2 x 60-80L Comingled recycling (to be emptied up to once a day or as required)
 - 2 x 60L Organics recycling (to be emptied up to once a day or as required)
- **Local Disposal Point** requirements:
 - **Footprint of bins alone 2-3m²**
 - **Local Disposal** Point to be a room or cupboard with tiled area surroundings which has easy access to bins for all residents including mobility impaired residents (i.e. wheelchairs and walking frames)

Final size of **Local Disposal Point(s)** to be confirmed in detailed design phase. These Local Disposal Points should be positioned, designed, operated and maintained to:

- Maximise convenience of access and use by residents;
- Minimise opportunity for spillage of waste and recycling on the surrounding floor and walls;
- Ensure they are easy to keep clean and maintain;
- Do not result in unnecessary noise disturbances when used or accessed for waste collection by the Building Manager;
- Do not result in unpleasant and/or objectionable odours for residents;

- Preferably hidden from plain view when not in use or being accessed;
- Include clear instructions and signage on use and who to notify in the event of a problem (this should also be included in the resident's operating manual).

5.2.4 Transfer Pathway to Storage/Aggregation Area

The transfer pathway from the Residential Local Disposal Point to the Waste & Recycling Storage/Aggregation Room is summarised below. For Café/Restaurant and Office areas, waste & recycling would be transferred directly from tenancies to the Waste & Recycling Storage/Aggregation Room, as mentioned above.

5.2.4.1 Residential

Building Management would empty bins from Local Storage Area on each Residential floor and use a trolley &/or larger bins (e.g. 240L MGB) to transfer waste from 60-80L bins to the Waste & Recycling storage/Aggregation Room (on Ground Level). Building Manager would use lift for this transfer pathway and to avoid spending excess time in the front lobby of the building. There are to be no steps and no grades > 5% along path.

5.2.5 Storage/Aggregation Area

The **Waste & Recycling Storage/Aggregation Room** would be shared by all Residential, Offices and Café/Restaurant areas. Space needed in this area for bin storage, working area and access equates to a total footprint of about **30m²**.

The specific bins required for each land use are detailed below.

This Room may also need to have a bin-lifter or platform to enable the Building Manager and/or commercial tenants or cleaners to be able to empty waste & recycling into the larger bins, which should be decided when the final waste & recycling system configuration is resolved. Appropriate instructions and signage should be allowed for, as well as ventilation, lighting and security and water supply and drain for hand-washing and cleaning purposes.

5.2.5.1 Residential & Offices

Shared bins needed for Residential and Office tenancies:

- General Waste
 - 4 x 660L bins
- Comingled Recycling
 - 3 x 660L bins
- Organics Recycling
 - 1 x 660L bins
- Paper Recycling
 - 1 x 140L bin

5.2.5.2 Café/Restaurant

Bins needed for the Café/Restaurant:

- General Waste
 - 1 x 360L bins
- Comingled Recycling

- 1 x 140L bin
- Organics Recycling
 - 1 x 660L bins
- Cardboard Recycling
 - 1 x 140L bin
- CDL/ Bottles & Can Recycling
 - 1 x 140L bin

5.2.6 Transfer to Collection Point

The transfer pathway from the Waste & Recycling Storage/Aggregation Room to the Collection Point is summarised below.

All bins would be collected by waste contractors using a 'pull-in, pull-out' service, therefore bins would not be left at the collection point, and instead returned immediately to the **Waste & Recycling Storage/Aggregation Room** via the same pathway after collection. A waste contractor would pull bins from the Waste & Recycling Storage/Aggregation Room on the Ground Floor to the Loading Zone located on Pulteney Street via the internal pathway which provides access to Pulteney Street. The waste pathway is to avoid use of the main lobby areas to ensure the pathway is clear, safely accessible and minimises the impact on the public and residents/tenants of the building.

Hallway and doorway access along the waste pathway should ensure easy access for 660L bins (1.34 x 0.64 m). There should be no steps or grades > 5%.

5.2.7 Collection Point

As mentioned above, the Collection Point for all land uses would be a Loading Zone on Pulteney Street, arrangements for which would need to be confirmed with Council. The current bus lane (7:30-9am) on Pulteney Street and times of peak-hour traffic could dictate the time of day allowable for waste collection from the development. We recommend collection be arranged with the commercial contractor(s) for between 9am and 4pm weekdays. Weekend collections may also be arranged during the existing Loading Zone times (8am – 12pm Saturday) if required. The flexibility of commercial waste collection ensures that collection times can be specified and changed if required. This should be discussed with Council who may be able to place restrictions around use of the Loading Zone so that it is available for collection trucks when collection is scheduled.

A traffic consultant will need to determine whether the size of the Loading Zone on Pulteney Street is large enough for the waste collection truck. Discussions with Council would need to be conducted to extend this Loading Zone if it is not long enough.

5.2.8 On-Call Services

The collection of On-Call Services including hard waste and e-waste, confidential paper recycling, printer cartridge recycling and battery recycling for the Development are summarised below.

5.2.6.1 Hard Waste & E-waste

All three land uses (Residential, Offices and Café/Restaurant) would have a **Common Hard Waste & E-waste Storage Room**. The required size of this room is **20m²** (location TBC).

Managed by Building Management: Disposal by appointment (Collection schedules as required). Smaller bins for lighting for tenancies and Residential areas are also optional at this location.

Consideration should be made as to how the Building Manager would move the large hard waste & e-waste items from upper levels to the **Common Hard Waste & E-waste Storage Room**. For example, a motorised trolley or an additional helper could be hired to help with the movement of these items when required. It may be necessary in some cases for collection to occur directly from a dwelling or tenancy depending on size and volume of waste items.

Building Management would book collections of hard waste and e-waste when required, using a hard waste and/or e-waste collection agency.

Additional containers for the collection of e-waste (including batteries) could be provided in the Local Disposal Point on Residential Levels to allow residents to easily dispose of this waste. The collection of which is to be managed by Building Management.

5.2.6.2 Other On-Call Services

Confidential paper, batteries and printer cartridge recycling will be generated by the tenants in the Offices. It is advised that as part of the tenancy agreement, provision for space for a 240L confidential paper recycling bin, a printer cartridge recycling container/box, a battery recycling container/box and an optional regular paper recycling bin be made available in each of the tenancies in the **Local Storage Area** (allow **3-4m²** for confidential paper, printer cartridge & battery recycling bins/boxes/containers only).

The collections of the confidential paper recycling would be provided via an on-call 'pull-in, pull-out' service as required. Requirements for access for a 'pull-in, pull-out' service would be the same as those already listed in Section 5.2.5, above. Printer cartridge recycling and battery recycling container/bins to be collected by either Building Management taking the waste when required to an appropriate recycling depot, or through on-call collection by a printer cartridge recycling company and/or a battery recycling company.

6 Collection Requirements

6.1 Collection Schedule

The below table outlines the collection schedule for each waste stream for Residential, Café/Restaurant and Office for the Development. The number of truck movements for Routine Service collections is expected to be between 9-10 times per week. Additional truck movements may be required for these waste streams during peak times.

Additional truck movements for the on-call collection of hard waste and e-waste are expected to occur every 1-2 months, or more frequently depending on the area supplied for the Common Hard Waste & E-waste Storage Room. Confidential paper recycling is expected to be collected approximately once every couple of months. On-call collections for battery recycling and printer cartridge recycling may also occur approximately once a year.

Table 6.1: Routine Services waste collection schedule for each land use of the site

	General Waste	Comingled Recycling	Organics Recycling	Cardboard Recycling	Paper Recycling	CDL Recycling
Residential	2 times a week	2 times a week	2 times a week	-	-	-
Café/ Restaurant				Once a week	-	Once a week
Offices			-	-	Once a week	-

6.2 Truck Sizes

The collection vehicles expected for waste collection at this development would generally be:

- Rear-lift truck – for collection of routine waste & recycling streams
- Pantech or flat-bed truck – for collection of at-call waste streams

Likely maximum truck dimensions are provided in the table below to assist the Traffic Consultant to ensure that the Loading Zone on Pulteney Street can accommodate the waste collection trucks. In addition to the truck length, the parking area will need to accommodate at least 2m behind it for bin or waste loading.

Table 6.2: Likely dimensions & turning circles of waste collection trucks

	Rear-lift truck to collect bins (up to 1.1m ³)	Pantech/skip truck (collect hard- waste/ e-waste)
Dimensions	3.5m (h) x 2.5m (w) x 8m (l)	4.2m (h) x 2.6m (w) x 12m (l)
Vehicle height in operation	Up to 4m	Up to 4.5m
Vehicle turning circle	18 -25m	15 -25m

7 Supporting Documentation & Design Details

The following information will need to be provided by the developer to support this WMP.

Building plans confirming:

- Waste & recycling storage space provision in Apartments;
- Local Storage Point size, layout & design on each Residential Level;
- Pathway from residential levels and tenancies to Waste & Recycling Storage/Aggregation Room with no steps and no grades >5%;
- Size and layout of Waste & Recycling Storage/Aggregation Room on Ground Floor
- Location, size and layout of Common Hard & E-Waste Storage Room;
- Pathway from the Waste & Recycling Storage/Aggregation Room to the Collection Point; and
- Collection Point & Loading Zone on Pulteney Street.

Traffic Consultant to confirm:

- With Council the Loading Zone position & operational arrangement on Pulteney Street, including access from property boundary across pedestrian path and onto Loading Zone area; and
- Size of required Loading Zone on Pulteney Street to enable access and parking of collection vehicles (based on truck type and sizes provided).

8 Appendix 1: Potential Service Requirements & Waste Generation Volumes

8.1 Potential Service Requirements

Table 4.1 presented in the main body of this report summarised potential waste and recycling services that should or could need to be provided across the Sky Apartments Development. These services are different according to the type of development activity.

These recommendations include what would be regarded as mandatory services (expected by ACC) as well as what might reasonably be expected by some tenants in the development to reasonably meet the needs of the activity they are undertaking. In this case:

- Residential tenants would expect regular services for general waste, dry recyclables & organics and irregular (on-call) services for hard-waste and e-waste.
- Café/Restaurant tenants would expect regular services for general waste, dry recyclables & organics and irregular (on-call) services for hard-waste and e-waste. Additional services such as cardboard & CDL collections may also be required.
- Office tenants would expect regular services for general waste, dry recyclables & paper and irregular (on-call) services for hard-waste and e-waste. Options for additional collections for confidential paper, battery recycling, printer cartridge recycling and lighting recycling may also be required.

8.2 Waste Generation Volumes

To determine bin sizing, service frequency and storage space required for different services, an assessment of potential waste and recycling volumes was undertaken. This assessment was based on:

- ACC's recommended Waste Resource Generation Rates in its Draft Design Guide for Residential Waste Resource Recovery;
- Rawtec's own proprietary data² for waste and recycling generation rates and composition for various development types.

Table 4.2 in the main body of the report summarises high-level estimates (in L/wk) of waste and recycling volumes for the development.

These estimates, loosely interpreted, are intended to average weekly generation rate expected for that type of development, which would be used for design purposes.

² This includes relevant data on waste and recycling generation rates and composition for the Adelaide City area.

Consultant Traffic Engineers

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File: 205-13

17 June 2014

Mr Louis Petridis
Loucas Zahos Architects
GPO Box 2570
ADELAIDE SA 5001

Dear Mr Petridis,

**PROPOSED MIXED USE DEVELOPMENT - 261-263 PULTENEY STREET, ADELAIDE -
TRAFFIC AND PARKING ASSESSMENT**

I refer to our recent discussions relating to the proposed redevelopment to the above site to provide a mixed use development accommodating 68 residential apartments and commercial areas on the ground and mezzanine levels of the subject development.

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 south-western corner of the intersection of Bath Lane with Pulteney Street, Adelaide. The site has a frontage of approximately 28m along the east-west section of Bath Lane and approximately 13m to both Pulteney Street and the north-south section of Bath Lane on the eastern and western sides of the site, respectively.

The subject site currently accommodates a mostly ground floor building with a first floor extension located along the Pulteney Street frontage of the site.

The existing building currently accommodates a dance studio (Quicksteps) but appears to have previously been used as a shop and includes roller doors located along the northern and western sides of the building off Bath Lane.

The existing building on the subject site is constructed to each of the adjoining property boundaries and it is noted that a mirror has been installed diagonally opposite the north-western corner of the subject building in order to address sight distance between traffic using the east-west and north-south sections of Bath Lane.

On site car parking is not provided by the existing development on the subject site.

Pulteney Street adjacent to the subject site is an undivided multi lane roadway and allows for both left and right turn access into and out of the east-west section of Bath Lane.

Kerbside usage along the western side of Pulteney Street adjacent to the subject site includes a loading zone and short term parking during weekday periods and Saturday mornings.

The loading zone commences approximately 5.5m to the south of Bath Lane and is approximately 6m in length and applies between 9.00 am and 6.00 pm Monday to Friday and 8.00 am to 12.00 noon Saturdays. Three 2-hour parking spaces are located to the immediate south of this loading zone and these spaces operate over the same periods as the adjacent loading zone.

Parking is prohibited on the western side of Pulteney Street between 7.30 am and 9.00 am Monday to Friday.

Bath Lane provides a width of approximately 4.4m along the northern and western sides of the building. Given the width of this lane parking along both sides of the east-west and north-south sections of Bath Lane adjacent to the subject site is prohibited by No Stopping Anytime restrictions.

In addition to the subject site Bath Lane also provides vehicular access to:-

- An at-grade car park located on the southern side of Wakefield Street,
- A small at-grade parking area on the western side of Bath Lane,
- A basement car park associated with the Metropolitan Fire Service (MFS), and
- An undercroft car parking area associated with the building on the northern side of Bath Lane. This building is located directly opposite the subject site.

Notwithstanding the narrow widths of Bath Lane, both sections of this roadway currently accommodate two-way traffic movements.

In order to determine the level of traffic currently using Bath Lane, traffic surveys were conducted over the following periods:-

- From 3.00pm to 6.00pm on Monday 7th April 2014, and
- From 7.45am to 9.45am on Tuesday 8th April 2014.

The above traffic surveys included counts of cars entering and exiting the following locations:-

- The intersection of Pulteney Street with Bath Lane,
- The intersection of Bath Lane (east-west) with Bath Lane (north-south),

- The intersection of Angas Street with Bath Lane, and
- The intersection of Bath Lane (north-south) with the Metropolitan Fire Service (MFS) car park access point.

The results of the traffic surveys identified that the am peak period occurred between 7.45am to 8.45am on the Tuesday morning and the peak afternoon period occurred between 4.15pm and 5.15pm on the Monday afternoon.

The traffic volumes recorded during the above periods are summarised in Figure 1 (pm peak period) and Figure 2 (am peak period).

Analysis of the above figures identifies that:-

- There were 26 vehicles accessing Bath Lane at the intersection with Angas Street (comprising entry movements only) in the am peak period,
- There were 19 vehicles accessing Bath Lane (11 entry movements and 8 exit movements) in the pm peak hour period on the Monday,
- Traffic entering Bath Lane from Angas Street primarily accessed the MFS car park in both the am and pm peak periods,
- The volume of traffic turning between the two sections of Bath Lane was minimal during both periods,
- There were 10 vehicles accessing Bath Lane at Pulteney Street (7 entry and 3 exit movements) in the am period, and
- There were 18 vehicles accessing Bath Lane at Pulteney Street (14 entry and 4 exit movements) in the pm period.

The majority of traffic entering / exiting Bath Lane at Pulteney Street was observed to relate to traffic entering / exiting the car park on the north-eastern corner of the two legs of Bath Lane.

Only a relatively small volume of traffic was observed to access the at-grade car parking areas along the western side of the northern section of Bath Lane and the car park at the northern end of this lane.

In summary, it was identified that there was a maximum of 18 vehicles entering / exiting Bath Lane via Pulteney Street and a maximum of 26 vph accessing Bath Lane at Angas Street during the survey period.

Proposed Development

I understand that the proposed development will comprise:-

- construction of a multi storey building including:-
 - a ground floor commercial tenancy of approximately 53m²,
 - studio areas of 125m² and 115m² on the second and third floors, respectively, and
 - a total of 68 residential apartments, and
- on-site car parking with a maximum of 28 car parking spaces comprising:-
 - three car parking spaces on the ground floor,
 - eight car parking spaces on each of the first third and fourth floor levels, and
 - five car parking spaces on each of the second and third floor levels.

The proposed car parking areas are to be accessed via an approximately 6m wide access point on the east-west section of Bath Lane. This will provide direct access into the ground floor spaces with access to the upper parking levels provided via a car lift.

The design of the car lift is subject to more detailed review (dependent upon the specific systems to be installed) but the plans identify an internal width of approximately 3.9m and depth of 6.5m associated with the car lift shaft, and should be adequate to accommodate a lift cage capable of containing at least a B85 design vehicle.

The plans also identify that the majority of car parking spaces will have a depth of 5.4m and nominally a width of 2.4m, with the exception of the middle spaces on the car parking areas at the western end of the upper level car parking areas. The depth of these spaces is restricted by the proposed location of a column. Consequently, these spaces will need to be assigned for occupation by a small car only.

These dimensions would meet the minimum requirements of AS / NZS 2890.1:2004 for parking associated with a residential development.

Bicycle Parking

In respect to on-site bicycle parking provision, **Table Adel/6 Bicycle Parking Provisions** within the Adelaide City Development Plan would require the following provision: -

Medium to High Scale Residential development

- one space for every dwelling / apartment with a total floor area less than 150m², and
- one space for every 10 dwellings for visitors.

On the above basis, the residential component of the subject development would require a total on-site bicycle parking provision of at most 74 bicycle parking spaces, including:-

- 68 spaces for residents, and
- 6 spaces for visitors to the residential development,

Traffic Assessment

Traffic generated by the proposed development will primarily relate to the on-site car parking spaces which I understand are to be used by residents only.

The “**Guide to Traffic Generating Developments**” report produced by the former Roads and Traffic Authority of NSW identifies a peak hour traffic generation rate of 0.24 trips per unit for a medium to high density residential development albeit this would assume that each unit would be provided with on-site car parking.

However I am aware that the Roads and Maritime Services of NSW (the former RTA) has undertaken more recent surveys of traffic generation rates associated with high density residential flat dwellings. These dwellings are described as being: -

- (i) *close to public transport,*
- (ii) *greater than 6 storeys, and*
- (iii) *almost exclusively residential in nature.*

The results of the recent surveys conducted by RMS identified, inter alia, the following trip generation rates: -

- an average of 0.15 trips per car space in the am peak hour,
- a range of between 0.09 and 0.29 trips per car space in the am peak hour,
- an average of 0.12 trips per car space in the pm peak hour, and
- a range of between 0.05 and 0.28 trips per car space in the pm peak hour.

On a worst case basis, I therefore consider that the residential component of the subject development should generate of the order of: -

- 8 trips in the am period i.e. 0.29 trips per unit by 28 spaces, and
- 8 trips in the pm peak hour period i.e. 0.28 trips per unit by 28 spaces.

I therefore estimate that this component of the development would generate an addition of approximately 8 vph trips in any one hour accessing Bath Lane. Such a volume of traffic would be equivalent to only one vehicle movement in every 7 to 8 minute period. I consider that this would have minimal impact on the capacity of this lane.

Assuming that the majority (75%) of these additional vehicle movements would occur to and from Pulteney Street with the remainder occurring via Angas Street, I therefore consider that:-

- The peak hour traffic movements accessing Bath Lane via Pulteney Street would increase from a maximum of approximately 18 vph to 24 vph, and
- Peak hour traffic movements accessing Bath Lane via Angas Street would increase from a maximum of 26 vph to approximately 28 vph.

There would also be at most 8 vehicles accessing the car lift in any one hour period. Based on my discussions with a potential supplier of such lifts (Nordic Elevators) I am advised that the subject lift would rise approximately 1m per second. Hence, I estimate an average cycle time to call the lift and return to ground level of approximately 1 minute. On this basis I suggest that there would be a capacity to accommodate 60 vehicle movements per hour.

Based upon probability theory I therefore calculate there should be a maximum of only 1 vehicle waiting to access the lift at the 98th percentile level. Hence, there should be minimal delays associated with cars entering the lift on the infrequent occasions when a vehicle is descending the lift. However, I note that it would be possible for a car to wait in the designated waiting area to stand clear of a vehicle departing the lift.

In order to minimise delays to traffic accessing the upper car parking levels, I recommend that the default position of the car lift should be at ground level.

Given the anticipated low usage of the lift, potential provision of a waiting bay and the adoption of a ground floor default position I do not anticipate that queues of cars would extend back to Bath Lane.

However, it is recommended that one space on the ground floor level should potentially be allocated as a waiting bay in the event that the driver of a car wishing to enter the lift is delayed when a car is descending within the lift.

As previously discussed with Council, I understand that servicing of the subject development (including waste and recycling collection) could occur from Pulteney Street via use of the existing loading zone in front of the subject building, albeit such use would be dependent upon:-

- an increase in the hours of operation of the loading zone to provide for servicing / waste collection prior to 7.30 am on or after 6.00pm, and
- the potential extension of the loading zone to include the northern most of the the two hour car parking spaces located to the immediate south of the loading zone.

On the above basis, I consider that there would be an opportunity to provide a loading zone of at least 12m in length and with sufficient duration to accommodate service vehicles require to infrequently service the subject development.

I note that Council staff have indicated in an email to the Planning Division, Department of Planning, Transport and Infrastructure, dated Tuesday 10 June 2014 that it would be possible to accommodate the on-street collection of rubbish for a half hour period between 6.00 am -7.00am Monday-Friday.

Design aspects

Based on an assessment of the proposed car parking layout (Option F) with Auto Track turning path software it is apparent that the majority of spaces could be accessed in most cases without the need for multiple turning movements.

The proposed design will include an open grille on the western side of the access in order to address potential sight distance requirements to the west.

The design includes a passenger lift along the southern edge of Bath Lane which has the potential to impact on sight distance for drivers exiting into this lane from the building. One option to address this aspect would be the installation of a mirror within the building facing to the east and therefore identifying the approach of either an oncoming car or pedestrian.

Turning paths of the B85 design vehicle accessing the various car parking spaces and the vehicle lift and are included as an appendix to this report. The attached turning paths identify that in most cases a driver should be able to access these spaces without the need to undertake multiple turns. However, in order to access space 8 on the First and Fourth Floor of the subject development it would be necessary to relocate / reduce the size of the adjoining air conditioning unit.

The various turning path drawings are summarized as follows:-

Ground Floor

- Figure 1 the design vehicle driving forward into space 1 and reversing out
- Figure 2 the design vehicle driving forward into space 2 and reversing out
- Figure 3 the design vehicle driving forward into the lift on the ground floor
- Figure 4 the design vehicle reversing out of the lift on the ground floor

First Floor

- Figure 5 the design vehicle reversing out of the lift and then accessing space 1
- Figure 6 the design vehicle driving out of space 1 into the lift
- Figure 7 the design vehicle being reversed out of the lift into space 2
- Figure 8 the design vehicle being driven out of space 2 into the lift
- Figure 9 the design vehicle reversing into space 3 and drive into the lift
- Figure 10 the design vehicle reversing into space 4 and driving into the lift
- Figure 11 the design vehicle reversing out of the lift into space 5
- Figure 12 the design vehicle driving out of space 5 into the lift
- Figure 13 the design vehicle driving out of the lift and entering space 6
- Figure 14 the design vehicle reversing out of space 6 and driving into the lift
- Figure 15 the design vehicle driving out of the lift and driving into space 7
- Figure 16 the design vehicle reversing out of space 7 and driving into the lift

Figure 17 the design vehicle driving out of the lift and driving into space 8

Figure 18 the design vehicle reversing out of space 8 and driving into the lift.

Summary and Conclusions

As identified above the proposed development will provide a total of 28 car parking spaces on site and will accommodate the required levels of on-site bicycle parking for residents of each dwelling.

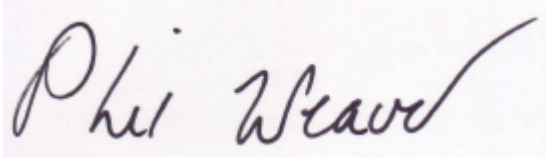
Subject to the suggested minor amendments to the design as indicated within this report, I consider that the design of the on-site car parking will provide an appropriate and convenient car parking arrangement for residents and tenants to be located on site.

At most there would typically be of the order of 8 vehicles accessing the car lift in any one hour period. On the basis of the above analysis there should be a maximum of only 1 vehicle waiting to access the lift at the 98th percentile level. Hence, there should be minimal delays associated with cars entering the lift on the infrequent occasions when a vehicle is descending the lift.

Analysis of the forecast traffic generation of both the residential apartments and the office development has shown that the volumes of traffic to be generated by the subject development will not be significant and will not adversely impact on the adjoining road network.

Based on consideration of the above traffic, parking and related aspects I therefore support consider that the proposed development will not result in adverse traffic impacts on either Bath Lane or the broader road network.

Yours sincerely

A handwritten signature in dark ink, reading "Phil Weaver", with a stylized flourish at the end.

Phil Weaver
Phil Weaver and Associates Pty Ltd

Enc

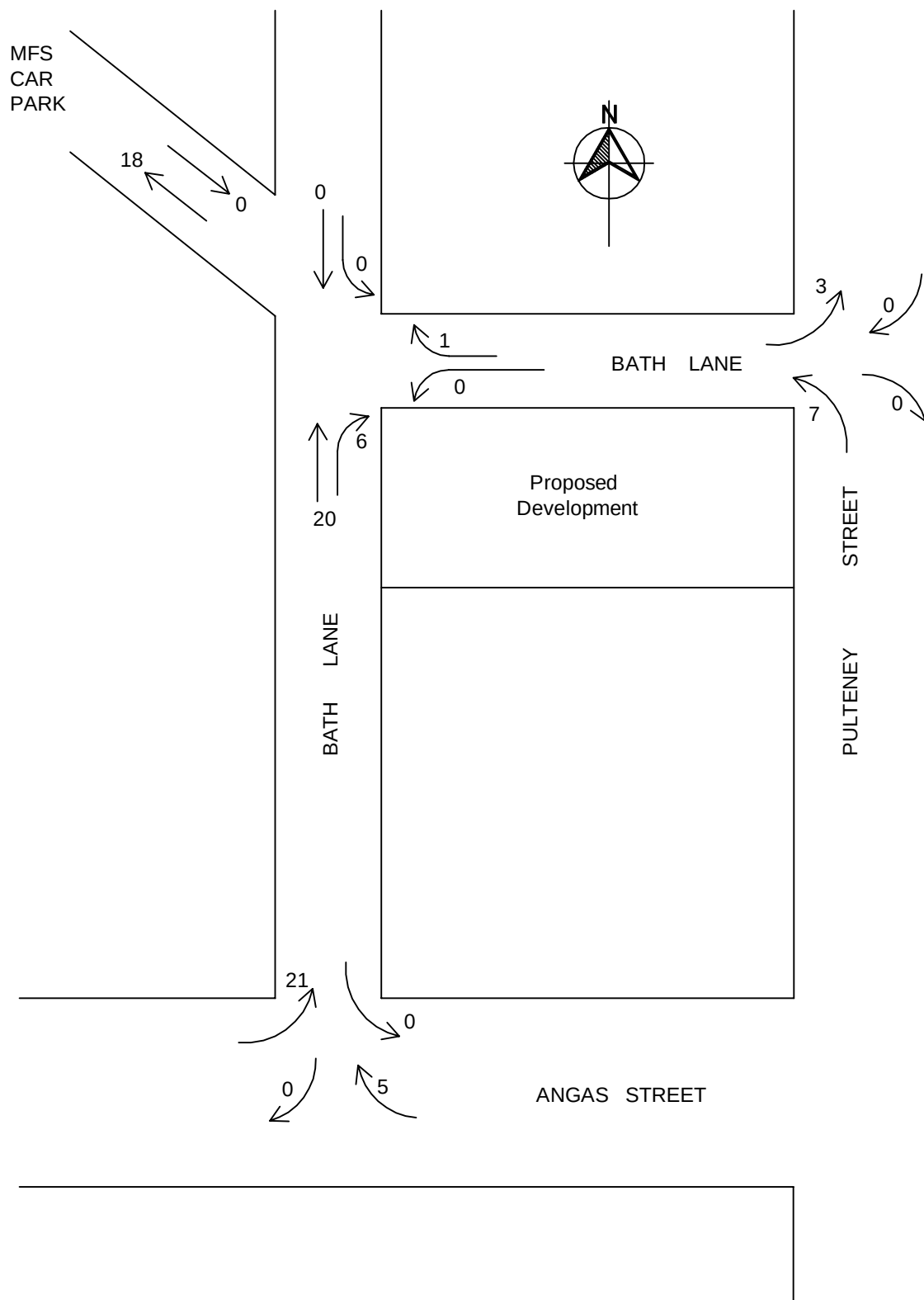


Figure 2: Existing AM peak hour traffic volumes
(7.45 - 8.45am) Tuesday 8th April 2014

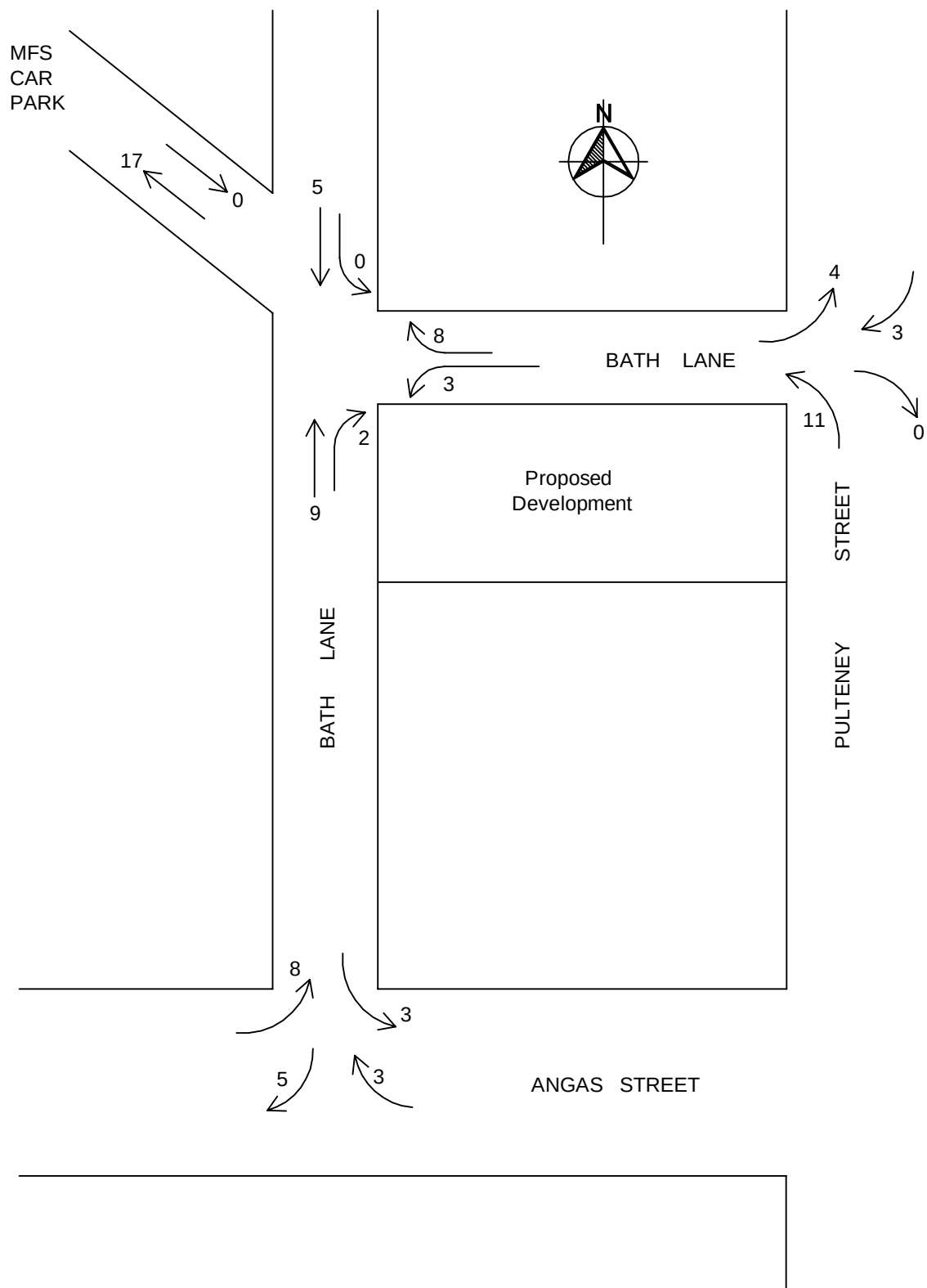
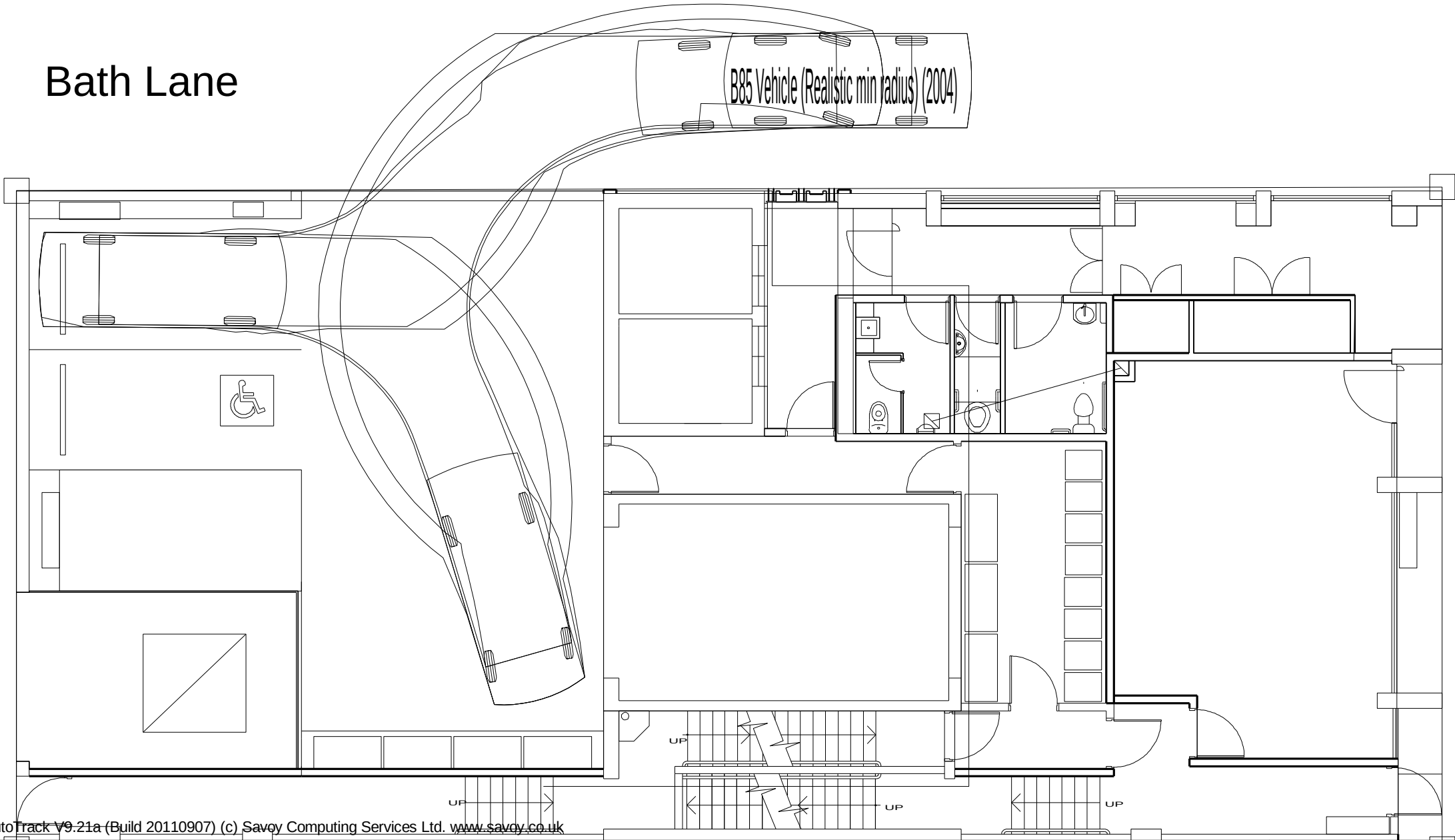


Figure 1: Existing PM peak hour traffic volumes
(4.15 - 5.15pm) Monday 7th April 2014

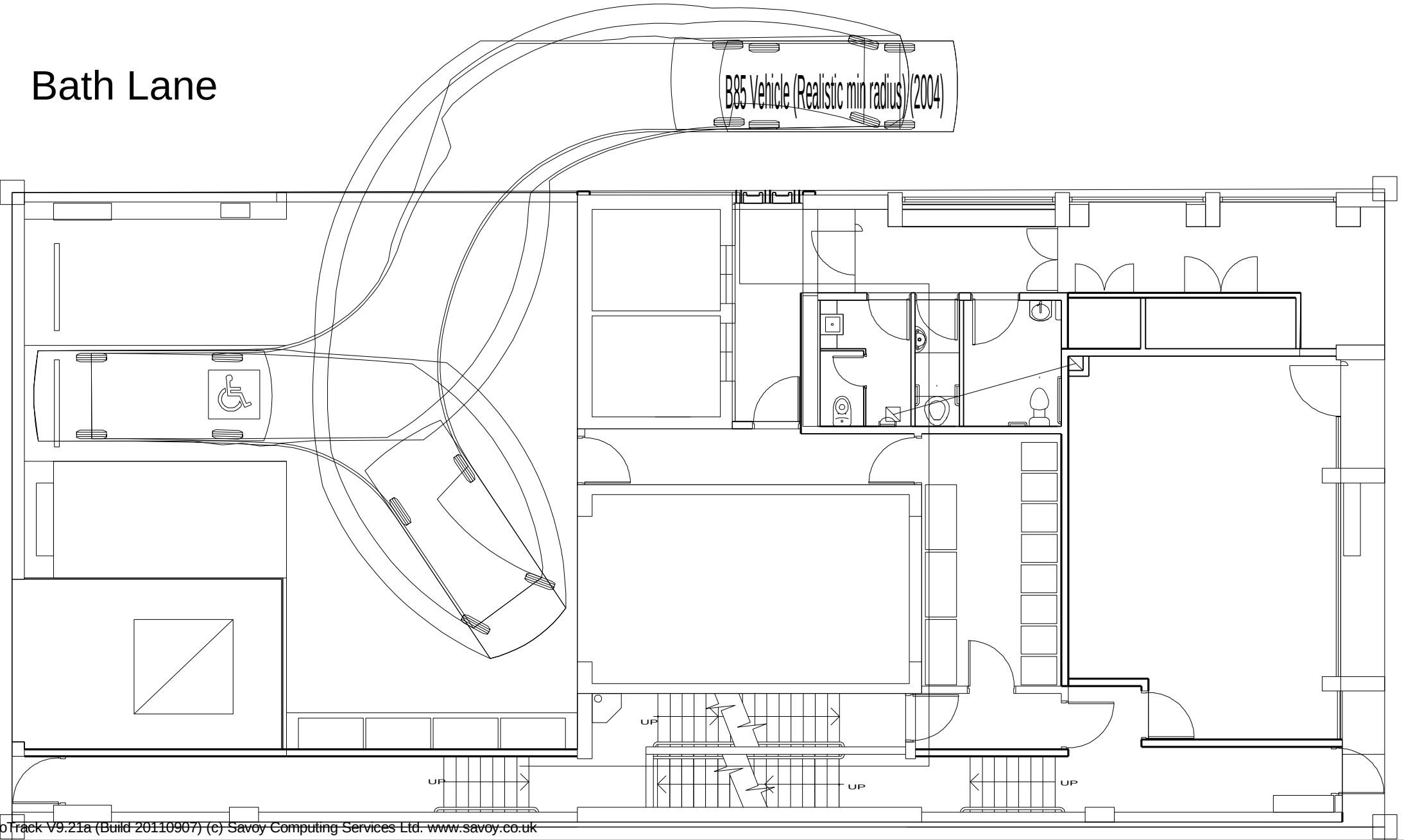
Bath Lane



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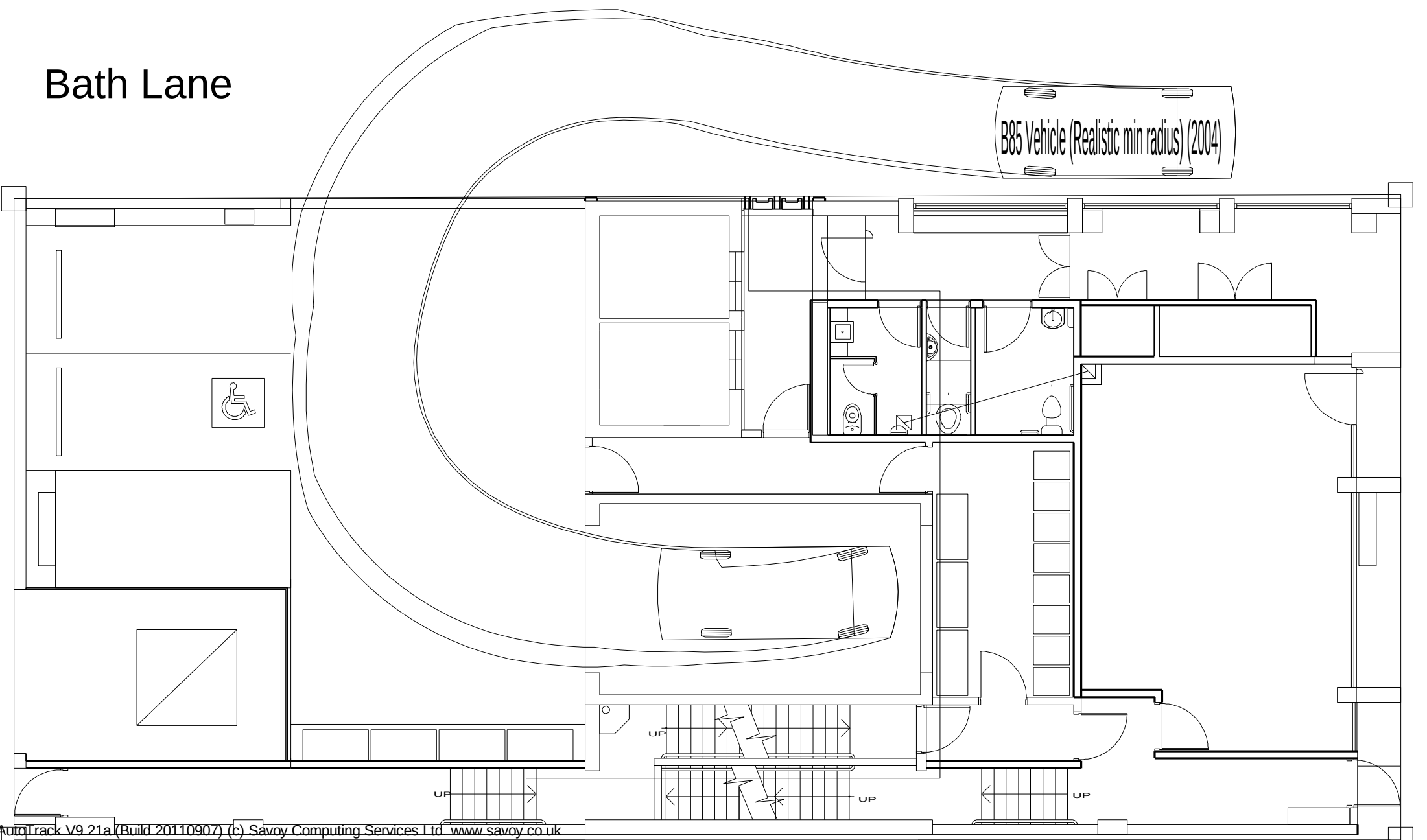
Bath Lane



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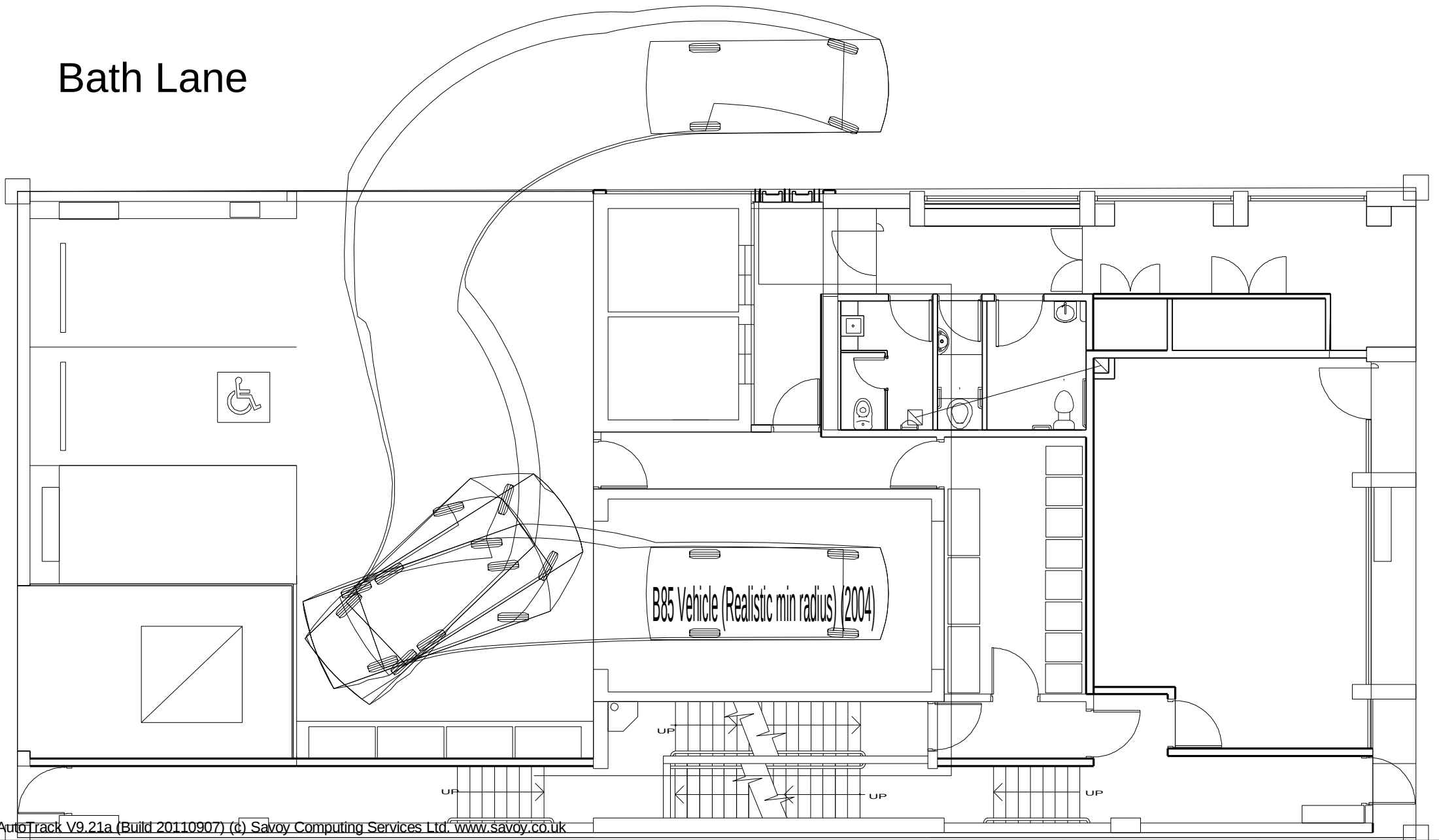
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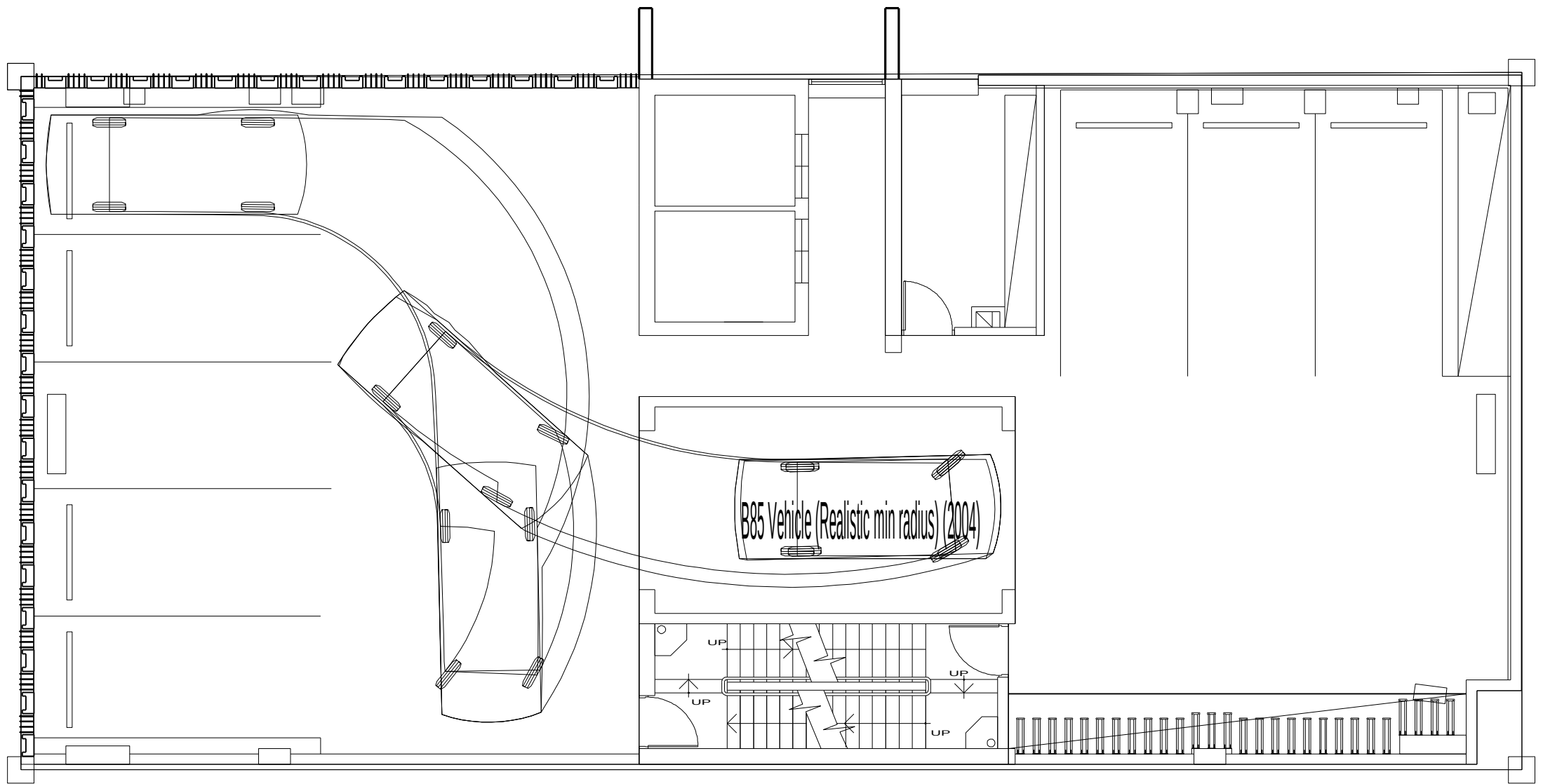
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Bath Lane

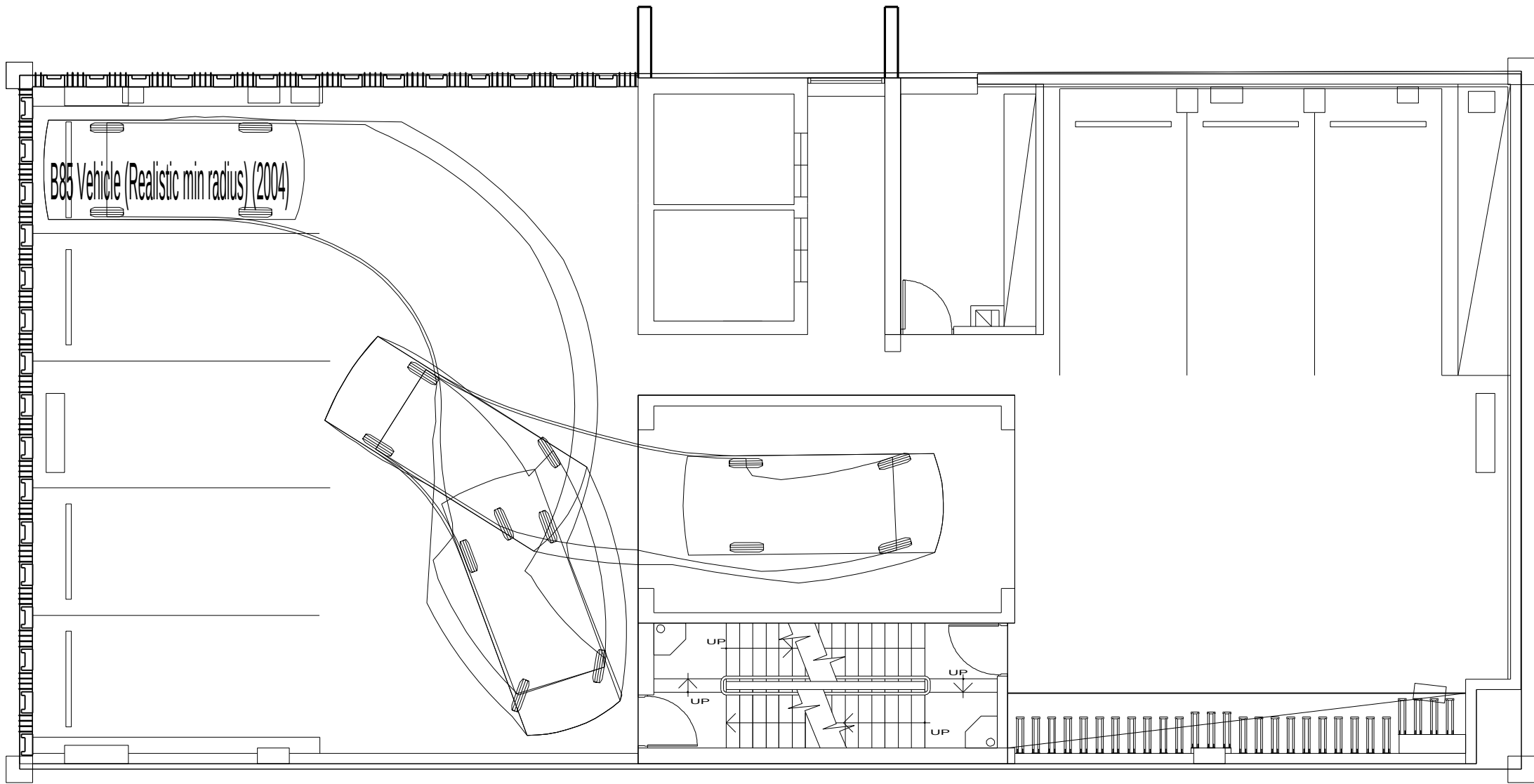


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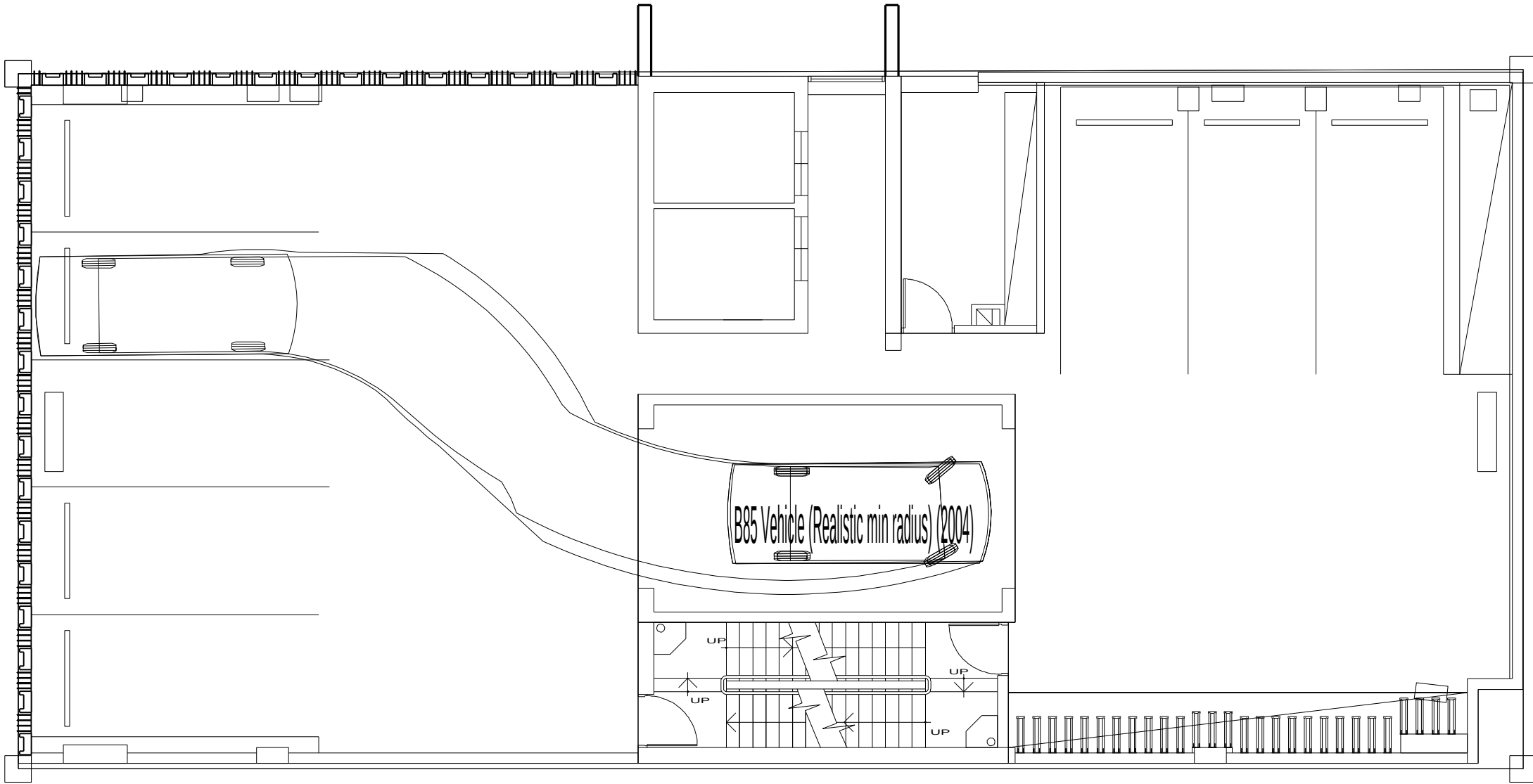
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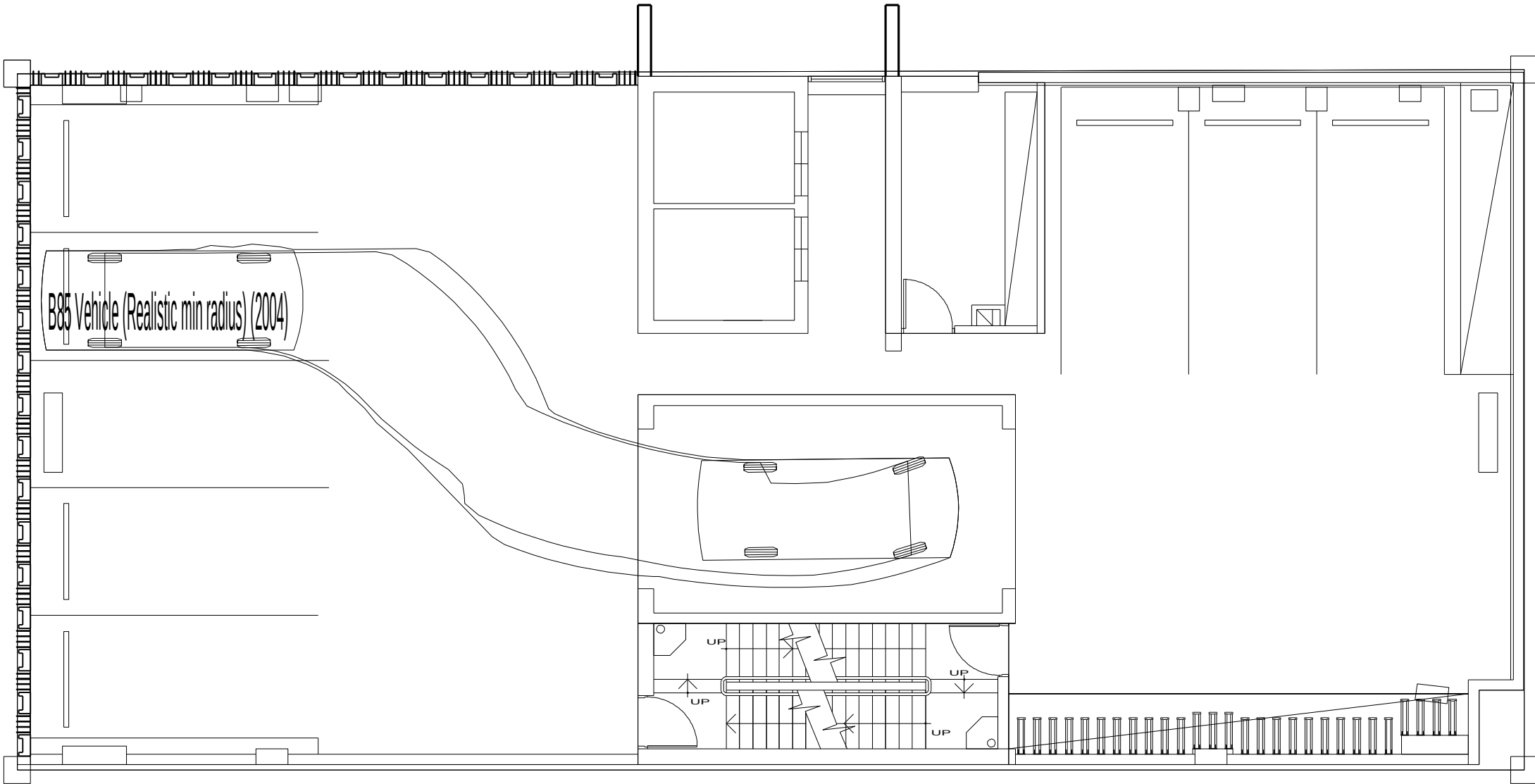
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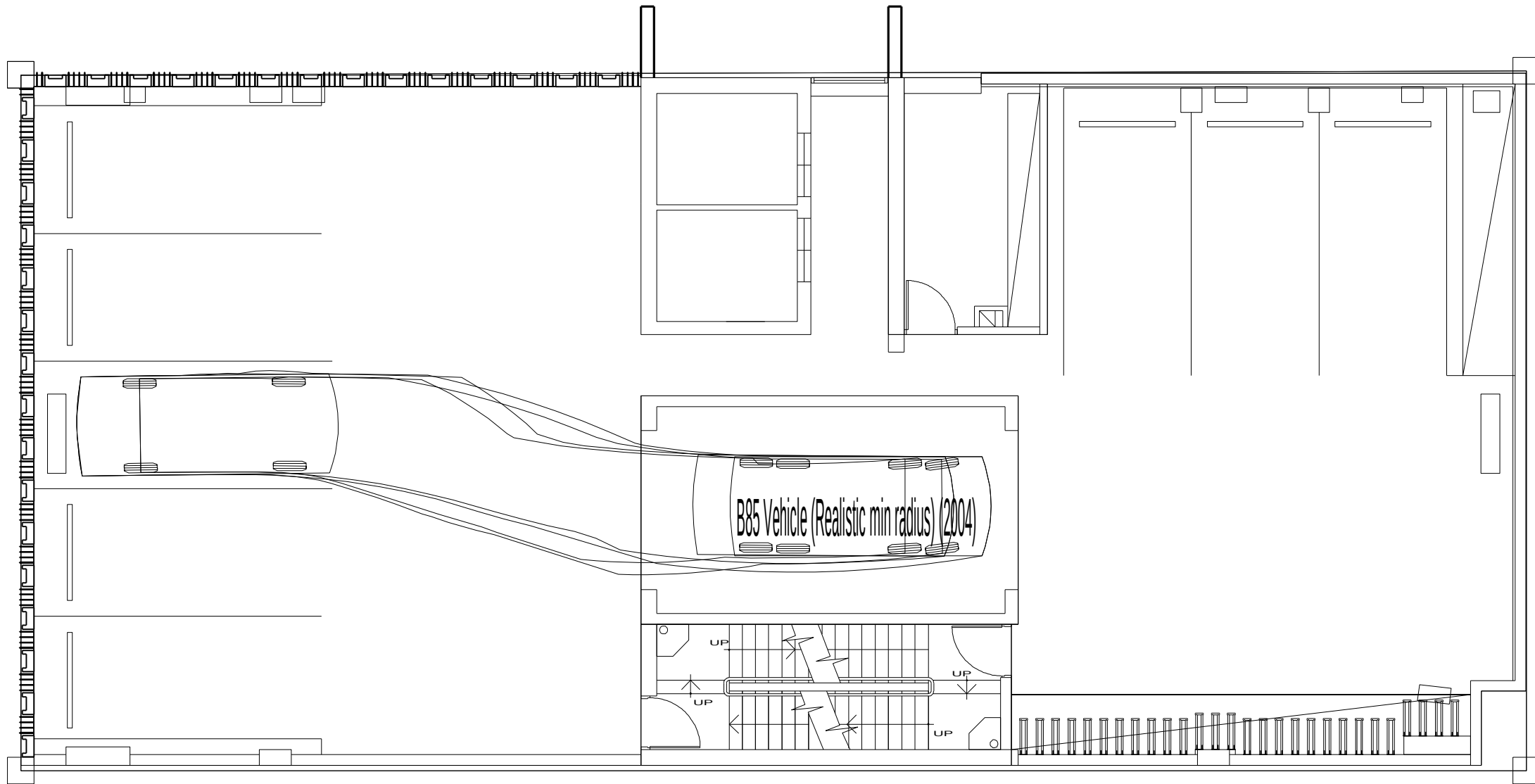
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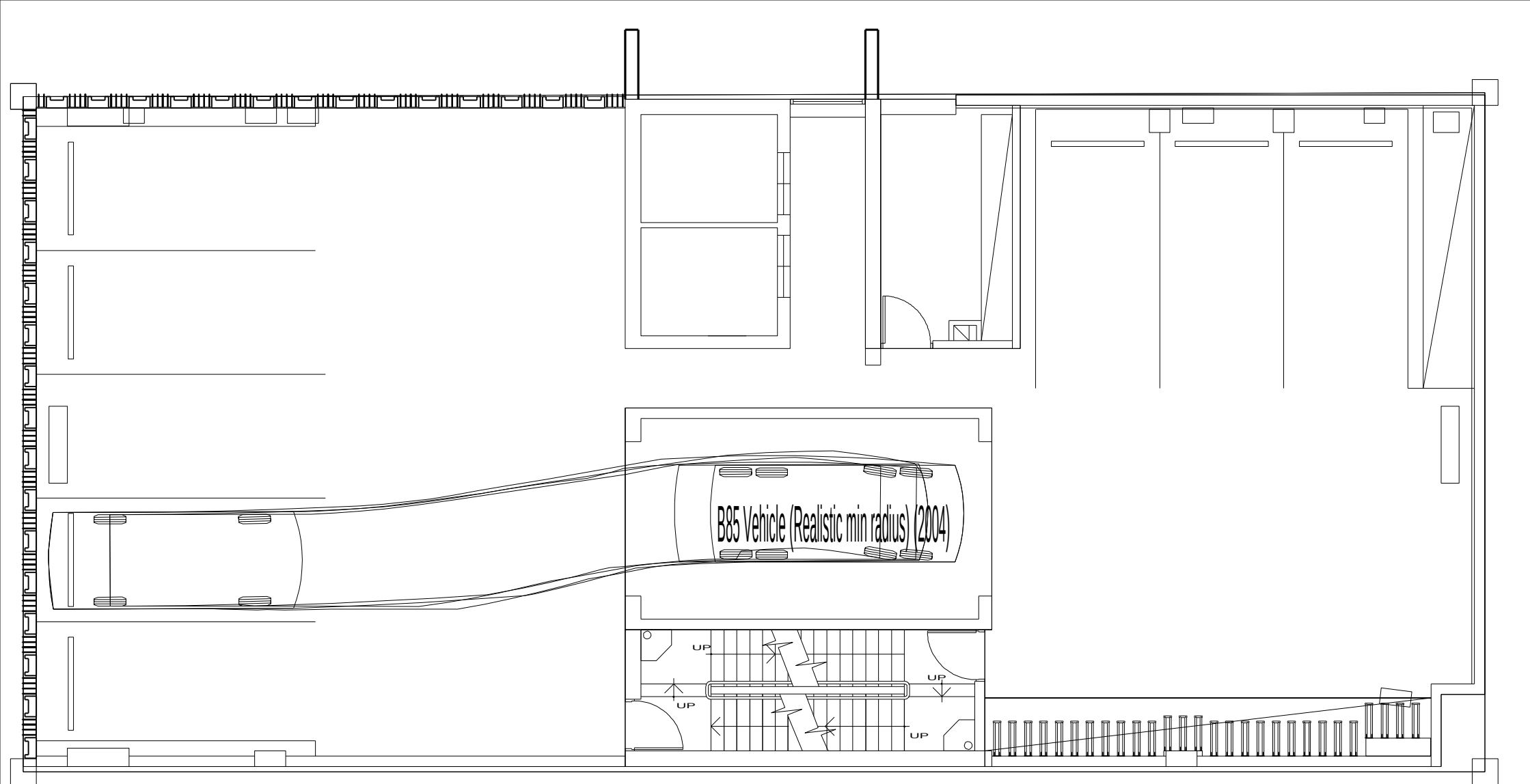
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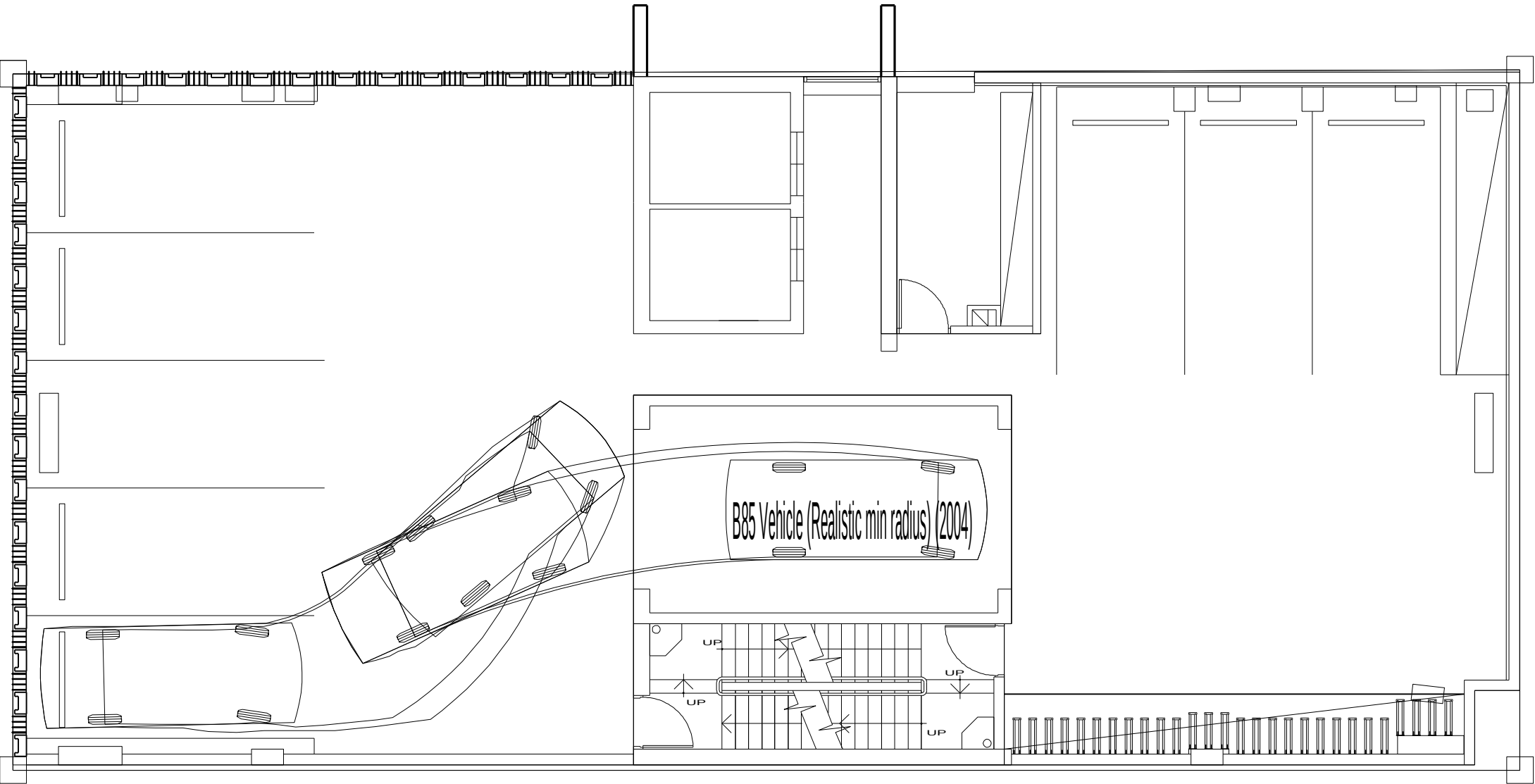
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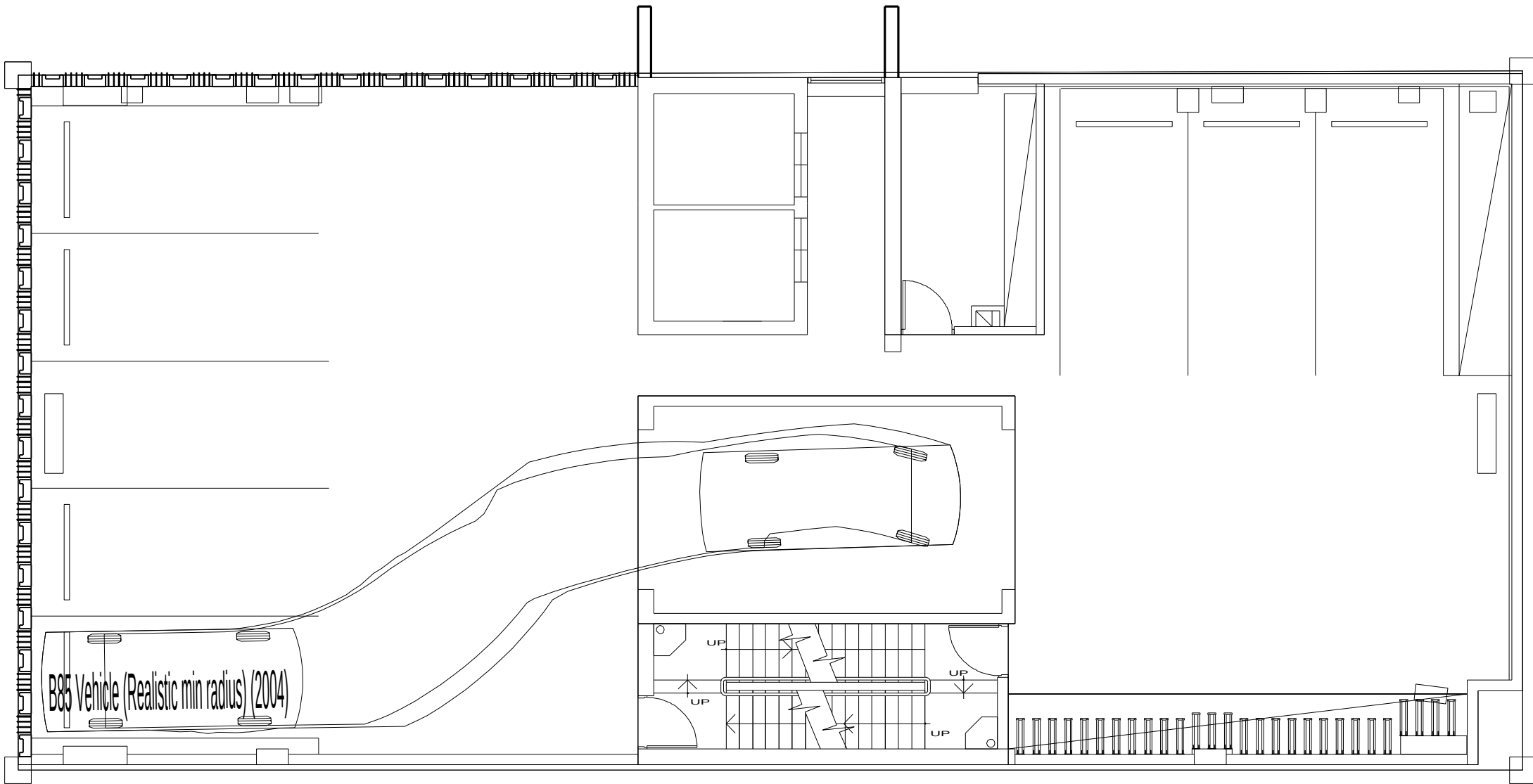
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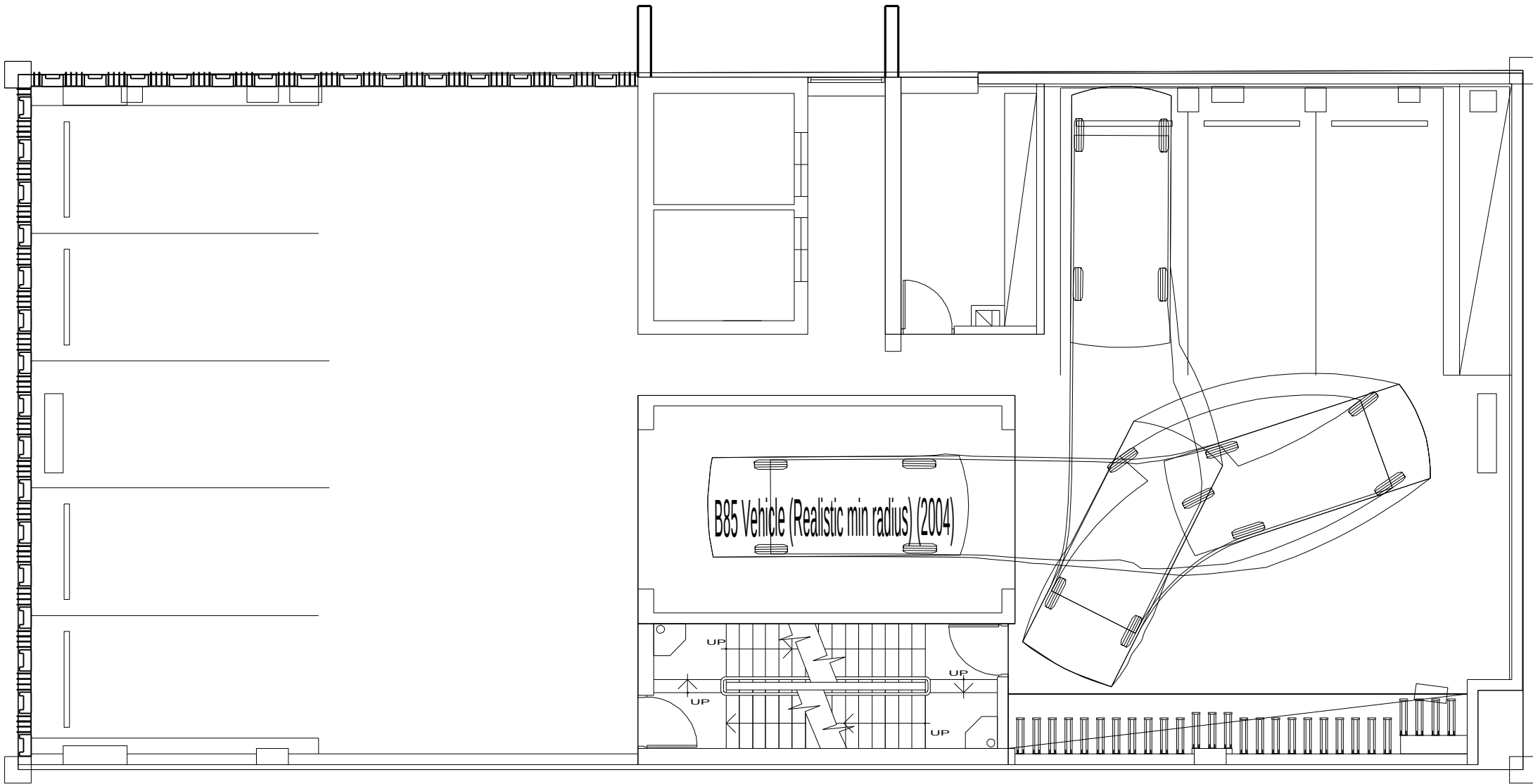
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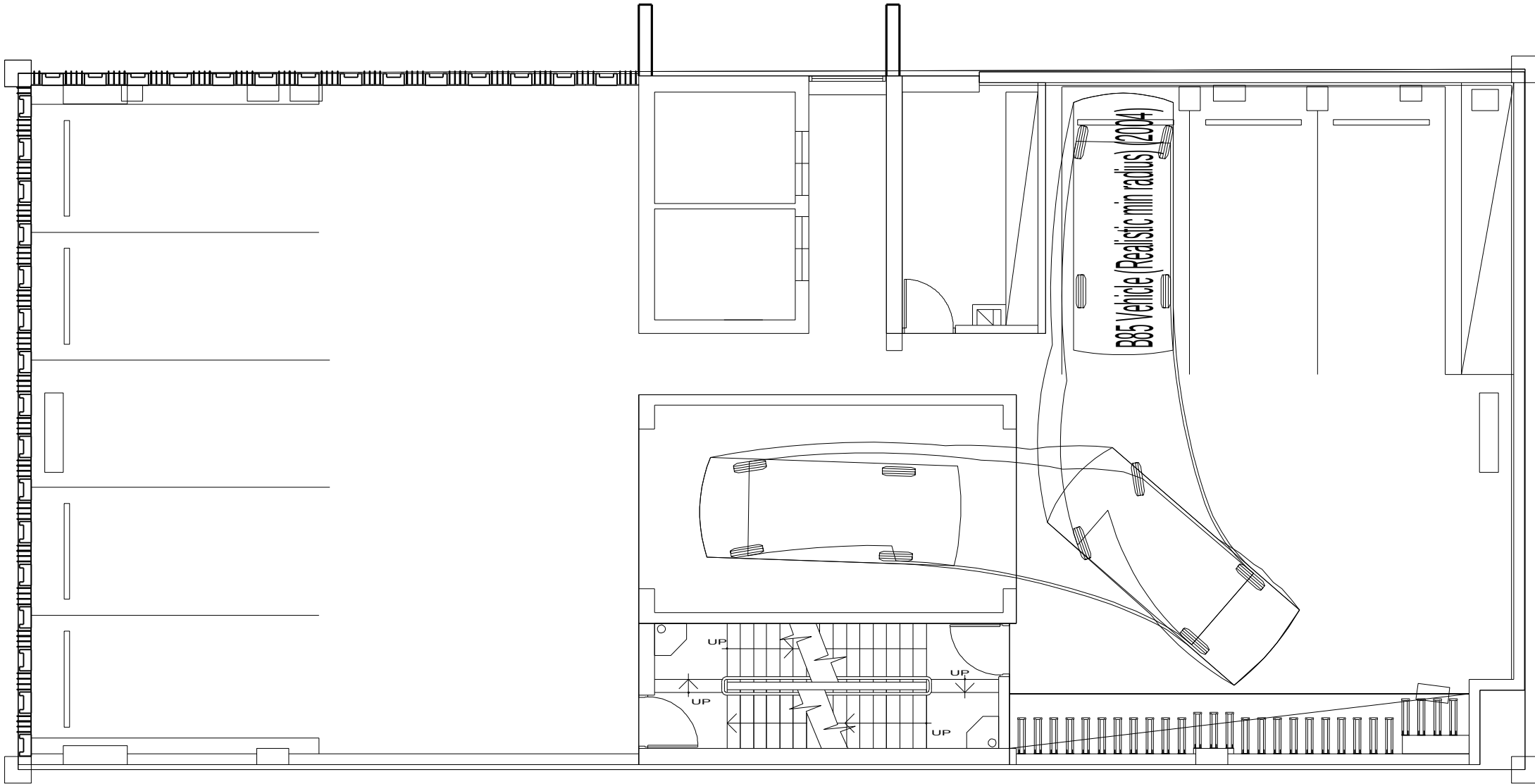
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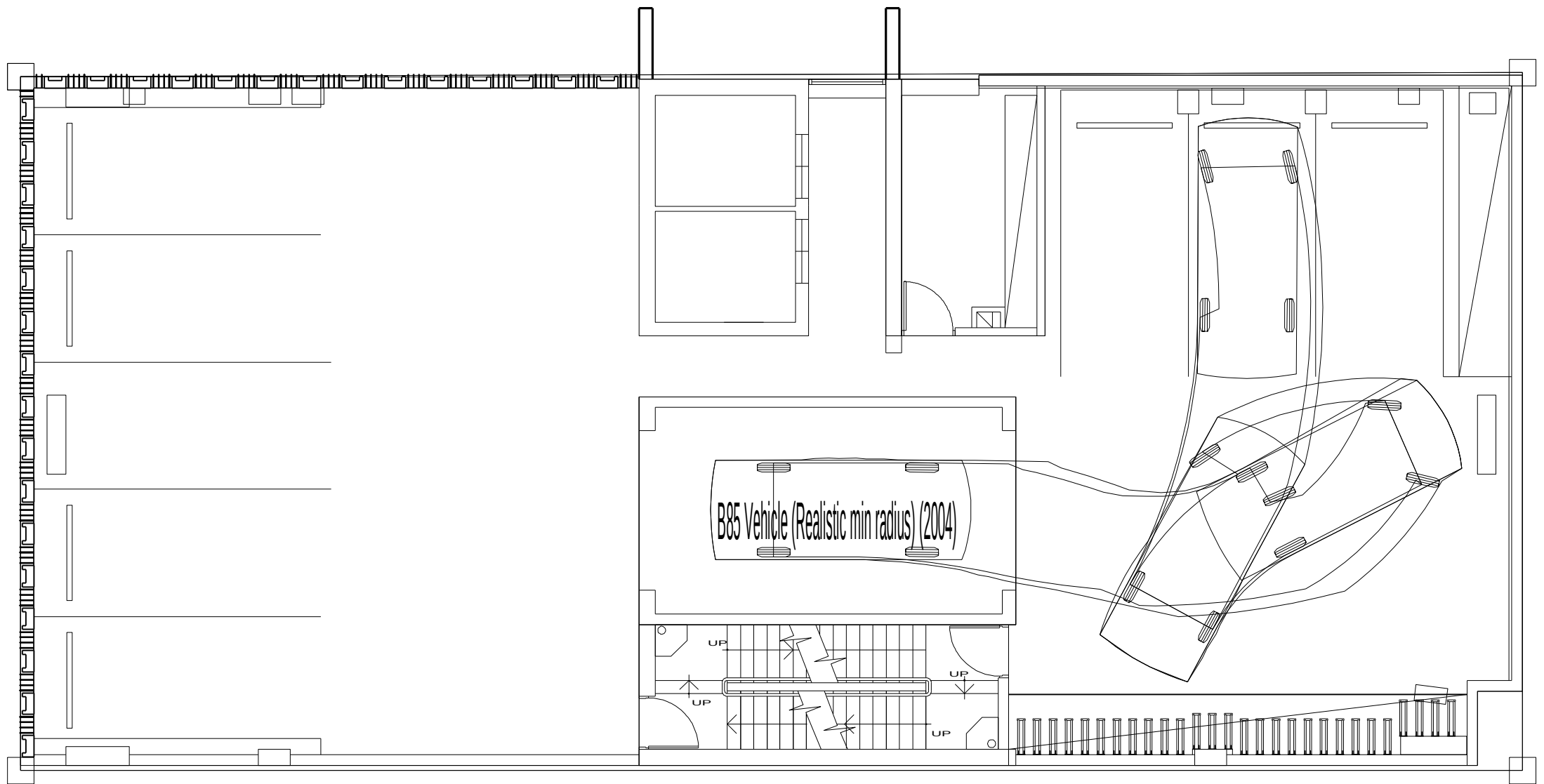
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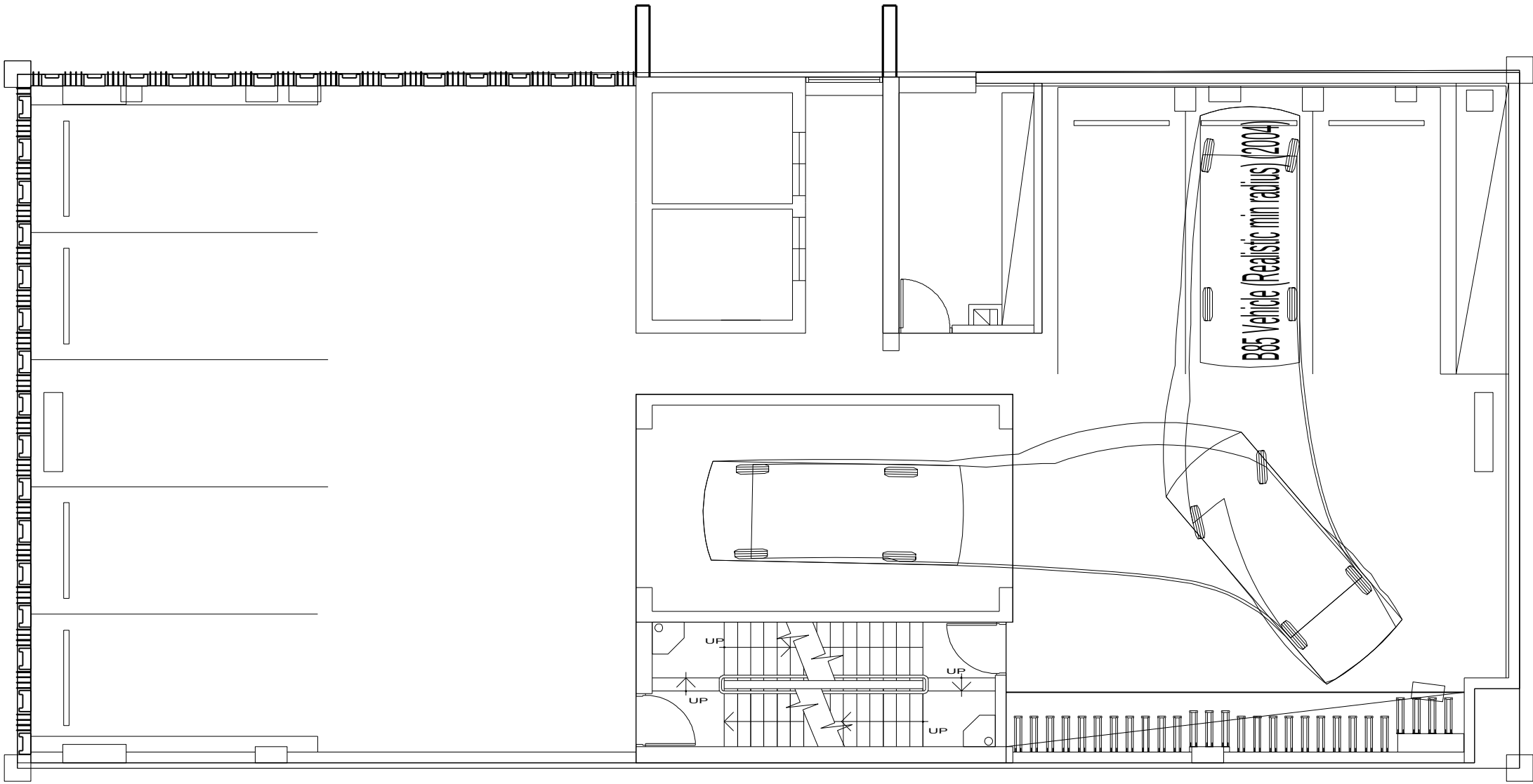
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		Dwg No:	



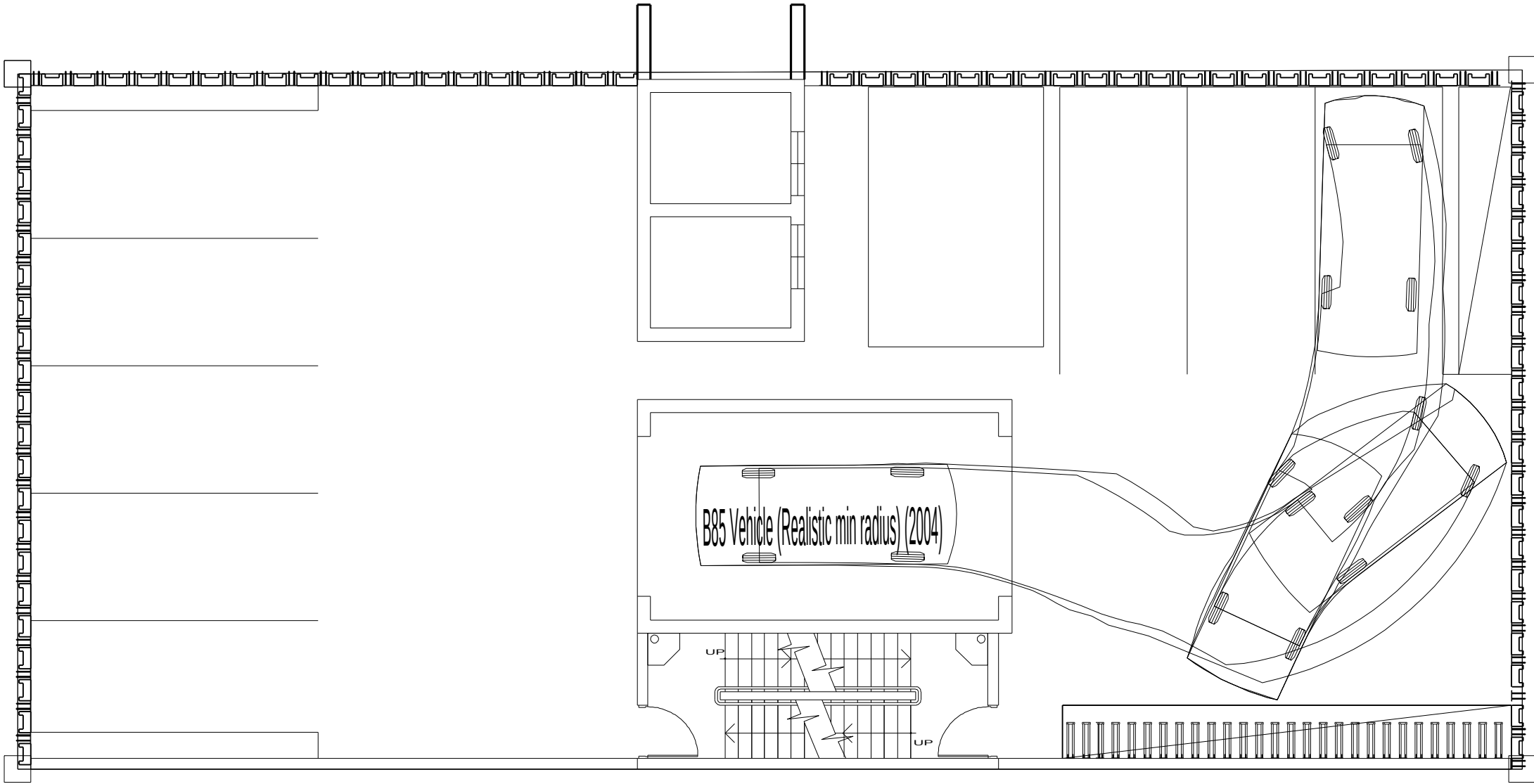
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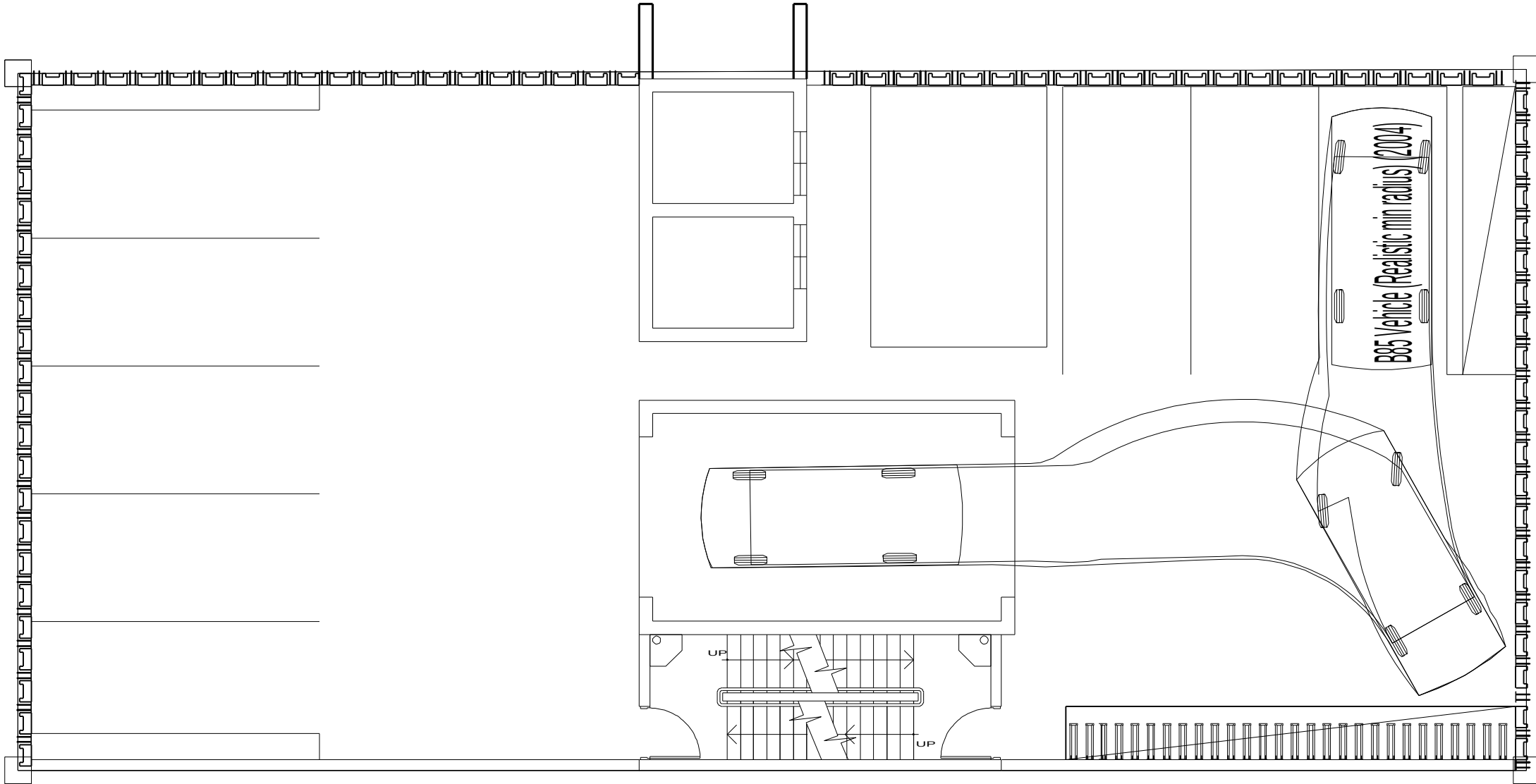
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		Dwg No:	



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		Date:	16/06/2014
		Prepared:	
Client:		Checked:	
		Dwg No:	



Title:	Figure 17	Scale:	1:100
		Date:	16/06/2014
		Prepared:	
Client:		Checked:	
		Dwg No:	



Title:	Figure 18	Scale:	1:100
		Date:	16/06/2014
		Prepared:	
Client:		Checked:	
		Dwg No:	

File No:
2014/11234/01

Ref No:
8654942

Pre-lodgement Agreement

ODASA Pre-lodgement No: PLA 2013/24223/01

Pursuant to Section 37AA of the Development Act, this Agreement obviates the need for a statutory referral to the South Australian Government Architect during the Development Assessment Commission assessment process. The Development Assessment Commission refers all development proposals over \$10 million in the City of Adelaide to the South Australian Government Architect, for review and comments on design merit. The Agreement must be lodged with the development application, and the application lodged within three months of the agreement being signed.

The Agreement between the **South Australian Government Architect** and **Peter Kozno** (the Proponent), signed on **19 June 2014** pertains to the development proposal at **261 – 263 Pulteney Street, Adelaide** described in the drawings listed in the schedule below, reviewed by the South Australian Government Architect on 17 June 2014. The drawings form part of the Agreement.

This Agreement is not an approval to proceed with the proposal. Development Approval from the Development Assessment Commission must be obtained prior to commencing work.

Development description

A mixed use development comprising 17 storeys of residential apartments, 5 storeys of above ground carparking, provision for 2 commercial premises at levels three and four, with a retail component at the ground floor to encourage street activation. There is also a shared rooftop terrace provided as additional outdoor space for residents.

Drawing Schedule

Title	Date	Drawing Number
Context Plans	04/06/14	1
Proposed Streetscape	04/06/14	2
Planning	04/06/14	3
Building Section and ECO Standards	04/06/14	4
Vignettes	04/06/14	5
Option F Floor Plans	04/06/14	6
Option F Floor Plans	04/06/14	7
Podium Plans	04/06/14	8
Podium Plans	04/06/14	9
Elevations	04/06/14	10
Roof Plans and Massing	04/06/14	11
Street Level Perspectives	04/06/14	12
Sun Study	04/06/14	13
Outdoor Dining	04/06/14	14

Level 2
26-28 Leigh Street
Adelaide SA 5000

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Adelaide SA 5001

DX 171

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E- odasa@sa.gov.au



File No:
[insert file no.]

Advisory Notes

Ref No:
[insert ref no.]

The project was presented to the Capital City Design Review Panel three times, over which period the design response progressed significantly.

This proposal has the potential to offer a benchmark for inner-city apartment development in Adelaide particularly in relation to its response to site and context. Key to the successful fulfillment of this potential will be protection of the design approach to proportion and modelling, particularly in relation to the overall expression of form and bulk. The current proposed height will be justified by the successful detail resolution of the tower base such that its contribution to pedestrian and tenant amenity is optimised. Critical to the success of the proposed retail tenancies is the resolution of access and facilities that ensures flexibility of use as well as safety for all building occupants.

Overall, the proposed floor layouts maximise the opportunities of the constrained site. Current apartment layouts indicate sensitivity to the amenity of each apartment type.

Overall, the proposal is supported by a strong passive ESD approach.

I note there have been concerns expressed in relation to heavy vehicle access on the Bath Lane corner. I also note that the potential requirement to incorporate a setback on this corner would result in extensive design changes that I anticipate would require additional Design Review.

While the Government Architect has considered the impact of design aspects relating to the proposed height and consequent overshadowing the detailed assessment of whether the development plan policy is met is deferred to the Development Assessment Commission.

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Government
of South Australia

File No:
2014/11234/01

ODASA Pre-lodgement No: PLA 2013/24223/01

Ref No:
8654942

261 – 263 Pulteney Street, Adelaide

Pursuant to Section 37AA of the Development Act, this Agreement obviates the need for a statutory referral to the South Australian Government Architect during the Development Assessment Commission assessment process.

South Australian Government Architect
Signature

Date 19/6/14



Ben Hewett

The Proponent
Signature

Date 19/6/14



Peter Kozno
Director, Adelaide Timber Flooring

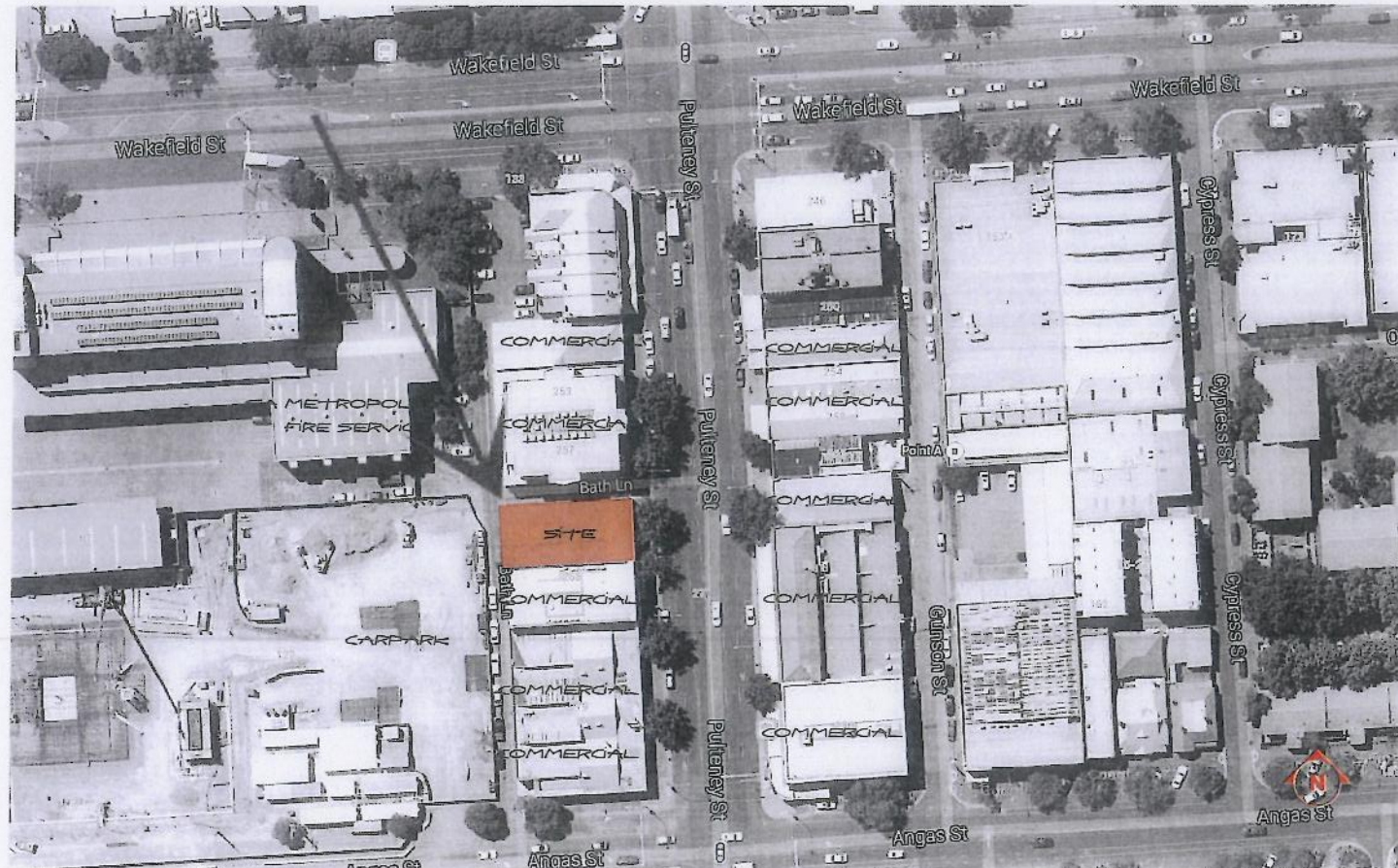
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Adelaide SA 5001

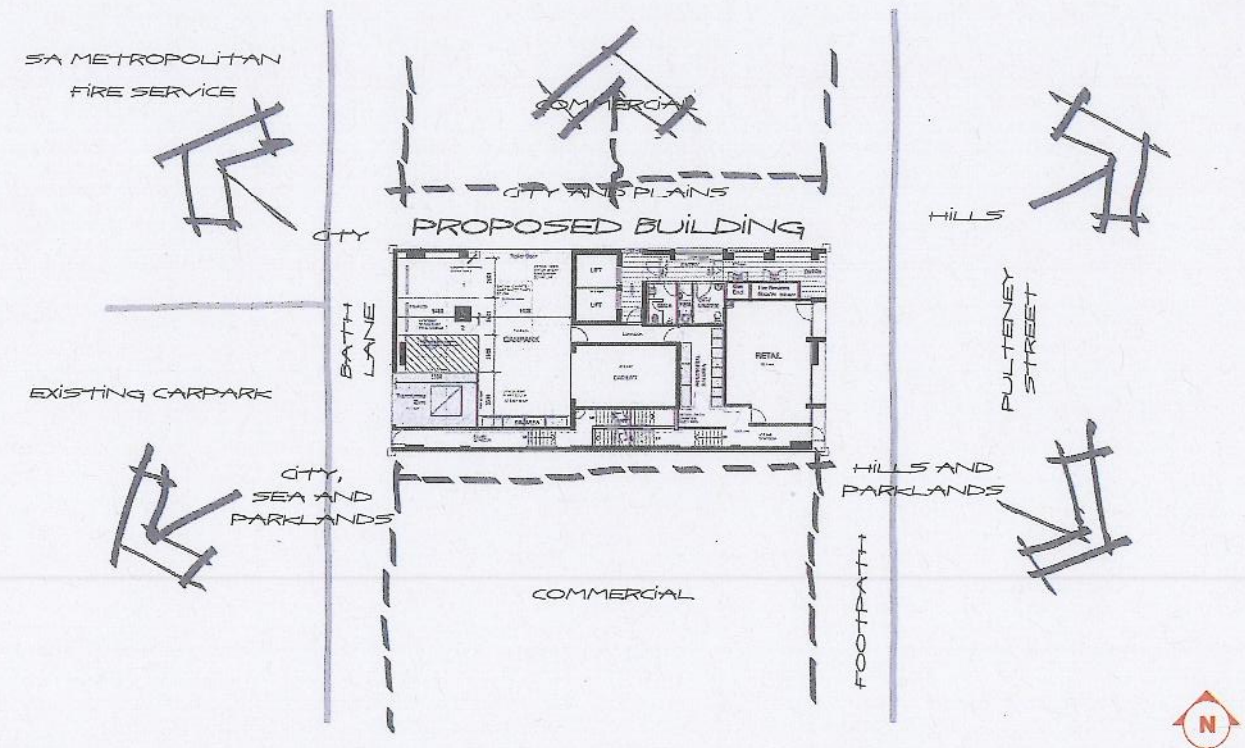
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A LOCATION PLAN

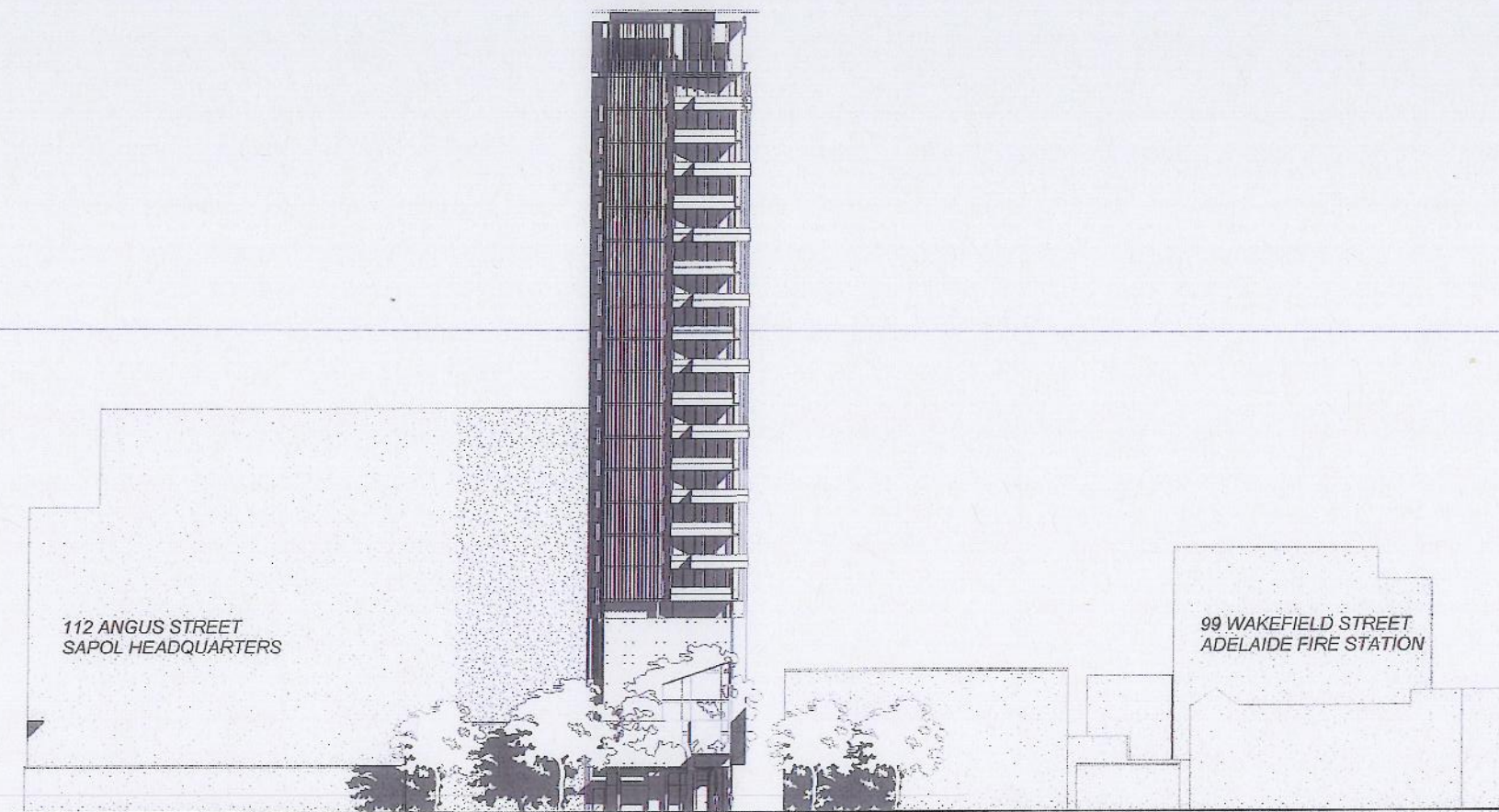


B CONTEXT STUDY

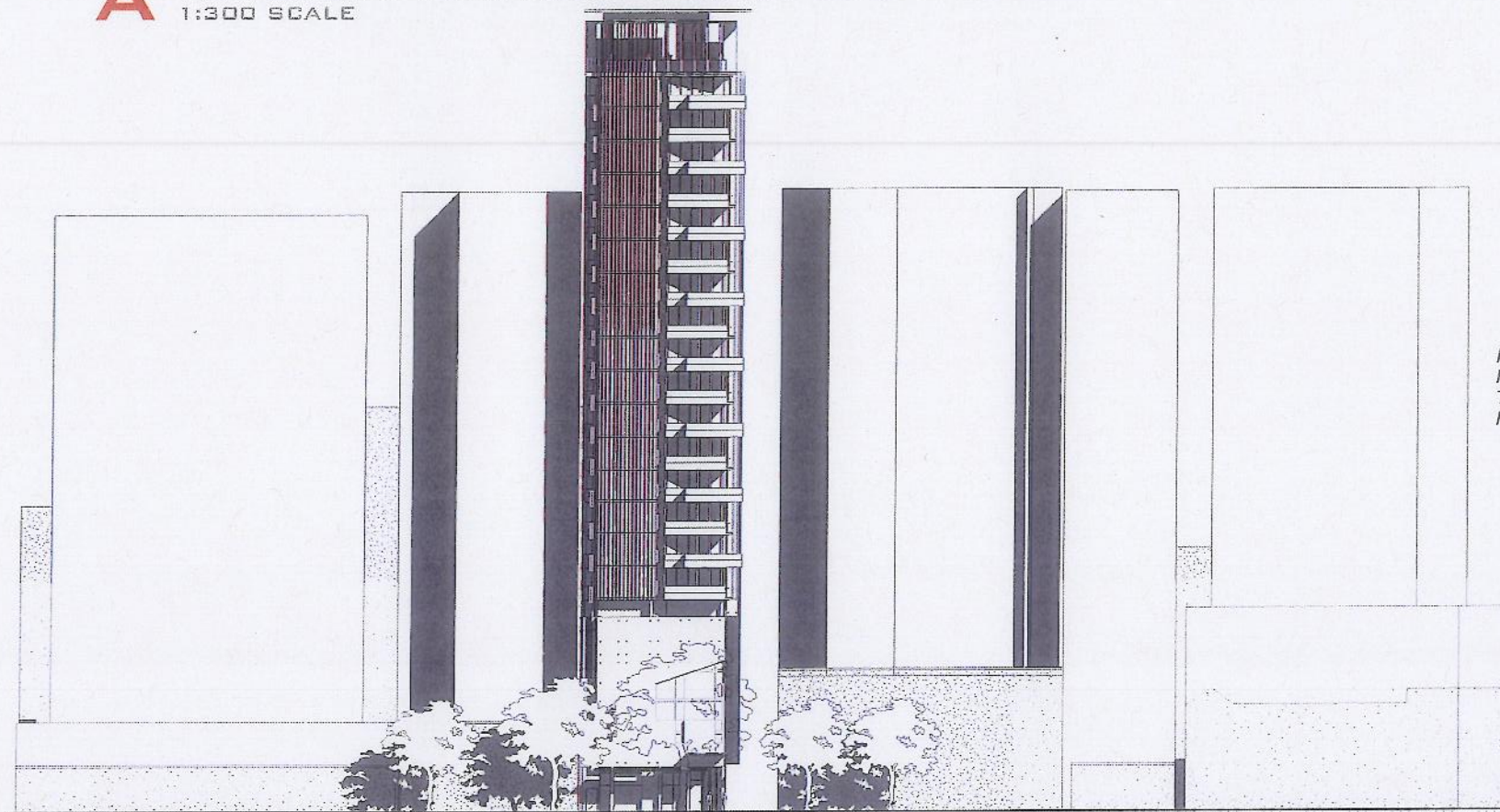
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PRE-LODGEEMENT AGREEMENT NO: PLA2013/24223/01
SA GOVERNMENT ARCHITECT, BEN HEWETT

DATE 19/7/14 SIGNED: *[Signature]*
This Agreement remains valid for three months from this date

04.06.14 261 PULTENEY STREET PTY LTD



A PROPOSED PULTENEY STREET STREETSCAPE
1:300 SCALE



B FUTURE PULTENEY STREET STREETSCAPE
1:300 SCALE

INDICATIVE BUILDING
HEIGHTS IN ACCORDANCE
TO 53M HEIGHT
RESTRICTION

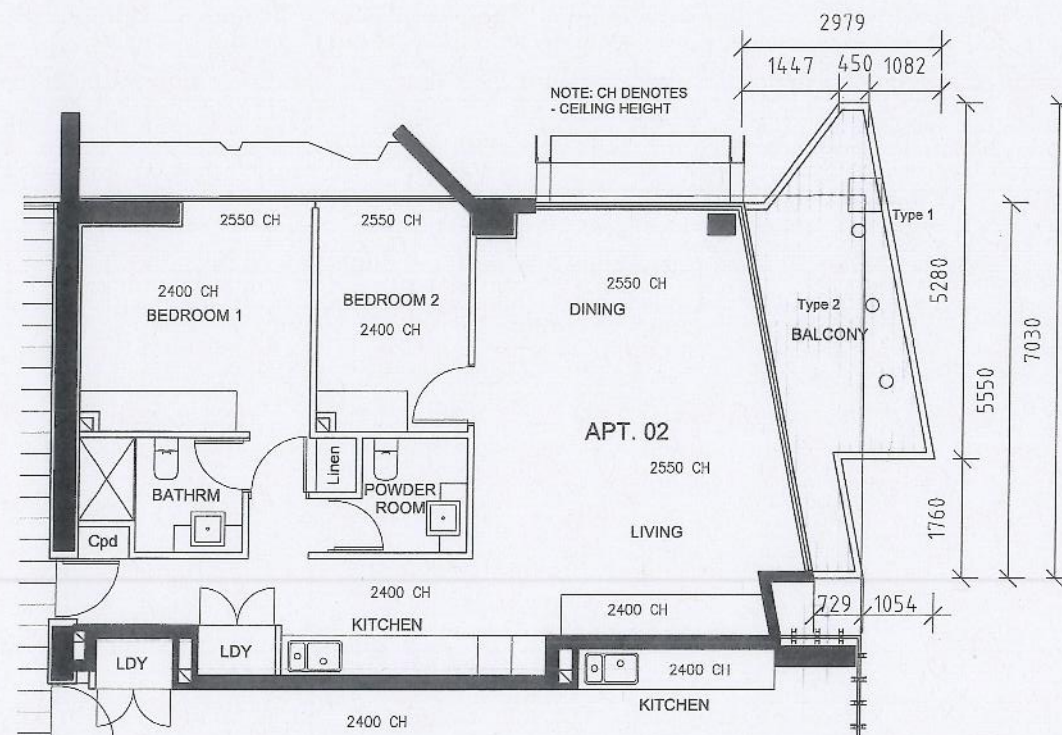
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04.06.14 261 PULTENEY STREET PTY LTD

DATE 19/6/14 SIGNED: [Signature]
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RATIONAL FOR CHANGES FROM INITIAL DESIGN RESPONSE TO CURRENT DESIGN RESPONSE



TYPICAL BALCONY PLAN

- A** Rational for revised building height - The height increase is due mainly to the provision of additional levels of car parking (from 3 levels to 5 levels) and the incorporation of a 2nd lift (ODASA recommendation). This has meant an increased cost of \$250,000 for the extra lift and subsequent loss of overall apartment floor areas per floor. In addition, the current design incorporates 2 additional levels of studio space to provide additional activation to the building and the street.
- B** North East façade corner - has been redesigned to provide for a lighter, more open façade with additional interest and sculptural relief.
- C** Level 1-4 Ceiling Heights - the apartment ceiling heights in the new studio floors have increased by an additional 300mm per floor. This provides future tenants with more flexibility when a potential change in use is considered by a new tenant.
- D** Level 5-22 Ceiling - the apartment ceiling bulkheads have been further modified to increase ceiling heights in living areas to 2550 AFL.
- E** South Boundary 3 metre setback - suggested by the Adelaide City Council Development Plan, especially along the southern boundary of site would result in the design only being able to achieve 2 apartments per floor rather than the preferred current configuration of 4 apartments per floor. The provision of 4 apartments per floor provides more opportunity for variety in apartment size and therefore affordability. That is, the current design provides for 2, 1 and 1 and a half bed room apartments. In addition, with regard to the southern façade, the building may be built for 20 years before having a neighbour built on the southern boundary. This building is part of the gate way into city, therefore the southern façade needs to provide an attractive architectural form rather than a blank wall - which would be inappropriate for the location.
- F** Kitchen and WC relationship - has been amended and resolved to stop WC opening onto the kitchen.
- G** Apartment Corridor Width - kitchens facing a narrow passageway has been amended to 1200mm wide.
- H** Car Lift over run area - is to become a resident/retail tenant storage area and plant area.
- I** Blade Walls on south - are designed to maximise living rooms and provide an increased level of light and interest. Note that the blade walls are actually perforated and not solid - to allow more light into the living areas and bed rooms.
- J** Circulation Area of Apartments - the floor plans provide for a better use of shared infrastructure and additional natural flow through ventilation.
- K** Roof Garden - has remained as a key 'community asset' which can be used as a cinema, bar, entertaining area, etc.
- L** Waste and Traffic circulation issues - will be further refined with additional input from specialist consultants to minimise potential security and safety issues and ensure that adequate storage and rubbish areas are provided for commercial, retail and residential uses.
- M** Ground floor outdoor eating/café area - has been adjusted to provide a 1.8 metre pedestrian clearance with removable furniture and bike racks/station without changing the existing line of the pavement /roadway.
- N** Bath Lane - further consideration will be given with regard to the development of a shared use space in future negotiations with council.

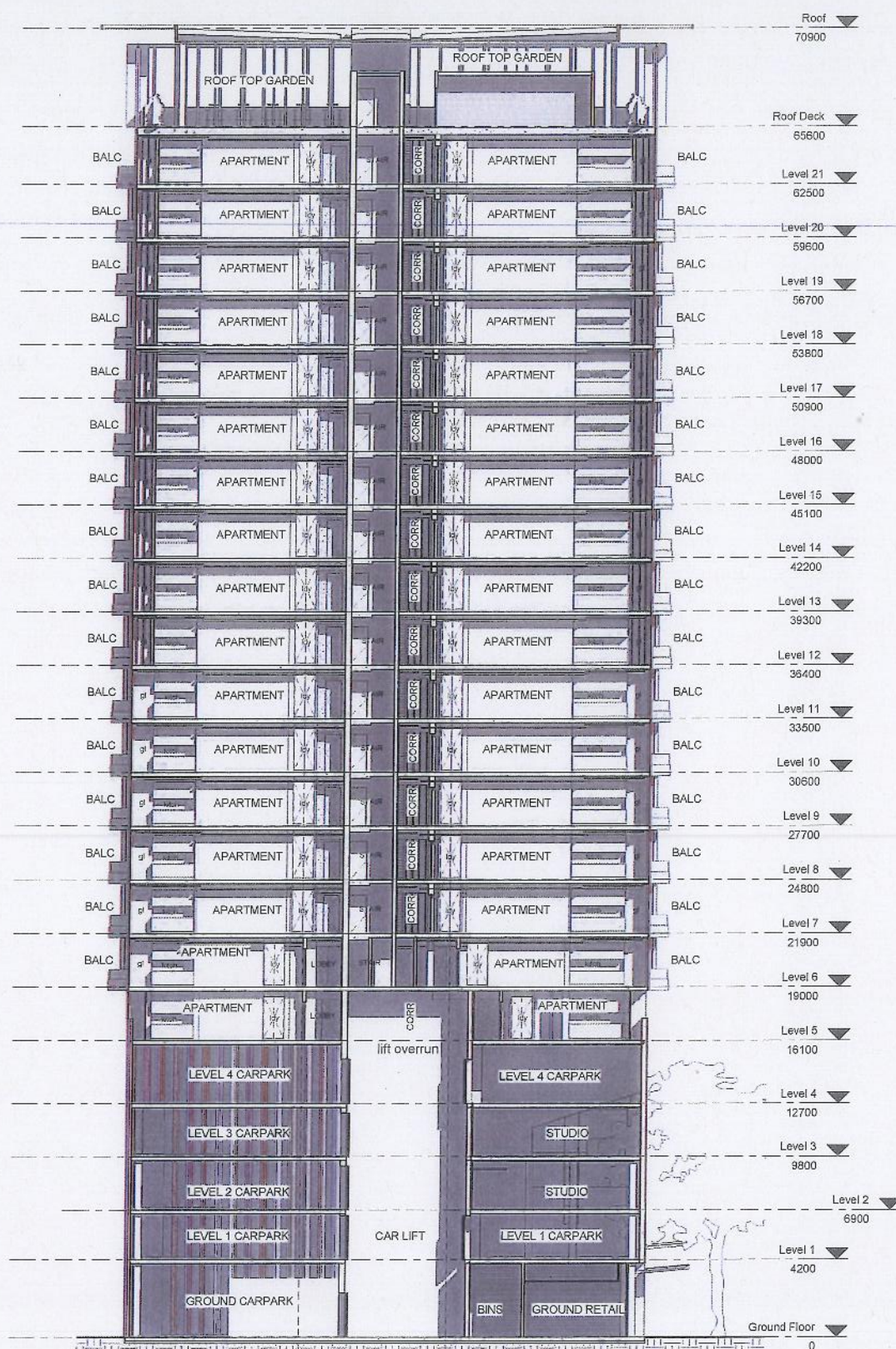
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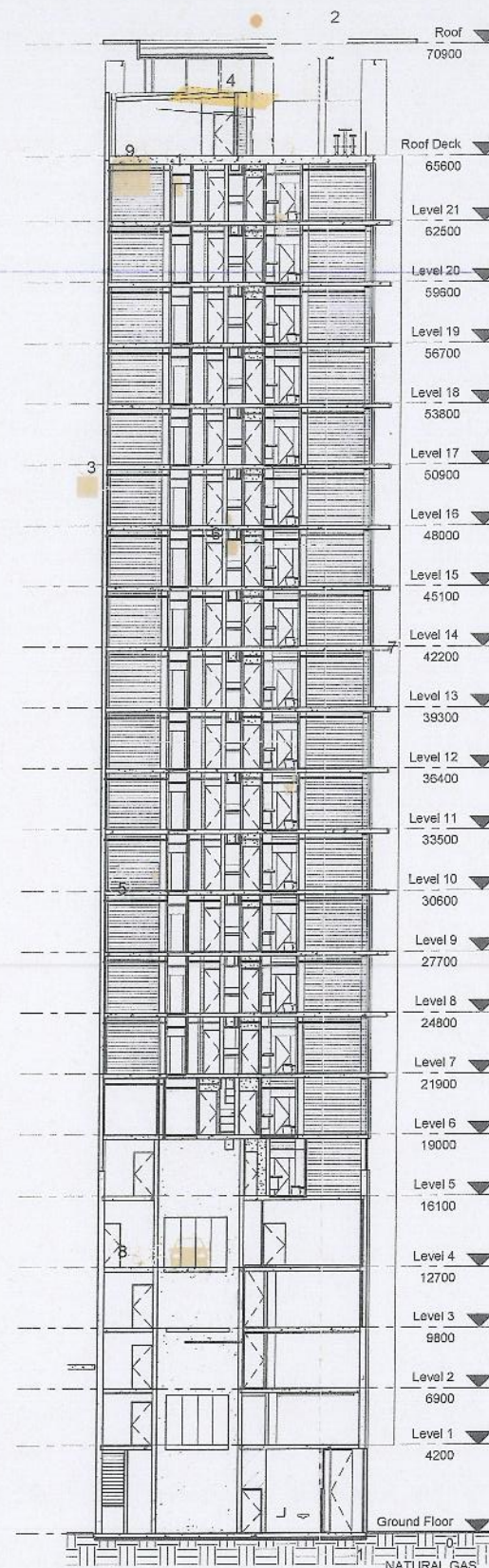
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04.06.14 261 PULTENEY STREET PTY LTD



A SECTION AA
1:150 SCALE

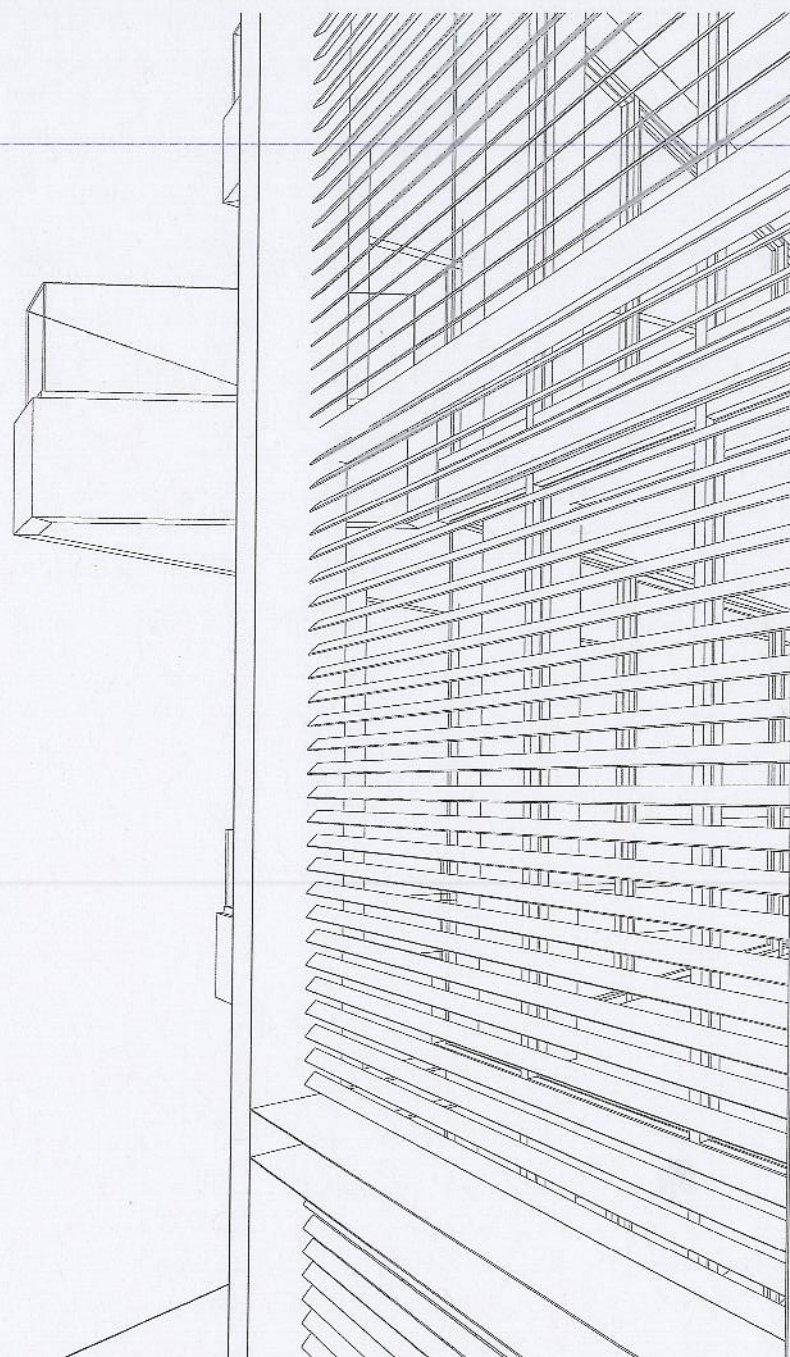


B ESD MEASURES
1:150 SCALE

1. NATURAL GAS FOR HOT WATER
2. RAINWATER HARVESTING FOR RE-USE IN W/C PLUMBING
3. HIGH EFFICIENCY INVERTER AIR CONDITIONER TO APARTMENTS
4. PV CELLS FOR COMMON AREA LIGHTING
5. LIGHT ISOLATION GREEN SWITCH FOR APARTMENTS
6. NATURAL GAS APPLIANCES
7. SUN SCREENING TO THE NORTH
8. CYCLIST FACILITIES
9. RAINWATER TANK FOR W/C'S

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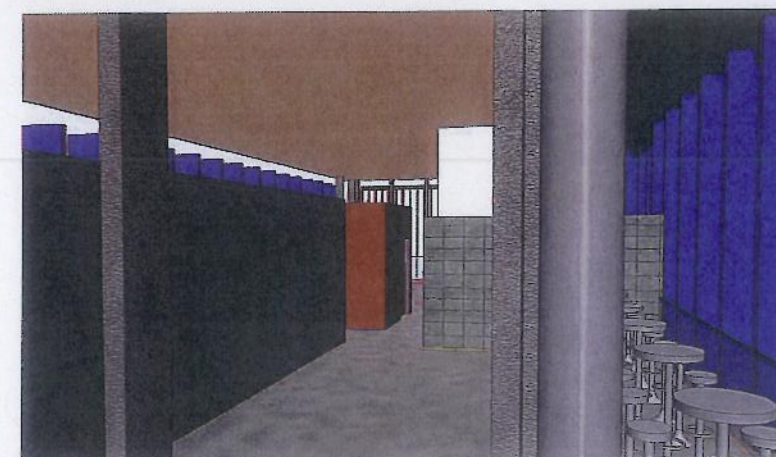
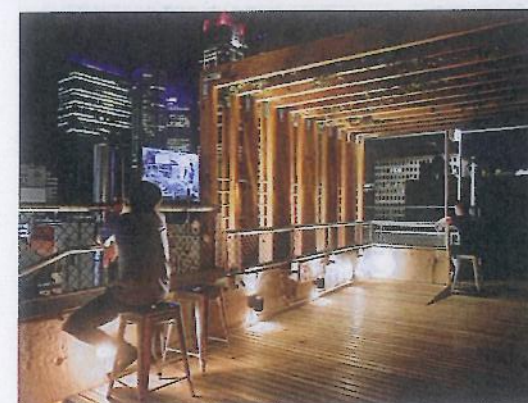
A BALUSTRADE



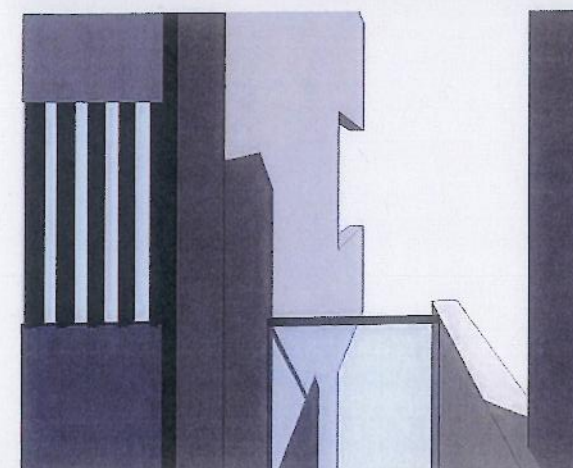
SOHO CLARION BALUSTRADE



ROOFTOP EXAMPLES



B ROOF DECK
VIEW ONE



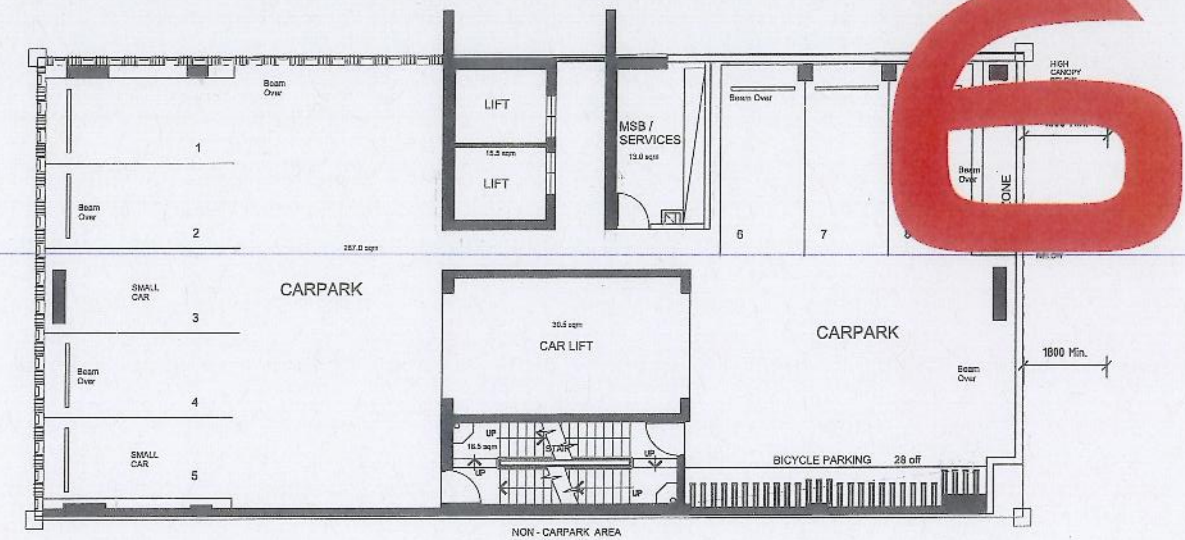
C SOUTH EAST
BALCONY VIEWS

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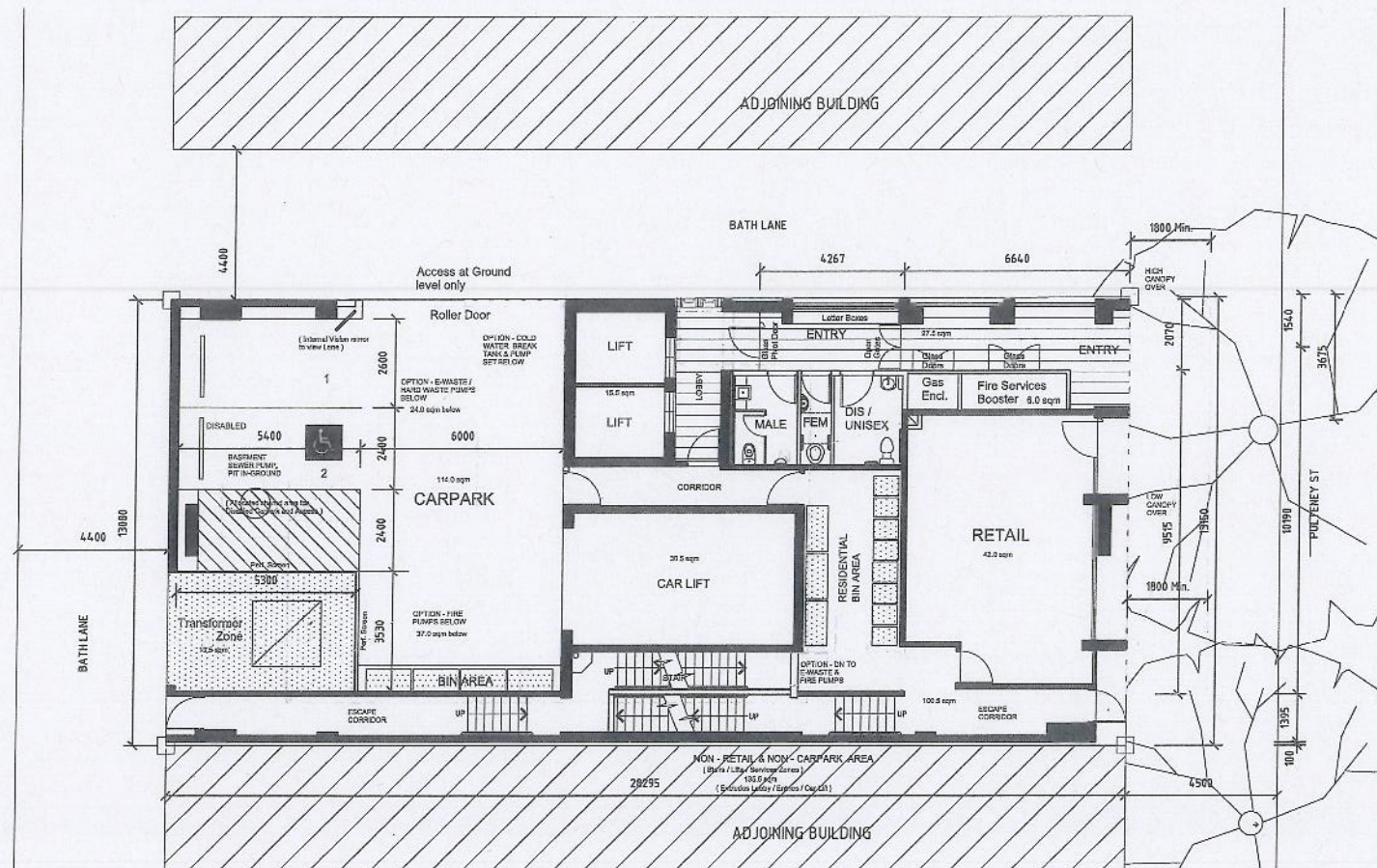
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SA GOVERNMENT ARCHITECT, BEN HEWETT

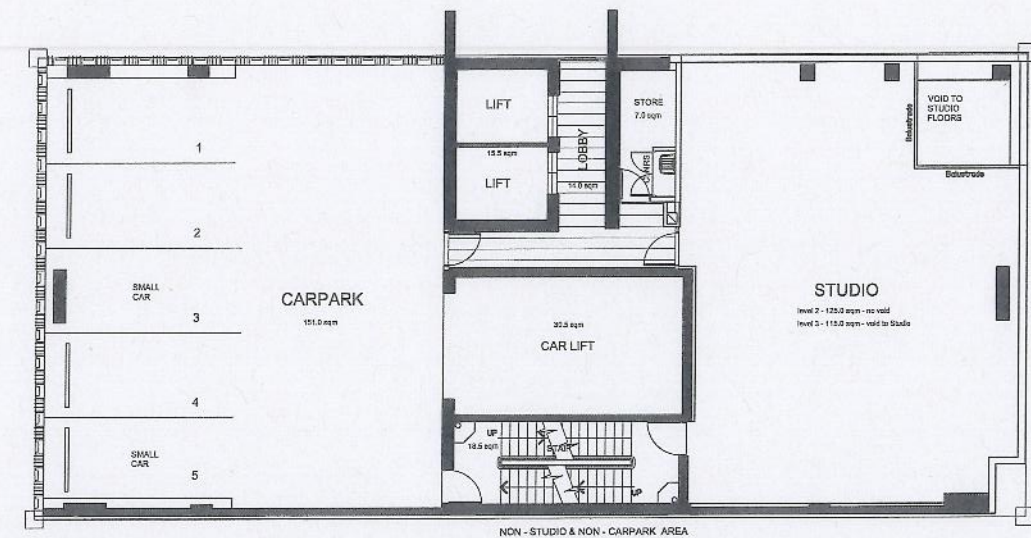
04.06.14 261 PULTENEY STREET PTY LTD



CA LEVEL 1 & 4 - CARPARK FLOOR PLANS
1:100 SCALE
OPTION F



GR GROUND FLOOR PLAN
1:100 SCALE
OPTION F

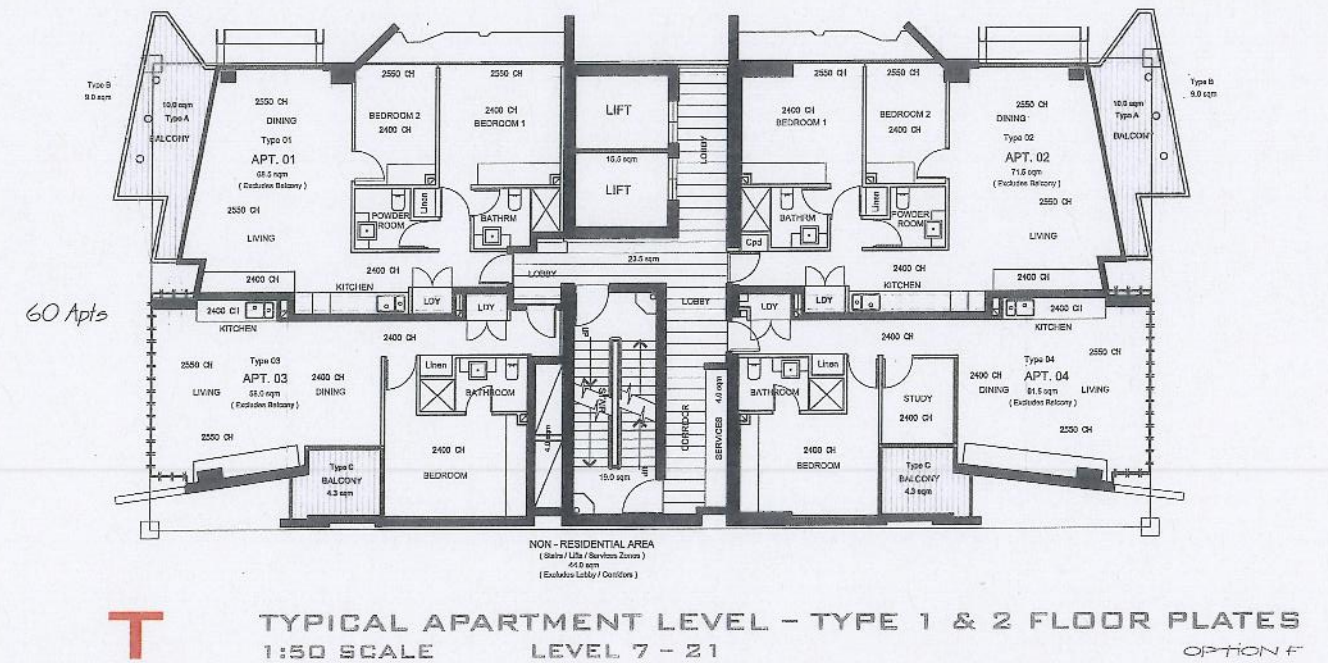
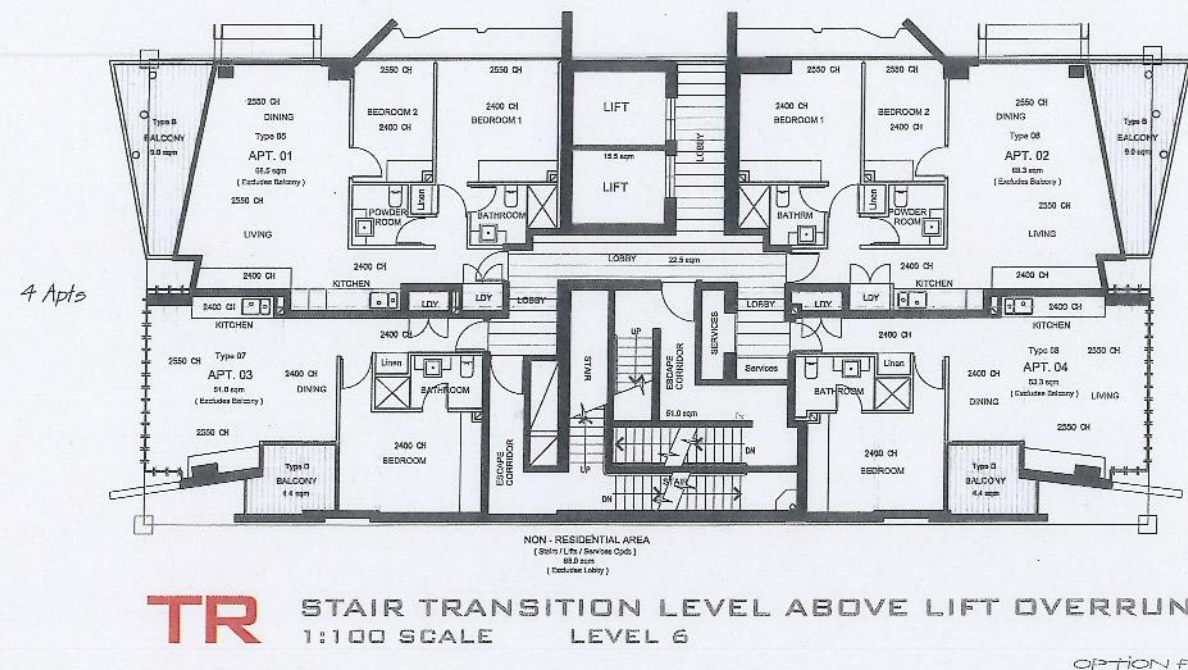
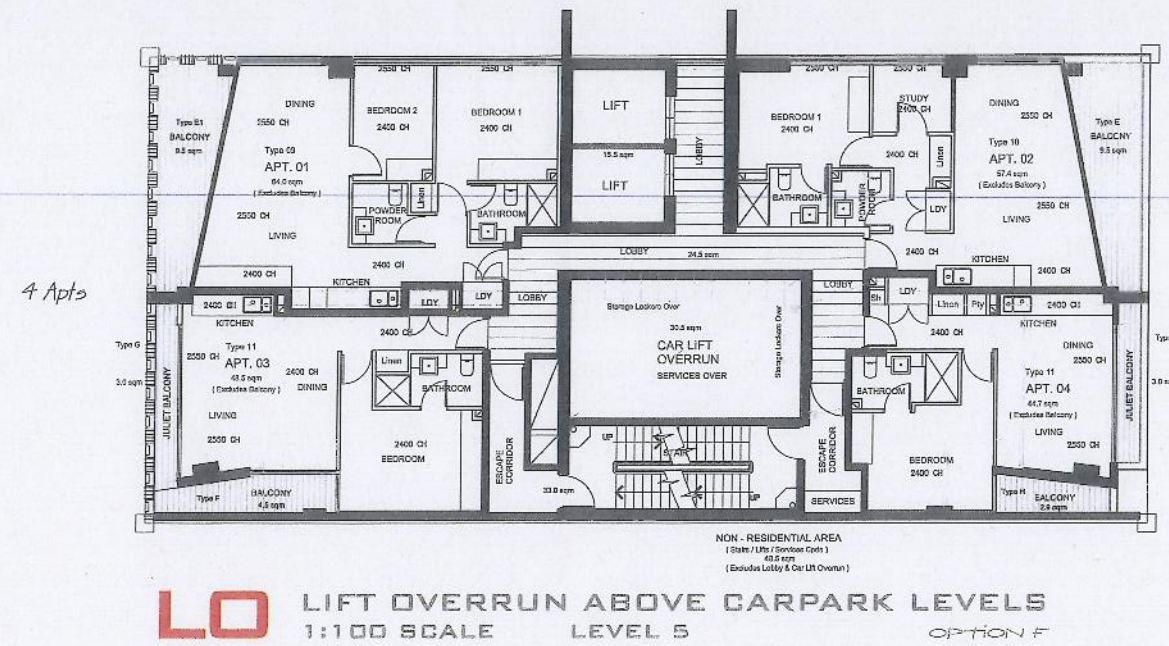


SC LEVEL 2 & 3 - STUDIO / CARPARK FLOOR PLANS
1:100 SCALE
OPTION F

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PRE-LODGEEMENT AGREEMENT NO: P.A.2013/12-1223/61
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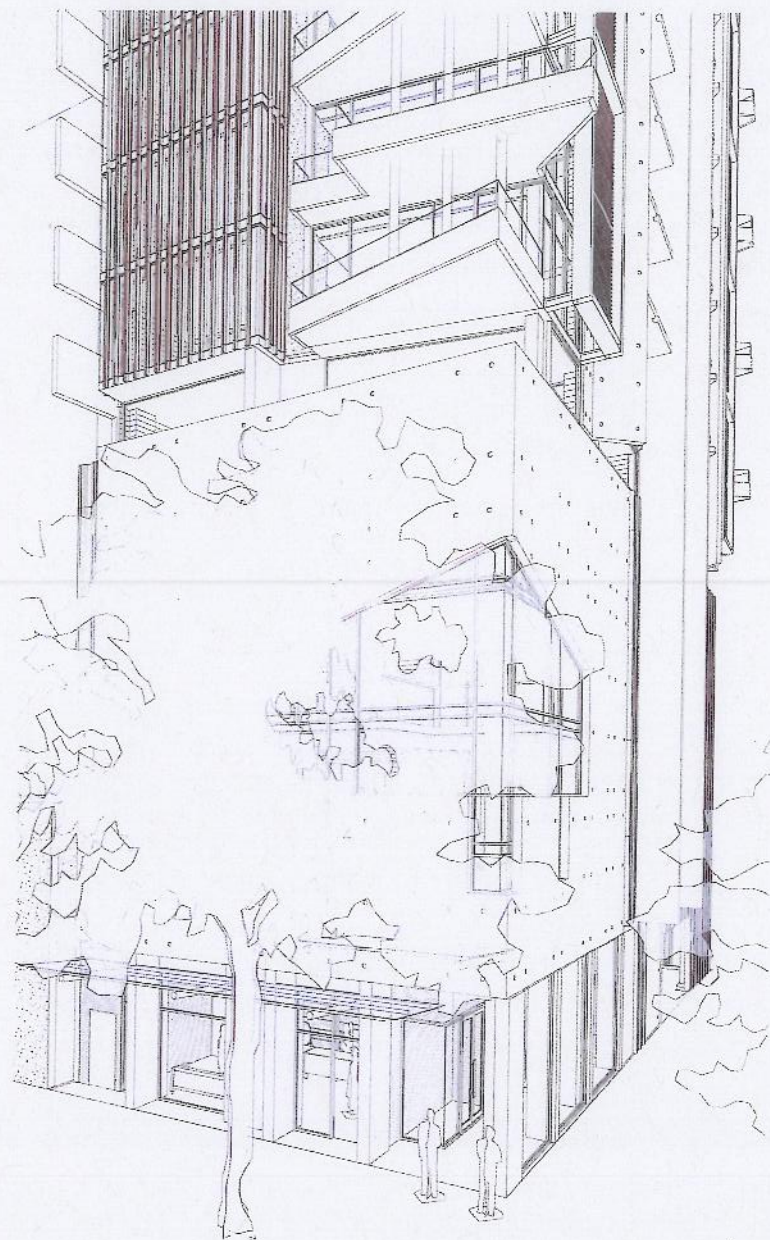
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B FACADE



FLINDERS LOFT
EXTERIOR FINS



REPUBLIC TOWER FACADE

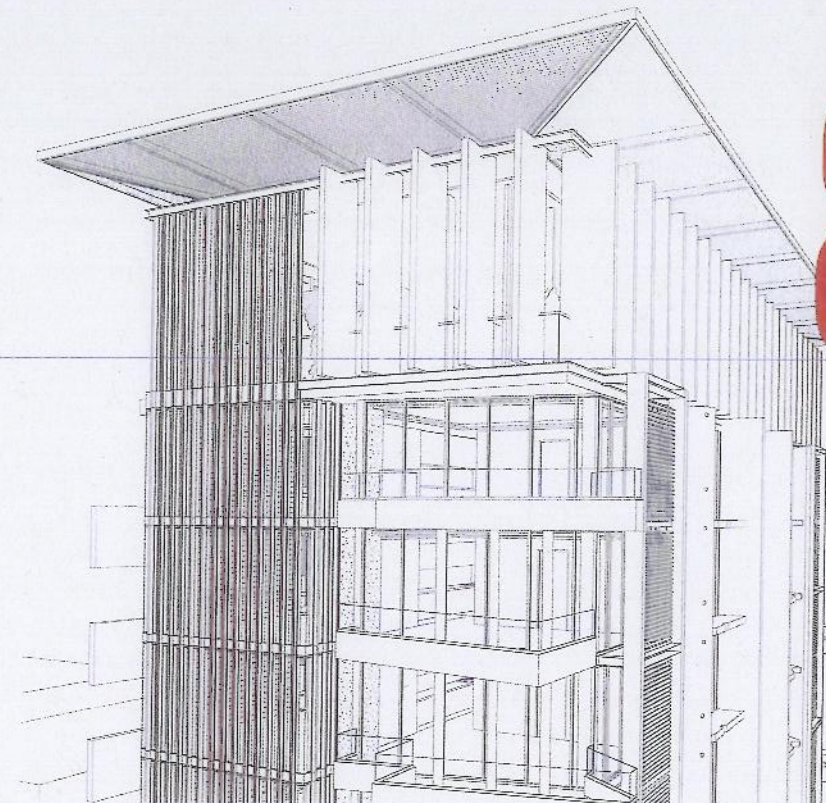
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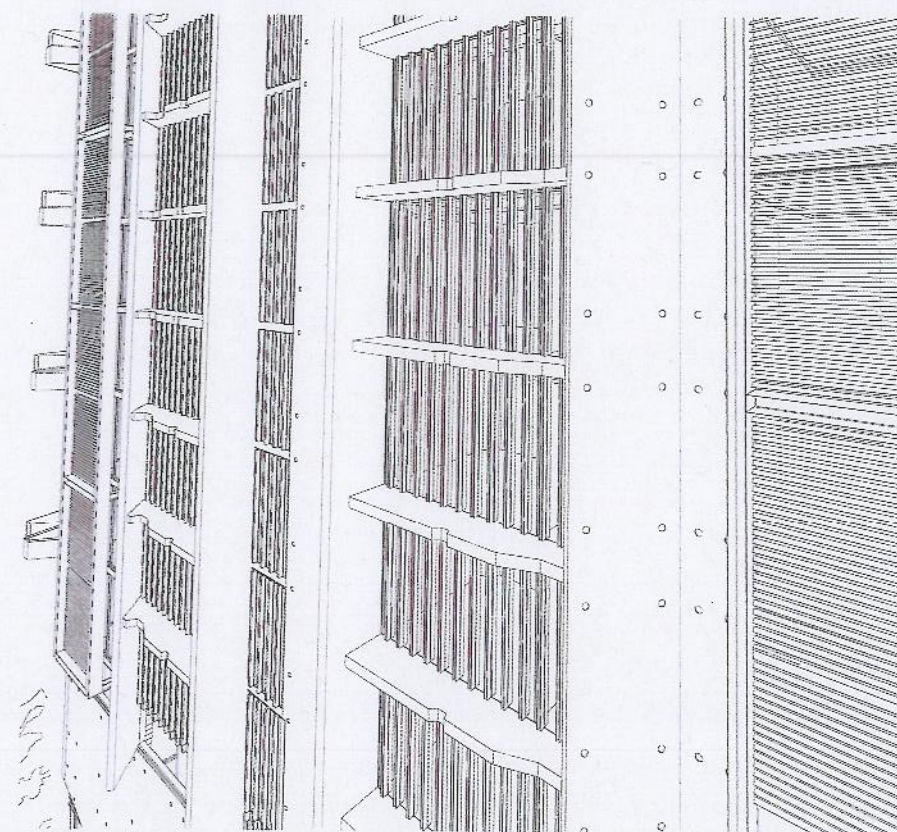
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C ROOF DECK



A EXTERIOR FINS



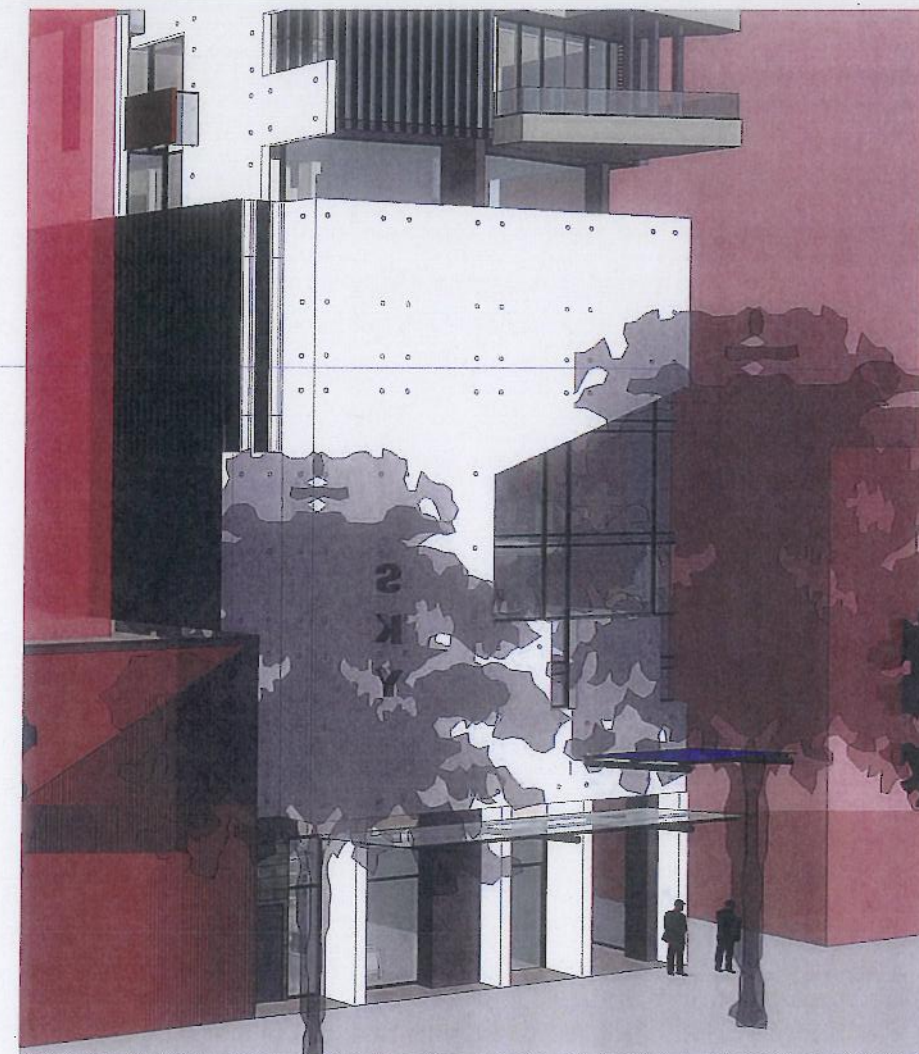
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261 - 263 PULTENEY STREET
ADELAIDE SA 5000
PODIUM PLANS



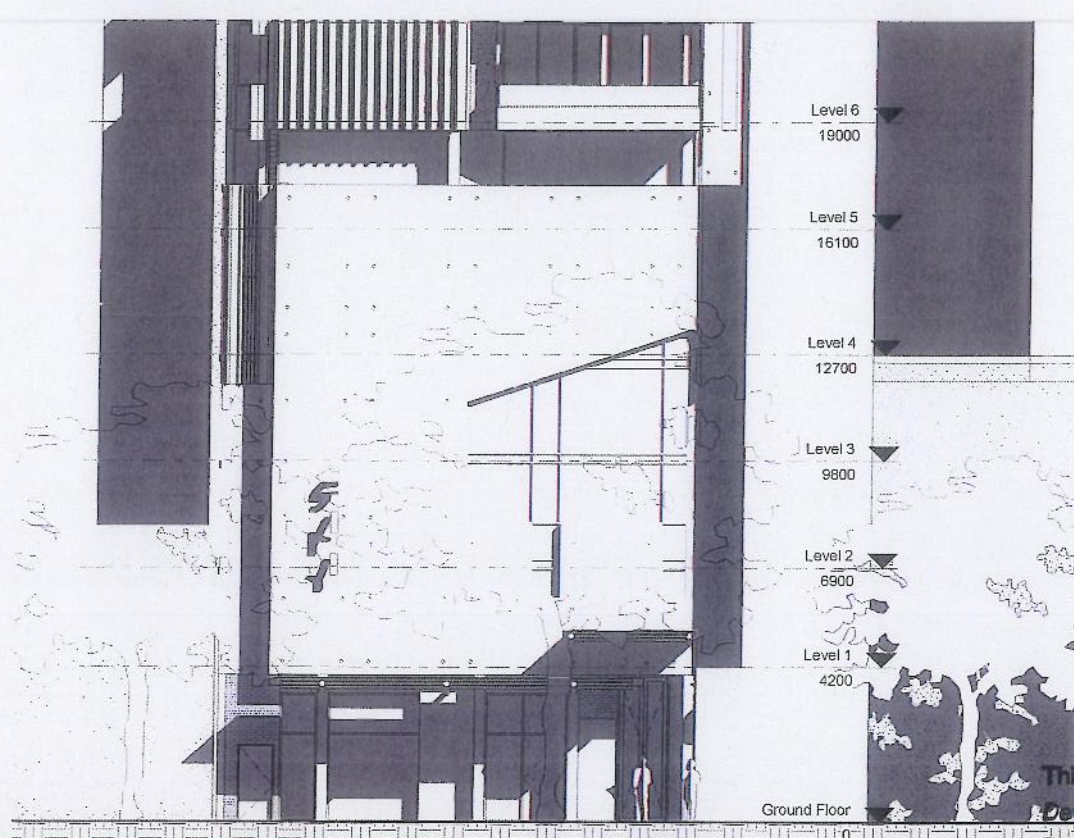
A PODIUM VIEW
- NE CORNER



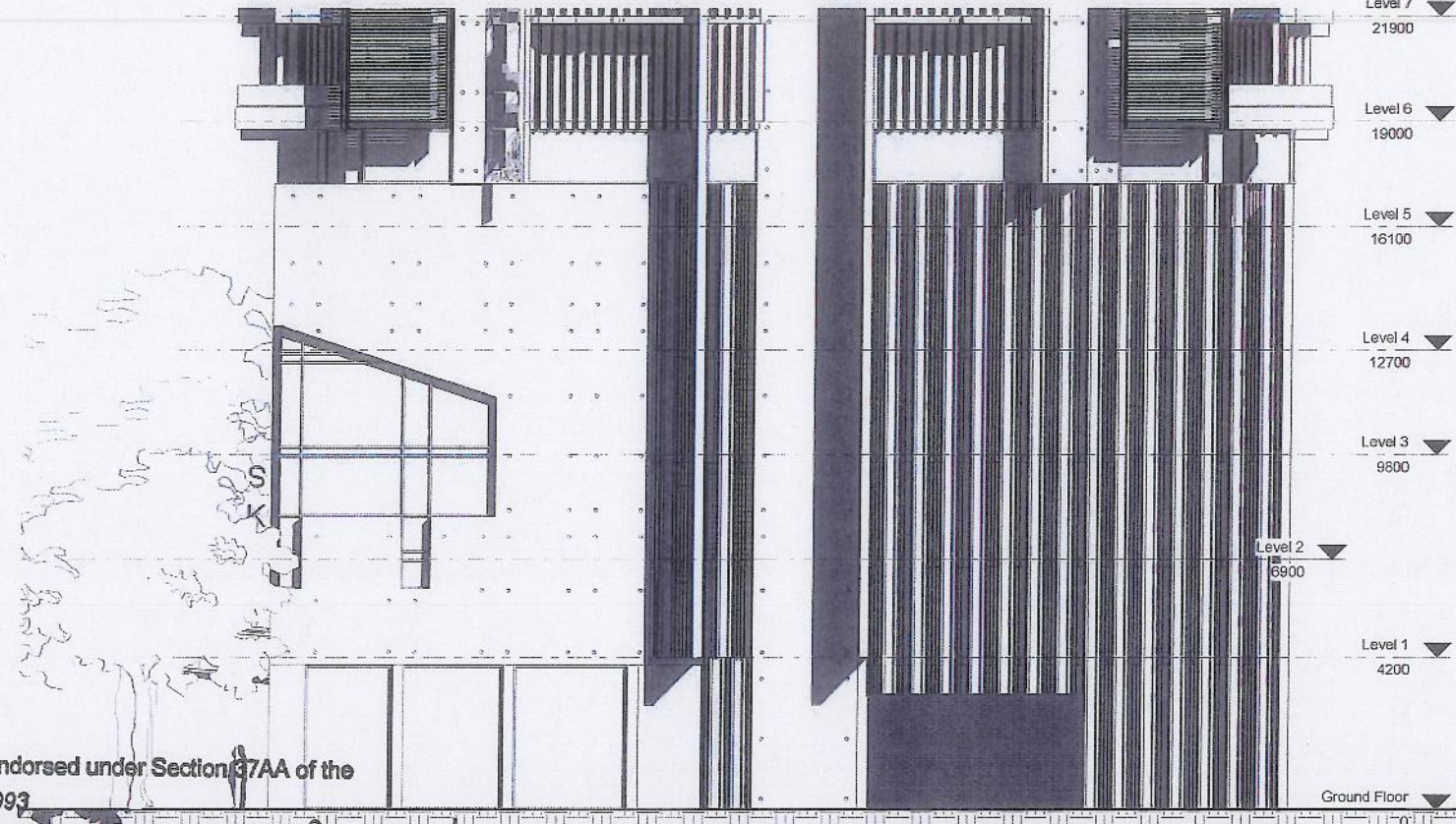
B PODIUM VIEW
- SE CORNER

C PODIUM VIEW
- EAST ELEVATION
1:100 SCALE

D PODIUM VIEW
- NORTH ELEVATION
1:100 SCALE



Level 6
19000
Level 5
16100
Level 4
12700
Level 3
9800
Level 2
6900
Level 1
4200
Ground Floor
0



Level 7
21900
Level 6
19000
Level 5
16100
Level 4
12700
Level 3
9800
Level 2
6900
Level 1
4200
Ground Floor
0

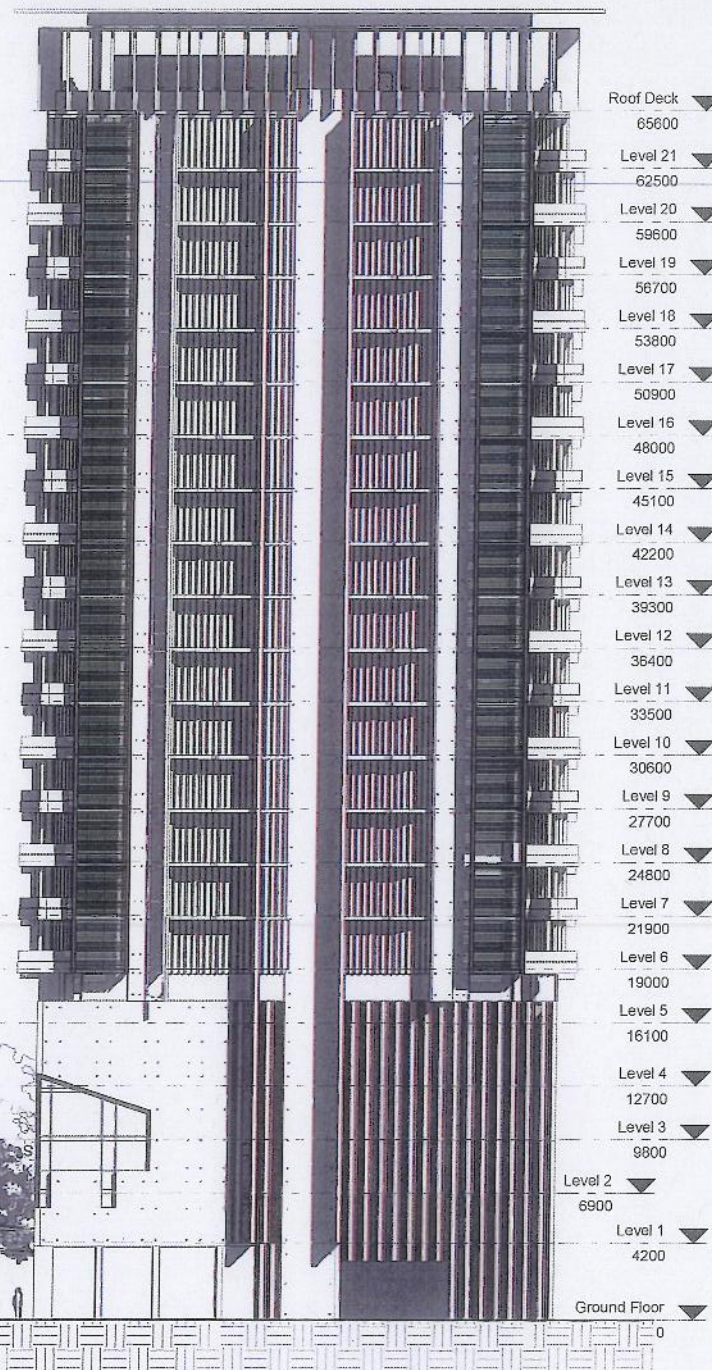
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PRE LODGEMENT AGREEMENT NO. 21/03/2014
SA GOVERNMENT ARCHITECT, BEN HEWETT

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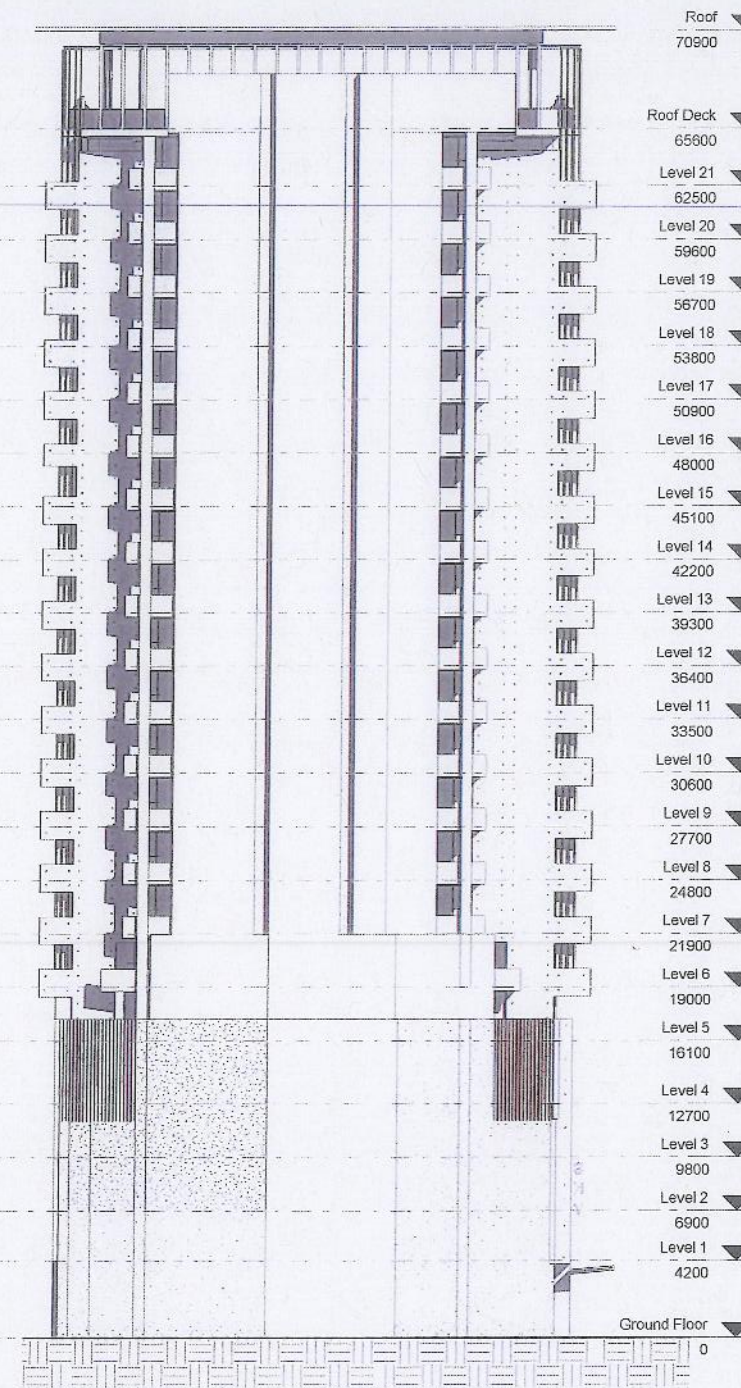
261 - 263 PULTENEY STREET
ADELAIDE SA 5000
PODIUM PLANS



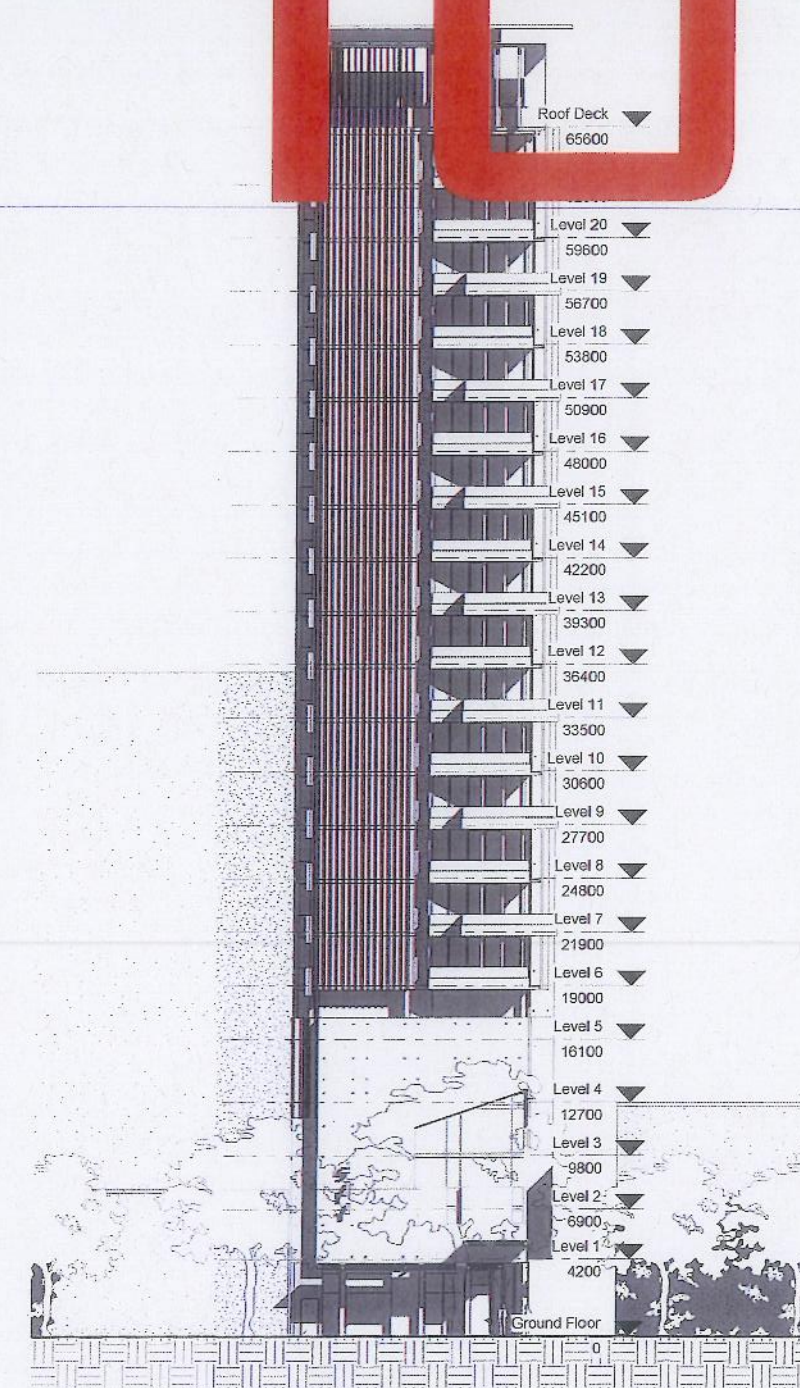
A NORTH - ELEVATION
1:200 SCALE



B WEST - ELEVATION
1:200 SCALE



C SOUTH - ELEVATION
1:200 SCALE



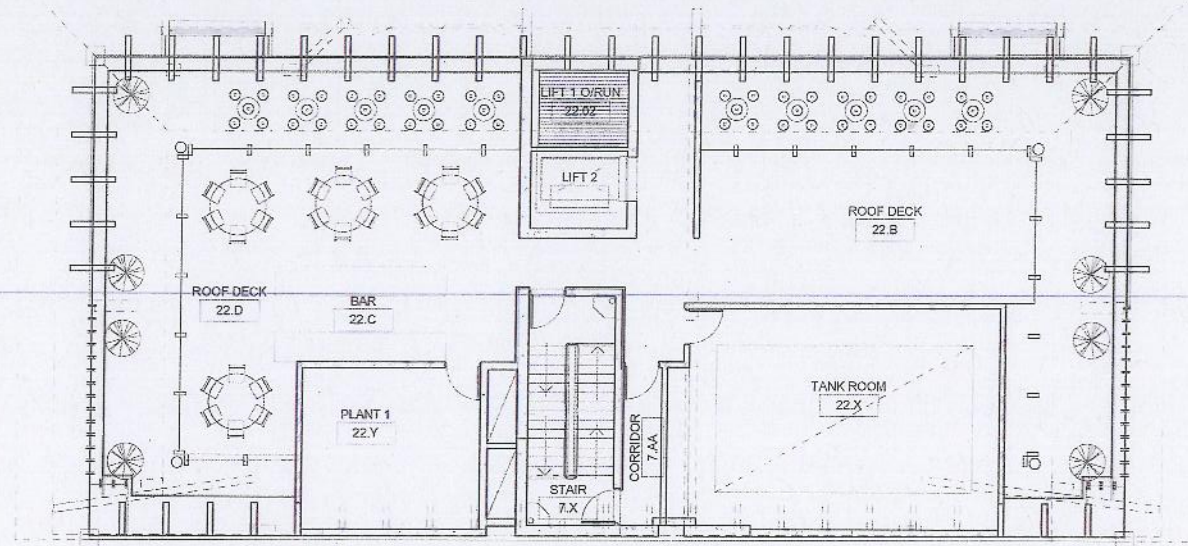
D EAST - ELEVATION
1:200 SCALE

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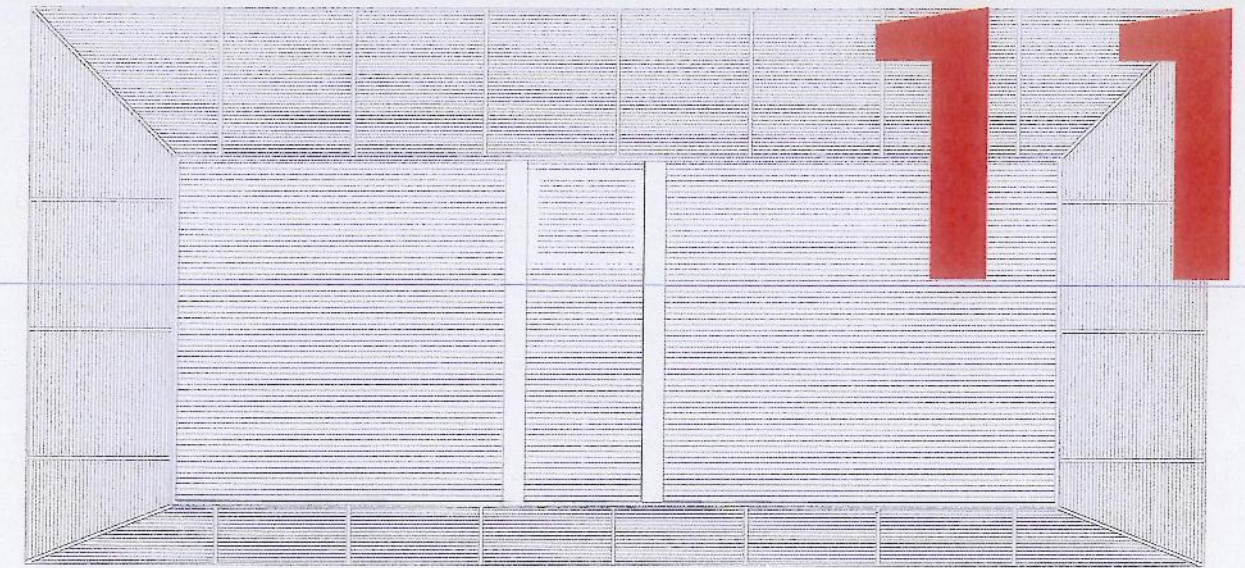
PRE-LODGEEMENT AGREEMENT NO.
SA GOVERNMENT ARCHITECT, BEN HEWETT

DATE 19/6/14 SIGNED: *[Signature]*
This Agreement remains valid for three months from this date

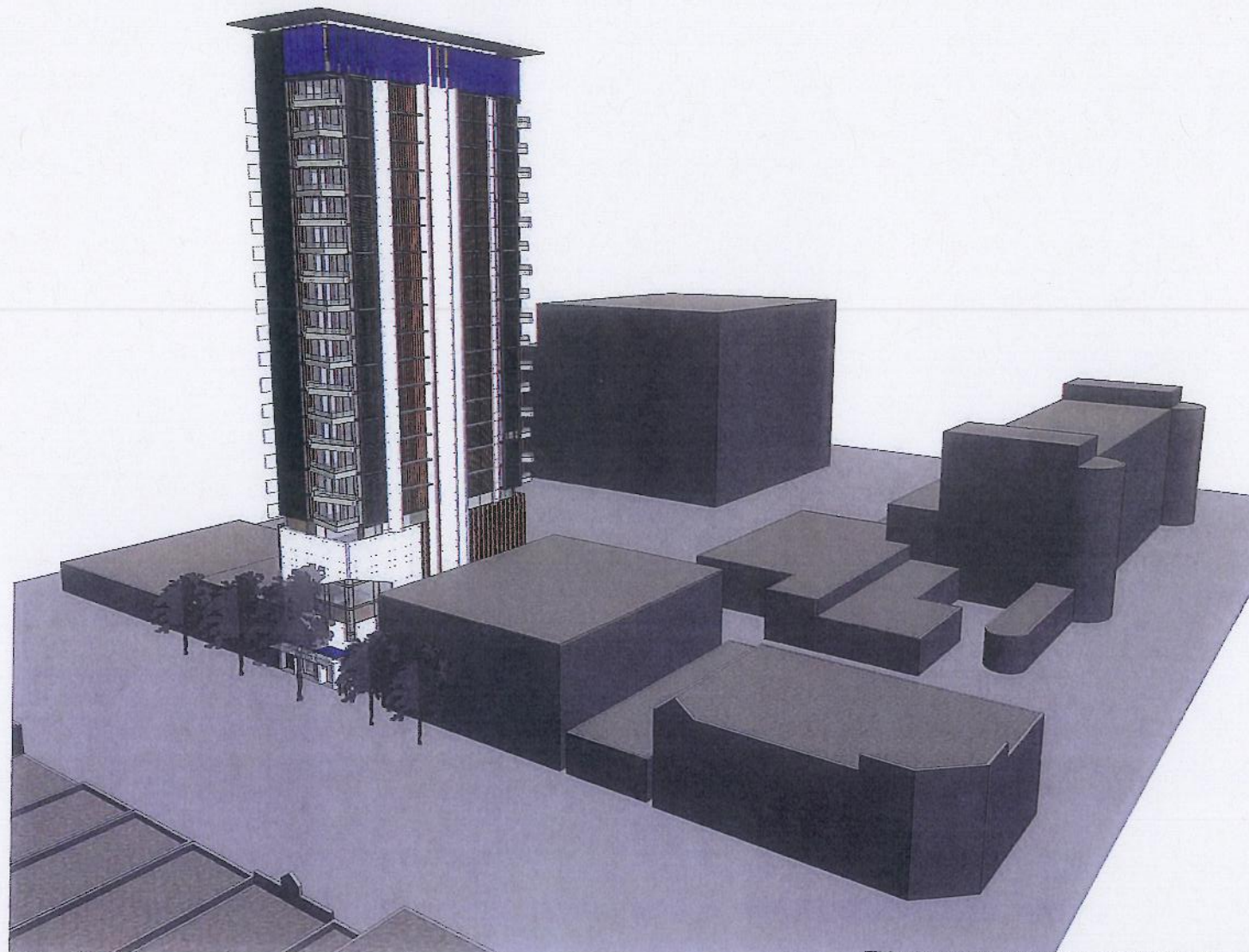
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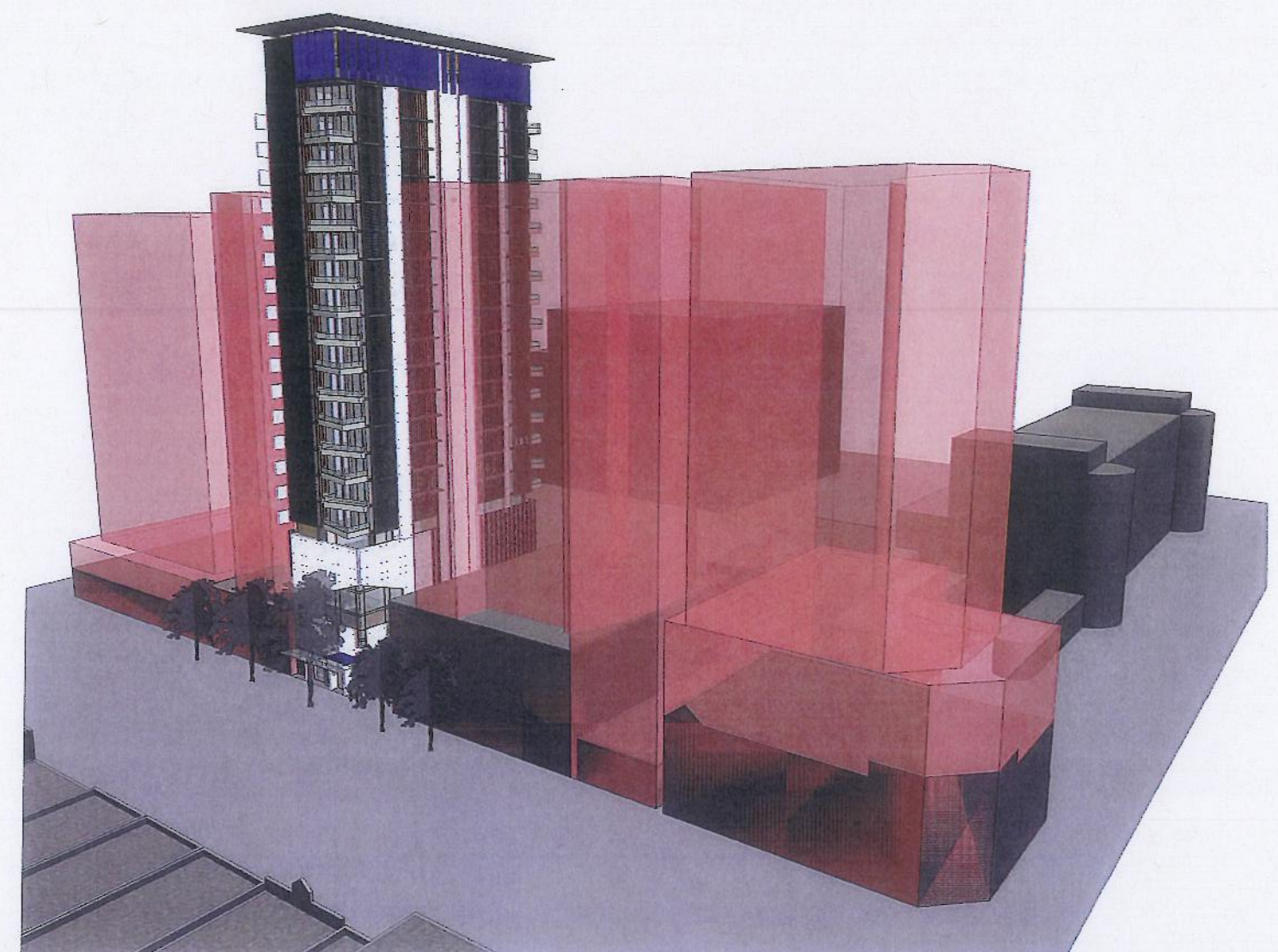
A ROOF DECK
1:100 SCALE



B ROOF PLAN
1:100 SCALE



C NORTH EAST AERIAL VIEW - EXISTING MASSING

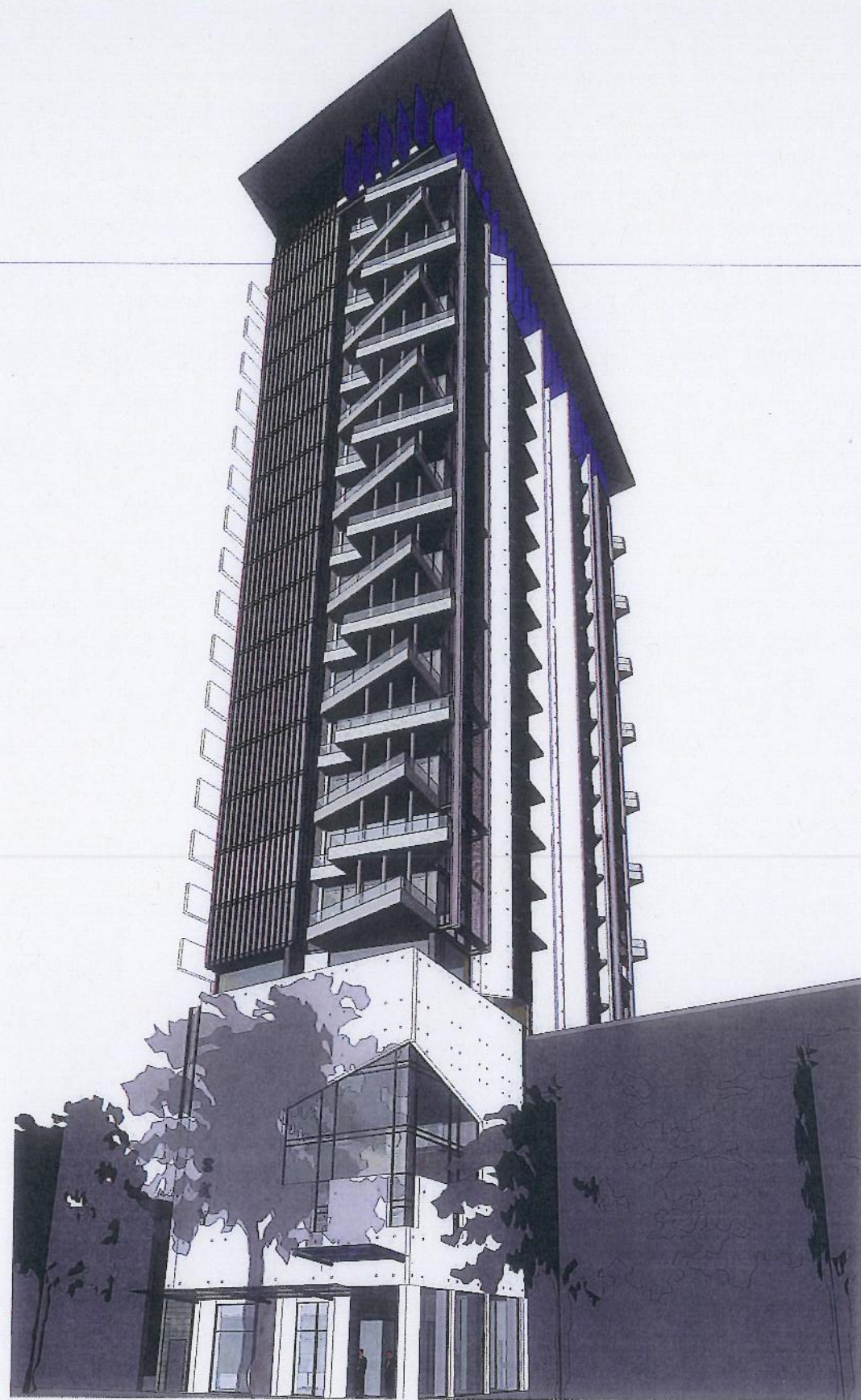


D NORTH EAST AERIAL VIEW - FUTURE MASSING

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PRE-LODGEEMENT AGREEMENT NO. 1003
SA GOVERNMENT ARCHITECT, BEN HEWETT

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DATE 19/6/14 SIGNED: [Signature]
This Agreement remains valid for three months from this date



A STREET LEVEL - EXISTING MASSING



B STREET LEVEL - FUTURE MASSING

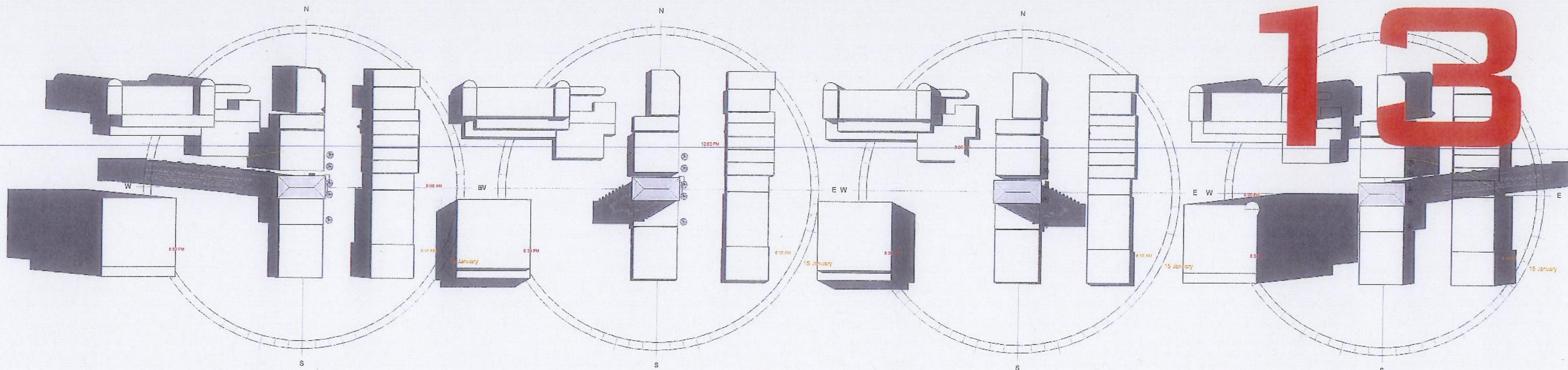
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PRE-LODGEEMENT AGREEMENT NO.....
SA GOVERNMENT ARCHITECT, BEN HEWETT

DATE 19/6/14 SIGNED: *[Signature]*
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04.06.14 261 PULTENEY STREET PTY LTD

261 - 263 PULTENEY STREET
ADELAIDE SA 5000
STREET LEVEL PERSPECTIVES

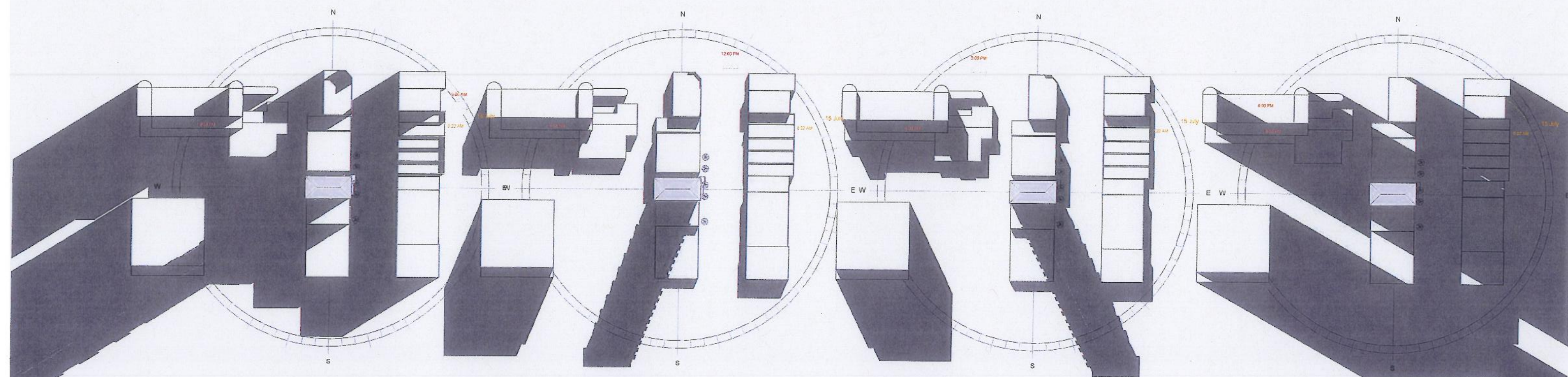


1 SUN STUDY 9^{AM} (SUMMER)
1:1200 SCALE

2 SUN STUDY 12^{PM} (SUMMER)
1:1200 SCALE

4 SUN STUDY 3^{PM} (SUMMER)
1:1200 SCALE

3 SUN STUDY 6^{PM} (SUMMER)
1:1200 SCALE



6 SUN STUDY 9^{AM} (WINTER)
1:1200 SCALE

7 SUN STUDY 12^{PM} (WINTER)
1:1200 SCALE

8 SUN STUDY 3^{PM} (WINTER)
1:1200 SCALE

9 SUN STUDY 6^{PM} (WINTER)
1:1200 SCALE

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Development Act 1993

PRE-LODGEEMENT AGREEMENT NO.....
SA GOVERNMENT ARCHITECT, BEN HEWETT

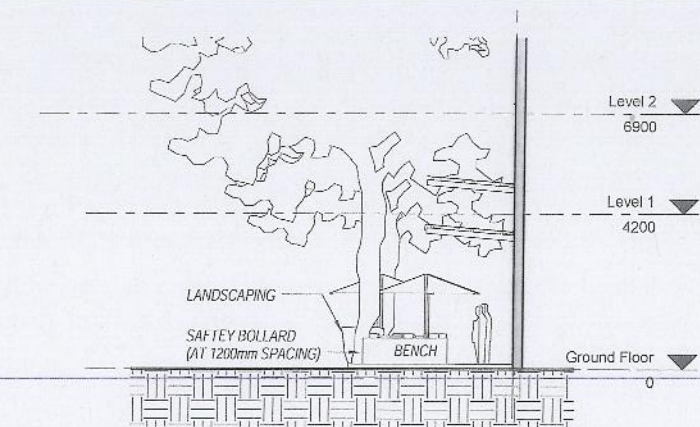
04.06.14 261 PULTENEY STREET PTY LTD



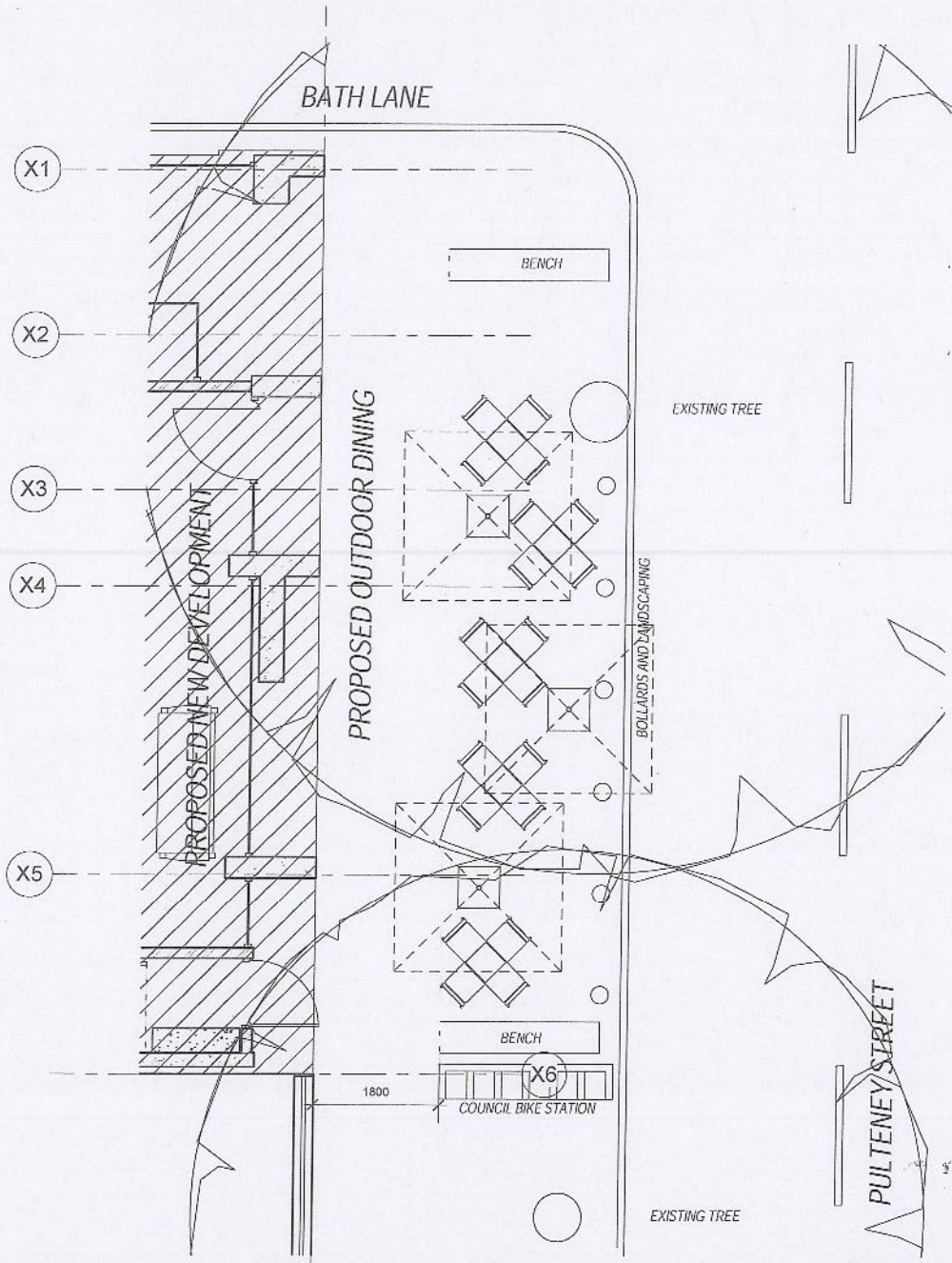
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DATE 19/6/14 SIGNED: *BH*
This Agreement remains valid for three months from this date

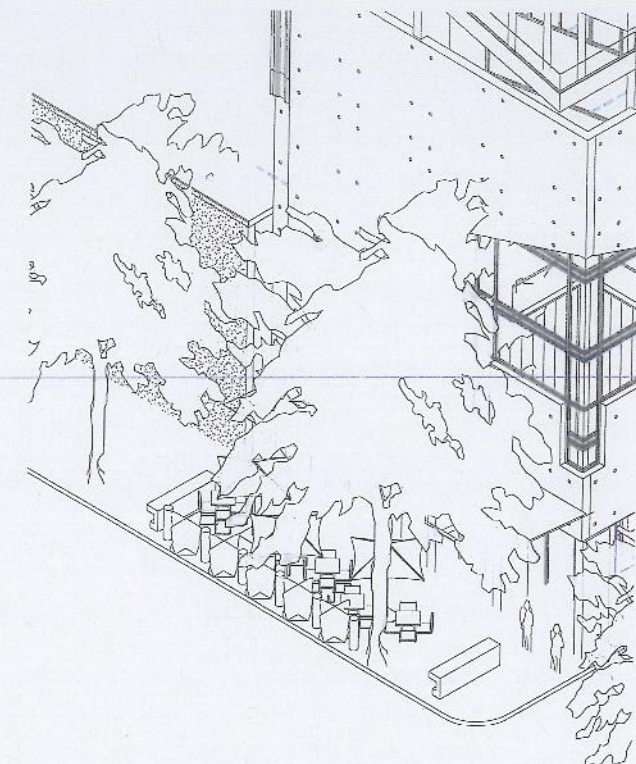
261 - 263 PULTENEY STREET
ADELAIDE SA 5000
SUN STUDY



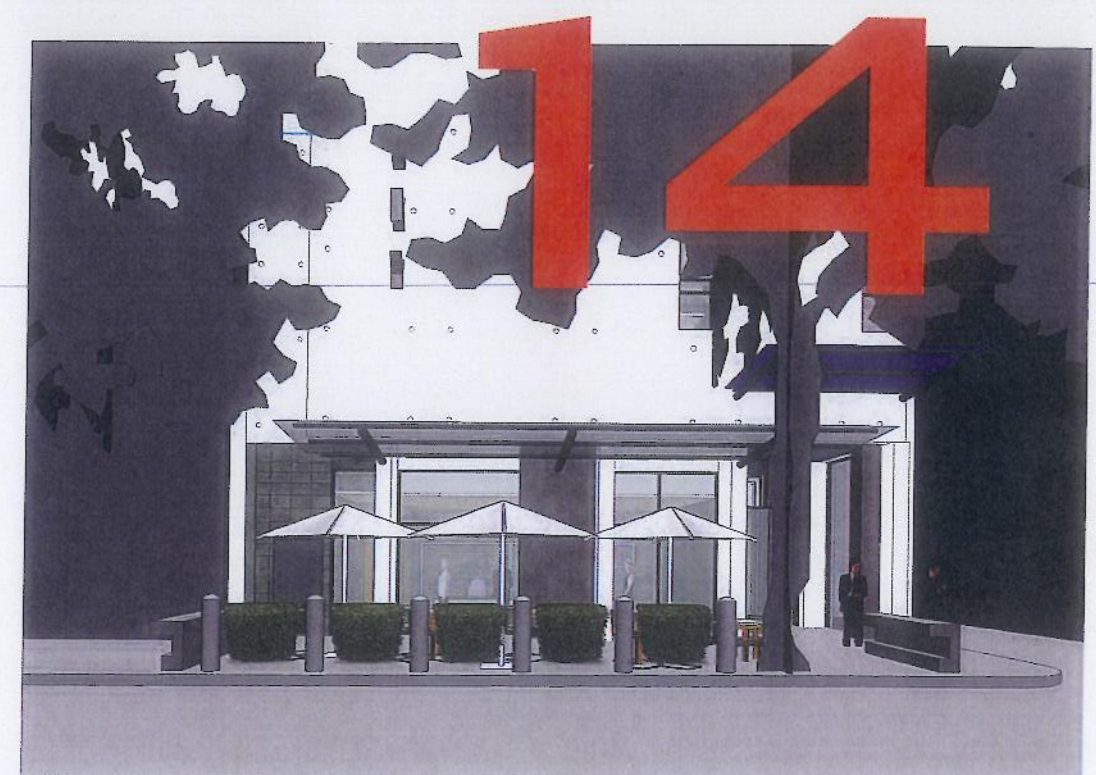
6 NORTHERN ELEVATION
1:100 SCALE



1 GROUND FLOOR
1:50 SCALE



2 OUTDOOR DINING AXO



5 PERSPECTIVE B



3 PERSPECTIVE A



4 PERSPECTIVE C

This document is endorsed under Section 37AA of the Development Act 1993
PRE-LODGEEMENT AGREEMENT NO:.....
SA GOVERNMENT ARCHITECT, BEN HEWETT

DATE 19/6/19 SIGNED: [Signature]
 This Agreement remains valid for three months from this date

04.06.14 261 PULTENEY STREET PTY LTD