Currie Street Pty Ltd C/Masterplan

25-storey mixed use building comprising commercial at ground, office and hotel accommodation at upper levels

62-68 Currie Street, Adelaide

020/A019/19

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OVERVIEW

Application No	020/A019/19
Unique ID/KNET ID	(3995) 2019/03333/01
Applicant	Currie Street Pty Ltd C/ Masterplan
Proposal	25-storey mixed use building comprising commercial at ground, office and hotel accommodation at upper levels and signage
Subject Land	62-68 Currie Street, Adelaide
Zone/Policy Area	Capital City Zone / Central Business Policy Area 13
Relevant Authority	SCAP
Lodgement Date	28 February 2019
Council	City of Adelaide
Development Plan	07 June 2018
Type of Development	Merit
Public Notification	Category 1
Referral Agencies	Government Architect, Adelaide Airport Limited, City of Adelaide
Report Author	Janaki Benson, Senior Planner
RECOMMENDATION	Development Plan Consent subject to conditions

EXECUTIVE SUMMARY

The proposed development is for a 25 storey mixed use building accommodating predominately a hotel, along with premium office space. The proposal also includes a café and restaurant/kitchen, along with entrance lobbies at ground floor. A new north-south pedestrian link is proposed at ground within the subject site, connecting Schrader and Currie Streets along the eastern boundary.

The proposal is a Category 1 form of development that triggers mandatory referrals to the Government Architect (GA), and the Airports Authority and an informal referral to the City of Adelaide.

The site is located within an area of the City that has no specific height limitations. High-scale development, in conjunction with non-residential land uses at ground that generate high levels of pedestrian activity during the day, evening and late night is anticipated in the Zone.

The GA gave in principle support of the proposal although encouraged further design development during the next phases of the development, such as a materials samples board, review of the details and design of the entry canopies and detailing of the expressed precast concrete frames. While the applicant does not propose to amend the canopies the other matters are recommended as conditions of consent. The City of Adelaide has raised concern with regards to vehicle movements and the necessity for the upgrade to Schrader Street. On advice received from the applicant, it is considered that the proposed development does not require any changes to Schrader Street in order for the proposed development to achieve safe and convenient access to the proposed Loading Bay and that of the proposed Shared Passenger and Service Vehicle Loading bays within the site of their development.

Overall, the proposal is considered to be consistent with the relevant provisions of the City of Adelaide Development Plan, and it is recommended for Development Plan Consent subject to a number of 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 introducing new policy intended to:

- reinforce the importance of design quality for new development;
- establish additional requirements for over-height development including zone interface treatments and triggers for over-height allowances; and
- provide guidance regarding built form responses to context and streetscape character.

1.2 Pre-Lodgement Process

The applicant engaged in the Pre-Lodgement Panel (PLP) process, including a Design and Desktop Review with the Office of Design, Architecture of South Australia (ODASA).

2. DESCRIPTION OF PROPOSAL

Application details are contained in the ATTACHMENTS.

A summary of the proposal is as follows:

Land Use Description	Hotel and Office
Building Height	25 storeys/ 91.95metres/ 135.17AHD
Description of levels	**Basement:** Building services, EOT and bike parking, storage and refuse areas, gym **Ground:** Lobby, restaurant and kitchen, café, back of house, fire control room, transformer **Level 01**: Plant, Conference rooms, office, hotel reception and admin, amenities **Level 02-12:** Office and amenities **Level 13-22:** Hotel accommodation **Level 23:** Plant, rooftop restaurant/bar and kitchen and outdoor deck **Level 24:** Rooftop plant
Site Access	Deliveries, waste collection services and hotel pick-up/drop-off is facilitated by a cul de sac at the end of Schrader Street
Car and Bicycle Parking	**Car Parking:** Two car parking spaces to be used as short stay drop off and passenger collection to be provided to the rear adjacent the cul de sac **Bike Parking:** 72 located within basement, adjacent the End of Trip facilities
Encroachments	Canopy over entrance to Currie Street
Staging	**Stage 1:** Demolition **Stage 2:** Substructure construction **Stage 3:** Super structure construction **Stage 4:** Architectural fit-out and external facades

3. SITE AND LOCALITY

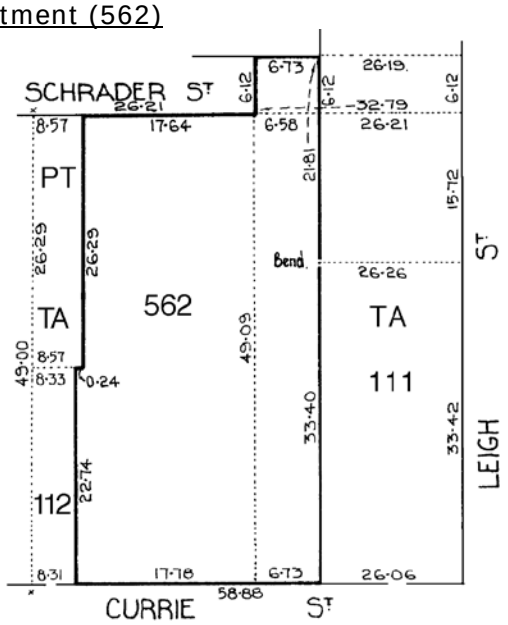
3.1 Site Description

The site consists of 1 allotment, described as follows:

Plan Parcel	Street	Suburb	Title Reference
F181404 A562	Currie Street	ADELAIDE	5763/904

The subject site is located on the northern side of Currie Street, with a secondary street frontage to Schrader Street to the north. The land has a site area of 1236m², frontage of 24.5 metres to Currie Street and is generally rectangular in shape. A small 6.7m x 6.1m protrusion to the north-eastern side of the allotment results in a 17.6 metre frontage to Schrader Street.

Figure 1 – The Allotment (562)



The site currently contains two abutting buildings, a vacant retail shop to Currie Street, the other a car park within a warehouse building that fronts Schrader Street. A carport, which provides cover for two car parking spaces, is located over the protrusion area to the north.

3.2 Locality

With two street frontages, the locality has two distinct characters. Currie Street is a wide City boulevard that is recognised on *MAP Adel/1 (Overlay 4)* as a 'High Concentration Public Transport Route', providing east-west cross-city connection for cyclists, pedestrian and vehicles alike. The built form along Currie in this part of the locality, while generally lower in scale, is mixed in terms of architectural expression, materiality, height and era of construction. There is a reasonably strong solid to void masonry character however, with the presence of both local and state heritage items along Currie Street.

Schrader Street, on the other hand, is a 'minor' street with narrow footpaths, which provides the 'back end' for those building with a frontage to both Currie and Hindley Streets. An intimate, gritty laneway character is established by the existence of several lower scale red brick buildings built to the boundary footpath.

Figure 2 – Location Map

4. COUNCIL COMMENTS or TECHNICAL ADVICE

4.1 City of Adelaide

Council has sought clarification on the following matters (with the applicant's response below):

- *It appears to have a footpath clearance of less than 3 metres. I confirm that Council will not support a minimum canopy height at any point above footpath level that is less than 3 metres as this does not satisfy Council's Encroachment Policy. Consequently, the canopy will need to be amended to ensure a minimum height of 3 metres above footpath level.*

  Response: *While a detailed explanation of the canopy design and consideration of the encroachment policy had been provided with the application demonstrated compliance with the "Intent" of the policy, the canopies have been redesigned to fully comply with the numerical guidelines. Please refer to the attached Entry Hood Drawings.*

- *On drawing DA201 next to the goods lift are the words "DDA Access to Rear Loading Via Goods Lift" – what does this mean? Where are people with a mobility impairment expected to go and for what purpose?*

  Response: *The goods lift is double sided and provides the opportunity to address the difference in levels between the loading bay (FFL of 42.46) access and the main floor of the Hotel which has a FFL of 43.22 (Approximately 800 mm level difference). This is primarily for goods loading*

and access to the Kitchen as DADA accessible ramps are provided in the proposed laneway link providing access to the Main entrances to the Hotel / Office Lobby floor level.
A small drawing error has been identified which has been corrected showing the double side access from this lift to the loading bay level at Ground Floor.

- *Drawing DA201 shows service vehicles indicatively at the loading dock and also at a wheel stop at the end of Schrader Street. These vehicles appear to block access to/from the drop off zone. Additionally, when there is a vehicle in the loading dock, it would appear that a vehicle at the end of the street would need to reverse all the way back to Kingston Street. Can I please have some explanation on how this space is proposed to be used and managed, particularly given the large number of waste pick-ups required for the development?*

  Response: *Please refer to Section 5.3.4 of the enclosed amended TIS report for details on how the proposed two loading docks would work in tandem.*

- *Can these "loading" areas be used by others in the street (general waste vehicles, other loading vehicles) to assist with turning around and therefore entering and exiting the street in a forward manner?*

  Response: *Please refer to* ***Section 5.3.4*** *of the enclosed amended TIS report for details on how the proposed two loading docks would work in tandem.*

- *Can the drop-off zone off Schrader Street be used for people with a disability/mobility impairment?*

  Response: *Yes, it has been designed for use by people with disabilities. Please refer to* ***Section 3.3.4*** *of the enclosed amended TIS report for details.*

- *Can people (pedestrians, people with mobility aids and cyclists) filter through to Schrader Street when the drop-off zones are in use?*

  Response: *The proposed drop-off parking is flushed with Schrader Street and pedestrian path along the eastern boundary which connects to Currie Street offering new pedestrian/cyclist connection. Please refer to* ***Section 3.3.4*** *of the enclosed amended TIS report.*

- *How do people connect between the drop-off zone and nearby car parking?*

  Response: *Plaza car park is located approximately 75 m from drop-off zone. Visitors using car parks nearby will be able to use existing footpath on the southern side of Schrader Street to access drop off zone.*
  As mentioned in response to comment 4 above, the proposed pedestrian connection along the eastern boundary between Currie Street and drop-off area along Schrader Street provides for a new pedestrian connection.

- *Can the resultant traffic volumes that are substantially increased by this development be supported given the existing narrow road width of Schrader Street (kerb to kerb is only 4.65 metres)?*

  Response: *Trip generation presented in the TIS indicates up to 32 peak hour trips using Solomon Street and/or Schrader Street. It is worth noting that the Plaza car park has two entrances one each from Solomon Street and Hindley Street, while Rosina Street car park is accessible from Hindley Street (via Rosina Street) only. As such traffic generated by the proposed development will be split into traffic destined to nearby car parks and to Schrader Street drop off area. Traffic*

originating from these two car parks will likely travel via Kingston Street and Rosina Street or Solomon/Burnett Street to access/egress Currie Street. Again no impact on Schrader Street traffic. In reality, a small fraction of estimated 32 peak hour trips will likely be using Schrader Street to access drop-off area. Refer to Appendix A for turn paths showing two vehicles passing in Schrader Street.

- *Are infrastructure changes required to support this development?*

  Response: *Minor infrastructure amendments for servicing may be required however there is no specific works required to facilitate the development. An upgrade of Schrader Street would be welcomed and the proposed development may present a Catalyst for these works to occur but are not essential for the development to be undertaken.*

  Council has reviewed the above response by the applicant and has indicated (on 14 May 2019):

  The Updated 62 Currie application Traffic Impact Statement (TIS) was received on Thurs 9 May. This was in response to RFI related to fundamental omissions the earlier version of the TIS regarding if the vehicle access to the proposal is functional. CoA also met directly with the project team to highlight the issues.

  Unfortunately the information in the updated TIS is still incomplete and doesn't yet demonstrate essential vehicle manoeuvring arrangements in full. There remains a fundamental risk that the current proposal would significantly impact on the functionality of public street (Schrader) and also the access rights of adjacent properties.

  In addition we have determined that Schrader Street would require conversion to a single surface (removal of kerb) to safely accommodate the change in traffic and pedestrian activity given the current roadway width is too narrow for two service vehicles to pass each other safely. It is essential that a conversation occurs between the proponent and CoA regarding funding of this Schrader St upgrade on which the development is dependent to function.

  We have met with the project team on site and are keen to work proactively with the proponent to find a way forward. However, it is essential that the project documents for any approval explicitly demonstrate that the physical design can accommodate the necessary manoeuvres.

  The applicant has advised that the vehicle movements associated with the loading dock and passenger and service loading areas are safe and convenient and that the upgrade of Schrader Street is not essential for this to occur. Refer to the planning assessment for a discussion on these matters.

5. STATUTORY REFERRAL BODY COMMENTS

Referral responses are contained in the ATTACHMENTS.

5.1 Government Architect

The Government Architect (GA) is a mandatory referral in accordance with Schedule 8 of the *Development Regulations 2008*. The State Commission Assessment Panel must have ***regard*** to this advice.

The GA supports the proposal in principle and has encouraged continuing the design development during the next phases of the project to ensure full delivery of the design intent as proposed. To ensure the most successful design outcome is achieved, the GA has recommended 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:

- *A high quality of external materials supported by a materials sample board.*
- *Review of the design, detailing and materiality of the entry canopies to better reflect the simple extruded arch form, improve the visibility of the double height arches from ground level and an integrated design outcome.*
- *Detailing of the expressed precast concrete frames, glazing selection, frame detailing and alignment to ensure delivery of the design intent.*

The applicant has noted the GA's recommendations above and considers that the canopy design is appropriate and the materials and detailing has been expressed in the application documentation provided and forms part of the application.

Refer to the design section of this report (8.4) for more details.

5.2 Adelaide Airport

The Adelaide Airports Authority (AAA) is a mandatory referral in accordance with Schedule 8 of the *Development Regulations 2008*. The AAA can ***direct*** the SCAP to refuse an application or impose conditions.

The AAA advises:

The application has been assessed and the building at a proposed height of RL 135.170m AHD the application will penetrate the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations.

The application will require approval in accordance with the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 and therefore will be forwarded to the Department of Infrastructure and Regional Development for their approval.

The developments will penetrate the OLS by approximately 35 metres.

If the development is approved by the Department of Infrastructure, Regional Development and Cities any associated lighting would also need to conform to the airport lighting restrictions and shielded from aircraft flight paths.

Crane operations associated with construction, if approved, will also be subject to a separate application.

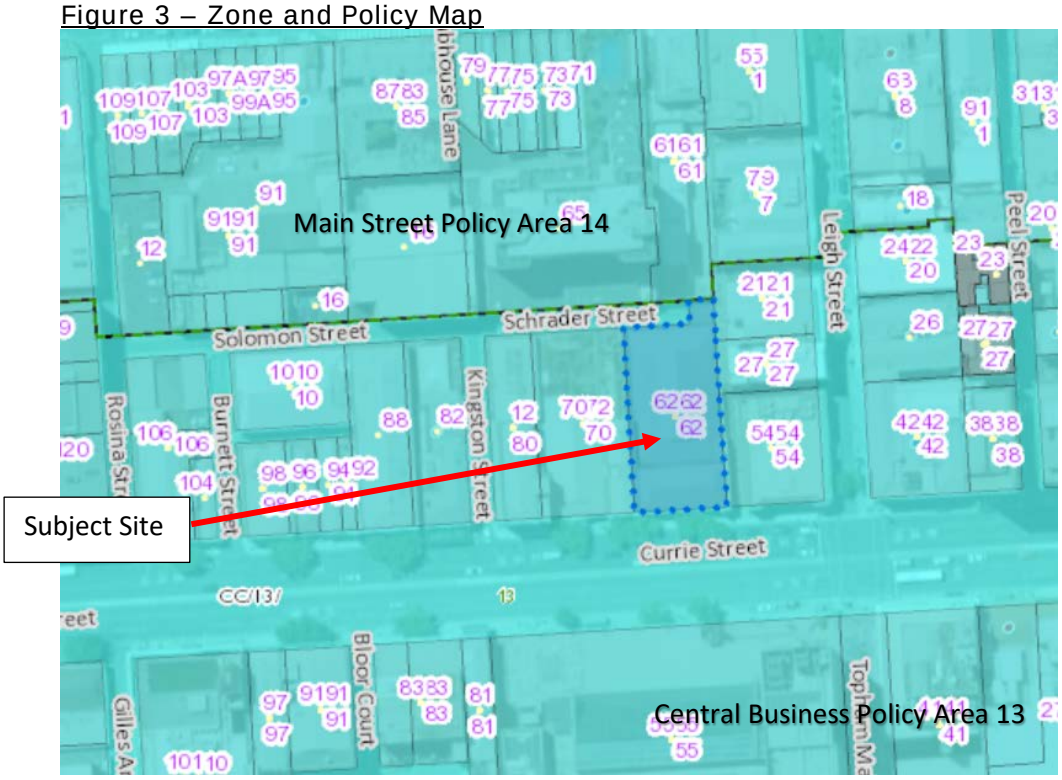
6. PUBLIC NOTIFICATION

The application is a Category 1 development pursuant to PDC XXXX of the Capital City Zone of the Adelaide (City) Development Plan. No public notification was therefore required.

7. POLICY OVERVIEW

The subject site is within the Capital City Zone, Central Business Policy Area 13 as described within the City of Adelaide Development Plan Consolidated 07 June 2018.

Figure 3 – Zone and Policy Map



7.1 Central Business Policy Area 13

- The Policy Area is the State's pre-eminent economic, governance and cultural hub and will be supported by educational, hospitality and entertainment activities and increased opportunities for residential, student and tourist accommodation.

- Buildings will exhibit innovative design approaches and produce stylish and evocative architecture, including tall and imposing buildings that provide a hard edge to the street and are of the highest design quality.

- Complementary and harmonious buildings in individual streets will create localised character and legible differences between streets, founded on the existing activity focus, building and settlement patterns and street widths.

- Development of a high standard of design and external appearance is anticipated in a way that successfully integrates with the public realm. To enable an activated street level, residential uses (or similar) should be located above ground level.

7.2 Capital City Zone

- High-scale development is envisaged in the Capital City Zone with high street walls that frame the streets and an interesting pedestrian environment and human scale created at ground level.

- 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.

- 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.

- 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.

7.3 Council Wide

Council Wide provisions provide guidance on the desire for increased levels of activity and interest at ground level; a high standard of design; appropriate bulk and scale of buildings and positive contribution to streetscapes including interfaces with places of heritage significance. Multi-level car parks and short stay public use of ancillary car parking spaces are discouraged at ground floor street frontages within the Primary Pedestrian Area.

7.4 Overlays

7.4.1 Affordable Housing

The subject land is located within the Affordable Housing Designated Area in Development Plan Map Adel/1 (Overlay 5a).

The Overlay recommends integration of affordable housing with residential and mixed-use development, and development comprising 20 or more dwellings to include a minimum of 15 percent affordable housing.

7.4.2 Adelaide City Airport Building Heights

Prescribed height limits are specified for the subject land under the Adelaide (City) Airport Building Heights Map Adel/1 (Overlay 5).

Referral to the Department of Transport and Regional Services through AAL has been undertaken given the development exceeds the Obstacle Limitation Surface prescribed in the Development Plan.

8. PLANNING ASSESSMENT

The application has been assessed against the relevant provisions of the City of Adelaide Development Plan, which are contained in Appendix One.

8.1 Quantitative Provisions

	Development Plan Guideline	Proposed	Guideline Achieved	Comment
Building Height	'No Prescribed Height Limit' (minimum height 28m)	91.95m / 135.17 AHD	YES ☒ NO ☐ PARTIAL ☐	The proposal realises the development potential of the site
Land Use	A wide range of land uses are envisaged, including hotel, office and restaurant	Hotel, office, café, restaurant, bar	YES ☒ NO ☐ PARTIAL ☐	The land uses proposed are expressly desired in the Zone, with the active uses located at ground
Car Parking	No minimum requirement	2	YES ☒ NO ☐ PARTIAL ☐	While on-site car parking is not required by the DP, 2 spaces are provided albeit these are dedicated to drop-

				off and pick up use only
Bicycle Parking	A minimum of 67	86	YES ☒ NO ☐ PARTIAL ☐	The on-site bike parking provided exceeds the minimum requirement

8.2 Land Use

The land uses proposed - restaurant, café, licensed premises/bar, office and hotel are anticipated within the *Capital City Zone* and will contribute to the Desired Character sought. The land uses proposed will provide for both day, evening and late night economy as desired.

At ground, active uses such as the café, restaurant and kitchen will ensure an interesting pedestrian environment and sense of activity along Currie Street and the proposed pedestrian link. The hotel entry lobbies will also result in 24 hour movement and bustle within and around the site.

8.3 Building Height

Within the Capital City Zone, PDC 21 provides that development should not exceed the maximum building height shown in the relevant Concept Plan. Concept Plan Figure CC/1 shows a no maximum height for the subject site. A minimum height of 28 metres is prescribed however by Zone PDC 22 to ensure development provides optimal height and floor space yields to take advantage of the premium City location.

At 25 storeys (91.95 metres), the building realises its development potential and is of a yield and height anticipated in this part of the City.

The Central Business Policy Area however advocates buildings of a height that ensures airport operational safety is not adversely affected. A statutory referral to Adelaide Airports has occurred given the proposed height at 135.17 AHD exceeds the Obstacle Limitation Surface (OLS) of 100 AHD in this location. Adelaide Airport has indicated support for the height and their detailed comments are provided above under Statutory Referral Body Comments - *5.2 Adelaide Airports.*

8.4 Setbacks, Design and Appearance

The *Capital City Zone* seeks high street walls that frame the city streets, which is strengthened by the Central Business Policy Area that supports tall and imposing buildings that provide a hard edge to the street. Minor Streets and laneways should also have a sense of enclosure through a welcoming human scale and respond to context.

Buildings should exhibit innovative design approaches and produce stylish and evocative architecture of the highest design quality. Development should be of a high standard of architectural design and finish to produce a variety of design outcomes of enduring appeal and contemporary juxtapositions providing new settings for heritage places.

The Development Plan identifies Currie Street as an east-west boulevard that provides an important entry point to the City. It is anticipated that Currie Street will become a key focus for pedestrians, cycling and public transport. Existing long views and vistas to the hills should also be maintained.

The GA supports the development's overall massing and composition, composed as a simple singular expression that presents as a slender built form with:

- A three storey podium element and use of materials (brickwork and glass bricks) to reflect the fine grain character and vertical fenestration proportions of the local heritage buildings in the locality;
- A singular tower form with expressed concrete frame to all elevations;
- Façade setbacks to the east and west that emphasise the vertical proportions of the tower and provide natural light to the upper levels; and
- A double height frame to the crown.

The current low scale context of this locality means the building will have a high degree of visibility in the round. The GA supports the design development of the west elevation to provide an expressed concrete frame and reinforce the singular expression of the tower. However, the inclusion of the expressed frame to the west elevation, in the opinion of the GA, is critical to the delivery of the design intent of a building in the round. In the event of SCAP support, a condition of approval will seek confirmation of the detailing of the expressed precast concrete frames, glazing selection and frame detailing and alignment to ensure delivery of the design internet, prior to Building Rules Consent (BRC) being issued for Stage 4 (Architectural fit-out and external facades). A condition of approval will also seek a physical samples board to ensure the high quality of materials intended (brick, tiles, Brass, Brightonlite concrete etc.) is followed through to the construction phase.

In regards to setbacks, the development is considered to meet the Desired Character sought for the *Capital City Zone* at ground, with a hard street edge and podium wall to the Currie Street boundary. The podium height, use of bricks (glass and 'Burlesque Charming Black glazed or similar') and expressed arches will also provide a contemporary visual link with the adjacent local heritage places as desired. A sense of arrival, pedestrian interest and human scale is also considered acceptable the Schrader Street vista, with a lower scale of built form and Hotel signage proposed to the north of the site.

Figure 4 – Western vista, from Schrader Street

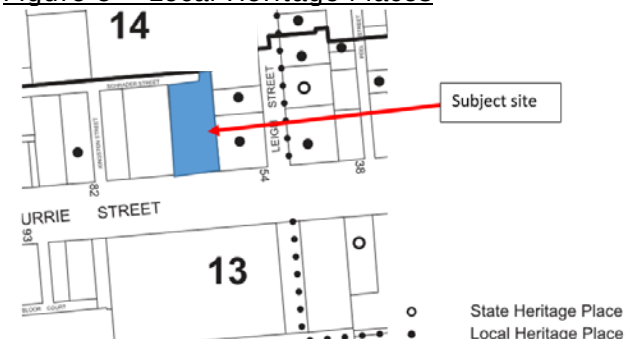
At upper levels, the 3.2 metre setback provided to the eastern and western elevations for the hotel levels (habitable room windows) will ensure ongoing access to natural light and outlook as desired by CW PDC 67.

Notwithstanding the recommended conditions that seek confirmation of the details (for the western elevation and a samples board), the development is considered to display a high standard of architectural design and finish, massing and composition.

8.5 Heritage

The development site abuts two (2) local heritage places (Commerce House at 54 Currie Street and Woodchester House at 7 Leigh Street) to its east – see Figure 5 below.

Figure 5 – Local Heritage Places



Council Wide Objs and PDCs seeks that development on land adjacent to land containing a heritage place should not detract from the heritage place and demonstrate a design relationship with the heritage place (without necessarily replicating its historic detailing). This may be achieved by establishing a compatible scale, form, bulk, setbacks and proportions, use of materials and composition of design elements.

The GA has outlined in referral advice that:
A three storey podium element is proposed to Currie Street with the intention to reflect the height of the adjacent Commerce House. The podium is characterised by brickwork, glass bricks and expressed arches to reflect the vertical fenestration proportions of the Local Heritage Place buildings in the immediate locality. I support the design approach to reflect the fine grain character of the area with a simple materially textured podium.

The 2.4 metre eastern setback (between ground and office/level 03) and use of a curtain wall façade at levels 4 to 12 is also considered to provide adequate separation and appropriate backdrop to the presentation of the local heritage buildings when viewed from both Currie and Leigh Streets as shown in the images below.

Figure 6 – Streetscape Images

Given the above, it is considered that the proposed development will retain the heritage value and setting of these adjacent local heritage places while also providing a compatible visual relationship via the use of materials and design approach.

8.6 Traffic Impact, Access and Parking

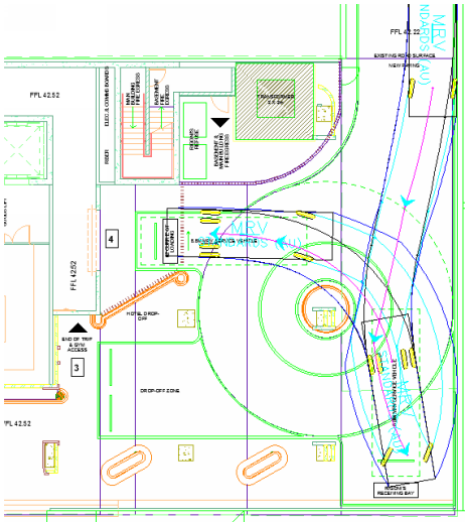
Development should provide safe, convenient and comfortable access and movement (Transport and Access, PDC 224), including by reflecting the significance and increasing the permeability of the identified pedestrian network (PDC 226), and by providing an adequate supply of on-site secure bicycle parking (PDC 234). No minimum requirement for provision of on-site car parking arises for development in the Capital City Zone.

The application documentation includes a Traffic Impact Assessment Report prepared by WSP Consultants. As outlined above, the site is located in an area that has no minimum requirement for on-site vehicle parking, with the application proposing two (2) car parking bays accessible from Schrader Street to facilitate pick-up and drop-off for staff and guests/visitors. An existing taxi rank (7pm-7am) is also located immediately in front of the development site on Currie Street (northern side), which will assist with convenient drop-off and pick-up for the hotel patrons along with all other uses within the building.

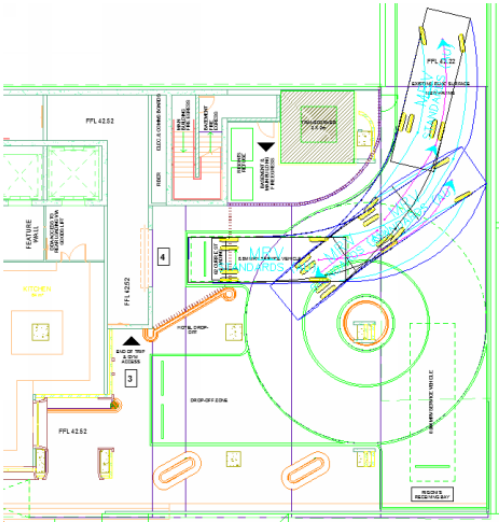
The WSP report has undertaken a review of the waste dock area and the vehicle swept paths required for the waste collection vehicles to enter and exit the site in a forward direction. The swept path diagrams shown below in Figure 7 indicate an 8.8m (MRV) truck can enter the loading dock by reversing in from in front of the Rigoni's receiving bay area and then exits out in a forward direction to Schrader Street.

Figure 7 – Swept Paths for 8.8 (MRV)

Entry



Exit



The turnpath assessment for the anticipated vehicles sizes (SRV 6.5m long and MRV 8.8m long) has indicated that the existing physical constraints of the surrounding streets will require drivers and service/delivery vehicles to access the loading area via Burnett Street, down Solomon Street to Schrader Street. While negotiating these tight intersections/streets will require precision to avoid multiple manoeuvres, an MRV (and SRVs, which will find it easier) will be able to negotiate turning movements according to WSP from Burnett Street onto Solomon, and from Schrader on to Kingston Street to exit.

Council has raised concern with the management of vehicle manoeuvring and possible conflict for larger vehicles on the subject site and adjacent streets. They advise that the information in the updated Traffic Impact Statement does not yet demonstrate essential vehicle manoeuvring arrangements in full. There remains a fundamental risk in the opinion of Council that the current proposal would significantly impact on the functionality of public street (Schrader) and also the access rights of adjacent properties. Council has sought the applicant require the upgrade of Schrader Street and also seek the applicant enter into an agreement for a right of way on their land for other users of Schrader Street.

The applicant advises, based on their traffic engineers expert advice, that the proposed development, does not include nor propose any change nor require any changes to Schrader Street in order for the proposed development to achieve safe and convenient access to the proposed Loading Bay and that of the proposed Shared Passenger and Service Vehicle Loading bays within the site of their development. In addition the *proposal does not prohibit or restrict the legal access to the existing Loading Bays and vehicle access points to adjacent buildings along the length of Schrader Street*. It is understood the applicant is meeting with Council to alleviate the above concerns and to demonstrate the development can work in isolation and does not rely on an upgrade to Schrader Street. Relevant traffic advice from the applicant will be made available to SCAP members prior to the SCAP meeting to confirm the current position of Council in any event.

With regards to the request for a right of way on the subject land, this is considered to be outside the scope of this application and is not a requirement for the applicant to enter into such an agreement. The applicant has however advises that they maintain a desire to work collaboratively with Council in their endeavours to upgrade Solomon and Schrader Street in the future.

In terms of bicycle parking, Table Adel/6 *On-Site Bicycle Parking* provides the required rates for various land uses, which has been analysed below in the table in Figure 8 by WSP:

Figure 8 - On-Site Bicycle Parking Analyses

LAND USE AND PARKING RATE	UNIT	BICYCLE PARKING REQUIRED
Café/restaurant — 1 per 20 employees — 1 per 50 seats for customers	 80 seats	 1 (employees) 2 (customers)
Offices — 1 per 200 sqm of GLFA for staff — 2, plus 1 per 1000 sqm of GLFA for visitors	 8500 sqm	 43 (staff) 10 (visitors)
Motel (hotel) — 1 per 20 employees — 2 for first 40 rooms, plus 1 for every additional 40 rooms for customers (guests)	 188 rooms	 3 (staff) 6 (visitors)
Licensed Premises — 1 per 20 employees — 1 per 40 sqm bar floor area for customers — 1 per 60 sqm dining room floor area for customers	 31 sqm bar area 285 sqm dining area	 2 (employees) 1 (customers) 5 (customers)
Total		49 (employees/staff) 18 (customers/visitors)

Based on the rates above, the development should provide a minimum of 67 bicycle parks. In this case, 86 parks are provided in the following configuration:

- 72 parks located in the basement via a stacking system by *Five at Heart*. These spaces are to be made available to office and café/restaurant staff and hotel guests; and
- 14 parks for visitors is to be provided at ground level via seven (7) bike rails on the subject site.

The GA has commended the decision to exclude car parking from the proposal and has acknowledged the movement strategy for cyclists from ground level to basement to provide convenient access and safety for users.

8.7 Movement / Pedestrian Links

The Desired Character of the Capital City Zone anticipates a safe and convenient movement network throughout the City, with the provision of high quality pedestrian linkages on both public and private land between important destinations and public transport. Council Wide Objs and PDCs also seek development that contributes to the quality of the public realm as a safe, secure and attractive environment for pedestrian movement. Within the Primary Pedestrian Area, development should provide weather protection and shelter for pedestrians.

The proposed site is located within the *Primary Pedestrian Area*, just outside the *Core Pedestrian Area.* Leigh Street, which is less than 50 metres east of the subject site, is an *Existing Pedestrian Link* as recognised on MAP Adel/2 – Overlay 2A.

The development proposes to connect Schrader and Currie Street and enhance the laneway culture via providing a north-south pedestrian link at ground along the eastern boundary, adjacent easement area associated with Commerce House. The connection aims to reinforce the City of Adelaide's laneway activation strategy and seeks to facilitate potential future linkages to Leigh Street.

The proposed building has been setback 2.4 metres from its eastern boundary at ground with the intent to provide a shared laneway space with the existing easement

area associated with Commerce House at 54 Currie Street (subject to negotiations with the land owner). A clearance height of 12.75 metre is to be maintained for a majority of the link to provide as sense of space and access to natural light.

While the applicant has indicated positive negotiations with the adjoining land owner in regards to the joint pedestrian space, two options to demonstrate how the pedestrian link will work, both in isolation (in the event collaboration with the neighbouring property owner does not transpire) and if the joint collaboration is realised.

Option 1 – Laneway without Collaboration

Option 1 will comprise a paved (Silver Grey Granite Paver or similar) area along the link, with the topography level difference between the two abutting sites (approximately 700mm) to be treated with a 1:20 ramp and associated balustrades and feathered stairs that step up to 54 Currie Street's to the north/east of the link.

Option 2 - Laneway with Collaboration

Option 2 will also propose a ramp and feathered stairs as outlined in Option 1 but will also include four (4) raised planters with seating along with bike parking over the easement area at 54 Currie Street (constructed with Brighton light and emerald green tiles) and a shared pavement treatment (Silver Grey Granite Paver or similar) as shown in figure 9 below.

Figure 9 – Laneway Perspectives

The inclusion of the link (with or without the adjacent land owner collaboration) is a desirable outcome and will provide safe and convenient movement for pedestrians on private land as desired within the *Capital City Zone*. At ground, active uses such as the café, restaurant and kitchen will ensure an interesting pedestrian environment and sense of activity along the link. The hotel entry lobby, views into the kitchen area and rear drop-off/pick-up area will also result in 24 hour movement and bustle within and around the site.

The GA strongly supports the design intent to enhance the laneway culture and address existing Crime Prevention through Urban Design (CPTED) issues via the pedestrian connection from Currie to Schrader Street. The GA has outlined however that the ground plane materiality, lighting, detailing and scale of landscape elements are critical to a visually and spatially connected and welcoming laneway link. Accommodation of the development's planters within the confines of the subject site has also been recommended by the GA. At this stage, the applicant is only proposing planters as part of Option 2 (above).

Proposed pedestrian circulation and sightline connection between Currie to Schrader Streets has been considered by the applicant to ensure efficient movement and assist with wayfinding. The absence of built form in the north-east corner at ground shown in figures 10 and 11 below demonstrates the visual connection and how a pedestrian negotiates their way through the site.

Figure 10 – Pedestrian Circulation Strategy

Figure 11 – Sightline Perspective

A full length canopy to Currie Street is not proposed for weather protection as desired within the *Primary Pedestrian Area*. The applicant outlined during the assessment process that existing Council street trees to Currie Street hinder the ability to provide meaningful protection over the footpath and hence a full length canopy is not proposed in this case.

A canopy hood over the entrance lobbies to Currie Street and eastern entry off the pedestrian link are provided however. The GA has recommended further review of the design, detailing and materiality of these canopy hoods to better reflect the simplicity of the extruded arch form and improve the visibility of the double height arches from ground level. A simple extruded glass arch canopy has been recommended by the GA to assist with reinforcing the expression of the arches and an integrated design outcome. The applicant has indicated that in their view that the design of the solid white powder coated steel hood warrants support given:

- They reflect the podium expressed arch fenestration design and clearly define the pedestrian entrances to the building; and

- The colour and form is considered to be effective in providing an integrated façade feature consistent with the building's art deco style.

While the form, material and colour of the canopies has not been amended in line with the GA's recommendation, the canopy hoods are considered acceptable given the overall architectural expression of the building.

Given the above, the relevant Objs and PDCs regarding movement are considered achieved.

8.8 Environmental Factors

8.8.1 Crime Prevention

Development should promote the safety and security of the community in the public realm and within development, through the promotion of natural surveillance and other design measures (Environmental – Crime Prevention Through Urban Design, PDCs 82 to 84).

The applicant's planning report identifies a range of active and passive surveillance strategies for the site. The strategies include:

- The Currie Street frontage and eastern elevation has utilised natural surveillance, with outlook in/out from the restaurant, café/bar and kitchen areas adjacent the pedestrian link;
- The pedestrian link between the laneway and Schrader Street to the north is accommodated through a single storey thoroughfare that incorporates the high frequency hotel drop-off car and end of trip external access point;
- To ensure effective sight lines through this pedestrian intersection, the north-eastern corner of the ground level has been stepped in. As such, the pedestrian intersection is able to be viewed from numerous vantage points; and
- The proposal is considered to provide a safe and permeable pedestrian experience which avoids areas of entrapment and maximises positive surveillance and activity through all hours of the day and night.

Given the above, the proposed development is considered to have satisfactorily addressed CPTED principles and therefore the Development Plan requirements.

8.8.2 Noise Emissions

The applicant has provided an acoustic report undertaken by WSP. The acoustic assessment has recommended required façade glazing to control noise ingress into the hotel rooms and mitigation measures to ensure adjacent noise sensitive development is not unreasonably impacted by the proposal (such as the rooftop bar and plant etc.), in line with relevant dB(A) criteria in Council's Development Plan.

The acoustic report concludes that:

- Traffic noise emissions in to noise sensitive areas can be controlled to achieve the internal noise criteria using typical single glazed and double glazed IGU windows and doors;
- Noise ingress from entertainment areas surrounding the site into hotel rooms located from Level 13 to 22 can be controlled to achieve the internal noise criteria using typical single glazed and double glazed IGU windows and doors;
- Noise emissions from roof top mechanical services plant to surrounding noise sensitive receives (Hotel Grand Chancellor and Holiday Inn) will be designed to satisfy the environmental noise criteria; and
- The rooftop bar will provide low level background music (similar in level to typical conversation) in the dining area. If it is decided that live or amplified music will be provided, further analysis would need to be carried out to ensure appropriate mitigation measures to achieve the relevant music noise criterion in regards to adjacent noise sensitive receivers (Hotel Grand Chancellor and Holiday Inn).

In the event of SCAP support, a condition of approval will require the recommendations in the WSP report (Project No PS111107) are undertaken to ensure the development meets the relevant noise criteria.

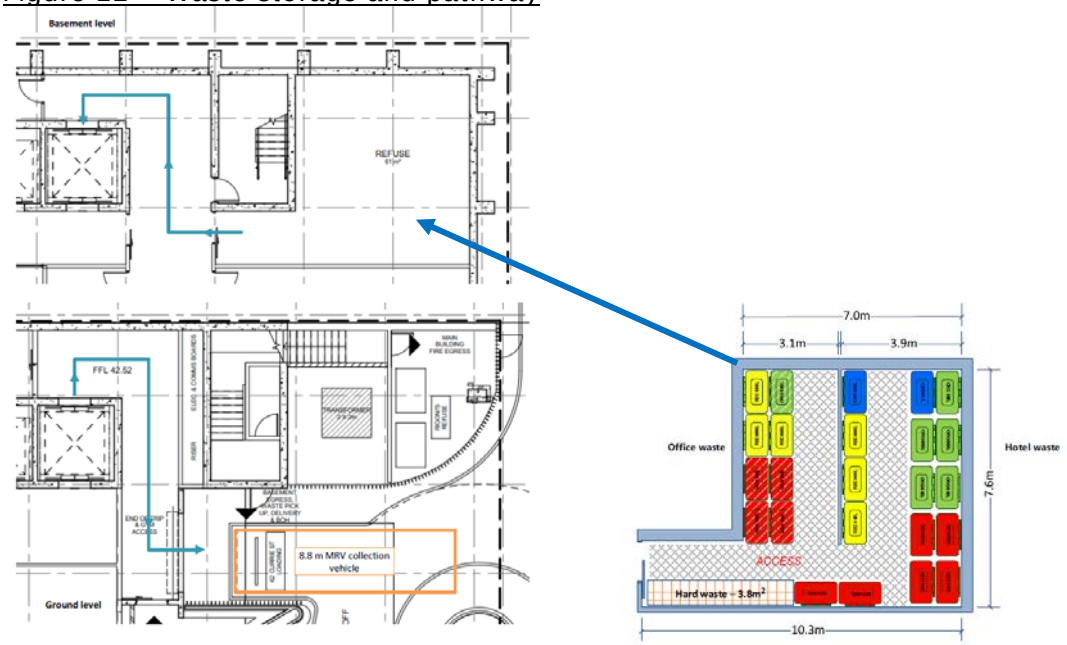
8.8.3 Waste Management

PDC 101 (Environmental – Waste Management) requires a dedicated area for on-site collection and sorting of recyclable materials and refuse to be provided within all new development. Development greater than 2,000 square metres total floor area should manage waste by containing a dedicated area for collection and sorting of construction waste and recyclable building materials, on-site storage and management of waste and disposal of non-recyclable waste (PDC 103).

A Waste Management Plan (WMP) has been developed by Rawtec for the applicant. This report has estimated waste and recycling volumes for the land uses, bin and waste storage capacity, along with frequency of collection.

Waste and recycling in this case will be transferred via the service lift to/from the basement level waste room as shown below in figure 12.

Figure 12 – Waste storage and pathway



Rawtec have estimated that the number of vehicle collections would be 19 per week (but up to 31 collections per week if the hotel and office contractors are not the same).

Council has been referred the application and raised no concern with the proposed Waste Management Plan proposed, although has raised concerns about vehicle movements when turning onto Schrader Street (refer to the traffic section). Given this and the above advice provided from Rawtec and WSP, the proposal is considered to have addressed the Development Plan requirements for waste management.

8.8.4 Energy Efficiency

Buildings should provide adequate thermal comfort and minimise the need for energy use for heating, cooling and lighting through design measures specified in Environmental – Energy Efficiency PDCs 106 to 108.

The proposed development is supported by a sustainability report by WSP that indicates a number of initiatives that have been adopted in the design of the building which include:

- Office areas targeting a 5 Star base building NABERS energy rating;
- High performance façade incorporating double glazing with low-e coatings and thermally broken frames;
- Floor layouts with reduced glazing on western façade to minimise afternoon solar loads;
- The use of exposed slabs to provide thermal mass combined with capability for night cooling strategies to minimise energy consumption and electrical demand;
- HVAC systems with central thermal plant utilised for both the office and hotel elements of the development, optimized sizing and control for maximum energy efficiencies, in-line with 5 Star Nabers (or equivalent) requirements;
- Energy efficient light fixtures comprising high efficiency LED fittings used throughout;
- Lighting control system with motion sensors and daylight dimming;
- Electrical sub-metering and management system to allow for ongoing management and reduction of energy consumption.
- Thermal sub-metering to allow for ongoing optimization of mechanical services after construction to further reduce energy consumption; and
- Destination control of lifts to minimise trip times and associated energy consumption.

Therefore, relevant Council Wide Objs and PDCs regarding Energy Efficiency are considered satisfied.

8.8.5 Wind Analysis

A wind report has been provided by the applicant given the Adelaide (City) Development Plan seeks any building greater that 21 metres demonstrates that wind speeds, as a result of a development, do not adversely impact pedestrian comfort.

The WSP report concludes that there is no requirement to introduce any wind mitigation measures along the façade given:

- The modelling outcomes in the WSP report demonstrates that the development is not expected to cause wind speeds 16m/s on adjacent streets and public spaces; and

- The presence of low rise existing buildings to the site's immediate surroundings have assisted in alleviating the incoming velocity acting towards the proposed site.

Given the above advice from WSP, unduly wind tunnel effects are not anticipated to result as a consequence of the proposed building's design and therefore Council Wide PDCs 119 & 125 are considered achieved.

8.8.6 Site Contamination

Council Wide (Environmental – Contaminated Sites) policy recommends that where there is evidence or reasonable suspicion that land may have been contaminated, development should only occur where it is demonstrated that the land can be made suitable for its intended use prior to commencement of that use.

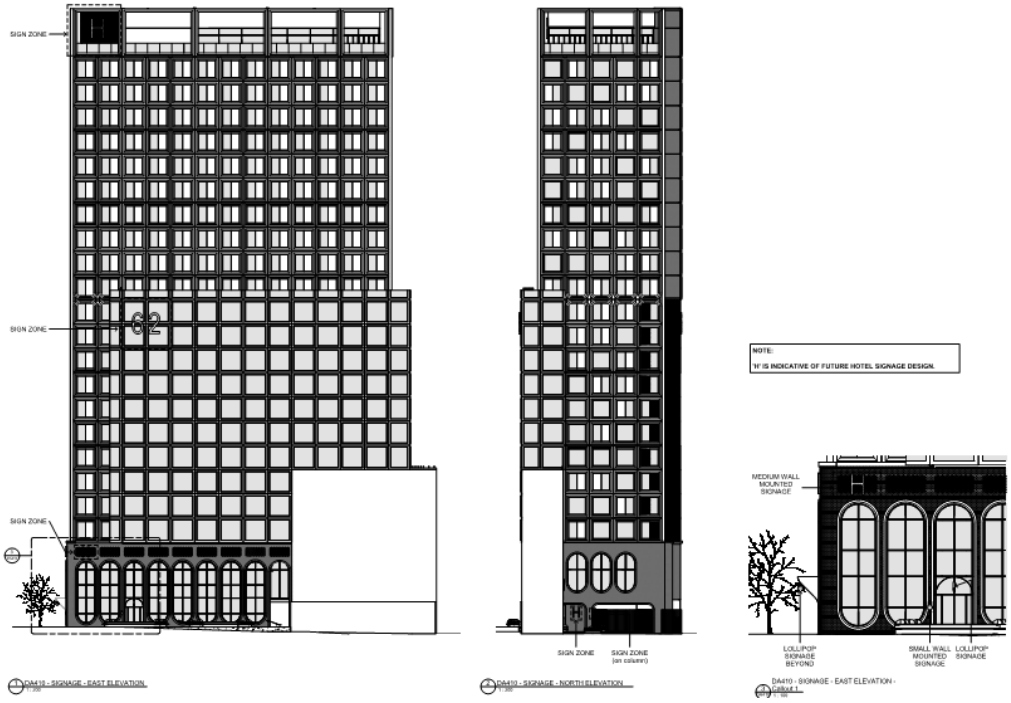
A Site History report has not been provided at this stage by the applicant to demonstrate the site is suitable for its intended use or if further testing and remediation will be required. A condition is proposed to be assigned to the consent however, in the event of SCAP support, that a statement from a suitably qualified environmental engineer be provided that demonstrates suitability of the site for its intended use be provided prior to the commencement of construction.

8.9 Signage

Capital City Zone PDCs and Council Wide Objs and PDCs under *Advertising* (Built Form and Townscape) seek outdoor advertisements that are designed and located to reinforce the desired character and amenity of their location, to be concise and efficient, avoiding visual clutter and ensuring a hazard is not created.

The applicant has shown indicative locations for eight (8) signs, three (3) to be located on each side of the podium and hotel signage in the corner of the tower on the eastern and western elevations. A sign 'zone' is to be located halfway up the building also on the eastern and western facades associated with the office land use. Three (3) small wall mounted signs are also proposed near the entry along the pedestrian link. The location of these signs is shown below in figure 13.

Figure 13 – Signage locations



While signage will form part of a separate application, the intended location, number and size of anticipated signage is considered acceptable and will provide a co-ordinated approach to signage for all land uses proposed within the building.

9. CONCLUSION

The applicant proposes a 25 storey mixed use development comprising hotel and office use within a prominent City location. The proposal meets the Development Plan criteria in relation to height, land use, parking (bicycle and vehicle), setbacks, ESD and CPTED principles, noise emissions and protection and waste management. The inclusion of a pedestrian link from Currie to Schrader Street will also positively contribute towards the City's movement network and assist with laneway culture.

Council's concern regarding the larger vehicle movements onto Schrader Street is noted. However, the applicant has outlined that adequate access to the site, with smaller trucks and appropriate management measures, can be achieved which does not rely upon the upgrade of Schrader Street. The use of Schrader Street for these back of house activities is a positive outcome for the development and allows the Currie Street façade to be used for active uses.

The development meets a majority of the Development Plan requirements and is considered to display a high standard of architectural design. The development is therefore recommended for the granting of Development Plan Consent, subject to conditions.

10. 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 Adelaide (City) Development Plan.

3) RESOLVE to delegate the granting of Development Plan Consent to the proposal by Currie St Pty Ltd for a 25-storey mixed use building comprising commercial at ground, office and hotel accommodation at upper levels at 62-68 Currie Street, Adelaide, subject to:

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 following plans submitted in Development Application No 020/A019/19.

   Reason for condition: to ensure the development is constructed in accordance with endorsed plans and application details.

2. The acoustic attenuation measures recommended in the report, dated February 2019 by WSP (Project No. PS11107), shall be fully incorporated into the building rules documentation to the reasonable satisfaction of the SCAP. Such acoustic measures shall be made operational prior to the occupation or use of the development.

   Reason for condition: to ensure noise does not result in amenity impacts on noise sensitive development.

3. The rooftop bar shall provide low level background music only (similar in level to typical conversation) in the dining area in accordance with the acoustic attenuation recommendation in the report dated February 2019 by WSP (Project No. PS11107).

   Reason for condition: to ensure noise does not result in amenity impacts on noise sensitive development.

4. Prior to Development Approval for Stage 4, the applicant shall submit a final detailed schedule of external materials and finishes in consultation with the Government Architect to the reasonable satisfaction of the SCAP.

   Reason for condition: to ensure the development is constructed in accordance with endorsed plans and application details.

5. Prior to Development Approval for Stage 4, the applicant shall provide the detailing of the expressed precast concrete frames, glazing selection and frame detailing and alignment in consultation with the Government Architect to the reasonable satisfaction of the SCAP.

   Reason for condition: to ensure the development is constructed in accordance with endorsed plans and application details.

6. Mechanical plant or equipment shall be designed, sited, screened and maintained 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 comply with the requirements of the Noise EPP and the criteria outline din Table 3.5 of the Acoustic Report undertaken by WSP dated February 2019 (project No. PS 111107).

   Reason for condition: to ensure mechanical equipment does not cause unreasonable nuisance or loss of amenity in the locality.

7. A statement by a suitably qualified environmental professional that demonstrates that the land is suitable for its intended use (or can reasonably be made suitable for its intended use) shall be submitted to the SCAP prior to any superstructure works.

   Reason: to ensure the site is suitable for its intended use.

8. All external lighting on the site shall be designed and constructed to conform to Australian Standard (AS 4282-1997).

   Reason for condition: to ensure external lighting does not introduce undue potential for hazards to users of the adjacent road network in accordance with the necessary standard.

9. All stormwater design and construction shall be in accordance with Australian Standard AS/NZS 3500.3:2015 (Part 3) to ensure that stormwater does not adversely affect any adjoining property or public road.

   Reason for condition: to ensure stormwater infrastructure is designed and constructed to minimise potential for flood risk to adjoining property or public roads associated with stormwater runoff in accordance with the necessary standard.

10. A proprietary stormwater treatment device (i.e. Gross Pollutant Trap) shall be installed within the carpark in accordance with Council and EPA Water Quality Guidelines. This system shall be regularly inspected, cleaned and maintained in good working order, with gross pollutants, sediments, oil and grease removed by the facility operator (at regular intervals) for the life of the development.

    Reason for condition: to ensure stormwater infrastructure is designed and constructed to minimise potential harm to water quality.

11. An appropriate Soil Erosion and Drainage Management Plan (SEDMP) (as described in the "Stormwater Pollution Control, General Code of Practice for Local, State and Federal Government") shall be prepared and implemented which includes a range of strategies to collect, treat, store and dispose of stormwater during construction and from the final form of the development (i.e. from roofs, driveways, parking areas, lawns, etc) while minimising disposal into the environment. EPA information sheets, guidelines documents, codes of practice, technical bulletins etc. can be accessed on the following website: http://www.epa.sa.gov.au.

    Reason for condition: to ensure stormwater is appropriately managed during construction.

ADVISORY NOTES

a. The development has been approved in the following stages:
   - Stage 1: Demolition;
   - Stage 2: Substructure construction;
   - Stage 3: Super structure construction;
   - Stage 4: Architectural fit-out and external facades.

b. 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.

c. 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.

d. 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).

e. The applicant is reminded of their obligations under the Local Nuisance and Litter Control Act 2016 and the Environment Protection Act 1993, in regard to the appropriate management of environmental impacts and matters of local nuisance. For further information about appropriate management of construction site, please contact the City of Adelaide.

f. The granting of this consent does not remove the need for the applicant to obtain all other consents that may be required by other statutes and regulations. The applicant is also reminded that unless specifically stated, conditions from previous relevant development approvals remain active.

g. The application has been assessed by Adelaide Airport and the building at a proposed height of RL 135.170m AHD will penetrate the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations.

   The application will require approval in accordance with the *Airports Act 1996* and the *Airports (Protection of Airspace) Regulations 1996* and therefore will be forwarded to the Department of Infrastructure and Regional Development for their approval.

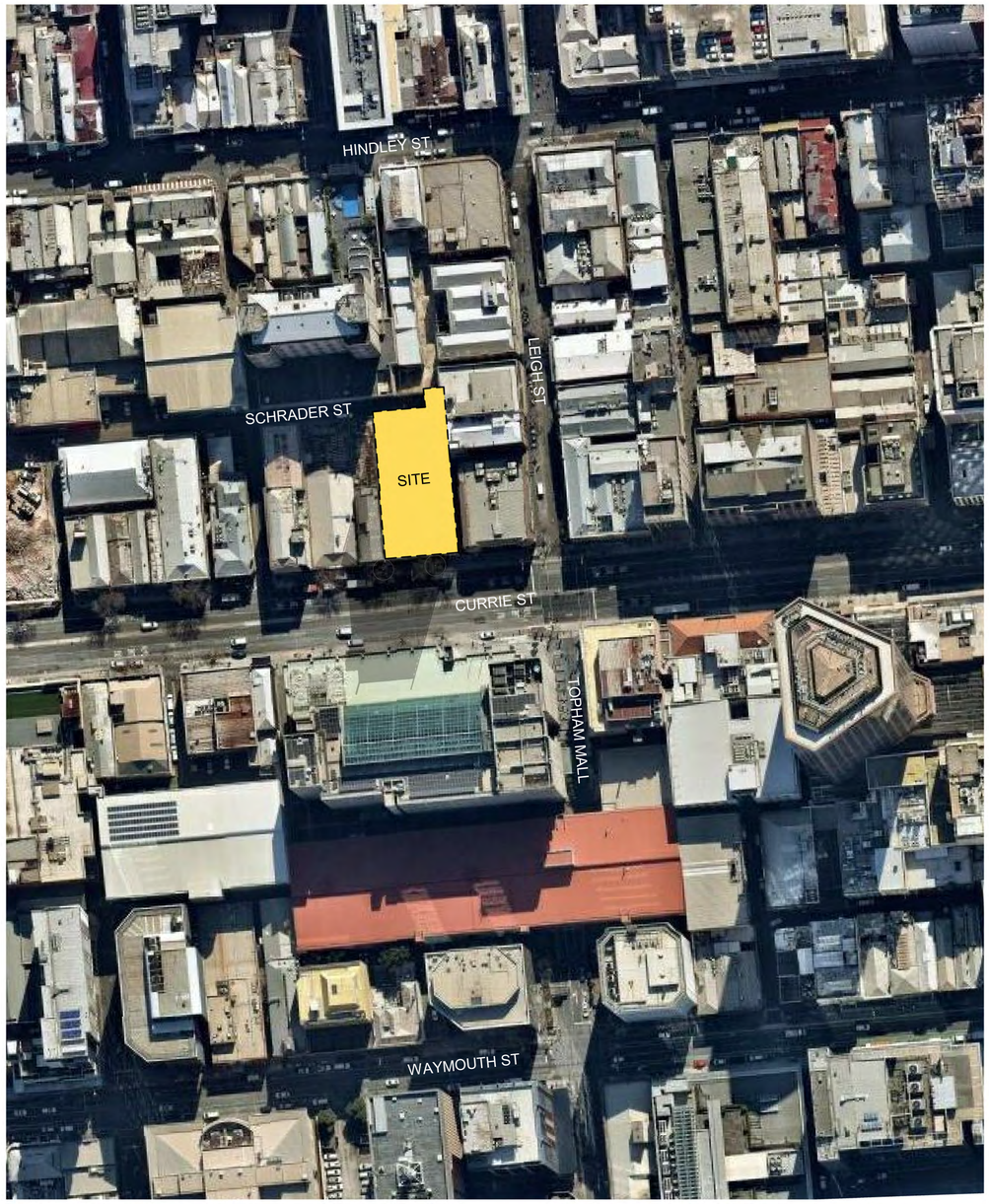
   If the development is approved by the Department of Infrastructure, Regional Development and Cities, any associated lighting would also need to conform to the airport lighting restrictions and shielded from aircraft flight paths.

   Crane operations associated with construction, if approved, will also be subject to a separate application.

h. All Council, utility or state-agency maintained infrastructure (i.e. roads, kerbs, drains, crossovers, footpaths etc.) that is demolished, altered, removed or damaged during the construction of the development shall be reinstated to Council, utility or state agency specifications. All costs associated with these works shall be met by the proponent.

i. Any activity in the public realm, whether it be on the road or footpath, requires a City Works Permit. 48 hours' notice is required before commencement of any activity. Email: cityworks@adelaidecitycouncil.com

Janaki Benson
Senior Planner
DEVELOPMENT DIVISION
DEPARTMENT OF PLANNING, TRANSPORT and INFRASTRUCTURE



DRAWING REGISTER	
Sheet Name	Sheet Number
COVER SHEET	DA000
CONCEPT + MATERIALITY	DA050
SITE PLAN	DA100
SHADOW DIAGRAMS	DA101
LANDSCAPING PLAN	DA102
CONTEXT SECTIONS	DA103
STREETSCAPE ELEVATIONS - SOUTH	DA104
STREETSCAPE ELEVATIONS - EAST	DA105
STREETSCAPE ELEVATIONS - NORTH	DA106
STREETSCAPE ELEVATIONS - WEST	DA107
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LEVEL 01 - CONFERENCE	DA202
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LEVEL 06 - OFFICE	DA205
LEVELS 07-12 - OFFICE	DA206
LEVELS 07-12 - OFFICE - TEST FITOUT (1 IN 10)	DA207
LEVEL 13 - HOTEL	DA208
LEVELS 14-22 - HOTEL	DA209
TYPICAL HOTEL ROOM LAYOUT	DA210
LEVEL 23 - RESTAURANT	DA211
LEVEL 24 - PLANT	DA212
ROOF	DA213
ELEVATIONS	DA400
ELEVATIONS	DA401
SIGNAGE ELEVATIONS - HOTEL SIGNAGE	DA410
SIGNAGE ELEVATIONS - HOTEL SIGNAGE	DA411
ENTRY HOOD	DA420
SECTION	DA500
SECTION	DA501
FACADE DETAILING	DA600
FACADE DETAILING	DA601

AXIOM PROPERTIES LIMITED

COVER SHEET

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:1000 @ A1
0 — 80

North:

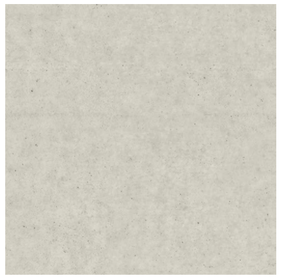
Project Number: 31786
Drawing Number: DA000
Revision: 0
Date: 28/02/2019

Hames Sharley

MATERIAL SCHEDULE

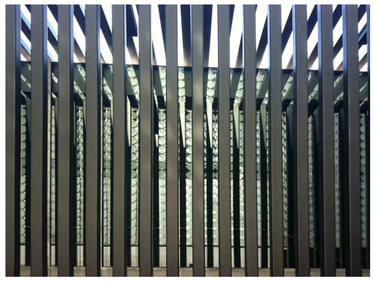
EF01

BURLESQUE CHARMING BLACK GLAZED BRICK OR SIMILAR.



EF02

BRIGHTONLITE LIGHT COLOURED CONCRETE FINISH TO FACADE OR SIMILAR



EF03

BLACK POWDERCOATED ALUMINUIM FINS TO FACADE OR SIMILAR.

EF04

SPANDREL GLAZING OR SIMILAR

SAME INSULATED GLAZING AS EF05 BUT WITH "SHADOWBOX CONSTRUCTION"

EF05

VISION PANEL OR SIMILAR

HIGH PERFORMANCE INSULATED GLAZING UNIT (IGU/DGU) WITH LOW-E SOFT-COATING TO SURFACE #2. HIGH VISUAL LIGHT TRANSMITTANCE. LOW SOLAR GAIN.

EF06

BLACK POWDERCOATED ALUMINUIM WINDOW FRAMES TO WINDOWS OR SIMILAR

EF07

TASSIE OAK HARDWOOD TO EXTERNAL JOINERY

EF08

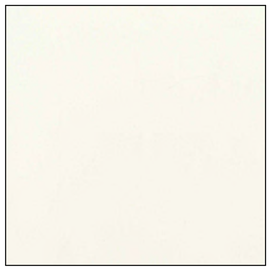
BLACK TILE TO EXTERNAL JOINERY OR SIMILAR

EF09

EMERALD GREEN TILE TO PLANTERBOXES OR SIMILAR

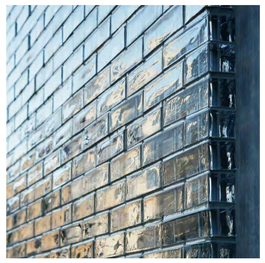
EF10

BRASS DETAILING TO EXTERNAL PLANTER BOXES OR SIMILAR



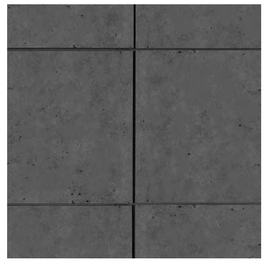
EF11

WHITE POWDERCOAT TO FABRICATED STEEL ENTRY HOOD OR SIMILAR



EF12

GLASS BRICKS TO BRICK FACADE OR SIMILAR



EF13

PAINTED CONCRETE TO WEST FACADE OR SIMILAR

EF14

SILVER GREY GRANITE PAVER OR SIMILAR WITH NON-SLIP FINISH

AXIOM PROPERTIES LIMITED

CONCEPT + MATERIALITY

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue

Address: 62-68 Currie Street Adelaide

Scale: NTS

North:

Project Number:	**31786**
Drawing Number:	**DA050**
Revision:	0
Date:	28/02/2019

HAMES SHARLEY

AXIOM PROPERTIES LIMITED

SITE PLAN

62 - 68 Currie Street Mixed Use Development

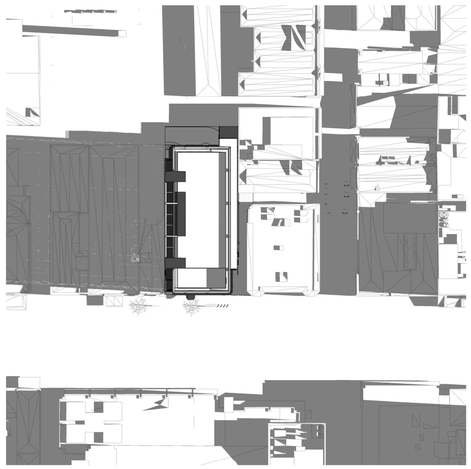
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:200 @ A1
0 16

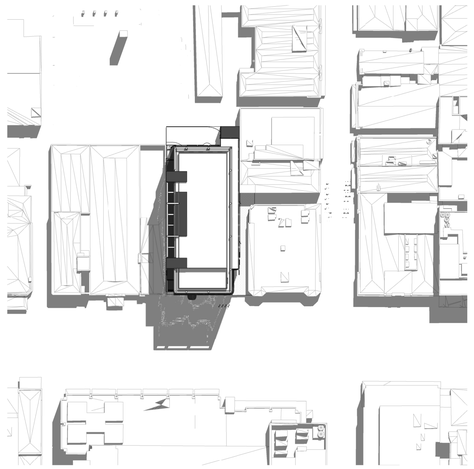
North:

Project Number:	**31786**
Drawing Number:	**DA100**
Revision:	0
Date:	28/02/2019

Hames Sharley

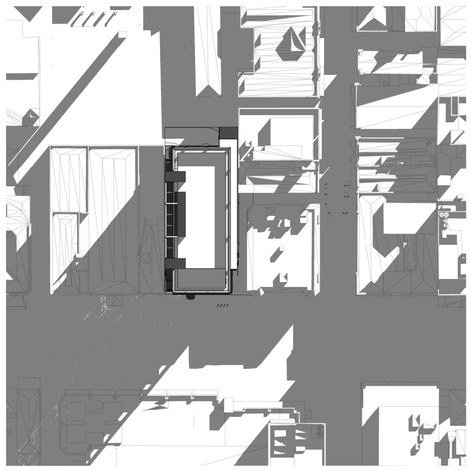


OVERSHADOWING DIAGRAM 21 DEC 9AM

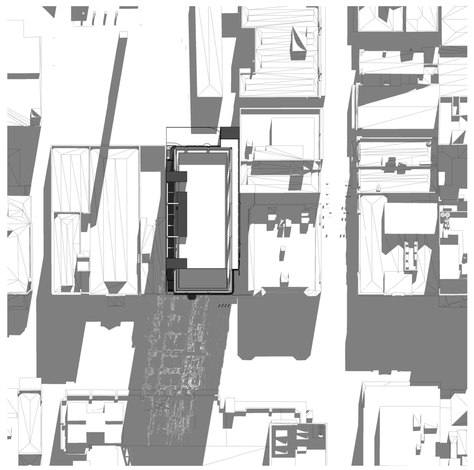


OVERSHADOWING DIAGRAM 21 DEC 12PM

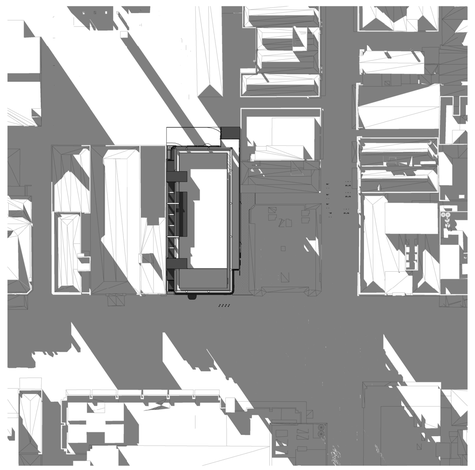
OVERSHADOWING DIAGRAM 21 DEC 3PM



OVERSHADOWING DIAGRAM 21 JUNE 10 AM



OVERSHADOWING DIAGRAM 21 JUNE 12 PM



OVERSHADOWING DIAGRAM 21 JUNE 3 PM

AXIOM PROPERTIES LIMITED

SHADOW DIAGRAMS

62 - 68 Currie Street Mixed Use Development

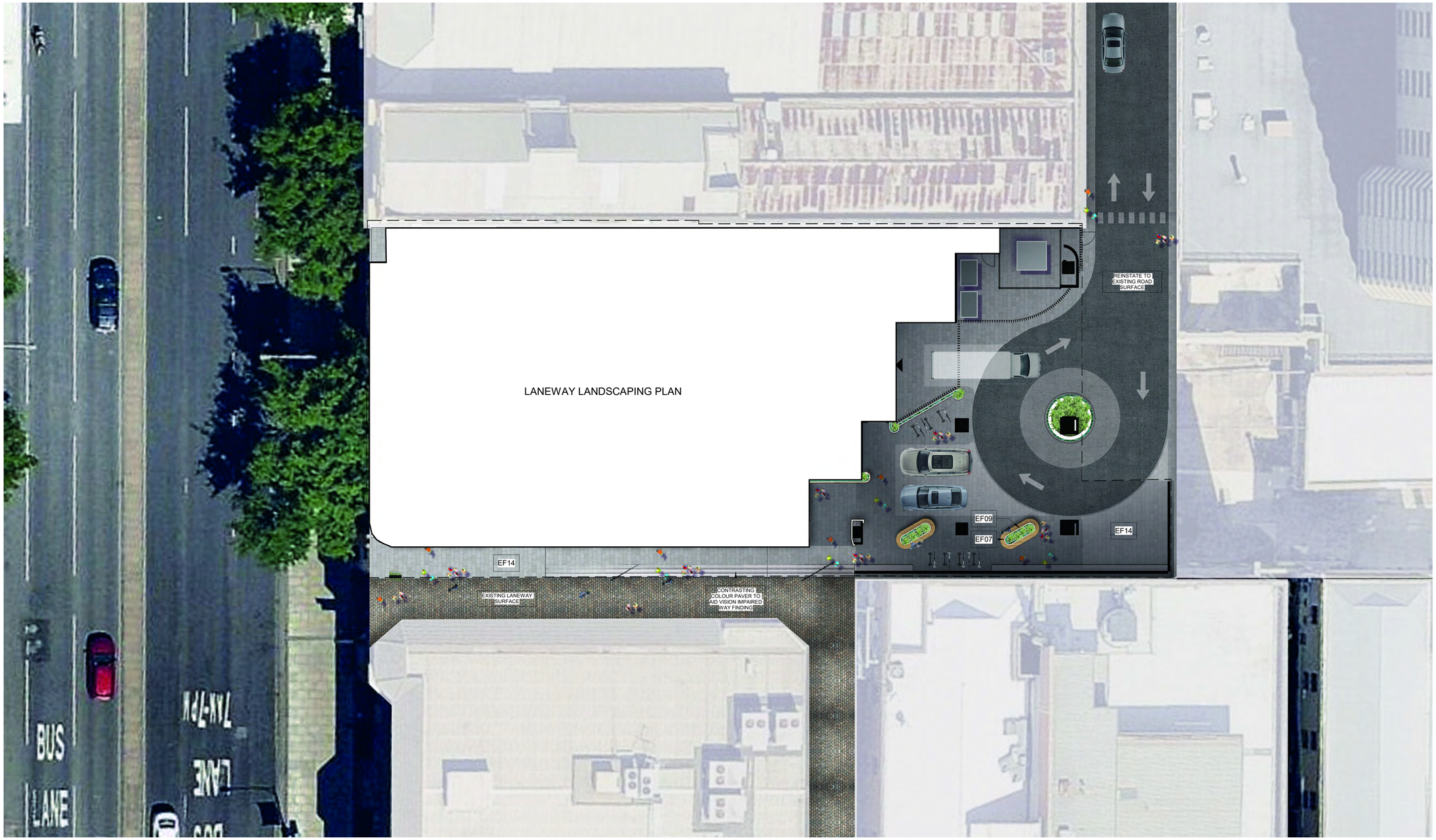
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:1000 @ A1
0 80

North:

Project Number: 31786
Drawing Number: DA101
Revision: 0
Date: 28/02/2019

Hames Sharley



LANEWAY LANDSCAPING PLAN

LANDSCAPING LEGEND

- EXISTING STREET TREE
- EXISITNG PAVING ON CURRIE STREET
- BITUMEN FINISH TO REAR LANE-WAY ACCESS OR SIMILAR
- LANEWAY PAVING
- PLANTERS WITH TIMBER SEATING

AXIOM PROPERTIES LIMITED

LANDSCAPING PLAN

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: NTS

North:

Project Number: 31786
Drawing Number: DA102
Revision: 0
Date: 28/02/2019

Hames Sharley

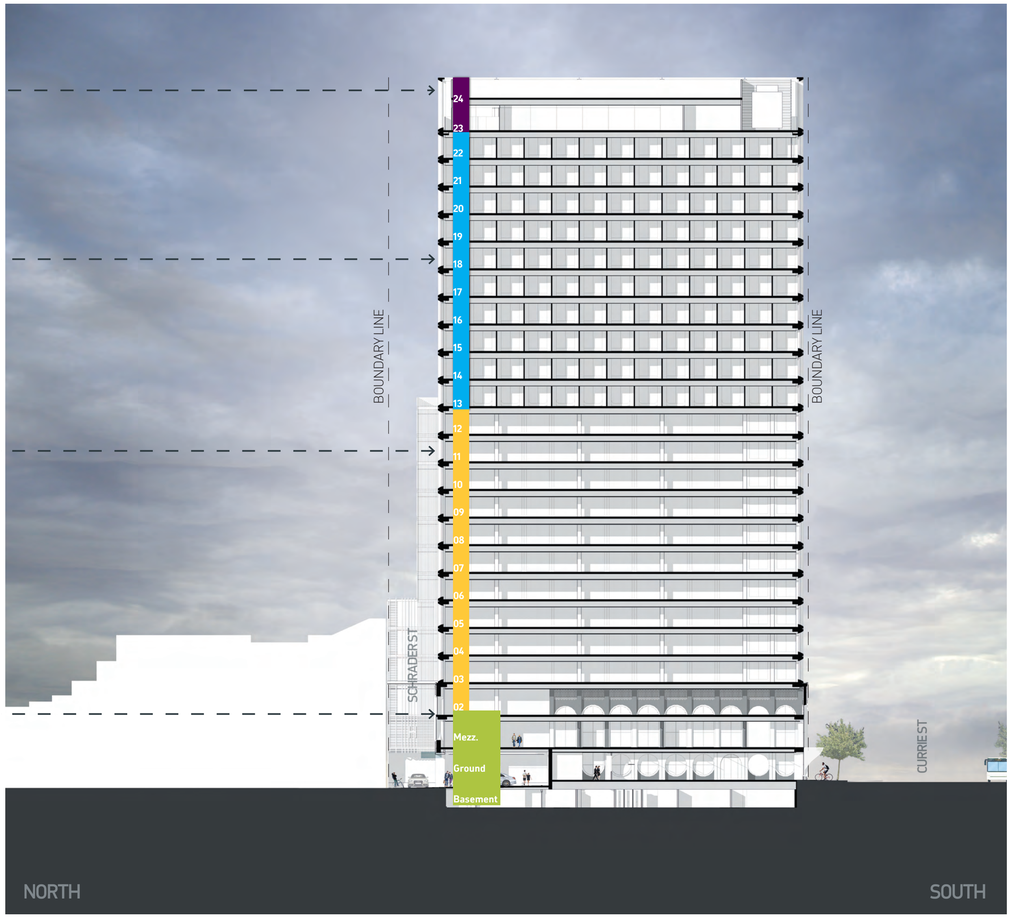
ROOFTOP AMENITY 250m²
+ 1 DOUBLE-VOLUME LEVEL
+ SKY BAR & RESTAURANT
(MAX 230 OCCUPANTS)

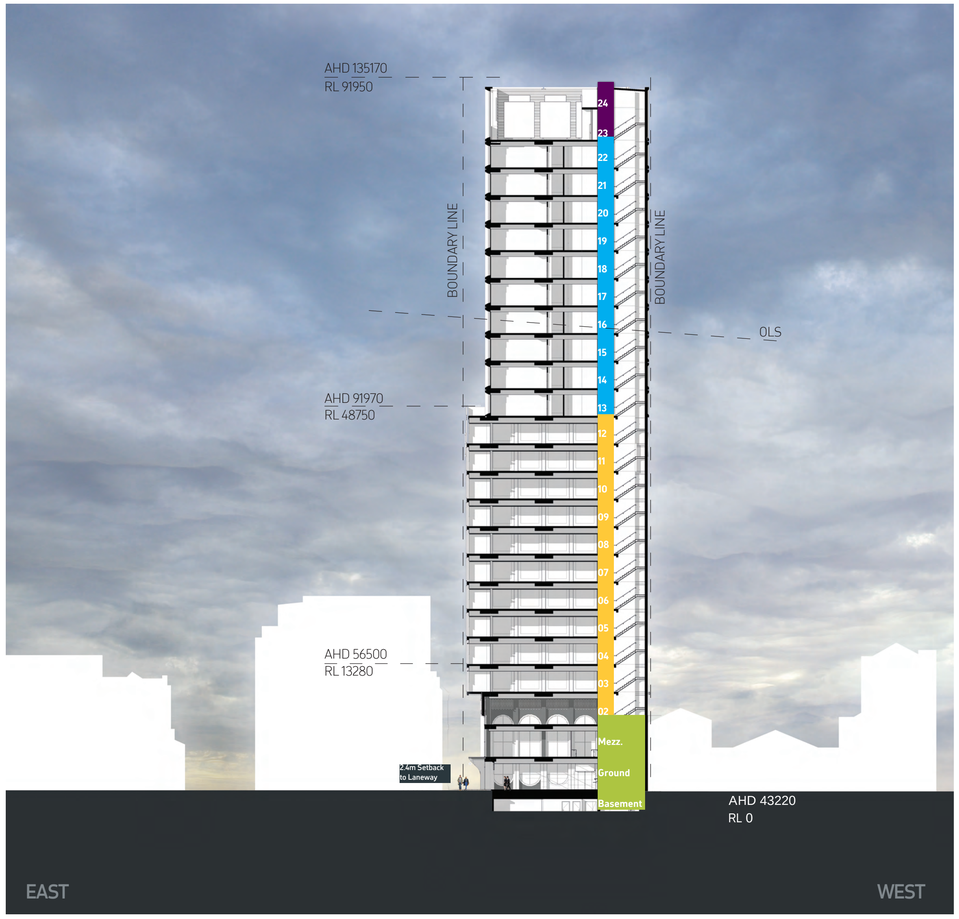
BOUTIQUE HOTEL 6000m²
+ 10 LEVELS
+ 198 HOTEL ROOMS

PREMIUM OFFICE 8450m²
+ 11 LEVELS
+ 8 LEVELS @ 790M² NLA
+ 2 LEVELS @ 760M² NLA
+ 1 LEVEL @ 570M² NLA

SHARED AMENITY 1400m²
+ FUNCTION ROOMS
+ PREMIUM END OF TRIP FACILITIES
+ GYM
+ RESTAURANT AND CAFE

Areas excluding service/plant/amenities





AXIOM PROPERTIES LIMITED

CONTEXT SECTIONS

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: NTS

Project Number: 31786
Drawing Number: DA103
Revision: 0
Date: 28/02/2019

HAMES SHARLEY

AXIOM PROPERTIES LIMITED

STREETSCAPE ELEVATIONS - SOUTH

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:250 @ A1

0 20

Project Number: 31786
Drawing Number: DA104
Revision: 0
Date: 28/02/2019

Hames Sharley

AXIOM PROPERTIES LIMITED

STREETSCAPE ELEVATIONS - EAST

62 - 68 Currie Street Mixed Use Development

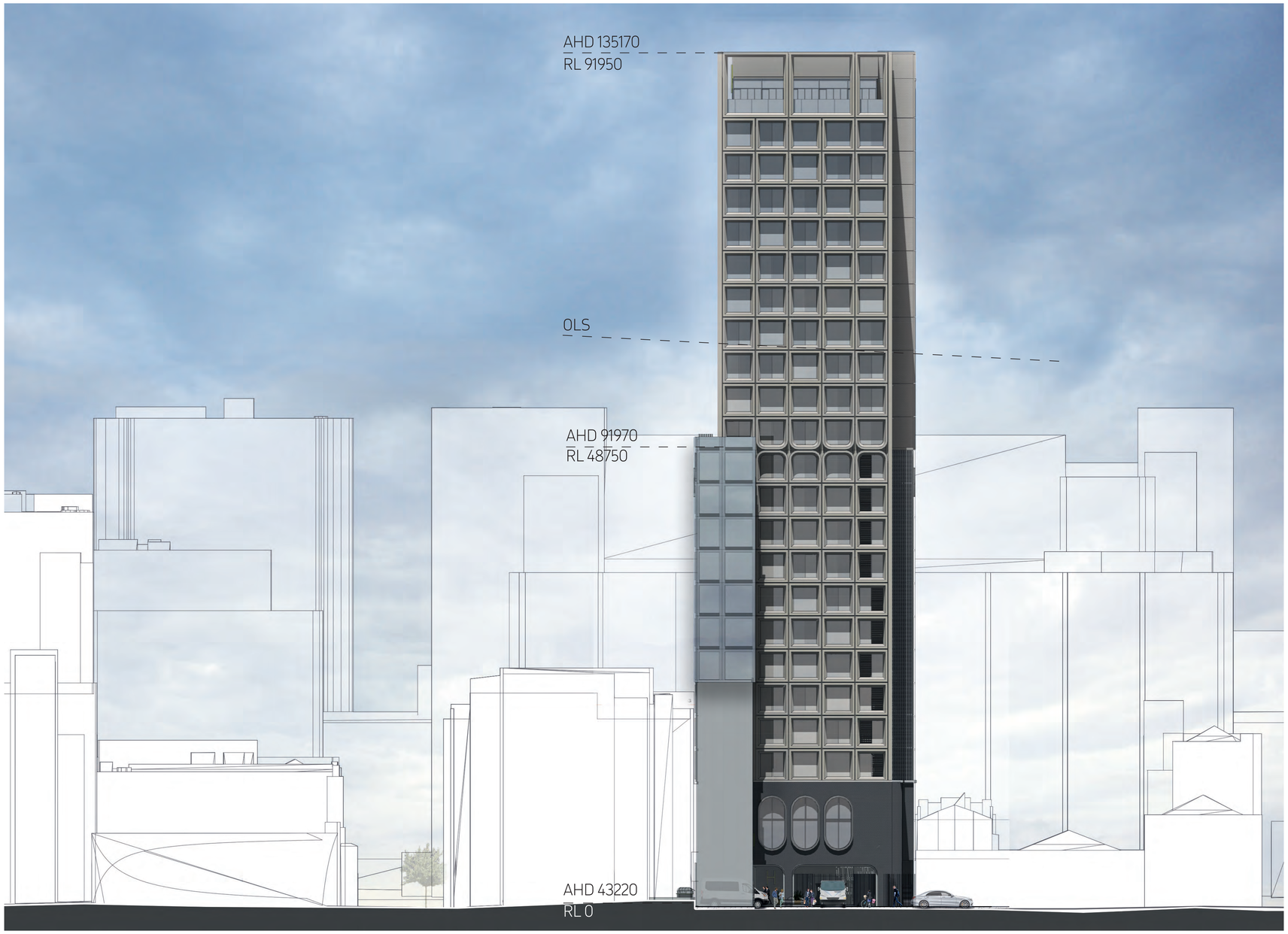
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:250 @ A1

0 20

Project Number: 31786
Drawing Number: DA105
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

STREETSCAPE ELEVATIONS - NORTH

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:250 @ A1

0 20

Project Number: 31786
Drawing Number: DA106
Revision: 0
Date: 28/02/2019

Hames Sharley

AXIOM PROPERTIES LIMITED

STREETSCAPE ELEVATIONS - WEST

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:250 @ A1

0 20

Project Number: 31786
Drawing Number: DA107
Revision: 0
Date: 28/02/2019

Hames Sharley

WEST ON CURRIE ST

WEST ON LEIGH ST

EAST ON SCHRADER ST

EAST ON CURRIE ST

AXIOM PROPERTIES LIMITED

3D STREETSCAPE IMAGES

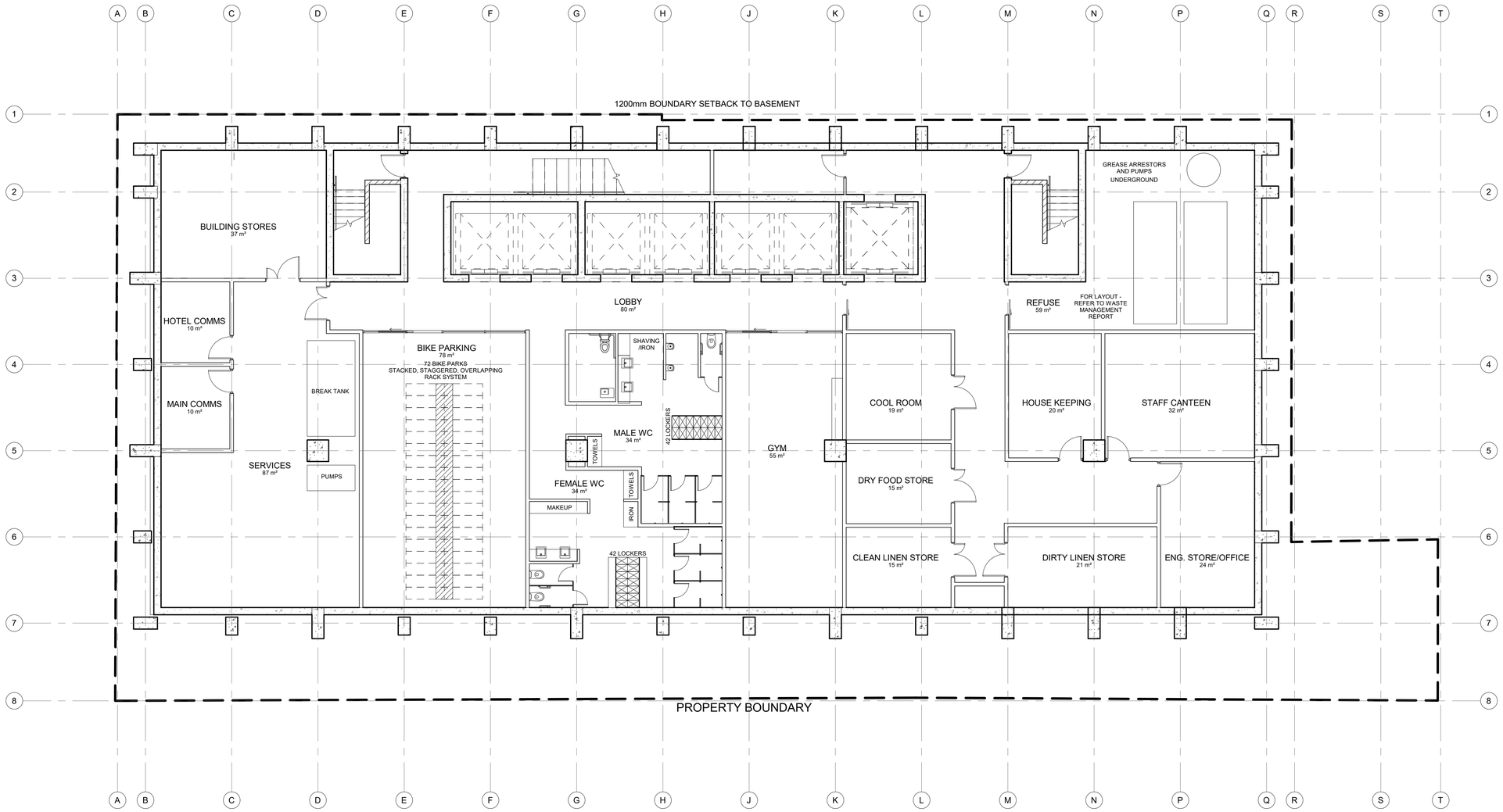
62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: NTS

Project Number:	**31786**
Drawing Number:	**DA108**
Revision:	0
Date:	28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

BASEMENT

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

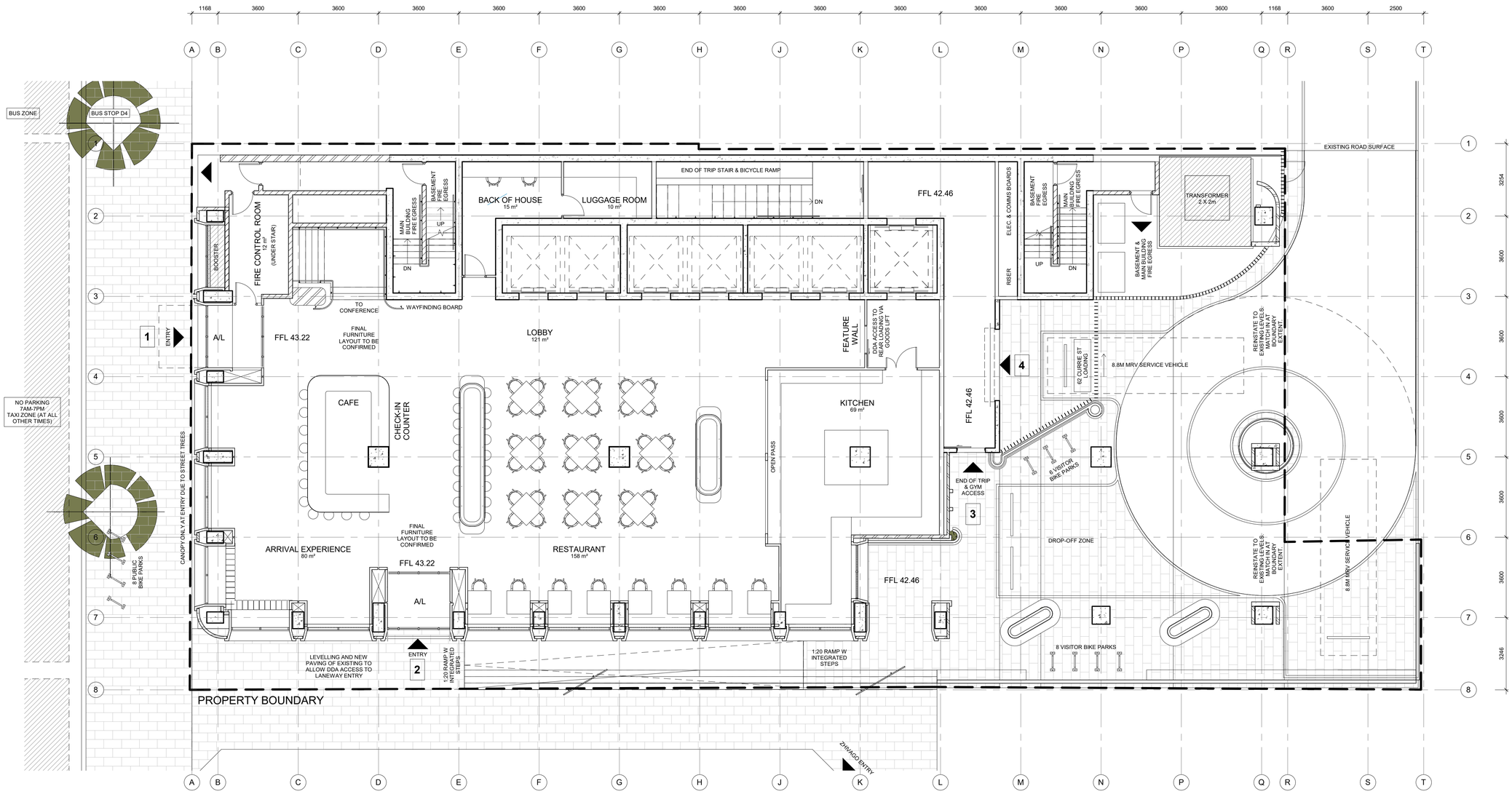
Scale: 1:100 @ A1
0 8
© Hames Sharley:

North:

Project Number: 31786
Drawing Number: DA200
Revision: 0
Date: 28/02/2019

Hames Sharley

Key Plan



Rev.	Date	Initial	Description
1	21/03/2019	MS	For Information Only

Client

AXIOM PROPERTIES LIMITED

Hames Sharley
hamessharley.com.au +61 8 8112 3400

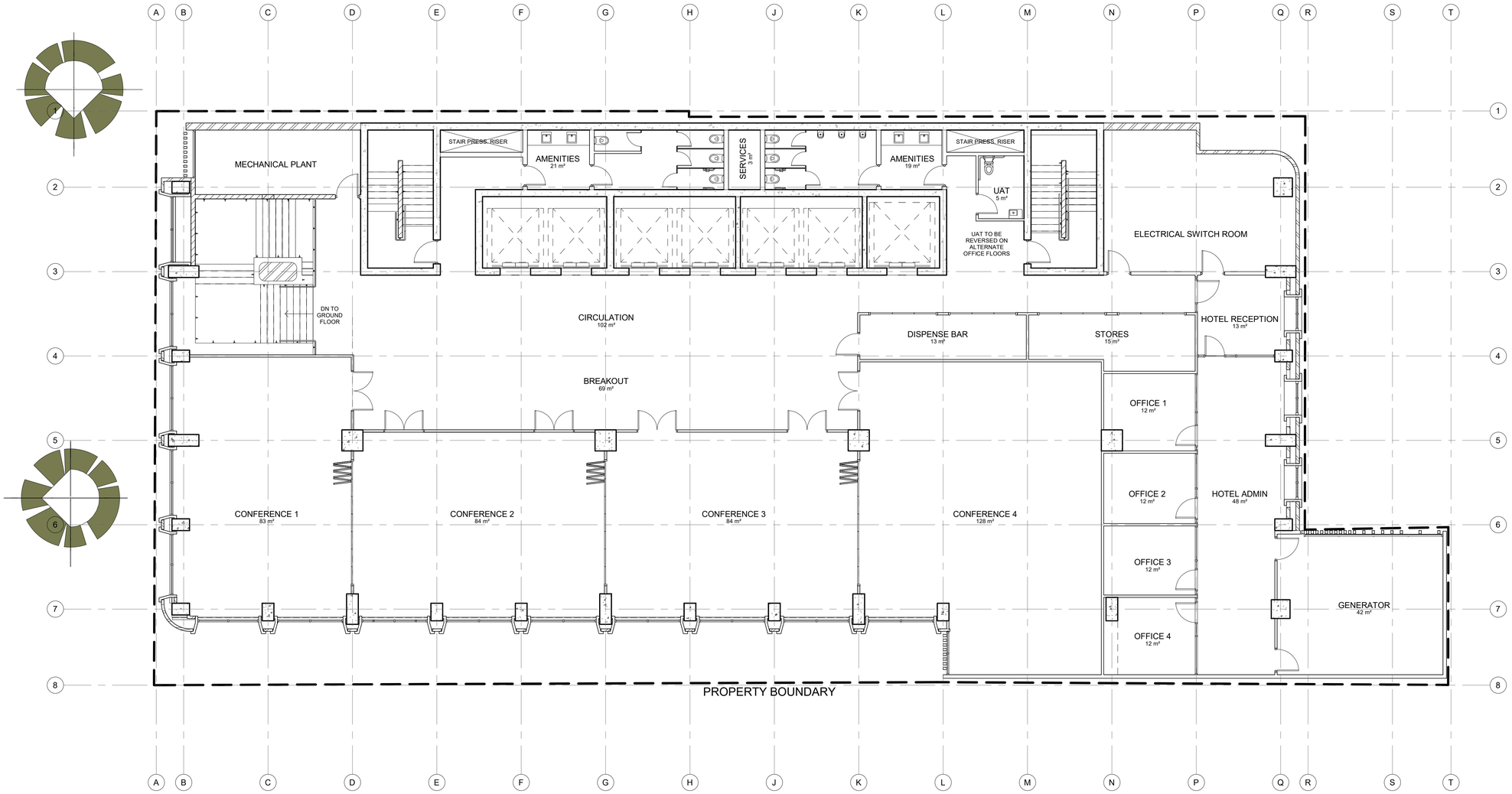
In Partnership With

Project
66 Currie Street Mixed Use Development
62-68 Currie Street, Adelaide SA 5000

Drawing Title
GENERAL LAYOUT PLAN - GROUND FLOOR

Drawn By	Checked By	Scale @ A1
M Steele	L Gouws	1 : 100
Project No.	Drawing No.	Revision
31786	DD201	1

Status



AXIOM PROPERTIES LIMITED

LEVEL 01 - CONFERENCE

62 - 68 Currie Street Mixed Use Development

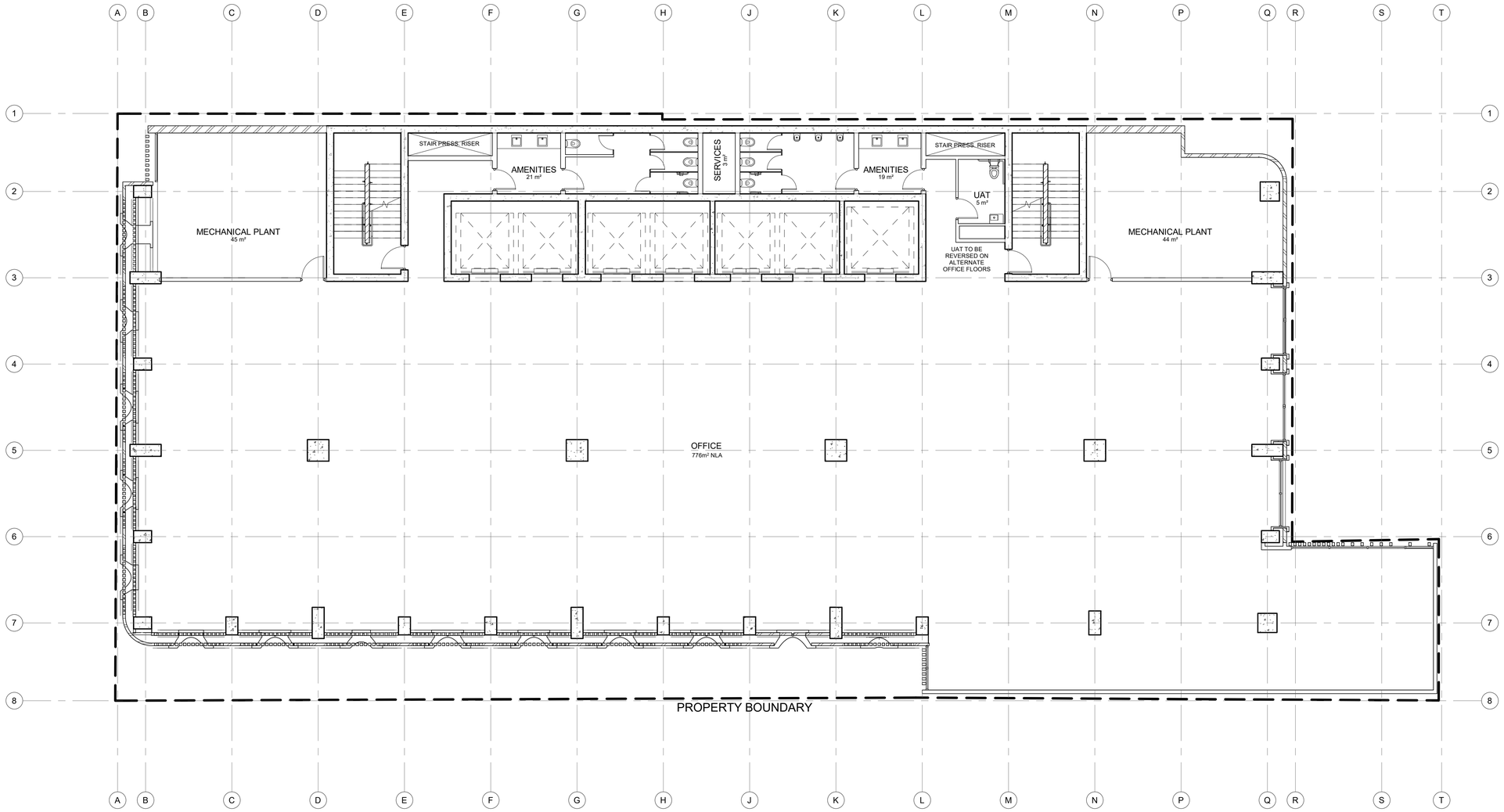
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 8

North:

Project Number: 31786
Drawing Number: DA202
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVEL 02 - OFFICE

62 - 68 Currie Street Mixed Use Development

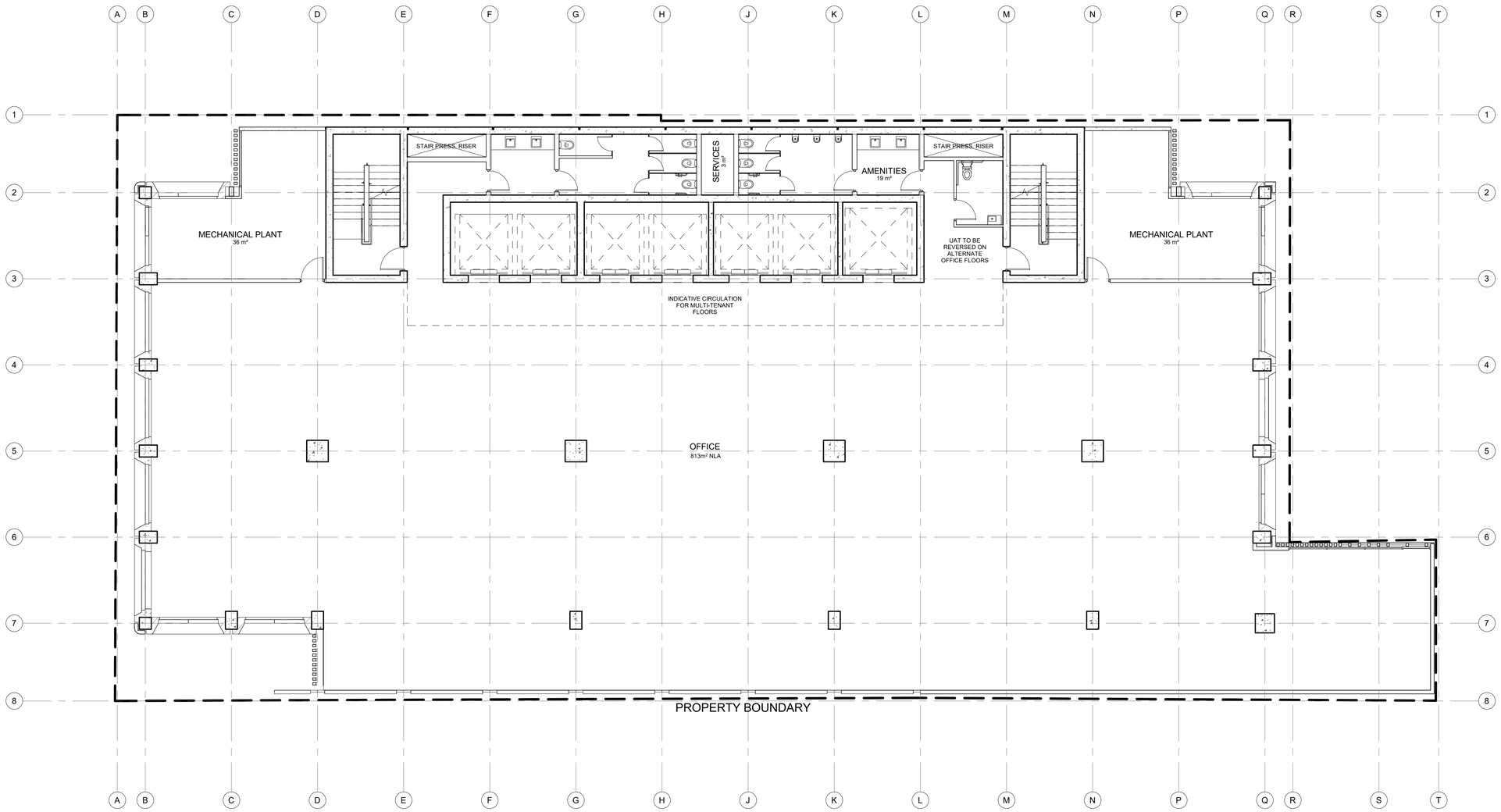
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 8

North:

Project Number:	**31786**
Drawing Number:	**DA203**
Revision:	0
Date:	28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVELS 03-05 - OFFICE

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

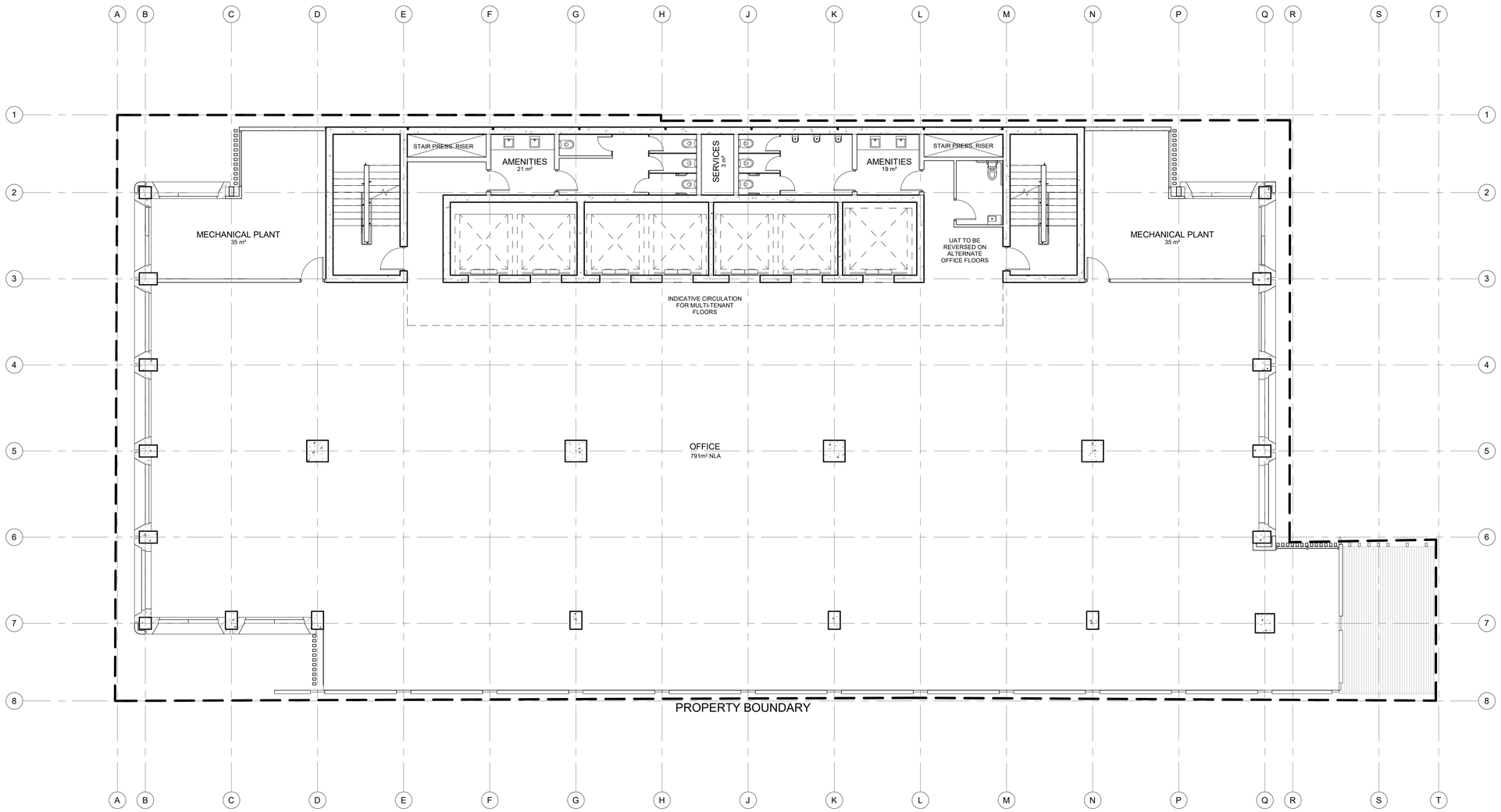
Scale: 1:100 @ A1

0 8

North:

Project Number: 31786
Drawing Number: DA204
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVEL 06 - OFFICE

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

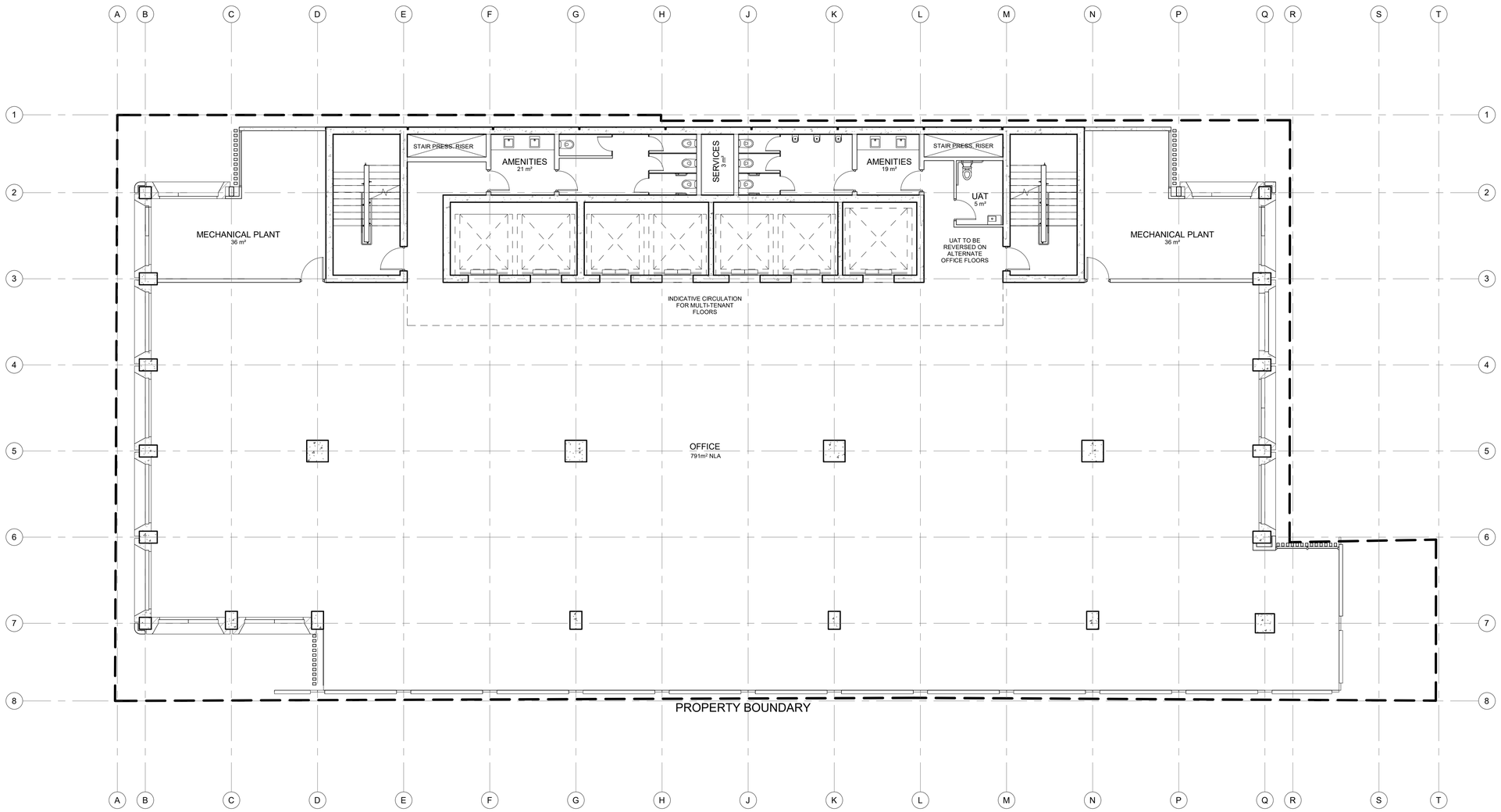
Scale: 1:100 @ A1

0 8

North:

Project Number: 31786
Drawing Number: DA205
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVELS 07-12 - OFFICE

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

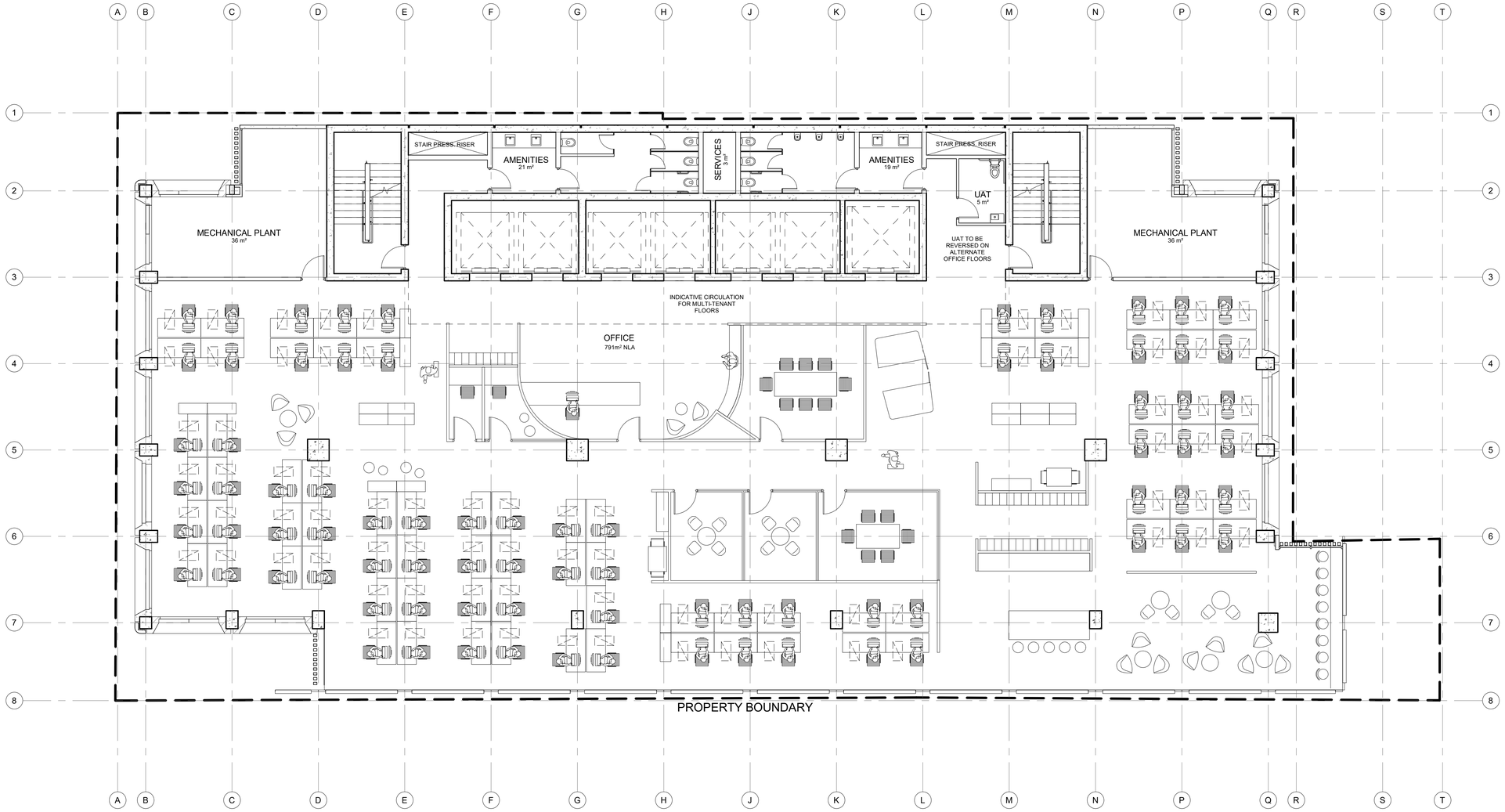
Scale: 1:100 @ A1

0 8

North:

Project Number:	**31786**
Drawing Number:	**DA206**
Revision:	0
Date:	28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVELS 07-12 - OFFICE - TEST FITOUT (1 IN 10)

62 - 68 Currie Street Mixed Use Development

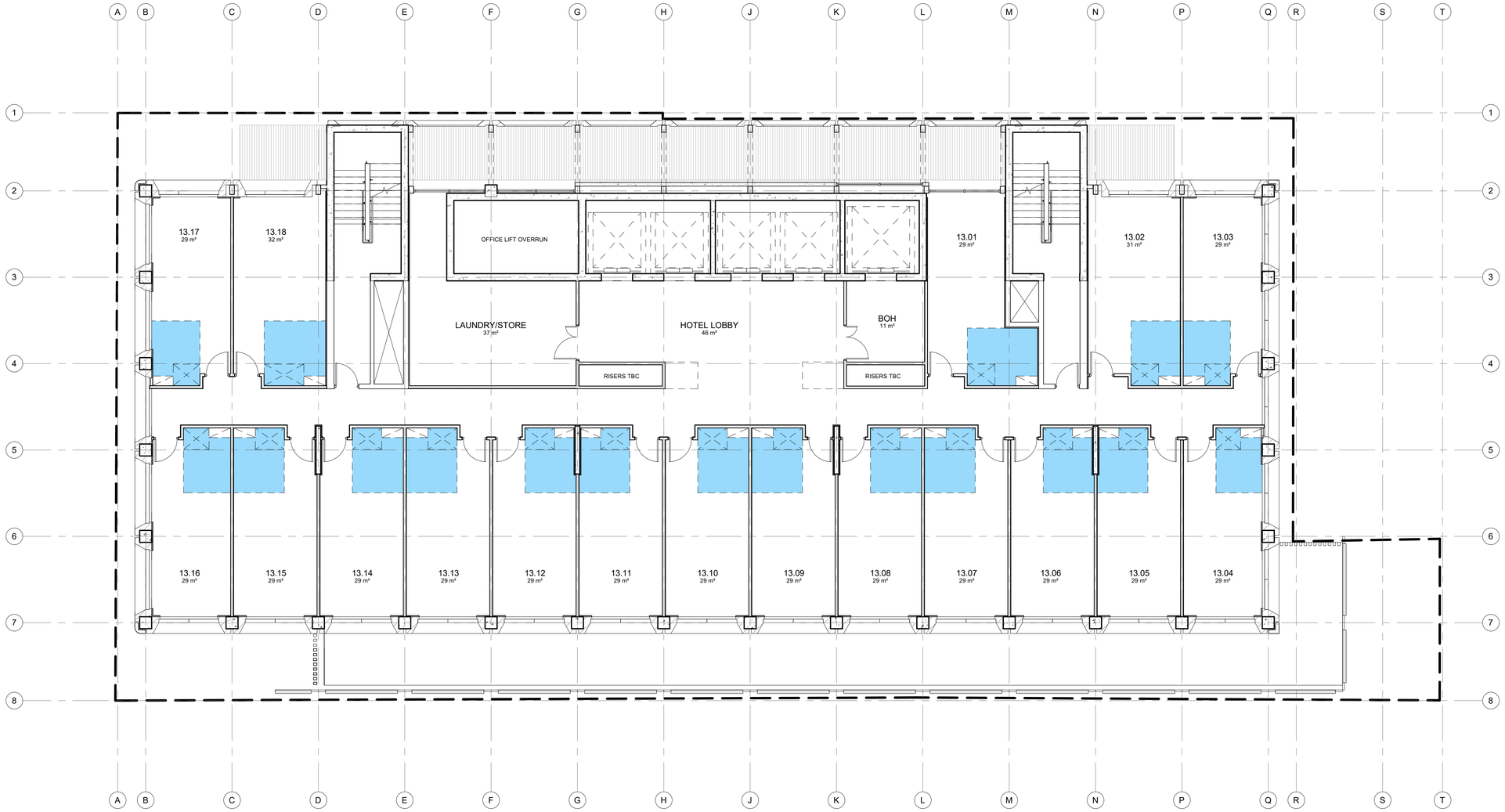
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 8

North:

Project Number: 31786
Drawing Number: DA207
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVEL 13 - HOTEL

62 - 68 Currie Street Mixed Use Development

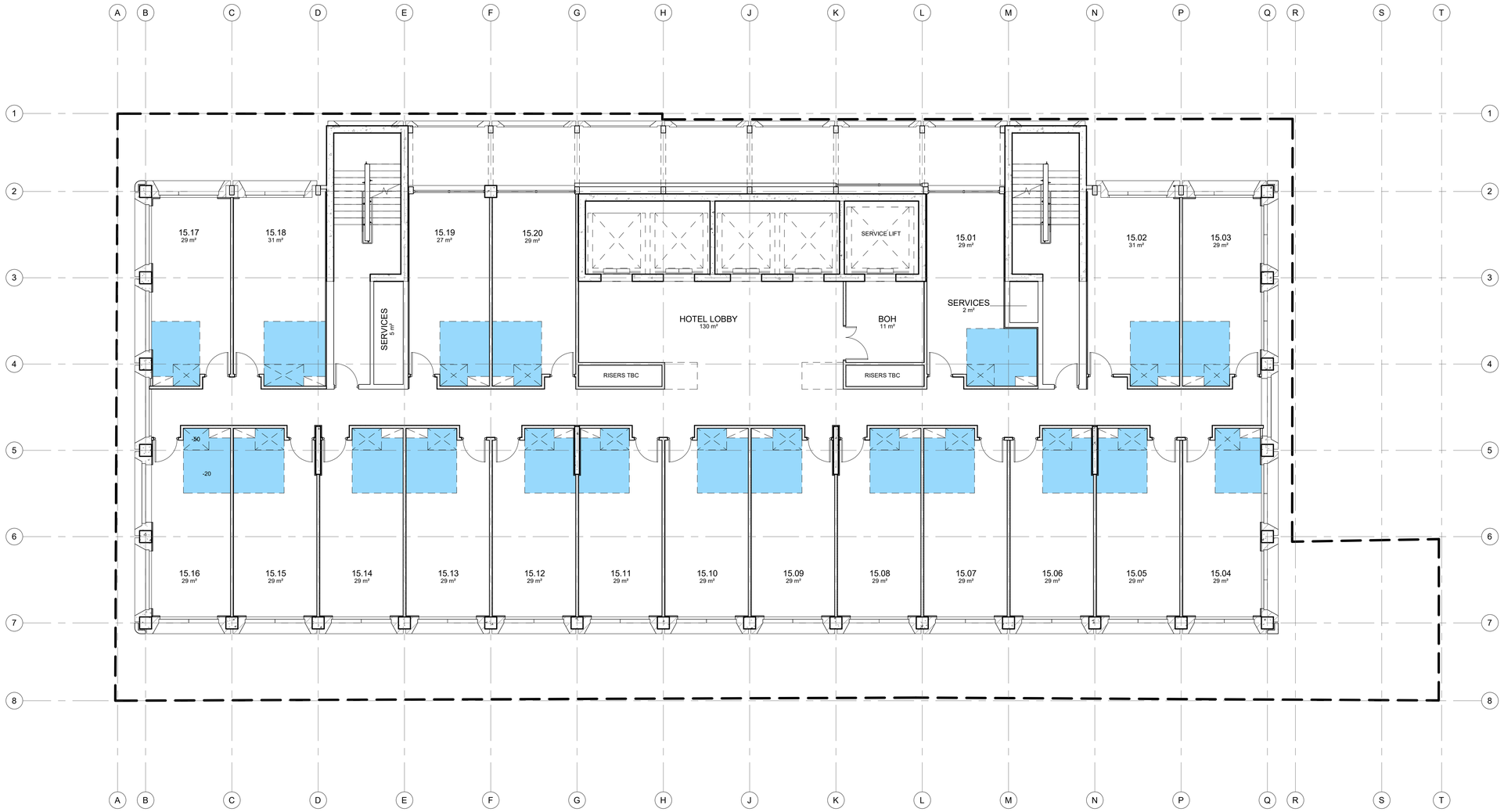
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 — 8

North:

Project Number: 31786
Drawing Number: DA208
Revision: 0
Date: 28/02/2019

HAMES SHARLEY



AXIOM PROPERTIES LIMITED

LEVELS 14-22 - HOTEL

62 - 68 Currie Street Mixed Use Development

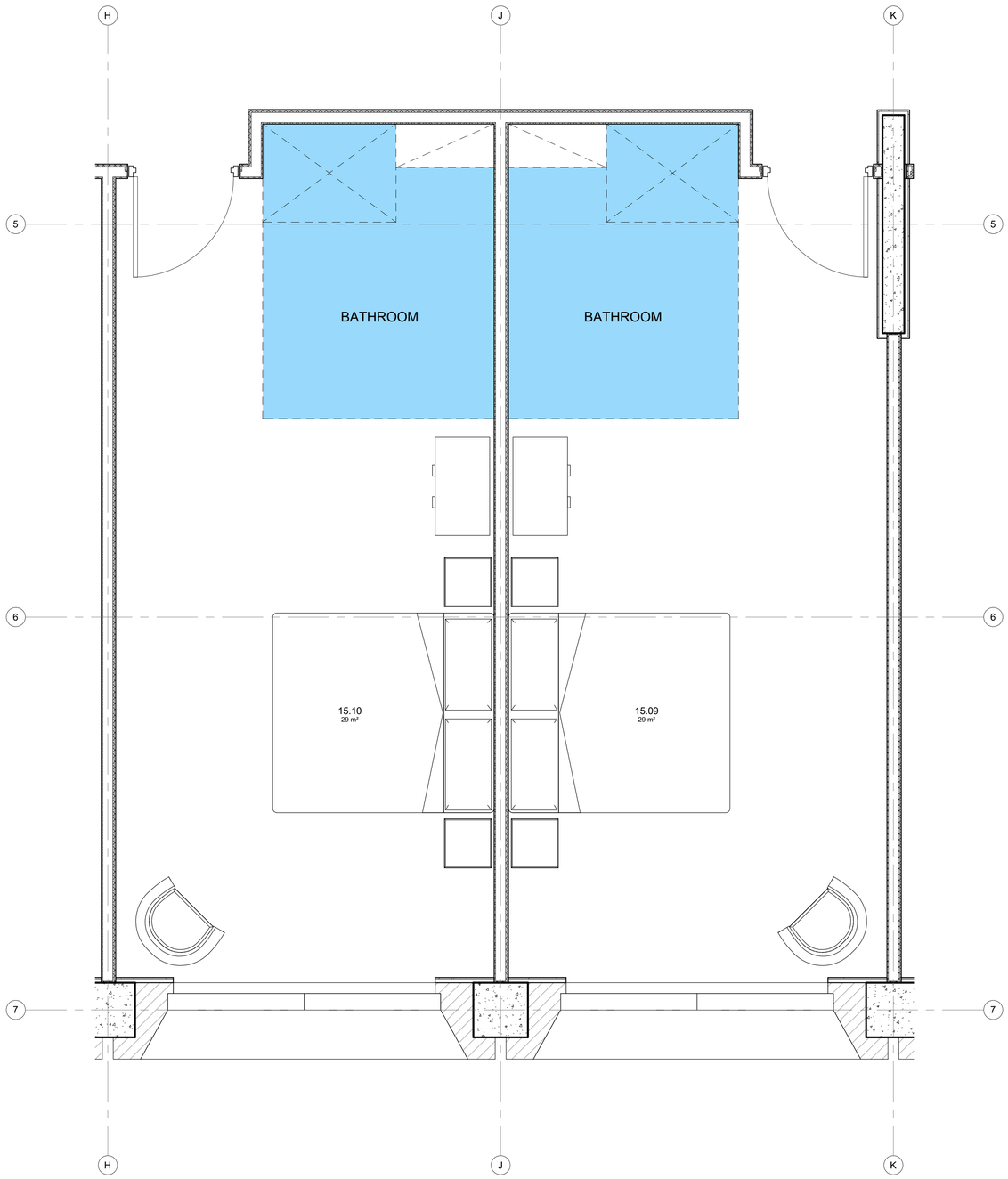
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 8

North:

Project Number: 31786
Drawing Number: DA209
Revision: 0
Date: 28/02/2019

Hames Sharley



NOTE: TYPICAL HOTEL ROOM LAYOUTS ARE INDICATIVE AND SUBJECT TO CHANGE

AXIOM PROPERTIES LIMITED

TYPICAL HOTEL ROOM LAYOUT

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

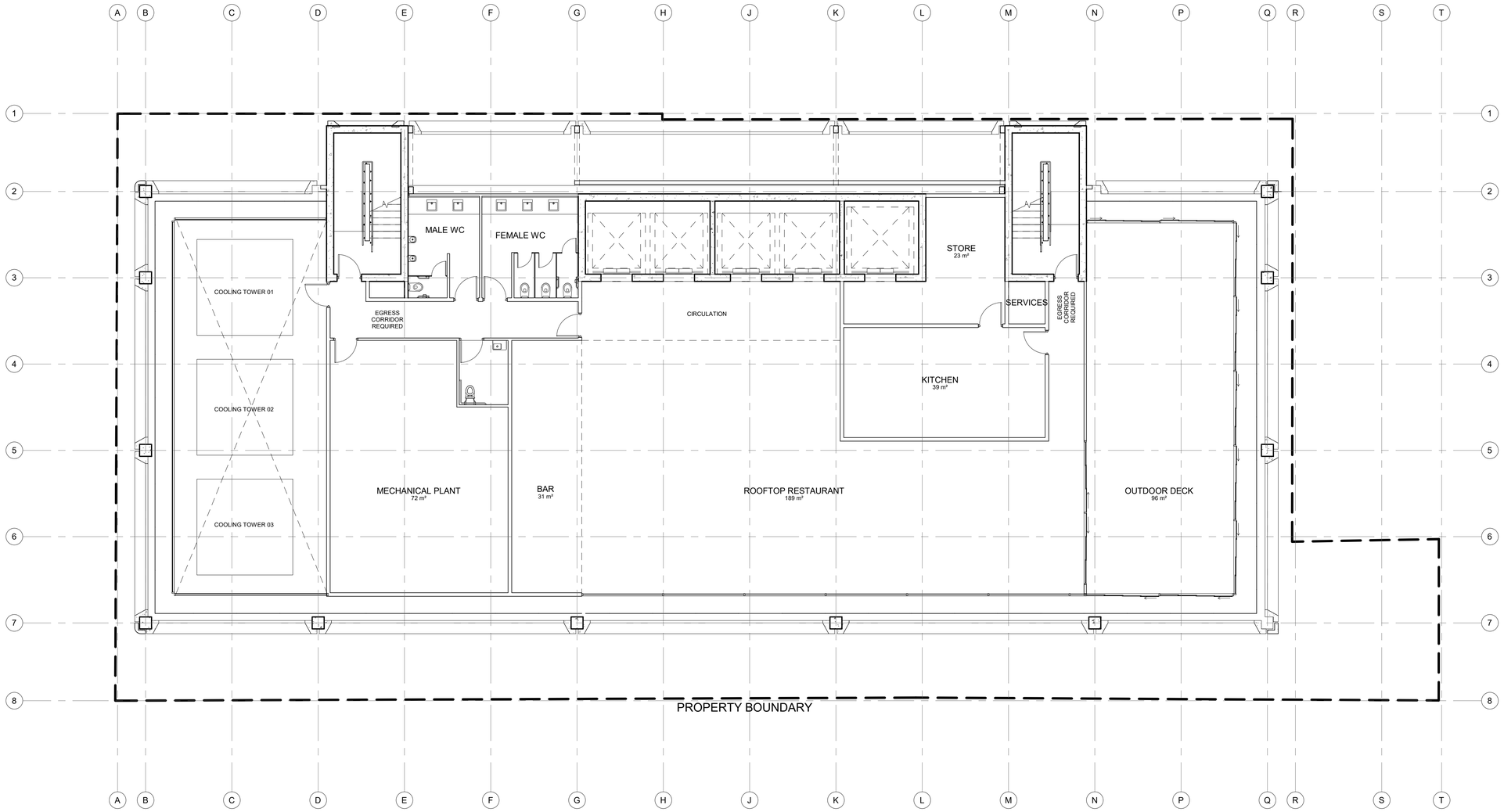
Scale: 1:25 @ A1

0 2

North:

Project Number:	**31786**
Drawing Number:	**DA210**
Revision:	0
Date:	28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVEL 23 - RESTAURANT

62 - 68 Currie Street Mixed Use Development

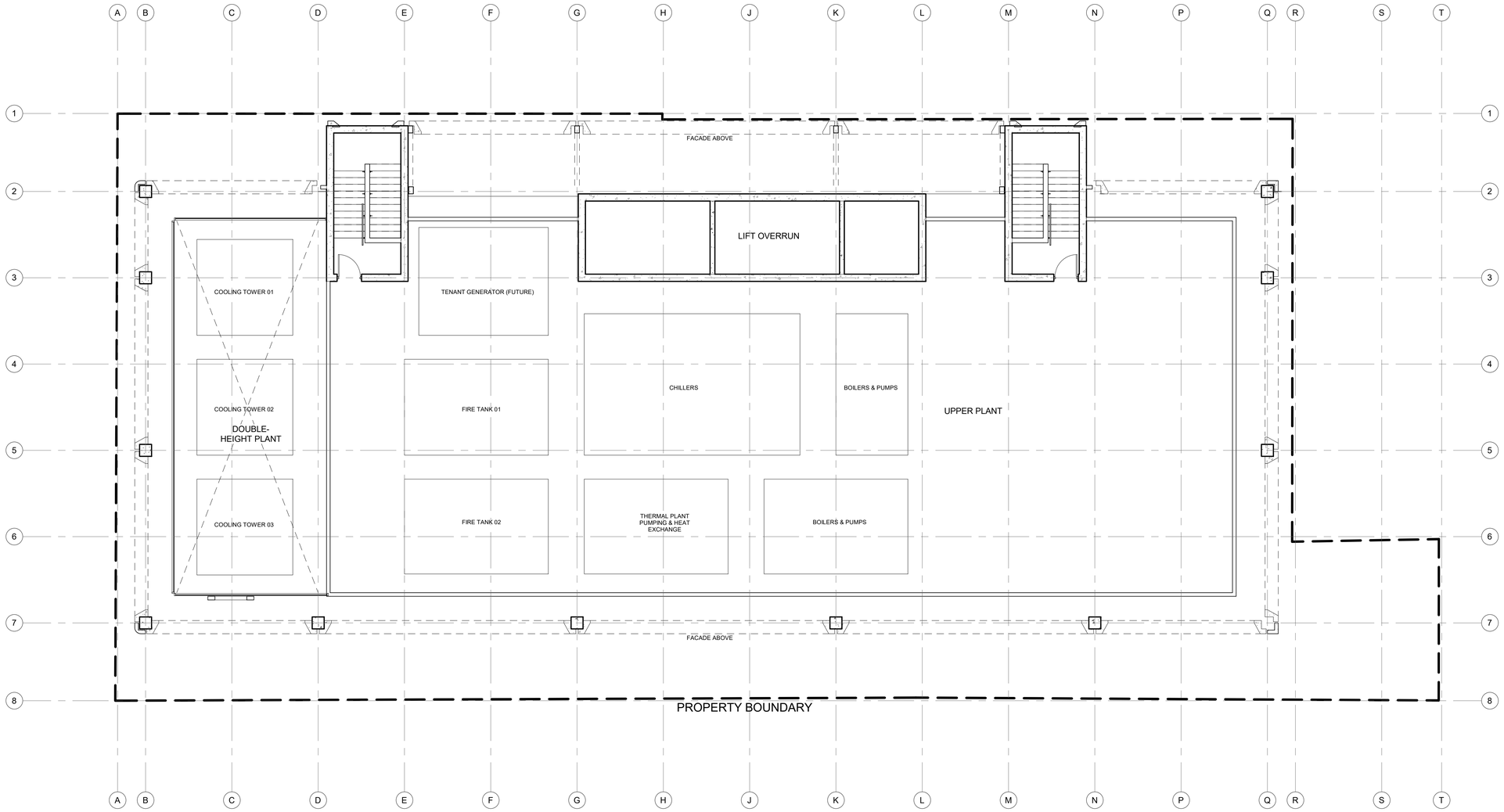
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:100 @ A1
0 8

North:

Project Number: 31786
Drawing Number: DA211
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

LEVEL 24 - PLANT

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

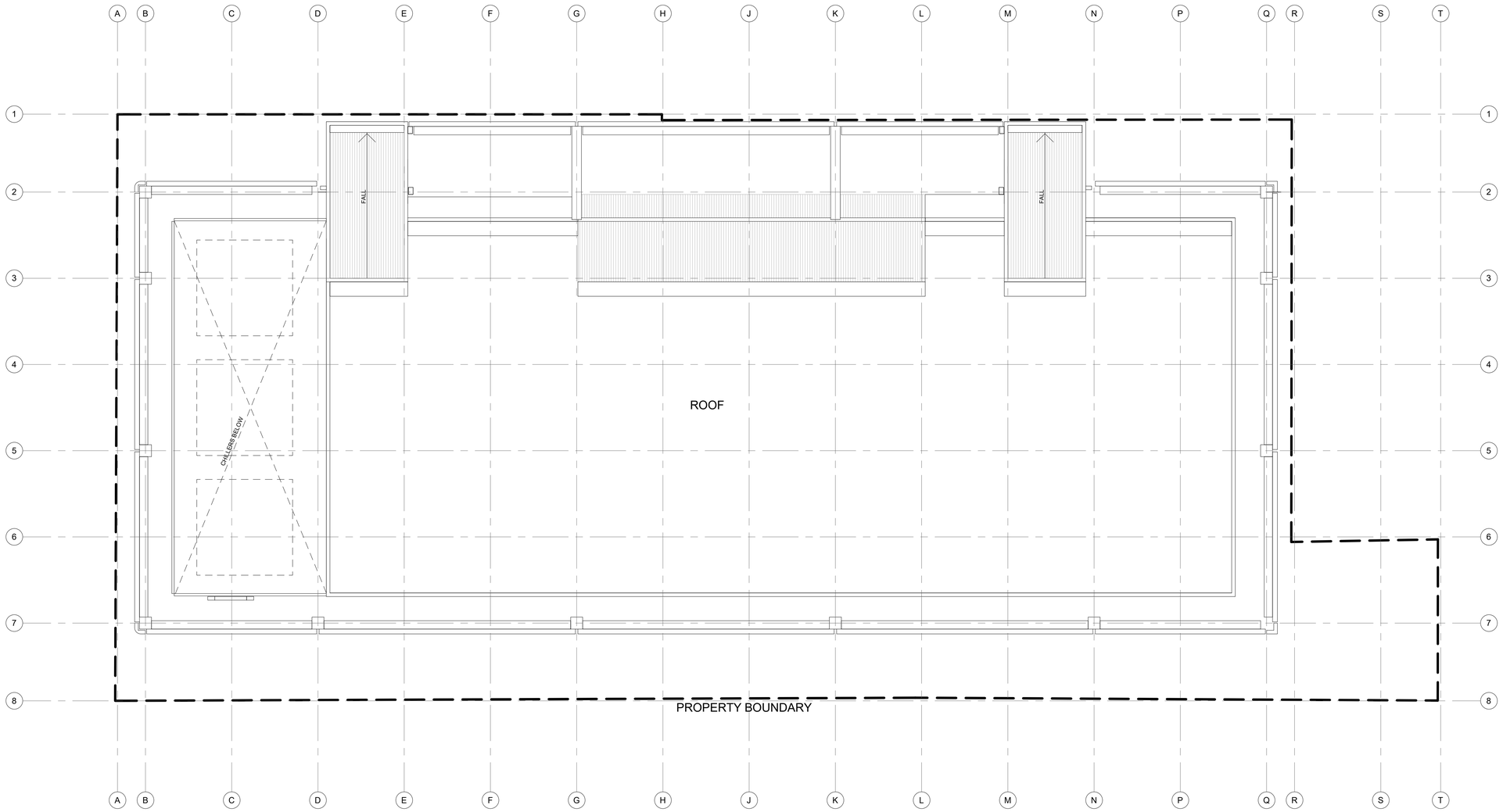
Scale: 1:100 @ A1

0 — 8

North:

Project Number: 31786
Drawing Number: DA212
Revision: 0
Date: 28/02/2019

Hames Sharley



AXIOM PROPERTIES LIMITED

ROOF

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

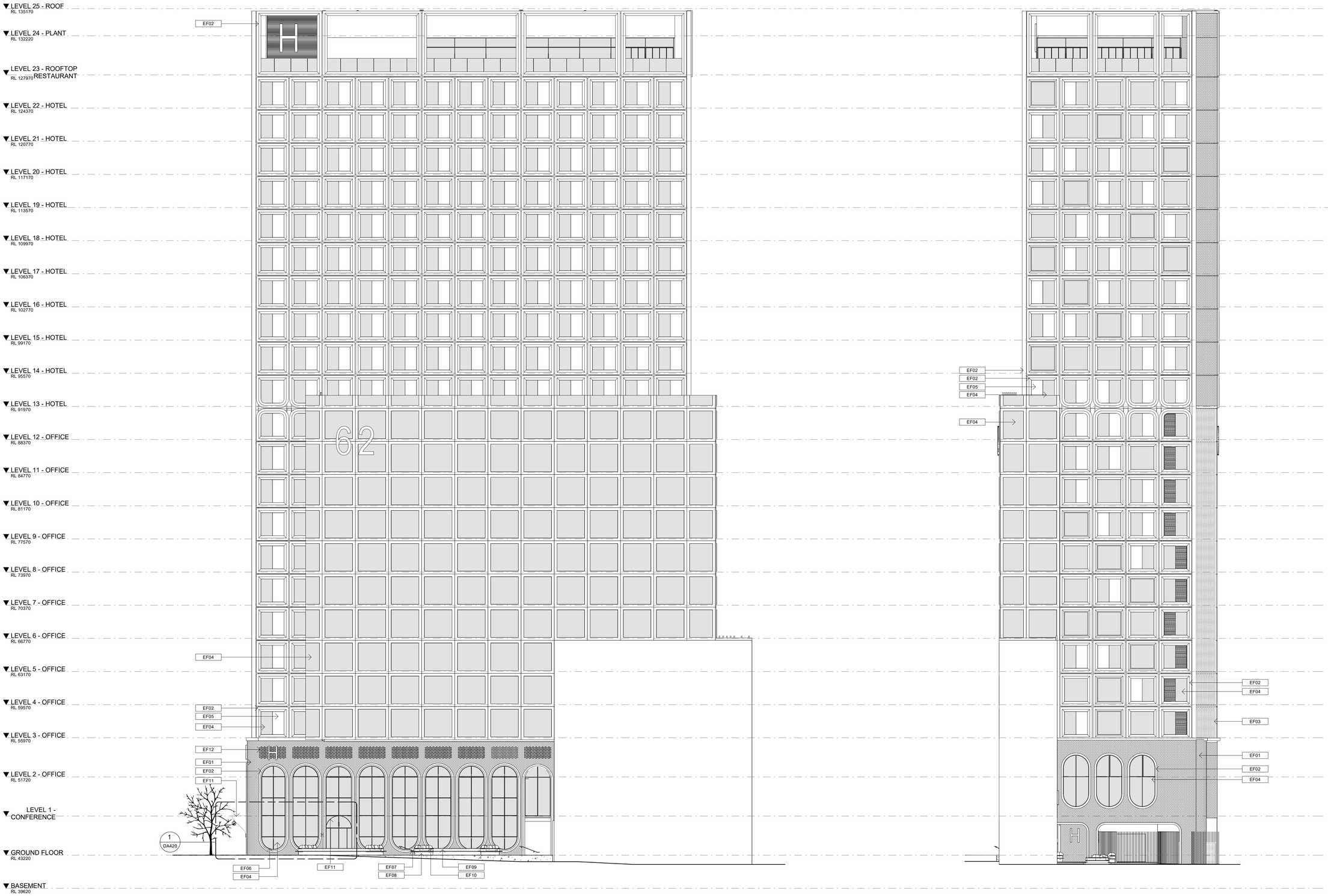
Scale: 1:100 @ A1

0 8

North:

Project Number: 31786
Drawing Number: DA213
Revision: 0
Date: 28/02/2019

Hames Sharley



DA400 - EAST ELEVATION
1 : 200

DA400 - NORTH ELEVATION
1 : 200

LEGEND

EF01

BURLESQUE CHARMING BLACK GLAZED BRICK OR SIMILAR.

EF02

BRIGHTONLITE LIGHT COLOURED CONCRETE FINISH TO FACADE OR SIMILAR

EF03

BLACK POWDERCOATED ALUMINUIM FINS TO FACADE OR SIMILAR.

EF04

SPANDREL GLAZING OR SIMILAR

EF05

VISION PANEL OR SIMILAR

EF06

BLACK POWDERCOATED ALUMINUIM WINDOW FRAMES TO WINDOWS OR SIMILAR

EF07

TASSIE OAK HARDWOOD TO EXTERNAL JOINERY

EF08

BLACK TILE TO EXTERNAL JOINERY OR SIMILAR

EF09

EMERALD GREEN TILE TO PLANTERBOXES OR SIMILAR

EF10

BRASS DETAILING TO EXTERNAL PLANTER BOXES OR SIMILAR

EF11

WHITE POWDERCOAT TO FABRICATED STEEL CANOPY OR SIMILAR

EF12

GLASS BRICKS TO BRICK FACADE OR SIMILAR

EF13

PAINTED CONCRETE TO WEST FACADE OR SIMILAR

AXIOM PROPERTIES LIMITED

ELEVATIONS

62 - 68 Currie Street Mixed Use Development

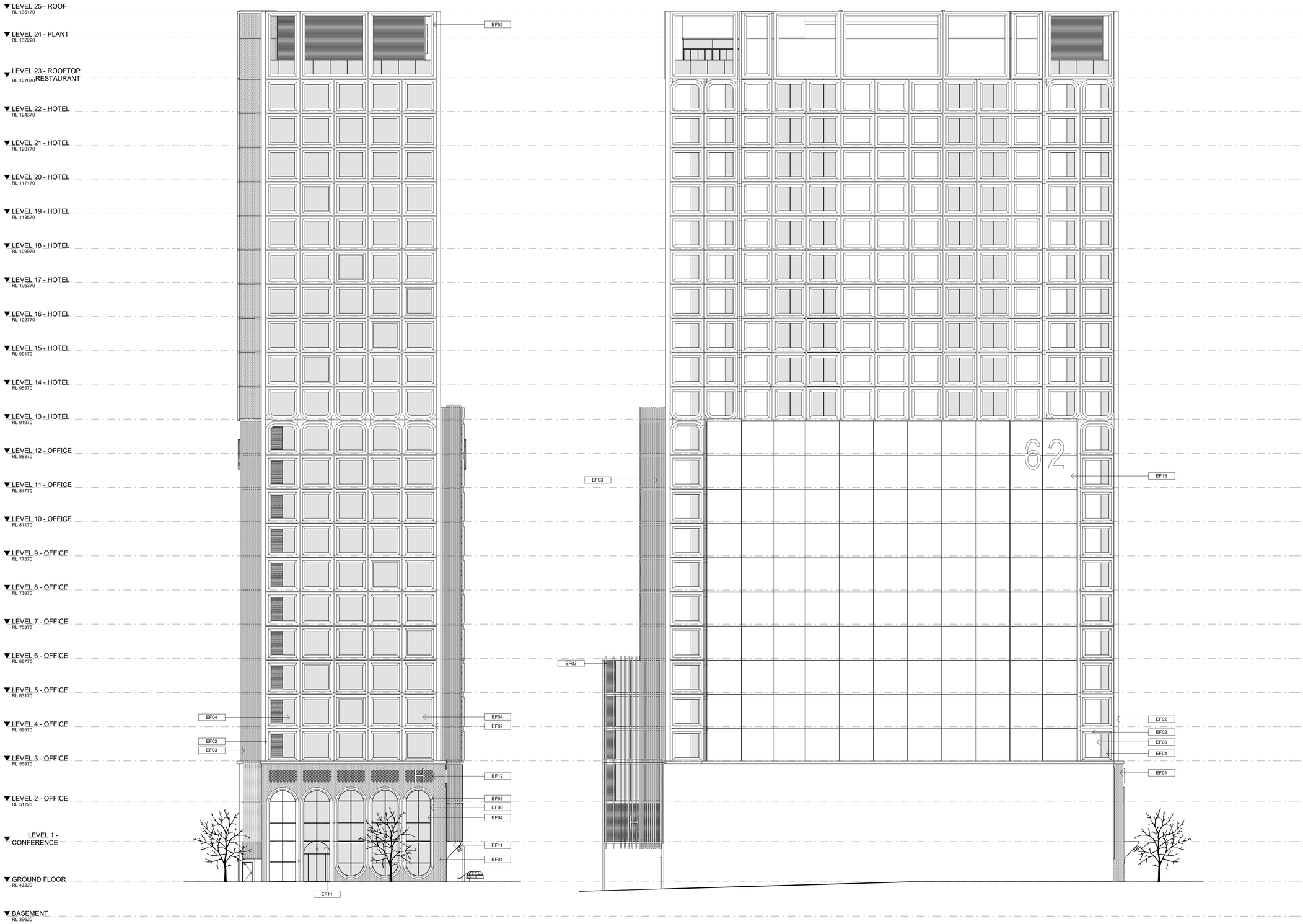
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:200 @ A1
0 16

North:

Project Number:	**31786**
Drawing Number:	**DA400**
Revision:	0
Date:	28/02/2019

Hames Sharley



DA401 - SOUTH ELEVATION
1 : 200

DA401 - WEST ELEVATION
1 : 200

LEGEND

EF01

BURLESQUE CHARMING BLACK GLAZED BRICK OR SIMILAR.

EF02

BRIGHTONLITE LIGHT COLOURED CONCRETE FINISH TO FACADE OR SIMILAR

EF03

BLACK POWDERCOATED ALUMINUIM FINS TO FACADE OR SIMILAR.

EF04

SPANDREL GLAZING OR SIMILAR

EF05

VISION PANEL OR SIMILAR

EF06

BLACK POWDERCOATED ALUMINUIM WINDOW FRAMES TO WINDOWS OR SIMILAR

EF07

TASSIE OAK HARDWOOD TO EXTERNAL JOINERY

EF08

BLACK TILE TO EXTERNAL JOINERY OR SIMILAR

EF09

EMERALD GREEN TILE TO PLANTERBOXES OR SIMILAR

EF10

BRASS DETAILING TO EXTERNAL PLANTER BOXES OR SIMILAR

EF11

WHITE POWDERCOAT TO FABRICATED STEEL CANOPY OR SIMILAR

EF12

GLASS BRICKS TO BRICK FACADE OR SIMILAR

EF13

PAINTED CONCRETE TO WEST FACADE OR SIMILAR

AXIOM PROPERTIES LIMITED

ELEVATIONS

62 - 68 Currie Street Mixed Use Development

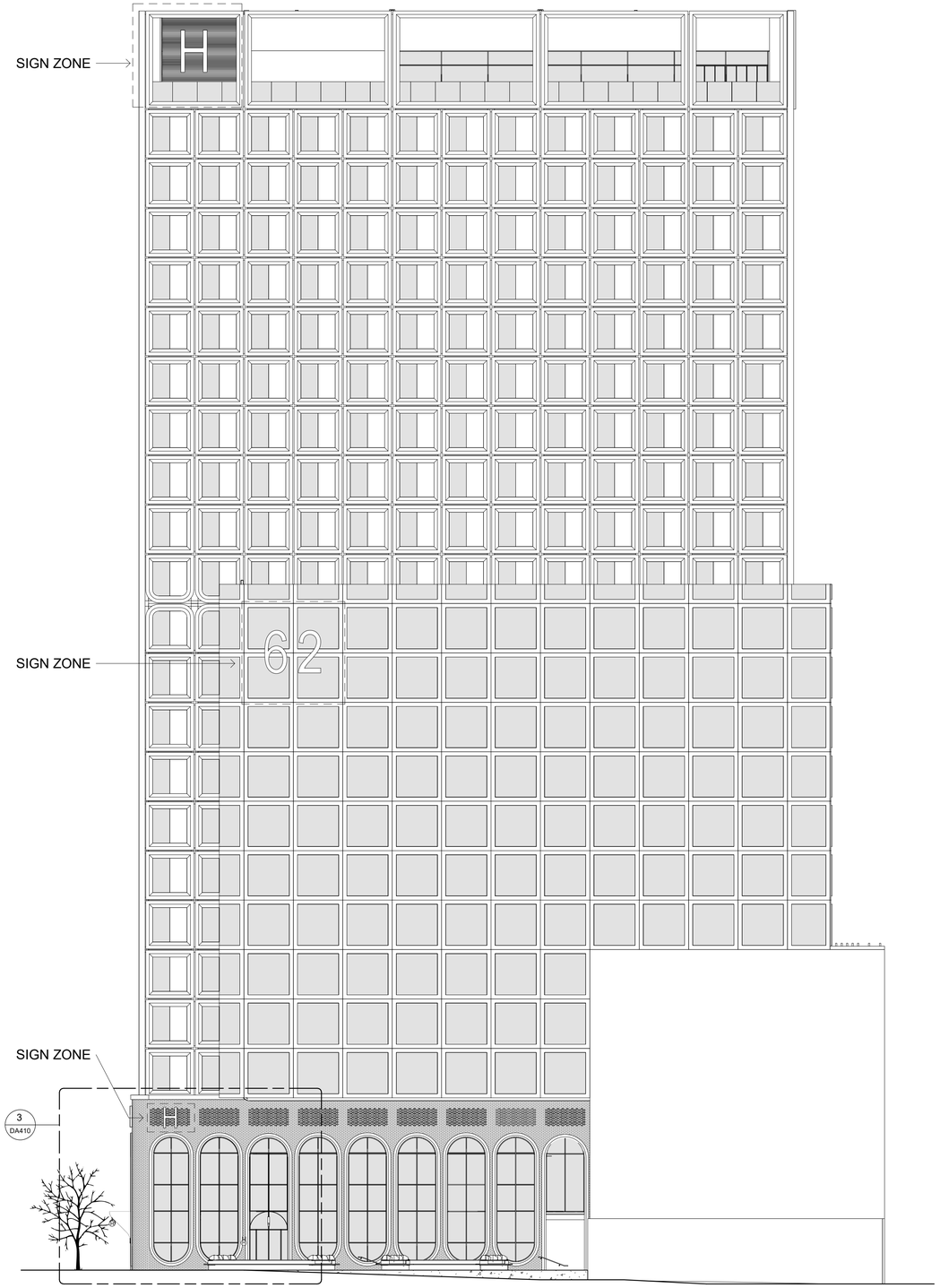
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:200 @ A1
0 16

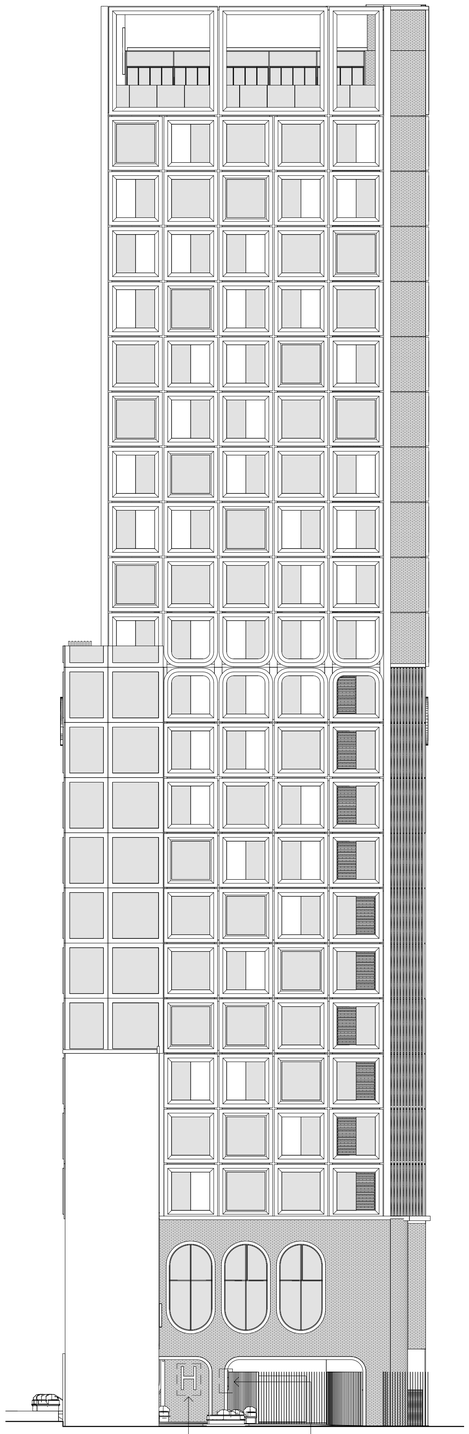
North:

Project Number:	31786
Drawing Number:	DA401
Revision:	0
Date:	28/02/2019

Hames Sharley



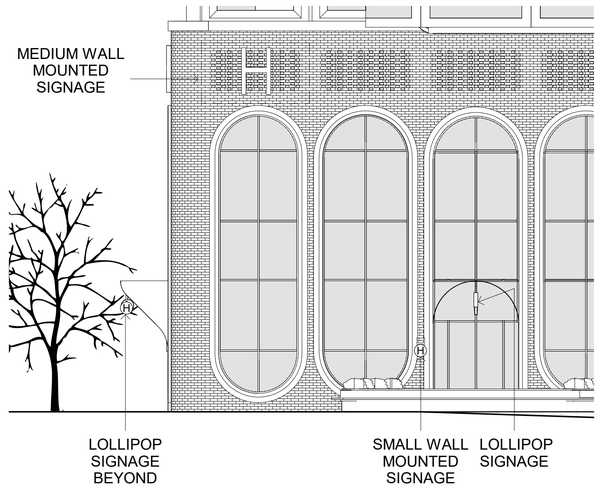
1 DA410 - SIGNAGE - EAST ELEVATION
1 : 200



2 DA410 - SIGNAGE - NORTH ELEVATION
1 : 200

NOTE:

'H' IS INDICATIVE OF FUTURE HOTEL SIGNAGE DESIGN.



3 DA410 DA410 - SIGNAGE - EAST ELEVATION - Callout 1
1 : 100

AXIOM PROPERTIES LIMITED

SIGNAGE ELEVATIONS - HOTEL SIGNAGE

62 - 68 Currie Street Mixed Use Development

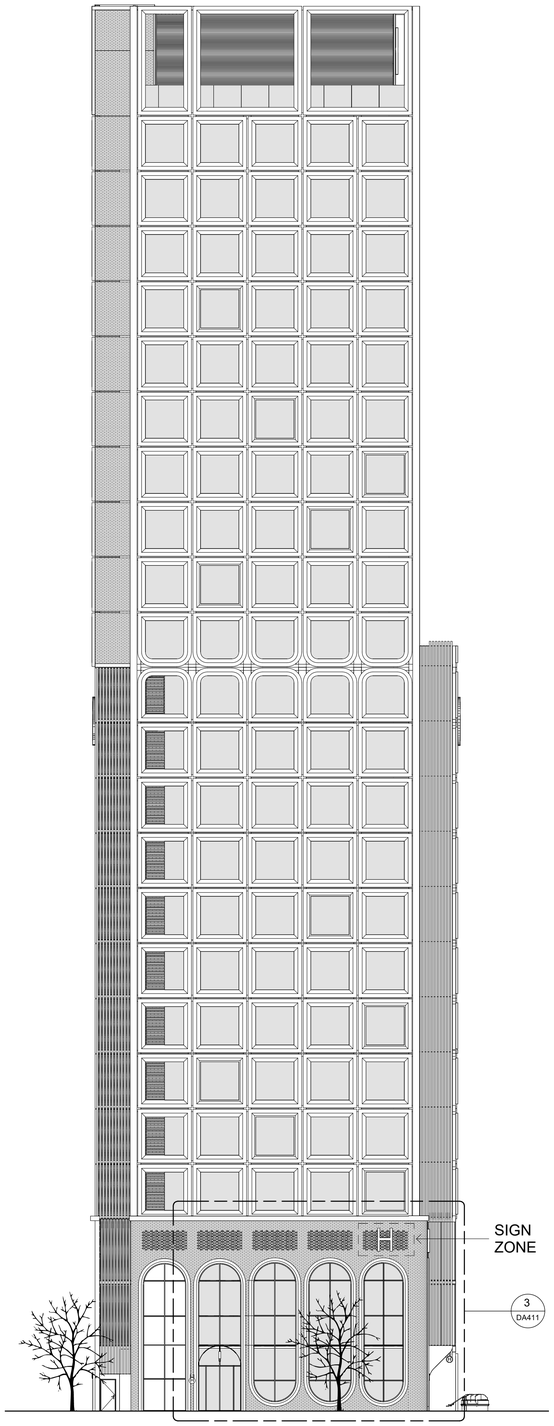
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:200 @ A1

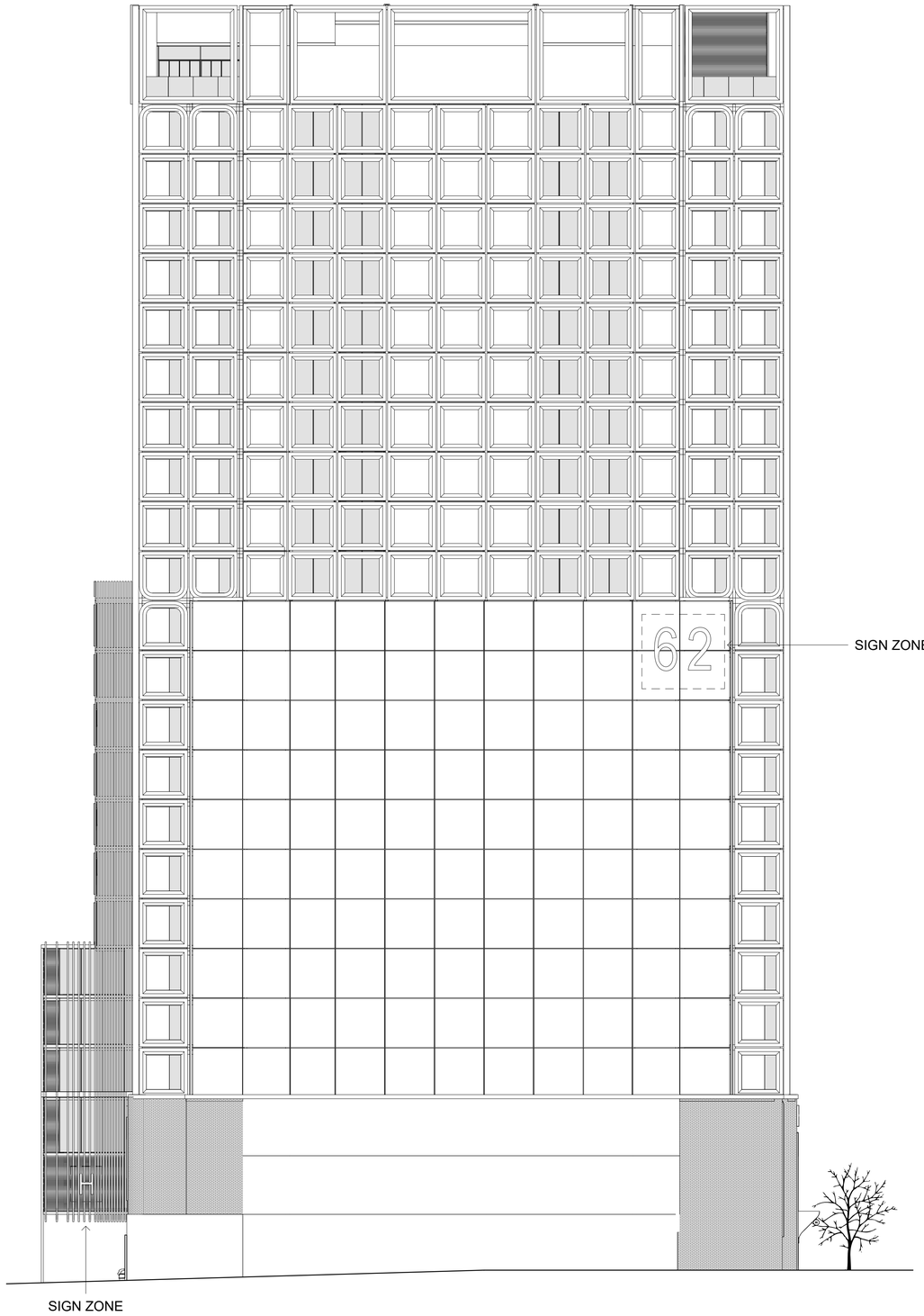
0 16

Project Number:	**31786**
Drawing Number:	**DA410**
Revision:	0
Date:	28/02/2019

Hames Sharley



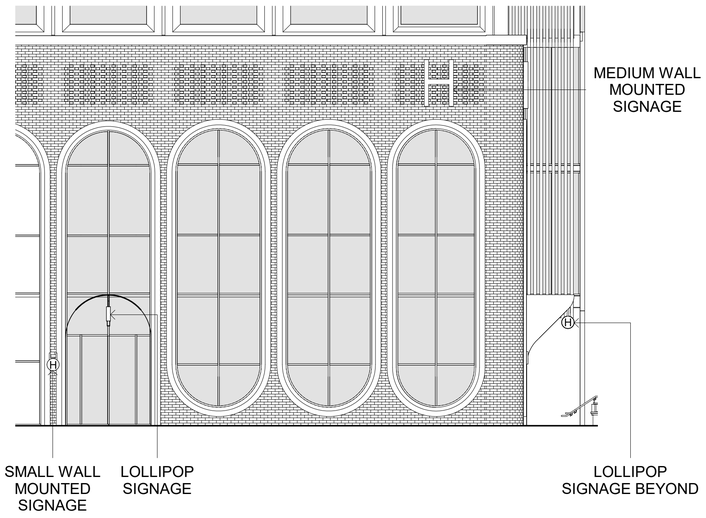
1 DA411 - SIGNAGE - SOUTH ELEVATION
1 : 200



2 DA411 - SIGNAGE - WEST ELEVATION
1 : 200

NOTE:

'H' IS INDICATIVE OF FUTURE HOTEL SIGNAGE DESIGN.



3 DA411 - SIGNAGE - SOUTH ELEVATION - Callout 1
1 : 100

AXIOM PROPERTIES LIMITED

SIGNAGE ELEVATIONS - HOTEL SIGNAGE

62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

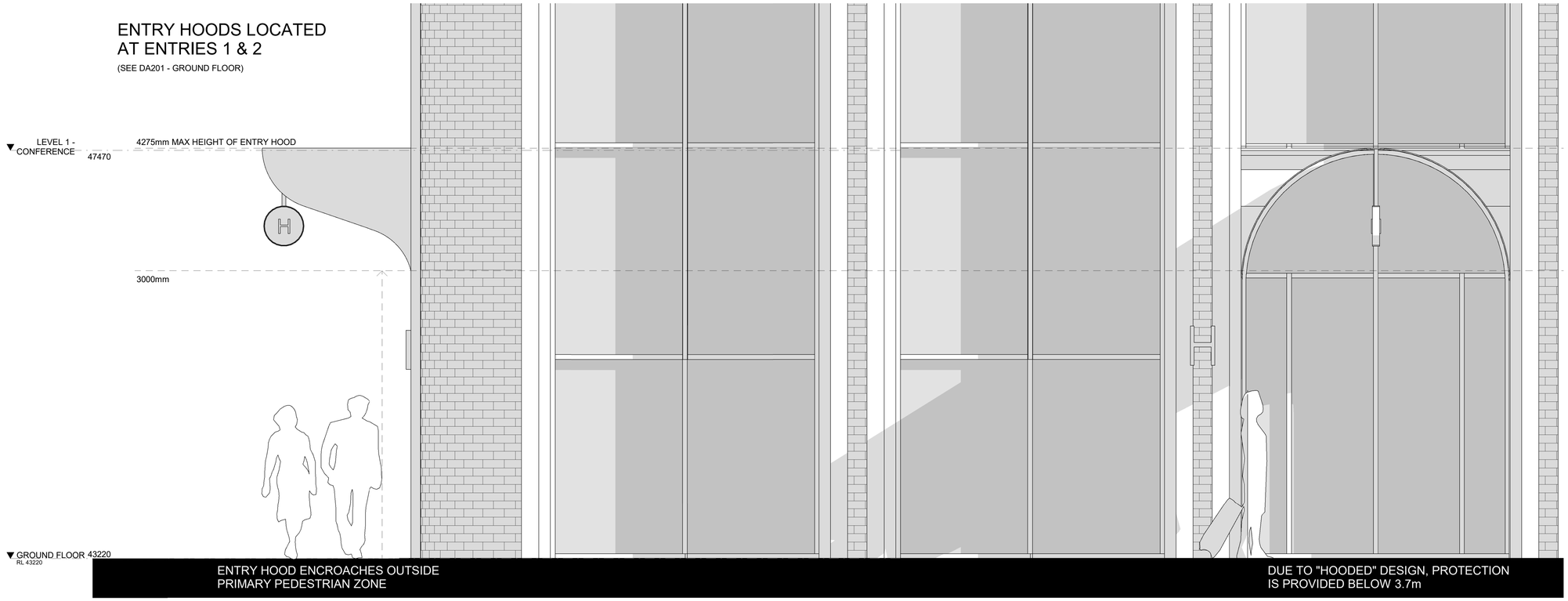
Scale: 1:200 @ A1
0 16

Project Number: 31786
Drawing Number: DA411
Revision: 0
Date: 28/02/2019

Hames Sharley

ENTRY HOODS LOCATED AT ENTRIES 1 & 2

(SEE DA201 - GROUND FLOOR)



1 DA400 DA420 - ENTRY HOOD
1 : 25

AXIOM PROPERTIES LIMITED

ENTRY HOOD

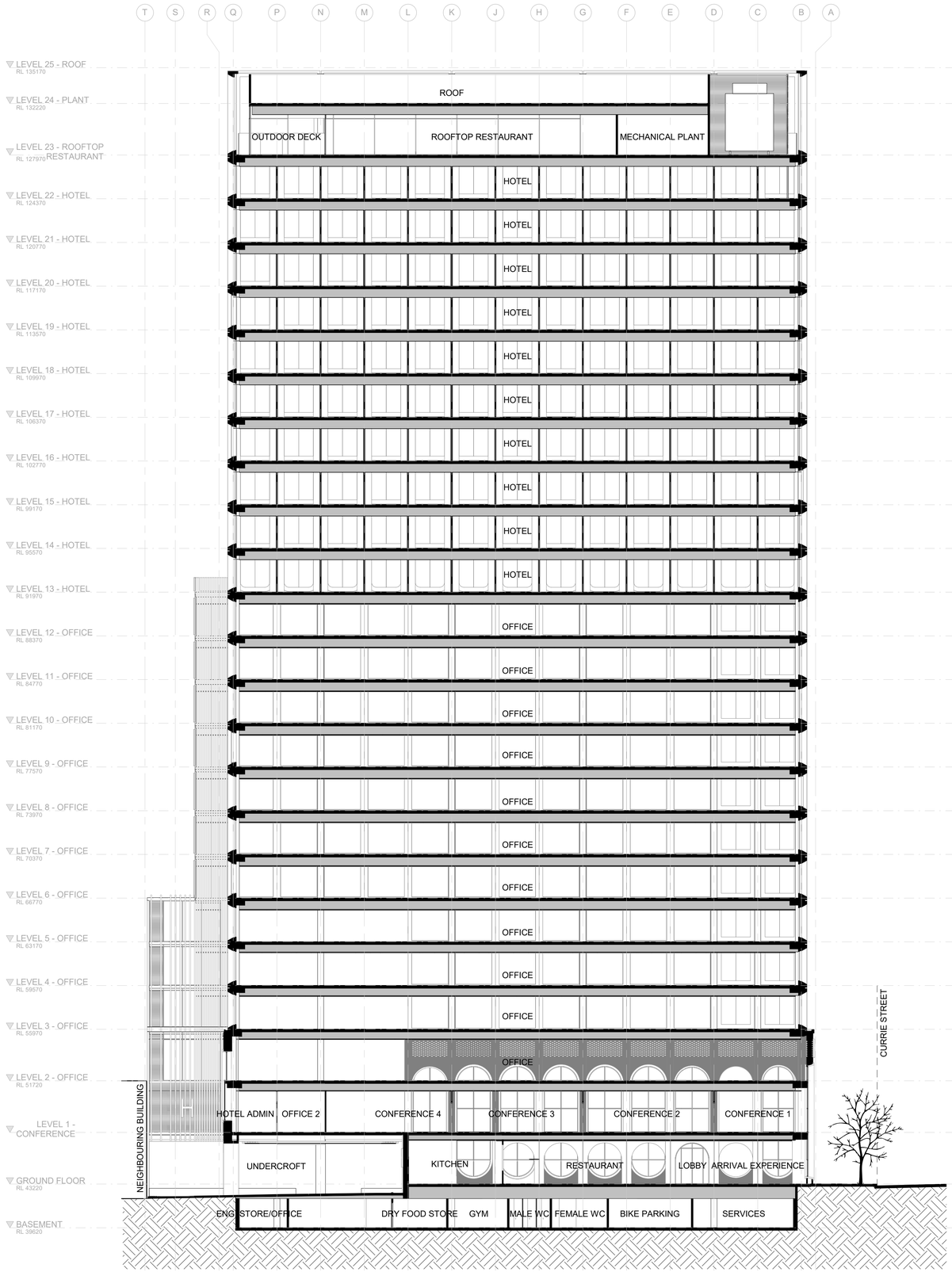
66 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street, Adelaide SA 5000

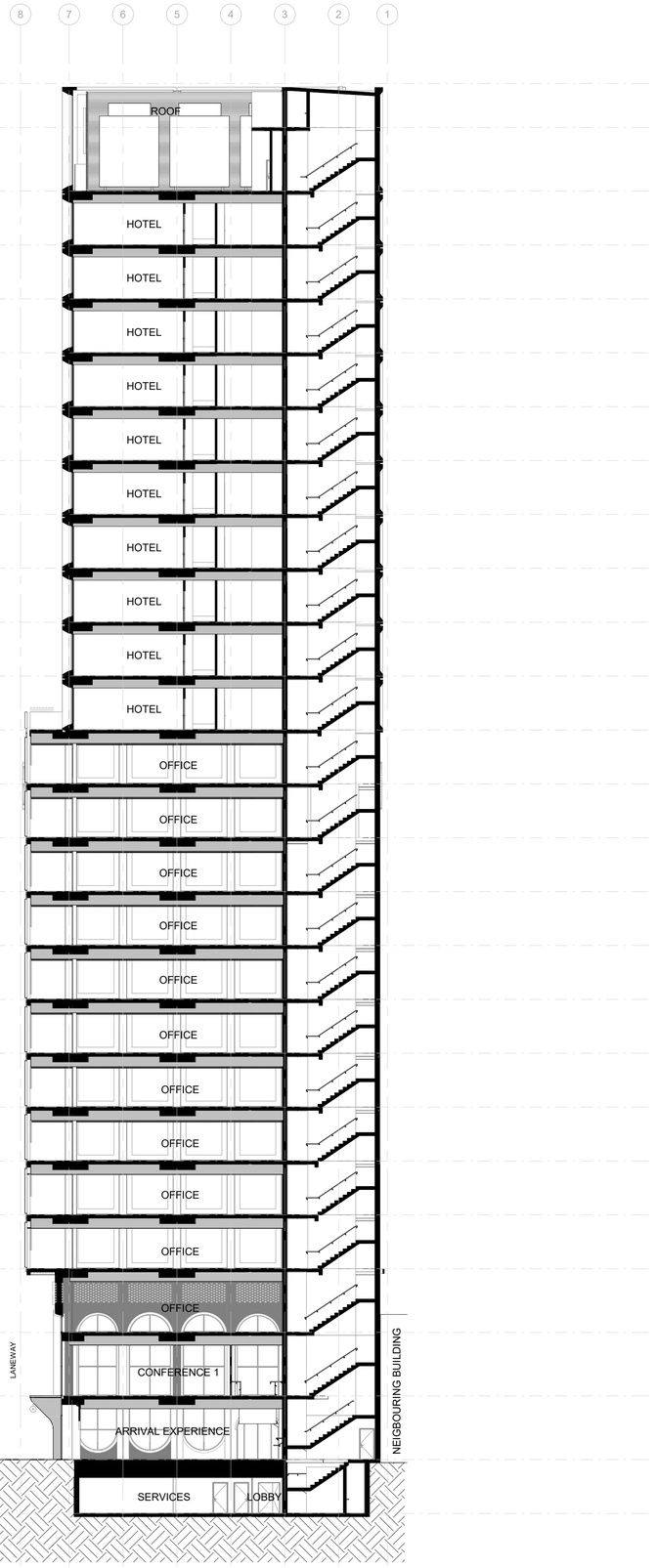
Scale: 1:25 @ A1
0 2

Project Number: 31786
Drawing Number: DA420
Revision: 0
Date: 28/02/2019

Hames Sharley



1 A260 DA500 - SECTION - NORTH SOUTH
1 : 200



2 A260 DA500 - SECTION - EAST WEST
1 : 200

AXIOM PROPERTIES LIMITED

SECTION

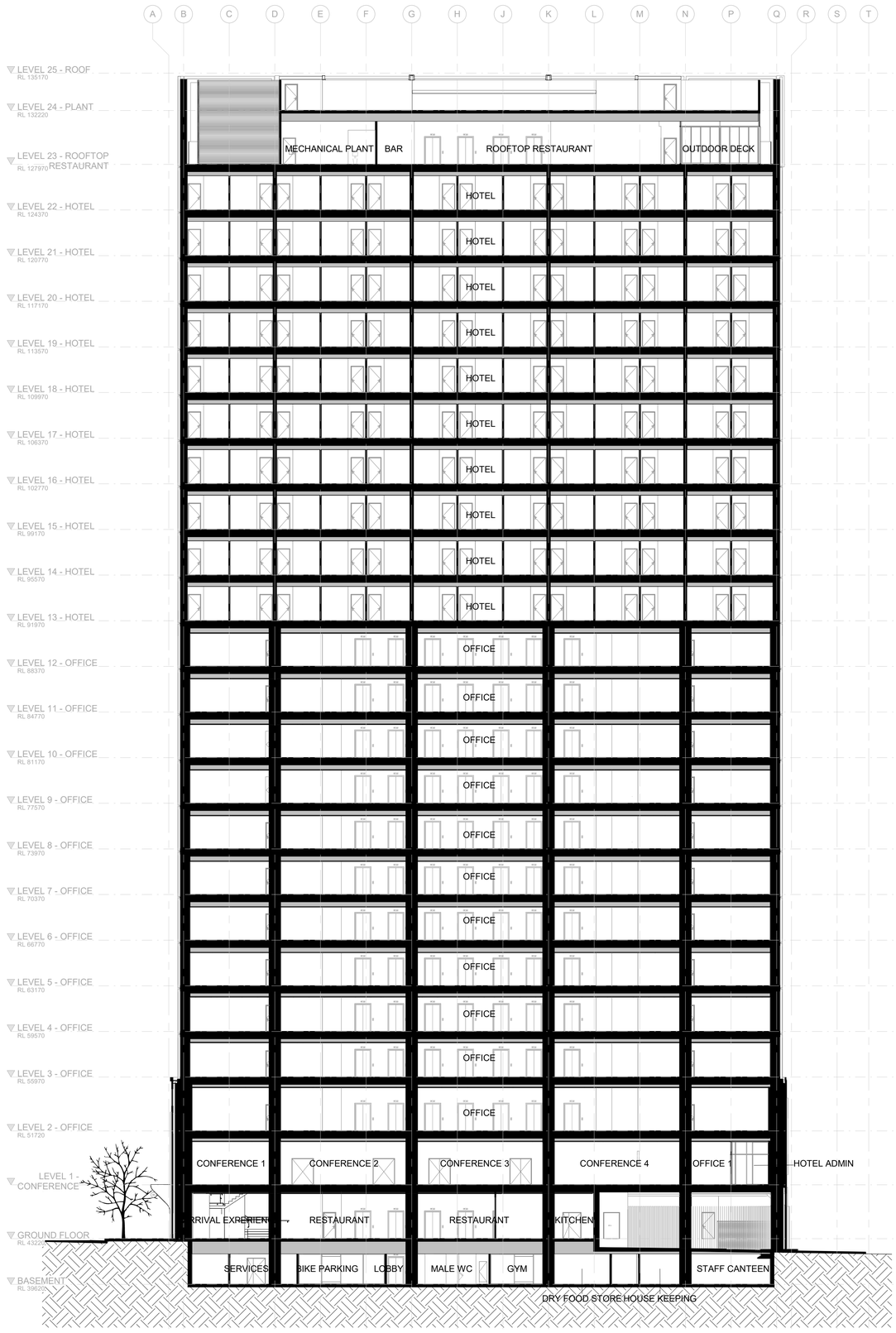
62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: 1:200 @ A1
0 16

Project Number: 31786
Drawing Number: DA500
Revision: 0
Date: 28/02/2019

Hames Sharley



1 A260 DA501 - SECTION - SOUTH NORTH
1 : 200

2 A260 DA501 - SECTION - WEST EAST
1 : 200

AXIOM PROPERTIES LIMITED

SECTION

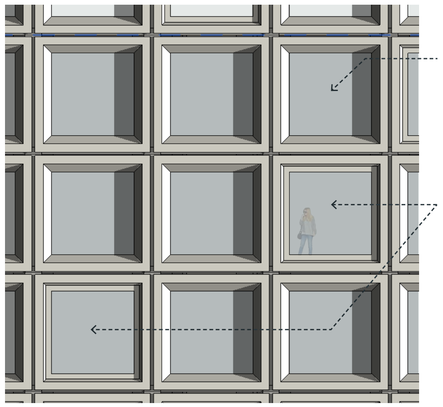
62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

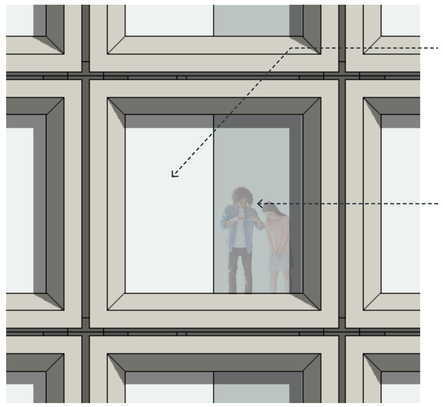
Scale: 1:200 @ A1
0 16

Project Number: 31786
Drawing Number: DA501
Revision: 0
Date: 28/02/2019

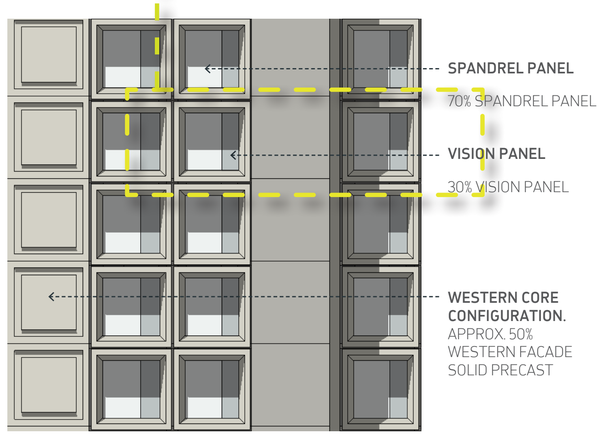
Hames Sharley



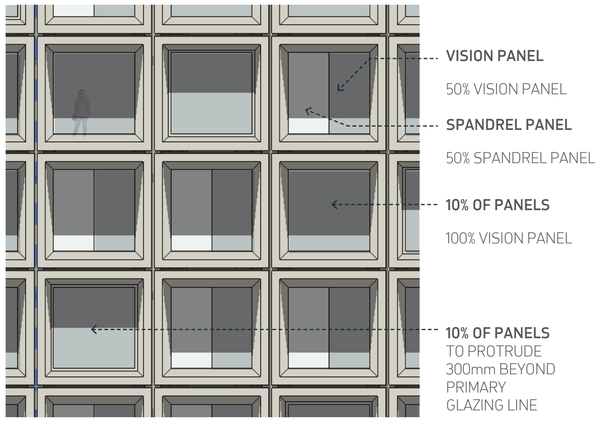
SOUTHERN FACADE
100% GLAZED PANELS
21ST DEC, 6AM



EASTERN FACADE
50% GLAZED PANELS
21ST DEC, 12 NOON



WESTERN FACADE
SOLID CORE + 30% GLAZED PANELS
21ST DEC, 2PM



NORTHERN FACADE
MIX OF 50% + 100% GLAZED PANELS
21ST DEC, 12 NOON

AXIOM PROPERTIES LIMITED

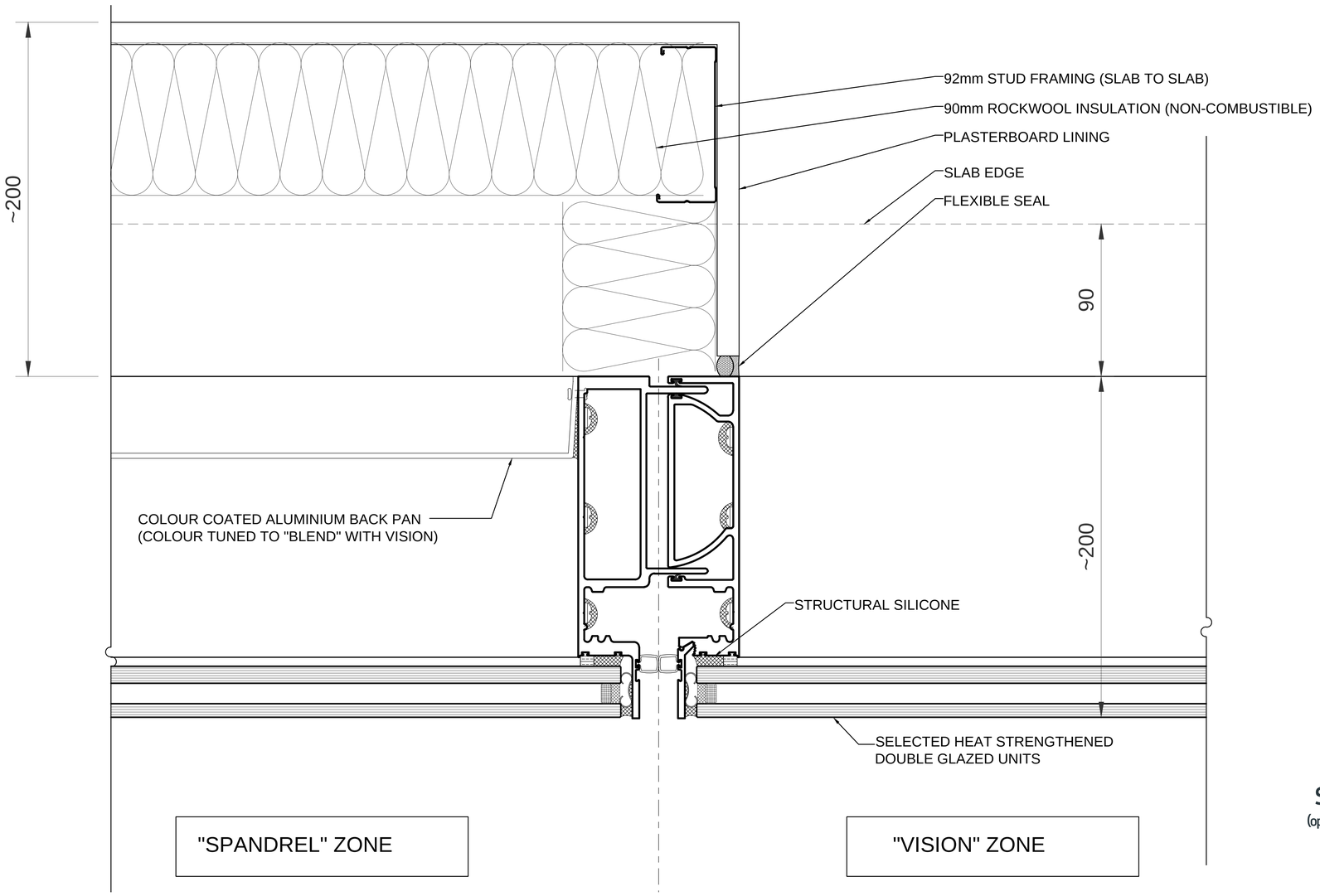
FACADE DETAILING
62 - 68 Currie Street Mixed Use Development

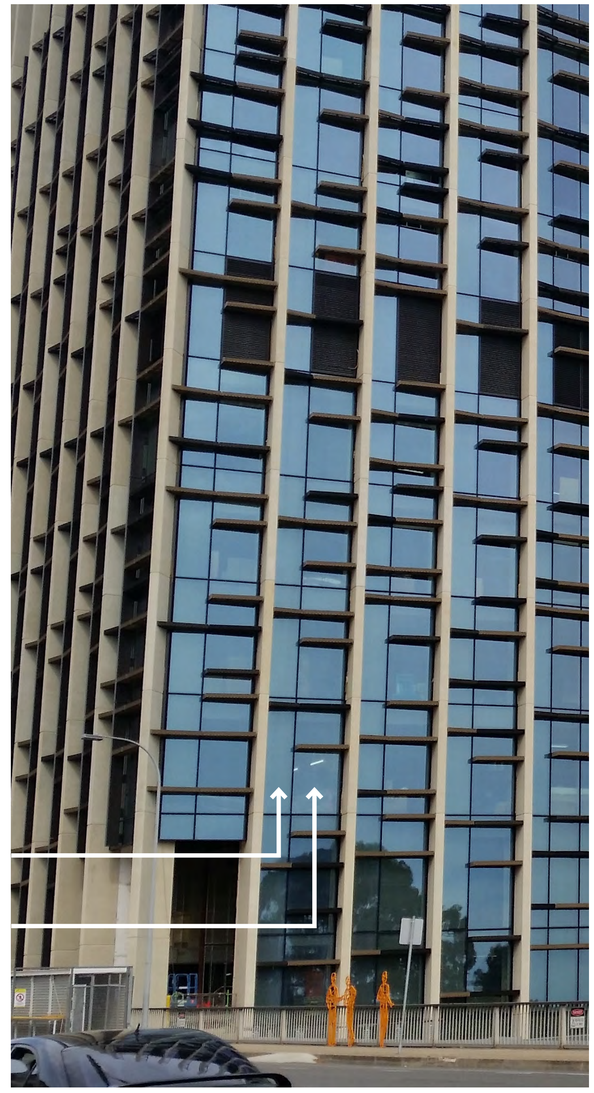
Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: NTS

Project Number:	**31786**
Drawing Number:	**DA600**
Revision:	0
Date:	28/02/2019

Hames Sharley





ABOUT THE "SHADOW-BOX" CONSTRUCTION:

THE SHADOW-BOX CONSTRUCTION IS "TUNED" TO MINIMISE DIFFERENCE IN OUTWARDS APPEARANCE BETWEEN VISION AND SPANDREL.

SHADOW-BOX CONSTRUCTION ALLOWS FOR HIGHER THERMAL COMFORT AND THERMAL PERFORMANCE OF BUILDING. REFER ARUP-FAC-01_01 FOR DETAIL

UniSA Cancer Research Institute
Adelaide, South Australia
Facade by ARUP

AXIOM PROPERTIES LIMITED

FACADE DETAILING
62 - 68 Currie Street Mixed Use Development

Status: Planning Issue
Address: 62-68 Currie Street Adelaide

Scale: NTS

Project Number: 31786
Drawing Number: DA601
Revision: 0
Date: 28/02/2019

Hames Sharley

ARCHITECTURE
INTERIORS
URBAN DESIGN
PLANNING
LANDSCAPE

62 CURRIE ST

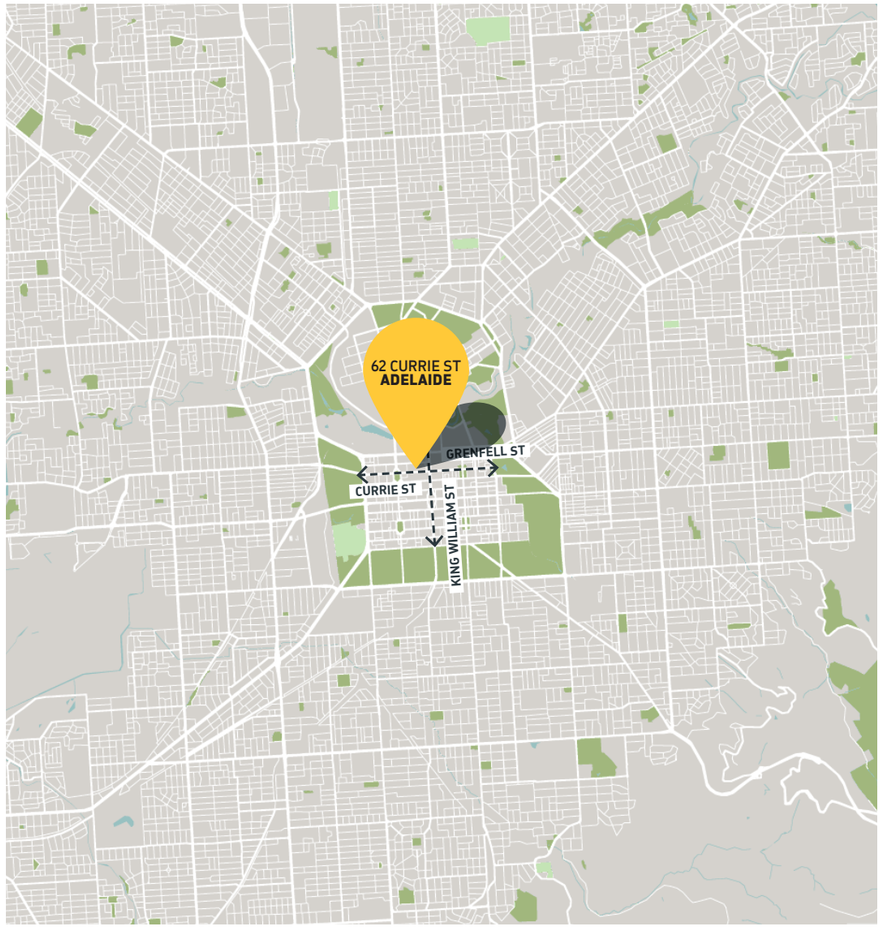
ARCHITECTURAL DESIGN STATEMENT

Hames Sharley

28 FEBRUARY 2019

overview
urban context

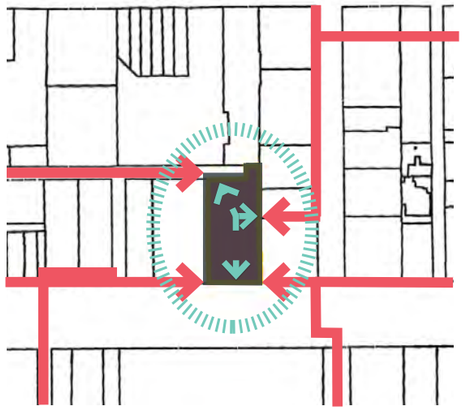
MACRO-LOCALITY



PROJECT ASPIRATIONS

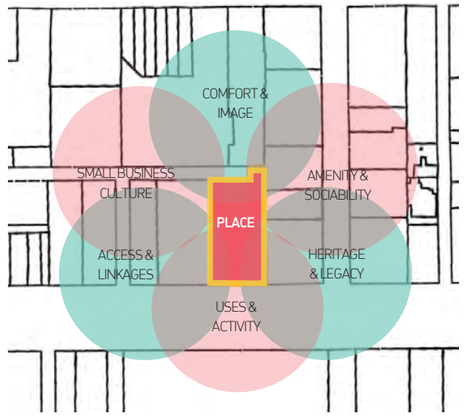
THE CLIENT BRIEF PROVIDES A COMPELLING MIXED-USE DEVELOPMENT ASPIRATION, A DIVERSE BUILDING PROGRAM AND 4 KEY SUCCESS FACTORS THAT WILL DEFINE THE OUTCOMES FOR THE PROJECT.

create an 'A' Grade ***mixed-use*** *precinct*



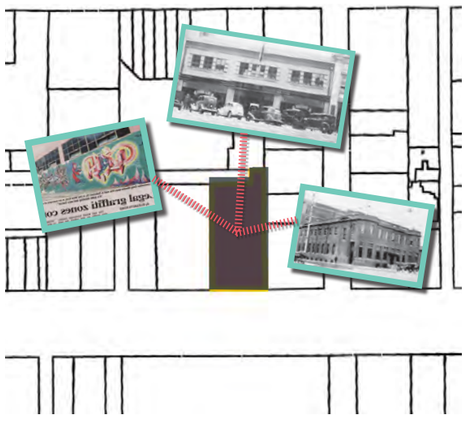
01
create site permeability + activation

- ESTABLISH A NEW 'SHORT CUT' FROM CURRIE STREET TO HINDLEY STREET WEST
- PROVIDE PEDESTRIAN PRIORITY, SHARED-USE ACCESS OPTIONS THAT ANIMATE THE GROUND PLANE WITH A MIX OF ACTIVITIES AND EXPERIENCES



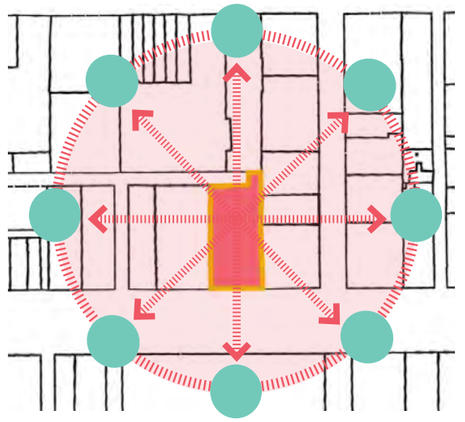
02
create community value through authentic experience

- CREATE A PLACE THAT EXPRESSES COMMUNITY VALUES AND IDENTITY AND FOSTERS COMMUNITY INVOLVEMENT
- DESIGN A LAYERED, ENGAGING + AUTHENTIC EXPERIENCE, THAT EXPLORES FINE GRAIN CONNECTIONS
- UTILISE FOOD AS A BUILDING CONNECTOR



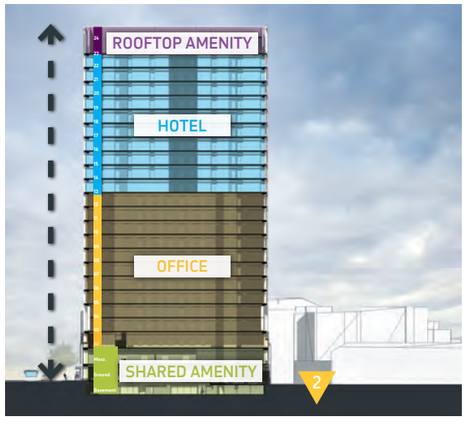
03
celebrate contextual strengths

- RESPECT AND CONTRAST THE SETTING'S HERITAGE CHARACTER WHILST ENGAGING WITH AND RESPECTING THE LANEWAY'S 'ART STREET' QUALITIES
- CREATE AUTHENTIC REFERENCING OF THE SITE'S HISTORY AND CHARACTER



04
generate a mixed use destination

- COMPLEMENT PRECINCT ACTIVITIES WITH A UNIQUE AND INTEGRATED RETAIL MIX
- SERVICE THE NEEDS OF THE ON-SITE USERS
- CREATE ACTIVE PUBLIC PLACES THAT ENCOURAGE INTERACTION AND EXPLORATION



05
differentiate development components

- STRUCTURE SITE PLANNING THROUGH LEGIBLE ENTRIES FOR OFFICE AND HOTEL COMPONENTS AND EXPRESS THESE COMPONENTS THROUGH THE ARTICULATION OF BUILT FORM
- CREATE VERTICAL SEPARATION THROUGH ACTIVATED SKY LOBBIES AND RECREATION DECKS

"a successful and transformative exemplar of **mixed-use** urban development"

+ THE SITE LOCATION IS PARTICULARLY **WELL PLACED TO LEVERAGE AND CAPITALISE ON ADELAIDE CITY'S BUOYANT VISITOR MARKET** WITH THE CURRENT CITY BASED CAPITAL SPEND
+ THE PRECINCT HAS A **BUOYANT SPECIALITY OFFICE AND SERVICED OFFICE MARKET CENTRED ON LEIGH STREET** WHICH THE SITE LOCATION IS WELL PLACED TO SUPPORT AND EXPAND.
+ THE **DIVERSE BUT FRAGMENTED RETAIL AND SERVICES OFFERING** WITHIN THE PRECINCT COULD BE FINESSED BY A 'GO TO' DESTINATION BASED RETAIL / SERVICES CONCEPT.
+ **NEW NON-RESIDENTIAL DEVELOPMENT WILL BRING NEW WORKERS TO THE PRECINCT** AND THEREFORE DEMAND FOR NEW RESIDENTIAL MARKETS

overview
urban context

ASPIRATION

VS

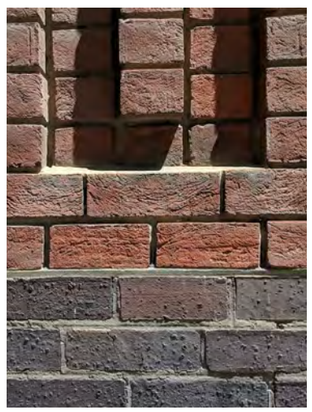
MIXED-USE SCOPE

- ROOFTOP AMENITY
- HOTEL
- OFFICE
- GROUND FLOOR LOBBY AND RESTAURANT
- GYM & PREMIUM END OF TRIP FACILITIES

SUCCESS FACTORS

1. DESIGN TO BE MARKET FLEXIBLE IN MIXING THE DIFFERENT USES
2. PRACTICAL AND COMMERCIAL
3. FIT IN WITH THE SURROUNDING PRECINCT THROUGH DESIGN AND LINKAGES
4. A POINT OF DIFFERENCE FOR THE SURROUNDING AREA

CONTEXTUAL MATERIALITY

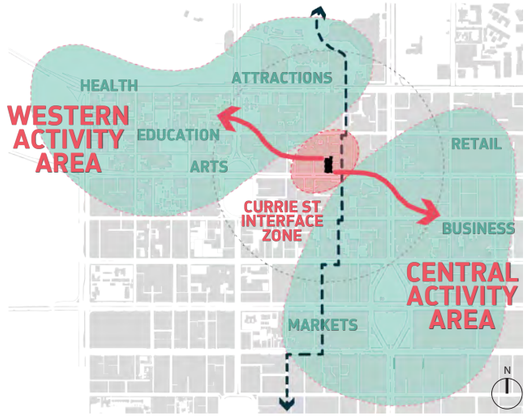





overview
urban context

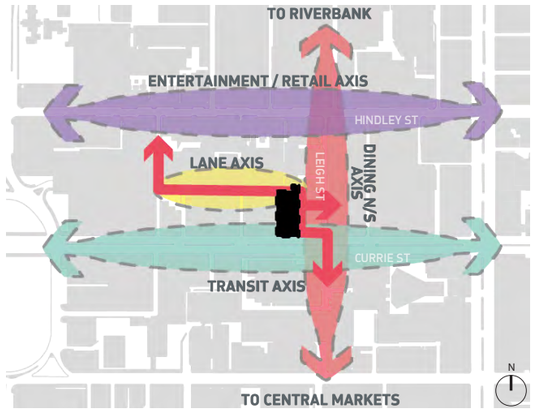
SITE OPPORTUNITIES

'A' Grade mixed-use development in a boutique, connected precinct



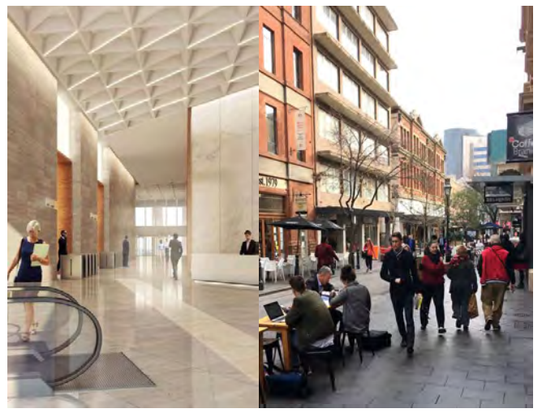
01 strategic location

AT THE INTERFACE OF THE COMMERCIAL CORE AND THE EMERGING WESTERN GROWTH AREA



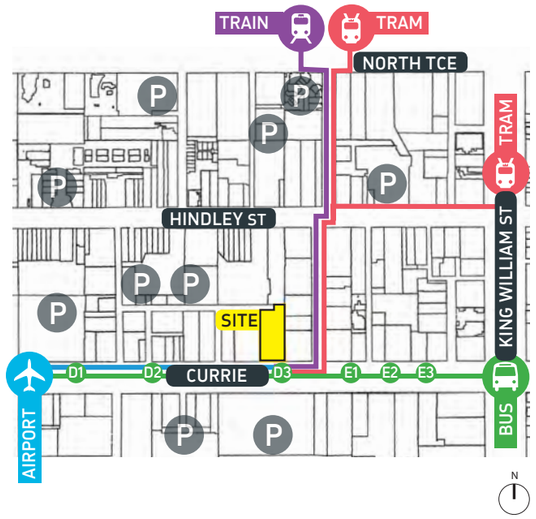
02 transformative opportunity

TO EMBRACE, LEVERAGE AND GROW LOCAL STRENGTHS AT THE FOREFRONT OF THE CURRIE STREET RENAISSANCE



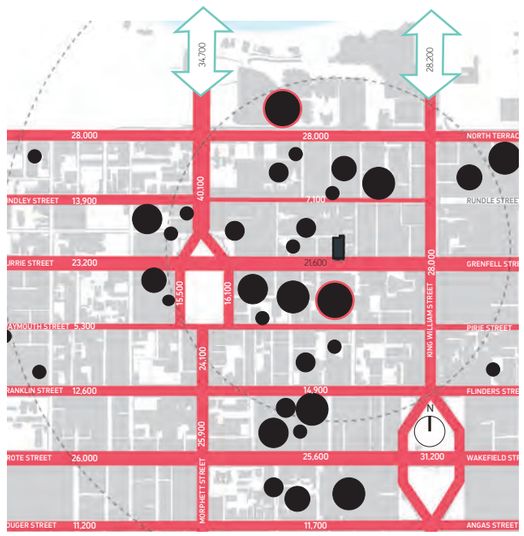
03 distinctive boutique setting

IN THE LEIGH STREET PRECINCT (CURRIE STREET ADDRESS WITH BOUTIQUE LANEWAY CONNECTION)



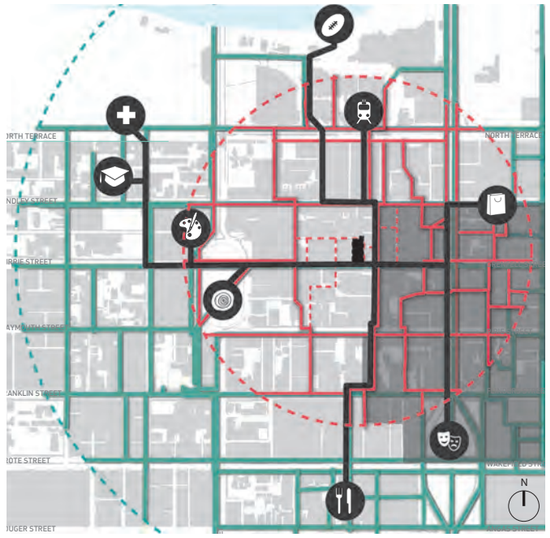
04 public transport networks

BUS, TRAM AND TRAIN ACCESS ADJACENT OR WITHIN EASY WALKING DISTANCE (400m / 5 MIN) OF SITE



05 vehicular access + parking

HIGHLY ACCESSIBLE FOR PRIVATE VEHICLES WITH CONVENIENT PARKING

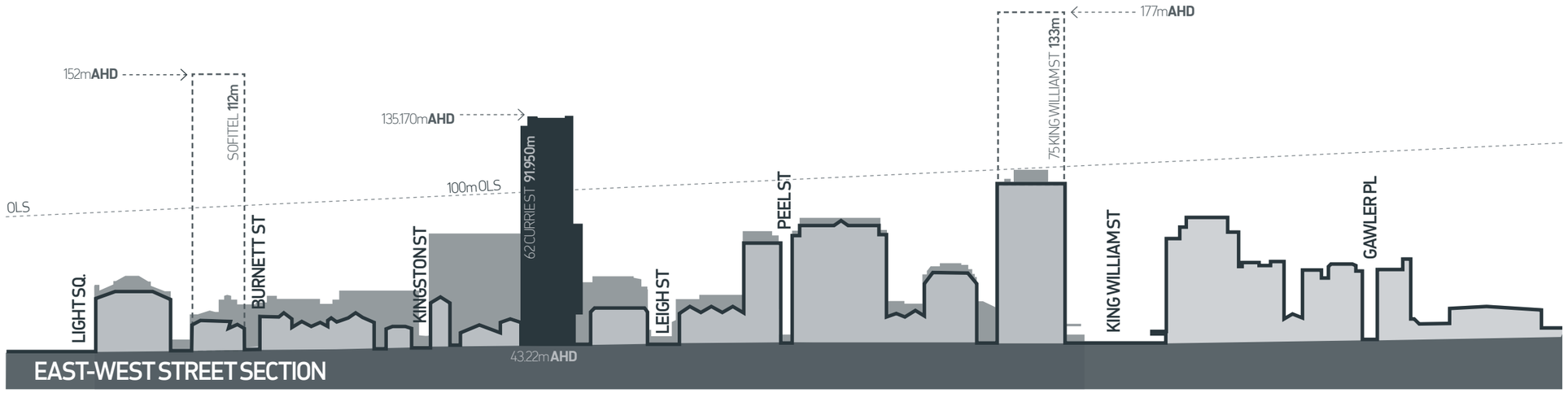


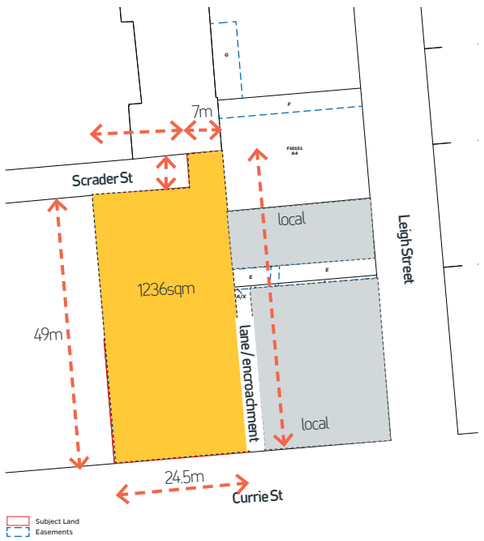
06 pedestrian + cycle networks

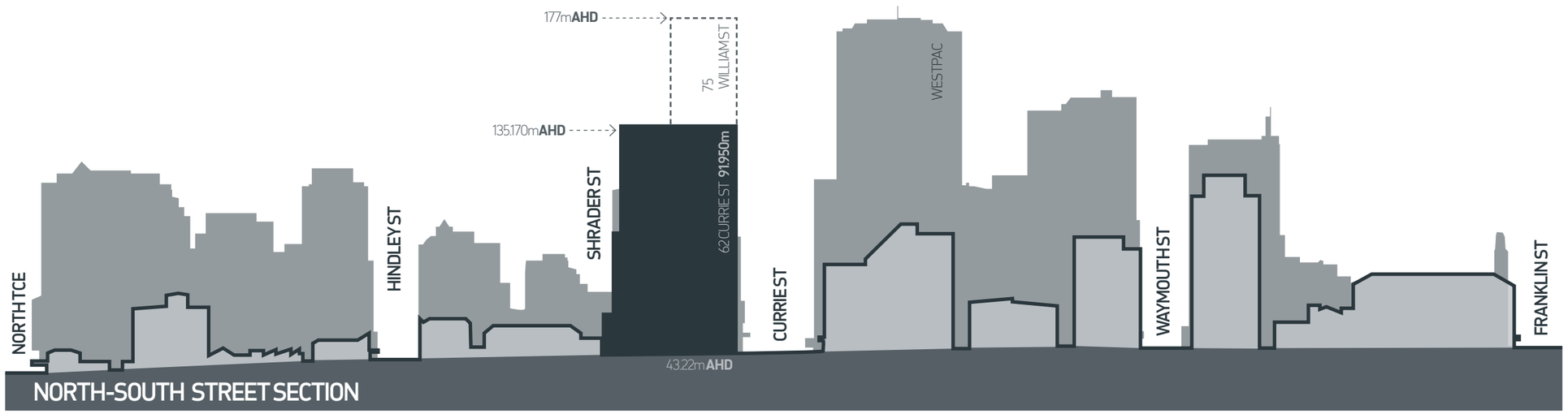
LOCATED ON A PRIMARY N-S PEDESTRIAN ROUTE LINKING TO KEY BIKE ROUTES AND DESTINATIONS WITHIN THE ENVIRONS

overview
urban context

SITE CONSTRAINTS

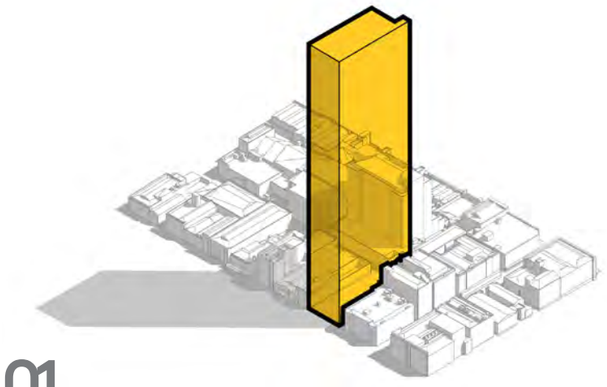






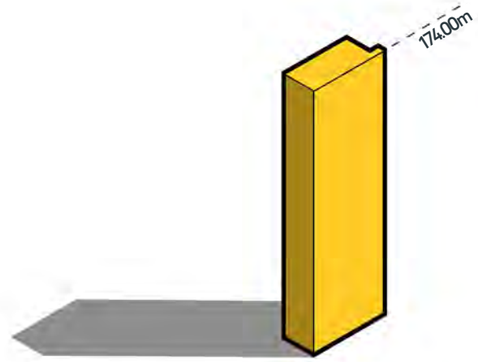
overview
architectural intent

PARTI DIAGRAMS



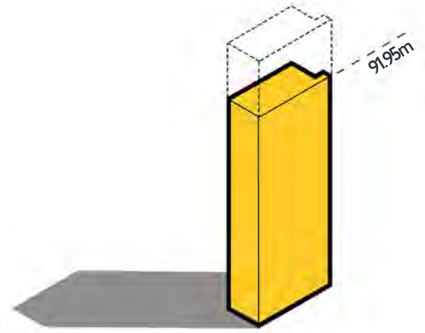
01
maximum permissable form

AREA: 1236 SQM



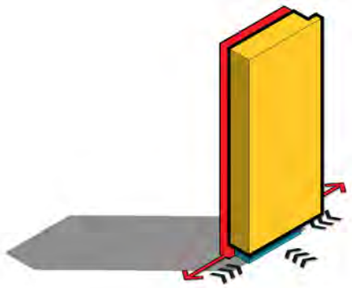
02
maximum permissable height

PANS-OPS: 174M AHD
OLS: 100 - 110M
AHD



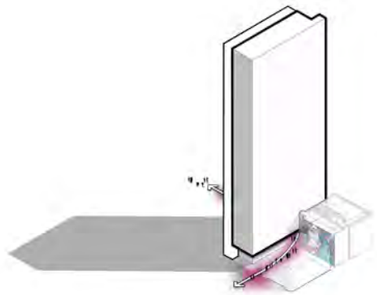
03
market-led height

CURRENT HEIGHT: 91.95M (25 STOREYS)



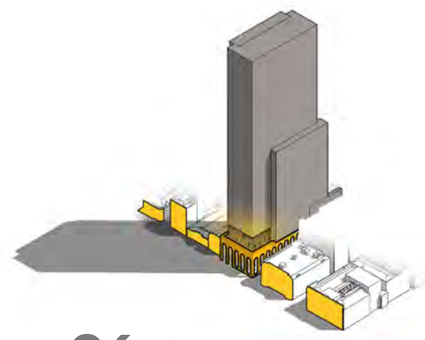
04
permeable ground plane

CLEARLY DEFINED AND SHARED ACCESS TO ALL BUILDING COMPONENTS



05
laneway connectivity

CONNECTING THE WESTERN ACTIVITY AREA WITH THE CENTRAL ACITIVITY AREA

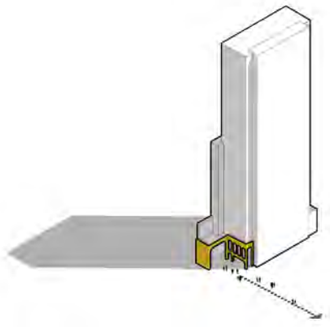


06
podium with negative setback

PODIUM HEIGHT AKNOWLEDGING THE HERITAGE CHARACTER OF CURRIE STREET AND NEIGHBOURING STRUCTURES

overview
architectural intent

PARTI DIAGRAMS

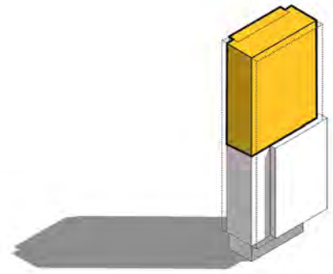


07
podium celebration on schrader

ACTIVATION OF REAR LANEWAY AND CONNECTION TO F&B, BUSINESS

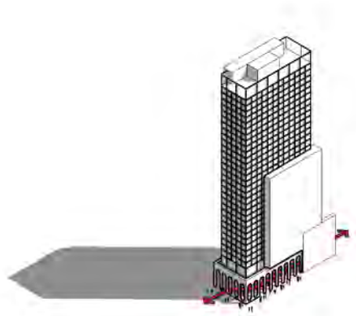
08
office maximisation

PREMIUM OFFERING WITH MAXIMISED FLOOR AREAS



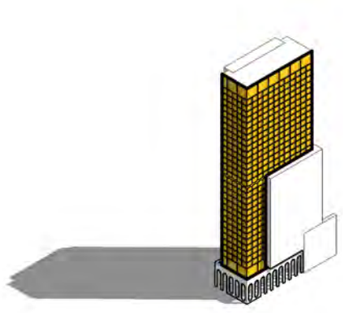
09
hotel setback

NATURAL LIGHT FOR HABITABLE SPACES



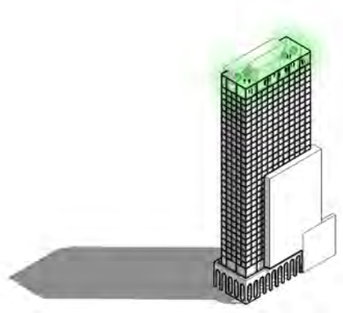
10
pedestrian-only through access

VEHICLES AT EACH END BUT PEDESTRIAN THORUGH ACCESS ONLY



11
classic facade

RECOGNITION TO CLASSIC TOWER DESIGN AND ADELAIDE CHARACTER WITH VISUALLY DEFINED VERTICAL RELIEF

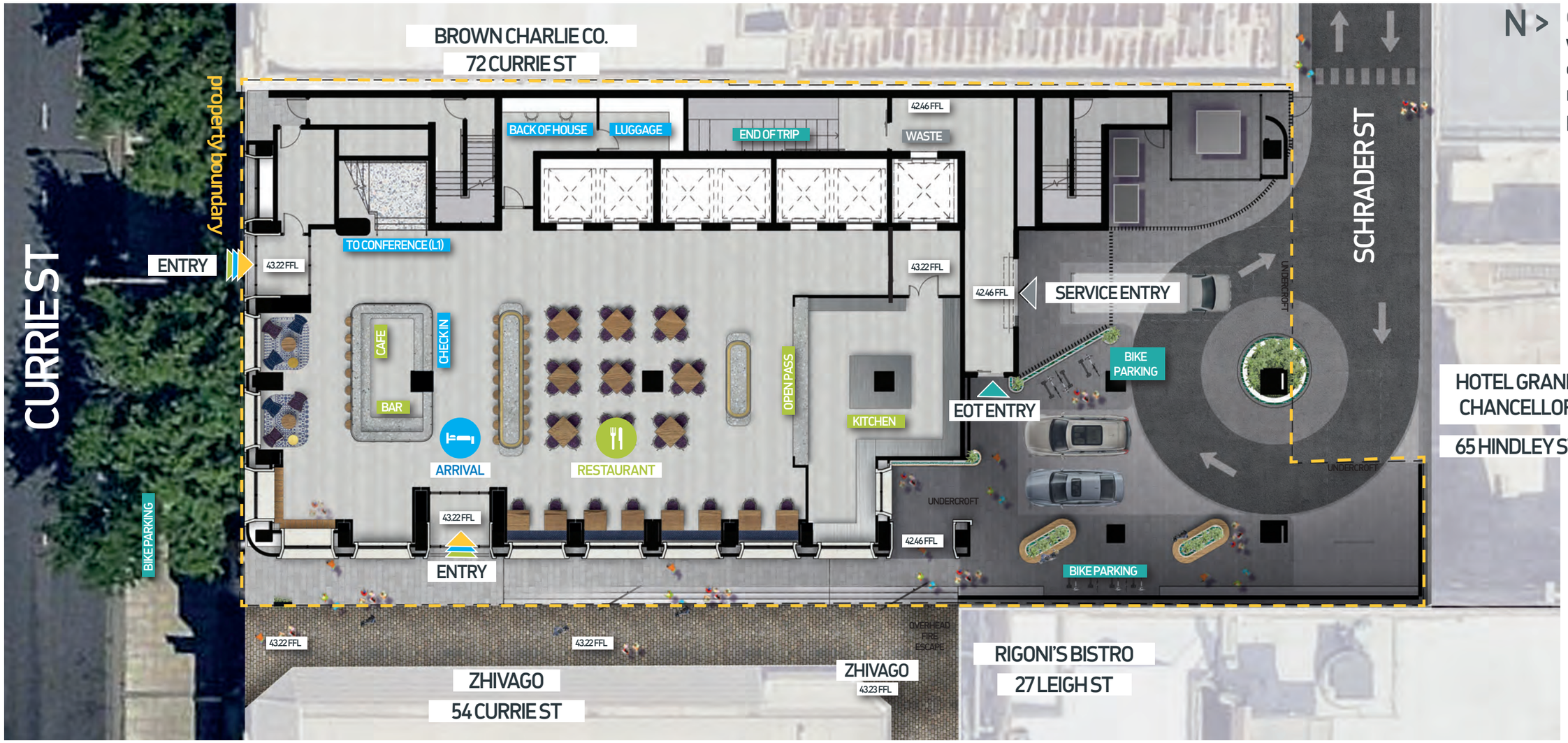


12
rooftop pergola

CELEBRATING ADELAIDE

development proposal
laneway vision

OPTION 01

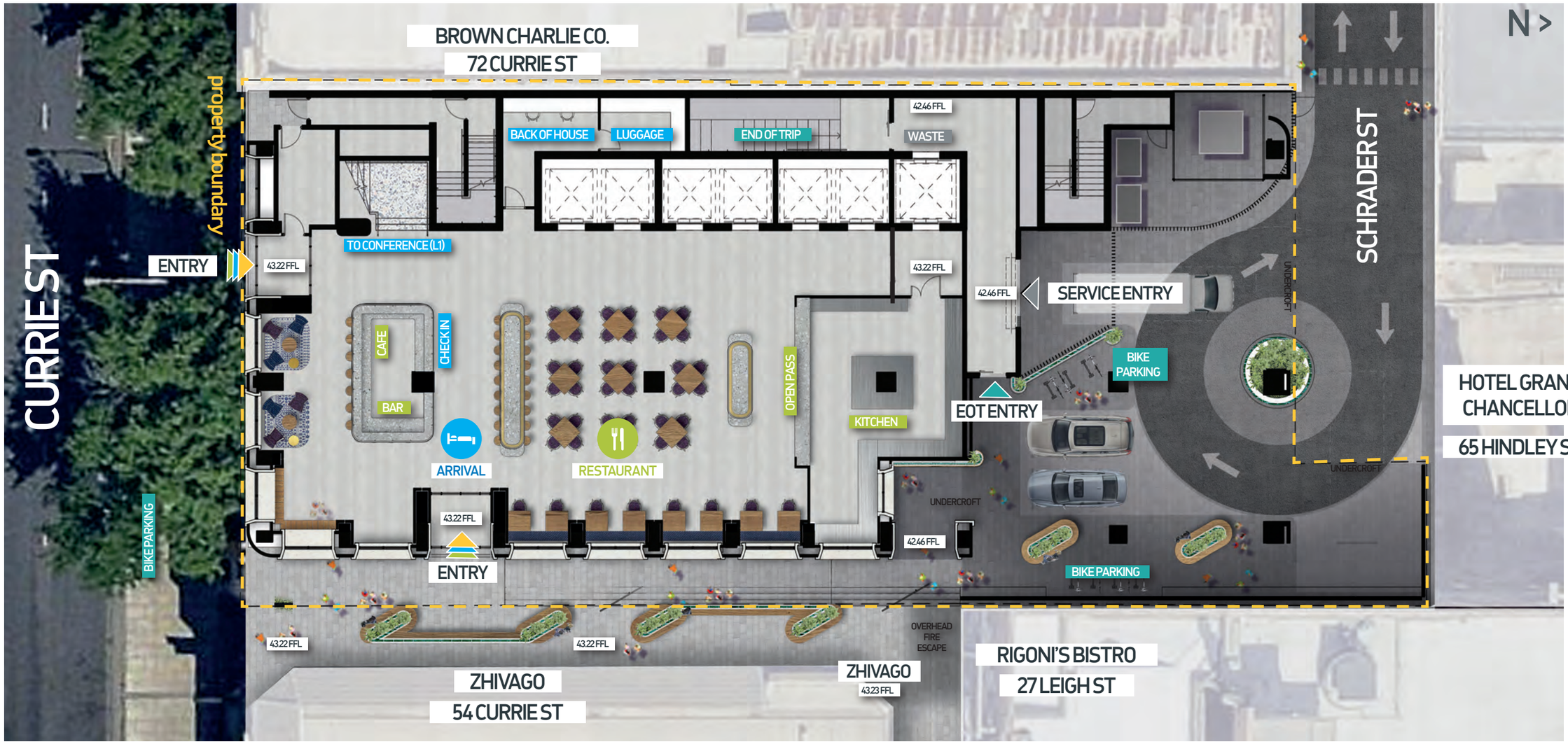


option 01
without
collaboration of
neighbouring
property owners

SITE PLAN
1:200

development proposal
laneway vision

OPTION 02



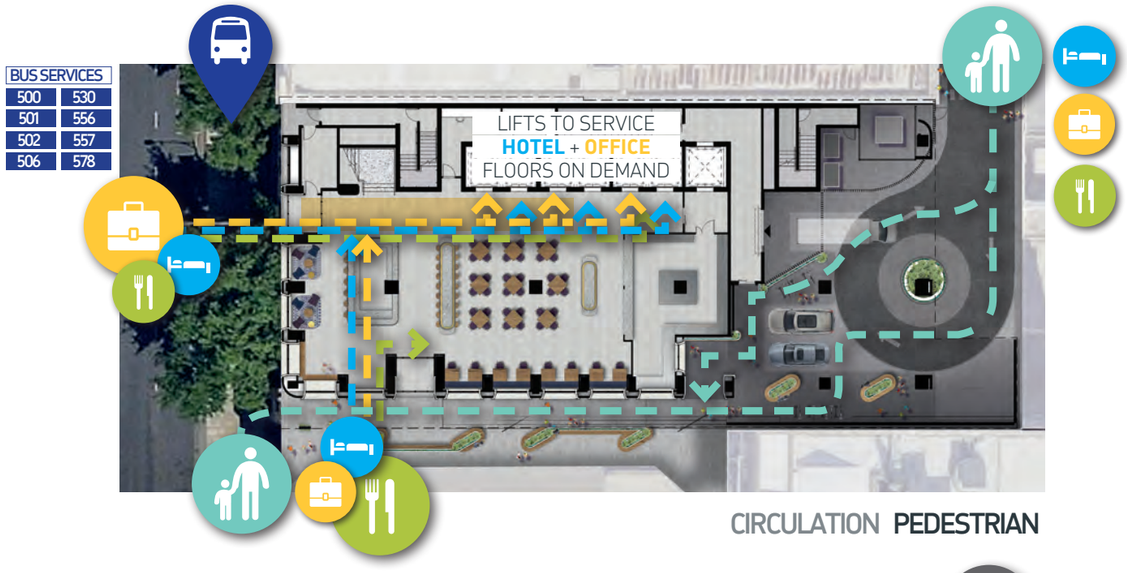
option 02
with collaboration of neighbouring property owners

SITE PLAN
1:200

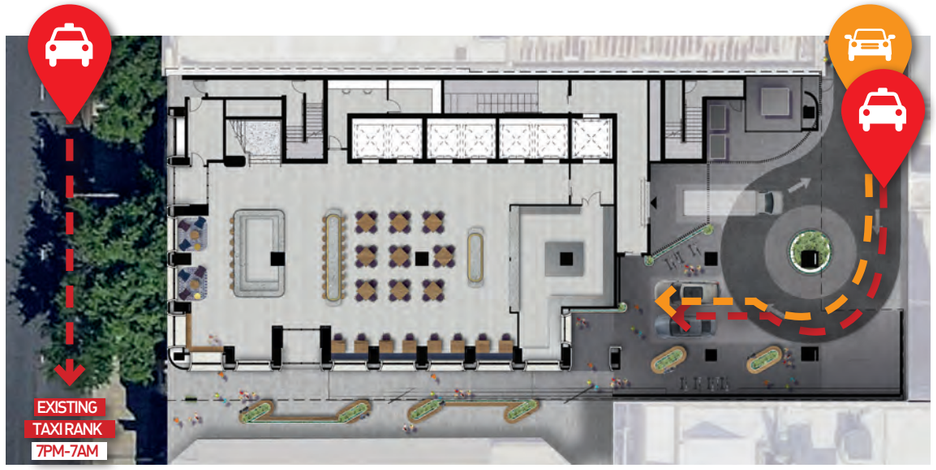
development proposal
circulation

ACCESS & SITE PERMEABILITY

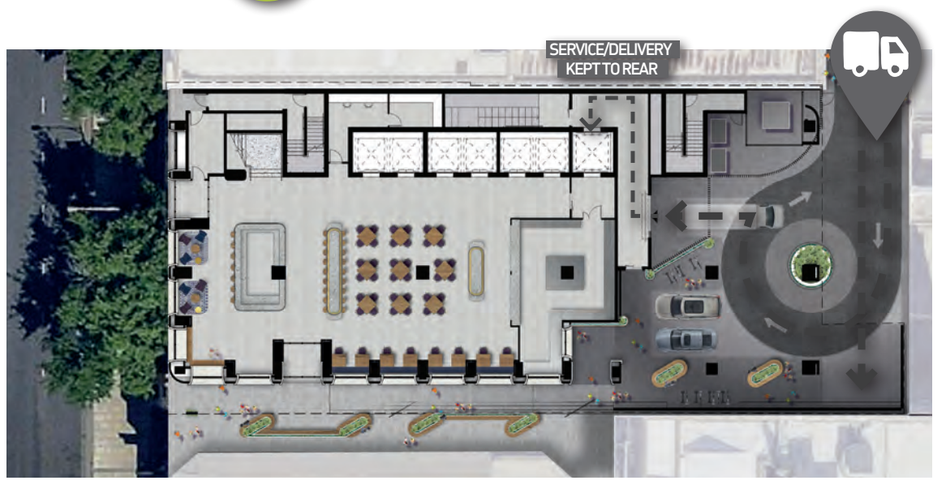
N >



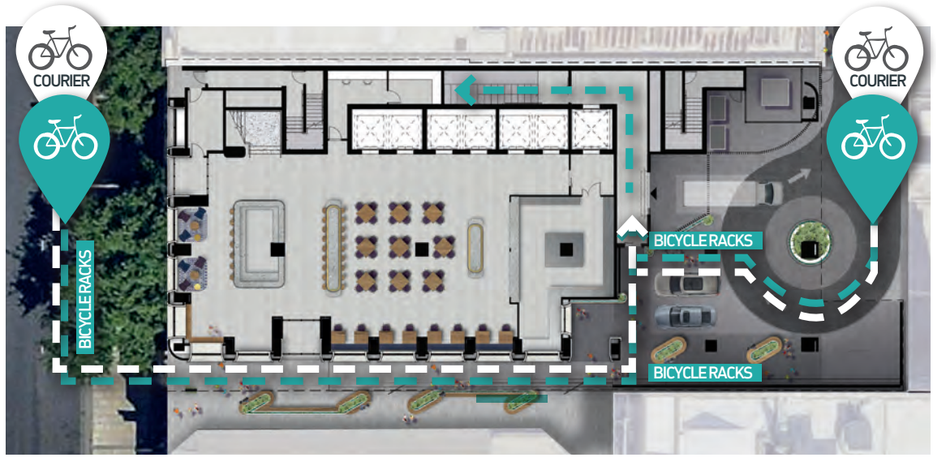
CIRCULATION **PEDESTRIAN**



CIRCULATION **VEHICLES**



CIRCULATION **SERVICE VEHICLES**

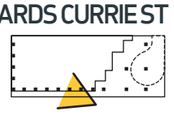


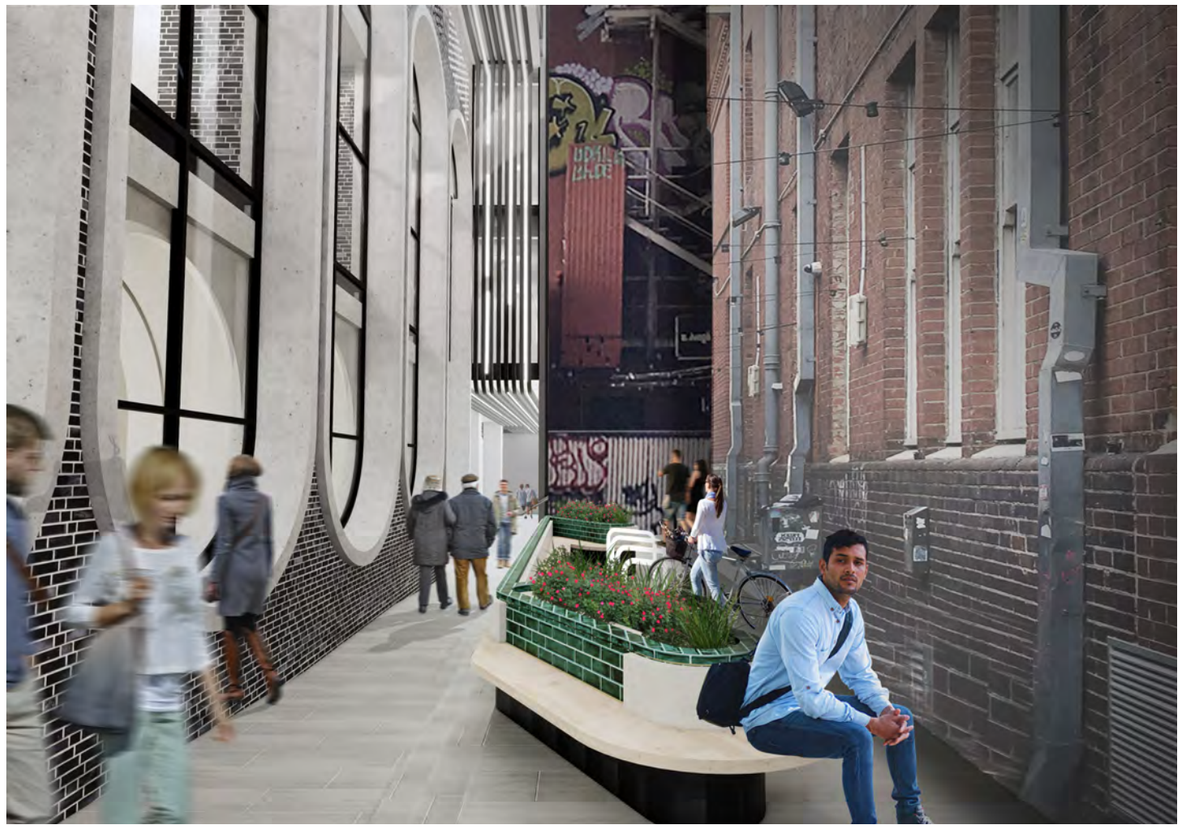
CIRCULATION **END OF TRIP & COURIER**

development proposal
laneway visualisation

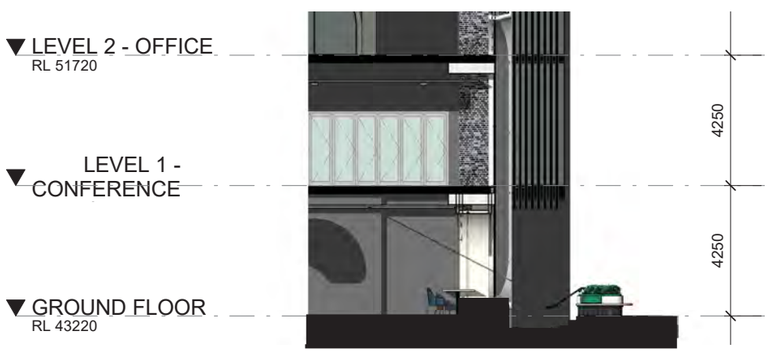
development proposal
laneway visualisation

LANEWAY
BACK TOWARDS CURRIE ST





LANEWAY
TOWARDS UNDERCROFT

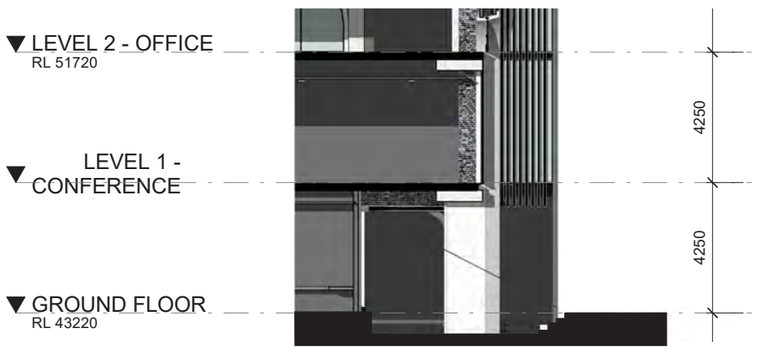


LANEWAY SECTION (W-E)
1:200

development proposal
laneway visualisation

LANEWAY
LANEWAY TO UNDERCROFT

REAR ARRIVAL
UNDERCROFT TO LANEWAY

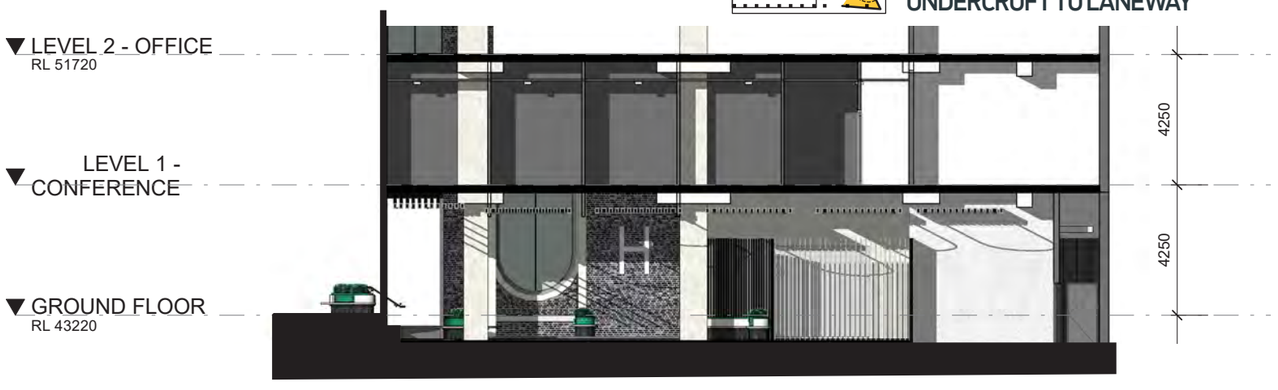


LANEWAY SECTION (W-E)
1:200

development proposal
laneway visualisation

REAR ENTRY
UNDERCROFT TO LANEWAY

REAR ARRIVAL
HOTEL DROP-OFF

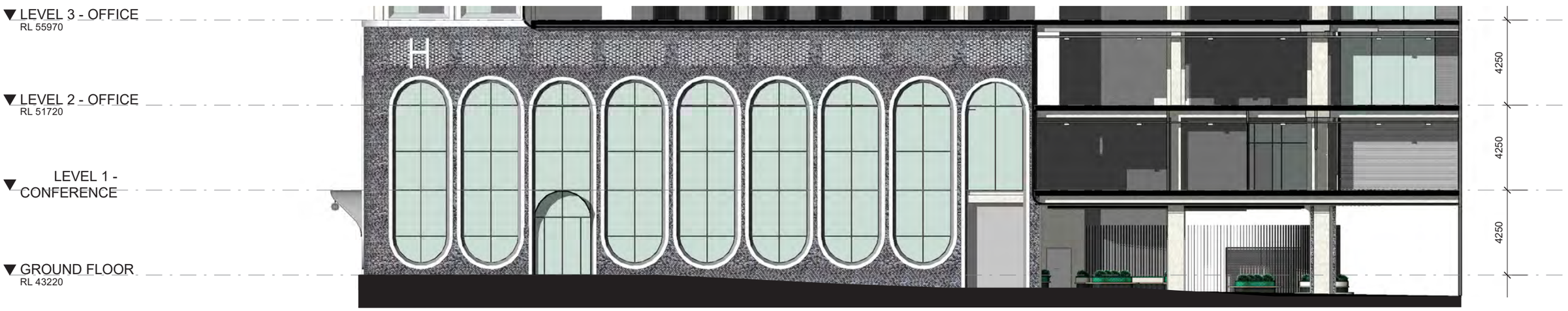


LANEWAY SECTION (E-W)
1:200

development proposal
laneway visualisation

REAR ENTRY
HOTEL DROP-OFF TOWARDS SCHRADERSTR

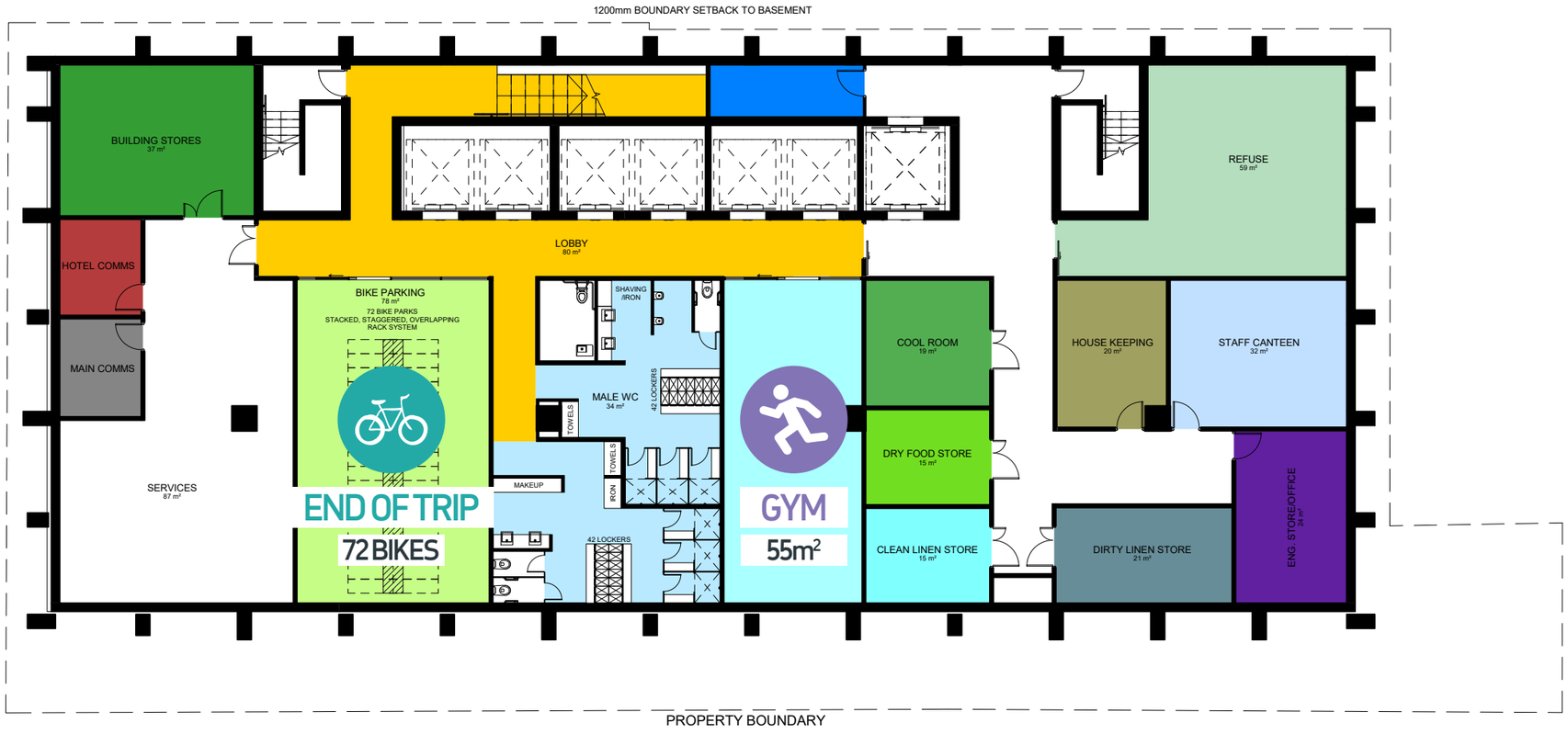
REAR ENTRY
HOTEL DROP-OFF



LANEWAY SECTION (S-N)
1:200

development proposal
end of trip

INTEGRATED AMENITY



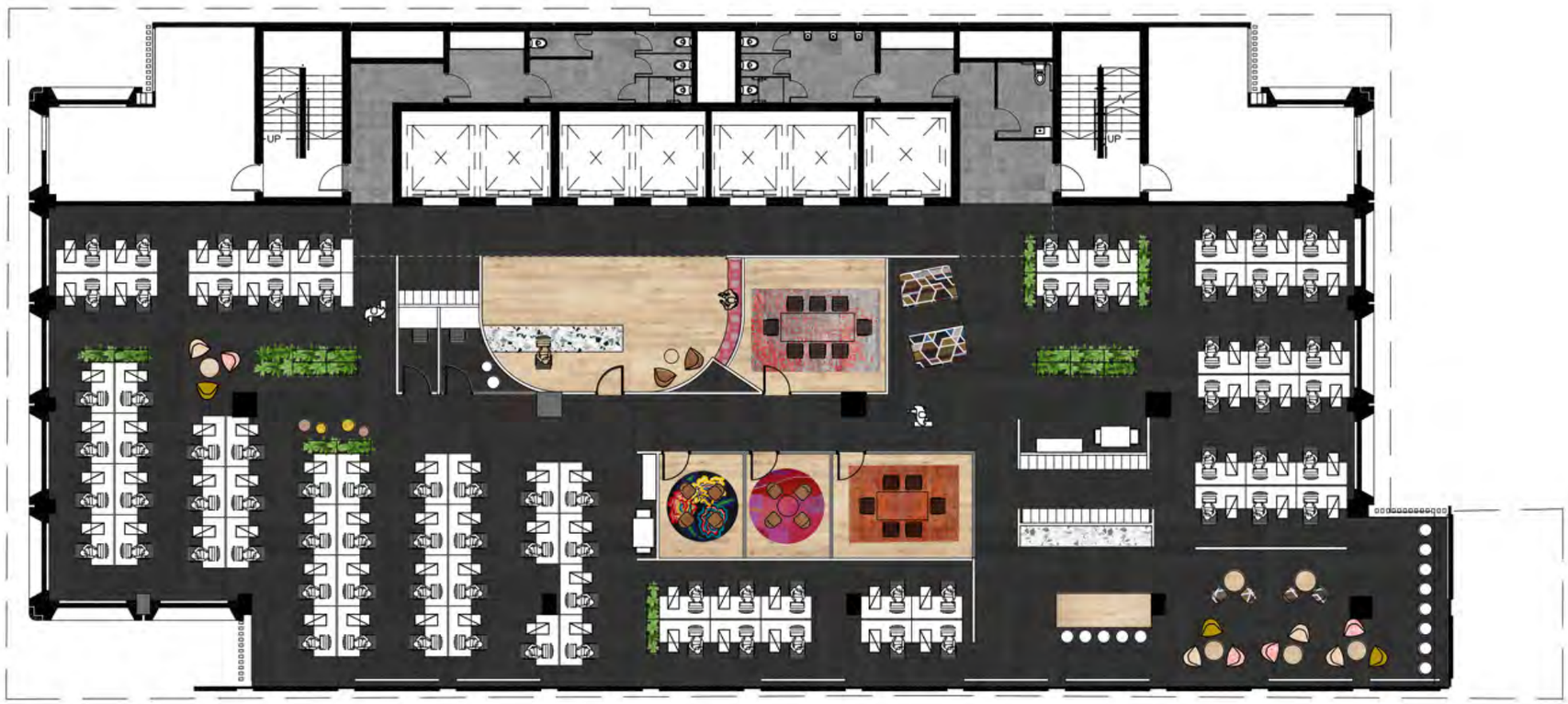
The Arc, Five at Heart, End of Trip Supplier

Barangaroo EOTF, THERE

GYM / END OF TRIP BASEMENT
1:200

development proposal
office test fitouts

TYPICAL OFFICE - LEVELS 07-12



OFFICE TEST FITOUT 1:10
1:200

development proposal
office test fitouts

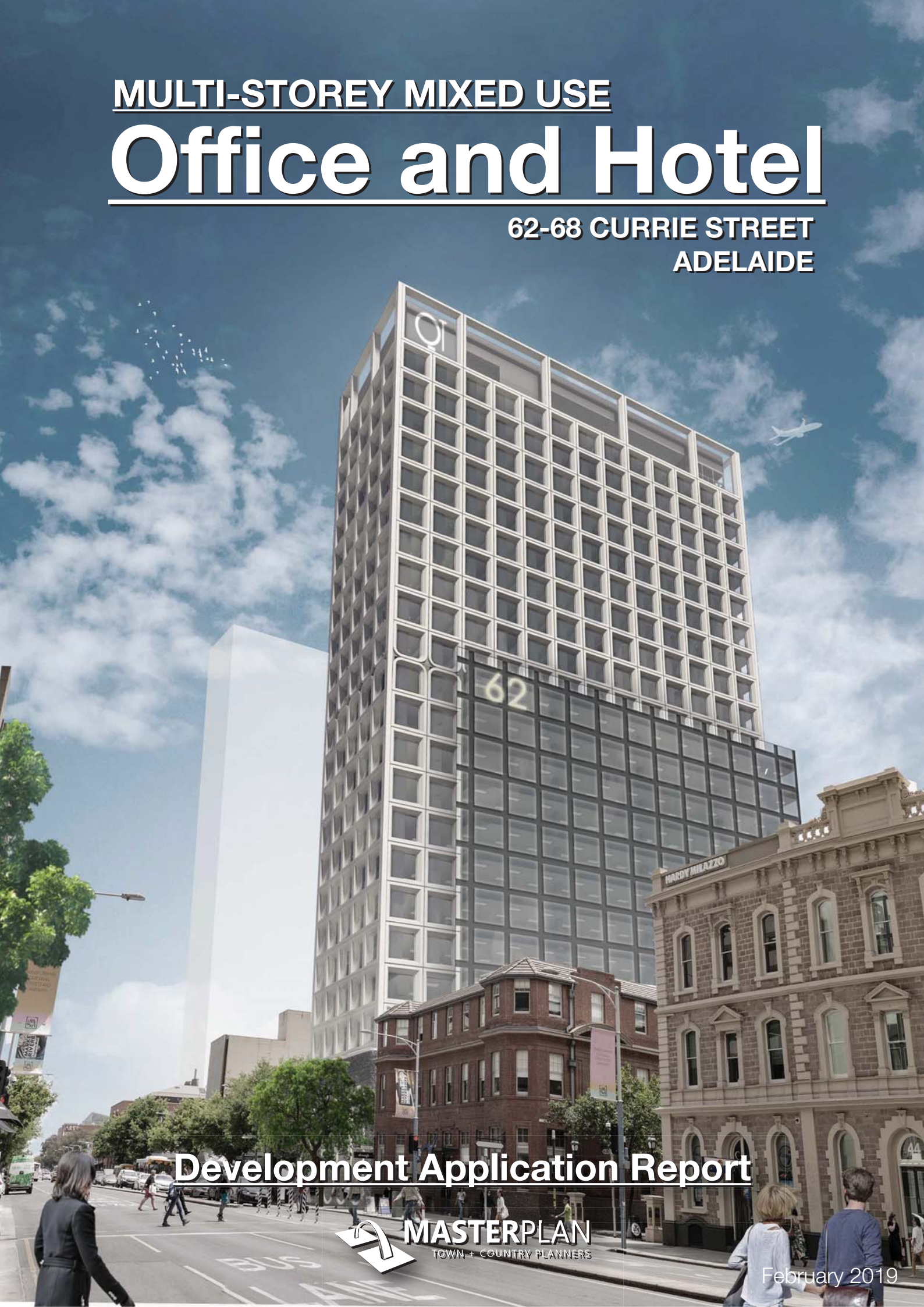
TYPICAL OFFICE - LEVELS 07-12

OFFICE TEST FITOUT 1:8
1:200

MULTI-STOREY MIXED USE

Office and Hotel

62-68 CURRIE STREET
ADELAIDE



Development Application Report

MASTERPLAN
TOWN + COUNTRY PLANNERS

February 2019

PLANNING REPORT

Multi-storey Mixed-use Building Comprising Office and Hotel Uses

62-68 Currie Street, Adelaide

Prepared by
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February 2019

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1.0 INTRODUCTION

MasterPlan SA Pty Ltd has been engaged by Currie St Pty Ltd, a joint venture between Axiom Properties Ltd and Auspac Networks Pty Ltd, to assist with the preparation of a development application for the construction of a multi-storey hotel and office building at 62-68 Currie Street, Adelaide.

This report has been prepared in collaboration with Hames Sharley Architects, WSP and Rawtec. It contains a description of the subject land, the locality and the proposed development, as well as our assessment of the proposed development against the relevant provisions of the Adelaide (City) Development Plan.

The Planning Report is supported by:

- Certificate of Title;
- the compendium of Architectural Drawings provided by Hames Sharley Architects;
- a design report provided by Hame Sharley Architects;
- an engineering and environmental services report provided by WSP;
- a traffic impact assessment report provided by WSP;
- a stormwater management report provided by WSP;
- an acoustic report provided by WSP;
- a pedestrian wind impact assessment report provided by WSP; and
- a waste management report provided by Rawtec.

We have concluded from our detailed and balanced assessment of the proposed development that it sufficiently accords with the relevant provisions of the Adelaide City Development Plan for the reasons set out herein.

2.0 BACKGROUND AND PRE-LODGEMENT DISCUSSIONS

2.1 Pre-lodgement

The Applicant voluntarily participated in the State Planning Commission's (the Commission's) Pre-Lodgement Panel (PLP) Process, including the Design Review Panel (DRP) Process with the Office for Design and Architecture South Australia (ODASA).

The Applicant, through their project team, sought and obtained feedback from the key stakeholders which was then incorporated into the proposed development at the following Pre-Lodgement and ODASA Design Review meetings:

- Pre-Lodgement Panel Meeting #1, 6 November 2018;
- Design Review #1, 21 November 2018; and
- Desktop Design Review #2, 30 January 2019.

Pre-Lodgement Panel Meeting

Through the pre-lodgement process, general stakeholder support of the following elements in the design were noted:

- the delivery of a mixed use development;
- the creation of a publicly accessible link between Currie Street and Schrader Street is strongly supported;
- the building height in principle;
- the ground floor mixed uses and integrated lobby;
- the massing and overall composition of the development;
- the design approach of a singular expression that presents as a slender built form; and
- the exclusion of car parking from the proposal is commended given the sites prime location.

The critical elements identified by DPTI Staff and ODASA through the PLP and DRP process in addition to the requests for further clarification include:

- the built form projection is not currently consistent with the slender tower form and restrained expression;
- request for further sectional studies to demonstrate the complex vertical program;
- further design refinement of the western façade is recommended to reinforce the singular expression of the tower;
- the façade changes between the office and hotel is recommended to be further enhanced and celebrated with a stronger distinction in the variations expressed;

- A holistic review of the hotel glazing selections is recommended to deliver the envisaged singular architectural expression while ensuring outlook for hotel guests and satisfy the solar load management requirements.
- The provision of additional bicycling spaces is recommended for the envisaged office population.
- It is recommended to undertake a review of the movement strategy for cyclists from ground level to the basement to ensure convenient and safe access is achieved.

In response to the commentary received from the Office for Design and Architecture, the plans were amended, and a second review was undertaken on 30 January 2019.

Design Review

Through the second desktop design review meeting, support of the following elements in the design were noted:

- the delivery of a mixed us development;
- the publicly accessible link between Currie Street and Schrader Street is strongly supported;
- the building height in principle;
- the relocation of the hotel lobby to the first floor and the inclusion of the restaurant and coffee kiosk on the ground floor;
- the fine grain character design approach;
- the massing and overall composition of the development;
- the design approach of a singular expression that presents as a slender built form;
- the change in materiality, projected form and expression of the grid layout in relation to the land use change from office to hotel at level 13; and
- the exclusion of car parking from the proposal is commended given the sites prime location.

The critical elements identified by DPTI Staff and ODASA through the second DRP process in addition to the requests for further clarification include:

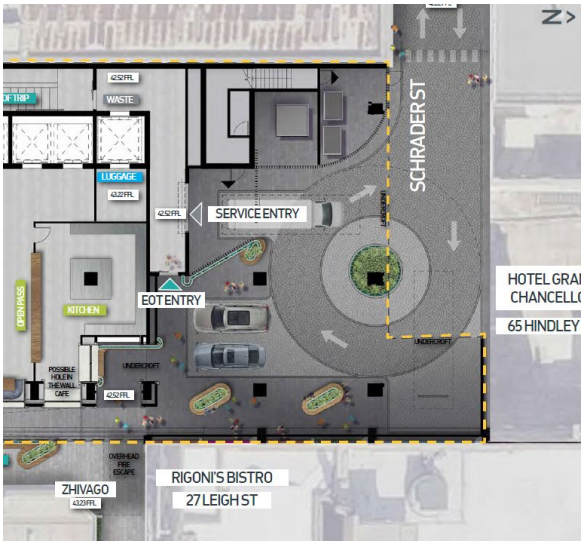
- consideration of a consistent ground plane material that extends from Currie Street through to Schrader Street;

- encourage design development to accommodate the bicycle parking and planters within the confines of the subject site and that additional bicycle spaces be considered for the envisaged office population;
- further review of the landscape elements, signage and accessibility consideration to the laneway and entries is recommended;
- further consultation with the City of Adelaide regarding material selection and lighting is recommended to ensure integration with the broader streetscape;
- there is an opportunity for further development of the layouts and relationships between the functions on level one and their connection to the ground level arrival. The provision of an arrival/lobby space with views to Currie Street and conference spaces to the rear/north of the site is encouraged;
- The design and detailing of the podium glass canopies could be further explored to better reflect the refined expression of the podium and expressed arches;
- Further review of the double height concrete frame above the podium in achieving the architectural intent of a singular tower expression at the junction between the podium form and the slender tower above;
- Further design refinement is required on the western façade to reinforce the singular expression of the tower and building in the round; and
- A holistic review of the tower facade is recommended to deliver the envisaged singular architectural expression while ensuring outlook for hotel guests and satisfying the solar load management requirements.

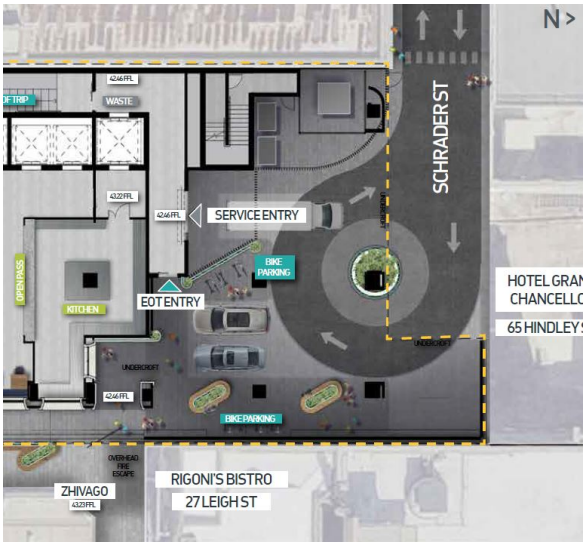
In the development of the final plans the above matters have been considered and where relevant amendments to the design have responded to the comments expressed. A summary of the response is detailed below:

Consistent ground plane material from Currie Street through to Schrader Street

The pedestrian transition from Schrader Street through to Currie Street illustrated the use of both cobblestones and large format granite pavers. This ground plane, including the vehicle drop off and pedestrian experience, now incorporates the use of silver grey granite pavers through the entire section. The existing Schrader Street bitumen surface will be integrated within the site as a cul-de-sac, to facilitate drop off and loading bay turning movements. The curve angle of this treatment integrates into the paved laneway pavers at grade.



Design Review 2 Image



Development Application Image

Bicycle parking and planter location. Additional bicycle parking.

The bicycle parking strategy has progressed with the further refinement of the proposal. External bicycle parking is now proposed on the subject site towards the Schrader Street extremity of the pedestrian thoroughfare. This location provides under cover protection for cyclist and sufficient width to ensure the footpath is not cluttered. Additional bicycle parking is also proposed for the Currie Street footpath given its generous depth to accommodate the infrastructure. It is estimated that 22 outdoor bike parks will be achieved.

Bicycle parking is retained at the basement level, with sufficient space for the storing of 72 bikes. A total of 94 bicycle parks are proposed to support the proposal.

Laneway landscape elements, signage and accessibility

The proposals landscape, signage and accessibility elements have been refined and are reviewed within the body of this report. Amendments of note include:

- a universal paving treatment providing the pedestrian link between Schrader Street and Currie Street;
- landscaping, seating and bike racks included within the pedestrian laneway;
- wayfinding signage; and
- an integrated signage strategy for the building.

Ongoing consultation with the City of Adelaide regarding broader streetscape material selection

It is our client's intention to work proactively and pragmatically with the City of Adelaide to achieve an integrated and high amenity pedestrian experience through material selection and lighting.

Level one association with the ground floor and Currie Street

It has been suggested there is an opportunity to improve the association and connection of the level one conference activities with the ground floor and Currie Street. This suggestion has been well received by the project team, with that opportunity realised through providing a wide grand stair case along the Currie Street frontage incorporating a direct relationship with the public realm through floor to ceiling expressed arch windows.

The stairs include a landing adjacent to the building frontage providing a direct pedestrian scale association with Currie Street. A visual outlook and connection to Currie Street now welcomes people exiting the lifts on the level 1 conference room floor.

Notably, the hotel lobby has also been removed from the first floor and integrated into the ground floor level, providing further land use connection.

Podium glass canopy and expressed arch design

The Currie Street and laneway canopies have also been amended from transparent black framed glass to a solid white curved hood. The canopies reflect the expressed arch design in the podium and clearly define the entrance to the building.

Design Review 2 Image

Development Application Image

Architectural expression of the double floor tower frame above the podium

This design advice has been well received by the project team. The design concept of incorporating a frame at both the top and bottom of the tower section of the building has been reviewed, with levels 4 and 5 now providing a façade consistent with the remainder of the tower. We agree with the suggestion that this outcome more closely aligns with the design intention of providing a singular slender tower with a consistent architectural expression.

Design Review 2 Image

Development Application Image

Further design refinement of the western façade

The retention of a singular slender tower continues to inform the design intention for the building. To ensure the western façade is more in keeping with this intent, the brightonlite panels are incorporated as a screen providing a consistent approach to the balance of each elevation. The expressed panels are now located on the western boundary and incorporate the previously exposed vertical protruding staircases, integrating the façade grid of the tower around all four elevations of the building. The resulting design outcome is a consistency in form, scale, materiality and expression around the entire tower, in line with the design intention.

Design Review 2 Image

Development Application Image

Tower façade review

Further façade detail has been provided within the application documents depicting the structural elements of the tower window 'shadow-boxes' that incorporate the use of spandrel and vision glazed panels. The shadow boxes are designed to address the buildings solar load management while providing a consistent glazing treatment appearance. The UniSA Cancer Research Institute building has been referenced in the application documents as an example of the successful undertaking of this glazing design technique. We feel that with this additional detail the Commission will have a greater understanding of the façade presentation achieved with the shadow boxes, and the consistent glazing appearance sought in the design expression within the facades solid grid lines.

3.0 SUBJECT LAND AND LOCALITY

3.1 Subject Land

The subject land is located on the northern side of Currie Street and one allotment to the west of the Leigh Street/Currie Street intersection. The land fronts Currie Street to the south and incorporates a secondary 'rear' laneway Schrader Street frontage to the north. The land is rectangular in nature with the exception of a 0.24 metre step along the western boundary and a 6.73 metre wide protrusion that extends 6.12 metres beyond the northern boundary.

The land has a Currie Street frontage width of 24.51 metres and depth of 49.03 metres. The protrusion to the north results in the land incorporating a Shrader Street frontage width of 17.64 metres and western Shrader Street frontage width of 6.12 metres (representing the end of the street). The total area of the land is approximately 1,236 square metres.

The site for the purpose of the proposed development is currently contained within a single land parcel:

CT VOLUME/FOLIO	PARCEL	PLAN
Volume 5763, Folio 904	Lot 562	Filed Plan 181404

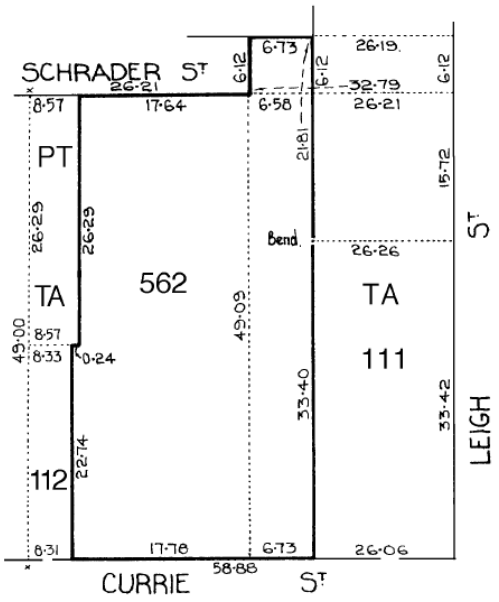


Figure 1: Lot 562, Volume 5763, Folio 904

The subject land currently supports two abutting buildings. A vacant furniture retail building fronts Currie Street and a car park within an original warehouse building fronts Schrader Street. The northern allotment protrusion supports a car port structure and incorporates two external car park spaces at the eastern end of Schrader Street.

Views to the north of the subject site from Currie Street.

Views to the east from Schrader Street of the subject site 'protrusion'

3.2 Nature of the Locality

The locality incorporates two distinct defining characteristics. The west, south and east are characterised by varying forms of commercial, hotel, retail, restaurant, community and institutional land uses. These areas are also provided with a well-connected and integrated pedestrian laneway environment represented through the adjacent Currie Street, Leigh Street and Topham Mall precincts.

Buildings in these directions generally range from two to ten storey's in height incorporating broad frontages. The ground floors are active with the provision of glazing treatments to the institutional and office buildings, and outdoor dining and small scale shops representing a dominant feature. The adjacent Leigh Street and Topham Mall in particular represent highly frequented and convivial pedestrian focused spaces.

To the north of the subject site represents a service laneway along Schrader Street incorporating car parking, loading bays and service access. Notably, the laneway is best described as developing, with these characteristics gradually being diluted by the development of restaurants, cafes, a hotel beer garden and gym towards the west of Schrader Street and within the adjacent Kingston Street. While warehousing and a public car park are strong features, gentrification of the lane is gradual and evident.

The buildings on the eastern side of the subject site are both listed as Local Heritage Places (Townscape), specifically:

- 54 Currie Street, Adelaide, *Commerce House*.
- 27 Leigh Street, Adelaide, *Woodchester House*.

The two brick heritage buildings provide a simplistic streetscape presentation incorporating boundary development to Currie and Leigh Streets and incorporate the restrained use of decorative treatments on their facades. A 3.21 metre wide right of way is located between the buildings, currently compromised by a single storey timber extension to 27 Leigh Street. The right of way extends from Leigh Street to the subject site, representing a future pedestrian link opportunity, with that link proposed to extend further to Schrader Street as a result of this development.

The locality has a clear pedestrian focus with mixed use laneways and pedestrian thoroughfares representing a dominant characteristic. Leigh Street and Topham Mall are recognised as a public transport pedestrian route within the Adelaide City Council Development Plan providing a link from North Terrace to the Gouger Street markets. The pedestrian function of these precincts has resulted in active and convivial streetscapes with an abundance of restaurants, cafes, bars and retail at ground level. The street level activity also extends to Currie Street given its wide footpath and function as a high frequency bus corridor.

Mature street trees are a defining characteristic of the public realm along Currie Street (west of Leigh Street) with mature trees located adjacent the frontage of the site.

4.0 PROPOSED DEVELOPMENT

The Applicant seeks Development Plan Consent from the Commission to construct a Multi-storey Mixed-use Building Comprising Office and Hotel uses which contains:

- hotel services and amenities including gym, bike parking and end of trip facilities at basement level;
- restaurant, arrival experience, lobby and loading dock and pedestrian laneway at ground level;
- conference rooms and hotel back of house office at level 1;
- offices rooms from levels 2 to12;
- hotel rooms from levels 13 to 22;
- rooftop restaurant at level 23; and
- rooftop plant at level 24.

The proposed development is represented across the compendium of architectural drawings at **Appendix A**.

The proposed development is described in detail below in the following sections and more fully illustrated in the compendium of plans accompany the application prepared by Hames Sharley, identified in Table 1 – Drawing Schedule.

Table 1: Architectural Drawing Schedule

DRAWING NUMBER	NAME	REVISION	REVISION DATE
DA000	Cover Sheet	0	28/02/2019
DA050	Concept and Materiality	0	28/02/2019
DA100	Site Plan	0	28/02/2019
DA101	Shadow Diagrams	0	28/02/2019
DA102	Landscaping Plan	0	28/02/2019
DA103	Context Sections	0	28/02/2019
DA104	Streetscape Elevations – South	0	28/02/2019
DA105	Streetscape Elevations – East	0	28/02/2019
DA106	Streetscape Elevations – North	0	28/02/2019
DA107	Streetscape Elevations – West	0	28/02/2019
DA108	3D Streetscape Images	0	28/02/2019
DA200	Basement	0	28/02/2019
DA201	Ground Floor	0	28/02/2019

DRAWING NUMBER	NAME	REVISION	REVISION DATE
DA202	Level 01 – Conference	0	28/02/2019
DA203	Level 02 – Office	0	28/02/2019
DA204	Levels 03-05 – Office	0	28/02/2019
DA205	Level 06 – Office	0	28/02/2019
DA206	Level 07-12 – Office	0	28/02/2019
DA207	Levels 07-12 – Office	0	28/02/2019
DA208	Level 13 – Hotel	0	28/02/2019
DA209	Levels 14-22 – Hotel	0	28/02/2019
DA210	Typical Hotel Room Layout	0	28/02/2019
DA211	Level 23 – Restaurant	0	28/02/2019
DA212	Level 24 – Plant	0	28/02/2019
DA213	Roof	0	28/02/2019
DA400	Elevations	0	28/02/2019
DA401	Elevations	0	28/02/2019
DA410	Signage Elevations – Hotel Signage	0	28/02/2019
DA411	Signage Elevations – Hotel Signage	0	28/02/2019
DA420	Entry Hood	0	28/02/2019
DA500	Section	0	28/02/2019
DA501	Section	0	28/02/2019
DA601	Façade Detailing	0	28/02/2019

4.1 Land Use

The proposed development is best described as a Multi-storey Mixed-use Building Comprising Office and Hotel (Tourist Accommodation) uses with a restaurant and arrival experience on the ground floor.

The proposed multi storey office and hotel incorporates the following associated uses:

LAND USE	LEVELS	TOTAL FLOOR AREA	DESCRIPTION
Shared Amenities	Basement, ground and 1	1,400m²	Including function rooms, end of trip facilities, gym, restaurant and café, bike parking and services
Premium office	1 to 11	8,450m²	Open plan office spaces
Boutique hotel	13 to 22	6,000m²	198 hotel rooms
Rooftop restaurant	23	378m²	Sky bar and restaurant including outdoor deck for a maximum of 230 occupants

4.2 Built Form

4.2.1 Building Height

The Adelaide(City) Development Plan provides a definition of building level within Schedule 1 of the Development Plan, which is identified as:

> ***building level:*** *that portion of a building which is situated between the top of any floor and the top of the floor next above it and if there is no floor above, that portion between the top of the floor and the ceiling above it. It does not include a floor located more than 1.5 metres below the median natural or finished ground level or the roof top location of plant and mechanical equipment.*

Accordingly, the proposed built form incorporates the construction of a multi-storey building comprising 25 building levels (in addition to one basement level), with a maximum building height of 91.95 metres (135.170 metres AHD) above the Currie Street finished ground level.

4.2.2 Setbacks

The podium levels extend to each allotment boundary with the exception of the 0.24 metre step along the western boundary and a 2.4 metre setback along the eastern boundary. The later setback creates the pedestrian laneway adjacent the eastern boundary of the site (combining with the existing laneway on the adjacent site). The 2.4 metre width extends for a length of 35 metres from the Currie Street frontage.

Office levels 3 to 13 of the tower (above the podium) are setback a nominal 300 millimetres from the northern and southern elevations where the podium presents a different architectural expression to the tower above. The tower levels also extend to the eastern boundary, canter-levered over the pedestrian laneway at 12 metres above ground level. The canter lever does not extend the entire length of the eastern boundary, retaining the 2.4 metre setback distance for a distance of 8.0 metres from the Currie Street boundary. The office levels also incorporate further setbacks from the south/western, north/western and north eastern corners, resulting in a stepped built form.

Hotel levels 14 to 22 retain the 300 millimetres northern and southern setback distances and incorporate an eastern and western setback distance of 3.2 metres. The exception to this is are the stair wells and the facade frame located on the western boundary.

4.2.3 Architectural Design Statement

The architectural report prepared by Hames Sharley accompanying the lodgement documents provides:

- urban context;
- architectural intent;
- laneway vision;
- circulation;
- laneway visualisation;
- end of trip; and
- office test fitouts.

The design statement depicts the contextual setting of the subject site with reference to the character of both Currie Street and the adjacent laneways, in addition to the broader Adelaide CBD setting. Given the site dimensions there is a focus on the building's vertical amenity, its connection with adjacent public spaces and the design principles that optimise the sites development opportunities. The design response presents as a podium and singular tower expression above, provided through 3D imaging of external components, material description, elevation perspectives and floor plans.

4.2.4 Materials and Finishes

The palette of external materials and finishes is detailed within the Architectural Design Report and drawings comprising:

Podium and ground levels:

- a façade comprising Black glazed brick, glass bricks, black powder coated aluminium window frames with brightonlite concrete surrounds, black aluminium fins and Tassie Oak hardwood to external joinery; and
- the ground level comprising silver grey pavers, emerald green and brass detailed planter boxes and timber seating.

Tower levels:

- a façade comprising brightonlite concrete framing, spandrel glazing and vision panel windows, black powder coated aluminium fins and painted concrete to the lift core behind the brightonlite framing in the western façade.

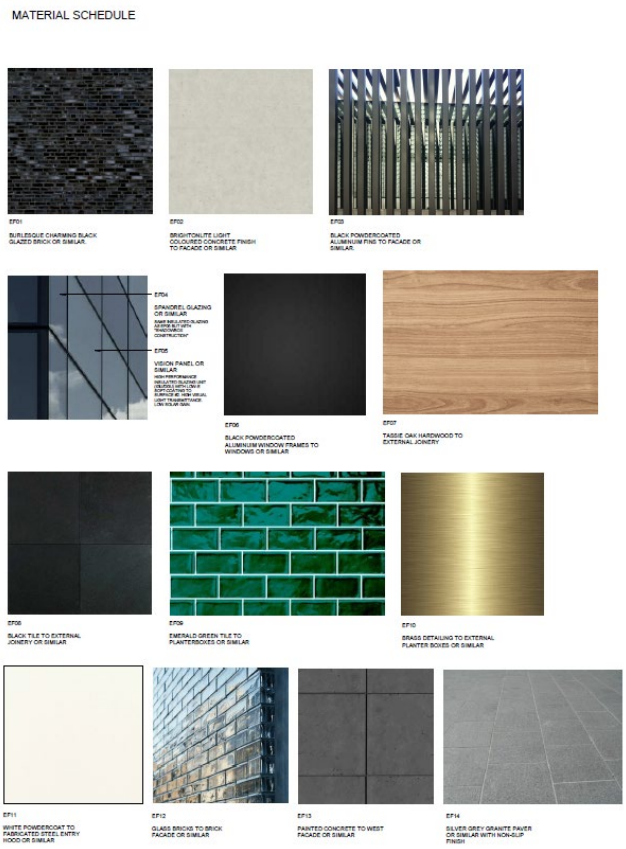


Figure 2: Materials Schedule

4.2.5 Signage

Signage zones are proposed on each elevation of the podium parapet and selected tower elevations. No specific graphics or sign form has been identified at this stage.

4.3 Traffic and Parking

On site manoeuvrability is accommodated via a cul de sac at the end of Schrader Street to enable service delivery vehicles and waste collection to reverse into the loading bay and exit in a forward direction. Vehicle access is also provided to two car parking spaces to be used as short stay drop off and passenger collection bays.

Provision for the secure indoor parking of 72 bikes is accommodated within the basement together with the EOT facilities, in addition to outdoor racks able to accommodate 22 bikes in the laneway and on the Currie Street footpath. The accommodation of a total of 94 bike parks is proposed.

4.4 Waste Management

The details of the waste management strategy are outlined in the report prepared by Rawtec.

In summary, the waste in the proposed development is to be managed as follows:

- the waste services will be managed separately for each land use to allow individual invoicing, however, will be universally stored at the basement level. In addition, three bins are to be located at the rooftop level to provide convenient access for the restaurant. Vertical bin access is achieved via a service lift shaft;
- the waste recycling services will include general waste, comingle recycling, organics recycling, paper recycling and confidential paper recycling;
- waste will be collected from Schrader Street via a service loading bay operating within a visual screen and gate; and
- the loading bay is able to accommodate an MRV size waste collection vehicle. The weekly collection movements are estimated to be 19 for a single waste collection contractor and up to 31 should separate contractors be engaged by the Hotel and Office.

4.5 Services

WSP consulting has provided a services report outlining the special allocations provided to accommodate the following services with the design drawings:

- stormwater management;
- sustainability;
- mechanical services;
- electrical services;
- hydraulic services;
- fire protection services;
- acoustic; and
- vertical transportation services.

The subject site is provided with sufficient access to public infrastructure services to accommodate the anticipated demand. Further, the design drawings appropriately accommodate the special requirements for the building's infrastructure.

4.6 Staging

The construction of the building is to occur in four consecutive stages for the purposes of issuing staged Building Rules Consents. The staging of the proposed development is as follows:

- Stage 1: Demolition;
- Stage 2: Substructure construction;
- Stage 3: Superstructure construction; and
- Stage 4: Architectural fit-out and external façades.

5.0 DEVELOPMENT PLAN ASSESSMENT

The relevant version of the Adelaide (City) Development Plan for procedural and assessment purposes was consolidated on 7 June 2018.

The subject land, under this version of the Adelaide (City) Development Plan, is situated entirely within the Capital City Zone as shown on Adel/19 and more specifically Policy Area 13 (Central Business Policy Area) as shown on Map Adel/49.

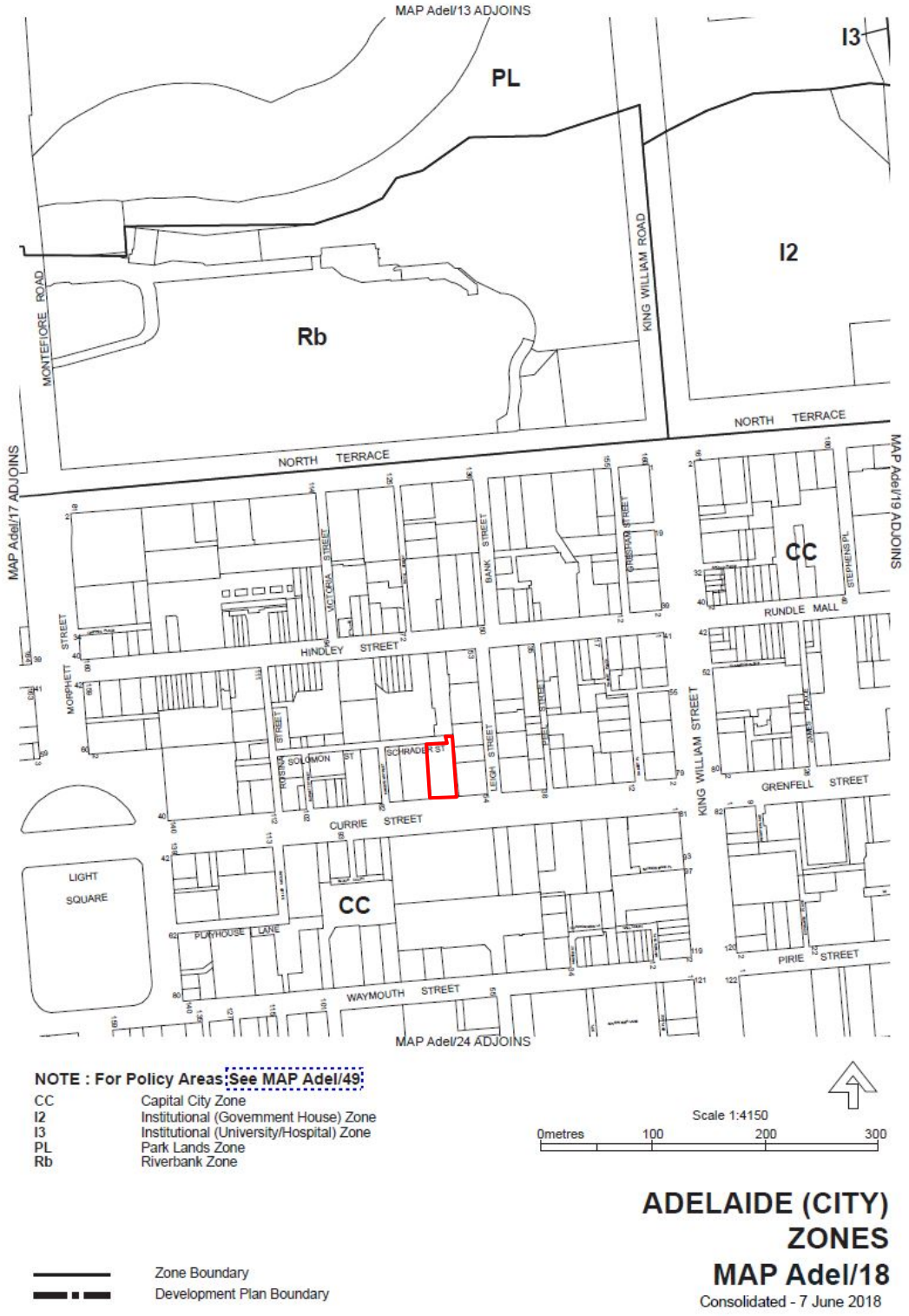


Figure 3: Zone Map Adel/18 Extract

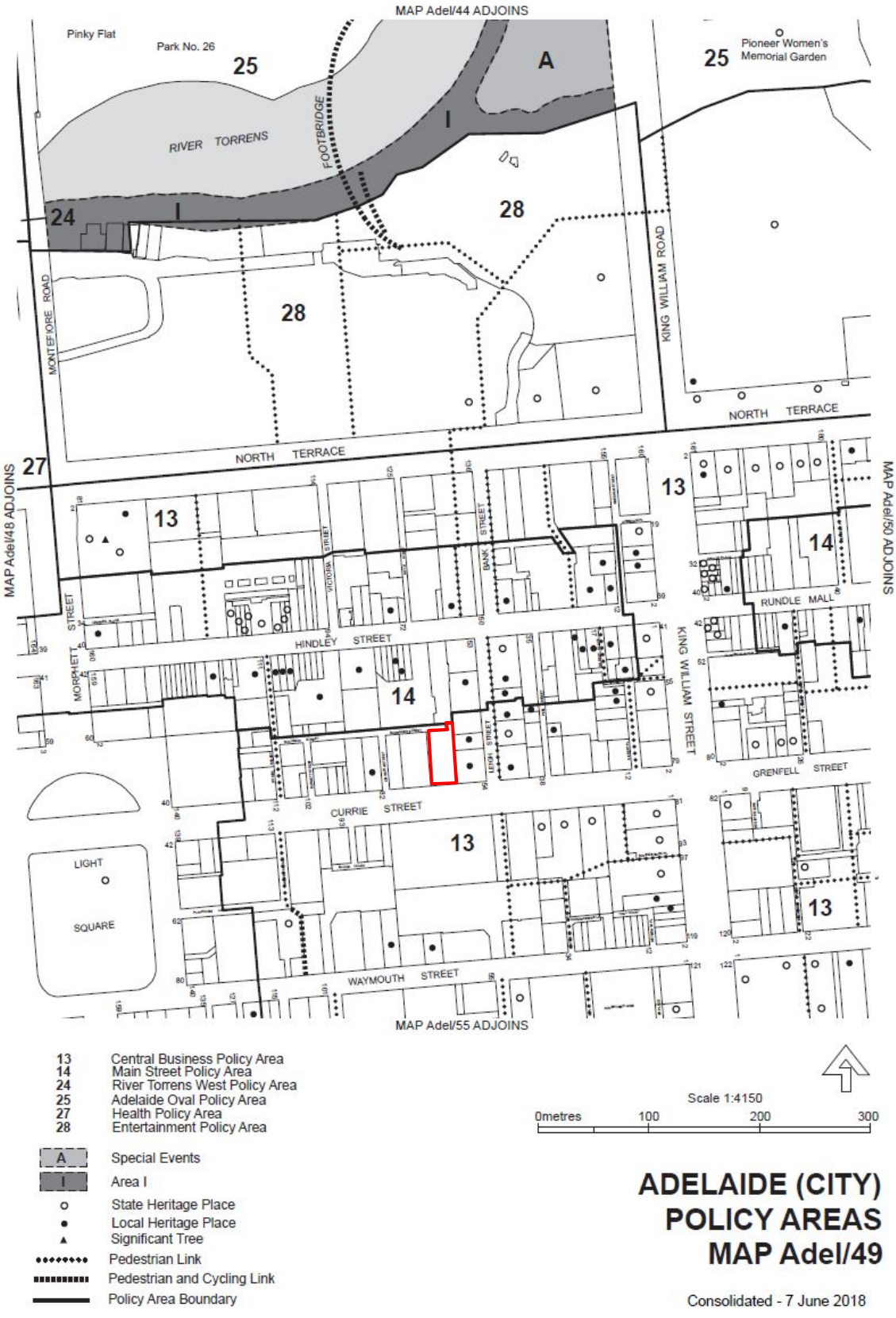


Figure 4: Policy Area Map Adel/49 Extract

5.1 Procedural Matters

5.1.1 Relevant Authority

The Relevant Authority for the purpose of the assessment of the application is the State Commission Assessment Panel in accordance with Schedule 10 Part B and Section 34 (1)(b) of the *Development Act, 1993*.

> *4B—City of Adelaide—developments over $10m*
>
> *(1 Development in the area of The Corporation of the City of Adelaide where the total amount to be applied to any work, when all stages of the development are completed, exceeds $10 000 000.*
>
> *(2) Subject to subclause (3), development— (a) under an application to vary a development authorisation given by the Development Assessment Commission under this clause; or (b) which, in the opinion of the Development Assessment Commission, is ancillary to or in association with a development the subject of an authorisation given by the Development Assessment Commission under this clause.*
>
> *(3 Subclause (2) does not apply to development involving a building in relation to which a certificate of occupancy has been issued.*

The proposed development comprises the construction of a building with a Development Cost that exceeds $10 million in the City of Adelaide.

5.1.2 Nature of Development

The proposed development of Multi-storey Mixed-use Building Comprising Office and Hotel Uses is neither listed as Complying Development nor Non-complying Development under Capital City Zone Principles 38 and 39 respectively. Accordingly, the application is required to be assessed on its merits.

5.1.3 Category of Development

Capital City Zone Principle of Development Control 40 identifies those developments that are listed as Category 1 or Category 2 for the purpose of public notification in addition to those expressed in Schedule 9 of the *Development Regulations 2008*.

All forms of development are listed as Category 1, except that classified as non-complying or Category 2.

The proposed development is not listed as non-complying or Category 2. Accordingly represents a Category 1 form of development for the purpose of Public Notification.

5.1.4 Statutory Referrals

The following agencies have been identified as requiring referrals under Section 37 of the *Development Act, 1993*:

- Government Architect or Associate Government Architect (ODASA):

  24—Certain development in City of Adelaide

  Development in the area of the Corporation of the City of Adelaide for which the Development Assessment Commission is the relevant authority under Schedule 10 clause 4B (excluding variations of applications—see clause 1(5a) of this Schedule).

- Commonwealth Secretary for the Department of Transport and Regional Services:

  9—Airports

  If the relevant Development Plan contains a map entitled Airport Building Heights, development within the area shown on the map which would exceed a height prescribed by the map.

5.2 Land Use

We are of the opinion that this office and hotel proposal, with the incorporation of ground level restaurant and arrival experience components is appropriate on the basis that:

- Tourist accommodation, office and restaurant are each listed as an envisaged land uses under PDC 1 of the Capital City Zone;
- the Desired Character Statement for Central Business Policy Area 13 advises, in part, that the Policy Area's role as the "pre-eminent economic, governance and cultural hub for the State will be supported by increased opportunities for hospitality and residential";
- PDC 1 of Business Policy Area 13 calls for the area to have the highest concentration of office and hospitality activities; and
- PDC 3 of Business Policy Area 13 calls for residential development or similar to be located above the ground floor level to enable street frontages to be activated.

5.3 Character, Setbacks and Podium

The Desired Character Statement for the Capital City Zone expresses the built form and character desired to be achieved, with a particular reference to 'laneway' development and Currie Street.

This proposal incorporates the two influences of a Currie Street frontage while also connecting with the adjacent laneways of Schrader Street, Leigh Street and the relationship to the easement and right of way on the adjacent allotment to the east. As such, the following extracts from the Capital City Zone Desired Character Statement in addition to PDC 8 and 11 are relevant to the assessment of the application:

> *'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.'*
>
> *"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..."*

PDC 8 Buildings should present an attractive pedestrian-oriented frontage that adds interest and vitality to City streets and laneways.

PDC 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.

PDC 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.**

The buildings streetscape presentation is provided with integrated expressed arch window treatments that extend over three floors within a brick facade representing a clearly defined podium on the southern and eastern elevations. Glazed entrance statements consistent with this design outcome are also incorporated within these facades. Notably, glass bricks are also used across the parapet of the podium to retain the building design integrity while facilitating additional access to light for additional internal amenity at level 2.

The generous glazing treatments results in a direct humane scale connection between the three podium levels of the building with Currie Street, Schrader Street and the proposed eastern pedestrian laneway. The podium provides a three storey streetscape presentation with the windows and entrance statements providing an art deco/urban style grandeur. The three storey podium provides a consistent built from and scale to a number of existing buildings within the locality, with particular reference to the three storey and five storey Local Heritage buildings to east. This is further advanced through the change in architectural expression of the 'tower' and the use of visually recessive colours and materials, reinforcing the human scale elements of the podium. In accordance with PDC 12 (h), an upper level setback is not required as the development is located in the Central Business Policy Area.

The two-tier façade feature resulting from the expressed tower above the podium reinforces the envisaged "high scale" development with the podium built to the street alignment maintaining high street walls. The design contrast of the art deco podium and the tower development above provides the sense of enclosure envisaged for laneway development while retaining an open and permeable streetscape. The proposed development delivers on the desired character for the Capital City Zone and specifically responds to the attainment of the character envisaged for the Central Business District.

5.4 Built Form

5.4.1 Design and Appearance

The following Built Form and Townscape Council Wide Objectives and PDCs outline the intent to be attained by development within the City of Adelaide, and directly reflect the importance of the built form and architectural expression contemplated within the CBD.

Capital City Zone

Objective 5: **Innovative design approaches and contemporary architecture that respond to a building's context.**

Objective 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.**

Materials, Colours and Finishes

187 **The design, external materials, colours and finishes of buildings should have regard to their surrounding townscape context, built form and public environment, consistent with the desired character of the relevant Zone and Policy Area.**

188 **Development should be finished with materials that are sympathetic to the design and setting of the new building and which incorporate recycled or low embodied energy materials. The form, colour, texture and quality of materials should be of high quality, durable and contribute to the desired character of the locality. Materials, colours and finishes should not necessarily imitate materials and colours of an existing streetscape**

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

190 **Development should avoid the use of large expanses of highly reflective materials and large areas of monotonous, sheer materials (such as polished granite and curtained wall glazing).**

The importance of the proposed built form quality in the Capital City Zone is recognised in the relevant Zone and Council Wide Principles of Development Controls that variously seek:

> *"high standard of architectural design and finish which is appropriate to the City's role and image as the capital of the State"*
>
> *"Development which incorporates a high level of design excellence"*

The proposed development was the subject of the "Design Review Process" with the Office of Design and Architecture South Australia where the quality of the design was critiqued, reviewed and developed recognising the site constraints, its contextual opportunities and the prominence of a building of this height.

The design responds to the contextual setting with the design intention of providing a podium at ground level that is clearly delineated from the slender tower above. This is achieved through the use of high quality complementary materials within each element, including:

- black glazed brick, glass bricks, black powder coated aluminium window frames with white surrounds, black aluminium fins and Tassie Oak hardwood to external joinery at the podium level; and
- brightonlite concrete façade, spandrel glazing and vision panel windows, black powder coated aluminium fins and painted concrete to the western façade at the tower level.

In particular, the glazed curtain wall that extends beyond the primary eastern façade accommodating the office floor levels assists in distinguishing the different land uses within the building which provide a clean façade backdrop to the heritage buildings to the east.

At the podium level, the innovative design and contemporary architectural presentation does not seek to mimic or copy existing Local Heritage buildings but responds subtly to their design cues. The podium respects their streetscape presentation through scale, materials and form, while providing a contrast with sufficient variation to provide its own identity.

The slender tower above the podium is visually distinct, expressed in brightonlite concrete, generous glazing treatments and the incorporation of and complementary contrasting painted concrete to the core in the western elevation and spandrel glazing on the eastern elevation. The appropriate use of colours and robust materials is consistent with the design intentions for a building of this size, with the design of the podium sitting comfortably in the context of Currie Street, Schrader Street and the surrounding laneways.

Podium image

The Schematic Design Architectural Report prepare by Hames Sharely accompanying the lodgement documents provides a detailed description of the Design Philosophy and the Contextual reference for the building.

5.4.2 Building Height

PDC 22 of the Capital City Zone and Council Wide PDC 172 provide guidance with respect to the height of buildings. Together, they recommend that:

> **PDC 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.**
>
> **PDC 172 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.**

The proposed building will be 25 storeys and 91.95 metres (135.170 metres AHD) above the Currie Street finished ground level. It will therefore comply with Concept Plan Figure CC/2, as the subject land falls within the confines of an area where there is '*no prescribed height limit*'.

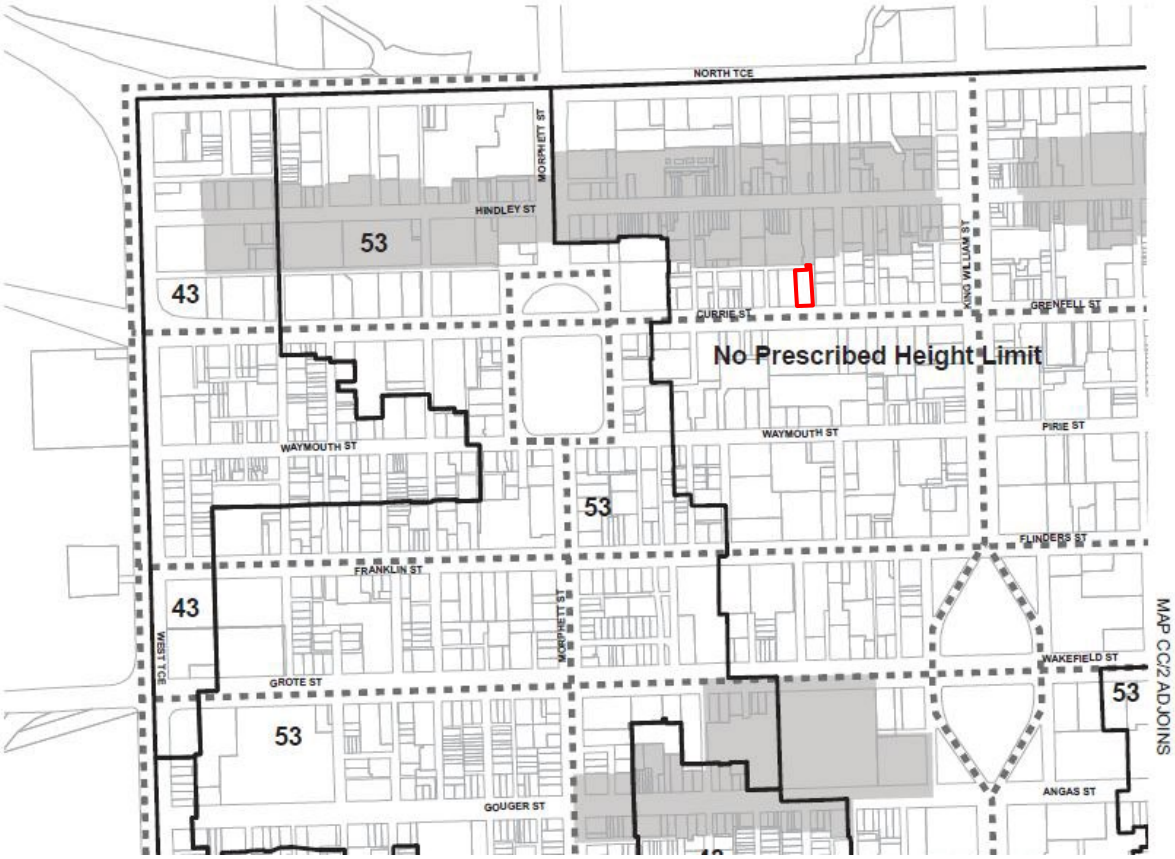
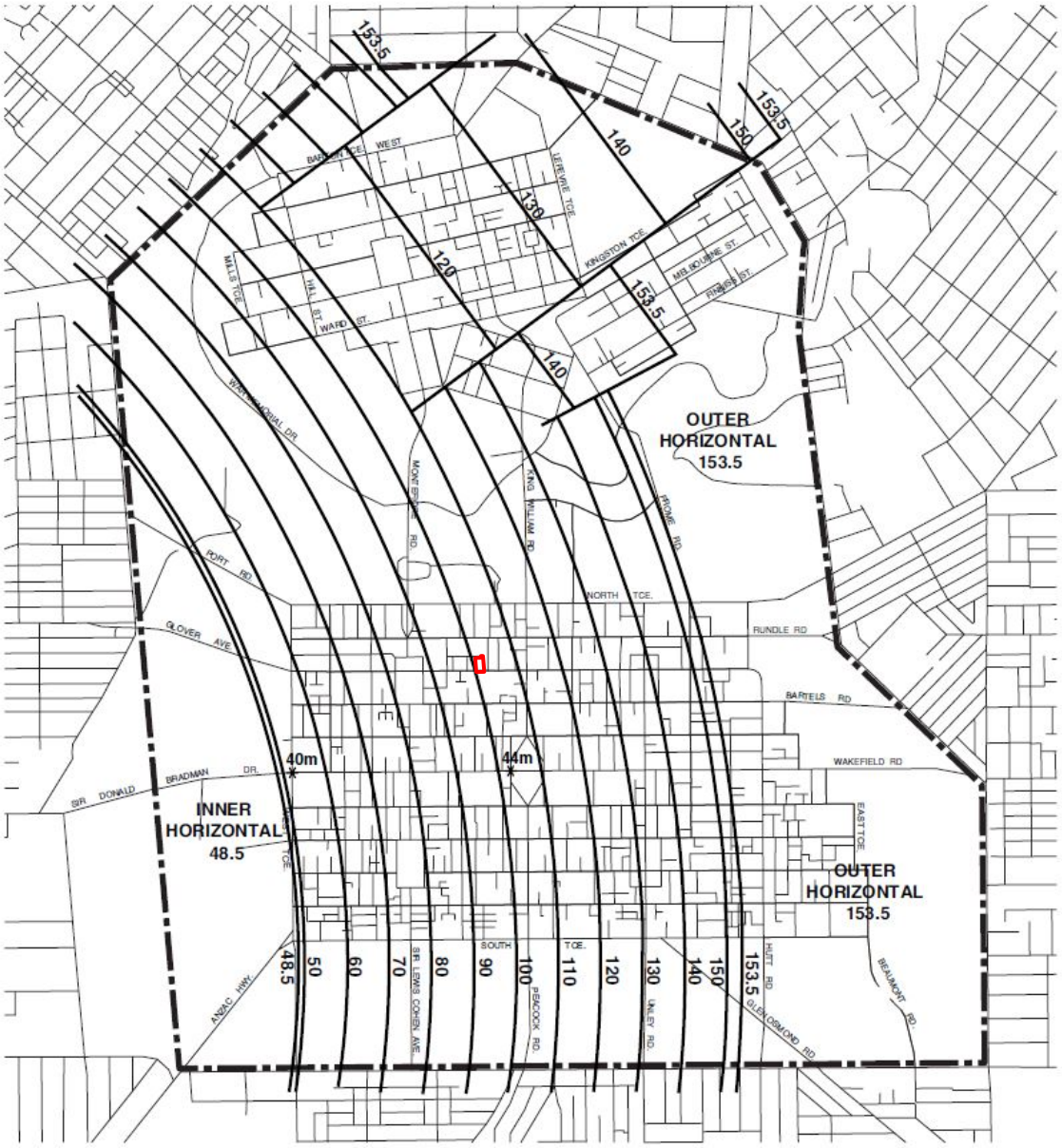


Figure 5: Building Heights Concept Plan Figure CC/1 (Extract)

The building will exceed the relevant Airport Building Heights Contour shown on Map Adel/1 (Overlay 5) of 100 metres AHD however, the building will be lower than the existing, approved and under construction buildings as shown on the cross section of buildings heights below.



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 - 7 June 2018

Figure 6: Aircraft Building Heights Map Adel/1 (Overly 5)

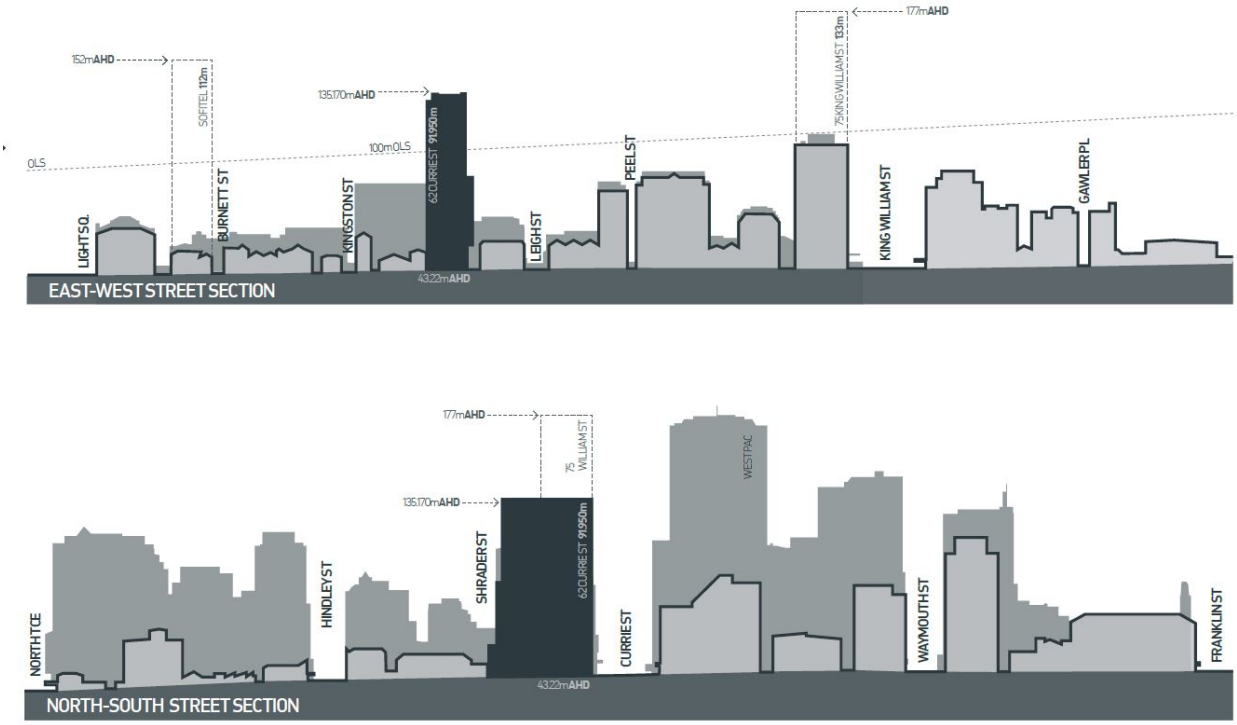


Figure 7: Aircraft Building Height Cross Section Analysis

The intent of development within the Capital City Zone is to 'optimise' floor space yields through the provision of tall buildings to ensure an appropriate density is achieved. The proposal is considered to support the intent of providing appropriate land use intensity within this strategically important CBD location with the provision of an appropriate development height.

Adelaide Airport representatives have reviewed the plans through the Pre-lodgement Panel process and advised that an approval will be required in accordance with the Airports Act Protection of Airspace Regulations 1996. Adelaide Airport Limited (AAL) verified that an airspace study was not required in this instance due to the proposal's proximity to the buildings at 106 Currie Street and 75 King William Street. Further, that any construction cranes will need to remain below 172m AHD.

Notably, ODASA has considered the height of the building in the context of its surrounds and have provided their endorsement in the context of the locality, subject to the relevance of design.

5.4.3 Building Composition

The following Capital City Zone Principles provide guidance with respect to the composition of the building.

PDC 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.

PDC 7 Buildings should present an attractive pedestrian-oriented frontage that adds interest and vitality to City streets and laneways.

PDC 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.**

PDC 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.**

PDC 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.**

The architectural form of the proposed development has been designed to prevent the massing of blank façades and provide an identifiable ground and upper level to the building. The active podium frontage to Currie Street particularly establishes an open and permeable base, while the tower above present a clearly defined section of the building.

The lower 12 levels of the towers western façade are built to the boundary and include a simple precast panel expressed joint defining the grid of the façade. These lower levels are in the main obscured from view in the Currie street and Schrader street streetscapes and accordingly does not present as a blank façade. The setback of the upper levels (13-24) allows the tower to express a consistent and homogenous façade in the round with the expressed brightonlite concrete grid on all four facades of the building.

The composition and nature of the land use activities at ground level together with the upper levels of the building combine with the architecture to respond to, and enhance the desired character of the locality, recognising the pedestrian focus of Currie Street.

5.4.4 Canopies

The provision of canopies and awnings within the Capital City Zone and in the Primary Pedestrian Areas is desirable where it provides all weather protection to pedestrians and is compatible in style and character with the associated building. The subject site is located within the Primary Pedestrian Area, as identified on Map Adel/1.

Capital City Zone

Desired Character Statement

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.

Council-wide

PDC 123 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.

The canopies incorporate a solid white curved hood form, reflecting the podium expressed arch fenestration design and clearly defines the pedestrian entrances to the building. The canopy colour and form is considered to be effective in providing an integrated façade feature consistent with the building's art deco streetscape.

The canopy extends to a height of 4.2 metres above ground level, with the bottom of the curve adjacent to the building façade incorporating a height of 2.2 metres above ground level. We note that this is inconsistent with the Adelaide City Council encroachment height criteria of a maximum 3.7 metres and minimum 3 metres above ground level.

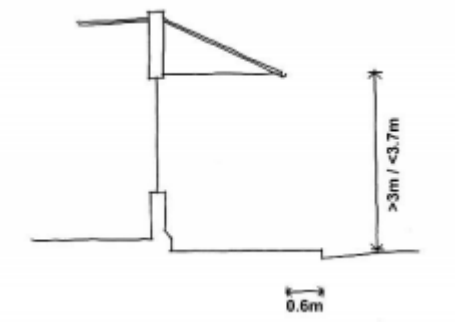


Figure 8: Adelaide Operating Guidelines Verandah Encroachment

We also note that the Development Plan outlines a minimum height of 3 metres, however does not nominate a maximum height:

Council-wide

PDC 222 Cornices, sunscreens and hoods should:

(a) have a minimum height of 3 metres above the level of the footway or 5 metres above a carriageway;

(b) have a maximum projection of 1.2 metres over a public space which exceeds 10 metres in width and a maximum of 600 millimetres over a public space which is 10 metres or less in width; and

(c) be constructed to prevent water dripping or running into a public place.

In our view, the design merits of the canopy, in particular its scale proportion in relation to the expressed arches warrants an exemption to the Adelaide City Council encroachment operating guidelines in that:

- the height above 3.7 metres is an integral element of the canopy's hood form directly relating to the architectural expression of the buildings podium;
- the canopies minimum height below 3.0 metres is a direct reflection of the organic curved from which does not present an intrusion or impediment on pedestrian movement; and
- the portion of the canopy below 3.0 metres is a minor element of the robust and durable material and is no different to a protruding under canopy sign which can be a minimum height of 2.5 metres above the footpath.

Notably, the Council encroachment guidelines incorporate a 2.5 metre minimum height for signs. Structures across the public verge at this height are clearly anticipated.

5.5 Signage

Capital City Zone Principles of Development Control 33, 34 and 35 provide guidance on appropriate signage displays, as follows:

PDC 33 Other than signs along Hindley Street, advertisements should use simple graphics and be restrained in their size, design and colour.

PDC 34 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 35 There should be an overall consistency achieved by advertisements along individual street frontages.

Six signs have been integrated within the design including a podium sign on each elevation and hotel signage in the corner of the tower on the eastern and western elevations. In addition, a sign zone is to be located half way up the building also on the eastern and western facades allowing for a coordinated approach to the expression of business signs.

The signage provides commercial identification typical of a building of this nature. Each sign will be consistent and simple in design and style. The signs are considered to be of appropriate size, scale and number for a building of this size, providing effective proportions and a simple presentation.

5.6 Access, Parking and Traffic

5.6.1 Pedestrian Access

Capital City Zone Principles of Development Control 27 and 28 together with Council-Wide PDC 239 provide guidance with respect to pedestrian access and movements. They recommend that:

PDC 27 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 28 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 239 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.**

Map-Adel/1 (Overlay 4) nominates Currie Street as a high concentration public transport route and the adjacent Leigh Street as a public transport pedestrian route, as illustrated on the following excerpt:

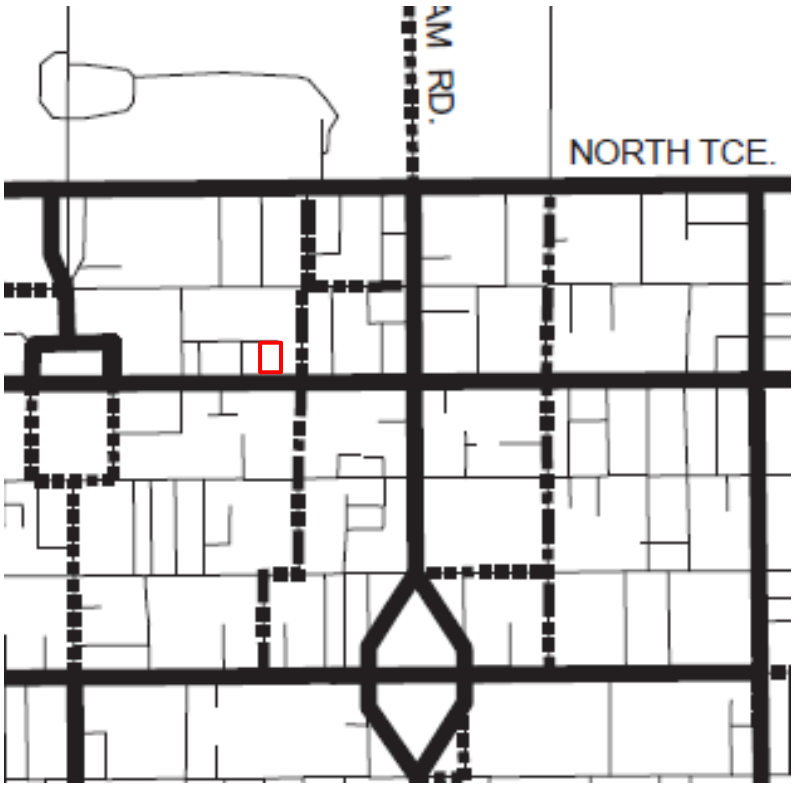


Figure 9: Public transport pedestrian route

The pedestrian access opportunities to the site have been reviewed by WSP in their attached traffic report. The report notes the site is located within the Primary Pedestrian Area within the Development Plan, and adjacent to the Core Pedestrian Area, as illustrated below:

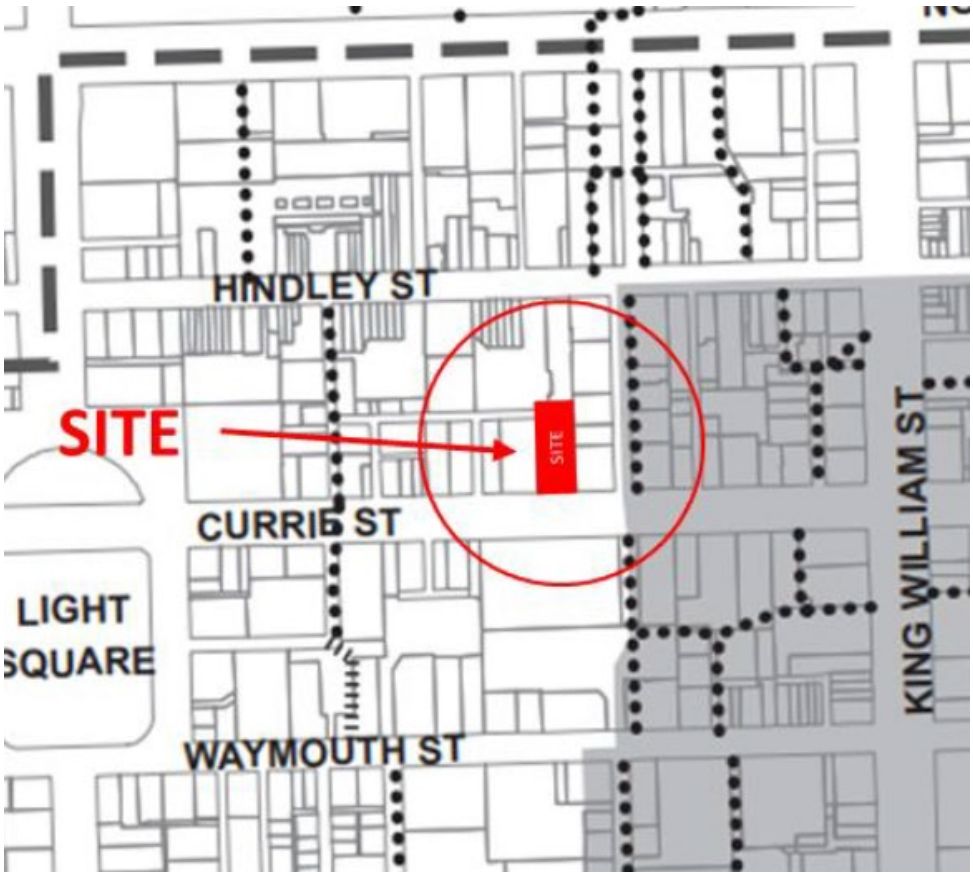


Figure 10: Primary Pedestrian Area

The WSP report also notes that the site is located within 100 metres of bus stops D3 and D4 along the northern side of Currie Street and taxis access is available:

- with an all-time kerbside taxi zone capable of storing three vehicles located on the southern side of Currie Street within 50 metres of the subject site;
- a 7.00 am to 7.00 pm time restricted kerbside loading zone immediately in front of the subject site; and
- kerb side loading zones within five minutes' walk of the subject site on the northern and southern sides of Currie Street, Kingston Street and Rosina Street.

Notably, the pedestrian links adjacent to the site are generally north/south in nature resulting in excellent accessibility to North Terrace (via Leigh Street) and the Gouger Street markets. Currie Street is also recognised as an important pedestrian thoroughfare providing excellent access to public transport on this high concentration route. Numerous kerbside taxi ranks and private multi-level car parking opportunities are also available in close proximity.

It is inherent in the design of the building to incorporate pedestrian connectivity through the creation of opportunities to establish additional pedestrian laneway linkages in the precinct. The proposal has been strategically designed to accommodate pedestrian access via the eastern laneway, and provide future opportunities for direct pedestrian access to Leigh Street via the currently compromised east/west right of way on the adjacent site. The sites integration with the existing pedestrian corridors and the direct linking of Schrader Street to that network is a significant accomplishment for the proposal.

These pedestrian linkages are supported through the development of the high-quality office and hotel development in this strategically important location and encourages Council's further development of these thoroughfares. It is anticipated that further redevelopment and activation of Schrader Street in particular will result from the development. In addition, the greater land use intensity associated with the proposal and the pedestrian focused population will ensure additional demand and frequency along Currie, Schrader and Leigh Street, improving the economies of scale for additional infrastructure investment by Council, providing a city-wide benefit.

5.6.2 Vehicular Access

Council Wide Objective 70 and Council-wide PDCs 240 and 241 provide guidance with respect to access, as well as the loading and unloading of goods. Together, they recommend that:

> **Objective 70: Adequate off-street facilities for loading and unloading of courier, delivery and service vehicles and access for emergency vehicles.**
>
> **PDC 240 Development should be designed so that vehicle access points for parking, servicing or deliveries, and pedestrian access to a site, are located to minimise traffic hazards and vehicle queuing on public roads. Access should be safe, convenient and suitable for the development on the site, and should be obtained from minor streets and lanes unless otherwise stated in the provisions for the relevant Zone or Policy Area and provided residential amenity is not unreasonably affected.**
>
> **PDC 241 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.**

All service deliveries are to be received via the Schrader Street access point, accommodated by a loading bay designed to accommodate vehicles up to MRV's 8.8 metres in length. Vehicle sweep paths have been reviewed by WSP Consulting who consider that safe and convenient access is accommodated. Sweep paths within the local laneway network of Schrader, Kinston, Solomon and Burnett Street have also been reviewed, of which that same conclusion has been reached.

Notably, the loading bay has been separated from the two drop off parks located adjacent to Schrader Street to minimise conflict. The two drop off bays will be time restricted and are appropriately located to facilitate direct ground level pedestrian access to the eastern entry point of the building. The drop off bays provide practical access to the site that is safe and convenient from the low speed Schrader Street environment.

5.6.3 Car Parking

PDC 26 of the Capital City Zone provides guidance with respect to the provision of on-site car parking. It recommends that:

> **PDC 26 Car parking should be provided in accordance with Table Adel/7.**

According to Table Adel/7 of the Adelaide (City) Development Plan, there is no minimum statutory car parking requirement for hotel or office in the Capital City Zone. Given the excellent pedestrian access to the CBD pedestrian network and public transport options for this strategically important site, no on-site car parking has been provided.

5.6.4 Bicycle Parking and Facilities

Council Wide Principles of Development Control 234 and 235 are most relevant for the assessment of on-site bicycle parking

> **PDC 234 An adequate supply of on-site secure bicycle parking should be provided to meet the demand generated by the development within the site area of the development. Bicycle parking should be provided in accordance with the requirements set out in Table Adel/6.**
>
> **PDC 235 Onsite secure bicycle parking facilities for residents and employees (long stay) should be:**
>
> **(a) located in a prominent place;**
> **(b) located at ground floor level;**
> **(c) located undercover;**
> **(d) located where passive surveillance is possible, or covered by CCTV;**
> **(e) well lit and well signed;**
> **(f) close to well used entrances;**
> **(g) accessible by cycling along a safe, well lit route;**
> **(h) take the form of a secure cage with locking rails inside or individual bicycle lockers; and**
> **(i) in the case of a cage have an access key/pass common to the building access key/pass.**

Table Adel/6 of the Adelaide City Council Development Plan identifies bicycle parking rates of:

TYPE OF DEVELOPMENT	BICYCLE PARKING SPACE STANDARD FOR EMPLOYEES AND/OR RESIDENTS	BICYCLE PARKING SPACE STANDARD FOR CUSTOMERS, VISITORS AND/OR SHOPPERS
Café/Restaurant	1 per 20 employees	1 per 50 seats
Offices	1 per 200 square metres of gross leasable floor area	2, plus 1 per 1000 square metres of gross leasable floor area
Serviced Apartment	1 per 20 employees	2 for the first 40 rooms, plus 1 for every additional 40 rooms.

An assessment of the relevant bike parking rate referencing Table Adel/6 has been undertaken by WSP Consulting and detailed within the **attached** report.

Provision for the secure indoor parking of 72 bikes is accommodated within the development, in addition to outdoor racks able to accommodate 22 bikes in the laneway and on the Currie Street footpath, resulting in a total of 94 bike parks.

The indoor bicycle parking is located within the basement of the building, with access obtained from the northern entry point via a modestly graded internal stairwell with associated bicycle ramp. The cyclist is able to walk down the steps while accommodating the bike on the adjacent ramp. The service elevator is also able to be utilised by cyclists.

Generous end of trip facilities is available at the basement level, including 84 lockers, 6 showers and WC's. The amenities also support the adjacent gym. Access from the end of trip facilities to the remainder of the building is able to be accommodated via the closely located lifts.

The 94 bike parking spaces and extent of end of trip facilities is considered to amply meet the anticipated demand for the proposal, supporting cycling as a safe and convenient transport option.

5.7 Services

Council-wide Objective 41 and Council-wide PDCs 132, 133 and 135 provide guidance with respect to the provision of services. Together, they recommend that:

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

PDC 132 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.

PDC 133 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.

PDC 135 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.**

The Infrastructure Report accompany the application documentation lists all of the mechanical, electrical, vertical transportation, hydraulic and fire protection services that will be provided as part of the proposed development and it is particularly relevant for the Commission to note that:

- the building will have adequate access to the existing electricity, water, sewerage, gas and communications infrastructure;
- the fire boosters and transformer are the only services to be located on the ground level of the building and have been strategically located to ensure that their visual impact on the public realm is minimised;
- the transformer, plant, gas and power on the ground floor level of the building will not be visible from the public realm; and
- the roof top plant has been effectively integrated into the building's roof design and also screened from the public realm.

5.8 Environmental Considerations

5.8.1 Heritage and Conservation

The site of the proposed development is located adjacent to two Local Heritage Places, with consideration of the following Council-Wide Objectives and Principles of Development Control:

> **Objective 43: Development that retains the heritage value and setting of a heritage place and its built form contribution to the locality.**
>
> **PDC 140 Development on land adjacent to a heritage place in non-residential Zones or Policy Areas should incorporate design elements, including where it comprises an innovative contemporary design, that:**
>
> **(a) utilise materials, finishes, and other built form qualities that complement the adjacent heritage place; and**
>
> **(b) is located no closer to the primary street frontage than the adjacent heritage place.**
>
> **PDC 142 Development that abuts the built form/fabric of a heritage place should be carefully integrated, generally being located behind or at the side of the heritage place and without necessarily replicating historic detailing, so as to retain the heritage value of the heritage place.**

The design team has been conscious of providing a streetscape outcome that respects the context and setting of *Commerce House* at 54 Currie Street and *Woodchester House* at 7 Leigh Street, located on the adjacent sites to the east. To this end, the change in architectural expression of the tower above the three storey podium is particularly relevant, providing a synchronicity with the bulk and scale of the adjacent three and five storey Local Heritage buildings. This design strategy is further enhanced with the building material transition provided between the podium levels and tower above.

While the podium incorporates similar construction materials to the Local Heritage buildings, the streetscape presentation does not mimic or replicate their design. The proposed glazing treatments provide an evident art deco design intention providing a clear design independence, while retaining sympathetic elements.

Complementing the podium form is the visually recessive form of the eastern elevation office levels. These incorporate a simple curtain wall façade at levels 4 to 12 providing a clean backdrop to the presentation of the Local Heritage buildings when viewed from the Currie Street and Leigh Street streetscapes. The separation of the buildings by the proposed north/south laneway between 62-68 Currie Street and 54 Currie Street further assists in ensuring that the heritage value and setting of the adjacent Local Heritage building is not compromised.

5.8.2 Crime Prevention Through Environmental Design

Inherent in design is the need to ensure that development provides for a safe secure and crime resistant environment as envisaged in the following Council-wide CPTED objectives and principles.

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

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

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

- **(a) promote natural surveillance of the public realm, including open space, car parks, pedestrian routes, service lanes, public transport stops and residential areas, through the design and location of physical features, electrical and mechanical devices, activities and people to maximise visibility by:**
  - **(i) orientating windows, doors and building entrances towards the street, open spaces, car parks, pedestrian routes and public transport stops;**
  - **(ii) avoiding high walls, blank facades, carports and landscaping that obscures direct views to public areas;**
  - **(iii) arranging living areas, windows, pedestrian paths and balconies to overlook recreation areas, entrances and car parks;**
  - **(iv) 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.**

The fundamental principles of CPTED have been a core building block informing the internal and external design outcome for the building. This is particularly the case given the opportunity for the site to provide a pedestrian link between Schrader Street and Currie Street, with the future opportunity to facilitate a link to Leigh Street. To provide an effective outcome, the ground floor design of the eastern elevation has utilised natural surveillance, access control, territorial reinforcement and space management adjacent to this important thoroughfare.

The ground floor eastern elevation has been setback 2.4 metres from the boundary to combine with the existing pedestrian laneway on the adjacent site. This setback distance remains consistent for the 12.75 metre high podium, providing a sense of space, with the three storey fenestration treatments adding to the laneways interesting and enticing nature. At ground level, restaurant outlook from the dining and kitchen areas together with and the hotels arrival experience provide a direct human scale connection.

The pedestrian link between the laneway and Schrader Street to the north is accommodated through a single storey thoroughfare that incorporates the high frequency hotel drop off car park and end of trip external access point. To ensure effective sight lines through this pedestrian intersection, the north-eastern corner of the ground level has been stepped in. As such, the pedestrian intersection is able to be viewed from numerous vantage points given the improved sight lines. The design outcome is considered to provide a clearly defined, safe and permeable pedestrian experience which avoids areas of entrapment and maximises positive surveillance and activity through all hours of the day and night.

5.8.3 Waste Management

Council Wide PDCs 101 and 103 provide guidance with respect to the management of waste. Together, they recommend that:

> **PDC 101 A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development.**
>
> **PDC 103 Development greater than 2000 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.**

Full details of the waste management solutions to be implemented throughout the proposed development are contained within the Waste Management Plan prepared by Rawtec accompanying the application documentation. Sufficient on site storage area has been allocated within the basement, with convenient service access to the point of collection off Schrader Street.

It is relevant for the Commission to note that the waste associated with the proposed development is to be managed as follows:

- the waste services will be managed separately for each land use to allow individual invoicing, however, will be universally stored at the basement level. In addition, three bins are to be located at the rooftop level to provide convenient access for the restaurant. Vertical bin access is achieved via a service lift shaft;

- the waste recycling services will include general waste, comingle recycling, organics recycling, paper recycling and confidential paper recycling;

- waste will be collected from Schrader Street via a service loading bay operating within a visual screen and gate; and
- the loading bay is able to accommodate an MRV size waste collection vehicle. The weekly collection movements are estimated to be 19 for a single waste collection contractor and up to 31 should separate contractors be engaged by the Hotel and Office.

5.8.4 Stormwater Management

Council-wide PDCs 128, 129, 130 and 131 provide guidance with respect to the management of stormwater. Together, they recommend that:

> **PDC 128 Development should incorporate appropriate measures to minimise any concentrated stormwater discharge from the site.**
>
> **PDC 129 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.**
>
> **PDC 130 Development should not cause deleterious effect on the quality or hydrology of groundwater.**
>
> **PDC 131 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.**

Stormwater received from the proposed development:

- will not increase the amount of runoff generated by the development which it is set to replace;
- the existing stormwater infrastructure surrounding the subject land is unlikely to experience increased post-development flows;
- a conventional downpipe system is likely to be adopted, with downpipes discharging to the basement for a single collection point to discharge to the Civil internal stormwater network; and
- treatment to collected flows will be via a treatment train, to be discharged directly into the existing Currie Street underground stormwater drainage system.

With this in mind, the proposed development is considered to satisfy Council-wide PDCs 128, 129, 130 and 131.

5.8.5 Wind Effects on the Pedestrian Environment

Council-wide PDCs 119 and 125 seek to minimise the micro-climatic impact of buildings on their immediate surrounds. Together, they recommend that:

> **PDC 119 Development should be designed and sited to minimise micro-climatic and solar access impact on adjacent land or buildings, including effects of patterns of wind, temperature, daylight, sunlight, glare and shadow.**
>
> **PDC 125 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.**

Whilst the full effects of the proposed building on wind flows in this locality are outlined in detail in the **attached** WSP Pedestrian wind Impact Assessment report, it is important for the Commission to note that:

- the presence of existing low rise buildings adjacent to the site has assisted in alleviation the incoming velocity acting towards the site;
- a maximum wind speed of 16m/s has been identified as the threshold to ensure that occupants do not experience adverse wind effects that in-turn, reduces the safety and comfort of people in the public realm. The proposed building is not expected to exceed that threshold; and
- it is not considered necessary to introduce further wind mitigation measures along the façade.

With these findings, the proposed development is considered to satisfy Council Wide PDC's 119 and 125.

5.9 Environmentally Sustainable Design

Council Wide Objective 30 and Council Wide PDC 108 combine to call for environmentally sustainable development. Together, they recommend that:

> **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.**
>
> **PDC 108 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.

WSP have been engaged to provide a sustainability report outlining the ESD strategies incorporated within the building design, which summarises the sustainability initiatives as incorporating:

- office areas targeting a 5 Star base building NABERS energy rating;
- high performance façade incorporating double glazing with low-e coatings and thermally broken frames;
- floor layouts with reduced glazing on western façade to minimise afternoon solar loads;
- the use of exposed slabs to provide thermal mass combined with capability for night cooling strategies to minimise energy consumption and electrical demand;
- HVAC systems with central thermal plant utilised for both the office and hotel elements of the development, optimising sizing and control for maximum energy efficiencies, in line with 5 Star Naber (or equivalent) requirements;
- energy efficient light fixtures comprising high efficiency LED fittings used throughout;
- lighting control system with motion sensors and daylight dimming;
- electrical sub-metering and management system to allow for ongoing management and reduction of energy consumption;
- thermal sub-metering to allow for ongoing optimization of mechanical services after construction to further reduce energy consumption; and
- destination control of lifts to minimise trip times and associated energy consumption.

Accordingly, the Council-wide Objectives and Principles of Development Control listed above relating to infrastructure are considered to be satisfied.

6.0 CONCLUSION

We conclude that the proposed development of a multi-storey hotel and office building, complies with the relevant Capital City Zone and Council-wide provisions of the Adelaide (City) Council Development Plan.

In particular, the proposed development:

- establishes a mix of land uses that are expressly envisaged within the Zone and Central Business Policy Area;
- establishes a building that exhibits design excellence and will make a positive contribution to the pedestrian intimacy of the surrounding laneways, the streetscape of Currie Street and the sky line of the broader CBD;
- reinforces and enhances the active street frontage to Currie Street, Schrader Street and the adjacent private laneway, facilitating a permeable pedestrian environment;
- provides streetscape scale proportions sympathetic with the Local Heritage Places to the east;
- incorporates facilities and services as part of the integrated office and hotel facility that will enhance the experience for the occupants of the building;
- is ideally located to take advantage of the public and private transport opportunities on Currie Street and has excellent pedestrian access to the adjacent North Terrace, Gouger Street markets and Light Square, providing high amenity communal open space and convenience shopping opportunities for office workers and hotel patrons; and
- provides for the necessary services and operation functions without detriment to the locality.

Accordingly, the proposal meets the land use, design and functional expectations of the Development Plan.

We conclude that the proposed development is not seriously at variance with the provisions of the Development Plan, and we therefore invite the State Commission Assessment Panel to accept that the proposal meets the provisions of the Development Plan in a manner sufficient to enable the application to be approved.

Stewart Hocking MPIA
B/A in Planning

1 March 2019

Design
for a better
future /

CURRIE ST PTY LTD

62 - 68 CURRIE STREET, ADELAIDE DEVELOPMENT APPLICATION

ACOUSTIC REPORT

wsp

FEBRUARY 2019

Question today
Imagine tomorrow
Create for the future

62 - 68 Currie Street, Adelaide
Development Application
Acoustic Report

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REV	DATE	DETAILS
0	30 January 2019	Initial issue
A	22 February 2019	Issued for Development Approval

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1 PROJECT BACKGROUND

1.1 INTRODUCTION

WSP was commissioned by Currie St Pty Ltd to conduct an acoustic assessment as part of the Development Application relating to the proposed development located at 62 - 68 Currie Street, Adelaide.

The acoustic assessment has been conducted in accordance with the requirements of the Adelaide City Council Development Plan and the South Australian EPA *Environment Protection (Noise) Policy 2007* and the South Australian EPA guideline *Music noise from indoor venues and the South Australian Planning System*

This report provides information regarding:

- An overview of the proposed development works.
- Acoustic criteria applicable to the proposed development.
- Façade glazing recommendations (to control noise ingress).
- Recommendations to control noise emissions from the site.

2 SITE DESCRIPTION

The proposed development site is located at 62 - 68 Currie Street, Adelaide. An aerial photograph illustrating the proposed development site location and surrounding area is presented in Figure 2.1.

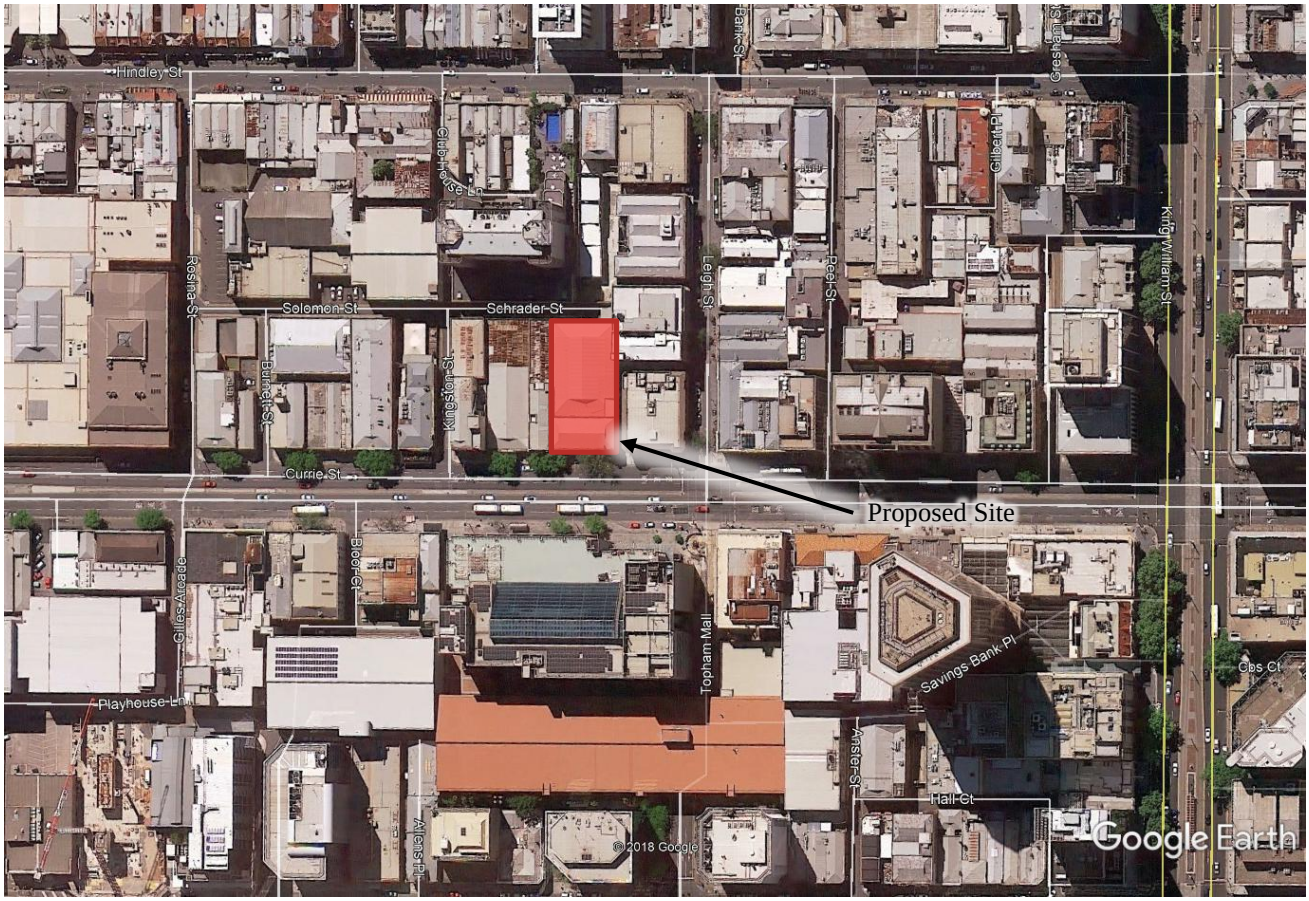

Figure 2.1 Development site aerial photo

The background noise environment for the proposed site is controlled by road traffic noise. During the evenings / nights and on weekends, there is also noise contribution from nearby entertainment premises.

The proposed development is a 25 storey mixed use building and comprises:

- A gymnasium and facilities (bike storage, cool room, house keeping etc) at basement level.
- Hotel reception and restaurant at ground level.
- Function rooms on level 1.
- Offices on levels 2-12.
- Hotel rooms on levels 13-22.
- Rooftop restaurant on level 23.
- Plant on level 24,

The area is predominantly commercial. The closest noise sensitive receptors are hotels located on Hindley Street, these being the Hotel Grand Chancellor and Holiday Inn.

3 NOISE CRITERIA

3.1 ADELAIDE CITY COUNCIL DEVELOPMENT PLAN

3.1.1 COUNCIL WIDE PRINCIPLES OF DEVELOPMENT CONTROL

The Adelaide City Council Development Plan (Consolidated 7 June 2018) provides the following council wide Principles of Development Control (PDC) that are relevant to this development:

Noise Sources

89 *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.*

91 *Development of licensed premises or licensed entertainment premises or similar in the Capital City, Main Street, Mixed Use 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 ($L_{10,\ 15\ min}$) less than 8 dB above the level of background noise ($L_{90,15\ min}$) in any octave band of the sound spectrum; and*

(ii) *music noise ($L_{A10,\ 15\ min}$) less than 5 dB(A) above the level of background noise ($L_{A90,15\ min}$) 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 ($L_{10,\ 15\ min}$) less than 8dB above the level of background noise ($L_{90,15\ min}$) in any octave band of the sound spectrum and music noise ($L_{10,\ 15\ min}$) less than 5dB(A) above the level of background noise ($L_{A90,15\ min}$) for the overall (sum of all octave bands) A-weighted levels; or*

(ii) *music noise ($L_{10,\ 15\ min}$) less than 60dB(Lin) in any octave band of the sound spectrum and the overall ($L_{A10,15\ min}$) noise level is less than 55 dB(A).*

Note: *A report regarding noise associated with licensed premises or licensed entertainment premises or similar prepared by an acoustic engineer at the planning application stage should specify the noise attenuation measures and address other typical noise sources to ensure those sources do not result in unreasonable interference. These noise attenuation measures might include:*

(a) *installation of an in-house music system which has a limiting device that monitors and controls the volume of the system so that the maximum internal noise level certified by the acoustic engineer is not exceeded;*

(b) *treatment of openings, such as by airlocks and seals for doors, sealing of wall and roof vents and treatment of ventilation and air-conditioning paths;*

(c) *acoustic treatment of building elements, such as sealing and double glazing of windows or upgrading roof construction;*

(d) *no entertainment on or in any balcony or outdoor area;*

(e) *no loud speakers placed on or in the fascia of the premises, balcony or any adjacent outdoor area or footpath;*

(f) *external windows and doors are kept closed where relied upon for noise attenuation;*

(g) *locating and designing entrances and fencing to assist in keeping patrons away from noise sensitive areas; or*

(h) *locating car park, delivery and rubbish collection areas away from noise sensitive development and limiting times of activity to minimise noise impacts.*

92 *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*

93 *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 City Living Zone, the Adelaide Historic (Conservation) 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.

94 *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

95 *Noise sensitive development should incorporate adequate noise attenuation measures into their design and construction to provide occupants with reasonable amenity when exposed to noise sources such as major transport corridors (road, rail, tram and aircraft), commercial centres, entertainment premises and the like, and from activities and land uses contemplated in the relevant Zone and Policy Area provisions.*

96 *Noise sensitive development in mixed use areas should not unreasonably interfere with the operation of surrounding non-residential uses that generate noise levels that are commensurate with the envisaged amenity of the locality.*

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

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

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

(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.

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.*

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

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

98.1 Appropriate stacking and horizontal location of rooms, eg bedrooms over bedrooms and bedrooms next to bedrooms.

98.2 Bedrooms of any dwelling/serviced apartment:

(a) not sharing a wall with a living room or a garage of another dwelling; and*

(b) not located above or below a living room of another abutting dwelling.*

** Living room means a room used for social interaction, relaxation or dining, including a living room, lounge room or open eating area linked to a kitchen, but does not include a bedroom.*

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

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

99.1 Common entries servicing a maximum of 10 dwellings/serviced apartments on each floor level.

99.2 Incorporation of acoustic core filled doors with airtight rubber seals for all entry doors into common access ways.

3.1.2 ADELAIDE CITY COUNCIL ZONING

The proposed development site is located within the Adelaide City Council "Capital City" zone, policy area 13. The surrounding noise sensitive receivers are located within the Adelaide City Council "Capital City" zone, policy area 14.

The Capital City zone promotes a mix of commercial, retail, professional services, hospitality, entertainment, educational facilities and medium and high density living.

Policy area 13 of the Capital City zone primarily promotes commercial land use, which is supported by educational, hospitality and entertainment activities and increased opportunities for residential, student and tourist accommodation.

Policy area 14 of the Capital City zone (Hindley Street, east of Morphett Street) primarily promotes commercial, educational, hospitality, retail and entertainment activities.

3.2 AUSTRALIAN STANDARD AS/NZS 2107:2016

The Adelaide City Council, council wide PDC 97 (b) refers to Australian/New Zealand Standard AS/NZS 2107:2000, however we note that the 2000 version of this standard has been superseded with the 2016 version which was released in October 2016. Therefore, for this assessment we have utilised the 2016 version of the standard.

Australian/ New Zealand Standard AS/NZS 2107:2016 – *Acoustics—Recommended design sound levels and reverberation times for building interiors* (AS/NZS 2107) provides internal design sound levels for spaces based on the occupancy of that space. For residential buildings, AS/NZS 2107 provides internal design sound levels for houses and apartments in inner city areas or entertainment districts or near major roads, summarised in Table 3.1

Table 3.1 Internal Noise Design Criteria

TYPE OF OCCUPANCY	DESIGN SOUND LEVEL RANGE, $L_{AEQ,T}$ dB
Apartment common areas (e.g. foyer, lift lobby)	45 to 50
Living areas	35 to 45
Sleeping areas (night time)	35 to 40
Work areas	35 to 45

3.3 SLEEP DISTURBANCE CRITERIA

The World Health Organisation (WHO), *Guidelines for Community Noise* report (Berglund, Lindvall, Schwela) was developed based on the outcome of a WHO expert task force meeting held in London, UK in April 1999.

This document has been used widely to define guideline values for sleep disturbance (among other things), and has generally been accepted for use in Australia. The guideline values for sleep disturbance are reproduced in Table 3.2.

Table 3.2 Sleep Disturbance Criteria

SPECIFIC ENVIRONMENT	CRITICAL HEALTH EFFECT	L_{AEQ} dB	$L_{AMAX(F)}$ dB
Inside bedrooms	Sleep disturbance, night time	30 (8 hour)	45

It is noted that the WHO internal L_{Aeq} noise criteria is more stringent than the AS/NZS 2107 criteria listed in Table 3.1. However, it should be noted that the WHO criteria is based on an 8 hour average, whereas the AS/NZS 2107 criteria is based on a measurement time to appropriately characterise the noise source. For this assessment we have adopted the AS/NZS 2107 criteria and for the purpose of assessing traffic noise ingress, have applied it to the typical worst case (highest) 1 hour noise level.

3.4 ENVIRONMENT PROTECTION (NOISE) POLICY

The South Australian *Environment Protection (Noise) Policy 2007* (Noise EPP) provides criteria for noise sources, which if complied with will satisfy the General Environmental Duty under Section 25 of the Environment Protection Act 1993.

The Noise EPP sets noise criteria based on the land uses principally promoted for the noise source and sensitive receivers by the relevant council development plan. For this development, the Adelaide City Council Development Plan principally promotes the following land uses for the noise source and nearest sensitive receivers. Where more than one land use is principally promoted for a zone, the Noise EPP requires that an average of the Indicative Noise Factors be taken for that zone. Similarly, where different land uses are promoted for the noise source and sensitive receivers, the Noise EPP requires an average of the Indicative Noise Factors be taken for the noise source and receiver.

A summary of the Indicative Noise Factors derived for each zone are presented in Table 3.3.

Table 3.3 Summary of Indicative Noise Factors for each Zone

COUNCIL ZONE	LAND USES PRINCIPALLY PROMOTED	INDICATIVE NOISE FACTOR, $L_{AEQ,15MIN}$ dB	
		Day (7am – 10pm)	Night (10pm – 7am)
Noise Source – proposed development			
Capital City, policy area 13	Commercial	62	55
Sensitive Receivers			
Capital City, policy area 14	Commercial	62	55

Based on the Indicative Noise Factors derived for each zone in Table 3.3, we are able to derive noise criteria for each of the noise sensitive receivers surrounding the site. Note that as this is a development authorisation application, Part 5, Section 20 of the Noise EPP requires the predicted noise level to not exceed the Indicative Noise Factor less 5 dBA. The applicable noise criteria derived from the Noise EPP are presented in Table 3.4.

Table 3.4 Summary of Noise EPP Criteria

NOISE SENSITIVE RECEIVER	NOISE EPP CRITERIA, $L_{AEQ,15MIN}$ dB	
	Day (7am – 10pm)	Night (10pm – 7am)
Hotel Grand Chancellor	57	50
Holiday Inn	57	50

The derived Noise EPP criteria are applicable for all noise sources from the proposed development, which will consist of mechanical plant and car park noise. In addition to this it is noted that the Adelaide City Council PDC 93 (a) requires that mechanical plant also achieve noise criteria of 55 dBA during the day and 45 dBA at night.

3.5 NOISE CRITERIA SUMMARY

A summary of the applicable noise criteria for the 62 - 68 Currie Street development are presented in Table 3.5.

Table 3.5 Noise Criteria Summary, dB

LOCATION	TIME PERIOD	
	Day (7am – 10pm)	Night (10pm – 7am)
Noise Ingress (Internal Receiver Locations)		
Apartment common areas (e.g. foyer, lift lobby)	$L_{Aeq,1hr}$ 50	N/A
Living areas	$L_{Aeq,1hr}$ 45	N/A
Sleeping areas (night time)	N/A	$L_{Aeq,1hr}$ 40 $L_{Amax(f)}$ 45 Music noise criteria as presented in Table 3.6
Work areas	$L_{Aeq,1hr}$ 45	N/A
Noise Emissions (External Receiver Locations)		
Hotel Grand Chancellor and Holiday Inn	$L_{Aeq,15min}$ 57 (overall) $L_{Aeq,15min}$ 55 (mech plant)	$L_{Aeq,15min}$ 50 (overall) $L_{Aeq,15min}$ 45 (mech plant)

Table 3.6 Internal music noise criteria, dB

MUSIC NOISE INGRESS CRITERIA (L10,15MIN) AT OCTAVE BAND CENTRE FREQUENCY (HZ)							OVERALL dBA
63	125	250	500	1000	2000	4000	
44	36	31	25	20	17	15	26

4 ASSESSMENT

4.1 NOISE INGRESS

4.1.1 TRAFFIC NOISE INGRESS

A desktop road traffic noise assessment was undertaken for the proposed development utilising the CoRTN methodology in SoundPlan software.

For the purpose of the assessment, the following was adopted:

- AADT road traffic volumes and percentage of commercial vehicles based on the DPTI Road Traffic Flow Maps sourced from https://dpti.sa.gov.au/traffic_volumes/maps.
- Posted speed limits for the Adelaide CBD
- Dense Graded Asphalt with a surface correction factor of 0 dB
- Road traffic noise model adjusted to be consistent with the measured CBD noise levels presented in the EPA report *Adelaide CBD strategic noise monitoring*
- The difference between the 9 hours night time noise level and 15 hour day time noise level is +5 dBA, which was the typical difference presented in the results of EPA report *Adelaide CBD strategic noise monitoring* (for locations controlled by road traffic noise)
- The difference between the 9 hour night time noise level and maximum 1 hour night time noise level is +2 dBA, which was the typical difference presented in the results of EPA report *Adelaide CBD strategic noise monitoring* (for locations controlled by road traffic noise)
- The difference between the daytime and night time equivalent and maximum noise levels is + 20 dBA at 6 metres from the road, which was the typical difference presented in the results of EPA report *Adelaide CBD strategic noise monitoring* (for locations controlled by road traffic noise)
- Road traffic noise spectrum as per the typical road traffic noise spectrum presented in Figure 13 of EPA report *Adelaide CBD strategic noise monitoring*

The predicted highest night time noise levels for Level 13 (lowest hotel floor) is presented in Table 4.1.

Table 4.1 Predicted road traffic noise levels

LEVEL 13 (HOTEL) - NIGHT	**BUILDING FAÇADE NOISE LEVEL**			
	NORTH	**SOUTH**	**EAST**	**WEST**
$L_{eq,9hr}$	57 dBA	64 dBA	61 dBA	62 dBA
$L_{eq,1hr}$	59 dBA	66 dBA	63 dBA	64 dBA
L_{max} (1)	66 dBA	73 dBA	70 dBA	71 dBA

Note (1): L_{max} calculated based on the 13th floor being 48 metres above ground level and the L_{max} noise source attenuation of 6 dB per doubling of distance vs the L_{eq} noise source attenuation of 3 dB per doubling of distance.

Indicative glazing requirements for the hotel levels to control traffic noise ingress are presented in Table 4.2. As the L_{max} noise level is more than 5 dB greater than the L_{eq} noise level, the L_{max} noise level will control the design (i.e. the difference between the L_{max} and L_{eq} design criteria is 5 dB). Note that the lower level commercial floor glazing will be designed to achieve the internal noise criteria as set out in AS/NZS 2107:2016, following completion of detailed traffic noise measurements during the detailed design phase of the project.

Table 4.2 Indicative glazing requirements to control traffic noise ingress

BUILDING LEVEL	BUILDING FAÇADE GLAZING REQUIREMENTS (R_W)			
	NORTH	SOUTH	EAST	WEST
Level 13 to 22 (Hotel)	R_W 32 (e.g. 6.38mm laminate)	R_W 40 (e.g. 8mm float, 12mm air space, 8.38mm laminate)	R_W 34 (e.g. 10.38mm laminate)	R_W 34 (e.g. 10.38mm laminate)

4.1.2 MUSIC / ENTERTAINMENT NOISE INGRESS

Measurements of the ambient noise levels around the proposed development were carried out to characterise the noise environment around the site and to determine the influence of entertainment and patron noise from the Hindley Street, Solomon Street and Leigh Street areas. Measurements were carried out between 11:30pm and 12:30am on Friday 18 January 2019 on the top floor of the Secure Parking – Plaza Car Park (Solomon Street) and Wilson Parking (30 Hindley Street). These locations were selected as they are expected to provide an indication of the entertainment noise likely to be experienced at the 13th floor and above of the proposed hotel rooms.

The noise measurement results are presented in the following Table 4.3.

Table 4.3 Octave band measured noise levels

LOCATION	MEASURED NOISE LEVEL ($L_{10,15MIN}$ dB) AT OCTAVE BAND CENTRE FREQUENCY (HZ)							OVERALL dBA
	63	125	250	500	1000	2000	4000	
Solomon Street	76	68	62	62	59	56	50	64
Hindley Street	75	68	66	63	63	58	53	66

It was observed during the measurement period, at the Solomon Street location, that the noise environment was controlled by patrons (within The Duke and other venues on Solomon Street) and road traffic with some music noise occasionally audible from an entertainment venue on the corner of Burnett Street and Solomon Street.

At the measurement location on Hindley Street, the noise environment was controlled by road traffic and music from a street performer (observed to be playing a single electric guitar). Music from entertainment venues in the area was not audible at this location.

Based on the above measured noise levels and subjective observations, music noise emanating from entertainment venues does not control the noise environment in the vicinity of project site and so the music noise criteria presented in Table 3.6 will not control the acoustic design for this project. Notwithstanding, noise levels around the project site are elevated during busy night time periods on weekends (due to increased road traffic and patrons). It is expected that these busy periods would result in noise levels similar to those measured i.e. 64 – 66 dBA and as such the proposed development should provide mitigation measures to achieve the internal noise criteria presented in Table 3.5.

Our assessment of noise ingress, based on the measured noise levels, indicates that the glazing requirements outlined in Table 4.2 (for the control of road traffic), will also satisfy the internal noise criteria during busy weekend periods.

4.2 NOISE EMISSIONS

4.2.1 ROOFTOP PLANT NOISE EMISSIONS

Details of the rooftop plant are not available at this stage of the design. As the design progresses, noise emissions from the external mechanical services plant will be designed to comply with the requirements of the Noise EPP and the criteria outlined in Table 3.5.

4.2.2 ROOFTOP RESTAURANT NOISE EMISSIONS

We understand that the proposed rooftop restaurant will generally provide low level background music (similar in level to typical conversation) in the dining area. However, at this stage it is not known if live or amplified music will be provided in this area; if it is decided that live or amplified music will be provided, the design will incorporate the appropriate mitigation measures to achieve the music noise criteria in Section 3.1.1 (this analysis would be carried out at the Design Development stage). Therefore, external noise emissions from the restaurant are expected to comply with the criteria outlined in Section 3 and the requirements of the Noise EPP.

5 CONCLUSION

WSP has undertaken an acoustic assessment for the proposed mixed use development at 62 – 68 Currie Street in order to support the development application.

Based on the assessment, it has been demonstrated that:

- Traffic noise emissions in to noise sensitive areas can be controlled to achieve the internal noise criteria using typical single glazed and double glazed IGU windows and doors.
- Noise ingress from entertainment areas surrounding the project site into hotel rooms located from Level 13 to 22 can be controlled to achieve the internal noise criteria using typical single glazed and double glazed IGU windows and doors.
- Noise emissions from roof top mechanical services plant to surrounding noise sensitive receivers will be designed to satisfy the environmental noise criteria.

As such, WSP are of the opinion that the proposed development will be able to comply with the acoustic requirements outlined in the Adelaide City Council Development Plan.

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CURRIE ST PTY LTD

62-68 CURRIE STREET, ADELAIDE DEVELOPMENT APPLICATION

ENGINEERING & ENVIRONMENTAL SERVICES REPORT

wsp

FEBRUARY 2019

Question today
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62-68 CURRIE STREET, ADELAIDE
DEVELOPMENT APPLICATION

ENGINEERING AND ENVIRONMENTAL SERVICES REPORT

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REV	DATE	DETAILS
2	18 February 2019	Issued for Development Approval

	NAME	DATE	SIGNATURE
Prepared by:	Matthew Salisbury	22 February 2019	
Reviewed by:	Adam Newman	22 February 2019	
Approved by:	Matthew Salisbury	22 February 2019	

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1 SUSTAINABILITY

The following summarises the proposed sustainable design initiative associated with the development. Key sustainable design initiatives include measures to reduce energy and water consumption through passive and active design principles, maximization of indoor environment quality, and minimization of waste sent to landfill both during construction and operation. The office component of the development is targeting a 5-star base building NABERS energy rating which is considered excellent performance in the NABERS guidelines.

1.1 ENERGY EFFICIENCY

- Office areas targeting a 5 Star base building NABERS energy rating.
- High performance façade incorporating double glazing with low-e coatings and thermally broken frames.
- Floor layouts with reduced glazing on western façade to minimise afternoon solar loads.
- The use of exposed slabs to provide thermal mass combined with capability for night cooling strategies to minimise energy consumption and electrical demand.
- HVAC systems with central thermal plant utilised for both the office and hotel elements of the development, optimized sizing and control for maximum energy efficiencies, in-line with 5 Star Nabers (or equivalent) requirements.
- Energy efficient light fixtures comprising high efficiency LED fittings used throughout.
- Lighting control system with motion sensors and daylight dimming
- Electrical sub-metering and management system to allow for ongoing management and reduction of energy consumption.
- Thermal sub-metering to allow for ongoing optimization of mechanical services after construction to further reduce energy consumption.
- Destination control of lifts to minimise trip times and associated energy consumption.

1.2 INDOOR ENVIRONMENT QUALITY

- Low VOC paints, adhesive, paints and carpet throughout the building to minimise pollutants adversely impacting occupant health.
- Best practice acoustic performance to control noise and reverberation in the space.
- Best practice lighting design, daylight, and glare control.
- CO2 monitoring systems continually monitor and adjust outside air ventilation rates to maximise air quality.
- Provision for outside air rates above minimum standards required by AS1668.2.

1.3 WATER EFFICIENCY

- Water efficient fixtures with best practical WELLS ratings.
- Water sub metering and monitoring system.

1.4 TRANSPORT AND WASTE

- End of trip facilities incorporating visitor and occupant bicycle parking, occupant shower, change and locker facilities.
- Recycling waste collection area to allow for diversion of waste from landfill during operation.
- Specification of responsibly sourced timber and steel to ensure sustainable sources
- Requirements for recycling of construction waste

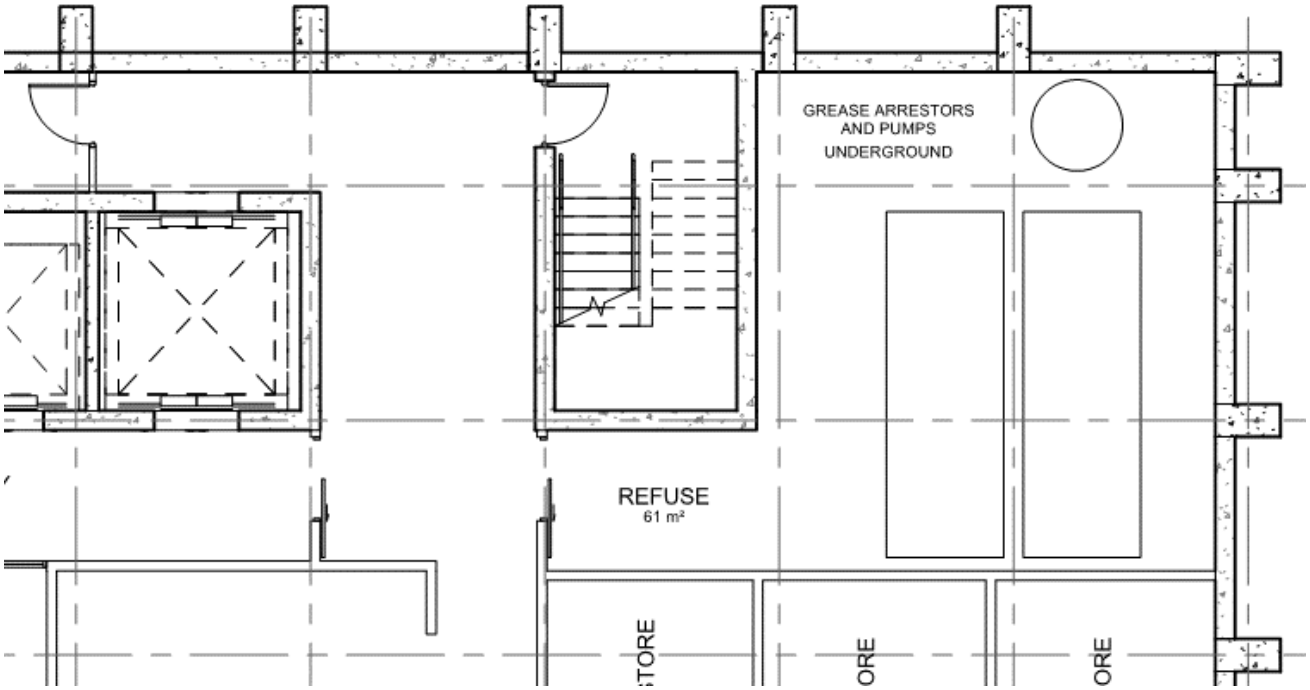

Fig 1: Location of Refuse area within the basement

2 ENGINEERING SERVICES

2.1 MECHANICAL SERVICES

2.1.1 PERFORMANCE REQUIREMENTS

The HVAC system thermal plant efficiencies will be in line with the requirement of a 5 star NABERS energy efficiency as a minimum benchmark.

2.1.2 COMMERCIAL, GROUND LOBBY AND CONFERENCE AREAS

Air Conditioning Systems comprise of chilled water air handling systems located on each typical floor with low temperature variable air volume terminal units with ducted air distribution serving each thermal zone in accordance with PCA A Grade zoning requirements.

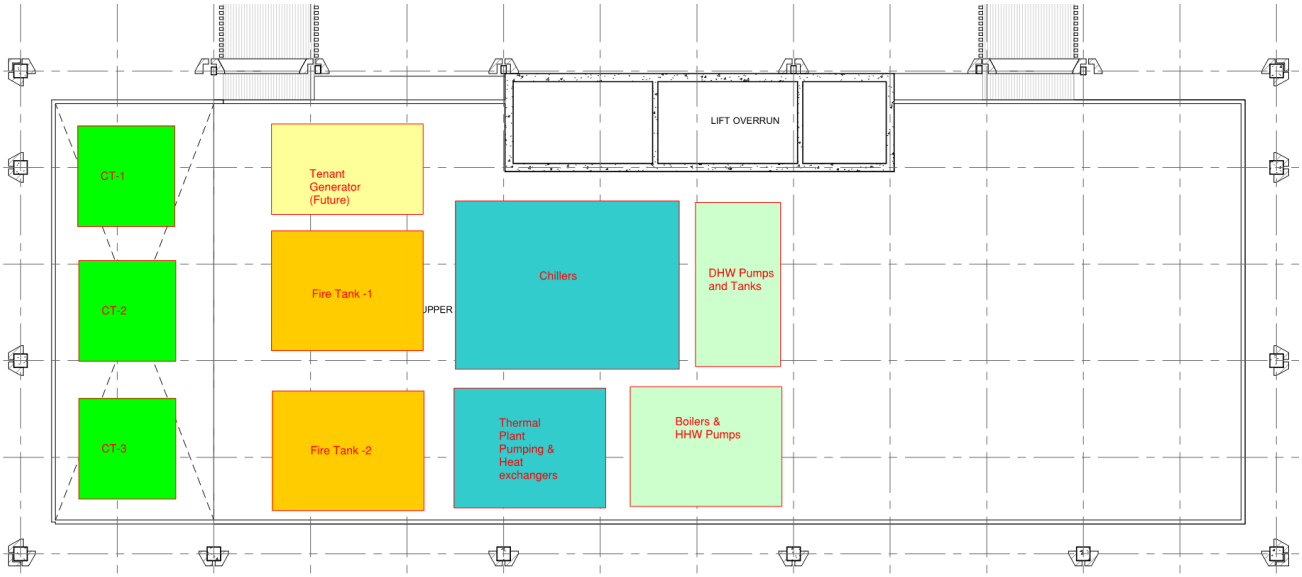

Fig 1: Locattion of Thermal HVAC Plant and associated Mechanical Plant –Roof Level

Thermal heat rejection plant comprises of water cooled magnetic bearing high performance rooftop chillers, cross-flow cooling towers and circulating pumps and heat exchangers. Gas fired Condensing type heating hot water boilers provide hot water for heating purposes. Outside air to the typical floors will be elevated above code requirements by 100%, whilst allowing for a higher peak density on average on the floor of 1 person per 8m^2. CO2 control will monitor and regulate the outside air provisions to ensure fresh air concentrations are maximised.

Economiser cycles are enabled to typical floors where ambient conditions are suitable to maintain conditions and minimise energy consumption

All systems serving the commercial and general commercial tenants areas will be separately metered via the BMS and flow control meters for independent energy calculation and metering.

2.1.3 HOTEL

Dedicated room chilled and heating water fan coil units are provided within each room above the wet area bulkheads. As per above, the systems are independently controlled in each room, linked to the room occupancy. The Hotels chilled and heating water reticulation will be separately metered.

2.1.4 EXHAUST SYSTEMS AND VENTILATION

The exhaust systems comprise of the following throughout the building;

- Basement general ventilation
- Toilet exhaust systems
- Outside air make-up ventilation
- Waste storage exhaust
- Generator exhaust
- Smoke spill exhaust
- Stairwell pressurisation ventilation systems
- Air relief ventilation systems

2.2 ELECTRICAL SERVICES

2.2.1 COMMERCIAL, GROUND LOBBY AND CONFERENCE AREAS

Electrical supply for the building is derived from a dedicated SA Power Networks High voltage transformer located at the ground floor rear of the building, adjacent to the hotel entry.

The main switchboard is located within a dedicated electrical switch room at level 1 and will incorporate retailer metering and Power Factor Correction Equipment.

General power is distributed via centralised core riser pathways to service independent switchboards at each commercial floor level, within two separate electrical riser cupboards near each floor mechanical plantroom.

The Building Main Communications Room (MCR) will be located at basement level and will incorporate the building telecommunications lead in and Landlord Security and CCTV head end equipment.

Two spatially diverse communications risers, located at the northern/southern ends of the building, will be provided to service the commercial office floors. The communications risers will house base building security and communications infrastructure including Copper/Fibre distribution, MATV distribution and Access Control hardware.

Landlord Closed Circuit Television coverage will be provided to main building entry/exit points, lifts and loading dock.

Lighting throughout the building will consist of high efficiency LED luminaires selected to complement the architectural intent. All lighting will be controllable via an intelligent digital lighting control system.

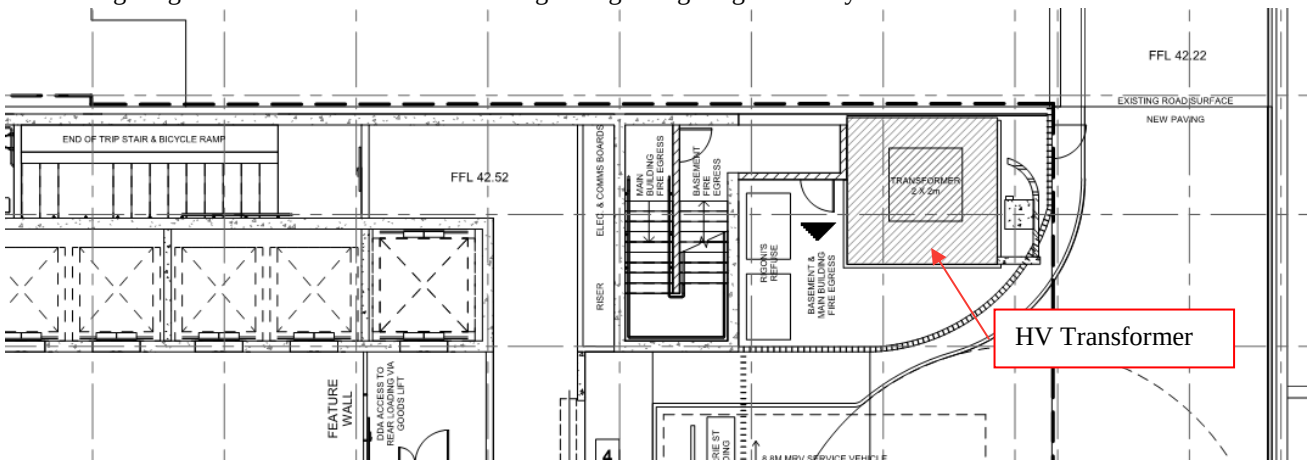

Fig 1: Transformer location on Ground Level

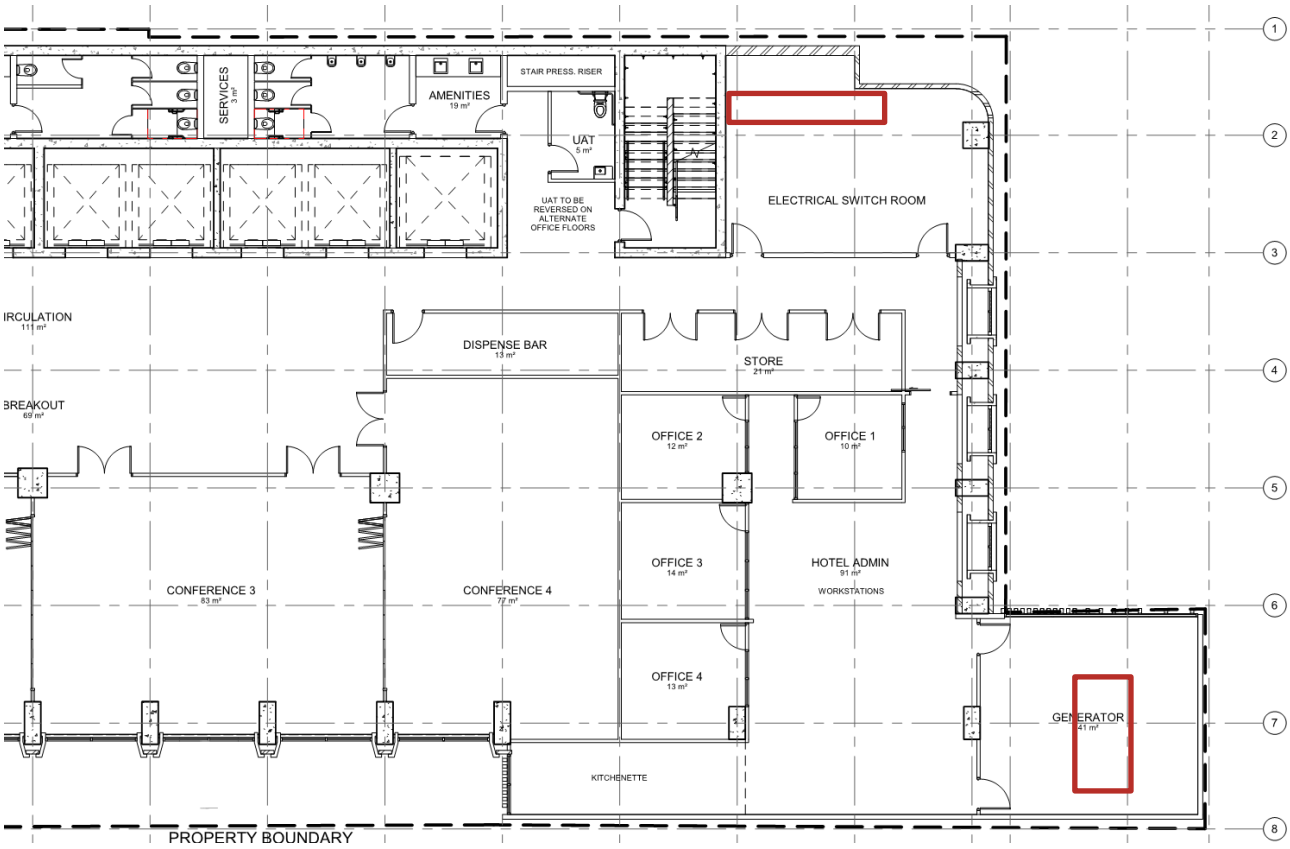

Fig 2: Generator and Main Switchboard located on Level 1

2.2.2 HOTEL

Common Area power to each hotel floor will be distributed from a dedicated electrical distribution board located within the floor electrical riser cupboard.

Each hotel room will be provided with a dedicated electrical load centre, from which all room appliances will be powered.

Lighting throughout the hotel floors will consist of high efficiency LED luminaires selected to complement the architectural intent and hotel aesthetic.

Lighting to hotel common areas will be controllable via an intelligent digital lighting control system, whilst standard mains-voltage switching is proposed for the hotel rooms.

A dedicated hotel communications room will be provided to house active equipment, security/CCTV head end equipment.

2.2.3 GENERATOR COMMERCIAL

A stand-by diesel generation system will be located at Level 1 and provide essential power to base building equipment in line with PCA A-Grade requirements.

There is currently allowance for the generator to support hotel floors or hotel services.

Spatial allowance has been made within the generator room for a future commercial tenant diesel generator.

2.3 HYDRAULIC SERVICES

2.3.1 COMMERCIAL, GROUND LOBBY AND CONFERENCE AREAS

The building domestic cold water supply and sewer discharges will be connected to Currie Street.

Sewer will discharge via soil stacks spread across the floor plate for minimum coverage of the building as required by PCA A grade requirements.

Trade waste discharges generated via ground floor and roof top tenancies will be collect via two off grease arrestors located within the basement. Suction points for cleanout of the grease arrestor to be located adjacent to refuse area.

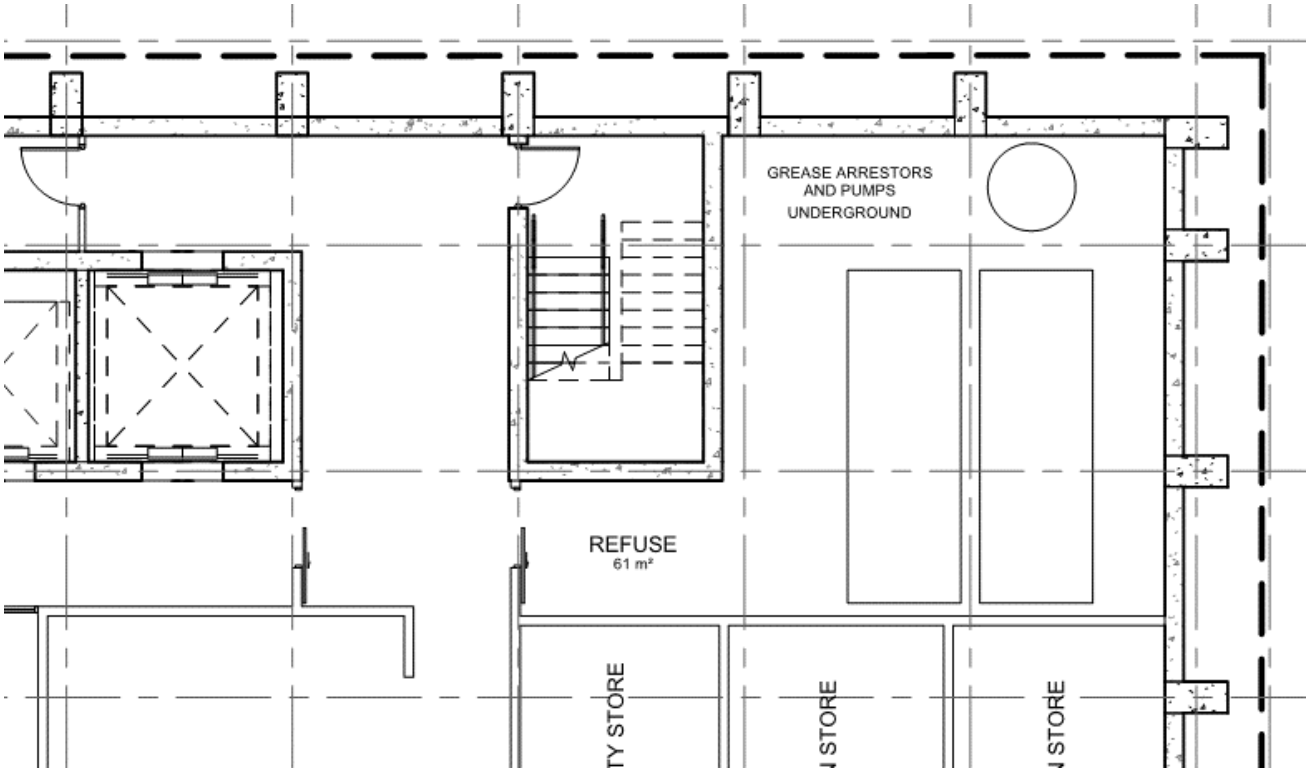

Fig 1: Trade Waste – Grease Arrestors in Basement

All basement sewer and trade waste discharges will be collected and pumped to Currie Street via an inground pump station.

Domestic cold water will be served to the ground floor tenancies and facilities via street mains pressure. A cold-water break tank with a minimum of 2 hours' storage, will be located within the basement and reticulated throughout the building via a pump system connecting to each of the office floor areas and feed to a domestic cold water storage tank located on the roof top plant area, along with fire tank infill connections.

Hot water will be supplied to the base building office floor amenities and ground floor building amenities via a centralised gas fired hot water plant located within the roof plant. Ground floor tenants will be required to supply hot water units as part of their fitout requirements.

All domestic cold and hot water supplies to the base building amenities will be metered to enable Nabers water monitoring.

Gas supply will be feed from Schrader Street and reticulated to the ground floor tenancies where cooking is required and feed up through the building to serve hot water units, mechanical boilers.

Domestic cold water supply to the Hotel rooms will be from the roof top storage tank.

Sewer will discharge via soil stacks within each of the hotel room wet areas and consolidated into the Office area soil stacks.

Hot water will be reticulated from the centralised gas fires hot water plant located within the roof plant.

Each hotel room will be reticulated with domestic cold and hot water connections. Hot water shall be tempered to a maximum of 50C, where Access compliance is required 45C shall be provided.

2.4 FIRE PROTECTION SERVICES

2.4.1 COMMERCIAL, GROUND LOBBY AND CONFERENCE AREAS

Fire Indicator Panel and Emergency Control Panel to be installed and located in the Fire Control Room on ground floor. Fire Fan Control panel shall be incorporated in the Fire Indicator panel and shall comprise switches to operate mechanical fans and dampers operating in fire mode.

Fire brigade booster assembly including street suction, system boost and rigid tank suction to be provided on ground floor in a position that is readily accessible to the fire brigade personnel.

A Fire Detection System and Sound System and Intercom System for Emergency Purposes (SSISEP) shall be provided throughout the building.

An automatic fire sprinkler system shall be provided throughout the building. The fire sprinkler system shall be served from a dedicated fire water supply riser including flow/test drain installed within the fire stair.

A Hydrant and Fire Hose Reel System shall be provided throughout the building. The fire hydrant and hose reel system shall be served by the dedicated fire water supply riser installed within the fire stair.

Portable Fire Extinguishers shall be installed throughout the building.

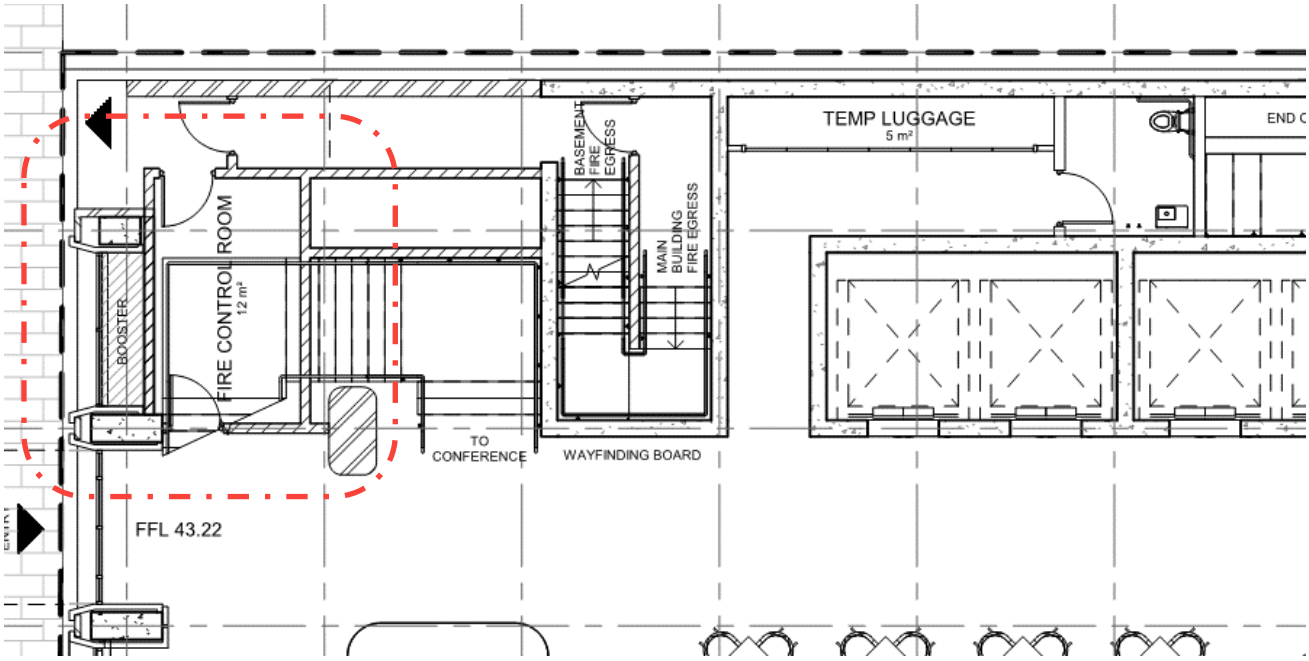

Fig 1: Ground Floor Booster and Fire Control room (with FIP)

2.4.2 HOTEL

A Fire Detection System and Sound System and Intercom System for Emergency Purposes (SSISEP) shall be provided throughout the building.

An automatic fire sprinkler system shall be provided throughout the building. The fire sprinkler system shall be served from a dedicated fire water supply riser including flow/test drain installed within the fire stair.

A Hydrant and Fire Hose Reel System shall be provided throughout the building. The fire hydrant and hose reel system shall be served by the dedicated fire water supply riser installed within the fire stair.

Portable Fire Extinguishers shall be installed throughout the building.

2.4.3 FIRE PUMPS AND TANKS

Provision of static water storage tank for combined sprinkler and hydrant systems. Static water storage tanks to be located on the roof level and have an effective capacity of not less than 160,000L.

Provision of an electric and diesel pump set for the combined sprinkler and hydrant systems. Electric and diesel pump sets to be fed from static water storage tank. Provision of pump annubar test water and valve/pipework arrangement to allow for recycling of water during pump testing back to the static fire water storage tanks

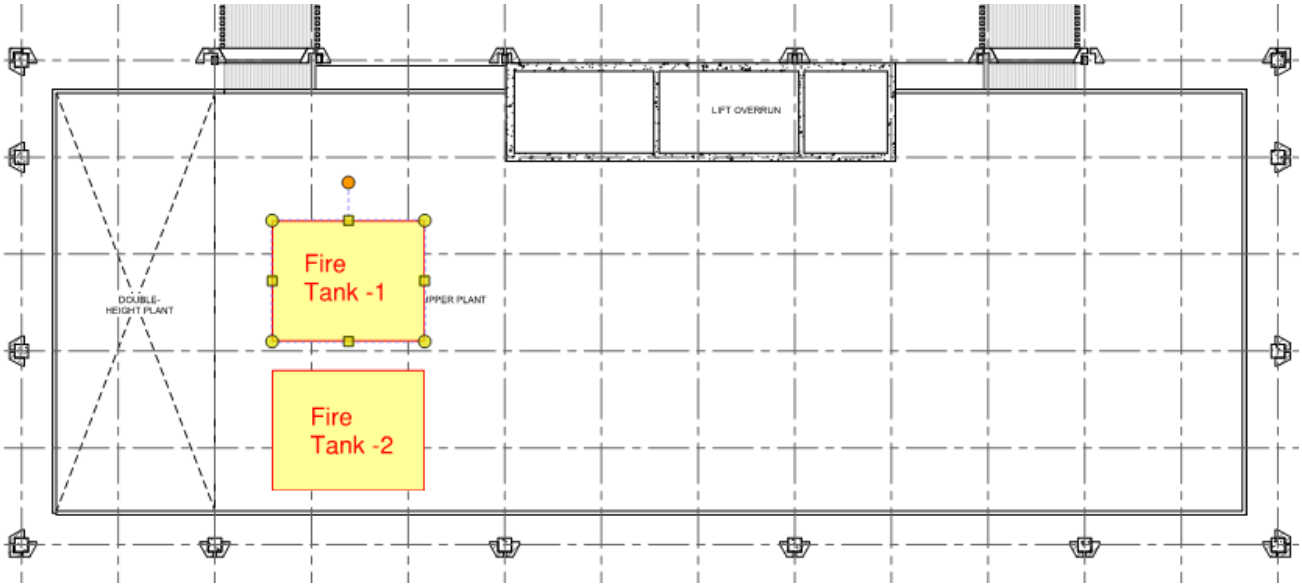

Fig 1: Fire Tanks located at roof level

2.5 ACOUSTIC

2.5.1 Noise emissions

Acoustic treatments have been considered (subject to detailed acoustic assessment) to ensure noise from the proposed bar/restaurant and all mechanical plant to the existing nearest noise sensitive receivers and hotel complies with the Adelaide City Council Development Plan and *Australian/New Zealand Standard AS/NZS 2107:2016 - 'Acoustics - Recommended Design Sound Levels and Reverberation Times for Building Interiors.*

Noise sensitive receivers include Hotel Grand Chancellor and Holiday Inn – both located on Hindley Street.

An acoustic assessment and treatment for potential noise emissions from the proposed bar (Level 23) on the existing nearest noise sensitive receivers has been considered as part of the acoustic review. (Hotel Grand Chancellor and Holiday Inn – both located on Hindley Street).

The assessment carried out against requirements of the Adelaide City Council Development Plan. Assessment of the noise transfer from the operation of the bar into the proposed hotel directly below to demonstrate that compliance with *Australian/New Zealand Standard AS/NZS 2107:2016 - 'Acoustics - Recommended Design Sound Levels and Reverberation Times for Building Interiors* is achievable via typical construction methods and materials. The assessment also considers airborne noise transfer from sources such as music and patron noise.

The acoustic assessment analyses noise emission from any fixed mechanical services plant on the nearest noise sensitive receivers. The assessment demonstrates that compliance with the requirements of the Adelaide City Council Development Plan is achievable through typical design methods i.e. selection of quiet plant, appropriate screening or use of attenuators.

2.5.2 NOISE RECEIVERS

An assessment of the existing noise environment has been carried out to demonstrate that the proposed hotel can be designed to satisfy the requirements of the Adelaide City Council Development Plan via typical construction methods and materials.

2.6 VERTICAL TRANSPORTATION

Aside from stairs the main vertical transportation will be via six (6) passenger lifts and a dedicated Goods lift, serving the following areas;

- Basement level made up of hotel recreational facilities and end of trip (EOT) facilities
- Ground level entry comprising of main commercial office lobby, hotel reception and restaurant
- Function spaces on Level 1 and Mezzanine
- Office floors between Levels 2 to 12
- Hotel guest floors between Levels 13 to 22
- Rooftop restaurant.

DESIGN BENCHMARKS

Office: PCA A / B Grade & Hotel: Minimum 4 Star or better.

In this scenario, the DCS lifts would be serving hotel guests as well as office tenants. The table below shows the quality of service for the office and hotel zones.

The preferred option assumes the Ground floor entry being a common lobby, that is accessible to people going to office floors and hotel floors. The use of a Destination Control System (DCS) will ensure that people going to the different zones are not allocated the same lift, however, this will likely not be possible during peak periods.

Out of the six (6) passenger lifts, two (2) lifts shall terminate at the highest office floor served and the remaining lifts shall extend to serve the hotel levels and the rooftop restaurant. There will also be a dedicated back of house service lift for the hotel that will serve all floors that belong to the hotel. It is assumed that Goods Service for the office floors, will be via one of the two (2) lifts that terminate at the highest office floor served.

TYPE	HANDLING CAPACITY	AVERAGE WAITING TIME
Office	13%	23 s
Hotel	12%	40 s

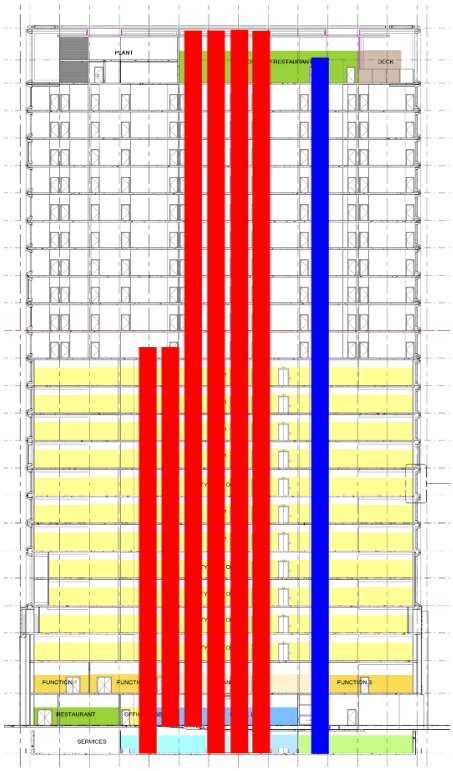

Figure 2.1 Lift Car Section

The lifts servicing both the hotel and office floors will be programmed via 'Destination Selection Control' to enhance security and separation of hotel guests and office personnel (***Figure 2.1***)

In the event of a 'peak' arrival for office (typically morning), the lift system will allow a dual use lift, thus ensuring office staff are not delayed on arrival to their floors and meeting the benchmark travel times (Figure 2)

This programming also allows for redundancy in the event of car maintenance / service.

A dedicated hotel service lift provides all back of house servicing of the hotel and allows for programmed and secure movement of occupants to the rooftop bar. Alternatively, programming of a dedicated hotel car can also service the rooftop bar, with all cars available for exiting guests.

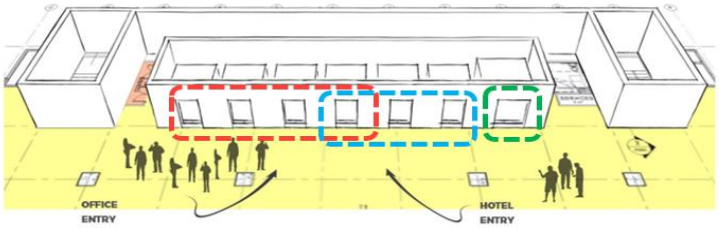

Figure 2.1 Peak Time Utilisation – Sharing of one lift

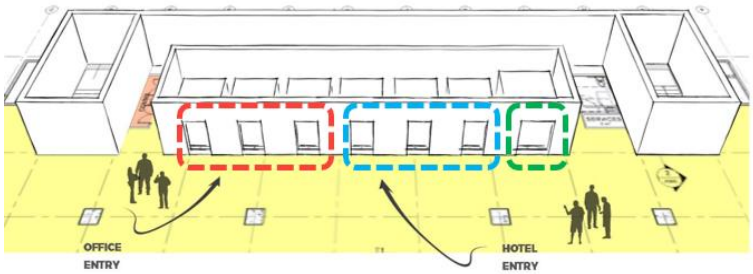

Figure 2.2 Typical use separate Hotel/Office utilisation

3 TECHNICAL PERFORMANCE – BUILDING CONFIGURATION & BUILDING MANAGEMENT

3.1 ENGINEERING SERVICES

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Building Size (NLA)	>5,000sqm	Yes
Floor Plate	>800 sqm	Yes
Tenant Service Zone	≥125mm	Yes
Energy and Water Sub-metering	Yes	Yes
BMS Control room within main plant area & A/C, with other monitoring	-	Yes

3.2 ENVIRONMENTAL

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Green Star	5 Star	No formal rating pursued
NABERS Commitment without Green Power	4.5 Star	5 Star Minimum (Premium)
Water - Green Star Design & As Built % points	50%	Best Practice – benchmarked to Green Star principles
Waste - Green Star Recycling Waste Storage credit, or Operational Waste credit	4.5 Star	Best Practice – benchmarked to Green Star principles
Indoor Environment Quality - Percentage of maximum Indoor Environment Quality points under Green Star Office Design and As Built.	Minimum of 50% including credits for Thermal Comfort	Best Practice – benchmarked to Green Star principles
Climate Change Adaptation and Resilience - Green Star Design and As Built	Full Credit Points under Management - Adaptation and Resilience	Best Practice – benchmarked to Green Star principles
Configuration		
Building Size (NLA)	> 5,000 sqm	Yes
Floor Plate	> 800 sqm	Yes
Tenant Service Zone	≥ 125 mm	Yes

High loading %	5% > 7.5kPa	Yes

3.3 MECHANICAL

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Zones (All Air Systems)	≤ 85 / 120 sqm	Yes
If utilised, Chilled Beam Density – maximum area served per chilled beam	≤ 20 / 35 sqm	N/A
Tenant Equipment Allowance	≥ 12 w/sqm	Yes
Tenant Supplementary Loop	≥ 20 w/sqm	≥ 25 w/sqm - (Premium recommended)
After Hours operation (zones/sqm)	2 Zones 600 sqm	Yes
General Exhaust	0.1 L/s/sqm	0.2 L/s/sqm - (Premium recommended)
Commercial Kitchen Exhaust	≥ 3,000 L/s	Yes, minimum (final number of retail food & restaurants may increase requirement)
Supplementary Toilet Exhaust	0.1 L/s/sqm	Yes
Supplementary Outside Air	0.3 L/s/sqm	0.35 L/s/sqm (to meet proposed 2018 rating)

3.4 LIFTS

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Car Capacity	≥ 16 people	Yes
Lateral Vibration	≤ 20 mg	Yes
Waiting Intervals	Up Peak ≤ 30 sec DCS Lunch Peak ≤ 40 sec	Yes
Handing Capacity	Up Peak ≥ 13 sec DCS Lunch Peak ≥ 11 sec	Yes
Goods Lift	≥ 1 no.	Yes
Goods Lift Capacity	≥ 1,400 kg	1,600 kg

3.5 ELECTRICAL & BMS

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Power	≥ 50 VA/sqm	Yes, 50VA/sqm allowed
Power Factor Correction	0.98 efficiency	PF >= 0.95 will be maintained
Lighting	≤ 7 W/sqm	Yes
Lighting Control	≤ 150 sqm zones	Yes
Building Management Control System	Full BMCS including on-floor control, energy management, comfort control, diagnostics and reporting	Yes
Standby Power – Base Building		
Lifts	1 lift per rise	Yes
Safety Services (other than lifts)	100% capacity	Yes
House Light and Power	50% capacity	Yes
Tenant Supplementary Loop	100% capacity	Yes
Tenant Light and Power	Space Provision (for tenant generator/s)	Yes
On Site Fuel Storage	12 hrs of operation	Yes

3.6 COMMUNICATIONS AND SECURITY

COMMUNICATIONS

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Inter-floor stair access	Yes, minimum of 1, with conduits for future expansion in other fire stairs	Yes
MDF Room	≥ 1, at least two lead ins from property boundary	Yes, 1 Room only
MATV	Yes, with space in riser for cable TV	Yes
Carriers	2	Yes
In Building Mobile Phone Coverage	100% GFA and Lifts	Yes

SECURITY

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Access System	Proximity	Yes
Control Room/Security Desk - Location/Availability	Onsite 24/7 for buildings ≥ 30,000sqm	Not required for current building size, To be confirmed by client
CCTV - Extent of Coverage	Main public area/lobbies, loading docks, goods lifts and all points of entry and exit	Yes
CCTV - Archive Footage Storage	30 Days	Yes

3.7 FIRE AND HYDRAULICS

DESCRIPTOR	PCA A GRADE	62 CURRIE STREET
Water Storage	2 Hours	Yes
Grease Line	Yes if >=30,000m2	Not required for office
Grease Line		2 x 5000 litre grease arrestors for proposed restaurants & food retail
Non-Potable Water System	Yes	Yes
Fittings	2 Star	6 Star Sink and Basin, 3 Star Shower, 4 Star WC
Sub metering	Yes	Yes

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PEDESTRIAN WIND IMPACT ASSESSMENT

62-68 CURRIE STREET

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62-68 Currie Street

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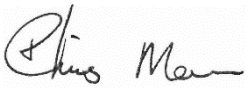
Fax: +61 8 8405 4301
wsp.com

REV	DATE	DETAILS
2	28/02/2019	Issued for Development Approval

	NAME	DATE	SIGNATURE
Prepared by:	Patricia Arenas	25/02/2019	
Reviewed by:	Chris Mann	25/02/2019	
Approved by:	Selwyn Saman	25/02/2019	

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APPENDIX A MONTHLY WIND ROSE RESULTS

EXECUTIVE SUMMARY

WSP was engaged by Axiom Properties to undertake a qualitative wind impact assessment in support of the Development Application for the proposed building at 62-68 Currie Street, Adelaide. This qualitative wind assessment addresses the wind effects caused by the implementation of the proposed development with respect to the areas stipulated in Table ES.1 below. It also provides mitigation options to address potentially adverse conditions and assesses compliance with best practice guidelines. This assessment addresses the wind effects experienced by pedestrians within the subject zones (Figure ES.1 – points A, B, C).

The building is to comply with The Adelaide (City) Development Plan which ensures that any building greater than 21 metres in height and built to the street alignment must be accompanied by a wind impact assessment, which demonstrates that wind speeds as a consequence of the proposed development do not adversely impact pedestrian comfort.

The areas surrounding the development are defined by the City Precinct Map and Code (Figure ES.2) as adjacent streets and public spaces, and therefore winds must not exceed 16m/s.

To comply with the Commercial Zones Development Code, a model was created and analysed under two wind direction scenarios, using wind speeds of 40km/h, as these were the prevailing winds, taken from the Adelaide Airport weather station.

FINDINGS

The proposed development does not cause wind speeds at street level to exceed 16m/s. This is demonstrated by the two prevailing wind scenarios, summarised in the table below. Resultant wind speeds are stated in the table's parentheses.

Table ES.1 Summary of outcomes for the proposed development at the subject points illustrated in Figure 1

AREA	SCENARIO 1: SOUTH-WESTERLY AT 40KM/H	SCENARIO 2: NORTH-EASTERLY AT 40KM/H
Point A – Lane	[5m/s] The lane is shielded from the South westerly winds by 62-68 Currie Street.	[5m/s] There is a down washing effect that which is causing a slight side-streaming and funnelling effect in the lane between development and existing neighbouring building. However, the wind do not exceed 5m/s.
Point B – South-East	[4m/s] The development is shielded at the pedestrian level by the neighbouring buildings opposite to it, wind speed is no greater than 4m/s.	[4m/s] The development is shielded at the pedestrian level by the neighbouring buildings opposite to it, wind speed is no greater than 4m/s.
Point C – South-West	[3m/s] Shielding from adjacent buildings. Downwash appears to oppose incoming wind.	[8m/s] The wind that is being down washed from the building is producing an increase of wind speeds at point C. People here may experience moderate to fresh winds

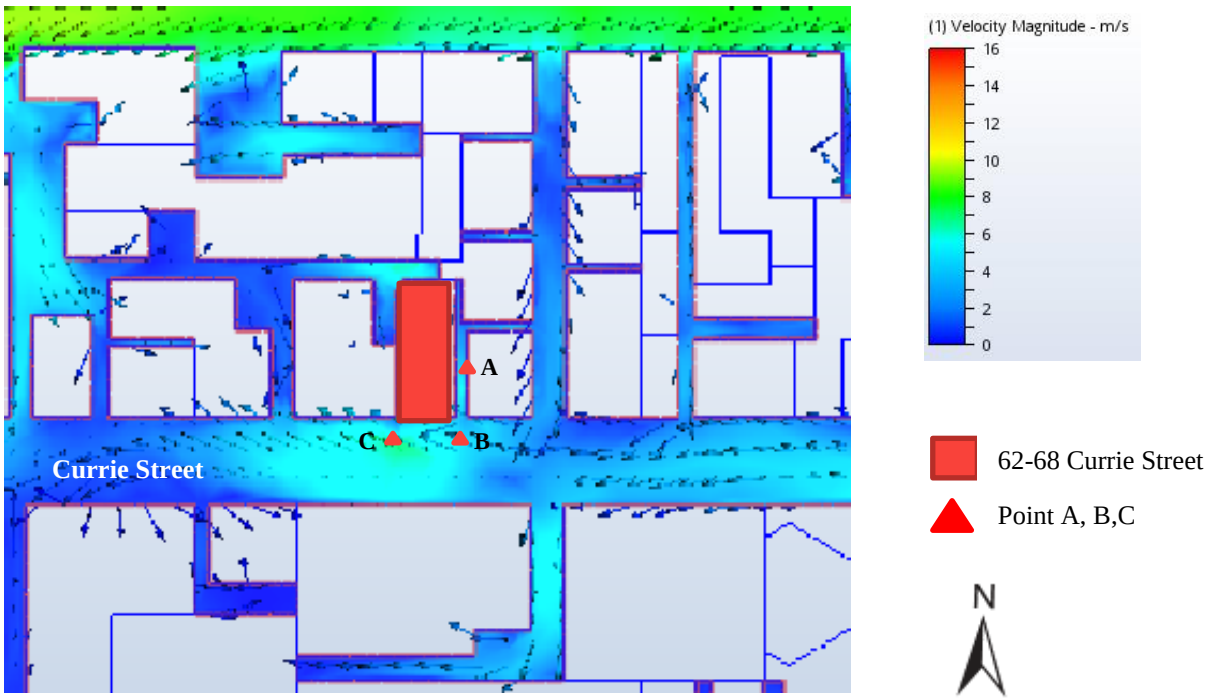
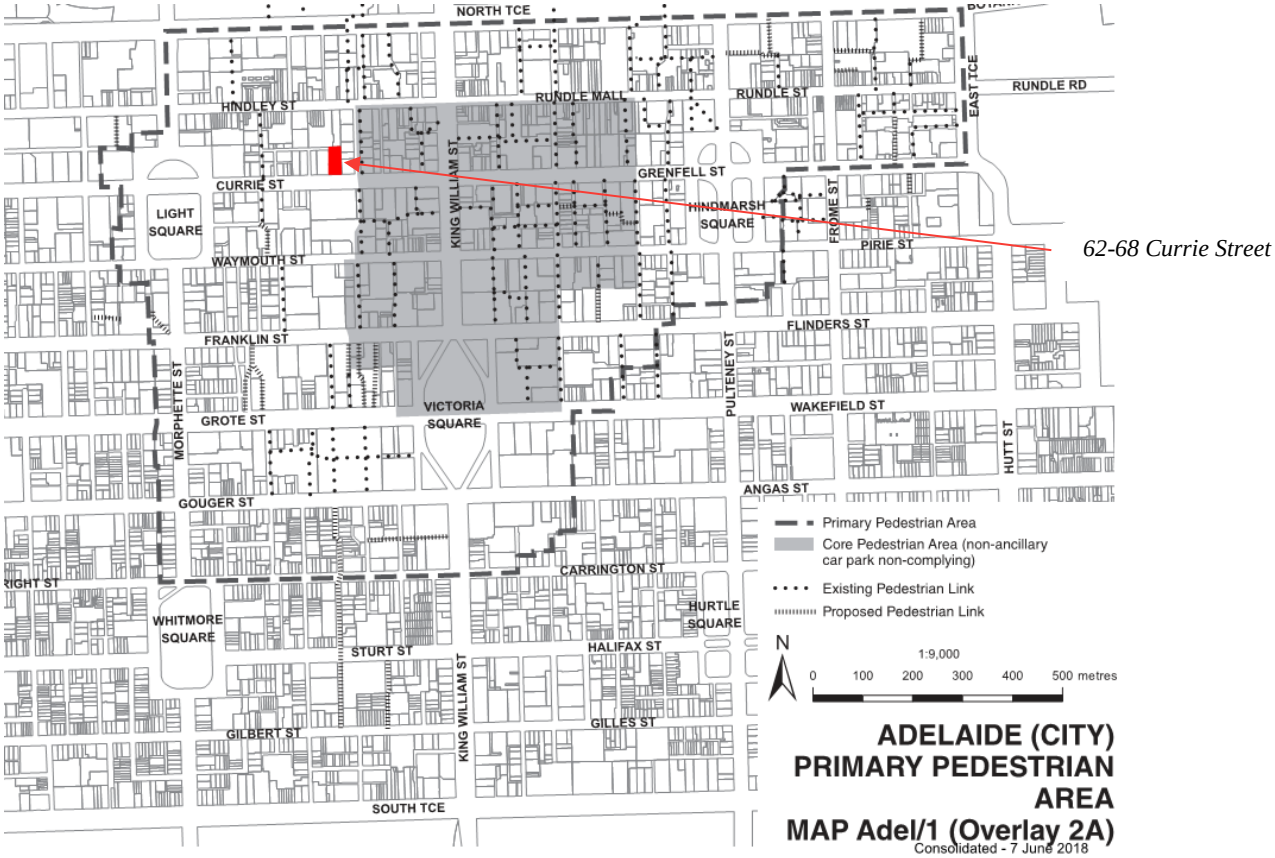


Figure ES.1 An example of the CFD modelling outlining the key points of assessment within the site



Source: *Adelaide (City) Development Plan, mark-up by WSP*

Figure ES.2 Extract from the Adelaide (City) Development Plan displaying the location of main pedestrian areas and routes in relation to 62-68 Currie Street

1 INTRODUCTION

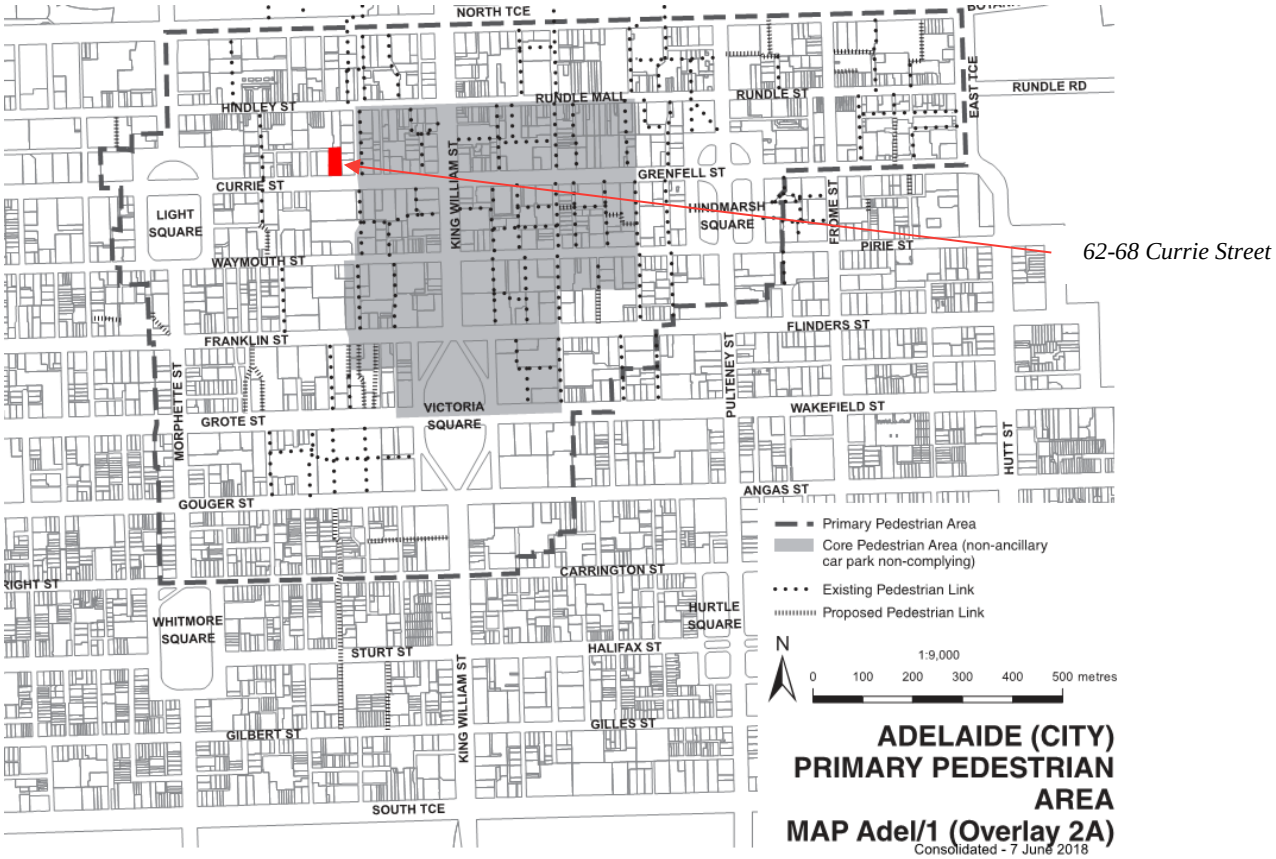
WSP was engaged by Axiom Properties to undertake a qualitative wind assessment in support of the development application for the development at 62-68 Currie Street, Adelaide. The qualitative wind assessment will identify zones with the potential to experience adverse wind speed conditions around the proposed development, provide mitigation options to address these conditions and to assess compliance with Australian Standards. Figure 1.1 and Figure 1.2 show the location of the site. The proposed development is a 25-level tower which includes 1 basement Level and 24 floors. The tower will stand 91.9m in height.

Neighbouring structures to the south-west, west and north-west sweeping from the north-west stand between 3 and 13 storeys. Westpac House to the south-east of the development is 31 storeys, one of the tallest buildings in Adelaide.

1.1 LOCAL PLANNING CODES

The Adelaide (City) Development Plan specifies wind standards for buildings at specified heights, to maintain safety and comfort in the public realm and other open spaces associated with the development.

This rule applies to buildings with a height of building greater than 21m.



Source: Adelaide (City) Development Plan, mark-up by WSP

Figure 1.1 Extract from the Adelaide (City) Development Plan displaying the location of main pedestrian areas and routes in relation to 62-68 Currie Street

Figure 1.1 above shows the main pedestrian areas and routes in accordance with the Adelaide (City) Development Plan effective June 20, 2017 (shown on page 1 of that document). A maximum wind speed of 16m/s has been identified as the threshold to ensure that occupants do not experience adverse wind effects in-turn, reducing the safety and comfort of people in the public realm.

Source: Adelaide (City) Development Plan, mark-up by WSP

Figure 1.2 Site location of the proposed development (red highlight)

1.2 CFD MODELLING

The analysis was conducted using Autodesk CFD 2018. The software allows for the modelling and analysis of wind speed, pattern and behaviour around building masses for a given wind speed and direction; whereby a simplified depiction of building is used for this high-level assessment. All observations and findings were taken at 1m above ground level to depict wind speeds experienced at pedestrian level for each given scenario. A snapshot of the model can be seen in Figure 1.3.

1.3 LIMITATIONS

CFD simulation provides an estimate of resultant wind speeds around buildings. This estimate is based on a necessarily simplified and idealised version of the building that does not and cannot fully represent all of the intricacies of the building form once built. Thus, simulation results only represent an interpretation of the potential resultant speeds. No guarantee or warrantee of building influence on resultant wind speed in practice can be based on simulation results alone. The results detailed in this report are valid only under the modelling conditions stated in this document. Any variations to the design will render the conclusions of the report invalid.

1.4 SOURCES OF INFORMATION

- Architectural Revit model– issued 7th January 2019 by Hames Sharley Architects.
- Adelaide (City) Development Plan – issued 20th June 2017.
- Wind speed data from the Bureau of Meteorology website, for Adelaide Airport weather station and Adelaide (Kent Town) Station, measured from 1955-2010.

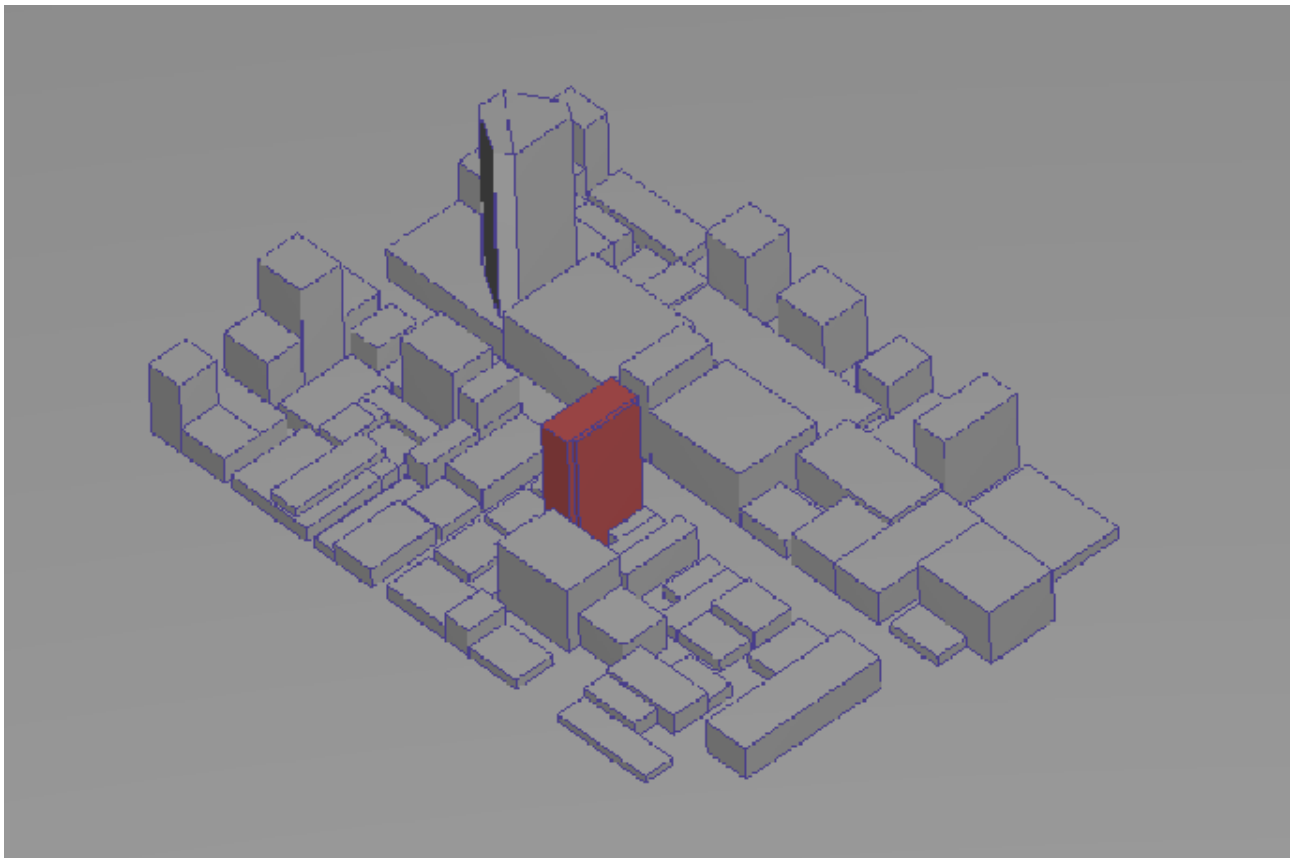


Figure 1.3 Snapshot of full CFD model geometry

Figure 1.4 Render based on full Architectural 3D model geometry

2 WIND CLIMATE DATA

2.1 ADELAIDE WIND CLIMATE DATA

In this qualitative wind study, known characteristics of mean and gust wind speeds on both an annual and seasonal basis, associated with Adelaide's wind climate have been addressed using long-term Bureau of Meteorology [BoM] data, recorded at the Adelaide Airport from 1955 to 2010. These readings take in to account the strength characteristics of prevailing Adelaide wind directions.

2.2 ANNUAL AND SEASONAL WINDS

The characteristics of mean wind speeds on both an annual and seasonal basis associated with the Adelaide wind climate based on data obtained from the Bureau of Meteorology are addressed in this report.

Figure 2.1 displays the 9am and 3pm wind roses for Adelaide where there is a prevailing south westerly and north westerly wind throughout the year. North and north westly winds appear to be between 10 to 30km/h for most the day. Gusts greater than 40km/h occur for very short periods during the typical day.

Monthly wind roses further demonstrate a prevailing south westerly wind and north easterly wind throughout the year throughout most seasons (refer to Appendix A for monthly wind roses). The seasonal Adelaide wind climate is characterised as:

- **Summer |** Winds typically occur from the south west, increasing in intensity during the day. East and southeast winds breeze through the climate during the morning.
- **Autumn |** Winds occur from the southwest and northeast, with south westerly to north easterly winds reducing in intensity in the afternoon.
- **Winter |** Northwest to northeast winds dominate in winter, again dropping in intensity during the day.
- **Spring |** In spring, southwest to north westerly winds prevail.

Figure 2.2 demonstrates the monthly mean wind speeds with wind speeds increasing during summer and peaking throughout spring (morning) and summer (afternoon). The monthly wind roses in Appendix A indicated an increase in wind speeds in the morning throughout the year.

For the high-level CFD modelling undertaken to support the developments approval (DA) submission, we have analysed the wind data available and used a 40km/h wind speed in both north-westerly and westerly directions, to mimic a typical windy day within the zone.

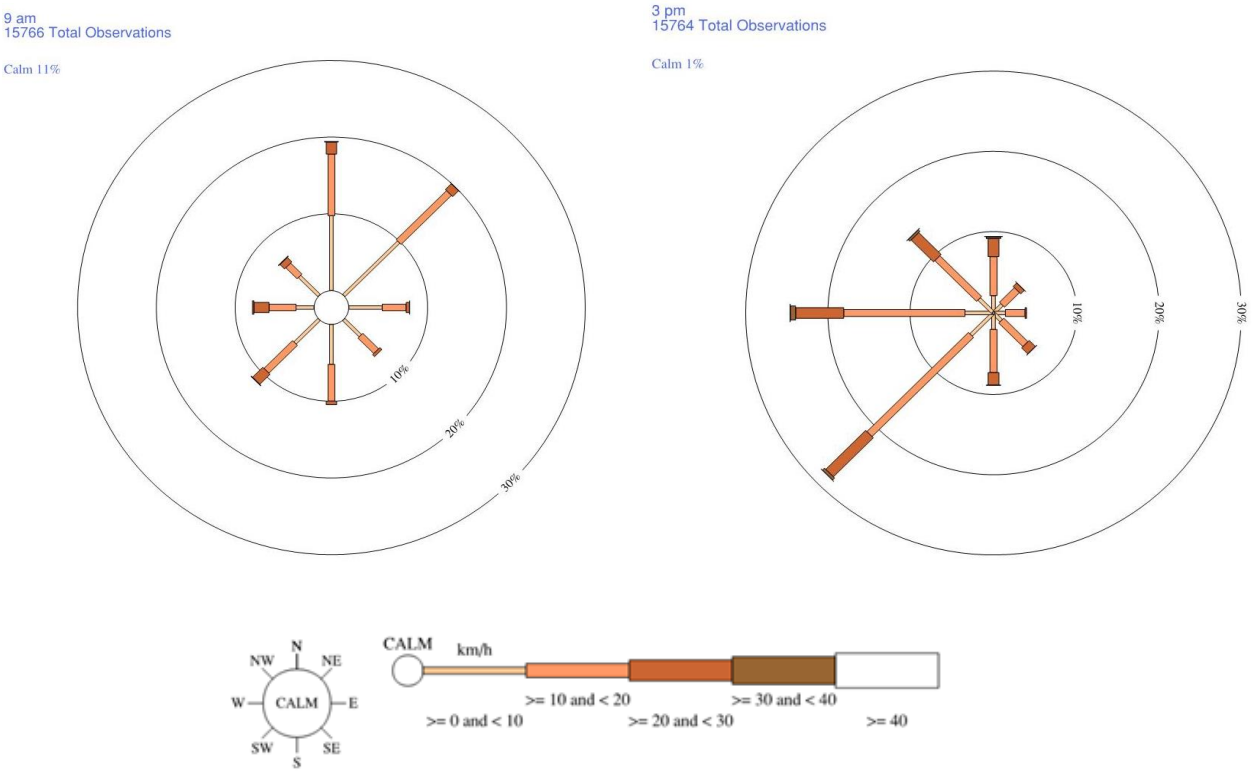


Figure 2.1 Annual wind roses at 9am (left) and 3pm (right) for Adelaide Airport

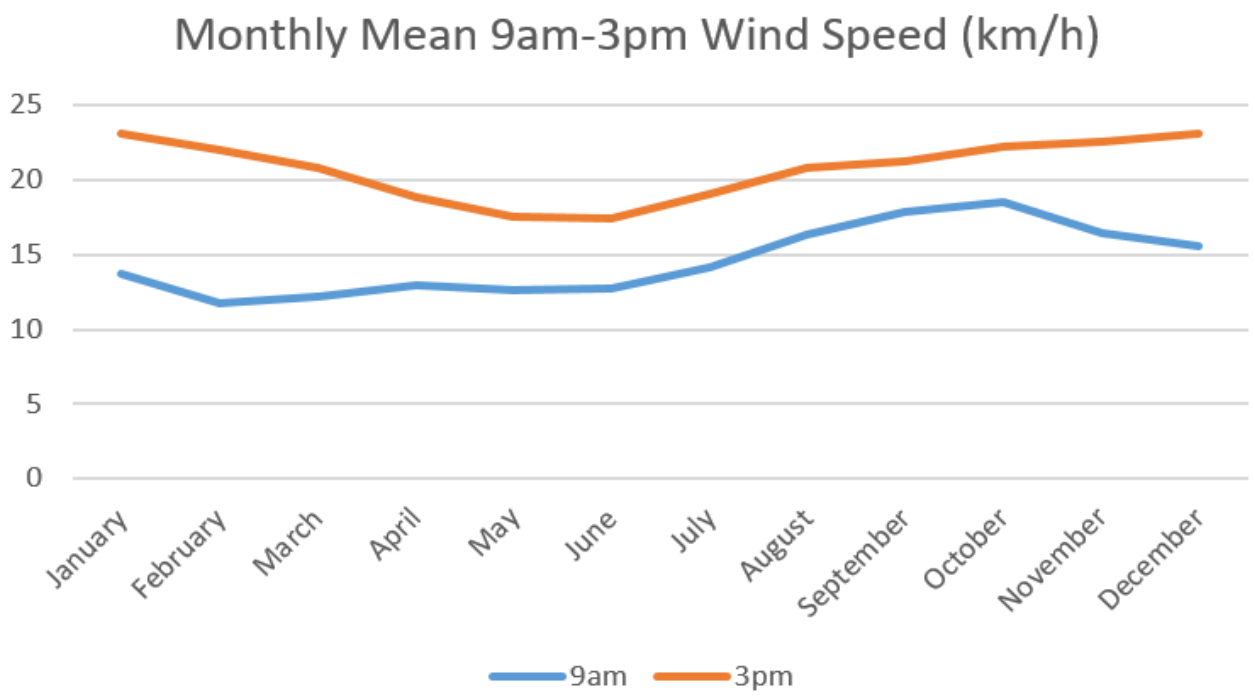


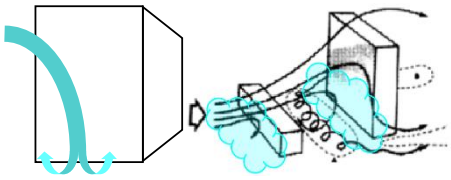
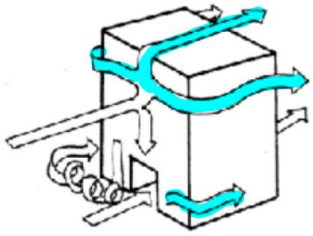
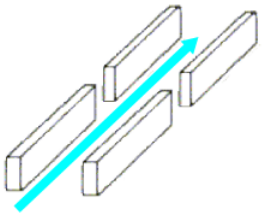
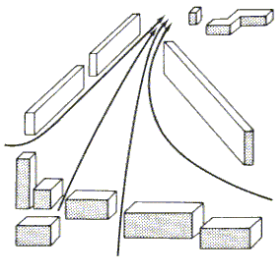
Figure 2.2 Monthly mean wind speeds at Adelaide Airport, Bureau of Meteorology [BoM]

3 WIND PATTERNS AND ACCEPTABILITY

3.1 LOCAL WIND CHARACTERISTICS

Key wind characteristics in relation to buildings are shown in Table 3.1. These will inform the analysis of the CFD modelling results.

Table 3.1 Wind flow patterns around buildings

EFFECT	DESCRIPTION	
Downwash Effect	At higher levels, greater wind speeds are seen. The downwash effect occurs when these winds are transferred down the façade of tall buildings the base, creating high wind speeds and potentially uncomfortable and dangerous conditions for pedestrians. This can cause problems in groups of buildings, particularly of differing heights, the combination of downwash and low tumbling winds.	
Side-stream Effect	Winds impacting corners and edges of an exposed building.	
Urban Canyon Effect or Channelling	Where parallel buildings along streets create a wind corridor (or canyon) and winds are channelled down the corridor.	
Venturi or Funnelling Effect	Impact of winds through two or more buildings that come together to form a bottleneck and resulting in increased wind intensity through the gap between the converged buildings.	

3.2 CRITERIA FOR WIND ACCEPTABILITY

This section outlines the international criteria against which the CFD model and Adelaide climatic wind data will be assessed to develop recommendations for wind amelioration. Potential adverse wind conditions and the likely wind intensities are compared to international standards for pedestrian and occupant safety and comfort.

The Beaufort Wind Scale also provides guidelines around the impact of different wind speeds as shown in Table 3.2. On the Beaufort Wind Scale, numbers five and above would create uncomfortable conditions for pedestrians. Furthermore, any occurrences of numbers seven and eight should not occur more than two times a year.

Table 3.2 Beaufort wind scale

BEAUFORT SCALE NUMBER	DESCRIPTIVE TERM	UNITS IN M/S	DESCRIPTION ON LAND
0	Calm	0	Smoke rises vertically
1-3	Light winds	<5m/s	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
4	Moderate winds	6 to 8m/s	Raises dust and loose paper; small branches are moved.
5	Fresh winds	8 to 11m/s	Small trees in leaf begin to sway; crested wavelets form on inland waters
6	Strong winds	11 to 14m/s	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty.
7	Near gale	14 to 17m/s	Whole trees in motion; inconvenience felt when walking against wind.
8	Gale	18 to 21 m/s	Twigs break off trees; progress generally impeded.
9	Strong gale	21 to 24m/s	Slight structural damage occurs -roofing dislodged; larger branches break off.
10	Storm	24 to 28m/s	Seldom experienced inland; trees uprooted; considerable structural damage.
11	Violent storm	29 to 33m/s	Very rarely experienced - widespread damage
12+	Hurricane	>33m/s	Very rarely experienced - widespread damage

Acceptable wind criteria to ensure pedestrian comfort and safety are defined below and are based on a range of acceptability criteria including that developed by the American Society of Civil Engineers (2003)[1], Lawson (1978)[2] and the Beaufort Wind Scale.

- **Sitting** <4 m/s
- **Standing** 4 to 6 m/s
- **Walking** 6 to 8 m/s
- **Fast walking or cycling** 8-10 m/s
- **Uncomfortable** >10 m/s.

[1] ASCE—American Society of Civil Engineers, 2003. Outdoor Human Comfort and its Assessment: State of the Art. Task Committee on Outdoor Human Comfort.

[2] Lawson TV. 1978. The wind content of the built environment. J Ind Aerodyne 3:93-105.

4 RESULTS AND FINDINGS

4.1 SOUTH-WESTERLY WINDS AT 40KM/H

When subject to a south-westerly wind at 40km/h, the development is shielded at the pedestrian level by the neighbouring buildings opposite to it. This reduces the incident South-Westerly winds from 10m/s to between 1m/s and 4m/s on the development's south-western and south-eastern sides. In both scenarios occupants within the zone will experience light winds. As result the lane on the east side of the building, between the development and the existing neighbouring building present winds no greater than 6m/s. Wind speeds in the proposed development (Figure 4.1) are expected not to exceed speeds that would result in pedestrians discomfort around the development.

Note: Max wind speed for each location is detailed in the square brackets, for example [10m/s].

Table 4.1 Testing points – south-westerly winds at 40km/h

TEST POINT	PROPOSED DEVELOPMENT RESULT
Point A – Lane	[5m/s] The lane is shielded from the South westerly winds by 62-68 Currie Street.
Point B – South-east	[4m/s] The development is shielded at the pedestrian level by the neighbouring buildings opposite to it, wind speed is no greater than 4m/s.
Point C – South-west	[3m/s] Shielding from adjacent buildings. Downwash appears to oppose incoming wind.

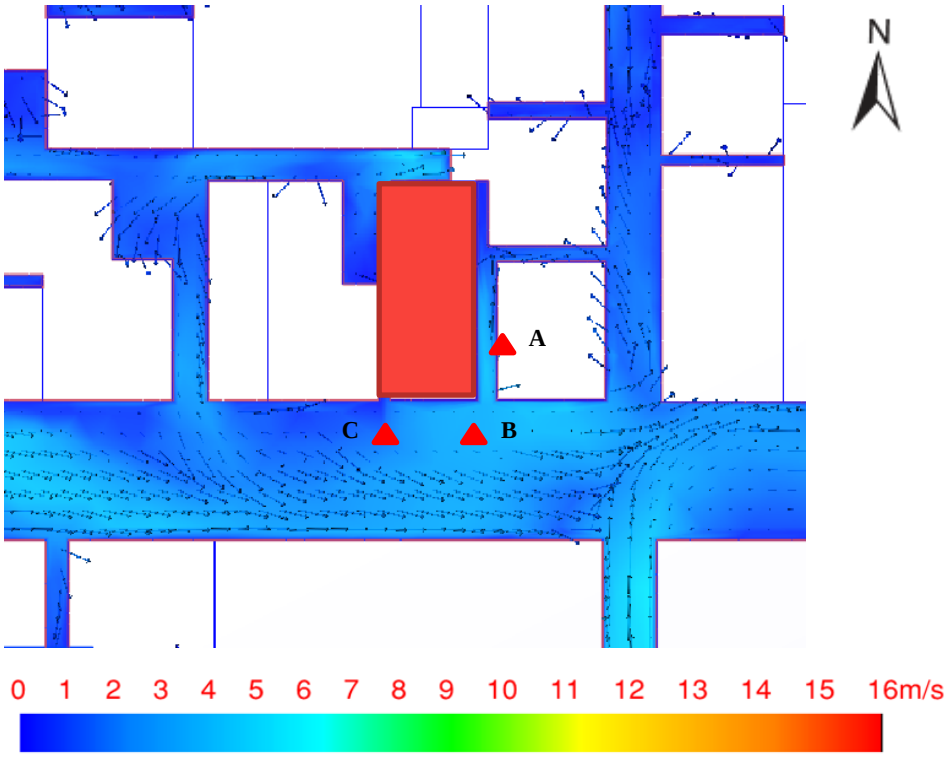


Figure 4.1 Proposed development – south-westerly wind

4.2 SOUTH-WESTERLY WIND – VELOCITY PROFILE AND ELEVATED SECTION VIEWS

When subject to a south-westerly wind, the test point A in the proposed development scenario display wind velocities between 0-5m/s at 1m above the ground. Occupants within these zones will feel moderate to fresh winds. Figure 4.2, which ta cross section of the lane way to the east of 62-68 Currie street and Figure 4.3, displays the wind velocities from a cross section through the building, illustrate that ground level velocities will be within acceptable levels (below 16m/s).

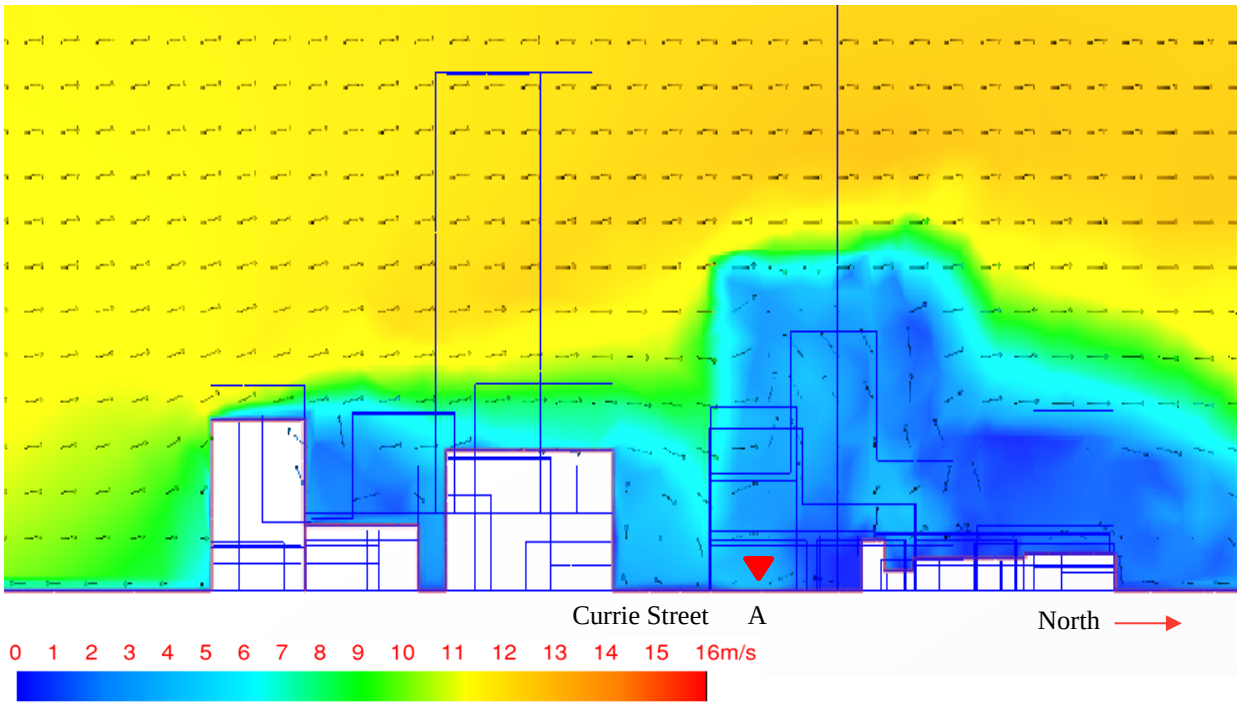


Figure 4.2 Longitudinal velocity profile of the lane – Subject to 40km/h north-westerly winds

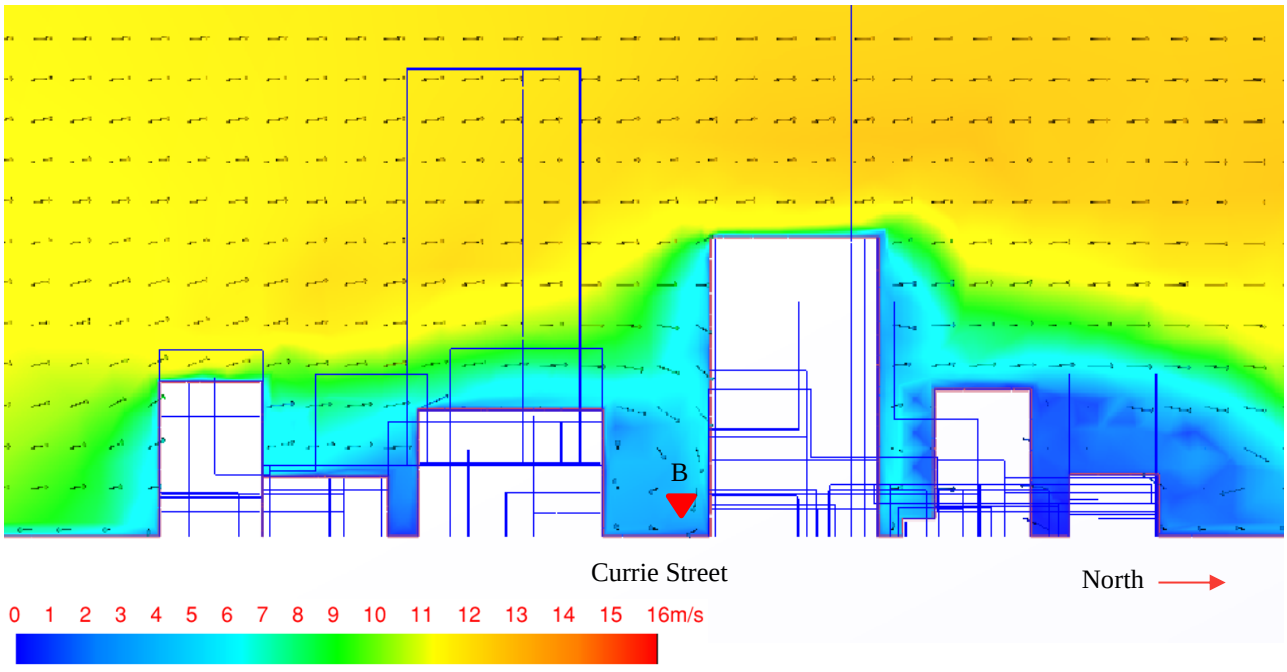


Figure 4.3 Transverse velocity profile of the proposed building – Subject to 40km/h north-westerly winds

4.3 NORTH-EASTERLY WINDS AT 40KM/H

When subjected to north easterly winds the proposed development results in higher wind speeds at pedestrian level, however as shown in the results below estimated wind speeds are still sufficiently low not to adversely impact pedestrian comfort.

Note: Maximum determined wind speed for each location is detailed in the square brackets, for example [10m/s].

Table 4.2 Testing points – north-easterly winds at 40km/h

TEST POINT	PROPOSED DEVELOPMENT RESULT
Point A – Lane	[5m/s] There is a down washing effect that which is causing a slight side-streaming and funnelling effect in the lane between development and existing neighbouring building. However, the wind do not exceed 5m/s.
Point B – South-east	[4m/s] The development is shielded at the pedestrian level by the neighbouring buildings opposite to it, wind speed is no greater than 4m/s.
Point C – South-west	[8m/s] The wind that is being down washed from the building is producing an increase of wind speeds at point C. People here may experience moderate to fresh winds

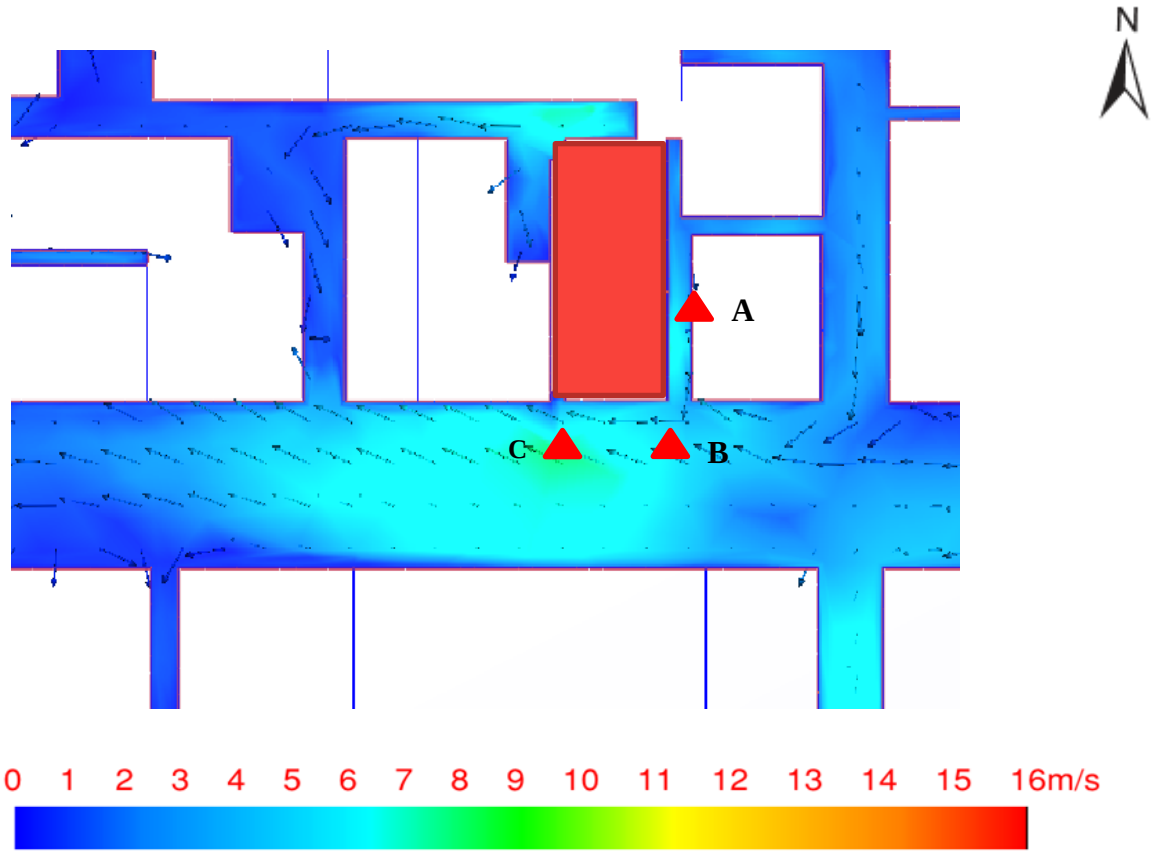


Figure 4.4 Proposed development – north-easterly wind

4.4 NORTH-EASTERLY WIND – VELOCITY PROFILE AND ELEVATED SECTION VIEWS

When subject to a north-easterly wind, the test points in the proposed development scenario display wind velocities between 0-8m/s at 1m above the ground. Occupants within these zones will feel moderate to fresh winds. The test points seen in Figure 4.5 and Figure 4.6 illustrate that velocities will be within acceptable levels (below 16m/s).

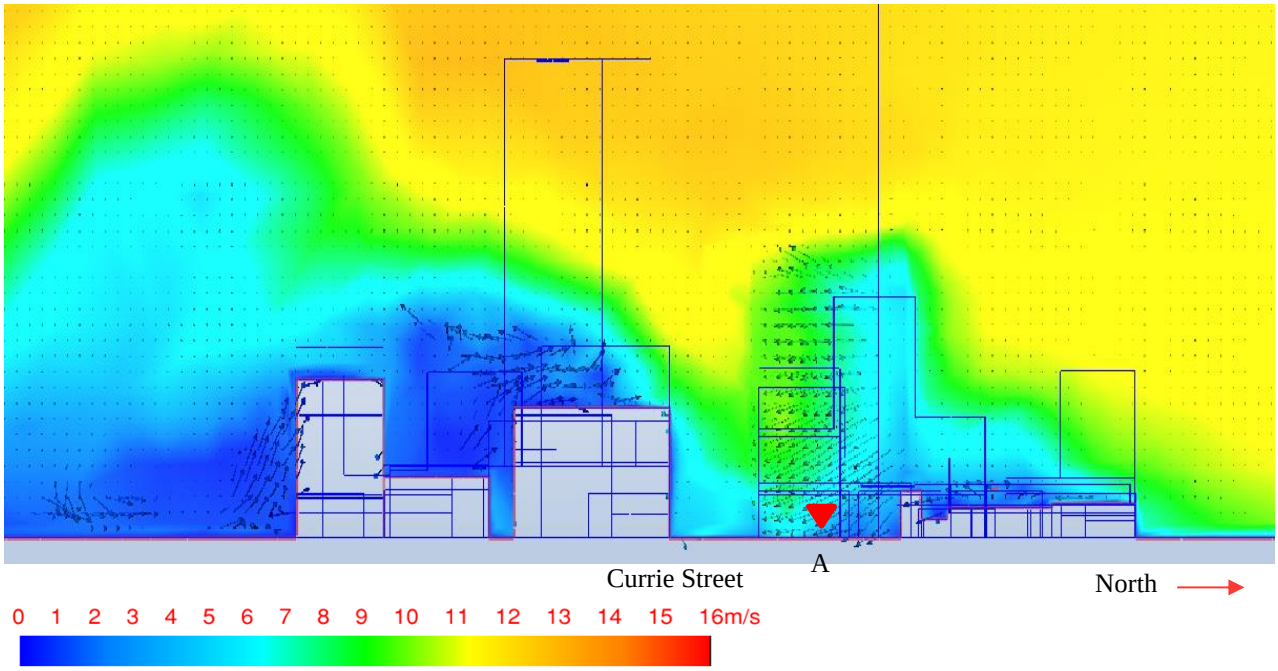


Figure 4.5 Longitudinal velocity profile of the proposed building – Subject to 40km/h north-easterly winds

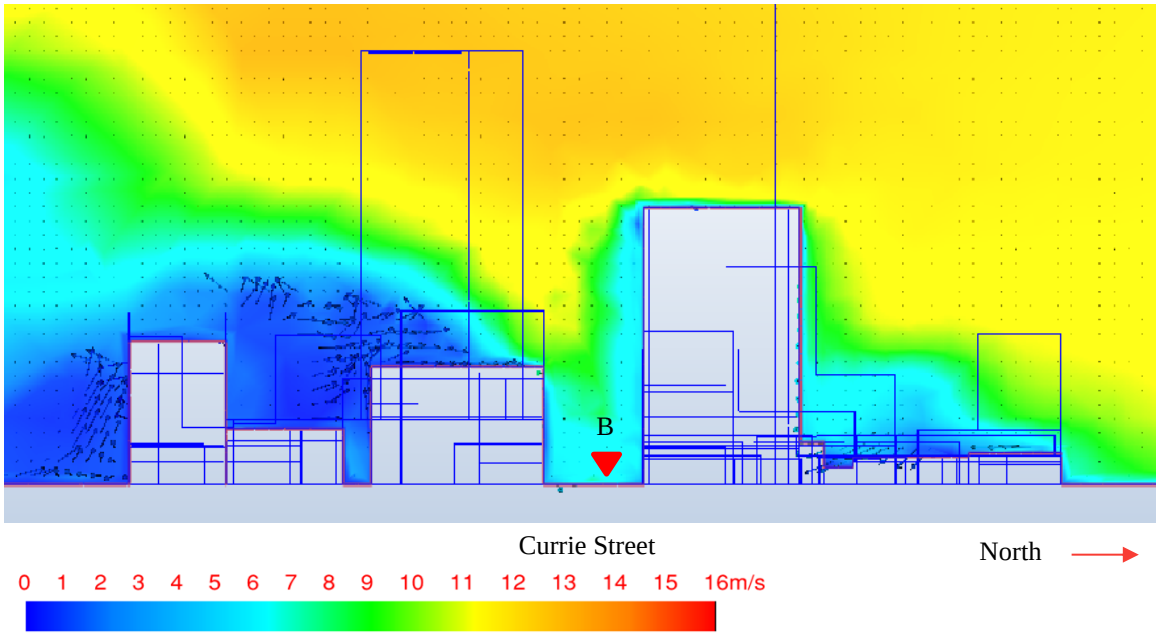


Figure 4.6 Transverse velocity profile of the proposed building – Subject to 40km/h north-easterly winds

5 WIND SPEED MITIGATION AND FURTHER RECOMMENDATION

The modelling outcomes presented within this report demonstrate that the presence of the proposed building is expected not cause wind speeds to exceed 16m/s on adjacent streets and public spaces (in accordance with the Adelaide (City) Development Plan), at the observed maximum gust probability sourced from the Bureau of Meteorology.

The presence of low rise existing buildings to the site's immediate surroundings have assisted in alleviating the incoming velocity acting towards the proposed site.

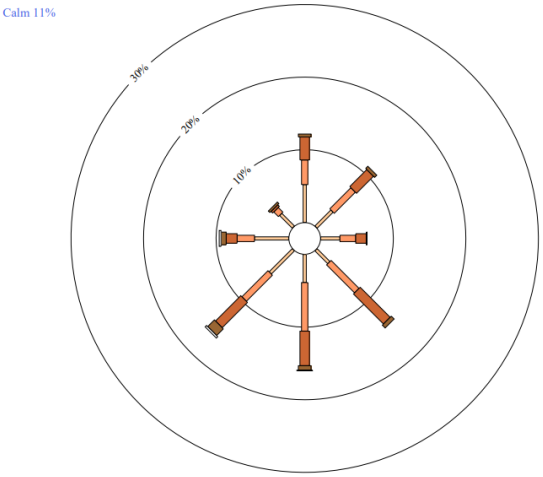
There is no additional requirement to introduce any wind mitigation measures along the façade.

APPENDIX A

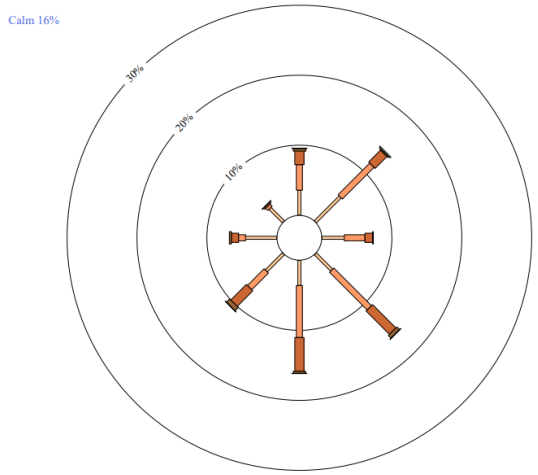
MONTHLY WIND ROSE RESULTS

A1 ADELAIDE AIRPORT 9AM WIND ROSES BUREAU OF METEOROLOGY, 1955 TO 2010

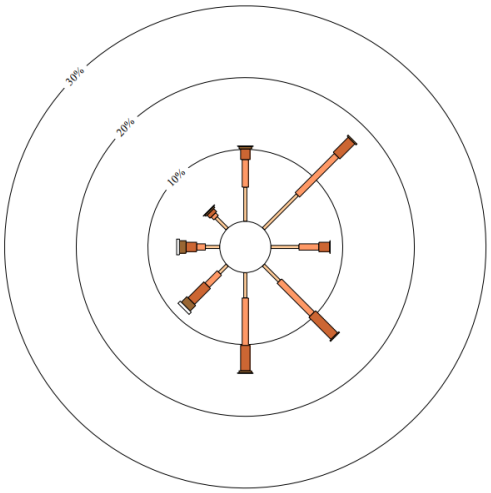
January – Calm 11%



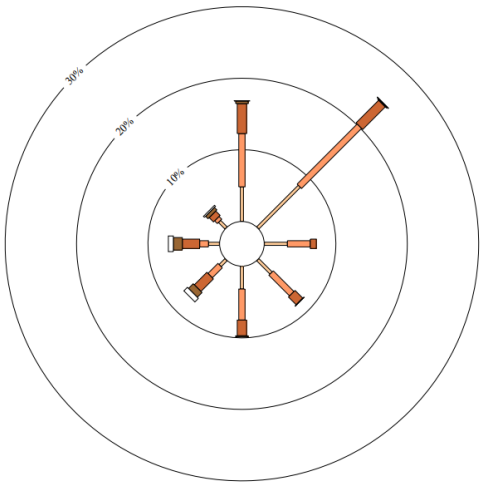
February – Calm 16%



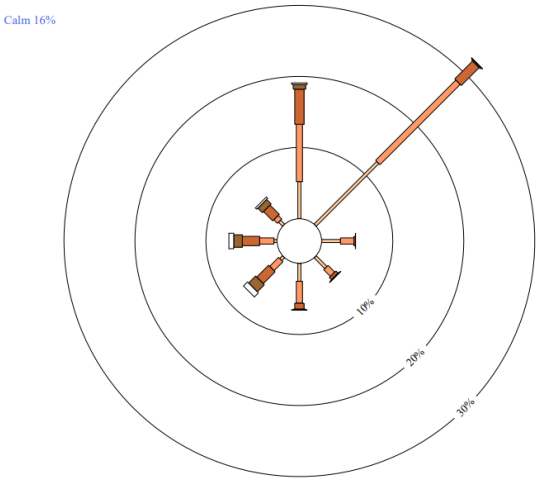
March – Calm 18%



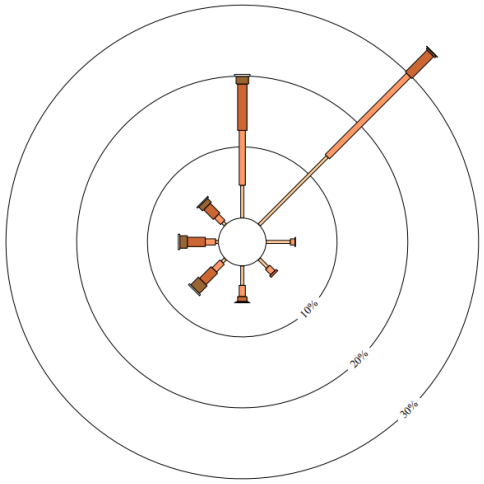
April – Calm 16%



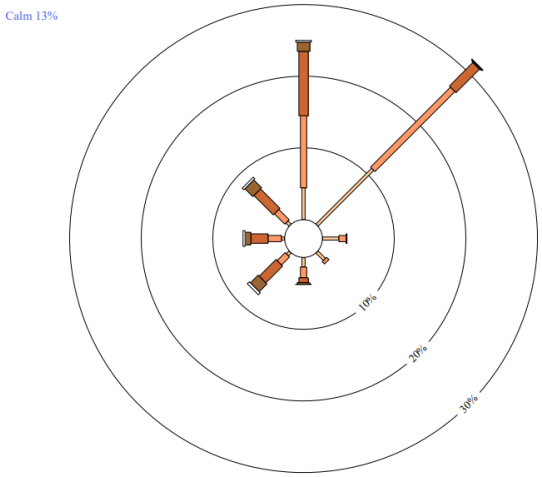
May – Calm 16%



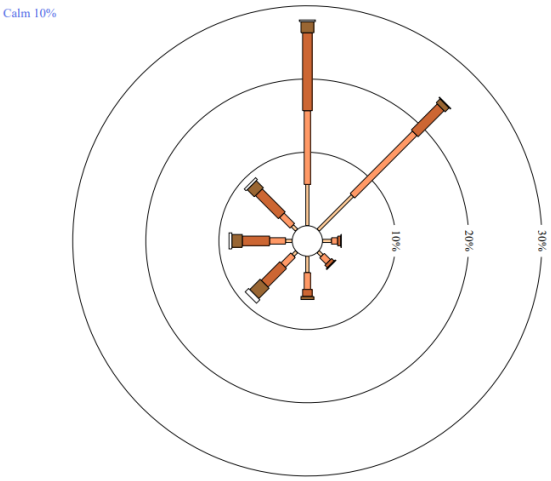
June – Calm 17%



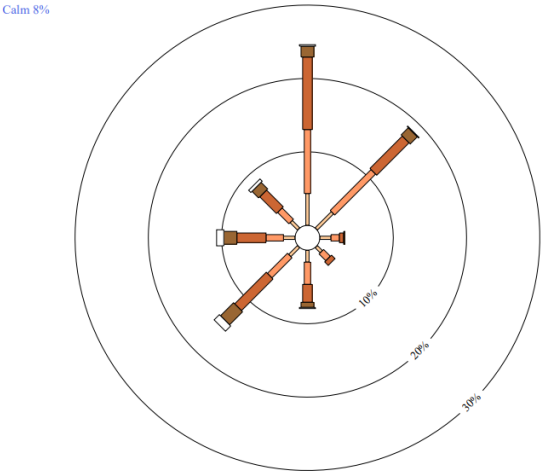
July – Calm 13%



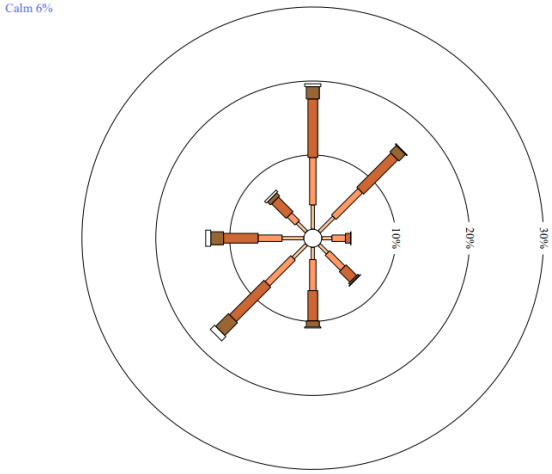
August – Calm 10%



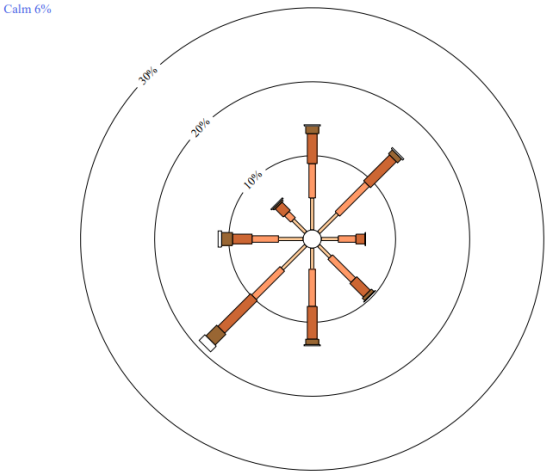
September – Calm 8%



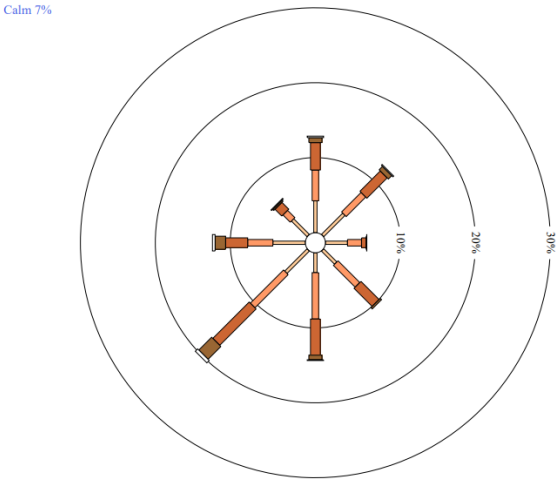
October – Calm 6%

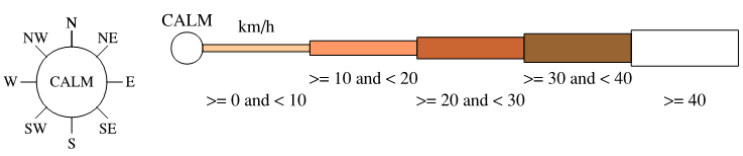


November – Calm 6%



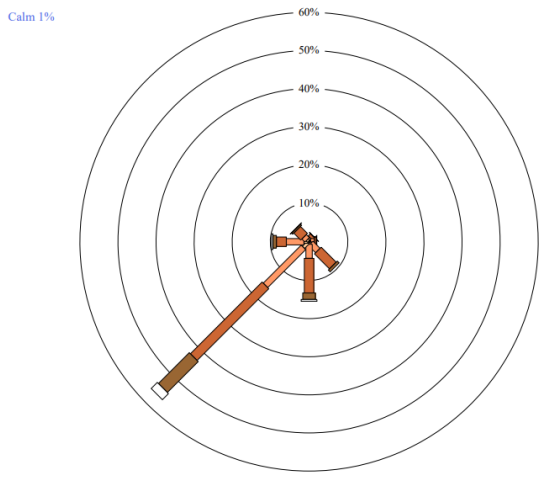
December – Calm 7%



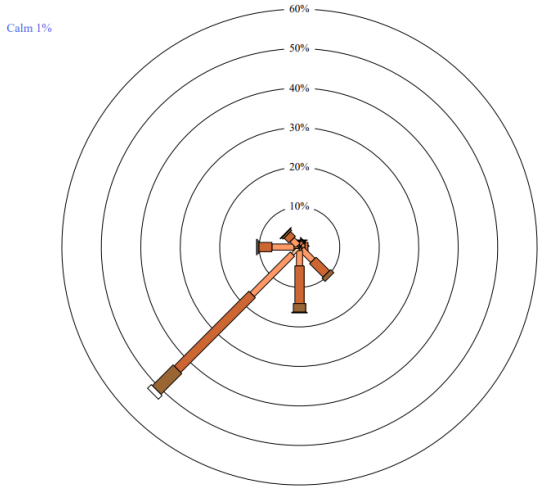


A2 ADELAIDE AIRPORT 3PM WIND ROSES BUREAU OF METEOROLOGY, 1955 TO 2010

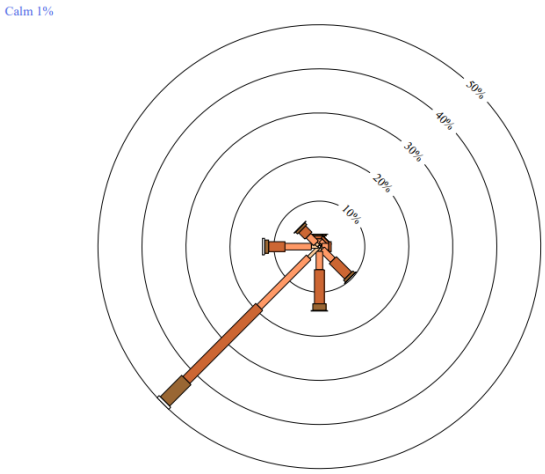
January – Calm 1%



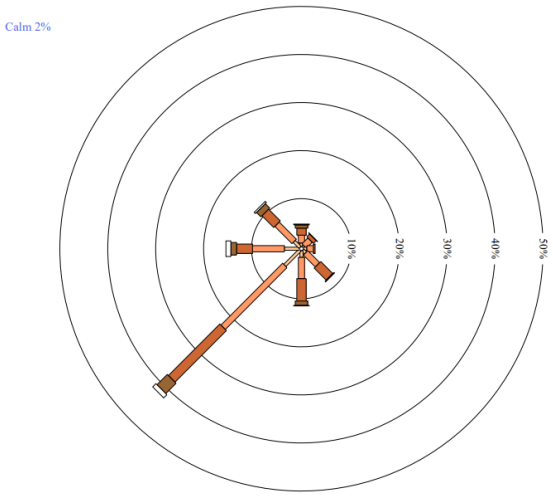
February – Calm 1%



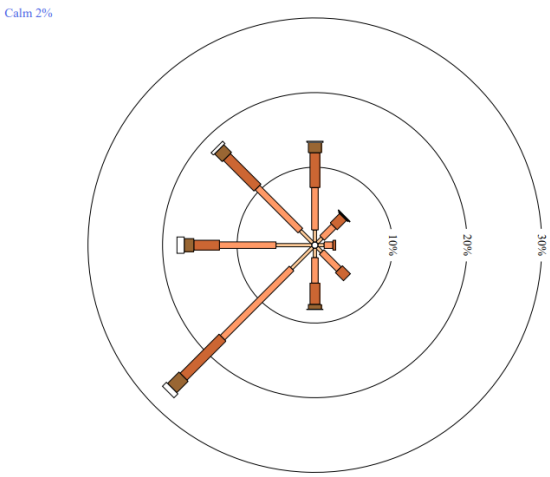
March – Calm 1%



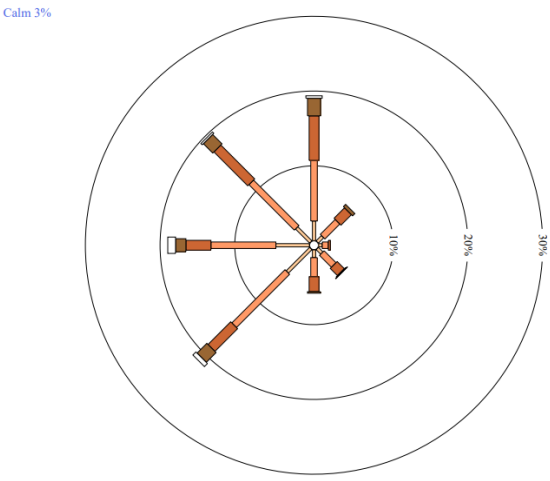
April – Calm 2%



May – Calm 2%



June – Calm 3%



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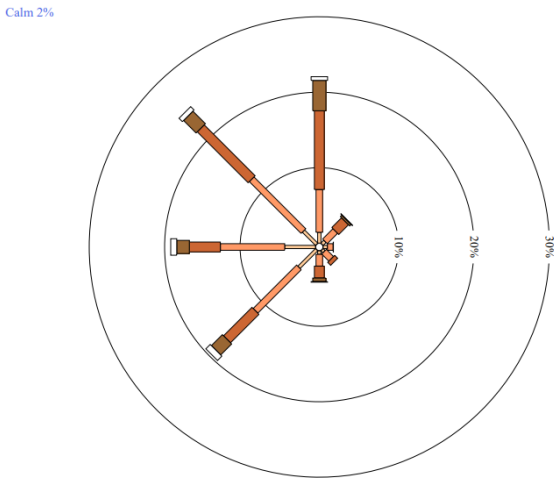
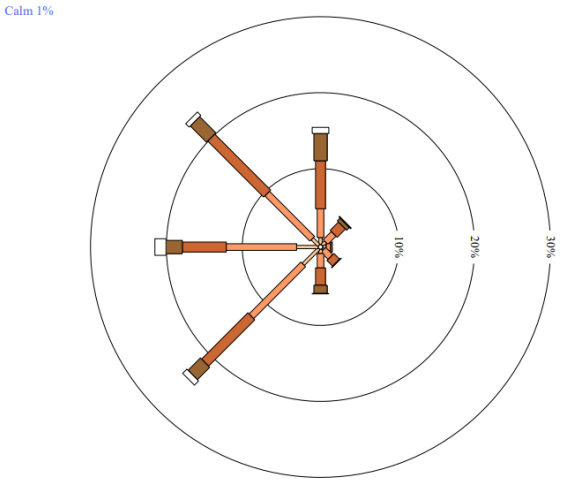
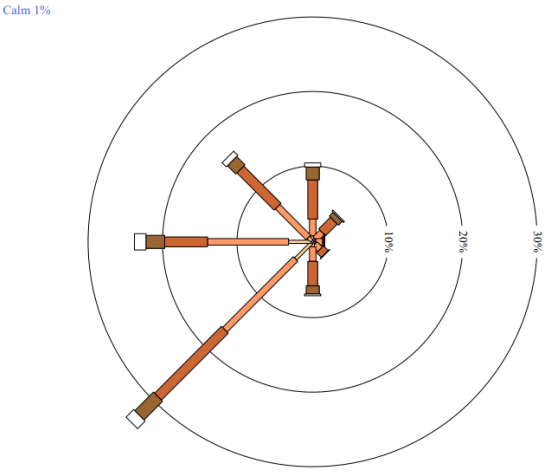


August – Calm 1%



September – Calm 1%



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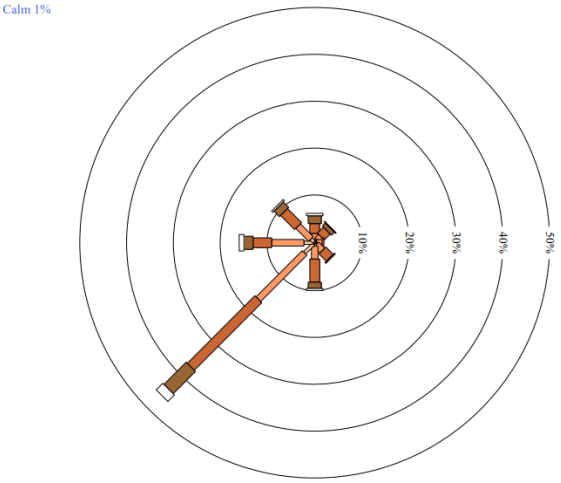

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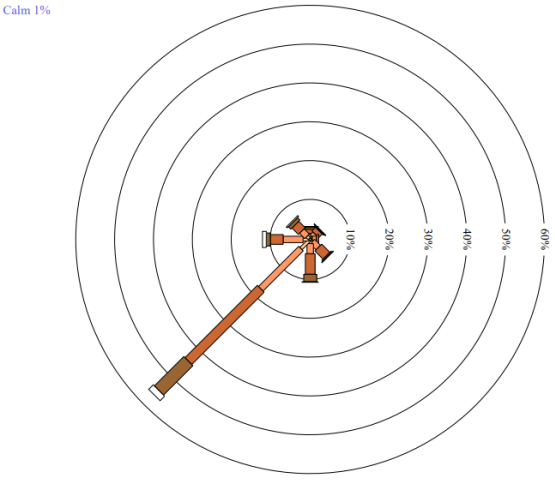

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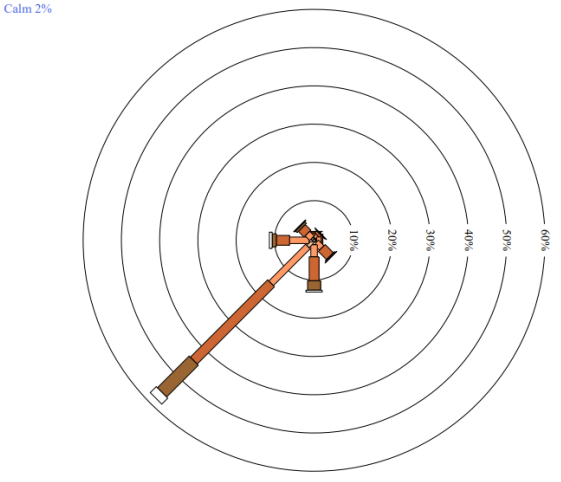

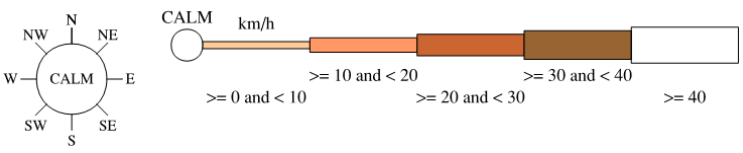

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62-68 CURRIE STREET MIXED USE DEVELOPMENT

STORMWATER MANAGEMENT PLAN

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62 Currie Street Mixed Use Development
Stormwater Management Plan

Currie St Pty Ltd

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REV	DATE	DETAILS
A	08.11.2018	SWMP-Preliminary Issue
01	26.02.2019	SWMP – Issued for Development Approval

	NAME	DATE	SIGNATURE
Prepared by:	Bel Macklin	26.02.2019	
Reviewed by:	Brad Bown	26.02.2019	
Approved by:	Adam Newman	26.02.2019	

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FIGURE 2.1 PROPOSED EXTENT OF THE REDEVELOPMENT, AT GROUND FLOOR 3

1 INTRODUCTION

62-68 Currie Street Adelaide is to undergo a redevelopment. The project comprises a mixed-use scenario, which will include a commercial office space, hotel space, amenities including restaurant, gym and bars, vehicle deliveries and drop-off to the rear, plus ground floor laneway connectivity.

The civil scope for the site will cater for the stormwater management to the site, including the basement drainage, surface levels and grading across the site, including to the laneway to the east, and the loading area and hotel drop-off entry to the north (rear) of the site.

The purpose of this Stormwater Management Plan (SWMP) is to provide an overview of the stormwater works as part of the proposed development. It should be noted that further investigations are warranted to test and validate certain assumptions and conditions within the site, and to confirm the extent of the current stormwater network to ensure no adverse impacts to existing stormwater connections that will continue to discharge stormwater flows into the internal stormwater network once proposed redevelopment works are completed.

1.1 EXISTING CONDITIONS

1.1.1 SITE DESCRIPTION

The existing site comprises of a 2-storey building containing offices and retail areas. An enlarged view of the project site is shown in Figure 1.1 below. The entire site is to be redeveloped to the envelope indicated below.

1.1.2 STORMWATER NETWORK

Existing stormwater infrastructure is located to the south of the site and north west of the proposed development. There exists a 675mm diameter pipe in Currie Street, north side, and an existing 225mm diameter piped system is located to the rear of the site, situated approximately 40m west of the development's north-western boundary. The location and size of the infrastructure to the rear of the proposed development lends the decision to discharge all flows from the site to the Currie Street drainage infrastructure as the most viable.

City of Adelaide (CoA) supports the proposal to discharge stormwater in to the Currie Street underground stormwater system, and preference is to discharge via a single stormwater property connection, as currently proposed.

Numerous downpipes are present in the proposed redevelopment area; the Civil and Hydraulics teams will liaise with each other to understand and coordinate connection of downpipes. The downpipes will be picked up at required locations by the Civil team (at base of downpipe, or collectively as single discharge at basement RL), and discharged into the proposed stormwater drainage network.

1.1.3 PRE-CONSTRUCTION FLOWS

The whole of the existing site is impacted by the proposed development, over approximately 1250m^2, which currently comprises of existing building or paved outdoor area.

The existing network is assumed to collect Q20 design storm flows and discharge at a Q20 year ARI design flow rate to the existing Council stormwater infrastructure. The proposed development will comprise also of building and outdoor paved areas, and thus will not generate a notable increase to the overall outflow from the site post-development. Given there is no significant overall change in catchment area, there is no specific need for a detention tank.

Figure 1.1 View of 62 Currie Street Adelaide redevelopment area

2 PROPOSED CONDITIONS

2.1 PROPOSED SITE LAYOUT

As identified in Section 1 of this SWMP, the civil scope for the site will cater for the stormwater management to the site, including the basement drainage, and levels and grading across the site, including to the laneway to the east, and the loading area and hotel drop-off entry to the north (rear) of the site. Refer to Figure 2.1 below.

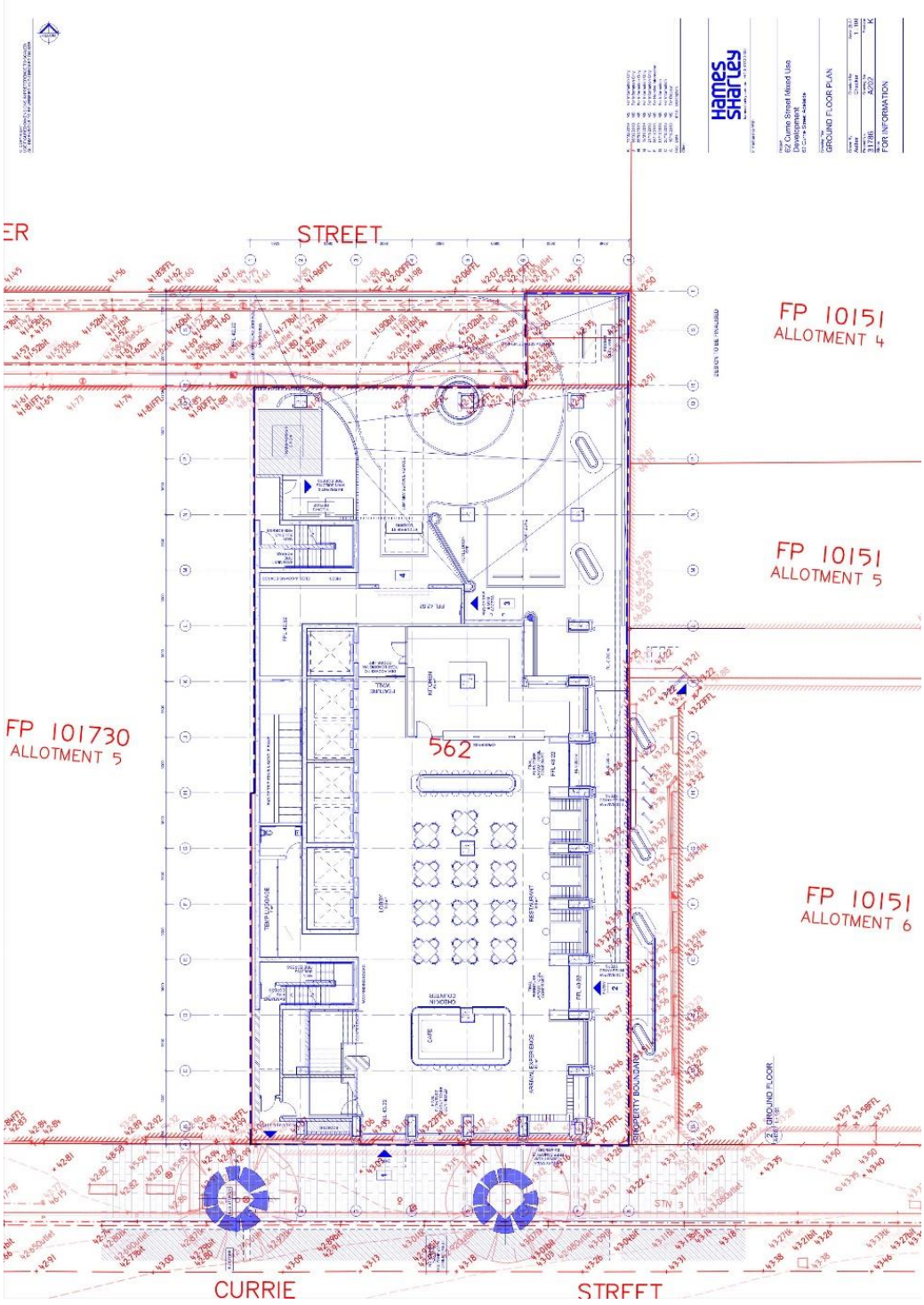

Figure 2.1 Proposed extent of the redevelopment, at Ground Floor

Based on the survey to the site, the levels fall predominantly to the rear, to Schrader Street.

Access to the site will be to the front of the development (to a restaurant entry), to the east of the development within the laneway for office and hotel entry, and to the rear of the development for back of house deliveries, end-of-trip (EOT) facilities, and hotel drop-off entry.

DDA access to the site will be required to the laneway and the rear of the property. To accommodate the pedestrian movements for the building at various locations, internal floor levels will differ by way of ramping or steps. This will be coordinated with the Architect as the design to the development progresses.

2.1.1 PROPOSED DRAINAGE SYSTEM

The preferred design approach is to:

- Provide a FFL of 43.220 mAHD to the front portion of the building. This finished floor level is lower than the adjacent eastern laneway levels (existing, based on survey). Planter boxes will be placed strategically and be utilised for the dual purpose of acting as both an aesthetic planting arrangement and a minor retaining structure, to allow for this finished floor level to seamlessly interact with the laneway while adopting DDA compliances with pedestrian movements to doorways and existing surface levels surrounding the new works. Placement of the planter boxes will allow for a minimum 1.2m pedestrian walkway width to the east of the planter boxes.
- Various entrances to the front of the development, off Currie Street, will require steps to gain access to either the hotel or to the main building and basement fire egress points.
- Provide a FFL of 42.460m AHD to the rear portion of the building. This finished floor level will allow for a gentle fall to match in to the adjacent eastern laneway levels (existing, based on survey), for a levelled entrance from the laneway to the end-of-trip facilities and to the rear of the building, for a levelled entrance to the hotel drop-off entry and vehicle loading bay.
- Provide a surface area that falls to centrally located grated inlet pits as required (within laneway, to rear of site vehicle area) beneath the partially covered roofing, and comply with DDA accessibility requirements for people to traverse between the new building spaces and laneway areas.
- Collect hardstand areas to site (vehicle area, laneway), and discharge to basement.
- Downpipe locations to be specified by the Hydraulics team, and the Civil team will coordinate to develop appropriate stormwater drainage solutions for all existing and new downpipes. A conventional downpipe system is most likely to be adopted, and downpipes will be discharged to basement for single collection point to discharge to Civil internal stormwater network.
- Treatment to collected flows will be via a treatment train. This may comprise a SPEL Stormceptor and Hydrosystem, and a pump chamber with dual submersible pumps (rising main discharge, 2 off), to treat each of the spaces' use, prior to discharge directly to the existing Currie Street 675mm diameter underground stormwater drainage system. Spatials to the basement are currently still being configured and coordinated between the services' disciplines, to allow for all services' infrastructure, including Civil treatment train infrastructure.

2.1.2 QUALITY OF OUTLET WATER

All stormwater flows collected from site will be treated through a treatment train located in the basement to the development, prior to discharge to CoA underground drainage infrastructure.

3 SUMMARY

In summary, the re-development of the 62-68 Currie Street site will discharge all stormwater flows to the existing underground infrastructure in Currie Street, by way of rising mains from a pumped system located in the basement of the development. The stormwater infrastructure will be connected via a single point of discharge, in keeping with Council requirements.

All stormwater flows collected within the site will be treated via a treatment train, prior to discharging via a single point of discharge to Council's underground stormwater drainage infrastructure. This is in keeping with Council expectations and requirements.

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62-68 CURRIE STREET, ADELAIDE

TRAFFIC IMPACT STATEMENT

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62-68 Currie Street, Adelaide
Traffic Impact Statement

Currie St Pty Ltd

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REV	DATE	DETAILS
00	26/02/2019	Issued for Development Approval
01	01/03/2019	Updated Final
02	01/05/2019	Updated with responses to CoA Comments

	NAME	DATE	SIGNATURE
Prepared by:	Amol Kingaonkar	01/03/2019	Kingaonkar
Reviewed by:	Andrew Leedham	01/05/2019	Andrew Leedham
Approved by:	Amol Kingaonkar	01/05/2019	Kingaonkar

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ABBREVIATIONS

AM peak	Morning Peak hour – one hour during 7–9.30 am with highest traffic volume
PM peak	Afternoon peak hour – one hour during 4–6 pm with highest traffic volume
HRV	Heavy Rigid Vehicle – length between 8.5 m and 12.5 m
MRV	Medium Rigid Vehicle – length between 6.4 m and 8.5 m
SRV	Small Rigid Vehicle – 6.4 m in length of smaller
vpd	Vehicles per day
vph	Vehicles per hour
CoA	City of Adelaide council
DP	Development Plan

1 PROJECT BACKGROUND

Currie St Pty Ltd propose to redevelop 62–68 Currie Street as a mixed-use development. WSP Australia has been commissioned by Currie St Pty Ltd (through Axiom Properties) to prepare a traffic impact statement (TIS) for the proposed development.

1.1 DEVELOPMENT LOCATION

The proposed mixed-use development (site) is located on the northern side of Currie Street, approximately 50 m west of Leigh Street.

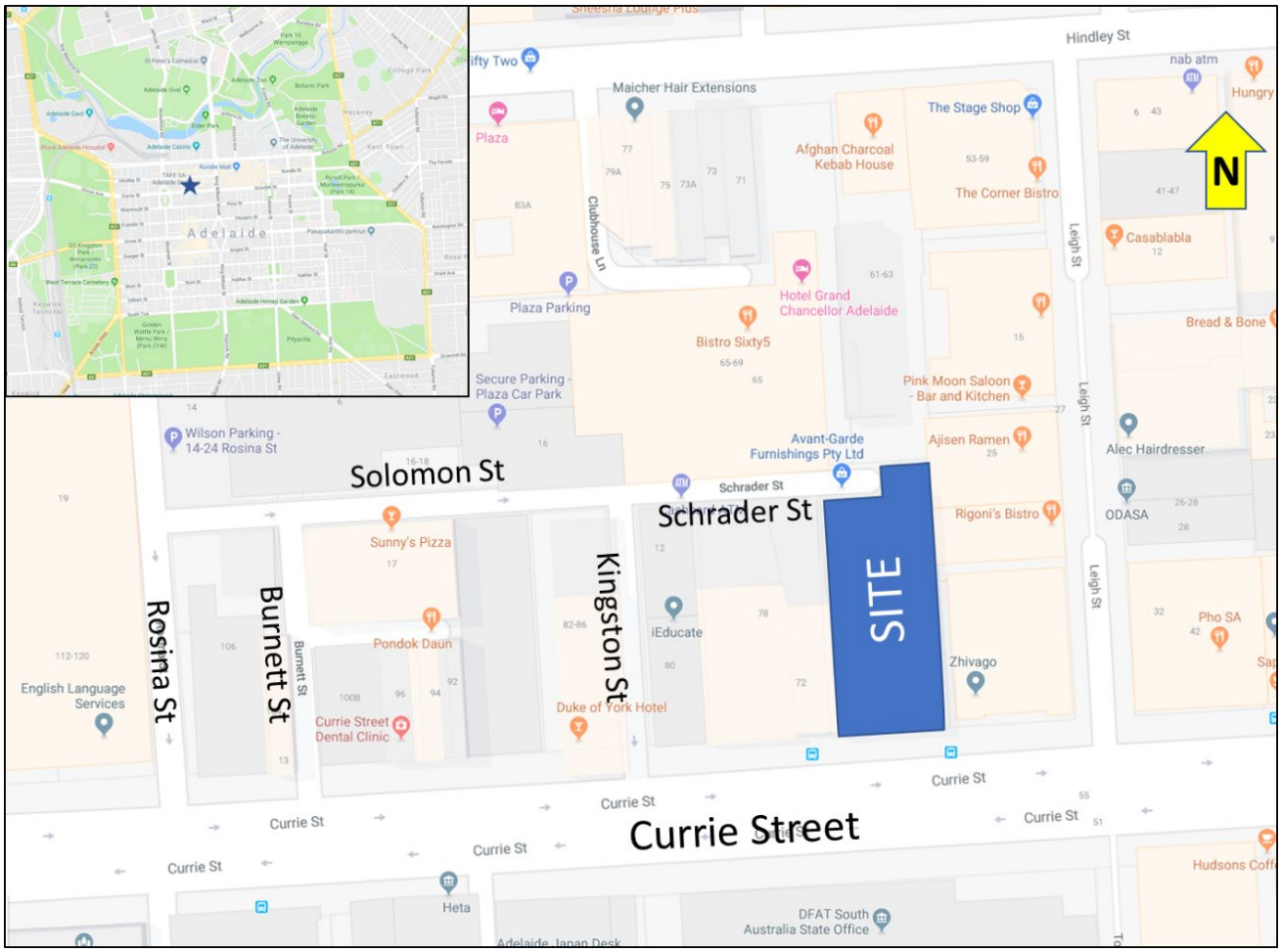


Figure 1.1 Development site location

1.2 SCOPE OF THIS REPORT

This report is structured as follows:

- Section 2 provides an overview of existing transport conditions surrounding the development site
- Section 3 details the proposed development
- Section 4 analyses the trip generation of the proposed development as well as the impact of the development on the surrounding road network and on public transport, pedestrians and cyclists
- Section 5 assesses access arrangements, on-site parking provision and loading facilities
- Section 6 presents the conclusions of the assessment and lists recommendations.

2 EXISTING CONDITIONS

This section describes the existing conditions surrounding the development site which will form the basis for assessing the potential impacts of the proposed development.

2.1 EXISTING LAND USE

The development site was previously used as a retail showroom by Avant Garde Furnishing. Avant Garde was spread over an area of 1,250 m^2. Avant Garde has initiated closing down of the showroom (late 2018) for future redevelopment.

The site has frontage along Currie Street and a rear vehicular access from Schrader Street. No on-site parking is provided.

2.2 SITE ACCESS

2.2.1 FUNCTIONAL CLASSIFICATION

As per City of Adelaide Development Plan (CoA-DP) Consolidated June 2018, Currie Street is classified as a *Secondary City Access* Road used by 17,600 vehicles per day[1].

Currie Street is also classified as a *High Concentration Public Transport Route* with dedicated bus lanes in both (eastbound and westbound) directions.

Vehicular access to the site is available (for deliveries) from Schrader Street (rear of the property).

2.2.2 PUBLIC TRANSPORT CONNECTIVITY

Adelaide Metro bus stop nos. D3 and D4 along Currie Street (northern side) are located within 100 m walking distance from the development site. Several other metro bus stops are located within a close walking distance from the site offering excellent public transport connectivity to/from the development site. Refer to Figure 2.1 for details.

Adelaide Metro Tram Stops along King William Street at Pirie Street and Rundle Mall are located within walking distances (350 m and 380 m respectively) from the development site.

2.2.3 TAXI AND DELIVERY

An all-time kerbside taxi zone, capable of holding up to three taxis is located on the southern side of Currie Street less than 50 m away from the development site. A second taxi-zone (7 pm–7 am) which can hold up to three taxis, is located immediately in front of the development site on Currie Street (northern side). Outside of these hours (7 am–7 pm) this space is assigned as a loading zone.

Kerbside loading zones are available along Currie Street (both on northern and southern side), Kingston Street and Rosina Street – all within a short (less than 5 minutes) walking distance from the site.

[1] Source – Location SA Map Viewer.

Figure 2.1 Parking and loading zone availability

2.2.4 PUBLIC OFF-STREET AND KERBSIDE PARKING

A multi-level paid parking facility, Plaza Car Park, operated by Secure Parking is located less than 100 m north west of the development site. Plaza Car Park has entry (only) from Hindley Street and entry/exit from Solomon Street.

Wilson Parking with 15 parking bays is located less than 150 m to the west of development site.

Half (½) hour kerbside parking is available between 10 am–3 pm on the southern side of Currie Street, less than 100 m from the site.

During the evening/night time additional kerbside parking is available on Currie Street (7 pm–7 am, weekdays) immediately to the west of the site. 2P restriction applies during 7 am–7 pm on weekends (Sat, Sun).

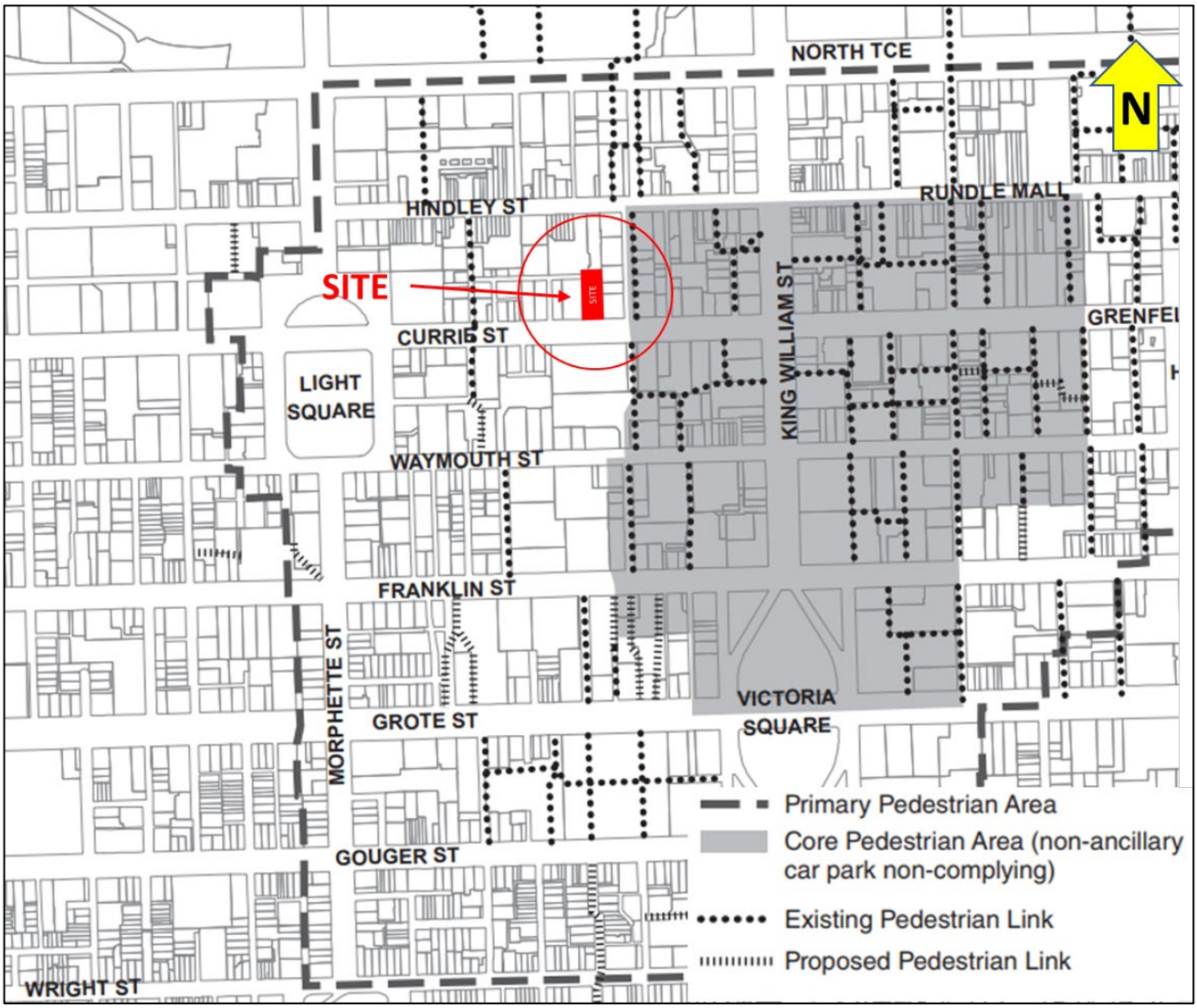
On-street free parking outside business hours (6 pm–8 am, M–F) is available along Kingston Street and Burnett Street 50 m and 120 m, respectively, to the west from the development site.

2.2.5 PEDESTRIAN ACCESS

The proposed development site is located within the *Primary Pedestrian Area*, and just outside the *Core Pedestrian Area*. Wide footpaths exist along Currie Street on both north and south side supporting high pedestrian movement. Refer to Figure 2.2.

Leigh Street which is less than 50 m to the east of the development site is an existing north-south Pedestrian Link connecting the Riverbank Precinct (North Terrace) and the Adelaide Central Market (Grote/Gouger Street).

Pedestrian access to the existing furniture shop is from Currie Street.



(source: CoA Development Plan – MAP Adel/1 – Overlay 2A)

Figure 2.2 Pedestrian movement framework

2.2.6 SUMMARY

The subject site is well served by both public transport (buses and trams) and there are several on and off-street car parking opportunities within proximity. Pedestrian links to the site are well defined and pedestrian footpaths are wide.

3 DEVELOPMENT PROPOSAL

3.1 PROPOSED LAND USE

The proposed mixed-use development is to comprise:

- single level basement (no car parking)
- ground floor public realm with vehicle drop-off to the rear
- conference, meeting and amenity spaces
- office use
- hotel accommodation
- rooftop plant and restaurant/bar.

Detailed area statement is included in Table 3.1 below:

Table 3.1 Area statement

LAND USE COMPONENT	LEVEL (S)	UNIT
Bicycle Parking, End of Trip Facilities, Gym & services	Basement	750 m^2
Café/Restaurant	Ground	230 m^2
Office and hotel	Ground	225 m^2
Conference/Meeting Rooms	1	550 m^2
Hotel back of office	1	95 m^2
Office	2–12	8,500 m^2
Boutique Hotel	13–22	198 rooms
Rooftop Restaurant/bar	23	350 m^2

3.2 PARKING PROVISION

3.2.1 ON-SITE CAR PARKING PROVISION

The proposal makes no provision for any off-street parking other than two car parking bays accessible from Schrader Street to facilitate pick-up and drop-off for staff and guests/visitors.

The proposed development site is located within the Capital City Zone (CoA-DP). Table Adel/7 of the CoA-DP provides minimum and maximum off-street parking provision requirements (rates) for various land uses within different city zones. For the zone in which the subject site is located, no on-site car parking is required to be provided. Accordingly, none is provided.

3.2.2 ON-SITE BICYCLE PARKING PROVISION

Table Adel/6 of the CoA-DP provides bicycle parking provision requirements (rates) for various land uses. For the proposed mixed-use development, bicycle parking provision required is shown in Table 3.2 below.

Table 3.2 Bicycle parking required

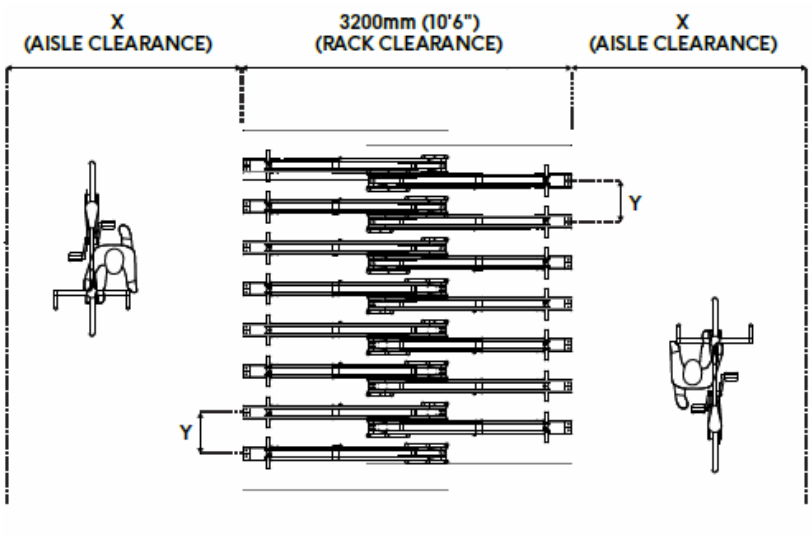
LAND USE AND PARKING RATE	UNIT	BICYCLE PARKING REQUIRED
Café/restaurant — 1 per 20 employees — 1 per 50 seats for customers	80 seats	1 (employees) 2 (customers)
Offices — 1 per 200 m^2 of GLFA for staff — 2, plus 1 per 1000 m^2 of GLFA for visitors	8500 m^2	43 (staff) 10 (visitors)
Motel (hotel) — 1 per 20 employees — 2 for first 40 rooms, plus 1 for every additional 40 rooms for customers (guests)	188 rooms	3 (staff) 6 (visitors)
Licensed Premises — 1 per 20 employees — 1 per 40 m^2 bar floor area for customers — 1 per 60 m^2 dining room floor area for customers	31 sqm bar area 285 m^2 dining area	2 (employees) 1 (customers) 5 (customers)
Total		49 (employees/staff) 18 (customers/visitors)

On-site bicycle parking for up to 72 bicycles and end of trip facilities are to be located in the basement of the building. These are to be made available to office and café/restaurant staff and hotel guests.

The development proposal includes bicycle stacking and parking system by Five at Heart.

Figure 3.1 Five-at-heart bicycle parking and stacking system (Photo courtesy: Five at Heart)

The proposed bicycle parking system is deemed to comply with AS2890.3 requirements.



Specification	
(X) Aisle	
AUS Standard (2890.3)	2000mm (6'7")
Manufacturer Recommended	1800mm (5'11")
(Y) Centre Spacing	
AUS Standard (2890.3)	400mm (1'3.75")
Manufacturers Recommended	400mm (1'3.75")
USA, San Francisco (CA) Standard	430mm (1'4")
(Z) Ceiling Height Minimum	
AUS Standard (2890.3)	2700mm (8'10")
Manufacturer Recommended	2600mm (8'6")

Figure 3.2 Five at heart bicycle parking system specifications

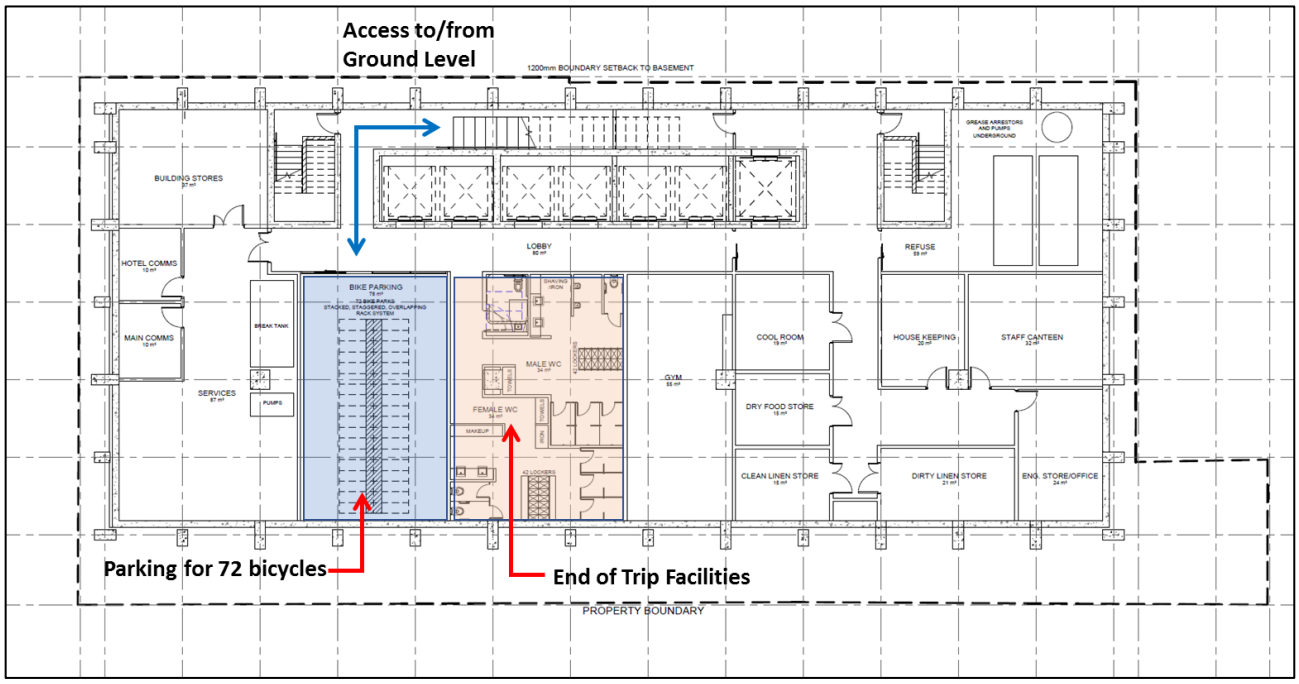


Figure 3.3 Basement bicycle parking provision, end of trip facilities and access arrangement

Bicycle parking provision for 22 bicycles (11 rails) for visitors is provided on Ground Level as shown in Figure 3.6.

3.3 ACCESS ARRANGEMENT

3.3.1 PEDESTRIAN AND CYCLIST ACCESS

Pedestrians will access the development (restaurant/Café on ground level, hotel reception and office lift lobby) from either Currie Street of the new laneway environment created on the eastern side of the site connecting Currie Street and Schrader Street.

The development proposal includes parking provision for 72 bicycles and end of trip facilities. Bicycle parking and end of trip facilities are located in the basement accessible via stair with bike ramp or the service lift from the rear (Schrader Street access). Cyclist will be able to access entry to the basement from both Currie Street and Schrader Street.

Refer to Figure 3.4 below for details.

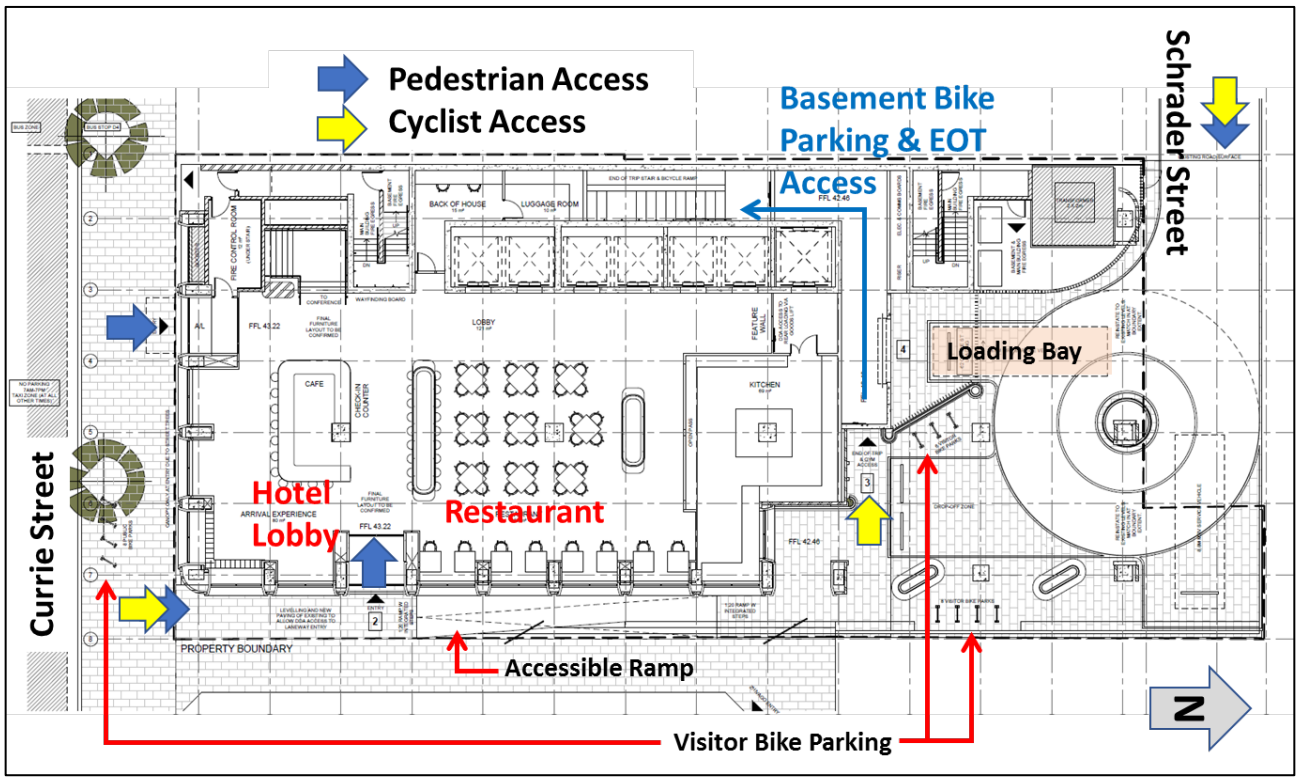


Figure 3.4 Pedestrian and Cyclist Access

3.3.2 LOADING AREA

The development proposal includes a loading bay accessible from Schrader Street. The loading bay will be capable of servicing medium rigid vehicles (MRV) up to 8.5 m in length and service the proposed development.

Arriving service/delivery vehicles will access Schrader Street from Currie Street via Burnett Street & Solomon Street. Departing service/delivery vehicles will exit onto Currie Street from Schrader Street via Kingston Street. Access and egress arrangements for service delivery vehicles are shown in Figure 3.5 below.

A second loading bay is proposed at the eastern end of Schrader Street intended to serve Rigoni's Restaurant. Details on operations of loading area (both loading bays) and drop-off area are discussed in detail in **Section 5.3.4** of this report.

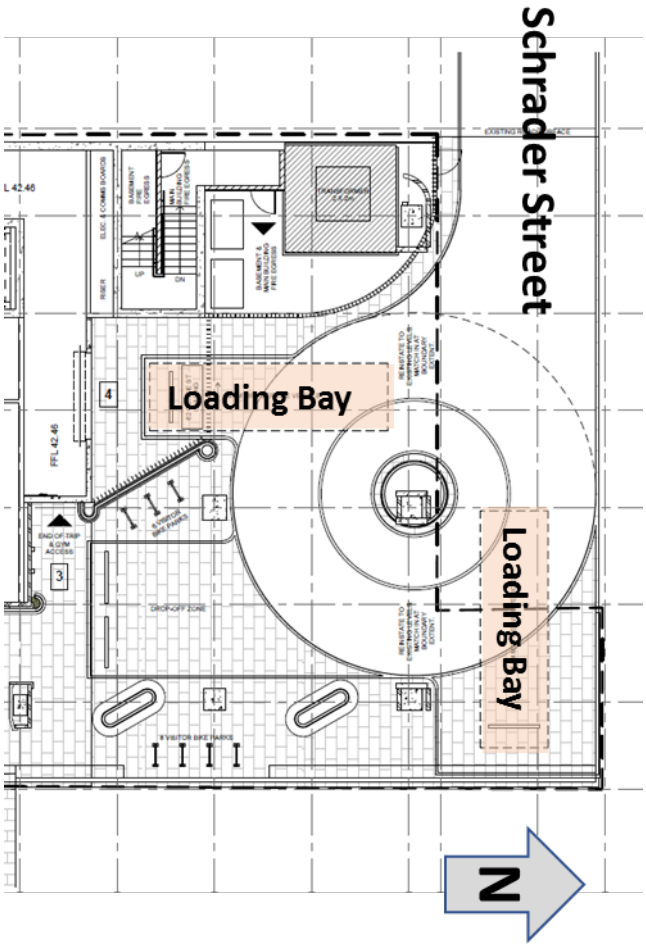


Figure 3.5 Loading Area

3.3.3 EMERGENCY ACCESS

Efficient access to the emergency services will be from Currie Street.

3.3.4 DROP OFF AND PICK UP AREA ON SCHRADER STREET

Office staff, visitors and hotel guests arriving and/or leaving by a private vehicle or taxi can access drop-off/pick-up area at the rear of the development from Schrader Street. Two car parking spaces are proposed in the drop off/pick-up zone which will have time restriction for efficient utilisation of the zone.

The proposed drop-off area parking bays (two) are designed to service people with disability/mobility impairments. The entire drop off and loading area is flushed with Schrader Street providing seamless connectivity for people with mobility aids and cyclists.

There is in general a level drop from Currie Street towards Schrader Street. A DDA compliant ramp (15.5 m long, 1:20 slope) is proposed between Hotel entry from the laneway and drop-off area to facilitate seamless connectivity between Schrader Street and Currie Street for pedestrian, cyclists and people with disability/mobility impairment.

Refer to Figure 3.6 below for details.

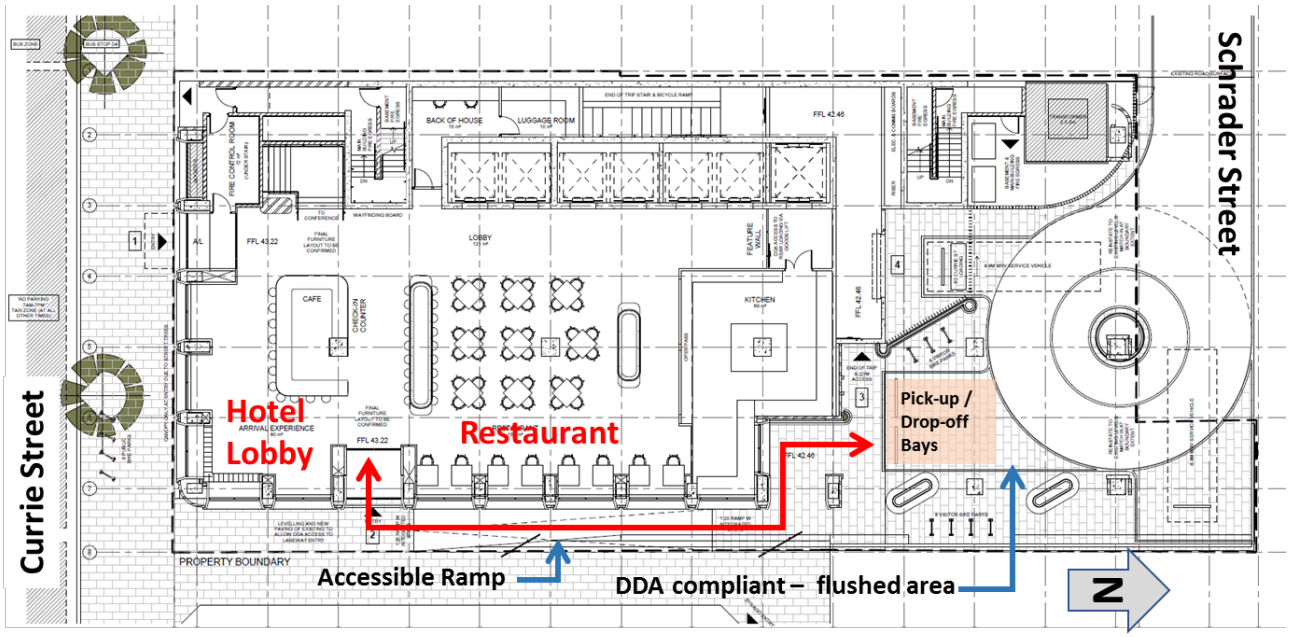


Figure 3.6 Schrader Street pick-up and drop-off – Pedestrian access arrangement

4 IMPACT ASSESSMENT

4.1 TECHNICAL REFERENCES

Roads and Maritime Services (formerly Roads and Transport Authority – RTA) publications *Guide to Traffic Generating Developments (October 2002)* and *Technical Direction – Guide to Traffic Generating Developments: Updated Traffic Surveys (August 2013)* were referred in estimating traffic generated from the existing furniture shop and the proposed development.

Published traffic generation rates for specific land uses are a guide only and may vary depending on availability and frequency of public transport services, proximity to walking and cycling paths, and availability and proximity of on and off-street car parking.

The subject site is located in the heart of the CBD with good access to alternative transport modes.

4.2 TRIP GENERATION – EXISTING LAND USE

Avant Garde Furnishing can be classified as a *Bulky Goods Retail Store* as defined in the reference documents. As per Roads and Maritime Technical Direction, the following traffic generation rates were applied to estimate traffic generated from existing furniture shop.

Table 4.1 Trip generation – Furniture shop

TRIP PERIOD	ROADS AND MARITIME TRIP GENERATION RATE	AVANT GARDE (1,250 m^2)
Weekday peak hour vehicle trips	2.7 per 100 m^2 GFA	34 during peak hour
Daily vehicle trips	33 per 100 m^2 GFA	410 per day

These estimates are considered conservative as there is no on-site parking provided and public transport connectivity to the site is very good which will likely result in lower vehicular traffic generation that estimated above. The existing number of vehicle trips generated by the store will cease when the store is closed. This is discussed in detail in section 4.3.6 Trip Generation Summary of this report.

4.3 TRIP GENERATION – PROPOSED DEVELOPMENT

4.3.1 CAFÉ AND RESTAURANT

The café and restaurant on ground level are considered to be an ancillary facility to the development and not envisaged to generate significant vehicular traffic on its own. It will likely attract passing walk-in trips in addition to office staff and hotel guests within the proposed development. A very small number of vehicular trips generated by the restaurant, are likely to be dispersed in public/paid parking in the vicinity of the development.

4.3.2 ROOFTOP BAR AND RESTAURANT

The Rooftop Bar and Restaurant is likely to attract customers in addition to hotel guests and office staff. The trip generation rate provided in Roads and Maritime guide is applied to estimate the traffic generated by Rooftop Bar and Restaurant.

Table 4.2 Trip generation – Restaurant

TRIP PERIOD	ROADS AND MARITIME TRIP GENERATION RATE	ROOFTOP BAR AND RESTAURANT (350 m^2)*
Evening peak hour vehicle trips	5 per 100 m^2 GFA	18 during peak hour**
Daily vehicle trips	60 per 100 m^2 GFA	210 per day**

* Rooftop Bar and Restaurant includes covered area and deck area

** There is no on-site parking therefore these vehicle trips will be via either taxi or park in nearby car park facilities and walk to the development.

4.3.3 CONFERENCE AND MEETING ROOMS

The development proposal includes three conference and meeting rooms on Level 2 (mezzanine) which will primarily support office tenants and boutique hotel. As such these conference and meeting rooms are not anticipated to generate additional traffic on their own.

4.3.4 OFFICE

The proposed development includes a total 8,500 m^2 of office space over 10 floors. Roads and Maritime released an update to traffic generation rates in August 2013. Chatswood site, one of the ten sites for which trip generation data is available in this update, was deemed to closely match characteristics of the proposed development for public transport connectivity, pedestrian and cyclist accessibility. WSP has therefore applied trip generation rates from Chatswood survey site to the proposed development for office component.

Table 4.3 Trip generation – Office

OFFICE BLOCK TRIP GEN	CHATSWOOD SITE	PROPOSED DEVELOPMENT
Total Staff	397	
Size (Area m^2)	10,214	8,500
Car and Bicycle Parking Spaces	150	72*
Loading Bays	6	1
Vehicular Trips		
AM peak hour trip rate (per 100 m^2)	1.03	
AM peak hour trips	105	88**
PM peak hour trip rate (per 100 m^2)	0.84	
PM peak hour trips	86	71**
Daily trip rate (per 100 m^2)	6.95	
Daily trips	710	590**

* bicycle parking provision only; no on-site vehicle parking provided

** there is no on-site parking therefore these vehicle trips will be via either taxi or park in nearby car park facilities and walk to the development.

4.3.5 BOUTIQUE HOTEL

The proposed development includes a Boutique Hotel with 198 rooms for guests. Trip generation rates for Boutique Hotel (Tourist Hotel) are not readily available in Roads and Maritime trip generation guide. Accordingly, WSP has applied trip generation rates for ***Motel*** (which is the closest land use available in Roads and Maritime trip generation guide) to estimate traffic generated by the Boutique Hotel within the proposed development. It is worth noting that the trip generation rate for Motel land use in Roads and Maritime guide assumes 100 per cent room occupancy. The proposed boutique hotel was assumed to have an average 75 per cent occupancy when estimating traffic generated from the hotel component. Motels usually have sufficient on-site parking for guests resulting in higher vehicular trip generation.

Table 4.4 Trip generation – Boutique Hotel

TRIP PERIOD	ROADS AND MARITIME TRIP GENERATION RATE	BOUTIQUE HOTEL (198 ROOMS)*
Evening peak hour vehicle trips	0.4 per unit (room)	60 during peak hour**
Daily vehicle trips	3 per unit (room)	450 per day**

* Based on 75 per cent occupancy for hotel rooms

** There is no on-site parking therefore these vehicle trips will be via either taxi or park in nearby car park facilities and walk to the development.

4.3.6 TRIP GENERATION SUMMARY

As mentioned in *Section 2* of this report, the proposed mixed-use development will replace the existing furniture store. As such trips generated by the proposed development will replace those generated by the furniture store.

The proposed development site is located on a priority public transport corridor (Currie Street) with dedicated bus lanes (7 am–7 pm, M-F) in both directions and several Bus Stops located within a short (up to five minutes) walking distance from the proposed development site.

The proposed development site is well connected to a Bicycle network. Dedicated bicycle lanes exist along Hindley Street and Waymouth Street – both less than 150 m to the north and south of the development site.

As per City of Adelaide's Development Plan (Consolidated June 2018), the proposed development site is within Primary Pedestrian Area. With Leigh Street pedestrian link less than 50 m to the east and Rosina Street pedestrian link less than 150 m to the west, the development site is deemed highly accessible by public transport and active mode of travel.

Based on the high accessibility by public transport and active modes of travel (cycling and walking), WSP has applied a nominal 30 per cent discount for high accessibility.

Table 4.5 Trip generation summary

PROPOSED LAND USE	MORNING PEAK HOUR TRIP GENERATION	EVENING PEAK HOUR TRIP GENERATION	DAILY TRIP GENERATION
Café and Restaurant	–	–	–
Office	88	71	590
Boutique Hotel	60	60	450
Rooftop Bar and Restaurant	18	18	210
Proposed Development – Total Trips (a)	**166**	**149**	**1,250**
Existing Traffic Generation (b)	34	34	410
Sub-Total – Traffic Generation (a–b) Trips from new development replacing existing furniture store trips	**132**	**115**	**840**

PROPOSED LAND USE	MORNING PEAK HOUR TRIP GENERATION	EVENING PEAK HOUR TRIP GENERATION	DAILY TRIP GENERATION
Nett New Traffic Generation After applying 30% discount – local traffic, public transport and active transport	**93**	**81**	**588**

The trip generation and distribution presented above is likely to be over estimation as peak hours for individual components of the development (office, hotel, restaurant etc.) are unlikely to coincide with the road network peak hours. Additionally, only evening peak hour trip generation rates were available for some of the land uses for which WSP have used the same rate to estimate morning peak hour traffic, potentially resulting in higher than actual traffic generation. However, adopting a conservative approach trip generation estimates presented above were used to develop traffic distribution profile.

4.4 TRIP DISTRIBUTION

The following factors were considered while developing traffic distribution for the proposed development:

- an understanding of transport network within Adelaide CBD and Adelaide Metropolitan area
- Journey to work data (2016 Census)
- likely origin and destinations for trips generated (employment, household, shopping centres etc.)
- location and configuration of access points
- public transport connectivity
- availability of taxi rank on Currie Street near the development
- non-availability of on-site parking resulting in pick-up and drop-off trips
- location of public parking stations within a short walking distance.

Based on the above factors, it was determined that 65 per cent of the nett estimated traffic generated by the proposed development would use Currie Street and 35 per cent would Solomon/Schrader Street.

Table 4.6 Trip distribution summary

DETAILS	TOTAL TRIPS	CURRIE STREET[1,2]	SCHRADER/SOLOMON STREET[1,3]
Morning Peak Hour Traffic	93	61	32
Evening Peak Hour Traffic	81	58	23
Daily	588	382	206

(1) vehicular trips – drop-off and pick-up by private vehicles and taxis along Currie Street north

(2) visitors/guests/staff being dropped off or picked up on the southern side of Currie Street

(3) trips going to/coming from paid car park on Rosina Street and Plaza car park

4.5 IMPACT ON SURROUNDING ROAD NETWORK

Currie Street is estimated to carry 17,600 vehicles per day. Additional (nett new) traffic likely to be generated by the proposed development (588 trips) represents a 3.3 per cent increase. It is noted that:

- not all trips are pick-up/drop off – a significant portion of traffic likely to accessing paid parking in the vicinity of the development
- likely route of arrival – from Hindley Street to Schrader Street via Rosina Street and Solomon Street or Currie Street from west or being dropped off on Currie Street on southern side and walking to the development
- likely route of departure – from Schrader Street to Currie Street or crossing to the south of Currie Street before getting into a taxi/being picked-up
- individual land use (e.g. boutique hotel, rooftop restaurant) peak hour unlikely to coincide with the surrounding road network peak hour.

As per traffic generation estimate presented above, Solomon Street/Schrader Street is likely to attract an additional 32 trips during morning peak hour. Solomon Street is narrow with only one-way traffic movement restriction in place. However, Schrader Street is wide enough to support two-way traffic movement albeit occasional. The additional 32 trips will be further split into arriving and departing trips (taxi and private vehicles), trips originating at/destined to public parking on Solomon Street (which also has entry only access from Hindley Street). As such the total additional trips assigned to individual street is likely be negligible.

Currie Street is estimated to attract an additional 61 morning peak hour trips. These trips will be dispersed along the northern and southern side of Currie Street which will be further split between taxi trips and private vehicle trips. It is quite possible that a trip may start or end on a surrounding road other than Currie Street (e.g. King William Street or Morphett Street) resulting in a short walking trip from/to the development site.

Traffic generated from the proposed development is not deemed to adversely impact on surrounding road network.

5 ACCESS, PARKING AND LOADING

The development proposal includes only two parking bays accessible from Schrader Street for drop-off and pick-up. No on-site parking is proposed for tenants and visitors to the proposed development.

5.1 VEHICULAR ACCESSIBILITY

Vehicles approaching from Hindley Street and from Light Square (Morphett Street, Currie Street West) can use Rosina Street/Solomon St to reach Schrader Street.

Outside business hours (7 am–7 pm), tenants, visitors and hotel guests will be able to use Taxi rank on Currie Street (northern side) immediately in front of the development site for on-street parking.

Arriving visitors will also be able to access paid parking from Hindley Street, Rosina Street and Solomon Street and walk to the development.

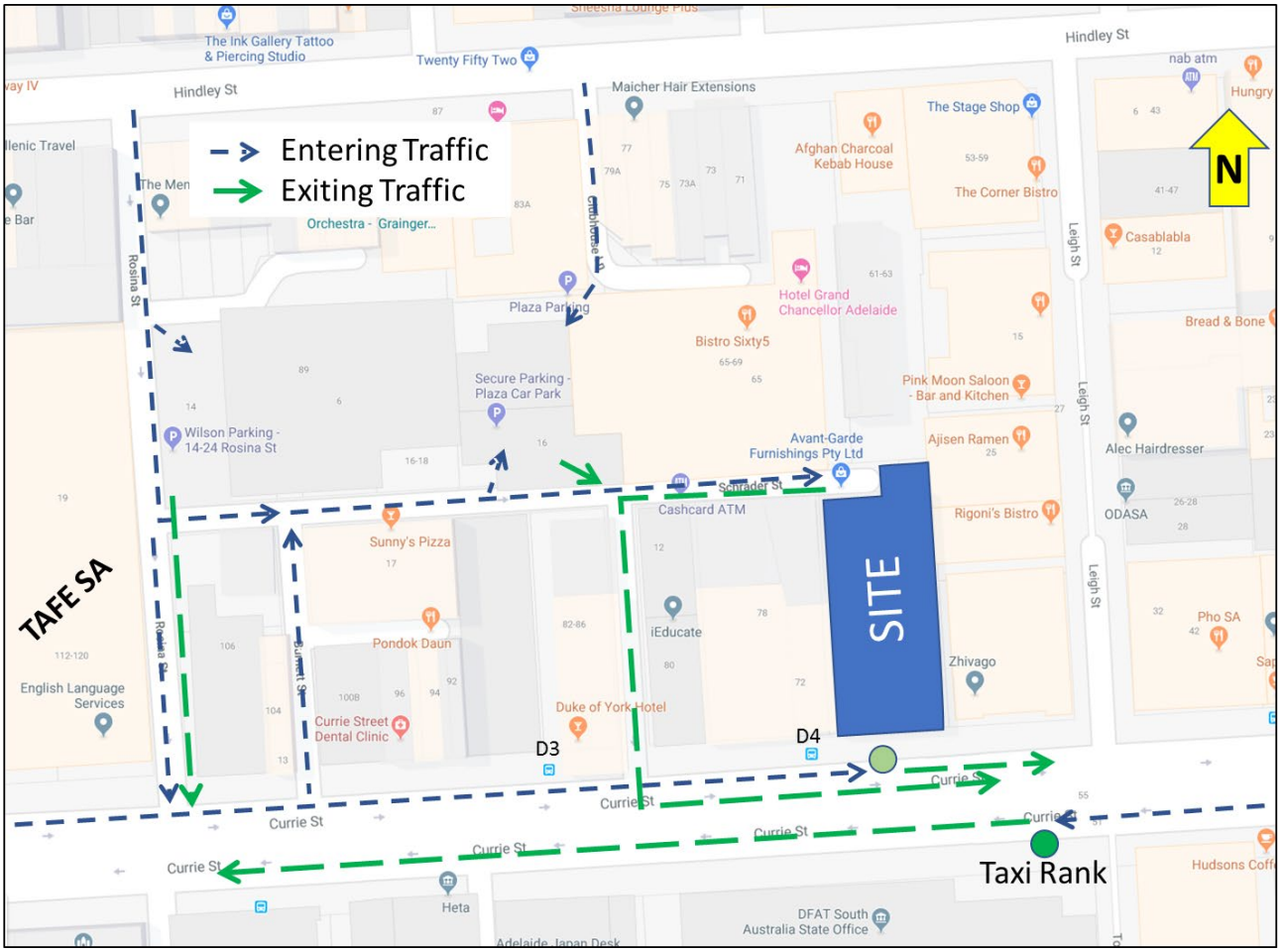


Figure 5.1 Vehicular access arrangement

5.2 DROP OFF AND PICK UP ZONE

The proposed pick-up and drop-off zone will be located at the eastern end of Schrader Street. A cul-de-sac is proposed to facilitate safer manoeuvring of cars and loading vehicles. The cul-de-sac is intended for use by cars only and is designed to have 6.7 m radius which is constrained by presence of existing wall on the northern side and structural column on the southern side. It is worth noting that vehicles accessing pick-up/drop-off zone will be undertaking a 90° turn to access one of the two parking bays. A departing vehicle (from the zone) will be required to reverse into the cul-de-sac area before turning right to continue to Schrader Street. As such the proposed cul-de-sac is not envisaged to be used heavily. The proposed cul-de-sac was assessed for turning path using a B99 vehicle and was considered sufficient to support such movement.

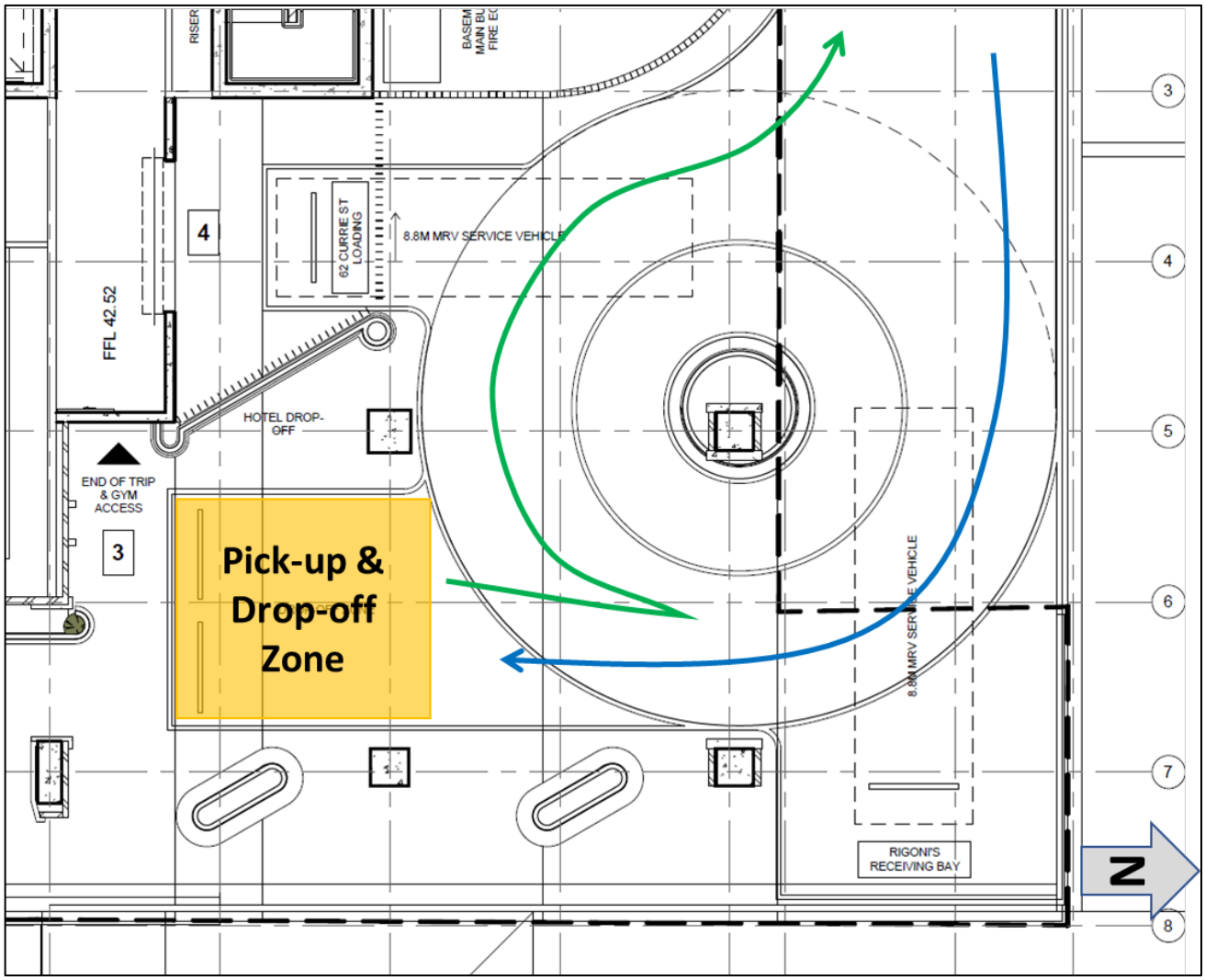


Figure 5.2 Pick-up and drop-off zone accessibility

5.3 LOADING AREA

5.3.1 SURROUNDING ROAD NETWORK CONSTRAINTS

The proposed loading bay will service a medium rigid vehicle (MRV). There are though some existing physical constraints at Burnett Street/Solomon Street and Schrader Street/Kingston Street intersection which drivers of these service/delivery vehicles will need to be familiar with.

Rosina Street intersection with Solomon Street was assessed to have a small footprint which doesn't allow a MRV to turn left from Rosina Street into Solomon Street. As such access to Schrader Street loading bay will be restricted from Currie Street via Burnett Street, Solomon Street and Schrader Street.

Solomon Street and Kingston Street are both one-way streets thus departing service/delivery vehicle will be required to egress onto Currie Street via Kingston Street.

A turn path assessment was undertaken for SRV (6.5 m long) and MRV (8.8 m long) vehicles to check accessibility of the loading area. Turn path assessment concluded that while an MRV would be able to negotiate turning movements from Burnett Street onto Solomon Street and from Schrader Street on to Kingston Street, negotiating these tight intersections may require precision and familiarity of existing physical constraints to avoid multiple manoeuvres while negotiating turns through these intersections. SRVs will find it easier to negotiate tighter intersections and narrow side roads.

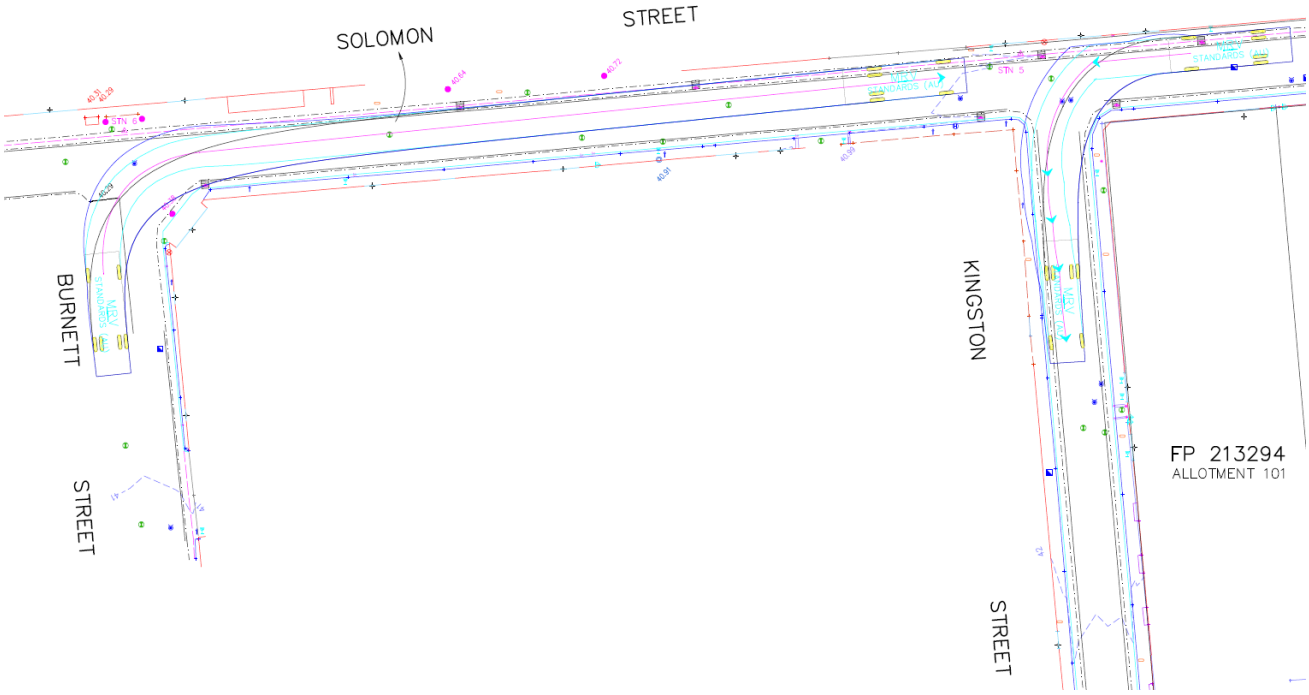


Figure 5.3 Turn path assessment for MRV

5.3.2 ACCESSIBILITY

An MRV will be required to access the loading dock by reversing in and exit in a forward motion.

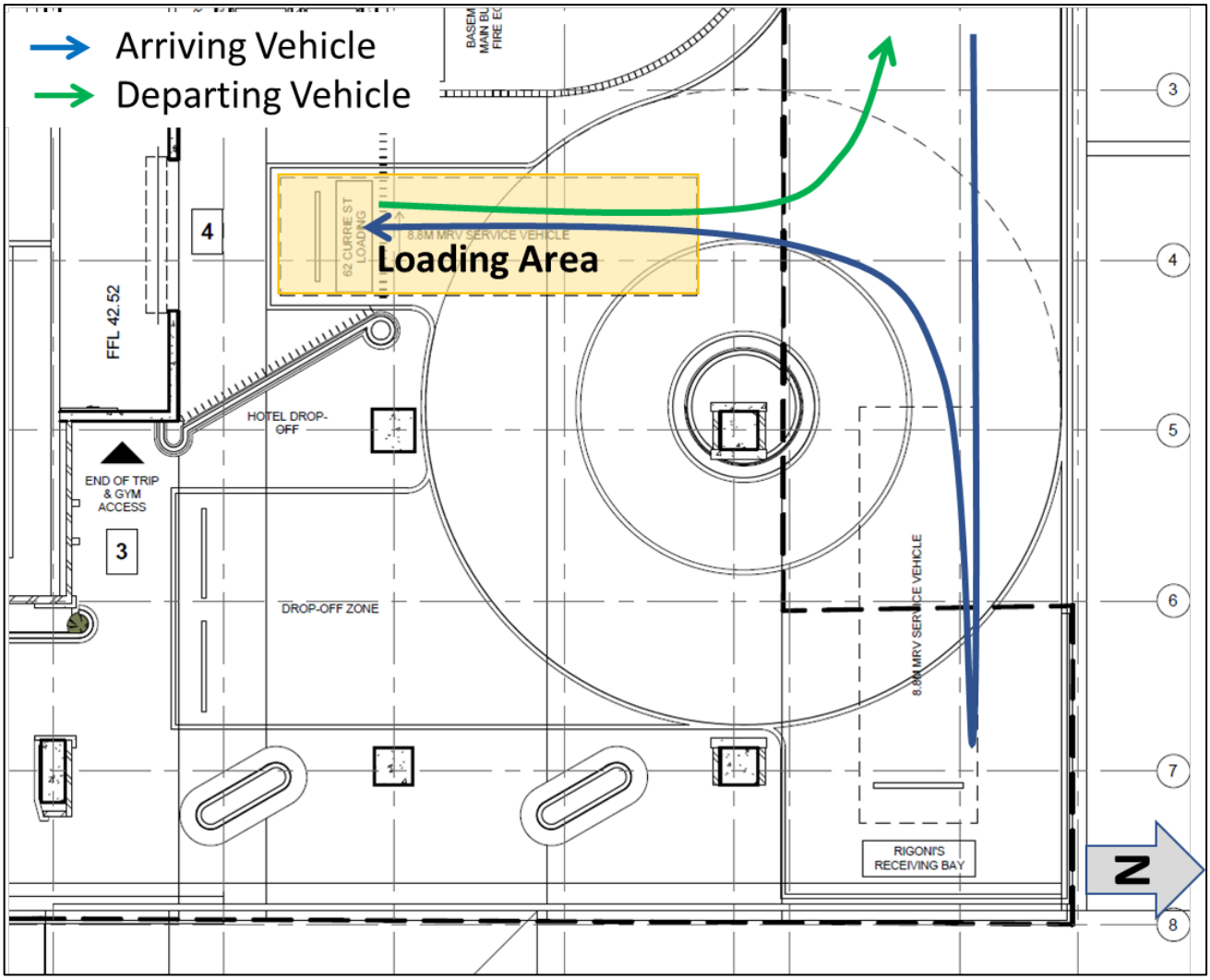


Figure 5.4 Loading zone accessibility

Existing physical and structural constraints may require multiple movements while entering/exiting loading dock. It is noted that the delivery vehicle fleet will be a mix of SRVs (6.5 m) and MRVs (8.8 m). It is recommended that an information session/sheet for drivers (of delivery vehicles) accessing the loading dock shall be prepared detailing physical constraints and ways to negotiate tight turns safely.

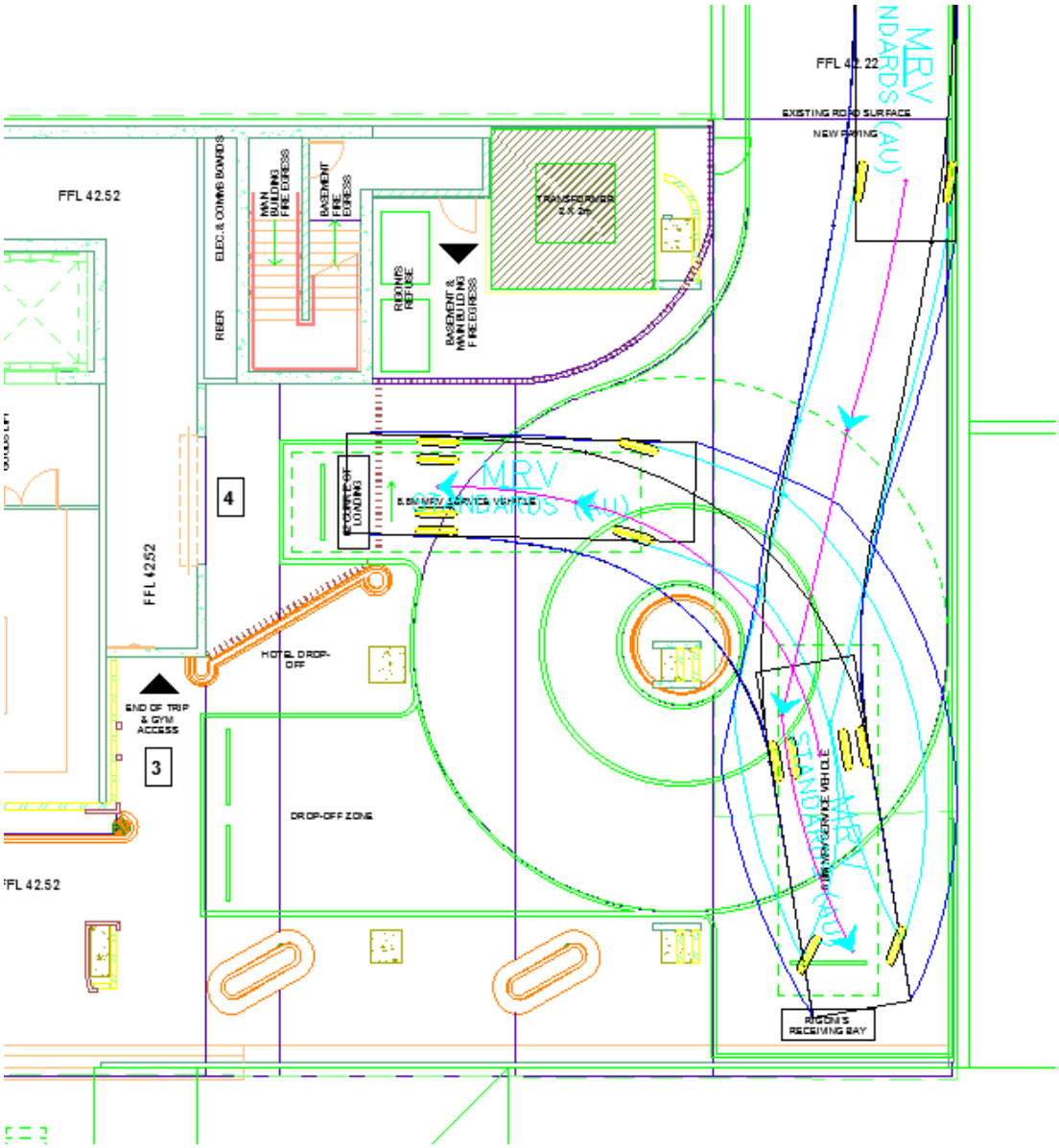


Figure 5.5 Turn path for 8.8 m MRV accessing loading area

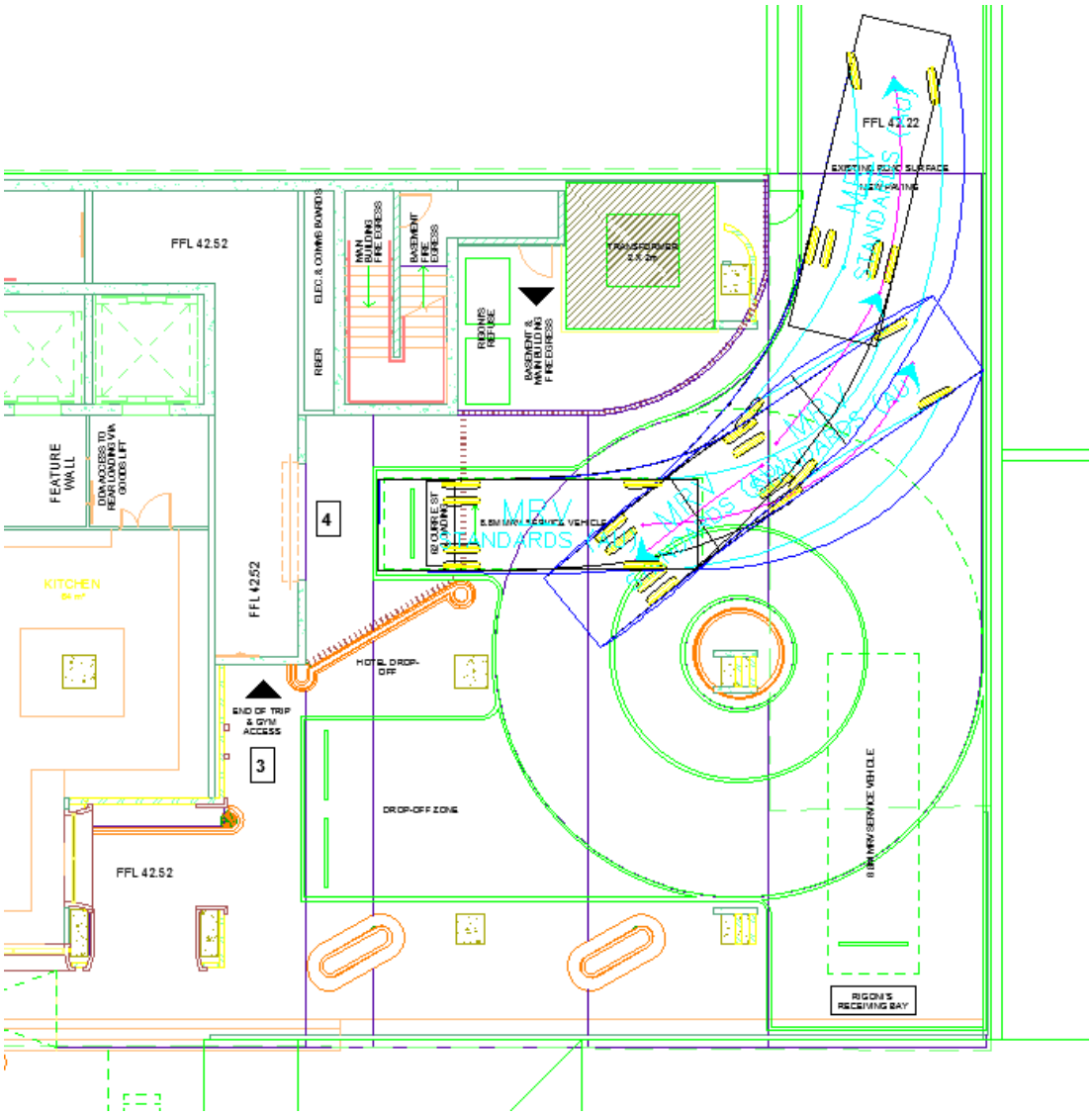


Figure 5.6 Turn path for 8.8 m MRV exiting from loading area

5.3.3 DELIVERY FREQUENCY

The following delivery frequency was assumed for the proposed development:

- one linen delivery/pick up per day for boutique hotel
- two food and beverage delivery trips per day for café/restaurant/bar
- three waste collection trips per day (averaged from 19 trips per week).

Thus, a total six delivery truck movements per day are estimated to access loading dock. These deliveries will need to be managed to avoid peak and business hours to minimise impact on drop-off/pick up zone from Schrader Street.

5.3.4 LOADING AREA OPERATIONS

The development proposal includes creation a loading bay, within the property boundary, accessible from Schrader Street. The development proposal also includes provision for a second loading bay at the eastern end of Schrader Street. Turn path assessment has indicated that two commercial vehicles (LRVs and/or MRVs) will find it challenging to pass each other along Schrader Street or Kingston Street. Furthermore, an MRV will require the full intersection footprint to negotiate narrow junctions along Solomon Street and Schrader Street.

It is recommended that service vehicles and deliveries accessing the proposed development loading area (either the southern loading dock or the eastern loading dock) shall be managed efficiently to minimise impact on accessibility to drop-off area for the proposed development.

CoA enquired about potential use of the proposed development loading area as a turnaround space by light commercial vehicles servicing other businesses along Schrader Street – such that these vehicles exit Schrader Street (onto Kingston Street) in a forward motion. While this suggestion will benefit light commercial vehicles servicing other businesses in the vicinity, it will require some awareness on how to use when one of the two loading areas (for the proposed development) is occupied.

The following recommendations are made to efficiently manage loading area for the proposed development:

- preference for small rigid vehicles (SRV 6.5 m long); occasional medium rigid vehicles (MRV 8.8 m long)
- both loading bays to be accessed by reversing in
- delivery/service vehicle scheduling to be managed to avoid two vehicles arriving within 15-minutes (assumed delivery/service timeframe) of one another
- two delivery/service vehicles (MRVs) arriving within 15-minutes of one another will impact on access to drop-off area;
- *in a scenario where two vehicles servicing the proposed development arriving within 15-minutes of one another*, the first vehicle to access the southern loading bay by reversing in, second vehicle arriving shall wait in the eastern loading bay until the first service/delivery vehicle leaves the southern loading bay dock. Service/delivery vehicle arriving later (second) will then reverse into the southern loading bay.
- *in a scenario where two vehicles servicing the proposed development and Rigoni's arrive within 15-minutes of one another,* first arriving vehicle to access designated loading bay by reversing in. vehicle arriving second shall wait in the other loading bay until the first vehicle leaves, then turnaround to access designated bay by reversing in
- service/delivery vehicles for the Grand Chancellor are encouraged to use the southern loading bay for reverse entry into its undercover loading area located north of Schrader Street.

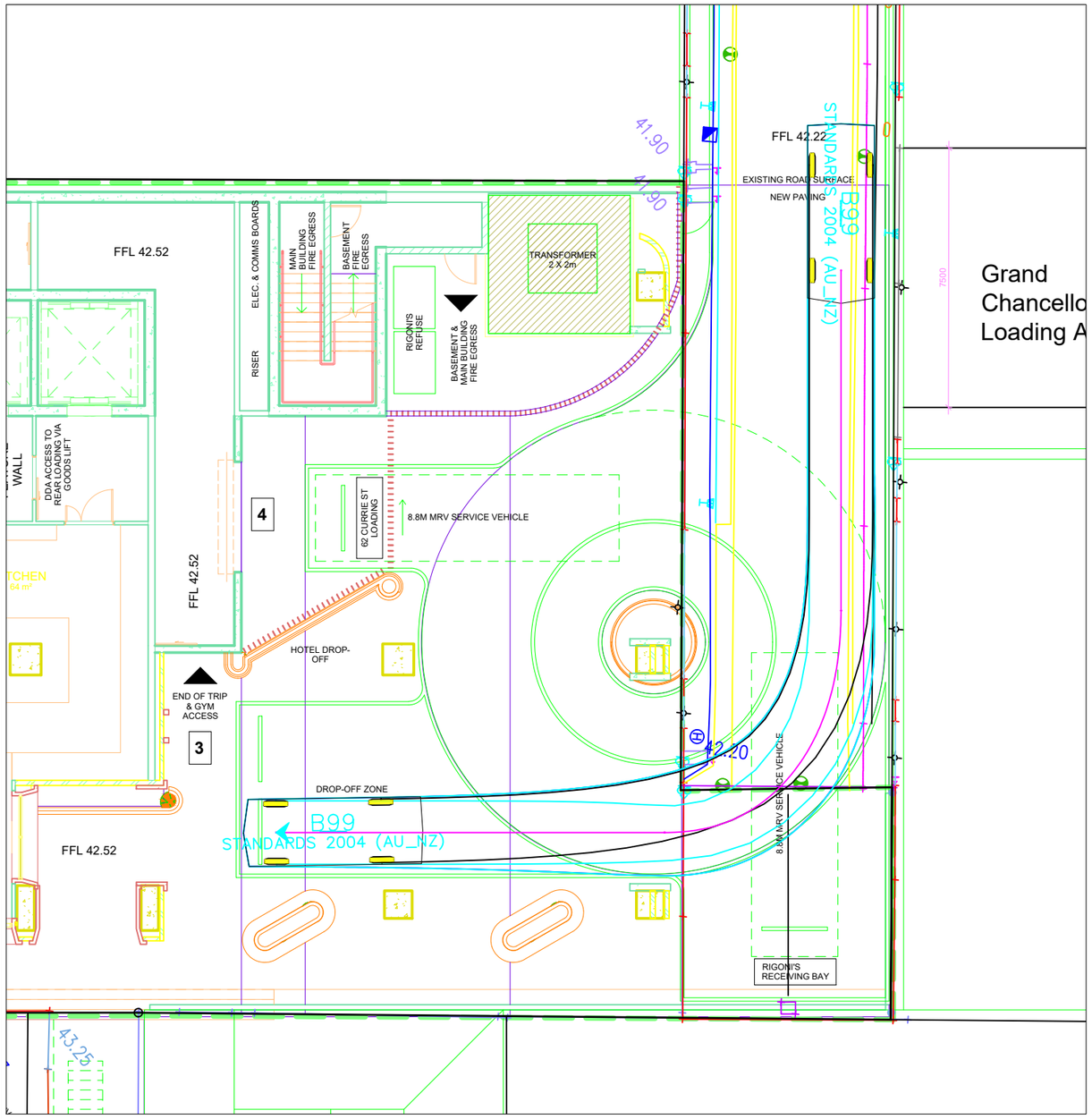
6 SUMMARY

Based on the assessment presented in this report the following conclusions and recommendations are made:

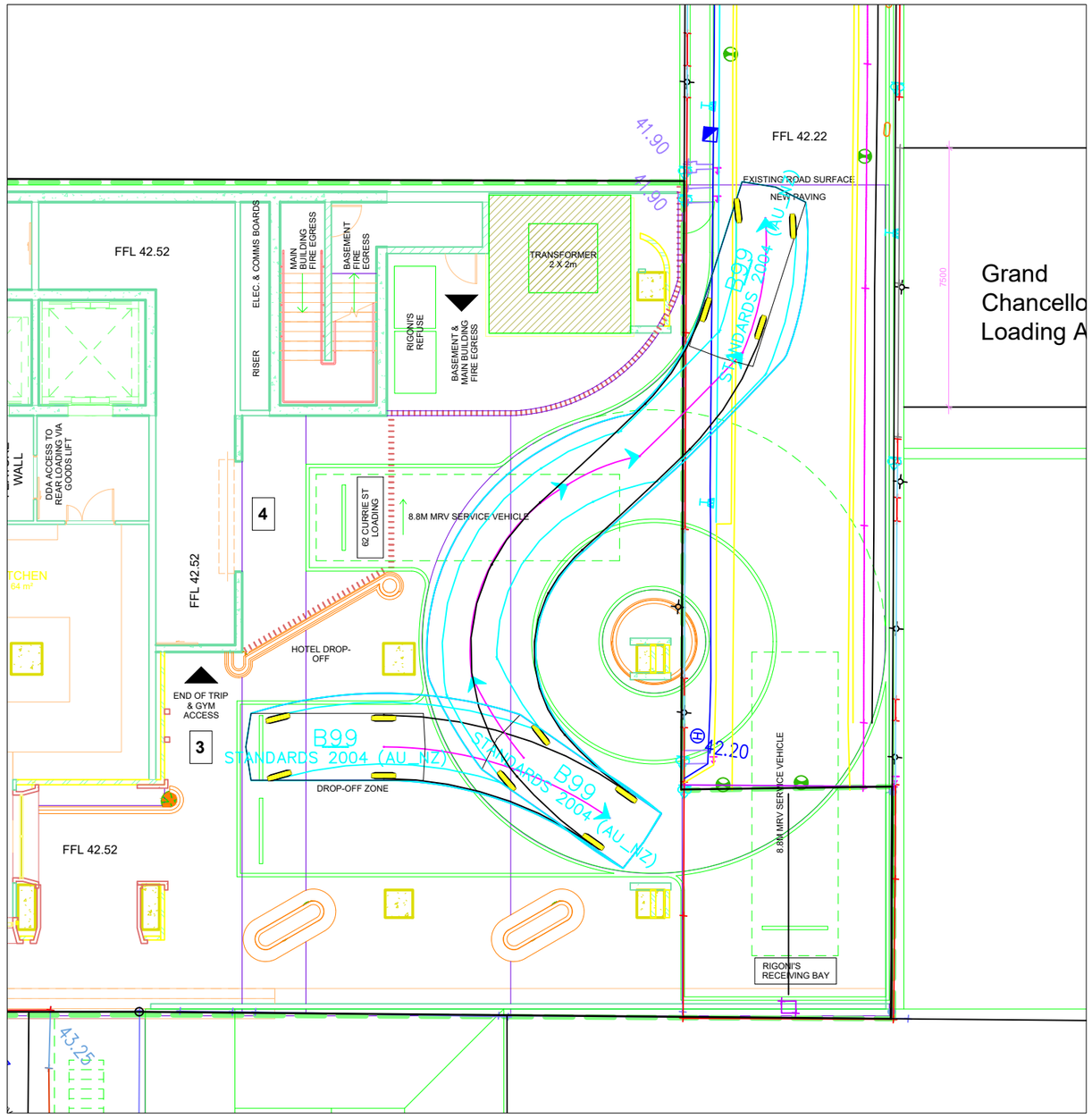
- The proposed mixed-use development will replace the existing building used by Avant Garde Furnishing store.
- The existing furnishing store was conservatively estimated to generate 34 peak hour vehicular trips and up to 410 daily vehicular trips.
- The proposed development was estimated to conservatively generate up to an additional 93 morning peak hour trips, 81 afternoon peak hour trips and 588 daily trips after discounting trips from existing store.
- Estimated traffic generated by the proposed development is deemed conservative due to lack of on-site vehicular parking provision thus requiring a private vehicle to be parked off-site and walking on foot to/from the development.
- Availability of taxi ranks on Currie Street in front of the development and within a short walking distance will facilitate easy pick-up and drop offs of hotel and restaurant guests and office staff/visitors.
- The proposed development site is located on priority public transport corridor offering excellent bus connectivity across metropolitan Adelaide. This is anticipated to reduce overall vehicular trips generated by the proposed development.
- Two car parking bays are proposed to the rear of the development site, accessible from Schrader Street, which can be used for passenger drop-off and pick-up.
- The drop-off and pick-up area car parks are DDA compliant (flushed with Schrader Street) and can accommodate vehicles used by people with disability/mobility impairment.
- A loading bay for the proposed development is also proposed at the rear, accessible from Schrader Street. Physical constraints of the surrounding local road network restrict the maximum service vehicle size to 8.8 m long (Medium Rigid Vehicles).
- The development proposal includes creation of a second loading bay at the eastern end of Schrader Street to service Rigoni's Restaurant. An operating procedure is recommended in this report for efficient management of loading bays to avoid any impact on access to drop off/pick up area for the proposed development.
- Up to six daily delivery trips are estimated to service the proposed development. Some of these deliveries may access on-street loading areas in close vicinity.
- A bicycle parking system capable of holding 72 bicycles (by Five at Heart), designed to relevant Australian Standards is proposed in the basement. End of trip facilities for cyclist are conveniently located adjacent to the bicycle parking area in the basement.
- Bicycle parking for visitors (22 spaces) is provided on the ground floor along Currie Street frontage and within the property boundary towards Schrader Street.
- The proposed development intends to create a laneway environment on the eastern side of the property facilitating pedestrian movement between Schrader Street and Currie Street.
- Overall, the proposed development is not deemed to have an adverse impact on the surrounding road network.

APPENDIX A

TURN PATH PROFILES



Passenger Vehicle (B99) accessing Drop-off area



Passenger Vehicle (B99) egressing from Drop-off area

REV	DATE	BY	DESCRIPTION	CHK	APPD

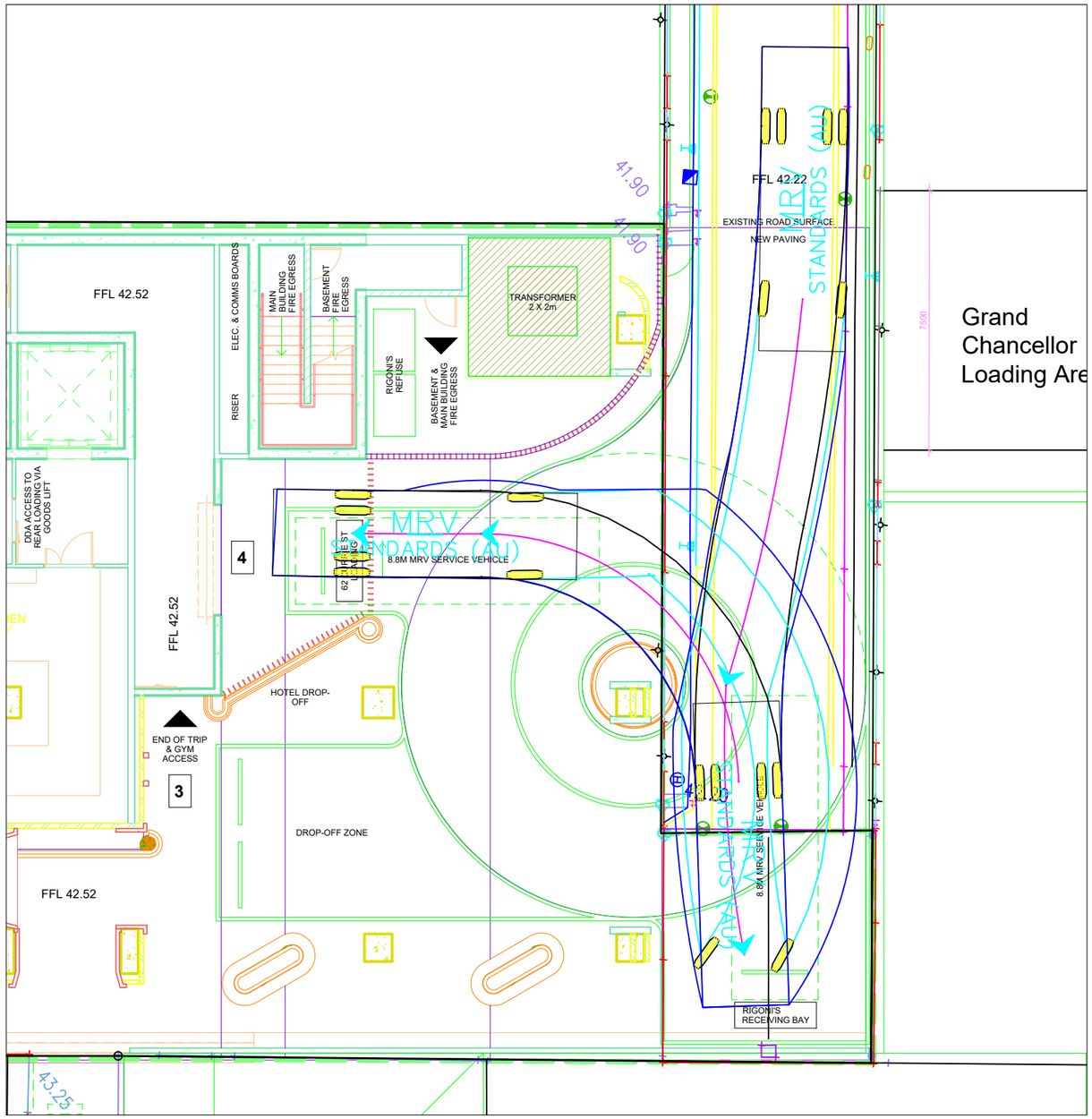
SCALE 1:200 @ A3

Level 1, 1 King William Street, Adelaide
GPO Box 398, SA 5000, Australia
Tel: +61 8 8405 4300 Fax: +61 8 8405 4301
www.wsp.com

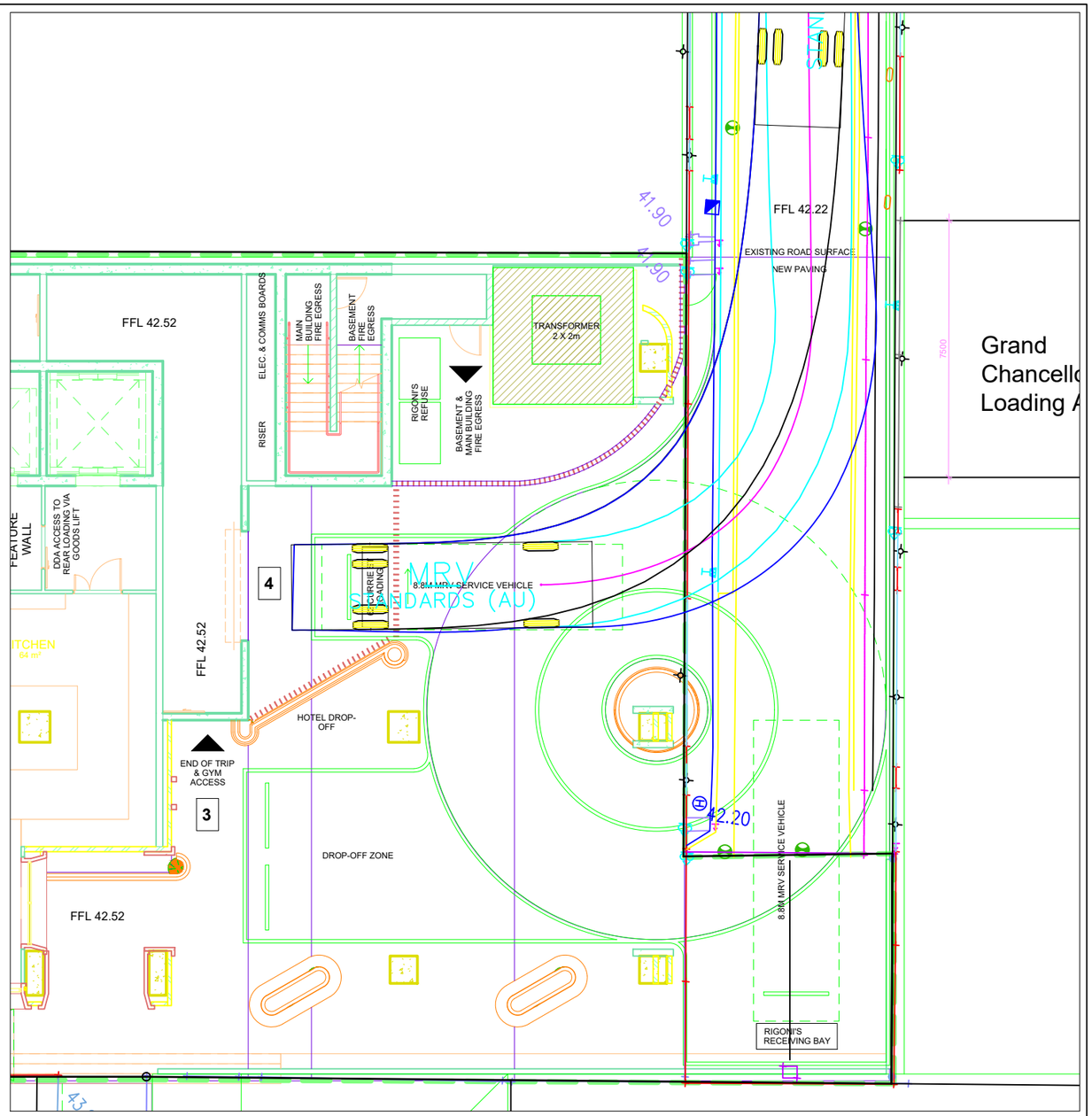
PROJECT DETAILS 62 Currie Street Mixed-use Development
Vehicle Turnpath @ Schrader St Drop-off area

DESIGNED:	CHECKED:	APPROVED:
AK		
PROJECT No:	DRAWN:	DATE:
PS111011	30/04/19	

DRAWING No: PS111011-TR-003 - - REV: 0



Medium Rigid Vehicle (MRV) - 8.8m Long -
Reverse Entry into Southern Loading Bay



Medium Rigid Vehicle (MRV) - 8.8m Long -
exiting Southern Loading Bay

REV	DATE	BY	DESCRIPTION	CHK	APPD

SCALE 1:200 @ A3

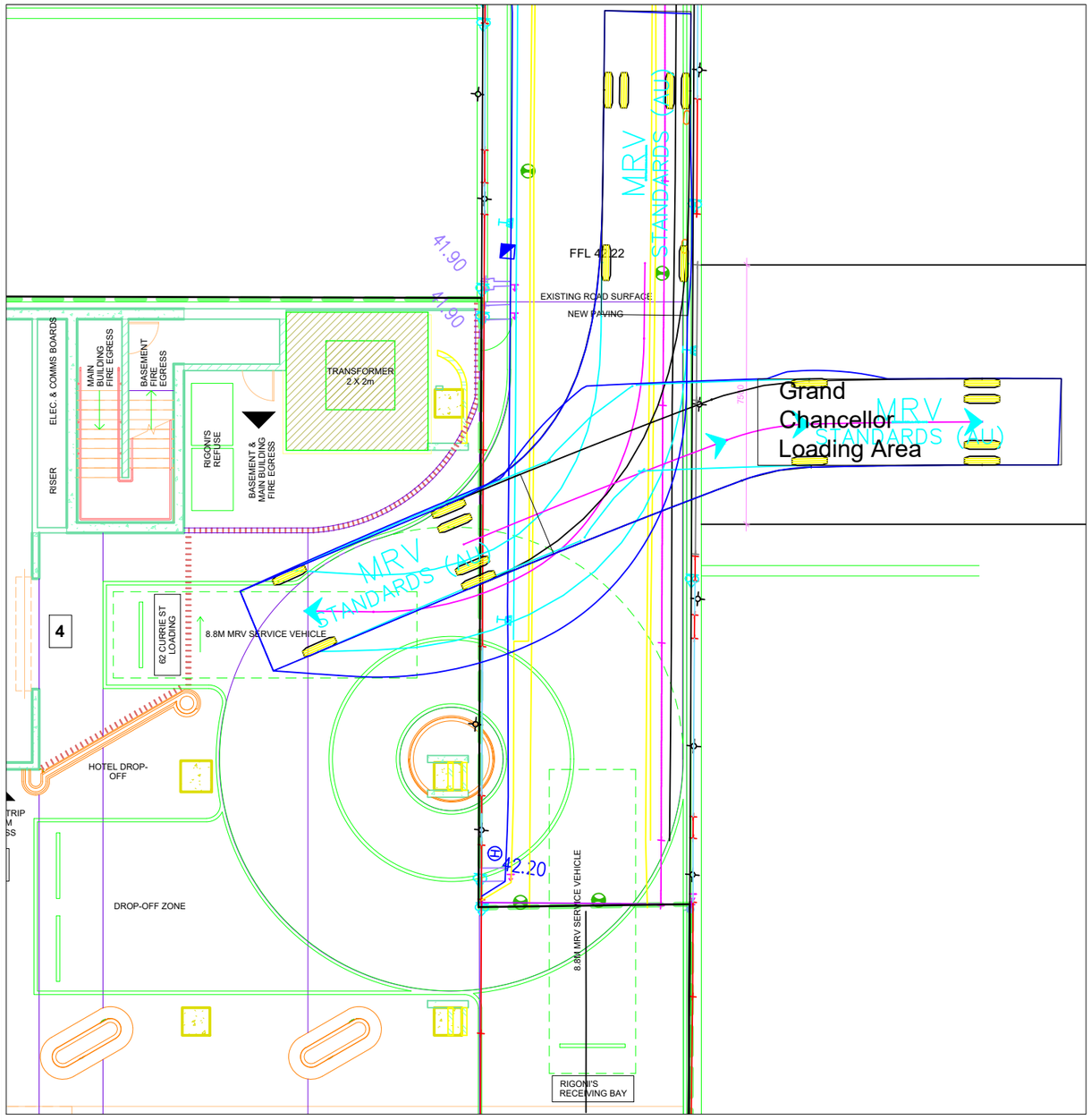
wsp
Level 1, 1 King William Street, Adelaide
GPO Box 398, SA 5000, Australia
Tel: +61 8 8405 4300 Fax: +61 8 8405 4301
www.wsp.com

PROJECT DETAILS 62 Currie Street Mixed-use Development
Vehicle Turnpath @ Schrader St Drop-off area

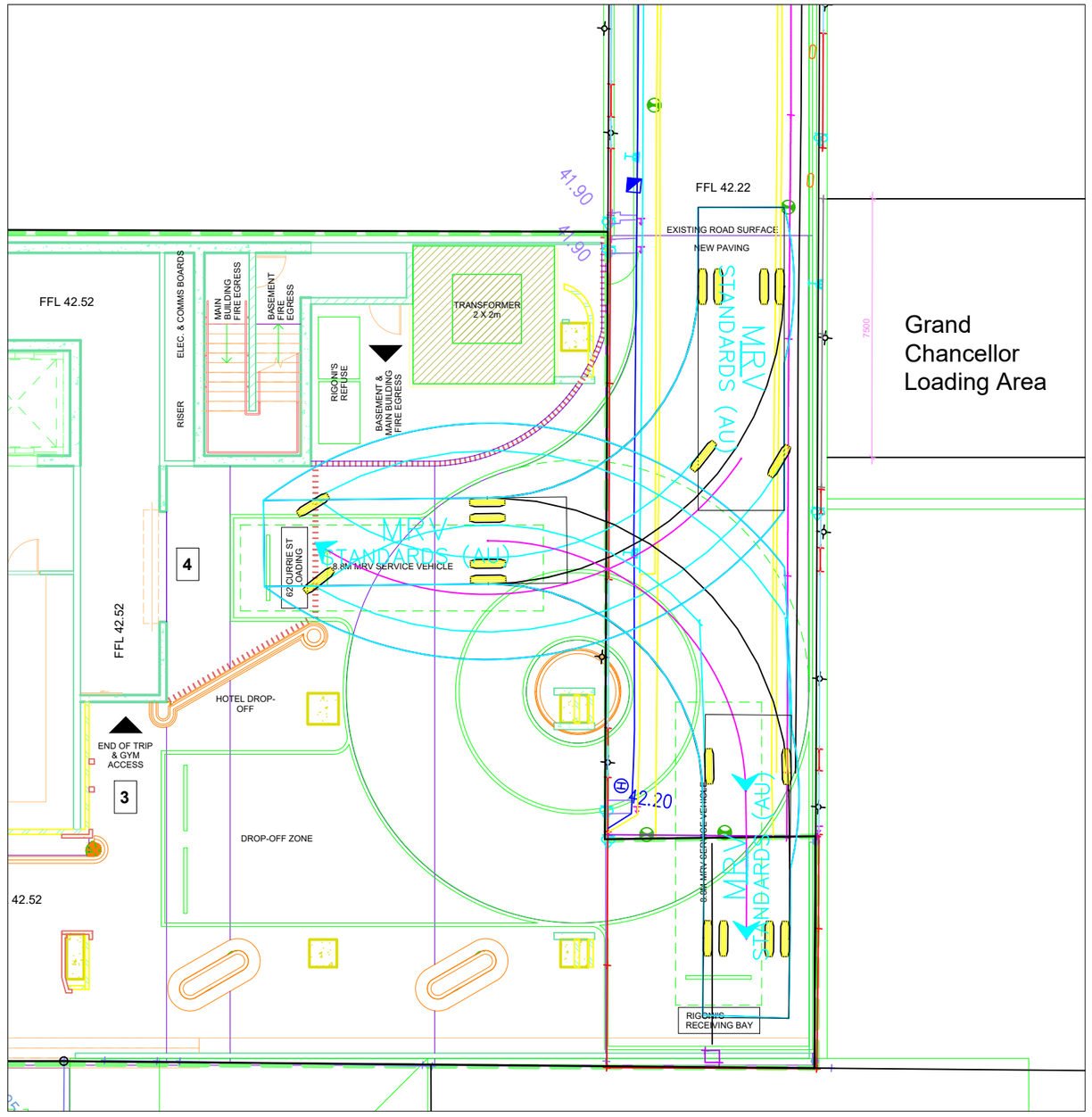
DESIGNED:	CHECKED:	APPROVED:
AK		
PROJECT No:	DRAWN:	DATE:
PS111011	30/04/19	

DRAWING No: PS111011-TR-001 - -

REV: 0



Medium Rigid Vehicle (MRV) - 8.8m Long - Reverse Entry into Grand Chancellor Loading Area



Medium Rigid Vehicle (MRV) - 8.8m Long - reverse access to Rigoni's Loading Bay

REV	DATE	BY	DESCRIPTION	CHK	APPD

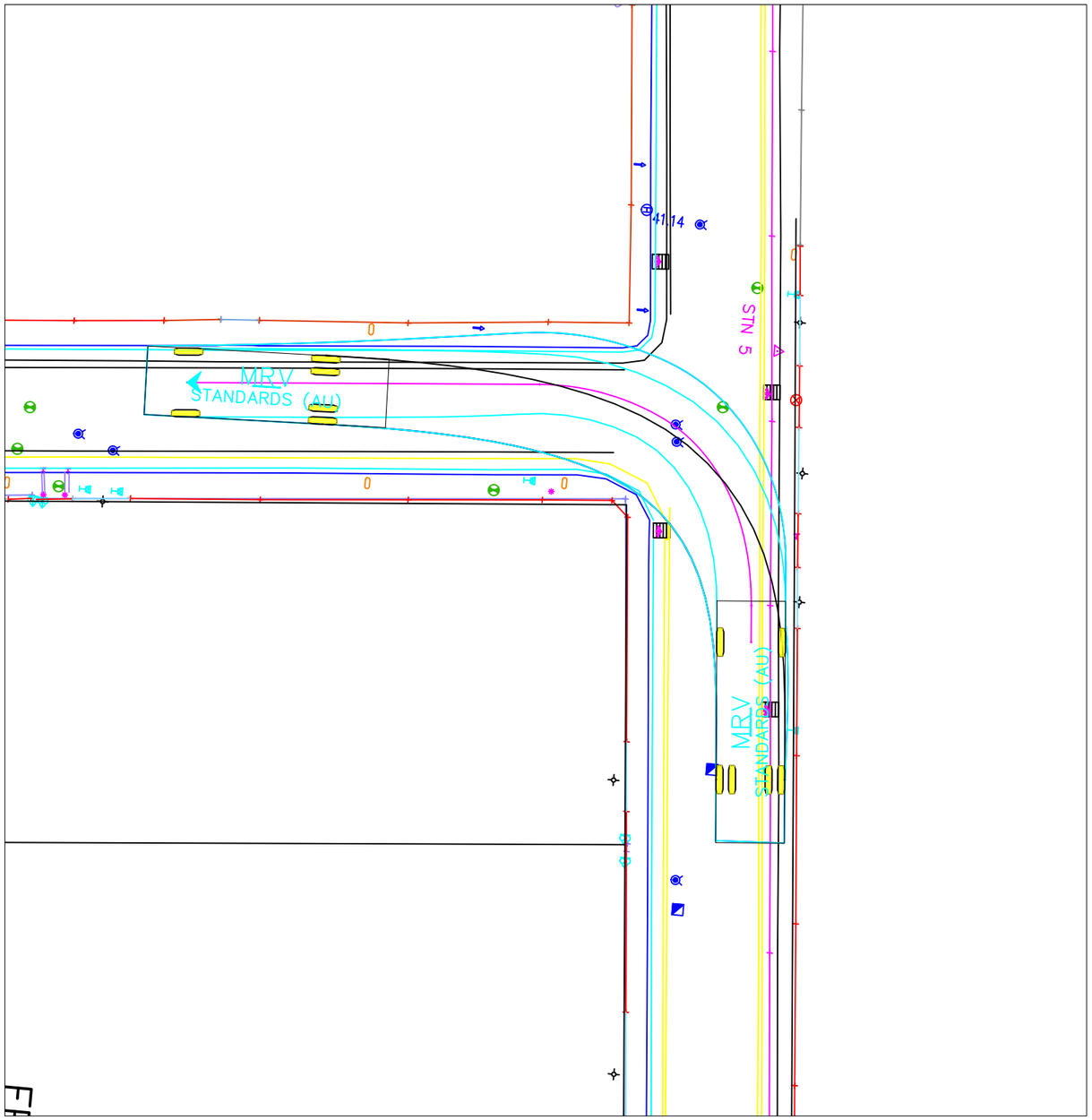
SCALE 1:200 @ A3

Level 1, 1 King William Street, Adelaide
GPO Box 398, SA 5000, Australia
Tel: +61 8 8405 4300 Fax: +61 8 8405 4301
www.wsp.com

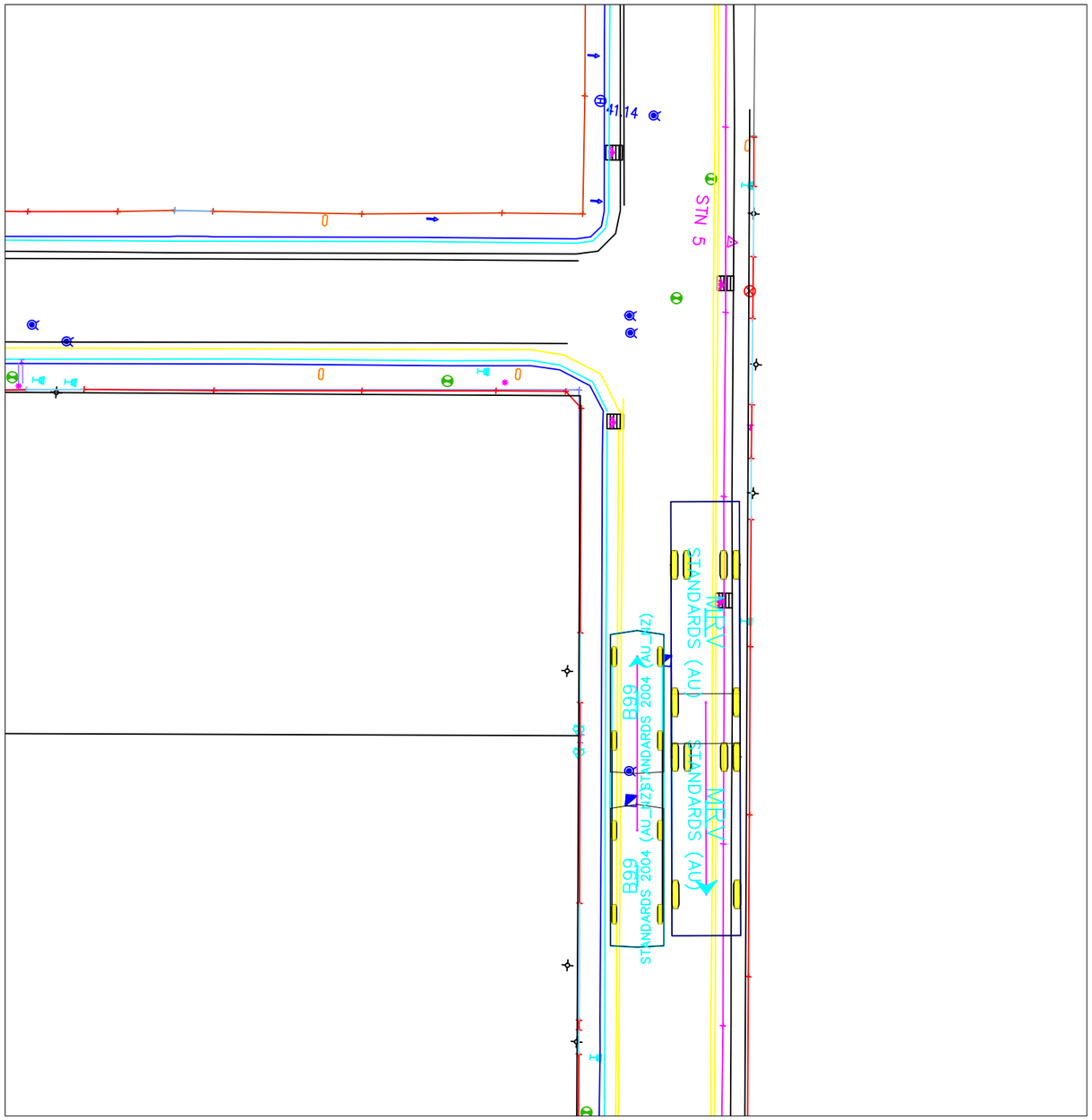
PROJECT DETAILS 62 Currie Street Mixed-use Development
Vehicle Turnpath @ Schrader St Drop-off area

DESIGNED:	CHECKED:	APPROVED:
AK		
PROJECT No:	DRAWN:	DATE:
PS111011	30/04/19	

DRAWING No: PS111011-TR-002 - - REV: 0



Passenger Vehicle (B99) accessing Drop-off area



Medium Rigid Vehicle (MRV) - 8.8m Long - passing a passenger vehicle (B99) in Schrader Street

REV	DATE	BY	DESCRIPTION	CHK	APPD

SCALE 1:200 @ A3

Level 1, 1 King William Street, Adelaide
GPO Box 398, SA 5000, Australia
Tel: +61 8 8405 4300 Fax: +61 8 8405 4301
www.wsp.com

PROJECT DETAILS 62 Currie Street Mixed-use Development
Vehicle Turnpath @ Schrader St Drop-off area

DESIGNED:	CHECKED:	APPROVED:
AK		
PROJECT No:	DRAWN:	DATE:
PS111011	30/04/19	

DRAWING No: PS111011-TR-004 - - REV: 0

APPENDIX B

CITY OF ADELAIDE COMMENTS AND WSP RESPONSE

No.	CoA Comment	WSP Response
1	Drawing DA201 shows service vehicles indicatively at the loading dock and also at a wheel stop at the end of Schrader Street. These vehicles appear to block access to/from the drop off zone. Additionally, when there is a vehicle in the loading dock, it would appear that a vehicle at the end of the street would need to reverse all the way back to Kingston Street. Can I please have some explanation on how this space is proposed to be used and managed, particularly given the large number of waste pick-ups required for the development?	Refer to **Section 5.3.4** of TIS report for details on how the proposed two loading docks would work in tandem.
2	Can these "loading" areas be used by others in the street (general waste vehicles, other loading vehicles) to assist with turning around and therefore entering and exiting the street in a forward manner?	Refer to **Section 5.3.4** of TIS report for details on how the proposed two loading docks would work in tandem.
3	Can the drop-off zone off Schrader Street be used for people with a disability/mobility impairment?	Yes, it has been designed for use by people with disabilities. Refer to **Section 3.3.4** of TIS report for details.
4	Can people (pedestrians, people with mobility aids and cyclists) filter through to Schrader Street when the drop-off zones are in use?	The proposed drop-off parking is flushed with Schrader Street and pedestrian path along the eastern boundary which connects to Currie Street offering new pedestrian/cyclist connection. Please refer to **Section 3.3.4** of TIS report.
5	How do people connect between the drop-off zone and nearby car parking?	Plaza car park is located approximately 75 m from drop-off zone. Visitors using car parks nearby will be able to use existing footpath on the southern side of Schrader Street to access drop off zone. As mentioned in response to comment 4 above, the proposed pedestrian connection along the eastern boundary between Currie Street and drop-off area along Schrader Street provides for a new pedestrian connection.
6	Can the resultant traffic volumes, that are substantially increased by this development, be supported given the existing narrow road width of Schrader Street (kerb to kerb is only 4.65 metres).	Trip generation presented in the TIS indicates up to 32 peak hour trips using Solomon Street and/or Schrader Street. It is worth noting that the Plaza car park has two entrances one each from Solomon Street and Hindley Street, while Rosina Street car park is accessible from Hindley Street (via Rosina Street) only. As such traffic generated by the proposed development will be split into traffic destined to nearby car parks and to Schrader Street drop off area. Traffic originating from these two car parks will likely travel via Kingston Street and Rosina Street or Solomon/Burnett Street to access/egress Currie Street. Again no impact on Schrader Street traffic. In reality, a small fraction of estimated 32 peak hour trips will likely be using Schrader Street to access drop-off area. Refer to Appendix A for turn paths showing two vehicles passing in Schrader Street.

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2014/11234/01

Ref No:
13869549

16 April 2019

Ms Janaki Benson
Senior Planning Officer
Planning and Land Use Services
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
Adelaide SA 5000

janaki.benson@sa.gov.au

For the attention of the State Commission Assessment Panel

62 Currie Street Adelaide

Further to the referral 029/A019/19 received 18 March 2019 pertaining to the development application at the above address and in my capacity as a statutory referral in the State Commission Assessment Panel, I am pleased to provide the following comments informed by the Design Review process for your consideration.

The proposal was presented to the Design Review panel on two occasions, over which period the design response progressed. Due to time constraints a pre-lodgement agreement was not reached in advance of lodgement.

I support the project team's aspirations to deliver a mixed use development in this part of the city. I also strongly support the inclusion of a publicly accessible link between Currie and Schrader Street as part of the proposal. I am of the opinion that any development on this site has a responsibility to deliver a high benchmark for design due to the site's prime location. Fulfilling this responsibility will be contingent on achieving a high quality design outcome particularly in terms of built form and architectural expression, materiality and detailing, and contribution to public realm. I support the proposal in principle and encourage continuing design development during the upcoming phases of the project to ensure full delivery of the design intent as presented.

The site of approximately 1236 square metres is located on the north side of Currie Street and west of Leigh Street and currently comprises a two storey commercial brick building. The Currie Street/southern frontage is 24.5 metres in width. To the rear/north of the site is Schrader Street, a dead end laneway that provides access to a number of commercial properties to the east, west and north of the site including the Hotel Grand Chancellor on Hindley Street. A number of Local and State heritage places are within the immediate locality on Currie and Leigh Streets. To the immediate east of the site is a narrow trafficable easement on the site of 54 Currie Street, a three storey red brickwork Local heritage place named Commerce House. To the north of Commerce House is the Local heritage listed five storey Woodchester House that currently houses the restaurant Rigoni's. A right of way exists between the two Local heritage places at the northern end of the narrow easement adjacent Commerce House.

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File No:
2014/11234/01

Ref No:
13869549

A single storey extension to the Rigoni's restaurant has been built on this right of way. The site is sloped from north to south, with a 700mm high point at Schrader Street.

A number of tall hotel and apartment buildings have recently been approved or are in construction in the vicinity. A 32 level mixed use Sofitel hotel located at 104-108 Currie Street, at the north east corner of Rosina Street, has commenced construction. The Sofitel site connects to a rear laneway named Solomon Street that is the continuation of Schrader Street to the west. Another hotel/residential apartment building has been approved on the north west corner of King William and Currie Streets. The proposed building will be 39 levels with an overall height of 132.44 metres.

This proposal is for a mixed use development that includes an active ground floor plane with cafe, restaurant, office and hotel arrival, one basement level, one level of conference facilities above the ground floor lobby, 11 office levels, 10 hotel levels accommodating 198 rooms, and a double height rooftop bar and plant services area. The proposal is for a 25 level development with an above ground height of approximately 92 metres (135.17 AHD). I recognise the potential for a tower of this size in this location and support the height in principle. I also support the proposed mix of uses and integrated ground floor arrival space.

The design seeks to enhance the laneway culture and precinct pedestrian links through the ground plane of the building by expansion of the public realm to create a new laneway within the site, effectively widening the existing easement/laneway of Commerce House, and connecting Schrader Street to Currie Street. The connection aims to reinforce the City of Adelaide's laneway activation strategy and seeks to facilitate potential future linkages to Leigh Street. Vehicle access is proposed via Schrader Street with the inclusion of a vehicle turn around and drop off bay for hotel guests and an on-site loading bay for refuse collection and delivery vehicles. Above the ground floor, the lower 12 floor levels are partially built to the east boundary adjacent the Rigoni's restaurant, and to the north portion of the site, creating an undercroft space for the laneway.

I strongly support the design intent to connect Schrader Street to Currie Street, enhance the laneway culture and address existing Crime Prevention through Environmental Design (CPTED) issues. I support the reduction in built form to the north east corner of the building at ground level to improve sightlines from Currie Street through the laneway to Schrader Street. I also support the introduction of low level planters, seating, bicycle parking and feathered stairs from the east right of way and a lighting strategy to improve the pedestrian experience. The ground floor level of the development has a level threshold to Currie Street and the 700mm difference in the topography of the site is accommodated through a new 1:20 sloped walkway to the laneway. In my view, the ground plane materiality, detailing and scale of landscape elements are critical to a visually and spatially connected and welcoming laneway link. To that end, I support the proposal for a consistent ground plane material of large format granite pavers that extends from Currie Street through to Schrader Street.

I support the proposal to provide adequate separation of the front of house functions from the servicing requirements to the rear of the site with the view to provide a welcoming arrival experience for hotel patrons. I also support the design testing of the laneway and connections from Currie Street to Schrader Street and

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encourage ongoing design development in the next stages of the project to include accommodation of the development's planters within the confines of the subject site. I also recommend further review of landscape elements, signage and accessibility considerations to the laneway and entries are undertaken in the next phase of design development, including luminance contrast and tactile indicators to ensure an integrated design outcome and a generosity of space. Additionally I recommend ongoing consultation with the City of Adelaide regarding material selection and lighting to ensure integration with broader streetscape improvements in the precinct.

With the view to further improve the contribution to the public realm, I support the inclusion of the hotel arrival space, cafe and restaurant on the ground floor to maximise activation of the ground floor and contribute to addressing existing CPTED issues. I also support the open stair between the ground and first floor levels that provides visual and volumetric connections and further improves the activation of Currie Street.

A three storey podium element is proposed to Currie Street with the intention to reflect the height of the adjacent Commerce House. The podium is characterised by brickwork, glass bricks and expressed arches to reflect the vertical fenestration proportions of the Local heritage buildings in the immediate locality. White powdercoated steel canopies with curved frames are proposed over each main ground floor entry. I support the design approach to reflect the fine grain character of the area with a simple and materially textured podium. However I recommend further review of the design, detailing and materiality of the canopies to better reflect the simplicity of the extruded arch form and improve the visibility of the double height arches from ground level. In my view, a simple extruded glass arch canopy will assist with reinforcing the expression of the arches and an integrated design outcome.

Above the podium, the design intent is for a singular tower form with expressed concrete frame to all elevations. The box frame intends to define each building level, with a double height frame proposed to the crown of the building which I support. Facade setbacks from the east and west site boundaries further emphasise the vertical proportions of the tower and provide additional natural light to the upper levels. The office levels are distinctly expressed on the east elevation through a projecting glass form. I support the massing and overall composition of the development. I also support the approach for a simple, singular expression that presents as a slender built form. The proposed building scale in the current predominantly low scale context results in a high degree of visibility in the round. Therefore any development on this site must make a generous and positive contribution to the streetscape and city skyline on all elevations. I support the design development of the west elevation to provide an expressed concrete frame and reinforce the singular expression of the tower. In my view, the inclusion of the expressed frame to the west elevation is critical to delivery of the design intent of a building in the round.

I recognise the potential for the design direction and controlled material palette to deliver a high quality outcome. In my view, the quality and detailing of the precast concrete and glass will be critical to a successful design outcome and delivery of the design intent. The change in use from office to hotel at level 13 is expressed through a change in materiality, projected form, expression of the grid layout of the facades and introduction of a minor curve to the concrete frame which I support. The hotel rooms are proposed with glazing selections of varying percentages of

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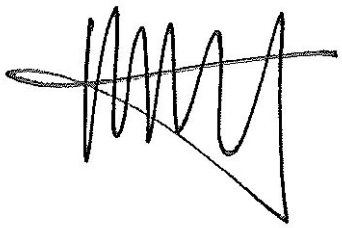
clear to opaque glass in response to the individual facade orientations. In my view, the glazing selection as well as their alignment, detailing and relationship with the expressed concrete frames are critical to delivery of a refined built form articulation. I recommend holistic review of the facades to deliver the envisaged singular architectural expression while ensuring outlook for hotel guests and satisfying the solar load management requirements.

Bicycle access is envisaged from Schrader Street or the new laneway off Currie Street, with 72 bicycle parking spaces in a custom stacking system and End of Trip (EOT) facilities proposed in the basement level. I commend the decision to exclude car parking from the proposal due to the site's prime city location and acknowledge the movement strategy for cyclists from ground level to the basement to provide convenient access and safety for users.

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:

- A high quality of external materials supported by a materials sample board.
- Review of the design, detailing and materiality of the entry canopies to better reflect the simple extruded arch form, improve the visibility of the double height arches from ground level and an integrated design outcome.
- Detailing of the expressed precast concrete frames, glazing selection, frame detailing and alignment to ensure delivery of the design intent.

Yours sincerely



Kirsteen Mackay
South Australian Government Architect

cc Belinda Chan ODASA belinda.chan@sa.gov.au

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Government of South Australia

5 April 2019

Janaki Benson
Department of Planning, Transport & Infrastructure
GPO Box 1815
ADELAIDE SA 5001

Dear Janaki,

DEVELOPMENT NUMBER: **DA 020/A019/19**
APPLICANT: **Currie St Pty Ltd**
NATURE OF DEVELOPMENT: **25-storey mixed use hotel and office accommodation**
SUBJECT LAND: **62-66 CURRIE ST ADELAIDE SA 5000**

The application has been assessed and the building at a proposed height of RL 135.170m AHD the application **will** penetrate the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations.

The application will require approval in accordance with the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 and therefore will be forwarded to the Department of Infrastructure and Regional Development for their approval.

The developments will penetrate the OLS by approximately 35 metres.

If the development is approved by the Department of Infrastructure, Regional Development and Cities any associated lighting would also need to conform to the airport lighting restrictions and shielded from aircraft flight paths.

Crane operations associated with construction, if approved, will also be subject to a separate application.

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

Adelaide Airport

Adelaide Airport Limited
1 James Schofield Drive
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Central Business Policy Area 13

Introduction

The Objectives and Principles of Development Control that follow apply to the Policy Area as shown on Maps Adel/49, 50, 55 and 56. They are additional to those expressed for the Zone and, in cases of apparent conflict, take precedence over the Zone provisions. In the assessment of development, the greatest weight is to be applied to satisfying the Desired Character for the Policy Area.

DESIRED CHARACTER

The Central Business Policy Area is the pre-eminent economic, governance and cultural hub for the State. This role will be supported by educational, hospitality and entertainment activities and increased opportunities for residential, student and tourist accommodation.

Buildings will exhibit innovative design approaches and produce stylish and evocative architecture, including tall and imposing buildings that provide a hard edge to the street and are of the highest design quality. A wide variety of design outcomes of enduring appeal are expected. Complementary and harmonious buildings in individual streets will create localised character and legible differences between streets, founded on the existing activity focus, building and settlement patterns, and street widths.

OBJECTIVES

Objective 1: A concentration of employment, governance, entertainment and residential land uses that form the heart of the City and central place for the State.

Objective 2: Development of a high standard of design and external appearance that integrates with the public realm.

Objective 3: Development that contributes to the Desired Character of the Policy Area.

PRINCIPLES OF DEVELOPMENT CONTROL

Land Use

1 Development should contribute to the area's role and function as the State's premier business district, having the highest concentration of office, retail, mixed business, cultural, public administration, hospitality, educational and tourist activities.

2 Buildings should be of a height that ensures airport operational safety is not adversely affected.

3 To enable an activated street level, residential development or similar should be located above ground floor level.

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 though 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, Benthem 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 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.

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.

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.

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 though 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.

13 Buildings north of Rundle Mall, Rundle Street, Hindley Street and Gouger Street should have a built form that incorporates slender tower elements, spaces between buildings or other design techniques that enable sunlight access to the southern footpath.

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.

The Squares (Victoria, Hindmarsh and Light)

17 Outdoor eating and drinking facilities associated with cafés and restaurants are appropriate ground floor uses and should contribute to the vitality of the Squares and create a focus for leisure.

18 Buildings fronting the Squares should:

(a) provide a comfortable pedestrian and recreation environment by enabling direct sunlight to a minimum of 75 percent of the landscaped part of each Square at the September equinox; and

(b) reinforce the enclosure of the Squares with a continuous built-form with no upper level set-backs.

The Terraces (North, East and West)

19 Development along the terraces should contribute to a continuous built form to frame the City edge and activate the Park Lands.

20 Development along North Terrace should reinforce the predominant scale and ‘City wall’ character of the Terrace frontage.

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.

Interface

23 Development should manage the interface with the City Living Zone or the Adelaide Historic (Conservation) Zone 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.

24 Development on all sites on the southern side of Gouger Street - Angas Street and adjacent to a northern boundary of the City Living Zone or the Adelaide Historic (Conservation) Zone should not exceed 22 metres in building height unless the Council Wide overshadowing Principles of Development Control are met.

25 Parts of a development that exceed the prescribed maximum building height shown on Concept Plan Figures CC/1 and 2 that are directly adjacent to the City Living, Main Street (Adelaide) and Adelaide Historic (Conservation) Zone boundaries should be designed to minimise visual impacts on sensitive uses in the adjoining zones and to maintain the established or desired future character of the area. This may be achieved through a number of techniques such as additional setback, avoiding tall sheer walls, centrally locating taller elements, providing variation of light and shadow through articulation to provide a sense of depth and create visual interest, and the like.

Movement

26 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.

27 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.

28 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).

29 Car parking should be provided in accordance with Table Adel/7.

30 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).

31 Multi-level, non-ancillary car parks are inappropriate within the Core Pedestrian Area as shown on Map Adel/1 (Overlays 2, 2A and 3).

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.

Advertising

33 Other than signs along Hindley Street, advertisements should use simple graphics and be restrained in their size, design and colour.

34 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.

35 There should be an overall consistency achieved by advertisements along individual street frontages.

36 In Chesser Street, French Street and Coromandel Place advertisements should be small and preferably square and should not be located more than 3.7 metres above natural ground level or an abutting footpath or street. However, advertisements in these streets may be considered above 3.7 metres at locations near the intersections with major streets.

37 Advertisements on the Currie Street frontages between Topham Mall and Gilbert Place and its north-south prolongation should be of a size, shape and location complementary to the desired townscape character, with particular regard to the following:

(a) On the southern side of Currie Street, advertisements should be fixed with their underside at a common height, except where the architectural detailing of building façades precludes it. At this 'canopy' level advertisements should be of a uniform size and fixed without the support of guy wires. Where architectural detailing permits, advertisements may mark the major entrances to buildings along the southern side of Currie Street with vertical projecting advertisements 1.5 metres high by 1.2 metres wide at, or marginally above, the existing canopy level. Painted wall or window signs should be restrained.

(b) On the northern side of Currie Street, advertisements should be of a uniform fixing height and consistent dimensions to match those prevailing in the area.

PROCEDURAL MATTERS

Complying Development

38 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).

Non-complying Development

39 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, 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.

Total 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

40 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 the City Living Zone or Adelaide Historic (Conservation) 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.

Council Wide

Environmental

Crime Prevention Through Urban Design

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

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

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

(i) orientating windows, doors and building entrances towards the street**,** open spaces, car parks, pedestrian routes and public transport stops;

(ii) avoiding high walls, blank facades, carports and landscaping that obscures direct views to public areas;

(iii) arranging living areas, windows, pedestrian paths and balconies to overlook recreation areas, entrances and car parks;

(iv) 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.

83 Residential development should be designed to overlook streets, public and communal open space to allow casual surveillance**.**

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

85 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.

86 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

89 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.

93 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 City Living Zone, the Adelaide Historic (Conservation) 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.

94 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

95 Noise sensitive development should incorporate adequate noise attenuation measures into their design and construction to provide occupants with reasonable amenity when exposed to noise sources such as major transport corridors (road, rail, tram and aircraft), commercial centres, entertainment premises and the like, and from activities and land uses contemplated in the relevant Zone and Policy Area provisions.

96 Noise sensitive development in mixed use areas should not unreasonably interfere with the operation of surrounding non-residential uses that generate noise levels that are commensurate with the envisaged amenity of the locality.

Waste Management

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

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

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

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

(a) containing a dedicated area for the collection and sorting of construction waste and recyclable building materials;

(b) on-site storage and management of waste;

(c) disposal of non-recyclable waste; and

(d) incorporating waste water and stormwater re-use including the treatment and re-use of grey water.

104 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

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

106 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

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

(h) use of landscaping.

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

108 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.

109 Orientation and pitch of the roof should facilitate the efficient use of solar collectors and photovoltaic cells.

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

111 New buildings should be readily adaptable to future alternative uses.

112 Selection of internal materials for all buildings should be made with regard to internal air quality and ensure low toxic emissions, particularly with respect to paint and joinery products.

Office Development

115 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.

Renewable Energy

OBJECTIVES

Objective 31: The development of renewable energy facilities, such as wind and biomass energy facilities, in appropriate locations.

Objective 32: Renewable energy facilities located, sited, designed and operated to avoid or minimise adverse impacts and maximise positive impacts on the environment, local community and the State.

PRINCIPLES OF DEVELOPMENT CONTROL

116 Renewable energy facilities, including wind farms, should be located, sited, designed and operated in a manner which avoids or minimises adverse impacts and maximises positive impacts on the environment, local community and the State.

117 Renewable energy facilities, including wind farms, and ancillary developments should be located in areas that maximise efficient generation and supply of electricity.

118 Renewable energy facilities, including wind farms, and ancillary development such as substations, maintenance sheds, access roads and connecting power-lines (including to the National Electricity Grid) should be located, sited, designed and operated in a manner which:

(a) avoids or minimises detracting from the character, landscape quality, visual significance or amenity of the area;

(b) utilises elements of the landscape, materials and finishes to minimise visual impact;

(c) avoids or minimises adverse impact on areas of native vegetation, conservation, environmental, geological, tourism or built or natural heritage value;

(d) does not impact on the safety of water or air transport and the operation of ports, airfields and designated landing strips;

(e) avoids or minimises nuisance or hazard to nearby property owners/occupiers, road users and wildlife by way of:

(i) shadowing, flickering, reflection and blade glint impacts;

(ii) noise;

(iii) interference to television and radio signals;

(iv) modification to vegetation, soils and habitats; and

(v) bird and bat strike.

Micro-climate and Sunlight

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

119 Development should be designed and sited to minimise micro-climatic and solar access impact on adjacent land or buildings, including effects of patterns of wind, temperature, daylight, sunlight, glare and shadow.

120 Development should be designed and sited to ensure an adequate level of daylight, minimise overshadowing of buildings, and public and private outdoor spaces, particularly during the lunch time hours.

121 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 City Living Zone, Adelaide Historic (Conservation) Zone and North Adelaide Historic (Conservation) Zone.

122 Glazing on building facades should not result in glare which produces discomfort or danger to pedestrians, occupants of adjacent buildings and users of vehicles.

123 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.

124 Weather protection should not be introduced where it would interfere with the integrity or heritage value of heritage places or unduly affect street trees.

125 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

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

126 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.

127 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.

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

129 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.

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

131 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

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

132 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.

133 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.

134 Infrastructure and utility services, including provision for the supply of water, gas and electricity should be put in common trenches or conduits.

135 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.

Heritage and Conservation

OBJECTIVES

Objective 42: Acknowledge the diversity of Adelaide's cultural heritage from pre-European occupation to current time through the conservation of heritage places and retention of their heritage value.

Objective 43: Development that retains the heritage value and setting of a heritage place and its built form contribution to the locality.

Objective 44: Continued use or adaptive reuse of the land, buildings and structures comprising a heritage place.

Objective 45: Recognition of Aboriginal sites, items and areas which are of social, archaeological, cultural, mythological or anthropological significance.

PRINCIPLES OF DEVELOPMENT CONTROL

General

136 Development of a heritage place should conserve the elements of heritage value as identified in the relevant Tables.

137 Development affecting a State heritage place (Table Adel/1), Local heritage place (Table Adel/2), Local heritage place (Townscape) (Table Adel/3) or Local heritage place (City Significance) (Table Adel/4), including:

(a) adaptation to a new use;

(b) additional construction;

(c) part demolition;

(d) alterations; or

(e) conservation works;

should facilitate its continued or adaptive use, and utilise materials, finishes, setbacks, scale and other built form qualities that are complementary to the heritage place.

138 A local heritage place (as identified in Tables Adel/2, 3 or 4) or the Elements of Heritage Value (as identified in Table Adel/2) should not be demolished unless it can be demonstrated that the place, or those Elements of Heritage Value that are proposed to be demolished, have become so distressed in condition or diminished in integrity that the remaining fabric is no longer capable of adequately representing its heritage value as a local heritage place.

140 Development on land adjacent to a heritage place in non-residential Zones or Policy Areas should incorporate design elements, including where it comprises an innovative contemporary design, that:

(a) utilise materials, finishes, and other built form qualities that complement the adjacent heritage place; and

(b) is located no closer to the primary street frontage than the adjacent heritage place.

142 Development that abuts the built form/fabric of a heritage place should be carefully integrated, generally being located behind or at the side of the heritage place and without necessarily replicating historic detailing, so as to retain the heritage value of the heritage place.

Advertising

144 Advertisements or signs on the site of a heritage place should be located to complement, rather than dominate or conceal, the appearance and detailing of the heritage place by being:

(a) integrated with architectural elements of the heritage place, including within parapets or wall panels, and at canopy level or within fascias, end panels or windows; and

(b) below the silhouette of the heritage place.

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

(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.

PRINCIPLES OF DEVELOPMENT CONTROL

1 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

2 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;

(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 Adelaide and North Adelaide Historic (Conservation) Zones and groups of historic housing within the City Living Zone; and

(d) the open landscape of the Park Lands Zone.

3 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).

4 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.

5 Where possible, large sites should incorporate pedestrian links and combine them with publicly accessible open space.

6 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.

7 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

8 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.

9 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

10 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.

11 Building services such as drainage pipes together with security grills/screens, ventilation louvres and car park entry doors, should be coordinated and integrated with the overall facade design.

Materials, Colours and Finishes

12 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.

13 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

14 Materials and finishes that are easily maintained and do not readily stain, discolour or deteriorate should be utilised.

15 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).

Sky and Roof Lines

OBJECTIVE

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

PRINCIPLES OF DEVELOPMENT CONTROL

16 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.

17 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.

18 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.

19 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

20 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.

21 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.

Landscaping

OBJECTIVE

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

PRINCIPLES OF DEVELOPMENT CONTROL

22 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.

23 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.

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

25 Landscaping between the road and dwellings should be provided to screen and protect the dwellings from dust and visual impacts of the road.

Advertising

OBJECTIVE

Objective 56: Outdoor advertisements that are designed and located to:

(a) reinforce the desired character and amenity of the locality within which it is located and rectify existing unsatisfactory situations;

(b) be concise and efficient in communicating with the public, avoiding a proliferation of confusing and cluttered displays or a large number of advertisements; and

(c) not create a hazard.

PRINCIPLES OF DEVELOPMENT CONTROL

26 Advertisements should be designed to respect and enhance the desired character and amenity of the locality by the means listed below:

(a) the scale, type, design, location, materials, colour, style and illumination of any advertisements should be compatible with the design and character of the buildings and

land to which it is related, and should be in accordance with provisions for the Zone and Policy Area in which it is situated and any relevant adjacent Zones or Policy Areas;

(b) advertisements should be integrated with the architectural form, style and colour of buildings and wherever possible, requirements for advertisements should be considered in the design of new buildings;

(c) advertisements should be artistically interesting in terms of graphics and construction with intricacy and individuality in design encouraged while maintaining consistency in design and style where co-ordinated advertisements are appropriate;

(d) structural supports should be concealed from public view or of minimal visual impact;

(e) advertisements on individual premises should be co-ordinated in terms of type and design and should be limited in number to minimize visual clutter;

(f) advertisements should be displayed on fascia signs or located below canopy level;

(g) advertisements on buildings or sites occupied by a number of tenants should be co-ordinated, complementary and the number kept to a minimum; and

(h) advertisements on or adjacent to a heritage place should be designed and located to respect the heritage value of the heritage place.

Transport and Access

Access and Movement

OBJECTIVE

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.

PRINCIPLES OF DEVELOPMENT CONTROL

224 Development should provide safe, convenient and comfortable access and movement.

225 Vehicle access points along primary and secondary city access roads and local connector roads, as shown on Map Adel/1 (Overlay 1) should be restricted.

Pedestrian Access

OBJECTIVES

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**.**

PRINCIPLES OF DEVELOPMENT CONTROL

226 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.

224 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.

228 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.

229 Corner buildings in the Central Business Policy Area of the Capital City Zone, buildings adjacent to street intersections and buildings along a high concentration public transport route or along public transport pedestrian routes identified within Map Adel/1 (Overlay 4) should provide weather protection for pedestrians in the form of verandahs, awnings or canopies. Where verandahs or awnings are provided which block street lighting, they should include additional lighting beneath the canopy.

230 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.

231 Where posts are required to support permanent structures, they should be located at least 600 millimetres from the kerb line.

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

Bicycle Access

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

233 Development should have regard to the bicycle routes identified within Map Adel/1 (Overlay 3) by:

(a) limiting vehicular access points; and

(b) ensuring that vehicles can enter and leave the site in a forward direction, thereby avoiding reverse manoeuvres.

234 An adequate supply of on-site secure bicycle parking should be provided to meet the demand generated by the development within the site area of the development. Bicycle parking should be provided in accordance with the requirements set out in Table Adel/6.

235 Onsite secure bicycle parking facilities for residents and employees (long stay) should be:

(a) located in a prominent place;

(b) located at ground floor level;

(c) located undercover;

(d) located where passive surveillance is possible, or covered by CCTV;

(e) well lit and well signed;

(f) close to well used entrances;

(g) accessible by cycling along a safe, well lit route;

(h) take the form of a secure cage with locking rails inside or individual bicycle lockers; and

(i) in the case of a cage have an access key/pass common to the building access key/pass.

236 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.

237 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.

238 To facilitate and encourage the use of bicycles and walking as a means of travel to and from the place of work, commercial and institutional development should provide on-site shower and changing facilities.

Public Transport

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

239 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.

234 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

OBJECTIVES

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.

PRINCIPLES OF DEVELOPMENT CONTROL

241 Development should be designed so that vehicle access points for parking, servicing or deliveries, and pedestrian access to a site, are located to minimise traffic hazards and vehicle queuing on public roads. Access should be safe, convenient and suitable for the development on the site, and should be obtained from minor streets and lanes unless otherwise stated in the provisions for the relevant Zone or Policy Area and provided residential amenity is not unreasonably affected.

242 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.

243 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**.**

244 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.

245 Where vehicular access to a development is gained by an existing crossing in the Core Pedestrian Area identified in Map Adel/1 (Overlay 2A), there should be no increase in the number of parking spaces served by the crossing, nor any increase in the number of existing crossings serving that development.

246 There is no minimum setback required from a rear access way where the access way is wider than 6.5 metres. Where the access way is less than 6**.**5 metres in width, a setback distance equal to the additional width required to make the access way 6**.**5 metres or more, is required to provide adequate manoeuvrability for vehicles.

247 The number of access points on primary city access roads identified in Map Adel/1 (Overlay 1) should be limited to minimise traffic and pedestrian inconvenience, interference with public transport facilities and adverse effects on the environment.

248 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).

Car Parking

OBJECTIVES

Objective 71: To meet community expectation for parking supply while supporting a shift toward active and sustainable transport modes.

Objective 72: An adequate supply of short-stay and long-stay parking to support desired growth in City activities without detrimental affect on traffic and pedestrian flows.

PRINCIPLES OF DEVELOPMENT CONTROL

251 Car parking areas should be located and designed to:

(a) ensure safe and convenient pedestrian movement and traffic circulation through and within the car parking area;

(b) include adequate provision for manoeuvring and individually accessible car standing areas;

(c) enable, where practical, vehicles to enter and leave the site in a forward direction;

(d) minimise interruption to the pattern of built form along street frontages;

(e) provide for access off minor streets and for the screening from public view of such car parking areas by buildings on the site wherever possible;

(f) minimise adverse impacts on adjoining residential properties in relation to noise and access and egress;

(g) minimise loss of existing on-street parking spaces arising through crossovers and access;

(h) incorporate secure bicycle parking spaces and facilitate convenient, safe and comfortable access to these spaces by cyclists; and

(i) provide landscaping, such as semi-mature trees, to shade parked vehicles and reduce the visual impact of the car parking area while maintaining direct sight lines and informal visual surveillance.

252 All development should provide car parking spaces for people with disabilities in accordance with the requirements in the Building Code of Australia (BCA). For classes of buildings not covered by the requirements of the BCA, the number of spaces should be provided in accordance with Table Adel/7 and such car parking spaces should comply with Australian Standard 2890.1: 'Parking Facilities - Off-street Car Parking'.

254 Off-street parking should:

(a) be controlled in accordance with the provisions for the relevant Policy Area;

(b) be located away from street frontages or designed as an integral part of buildings on the site. Provision of parking at basement level is encouraged; and

(c) not include separate garages or carports in front of buildings within front set-backs.

258 Off-street parking in the Core Pedestrian Area identified in Map Adel/1 (Overlay 2A) will only be appropriate where:

(a) parking is ancillary to another activity carried out on the land;

(b) it can be provided without loss of pedestrian amenity; and

(c) it is not separately created on a strata title or community title basis (unless in association with another title held on the site).

259 Multi-level car parks or non-ancillary car parking use of an existing building should only be established where it can be demonstrated that there is a need which is not adequately satisfied by other parking facilities in the locality.

260 Multi-level car parks and short stay public use of ancillary car parking spaces are discouraged at ground floor street frontages in the Primary Pedestrian Area identified in Map Adel/1 (Overlays 2, 2A and 3). Multi-level car parks, short stay public use of ancillary car parking spaces or non-ancillary car parking use of an existing building may be appropriate where it:

(a) is located away from ground floor street frontages to major streets;

(b) ensures vehicle access is from the road with less pedestrian activity in instances where a site has access to more than one road frontage;

(c) has no more than one entry lane and one exit lane;

(d) has a controlled exit at the property boundary to stop vehicles before travelling across the footpath;

(e) has no more than one left in and one left out access point;

(f) avoids access points along high concentration public transport routes identified in Map Adel/1 (Overlay 4); and

(g) with respect to ancillary parking, is provided at basement level, or undercroft if located behind other uses which provide activity on the street frontage.

261 Multi-level car parks should be designed to:

(a) provide active street frontages and land uses such as commercial, retail or other non-car park uses, along ground floor street frontages to maintain pedestrian interest and activity at street level;

(b) be of a high quality design and complement the surrounding built form in terms of height, bulk and scale;

(c) provide surveillance, lighting and direct sightlines along clearly defined and direct walkways, through and within car parking areas and to lift and toilet areas;

(d) on a corner site with two major street frontages, be set back from the major street frontages, with commercial or other non-car park floor space in front of and screening the car parking building;

(e) on a site with only one major street frontage, include screening so that any car parking is not visible from the public realm either day or night, and detailed to complement neighbouring buildings in a manner consistent with desired character in the relevant Zone and Policy Area;

(f) incorporate treatments to manage the interface with adjacent housing, such as careful use of siting and use of materials and landscaping;

(g) not have vehicle access points across major walking routes identified in Map Adel/1 (Overlay 2); and

(h) provide safe and secure bicycle parking spaces in accordance with the requirements of Table Adel/6.

Economic Growth and Land Use

OBJECTIVES

Objective 73: The role of the City enhanced as:

(a) the community, civic and cultural heart of South Australia and as a driving force in the prosperity of the State;

(b) the State centre for business, administration, services, employment, education, political and cultural activities, government and public administration;

(c) a welcoming, secure, attractive and accessible meeting place for the people of metropolitan Adelaide and beyond for leisure, entertainment, civic and cultural activity, specialty shopping, personal and community services;

(d) a centre for education and research built on key academic strengths and on the excellent learning environment and student accommodation available in the City;

(e) a supportive environment for the development of new enterprises drawing on the cultural, educational, research, commercial and information technology strengths of the City centre;

(f) the gateway to the attractions of South Australia for international and interstate visitors by developing a wide range of visitor accommodation, facilities and attractions, particularly attractions which showcase the particular strengths of South Australia; and

(g) a great place to live, with a growing diversity of accommodation for different incomes and lifestyles.

Objective 74: A business environment which encourages investment from domestic and foreign sources, business development and employment.

Objective 75: Development which reinforces clusters and nodes of activity and distinctive local character.

Objective 76: A diverse mix of commercial, community, civic and residential activities to meet the future needs of the Capital City of South Australia.

PRINCIPLES OF DEVELOPMENT CONTROL

266 Development, particularly within the Capital City and Institutional Zones, is encouraged to:

(a) provide a range of shopping facilities in locations that are readily accessible;

(b) provide for the growth in economic activities that sustain and enhance the variety and mix of land uses and the character and function of the City;

(c) maximise opportunities for co-location, multiple use and sharing of facilities;

(d) be accessible to all modes of transport (particularly public transport) and safe pedestrian and cycling routes; and

(e) have minimal impact on the amenity of residential areas.

268 Development is encouraged to develop and expand upon the existing or create new tourism activities to maximise employment and the long-term economic, social and cultural benefits of developing the City as a competitive domestic and international tourist destination.

269 Tourist facilities should be compatible with the prevailing character of the area, within close proximity to public transport facilities and well designed and sited.

270 Development located either abutting, straddling or within 20 metres of a Zone or Policy Area boundary should provide for a transition and reasonable gradation from the character desired from one to the other.

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