

## **Bieson Pty Ltd C/- Future Urban Group**

The proposal seeks the demolition of all buildings on site with the exception of the State Heritage Place (façade and canopy) at 64 King William Street, and the construction of a 15 storey mixed-use office and retail building with ancillary vehicle parking and end of trip facilities

**52-66 King William Street, Adelaide**

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Image: King William Street perspective – Source: Cox Architects



Image: King William Street perspective – Source: Cox Architects





## **OVERVIEW**

<b>Application No</b>	020/A043/20
<b>Unique ID/KNET ID</b>	5424 / 2020/13778/01
<b>Applicant</b>	Bieson Pty Ltd
<b>Proposal</b>	15 storey (plus basement) mixed use retail and office building
<b>Subject Land</b>	52-66 King William Street, Adelaide
<b>Zone/Policy Area</b>	Capital City Zone/ Central Business Policy Area 13
<b>Relevant Authority</b>	State Planning Commission
<b>Lodgement Date</b>	30 July 2020 (amended plans 29 October 2020)
<b>Council</b>	City of Adelaide
<b>Development Plan</b>	Adelaide (City) Development Plan, Consolidated 30 April 2020
<b>Type of Development</b>	Merit
<b>Public Notification</b>	Category 1
<b>Representations</b>	N/A
<b>Referral Agencies</b>	ODASA, Heritage South Australia
<b>Report Author</b>	Damian Dawson, Consultant Planner
<b>RECOMMENDATION</b>	Development Plan Consent subject to conditions

## **EXECUTIVE SUMMARY**

The applicant seeks approval for the construction of a 16-level mixed use retail and office development on King William Street within the centre of the Adelaide CBD. The proposed building has a maximum height of 64.4 metres and will consist of approximately 1,000m<sup>2</sup> of ground floor commercial area, a 2,750m<sup>2</sup> supermarket and 39,000m<sup>2</sup> of office floor area.

The subject land is located within the Capital City Zone, where a vibrant mix of commercial, entertainment, educational and residential uses are sought. The proposed mixture of ground floor and basement retail/commercial tenancies and upper level office suites is supported along with the ground floor activity and interest to both King William Street and James Place. An east-west pedestrian connection/retail mall is proposed to replace the current Southern Cross Arcade. The retention, and improvement, of the arcade is supported as it provides a key pedestrian link between King William Street and James Place as well as City Cross Arcade further to the east.

The proposal seeks to retain the State Heritage listed façade and canopy of the former Sands and McDougall building. The heritage façade is to be incorporated within the 2/3 storey podium along the King William Street frontage and will provide an entrance feature for the office tower above. A lower 2 storey podium is proposed along the length of the James Place frontage to provide an appropriate scale and interface to this important north/south pedestrian route.

The overall design approach is supported with the glazed office tower likely to provide a distinct and contemporary sculptural element within the CBD skyline. The proposal is supported by the Government Architect with the design refined through the Design Review process. The integration and treatment of the State Heritage Place within the King William Street façade is supported by Heritage South Australia.

The proposal will result in an increase in passenger and commercial vehicle movements to the site. The Development Plan seeks to restrict car parking and traffic movements within the Core Pedestrian Area. Whilst the proposed increased in parking and traffic movements is undesirable it is restricted to the single existing access point from Imperial Place/Grenfell Street and with an appropriate level of management is considered to be acceptable in this instance.

On balance, the proposal seeks to establish a well-designed and considered mixed use commercial development as sought by the Capital City Desired Character Statement. It will provide for an increase in activity and interest within the Capital City Zone and as such warrants Development Plan Consent.

## **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 and provide guidance regarding built form responses to context and streetscape character.

#### **1.2 Pre-Lodgement Process**

The proponent entered into the pre-lodgement process and participated in three Pre-lodgement Panel meetings and three Design Review panel sessions. The application details progressed positively through these sessions with a pre-lodgement agreement reached with the Government Architect.

During the pre-lodgement process, and up to the point of lodgement, the former Sands and McDougall building was listed as a Local Heritage Item. The original proposal sought to demolish the heritage place. The South Australian Heritage Council resolved in August 2020 to provisionally enter the property in the South Australian Heritage Register as a State heritage place, identifying the fabric of heritage significance as the Art Deco façade and awning.

The applicant subsequently amended the proposal to retain and incorporate the listed heritage fabric within the proposed building. Given the substantial changes to the proposal since the signing of the pre-lodgement agreement the application was referred to the Government Architect for consideration and comment.

### **2. DESCRIPTION OF PROPOSAL**

Application details are contained in the ATTACHMENTS.

A summary of the proposal is as follows:

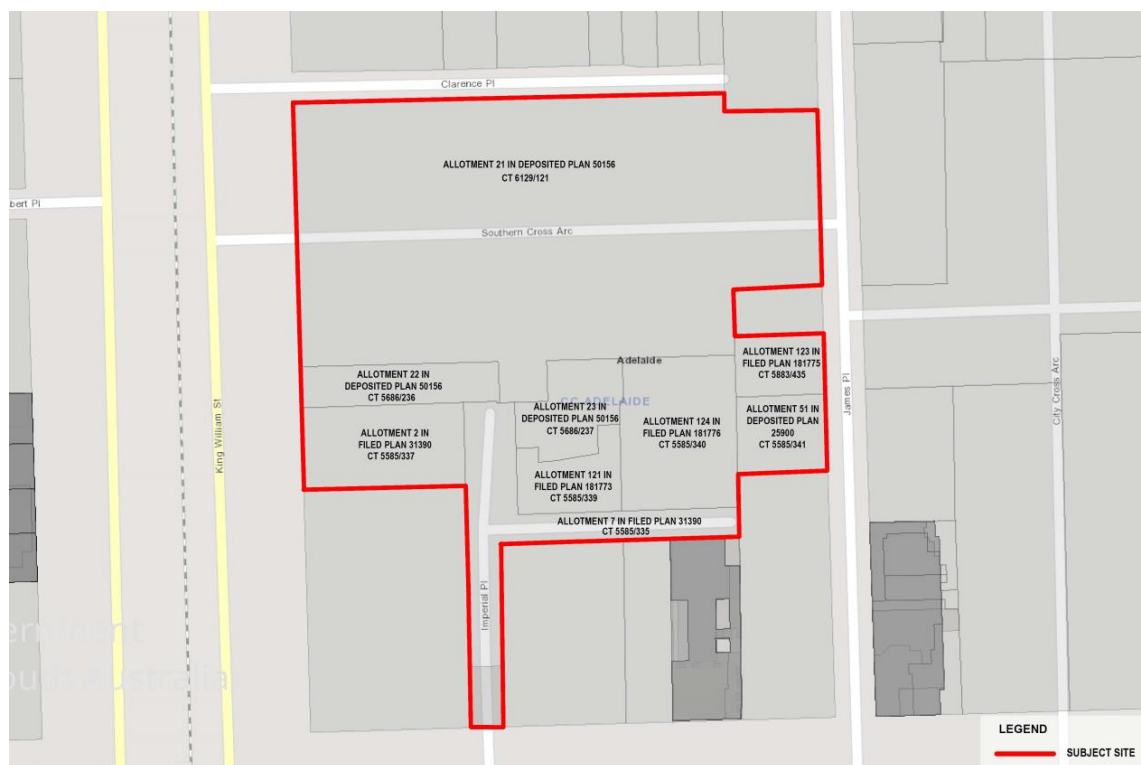
<b>Land Use Description</b>	Mixed use retail and office building	
<b>Building Height</b>	Office building: 15 storey plus basement (64.4 metres) Podium Height: 2 to 3 storeys (11.9 to 14.8 metres)	
<b>Description of levels</b>	Basement	Supermarket and car parking (39 spaces)
	Ground	Supermarket, eight (8) retail tenancies, pedestrian mall, foyer and reception area, loading and waste area, main switch room, waste room and associated amenities.
	Mezzanine	Bike parking (283 bike parks)
	Level 1	Sky lobby, boutique office, office hub, salon and end of trip facilities and wellness centre
	Level 3-13	Open office and associated amenities
	Level 14	Office, plant rooms, cooling tower and open deck area
<b>Site Access</b>	Pedestrian access from King William Street and James Place Vehicle access from Imperial Place Cyclist access from James Place	
<b>Car and Bicycle Parking</b>	39 car parking spaces 283 bicycle parking spaces	
<b>Encroachments</b>	Canopies to King William Street and James Place	
<b>Staging</b>	Stage 1 – Demolition Stage 2 – Sub-structure Stage 3 - Superstructure	

### 3. SITE AND LOCALITY

#### 3.1 Site Description

The site consistent of nine (9) allotments, described as follows:

Lot No	Section	Street	Suburb	Hundred	Title Reference
21	D50156	King William Street	Adelaide	Adelaide	CT6129/121
22	D50156	King William Street	Adelaide	Adelaide	CT5686/236
2	F31390	King William Street	Adelaide	Adelaide	CT5585/337
23	D50156	King William Street	Adelaide	Adelaide	CT5686/237
121	F181773	King William Street	Adelaide	Adelaide	CT5585/339
124	F181776	James Place	Adelaide	Adelaide	CT5585/340
51	D25900	James Place	Adelaide	Adelaide	CT5585/341
123	F181775	James Place	Adelaide	Adelaide	CT5883/435
7	F31390	Imperial Place	Adelaide	Adelaide	CT5585/331



**Figure 1: Subject land (showing allotment layout)**

The subject site is located on the eastern side of King William Street between Rundle Mall and Grenfell Street. The subject land has an approximate frontage of 57.5 metres to King William Street and 47 metres to James Places.

The site is currently occupied by the Southern Cross Arcade and several adjoining uses including retail, food outlets, café, consulting room, office and public toilet block (Council owned). As noted above the western facade and canopy of the building at 64 King William Street (Allotment 22 in DP 50156) is listed as a State Heritage Place.



The site is subject to number of easements including Imperial Place at the southern end of the subject land (Allotment 7 in FP 31390) which is a private road with free and unrestricted rights of way to several adjoining allotments.

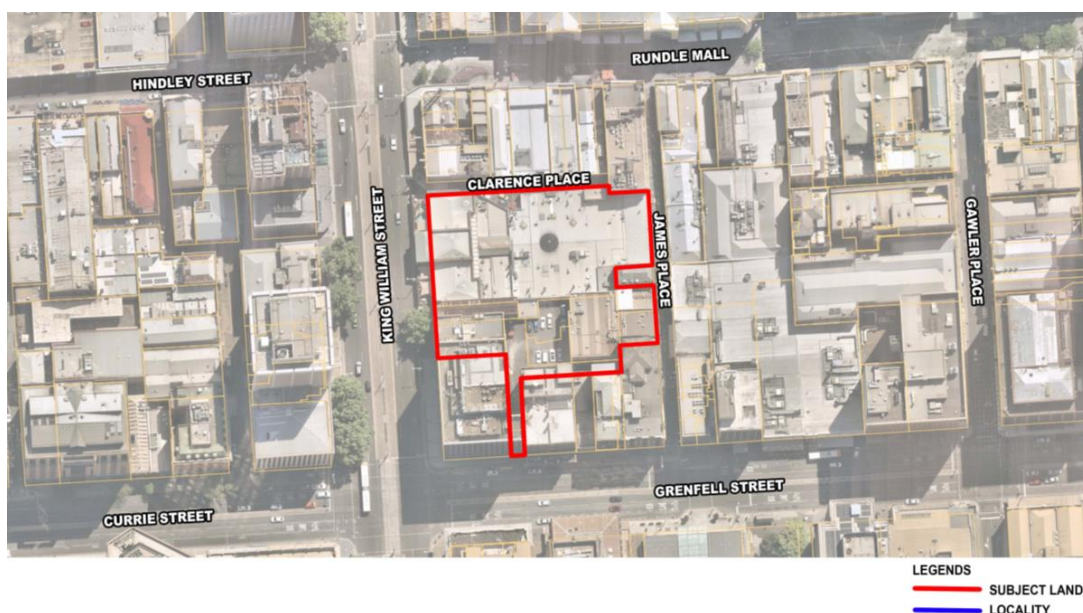
Vehicle access to the site is currently gained from Grenfell Street via Imperial Place and from King William Street via Clarence Place which is a public laneway located along the northern boundary of the subject land.

### 3.2 Locality

The locality is characterised by a mixture of commercial uses and offices.

The subject land is surrounded by a range of buildings styles and sizes ranging from two to twenty storeys in height accommodating shops, food outlets, cafés, hotels and offices.

The immediate locality includes Rundle Mall to the north, shops and offices to the south and east of the site along Grenfell Street and James Places and the tram line to the west along King William Street.



**Figure 2:** Subject Land and Locality (Source Near Map dated 09 Oct 2020)

## 4. COUNCIL COMMENTS or TECHNICAL ADVICE

The proposal was referred to the City of Adelaide for comment.

Council	Comment	Hyperlink
City of Adelaide	<p>Raised concern regarding the proposed increase in parking and traffic movements associated with the development.</p> <p>Recommended that further details be provided in relation to the retention of the heritage fabric.</p> <p>Recommend standard conditions in relation to stormwater, lighting and waste management.</p>	<a href="#">Attachment 5</a>

## 5. STATUTORY REFERRAL BODY COMMENTS

Referral responses are contained in the ATTACHMENTS.

The following agencies were formally consulted pursuant to Section 37 of the *Development Act 1993* and Schedule 8 of *Development Regulations 2008*:

Agency	Direction/ Regard	Advice	Comment	Hyperlink
Heritage Australia	South	Support	Recommend conditions	<a href="#">Attachment 4b</a>
Government Architect	Regard	Support	Recommend conditions in relation to the refinement of various design elements	<a href="#">Attachment 4a</a>

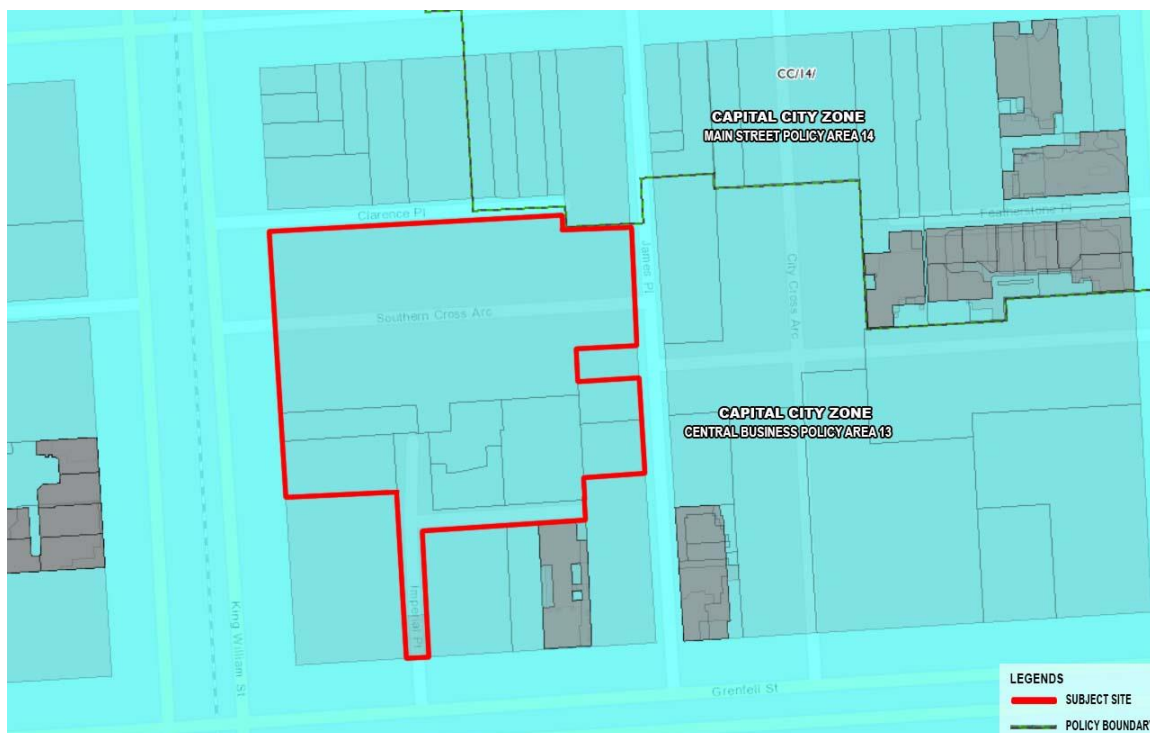
## 6. PUBLIC NOTIFICATION

The application is a Category 1 development as all forms of development within Capital City Zone are identified as Category 1. No public notification was required.

## 7. POLICY OVERVIEW

The subject site is within the Capital City Zone and the Central Business Policy Area 13 as described within the Adelaide (City) Development Plan Consolidated 30 April 2020.

Relevant planning policies are contained in Appendix One and summarised below.



**Figure 3:** Zone Map (Source – SA Property and Planning Atlas)

### **7.1 Policy Area**

Development in Policy Area 13 should include the highest concentration of employment, hospitality and entertainment activities with increased opportunities for residential, student and tourist accommodation to contribute to the area's role and function as the State's premier business district. Stylish and evocative architecture exhibiting innovative, high-quality design is expected, featuring tall and imposing buildings presenting hard edges to the street. Localised character and legible differences between streetscapes are encouraged with integration of built form with the public realm.

### **7.2 Zone**

The subject land is located within the Capital City Zone as prescribed by the Adelaide (City) Development Plan.

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

It is noted that there is no prescribed height for this part of the Capital City Zone. The Zone seeks a high standard of architectural design and finish that is appropriate to the City's role and image as the capital of the State.

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

The Desired Character Statement states the following regarding the King William Street frontage of the site:

*"(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".*

In relation to the James Place frontage the following is noted:

*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.*

### **7.3 Council Wide**

The Council Wide provisions provide direction on the desire for increased levels of activity and interest at ground level; a high standard of design; appropriate bulk and scale of buildings, safe and convenient servicing of sites, positive contribution to streetscapes and provision of employment opportunities.

Council Wide provisions also provide guidance on appropriate levels of access, car parking, bicycle parks, servicing and interaction/relationship with the public realm.

The heritage provisions seek that new development provides for a sufficient level of compatibility with, and acknowledgement of, adjacent heritage places within the design, siting and external materials and finishes used.



## **7.4 Overlays**

### **7.4.1 Affordable Housing**

The proposal is subject to the affordable housing overlay.

### **7.4.2 Noise and Air Emissions**

This site is located within the designated area for the Noise and Air Emissions Overlay, and as such requires assessment against *Minister's Specification SA 78B for Construction Requirements for the Control of External Sound*.

### **7.4.3 Adelaide City Airport Building Heights**

Referral to the Department of Transport, Regional Development and Cities through Adelaide Airport Limited is required where a development would exceed the Obstacle Limitation Surface (OLS) contours shown on Development Plan Map Adel/1 (Overlay 5). In this instance, the OLS contour shown on Map Adel/1 (Overlay 5) is identified as 110 metres AHD. At a height of 108 metres AHD the development does not penetrate the OLS contour and accordingly a referral is not required.

## **8. PLANNING ASSESSMENT**

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

### **8.1 Quantitative Provisions**

	<b>Development Plan Guideline</b>	<b>Proposed</b>	<b>Guideline Achieved</b>	<b>Comment</b>
<b>Building Height</b>	No maximum building height prescribed	Office building: 15 storey plus basement (64.4 metres) Podium Height: 2 to 3 storeys (11.9 to 14.8 metres)	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PARTIAL <input type="checkbox"/>	
<b>Land Use</b>	Mix of retail, residential and commercial	Retail and offices	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PARTIAL <input type="checkbox"/>	
<b>Car Parking</b>	No recommended provision of car parking in the Capital City Zone however no increase in onsite parking sought within the Pedestrian Core Area	39 car parks.  An increase in onsite car parking is proposed (additional 20 spaces)	YES <input type="checkbox"/> NO <input type="checkbox"/> PARTIAL <input checked="" type="checkbox"/>	See commentary in assessment section below
<b>Bicycle Parking</b>	261 parks (214 staff and 47 visitor) Office/retail - 1 employee space per 200m <sup>2</sup> and 2 patron spaces per 1,000m <sup>2</sup> of gross leasable floor area	283 employee bicycle parks plus 26 visitor parks adjacent the land	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PARTIAL <input type="checkbox"/>	
<b>Setbacks</b>	Buildings should be positioned regularly on the site and built to the street frontage (except where a	Podium built to boundary on all sides. Upper level tower setback to various degrees	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PARTIAL <input type="checkbox"/>	

	setback is required for outdoor dining or to provide a contextual response to a heritage place)	from boundaries.		
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## 8.2 Land Use and Character

The ground floor and basement retail/commercial uses and upper level offices proposed are consistent with the land uses sought within the Capital City Zone. The proposed ground floor retail tenancies, pedestrian mall and foyer/entrance to the office tower will provide a level of activity and activation along both the King William Street and James Place frontages as sought within the Zone and Policy Area.

## 8.3 Design and Appearance

The Capital City Zone and Central Business Policy Area seeks buildings to reflect innovative design approaches and contemporary architecture that responds appropriately to the locality and context. The Central Business Policy Area envisages tall and imposing buildings that provide a hard edge to the street and are of the highest design quality. There is a strong emphasis placed on creating interesting pedestrian environments and ground floor activation through careful building articulation and fenestration, frequent openings in building facades and other features.

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

- The proposed podium element provides a visual base for the building with the scale and materials used drawing on the scale of the State Heritage façade on King William Street and the James Place Hotel and Local Heritage Place adjacent the northern end of the James Place frontage;
- The design sufficiently articulates and modulates the tower facades to provide an adequate level of interest so as to avoid massive unbroken facades;
- A high standard of architectural design and finish is proposed;
- The treatment of the ground floor frontages to both King William Street and James Place provides for a comfortable proportion of human scale at street level; and
- The upper level terraces have been integrated within the building facades.

The proposal has the broad support of the Government Architect particularly the general massing and built form including the treatment of the podium elements and the contemporary design of the office tower. The Government Architect has recommended the inclusion of a number of conditions in relation to the detailing of the building and it's progression through the next stage of documentation. These conditions have been added to the recommendation below.

Overall, the design proposed is of a high standard and commensurate with the site's location upon the commercial spine and ceremonial boulevard of King William Street.

## 8.4 Heritage

The State Heritage listed Art Deco façade and awning of the former Sands and McDougall building is to be retained and incorporated within the King William Street podium façade. The architectural team has prepared a separate study of the integration of the heritage element within the proposal. Heritage South Australia has reviewed the proposal and provided advice to the applicant which has in the most part been incorporated within the proposed design.

It is noted that the Desired Character Statement of the Zone states:

*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.*

Only the façade and canopy of the Sands and MacDougall building are listed as heritage items with the remainder of the building having been altered and redeveloped over the years. The architectural team however have sought to provide a sense of the former footprint of the building within the entrance foyer through the creation of a lounge area directly behind the retained façade. The façade will be activated with a new entrance door and will be visible both from the outside and within the foyer on account of the recessed glazing line either side of the façade and the retention of the side wall returns of the building.

The podium treatment along King William Street is lifted to 3 storeys adjacent the heritage façade to better reflect the proportions of the heritage building. The podium consists of several portals which have been arranged and scaled to reflect the scale of the heritage façade. Heritage South Australia, the Government Architect and heritage staff from the City of Adelaide have recommended a number of conditions in relation to the final detailing of the adjoining portals as well as the heritage façade itself, particularly the reinstatement of the original glazing and internal treatment of the retained façade elements.

The retention of the façade and canopy is supported with the design approach adopted by the architectural team considered to achieve an appropriate level of recognition and respect to the heritage fabric. The heritage façade and canopy will form a prominent entrance to the office tower and will ultimately assist in providing a level of recognition and identity to the office tower above.

## **8.5 Traffic Impact, Access and Parking**

The subject land is located within the Core Pedestrian Area of the CBD with James Place and the existing Southern Cross Arcade designated pedestrian routes. The Development Plan seeks to retain and improve the existing pedestrian links and limit the amount of traffic and vehicle movements within the pedestrian area, particularly across footpaths along major roads such as King William and Grenfell Streets.

Council Wide Principle of Development Control 245 applies to the subject land, stating:  
*"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."*

The proposal seeks to consolidate all vehicle access for parking and loading/unloading to Imperial Place at the southern end of the subject land. No loading or access is to occur from either of the major street frontages or from Clarence Place along the northern boundary. The removal of any parking and loading from Clarence Place is supported as it will lessen the number of vehicle movements across the King William Street footpath.

It is noted however that the proposal does seek to increase the level of parking from the current 16-20 spaces to 40 spaces and increase loading movements within Imperial Place. The increase in traffic movements in Imperial Place is contrary to PDC 245 above and will increase the potential for pedestrian conflict on Grenfell Street and potentially impact on traffic movements within the laneway and along Grenfell Street.

Consideration has been given to the increase in parking and traffic movements within the traffic report prepared by GTA and submitted by the applicant. The report notes that all vehicles accessing the site will be able to do so in a forward direction and turn around within Imperial Place



to exit in a forward direction. This is an improvement on the current situation where commercial vehicles reverse out of Imperial Place onto Grenfell Street.

The traffic report suggests that the proposal will result in approximately 185 daily trips through the Imperial Place access. Of these trips 161 are expected to occur during business hours of 7am to 6pm. This is a significant increase in the current number of movements through this access, with Council's traffic engineer estimating a 70% increase on current traffic volumes with up to 310 vehicles per day when existing adjoining land uses are added. The GTA report recommends that traffic control measures will be required to minimise the risk of queuing or waiting traffic impacting upon Grenfell Street. No details of such a management system have been provided and as such a condition of approval is recommended requiring a management plan for the access to the site.

The proposal will result in increased movements across the Grenfell Street footpath and potential conflict with pedestrians and road users. The ability for vehicles to exit in a forward direction assists in minimising the risk for conflict and is supported. Whilst the increase in traffic is undesirable it is to be weighed against the broader ambitions to redevelop and activate the Central Business Policy Area. The removal of any access or loading from Clarence Place does offset the concentration of movements to Imperial Place. Whilst the number of proposed movements in Imperial Place are significant it is considered to be manageable both in terms of access to the site and potential conflict across the Grenfell Street footpath.

## **8.6 Environmental Factors**

### **8.6.1 Crime Prevention**

The Development Plan generally seeks development to integrate and attempt to facilitate natural passive surveillance, clear lines of sight and appropriate lighting within the design of the building to reduce potential crime.

Passive surveillance over King William Street, James Place and Clarence Place is available from the ground level retail tenancies and upper level offices. Limited surveillance is provided to Imperial Place from the ground level loading/access and upper level office windows. The retention of the pedestrian linkage through the site is likely to generate a level of activity within the locality as workers and visitors access the building. The location of the access to the end of trip facilities from James Place is supported.

It is recommended that a condition of approval be attached requiring an appropriate level of lighting be utilised across all frontages of the site.

### **8.6.2 Noise Emissions**

Council Wide PDC 93 (Noise Emissions) seeks mechanical or plant equipment to be designed, sited and screened to minimise noise impacts on adjacent premises and properties in accordance with the provisions set out within the Development Plan.

The applicant has provided an acoustic assessment in relation to potential noise impacts both from and upon the proposed development.

Whilst the report does not have access to the final detailed design of the glazing and walling systems to be used or the plant and equipment requirements of the building it is noted that in general terms there are no concerns in relation to acoustic matters.

Further details will be required at the detailed design phase in relation to these elements. A condition requiring further consideration of these elements as the appropriate details become available forms part of the recommendation below.

### **8.6.3 Waste Management**

Development Plan policy seeks that the storage and disposal of waste materials should be achieved without risk to health or impairment of the environment, with development including appropriately sized areas to facilitate the storage of any waste including recycling.

A waste storage area is to be located upon the ground floor accessible to the Imperial Place loading dock. Waste is to be managed by the Building Operator and collected by a private waste collection service provider. The waste report submitted details the likely waste storage capacity required and the collection frequency.

Waste collection vehicles will be able to access the waste room via Imperial Place.

The waste management strategy and collection proposed by the applicant is supported by Council and is adequate for the proposal.

### **8.6.4 Energy Efficiency**

The Energy Efficiency policies and objectives seek developments to be compatible with long term sustainability of the environment and minimise consumption of non-renewable resources and utilities.

The applicant has indicated that the proposed building will achieve several benchmarks/standards in relation to ESD initiatives including 5 Star Green Star - Design and As-Built (v1.2) rating and a 5 Star NABERS Energy rating. The achievement of these ratings is supported and represents best practice within the industry.

### **8.6.5 Stormwater**

Council Wide PDC 127 seeks developments to be designed to improve the quality of stormwater, minimise pollutant transfer to receiving waters, and protect downstream receiving waters from high levels of flow.

The subject site is currently covered by existing buildings and bitumen car parking. The subject site drains currently into the existing Council stormwater system along King William Street. The proposed development will cover the entirety of the subject site and will not result in an increase in stormwater discharge.

A stormwater management plan has been provided. It is noted that Council engineers seek a single connection into the existing stormwater infrastructure along King William Street which differs from the proposed intent. It is therefore recommended that further details be worked through between the proponent and Council by way for a condition of approval.

### **8.6.6 Wind Analysis**

The Development Plan provisions encourages developments over 21 metres in building height to be designed to reduce potential wind impacts on adjacent properties and the pedestrian environment. The Development Plan encourages the use of podiums, canopies and placement of building as design initiatives that could mitigate potential wind impacts.

A wind assessment report (desk top review) has been provided. It is noted that the report does not predict any issues or concerns in relation to wind impacts either on the development of adjoining public areas.

Of most interest is the potential impact upon the public realm adjacent the site. In this regard the report notes:

*The pedestrian pathways on King William Street, Clarence Place and James Place are expected to have wind conditions within the recommended walking comfort criterion with the proposed design. The building entrances are shielded by proposed*

*canopies and/or recessed within the building envelope. As such, these areas will be expected to have wind levels within the recommended standing comfort criterion.*

As such the potential wind impact of the proposal is considered to be acceptable.

#### **8.6.7 Site Contamination**

An Environmental Due Diligence (DD) Site Investigation was commissioned by the proponent. The report identified a limited degree of soil contamination, predominately in the form of fill likely to have been brought on to the site over time. The report has recommended that the fill be removed from the site during the initial site works. Additional investigation works are recommended by the report to establish the full extent of contamination onsite.

#### **8.7 Signage**

Signage is not proposed as part of this application. Subsequently, any application for signage must be made under a separate application.

### **9. CONCLUSION**

The proposal seeks to amalgamate and develop an underutilised site in a manner considered to be consistent with the desired character statement of the Capital City Zone and Central Business Policy Area. In particular the following aspects are supported:

- Appropriate mixture of land uses leading to an increase in retail activity and high-quality office floor area within the locality;
- Ground floor activation to King William Street and James Place;
- Appropriately scaled podium elements to all frontages;
- Retention and improvement of the east-west pedestrian link between James Place and King William Street and improvement to the pedestrian environment along James Place, another key pedestrian link through to Rundle Mall;
- High quality built form, materials and overall design;
- High level of ESD initiatives;
- High quality end of trip facilities;
- Appropriate retention and incorporation of the State heritage listed façade and canopy; and
- Consolidated onsite loading and servicing of the development.

It is noted that the proposal will result an increase in traffic movements at the southern end of the subject land with potential impacts upon the use of Imperial Place and pedestrian and traffic movements along Grenfell Street. Ultimately whilst a reduction in the number of onsite car parks would lessen the impacts of the proposal, it is considered to display a sufficient degree of merit and achieves a high quality design outcome that will lift the general level of activity within the locality and re-enforce the commercial spine of the CBD.

### **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) Council Development Plan.



- 3) RESOLVE to grant Development Plan Consent to the proposal by Bieson Pty Ltd for the construction of a 15 storey (plus basement) mixed use retail and office building at 52-66 King William Street, Adelaide subject to the following conditions of consent.

## **PLANNING CONDITIONS**

1. The development granted Development Plan Consent shall be undertaken in accordance with the stamped approved plans, drawings, specifications and other documents submitted to the State Planning Commission, except where varied by conditions below.

*Reason: To ensure the development is undertaken in accordance with the plans and details*

2. The following detailed design elements shall be documented to the satisfaction of the relevant planning authority, in consultation with the Government Architect, prior to the issue of Development Approval for any substructure works (Stage 2):

- Final samples of selected materials
- Detailing of the curved stone components of the King William Street entrance
- Review of the fenestration proportions of the three storey podium element to reflect the vertical proportions of the State Heritage listed façade
- Detailing of the interface and new interior works to the State Heritage listed façade including the new glazed doors and interior finishes behind the retained façade
- Detailing of the curved glass curtain wall system for the office building
- Review of opportunities to increase the depth of the roof terrace to maximise usability

*Reason: To ensure the development is undertaken in an manner that is sympathetic and sensitive to the historic fabric.*

3. The following detailed design elements and heritage investigations shall be documented to the satisfaction of the State Planning Commission, in consultation with Heritage South Australia, prior to the issue of Development Approval for any demolition works (Stage 1):

- The retention and conservation of the existing steel-framed windows at first and second floor levels and their associated decorative metalwork.
- The extent of any remnant below-canopy heritage fabric concealed behind later facings.
- The form, dimensions and detail of localised set-down in the second floor slab to the existing original second floor level of the Sands and McDougall building.
- The profile and depth of parapet returns to the Sands and McDougall façade.

*Reason: To ensure the development is undertaken in an manner that is sympathetic and sensitive to the historic fabric.*

4. A schedule of conservation works to the heritage fabric shall be prepared and the works documented in consultation with Heritage South Australia (Department for Environment and Water), to the satisfaction of the relevant planning authority.

*Reason: To ensure the undertaking of conservation works as part of the development.*

5. Material expression and finishes for the foyer portal to the Sands and McDougall facade, the internal face of the façade and the floor of the demarcated seating zone shall be determined to the satisfaction of the relevant planning authority in consultation with Heritage South Australia.

Note – The existing original floor and ceiling levels shall be represented in the detailed design of the foyer portal to the Sands and McDougall.

*Reason: To ensure there is a meaningful internal engagement with the retained facade.*

6. The articulation and modulation of fenestration to the three-storey podium portals shall be developed to the satisfaction of the relevant planning authority in consultation with Heritage South Australia and the Government Architect.

*Reason: To ensure the development appropriately responds to the vertical proportions of the Art Deco façade.*

7. The below-canopy design of the Sands and McDougall facade including the new shopfront infill, its flanking structure and reveals shall be developed to the satisfaction of the relevant planning authority in consultation with Heritage South Australia and the Government Architect.

*Reason: To ensure the development is undertaken in a manner that is sympathetic and sensitive to the historic fabric.*

8. A strategy and work method statement for support, stabilisation and protection of the Sands and McDougall façade and canopy during the construction-phase and for the demolition of the balance of the building shall be developed and documented to the satisfaction of the relevant planning authority in consultation with Heritage South Australia prior to any demolition works onsite. The permanent support strategy for the façade and canopy shall likewise be developed and documented to the satisfaction of the relevant planning authority in consultation with Heritage South Australia.

*Reason: To ensure the development preserves and conserve the historic fabric of the Sands and MacDougall building.*

9. A Traffic Management Plan shall be prepared and submitted to the satisfaction of the State Planning Commission detailing the management of traffic accessing the site through Imperial Place. The management plan shall detail how the queuing of traffic is to be managed to not impact upon pedestrian and vehicle movements along Grenfell Street. The operation of the facility shall always be undertaken in accordance with the submitted traffic management plan.

*Reason: To ensure that traffic movement to and from the site is safe and convenient.*

10. The finished floor level of the ground floor level at all entry points to the development shall match the existing footpath level.

*Reason: To ensure public footpaths remain level and as such pedestrian safety and amenity is not compromised.*

11. The connection of any storm water discharge from the Land to any part of the Council's underground drainage system shall be undertaken in accordance with the City of Adelaide City Works Guide # 2: 'Works Impacting Council Assets' which can be located on Council's website <https://www.cityofadelaide.com.au/> and shall be to the reasonable satisfaction of the relevant authority.

*Reason: To ensure that adequate provision is made for the collection and dispersal of stormwater.*

12. The applicant or the person having the benefit of this consent shall ensure that all storm water run-off from the development herein approved is collected and then discharged to the storm water discharge system. All down pipes affixed to the Development which are required to discharge the storm water run-off shall be installed within the property boundaries of the Land to the reasonable satisfaction of the relevant authority.

*Reason: To ensure that stormwater runoff does not have an adverse impact upon the public realm.*

13. Waste management shall be undertaken in accordance with the waste management plan submitted with the application.

*Reason: To ensure waste management is undertaken in such a way so as to minimise potential for on-site or off-site impacts.*

14. Ancillary activities such as deliveries, collection, movement of private waste bins, goods, empty bottles and the like shall occur before 10.00 pm and after 7.00 am Monday to Saturday or after 9.00 am on a Sunday or Public Holiday.

*Reason: To ensure that the Development does not unduly diminish the enjoyment of other land in the locality.*

### **ADVISORY NOTES**

- a. This Development Plan Consent will expire after 12 months from the date of this Notification, unless final Development Approval from Council has been received within that period or this Consent has been extended by the State Planning Commission.
- b. The applicant is also advised that any act or work authorised or required by this Notification must be substantially commenced within 1 year of the final Development Approval issued by Council and substantially completed within 3 years of the date of final Development Approval issued by Council, unless that Development Approval is extended by the Council.
- c. The applicant has a right of appeal against the conditions which have been imposed on this Development Plan Consent. Such an appeal must be lodged at the Environment, Resources and Development Court within two months from the day of receiving this notice or such longer time as the Court may allow. The applicant is asked to contact the Court if wishing to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide, (telephone number 8204 0289).
- d. This consent does not include signage for which a separate application must be submitted.
- 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. Construction Environment Management Plan (CEMP) shall be prepared in collaboration with the City of Adelaide (Council) and implemented throughout construction in accordance with current industry standards including the Local Nuisance and Litter Control Act 2016, the EPA publications "Handbook for Pollution Avoidance on Commercial and Residential Building Sites – Second Edition" and, where applicable, "Environmental Management of On-site Remediation" – to minimise environmental harm and disturbance during construction. The management plan should incorporate, without being limited to, the following matters:
  - timing, staging and methodology of the construction process and working hours;
  - traffic management strategies;
  - control and management of construction noise, vibration, dust and mud;
  - management of infrastructure services during construction and re-establishment of local amenity and landscaping;
  - stormwater and groundwater management during construction;
  - site security, fencing and safety and management of impacts on local amenity for residents, traffic and pedestrians;
  - disposal of construction waste, any hazardous waste and refuse in an appropriate manner according to the nature of the waste;
  - protection and cleaning of roads and pathways; and overall site clean-up.

- g. Unsecured building sites have been identified as a soft target for vandalism and theft of general building materials. The Eastern District Police and the City of Adelaide are working together to help improve security at building sites. Items most commonly stolen or damaged are tools, water heaters, copper piping and white goods. To minimise the risk of theft and damage, consider co-ordinating the delivery and installation of the goods on the same day. Work with your builder to secure the site with a fence and lockable gate. Securing the site is essential to prevent unauthorised access and establishes clear ownership.
- h. In relation to street trees, the proposal shall meet the following requirements:
  - a. The proposed verandah shall be designed to ensure that a minimum clearance of 600mm is maintained between the structure and the nearest significant limb of the street tree.
  - b. Site works shall be affected in such a manner so as not to damage the existing street tree.
  - c. The sewerage serving the development shall be laid out and designed in such a manner which ensures retention of the existing street tree notwithstanding the requirements of the Regulations under the Sewerage Act, 1929.
  - d. The street tree(s) will not be removed. Any pruning of the tree(s), necessary to maintain the clearance between the tree(s) and the verandah/development, shall only be carried out by Council.
- i. Section 779 of the Local Government Act provides that where damage to Council footpath / kerbing / road pavement / verge occurs as a result of the development, the owner / applicant shall be responsible for the cost of Council repairing the damage.
- j. 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.
- k. The City Works Guidelines detailing the requirements for various activities, a complete list of fees and charges and an application form can all be found on Council's website at [www.cityofadelaide.com.au](http://www.cityofadelaide.com.au)
- l. When applying for a City Works Permit you will be required to supply the following information with the completed application form:
  - a. A Traffic Management Plan (a map which details the location of the works, street, property line, hoarding/mesh, lighting, pedestrian signs, spotters, distances etc.);
  - b. Description of equipment to be used;
  - c. A copy of your Public Liability Insurance Certificate (minimum cover of \$20 Million required);
  - d. Copies of consultation with any affected stakeholders including businesses or residents.
- m. Any changes to the proposal for which planning consent is sought or granted may give rise to heritage impacts requiring further consultation with the Department for Environment and Water, or an additional referral to the Minister for Environment and Water. Such changes would include for example (a) an application to vary the planning consent, or (b) Building Rules documentation that incorporates differences from the proposal as documented in the planning application.
- n. You are advised of the following requirements of the Heritage Places Act 1993.
  - (a) If an archaeological artefact believed to be of heritage significance is encountered during excavation works, disturbance in the vicinity shall cease and the SA Heritage Council shall be notified.
  - (b) Where it is known in advance (or there is reasonable cause to suspect) that significant archaeological artefacts may be encountered, a permit is required prior to commencing excavation works.



- o. If Aboriginal sites, objects or remains are discovered during excavation works, the Aboriginal Heritage Branch of the Aboriginal Affairs and Reconciliation Division of the Department of the Premier and Cabinet (as delegate of the Minister) should be notified under Section 20 of the Aboriginal Heritage Act 1988.



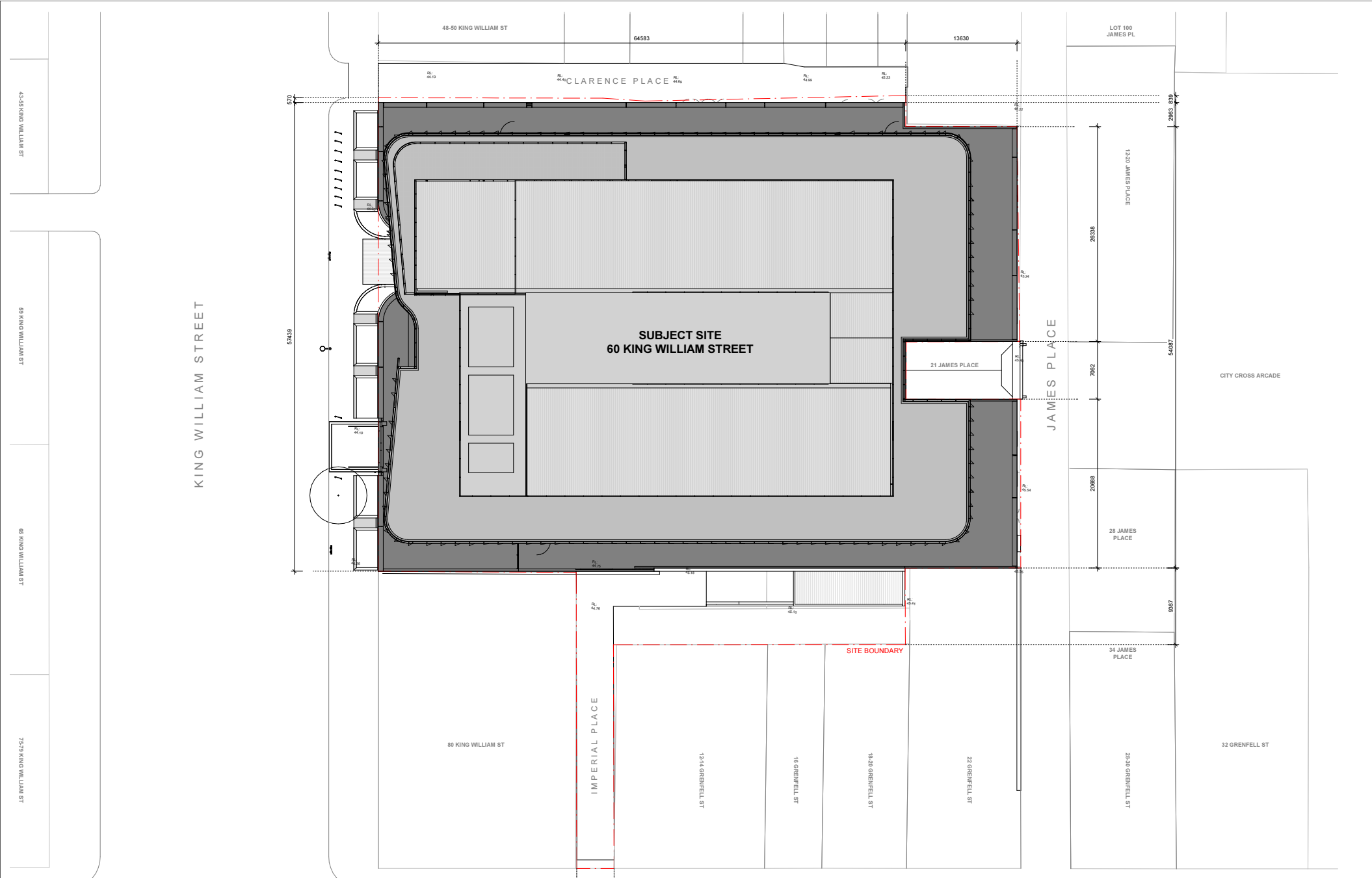
**DAMIAN DAWSON**  
**PLANNING CONSULTANT**

# 60 KING WILLIAM STREET

60 KING WILLIAM STREET,  
ADELAIDE SA 5000

DRAWING INDEX			
SHEET No.	SHEET NAME	REVISION	ISSUE DATE
DA-01-01	COVER SHEET - DRAWING INDEX	B	29/10/20
DA-11-01	SITE PLAN	B	29/10/20
DA-15-01	DEMOLITION PLAN	B	29/10/20
DA-15-02	DEMOLITION ELEVATIONS	B	29/10/20
DA-21-01	GA PLAN - BASEMENT 2	A	29/06/20
DA-21-02	GA PLAN - BASEMENT 1	B	29/10/20
DA-21-03	GA PLAN - GROUND	B	29/10/20
DA-21-04	GA PLAN - MEZZANINE	B	29/10/20
DA-21-05	GA PLAN - LEVEL 1	B	29/10/20
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DA-21-08	GA PLAN - LEVEL 4	B	29/10/20
DA-21-09	GA PLAN - LEVEL 5	B	29/10/20
DA-21-10	GA PLAN - LEVEL 6	B	29/10/20
DA-21-11	GA PLAN - LEVEL 7	B	29/10/20
DA-21-12	GA PLAN - LEVEL 8	B	29/10/20
DA-21-13	GA PLAN - LEVEL 9	B	29/10/20
DA-21-14	GA PLAN - LEVEL 10	B	29/10/20
DA-21-15	GA PLAN - LEVEL 11	B	29/10/20
DA-21-16	GA PLAN - LEVEL 12	B	29/10/20
DA-21-17	GA PLAN - LEVEL 13	B	29/10/20
DA-21-18	GA PLAN - LEVEL 14	B	29/10/20
DA-21-19	GA PLAN - ROOF	B	29/10/20
DA-30-01	NORTH ELEVATION	B	29/10/20
DA-30-02	EAST ELEVATION	B	29/10/20
DA-30-03	SOUTH ELEVATION	B	29/10/20
DA-30-04	WEST ELEVATION	B	29/10/20
DA-40-01	GA SECTION - NORTH / SOUTH	B	29/10/20
DA-40-02	GA SECTION - EAST / WEST	B	29/10/20
DA-81-01	KING WILLIAM STREET PERSPECTIVE 01	B	29/10/20
DA-81-02	KING WILLIAM STREET PERSPECTIVE 02	B	29/10/20
DA-82-01	MATERIAL SCHEDULE	B	29/10/20
DA-83-01	SHADOW DIAGRAMS	A	29/06/20
DA-83-02	SHADOW DIAGRAMS	A	29/06/20
DA-83-03	SHADOW DIAGRAMS	A	29/06/20
DA-83-04	SHADOW DIAGRAMS	A	29/06/20





Project:  
**60 KING WILLIAM STREET**  
SITE PLAN

Date: 28/10/20  
Revision: 8  
Project Number: 520005  
Drawing Number: DA-11-01

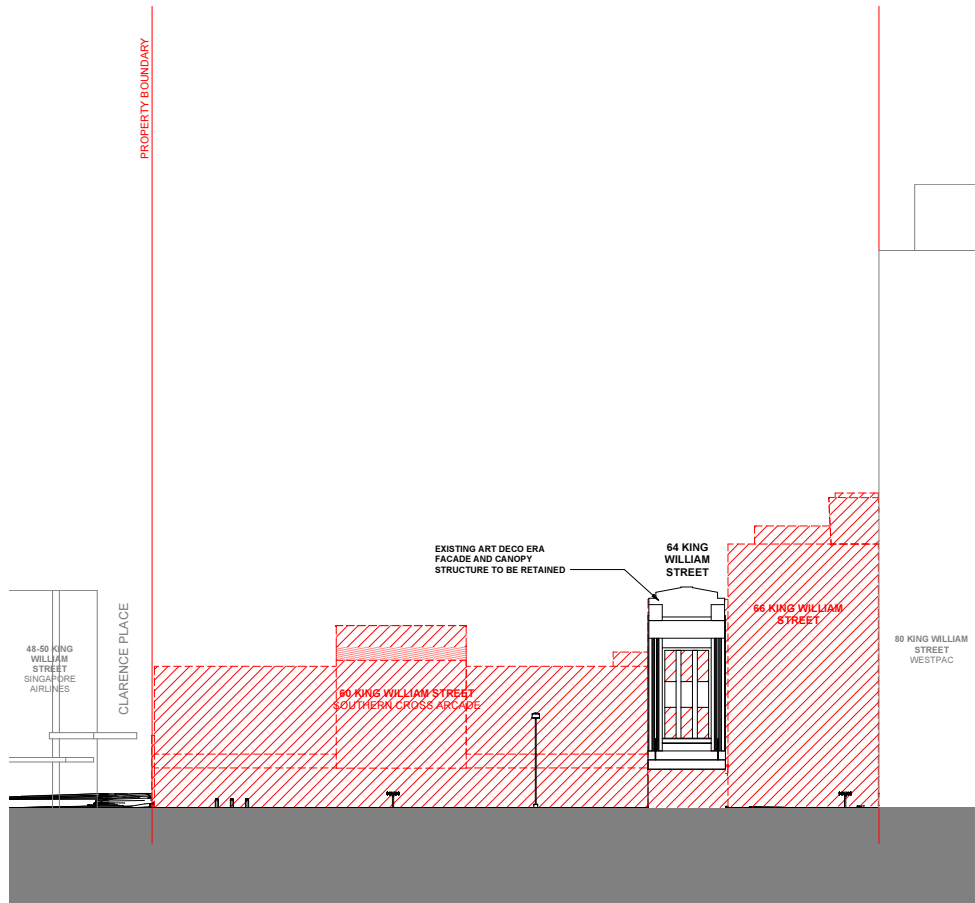
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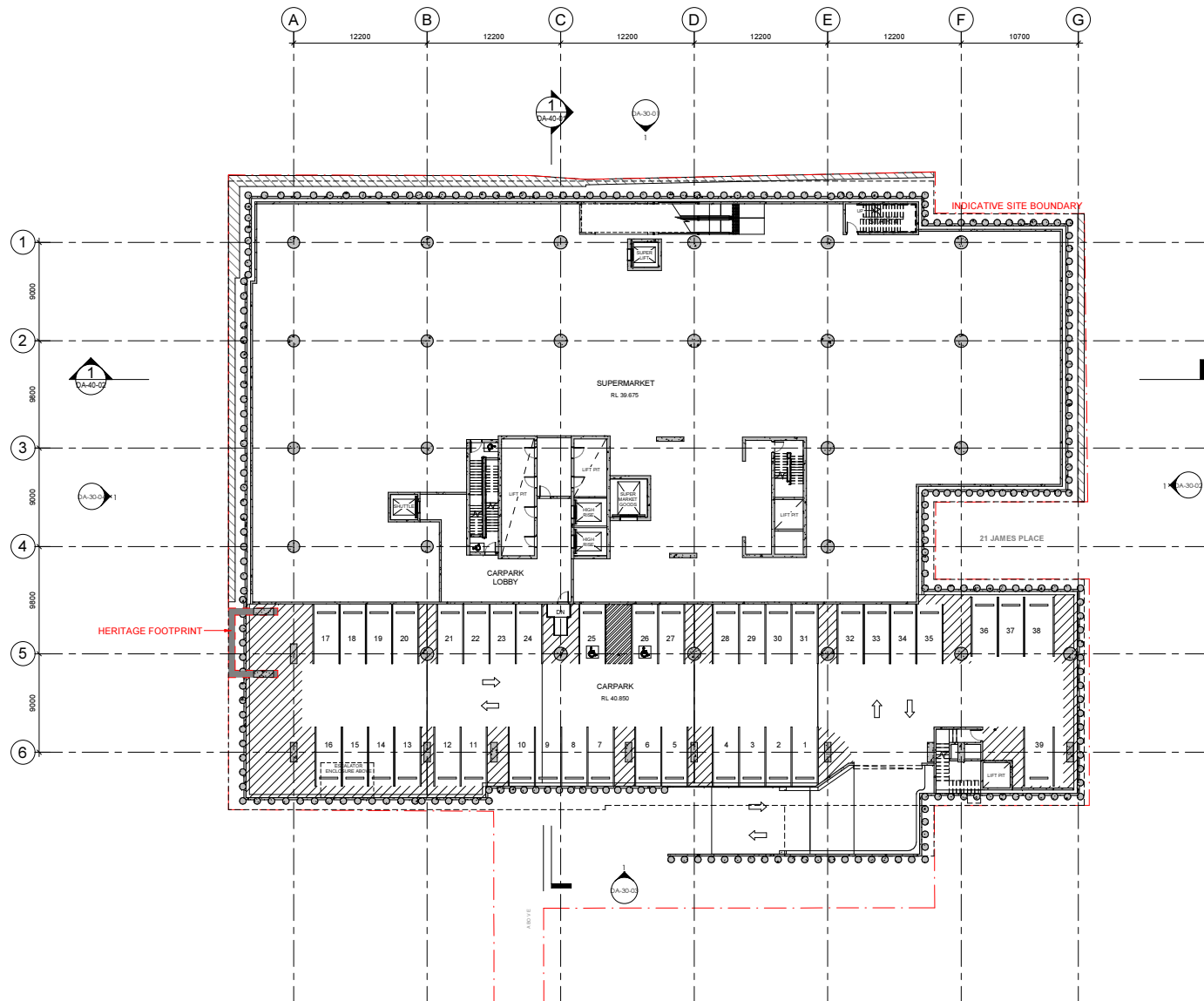
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SCALE 1:200



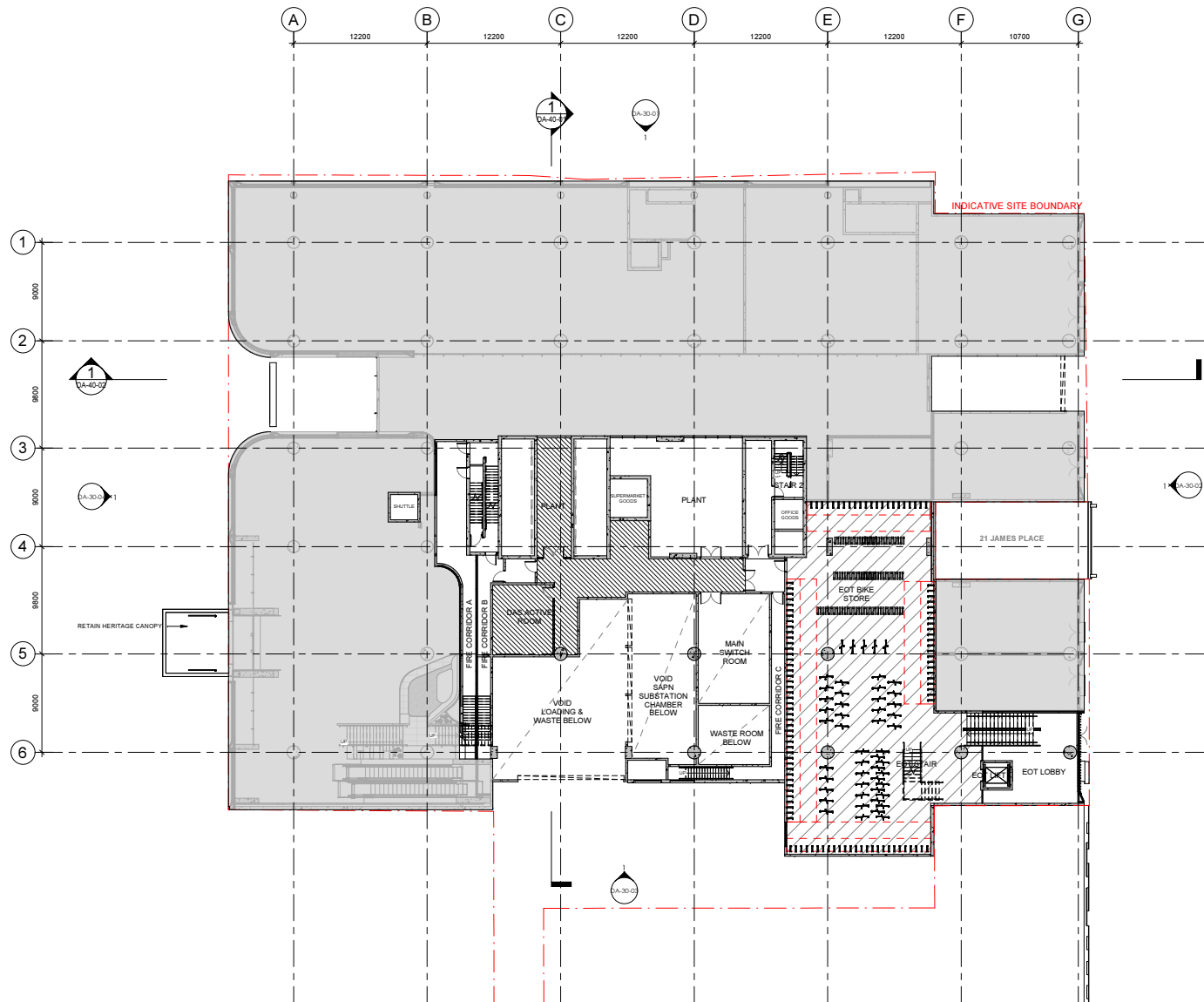
1 DEMOLITION - EAST ELEVATION  
SCALE 1:200

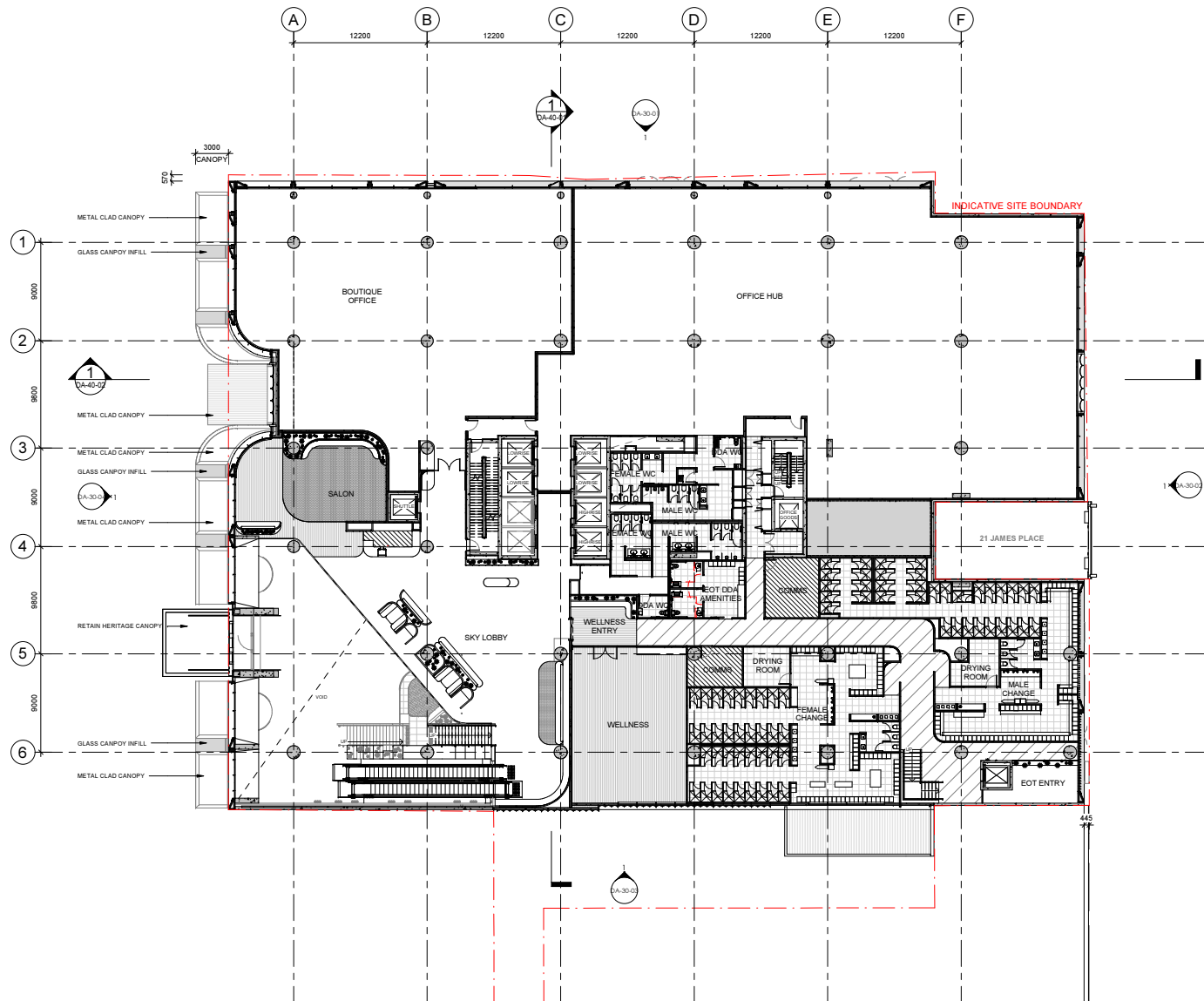
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- EXTENT OF SURFACE AND MINOR STRUCTURE TO BE DEMOLISHED
- EXTENT OF CANOPIES AND BALCONIES TO BE DEMOLISHED

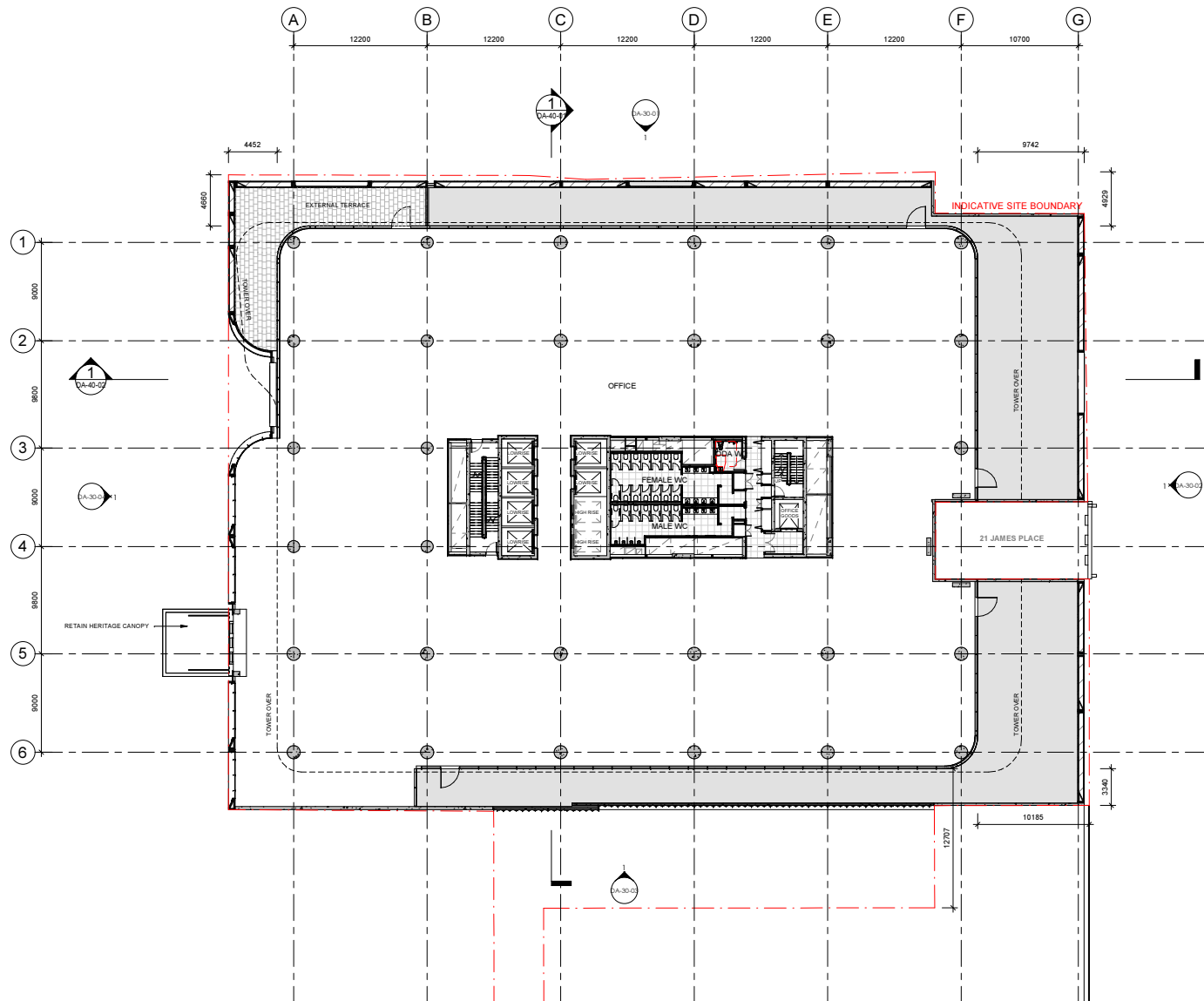




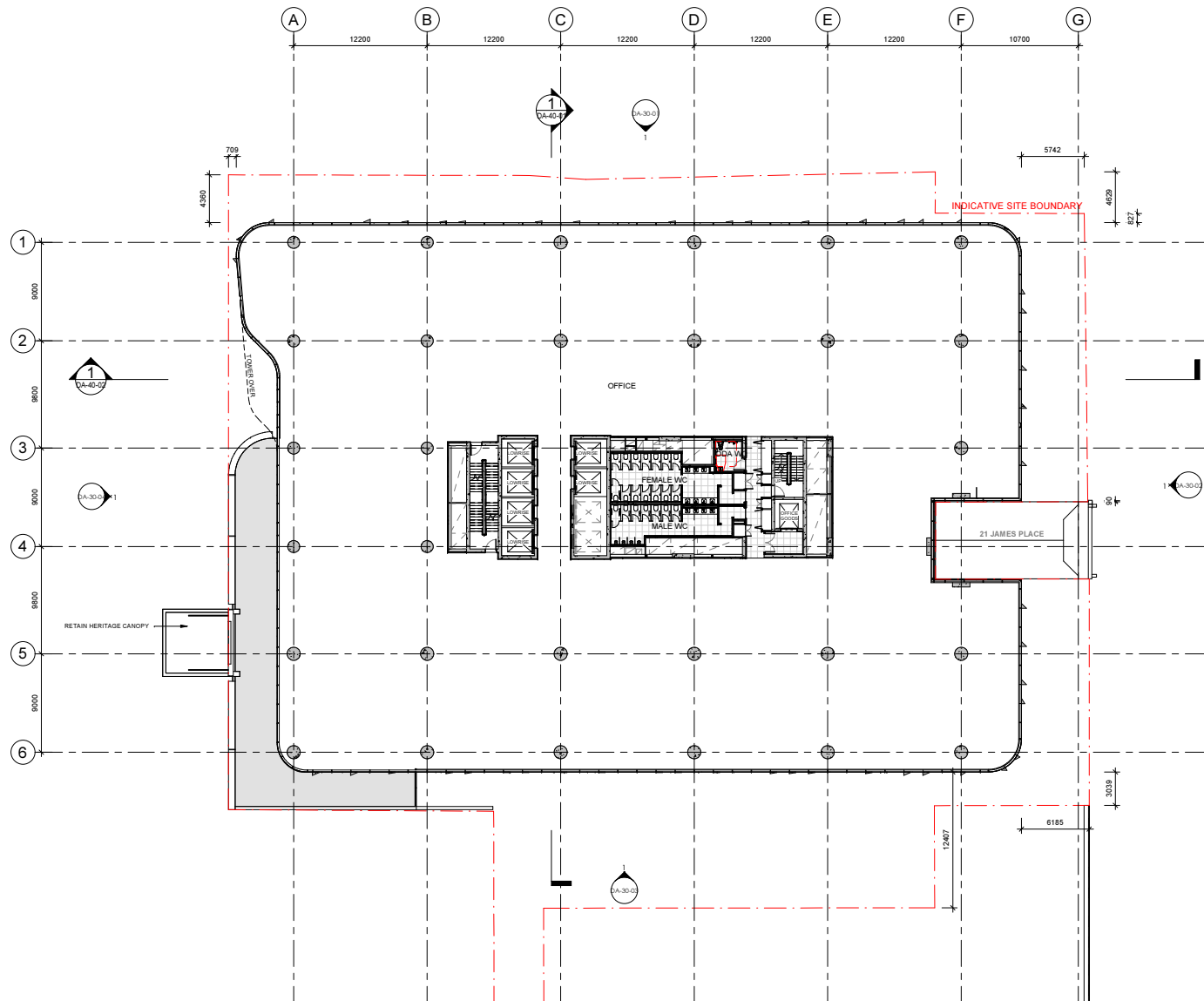


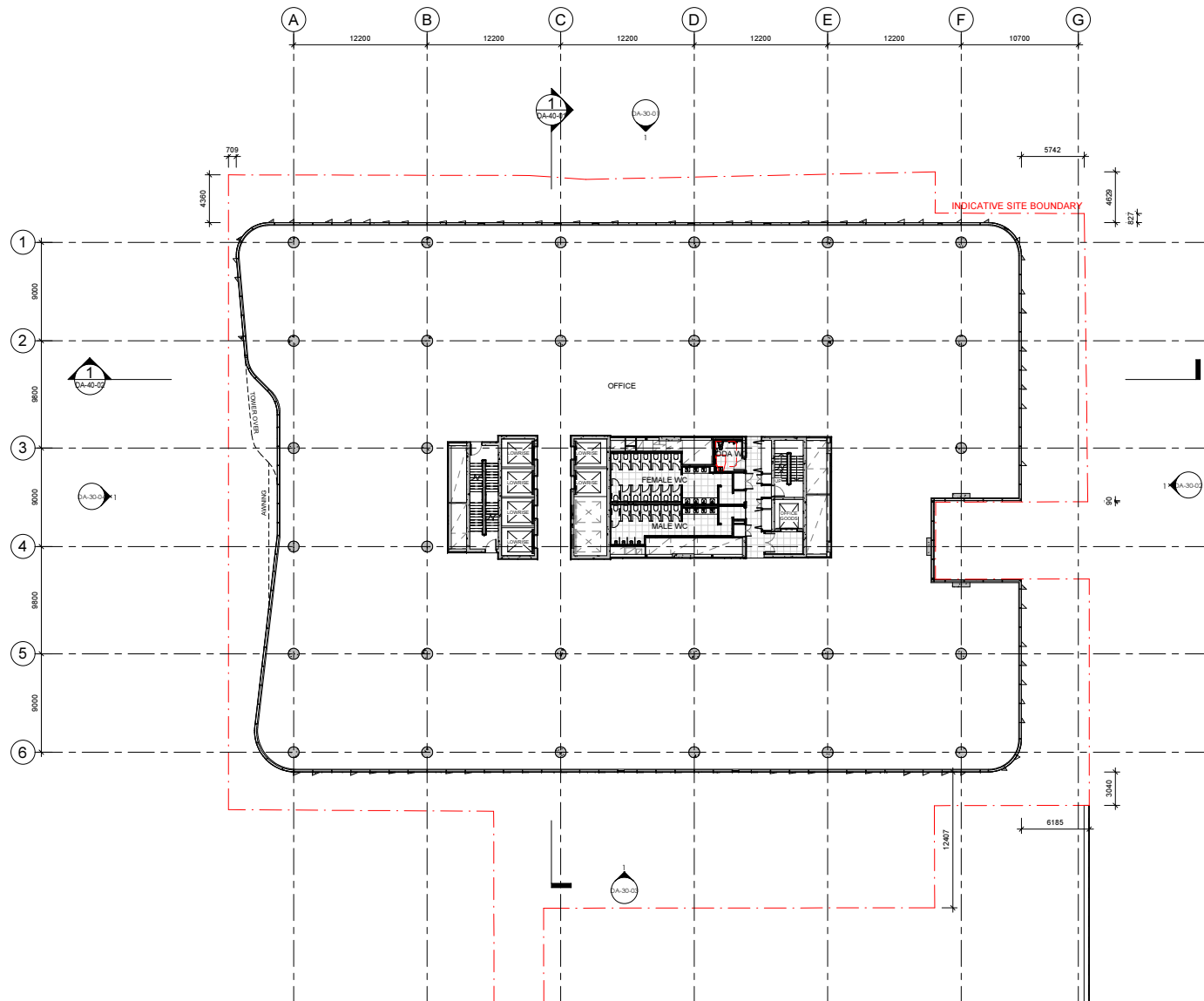


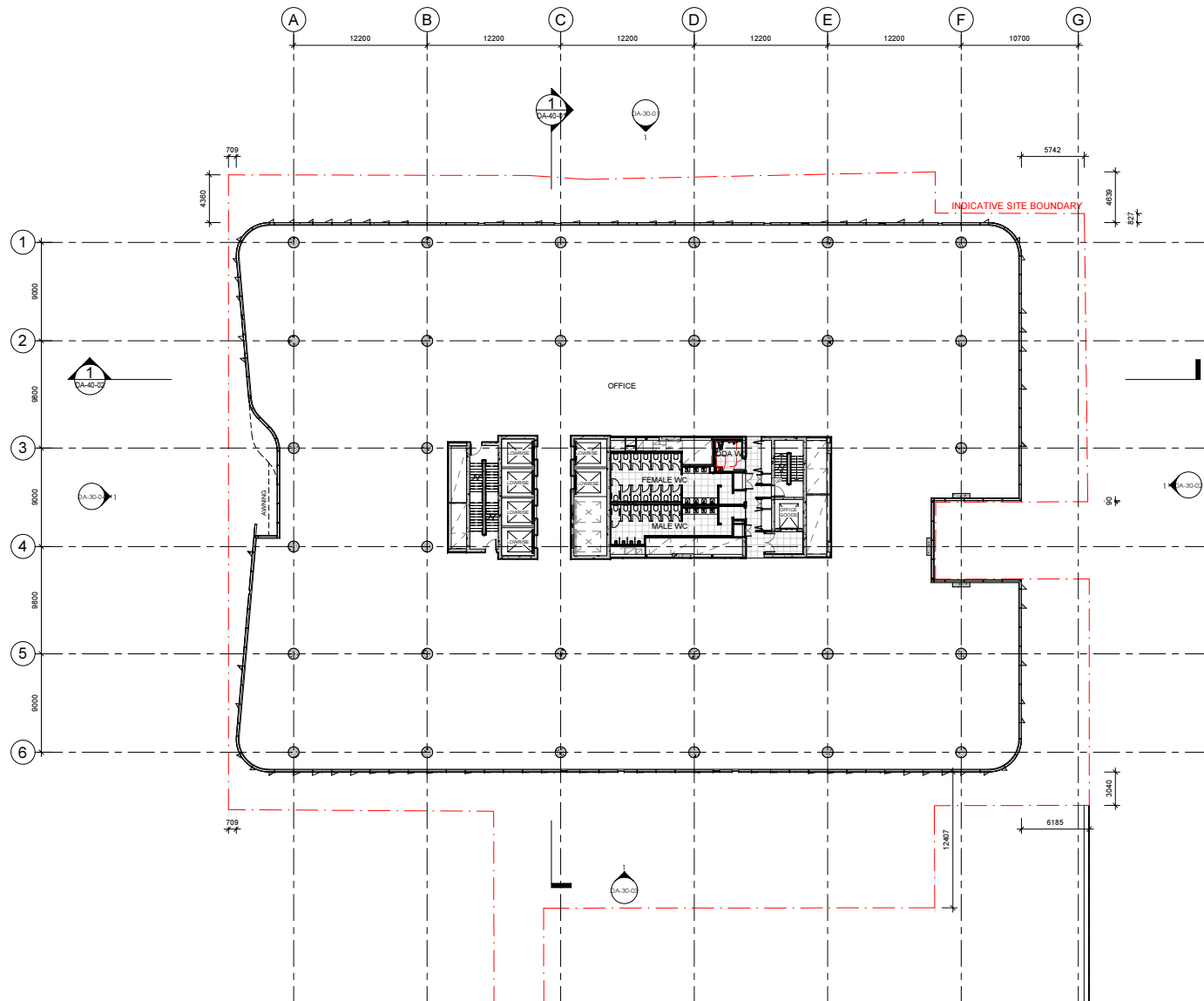


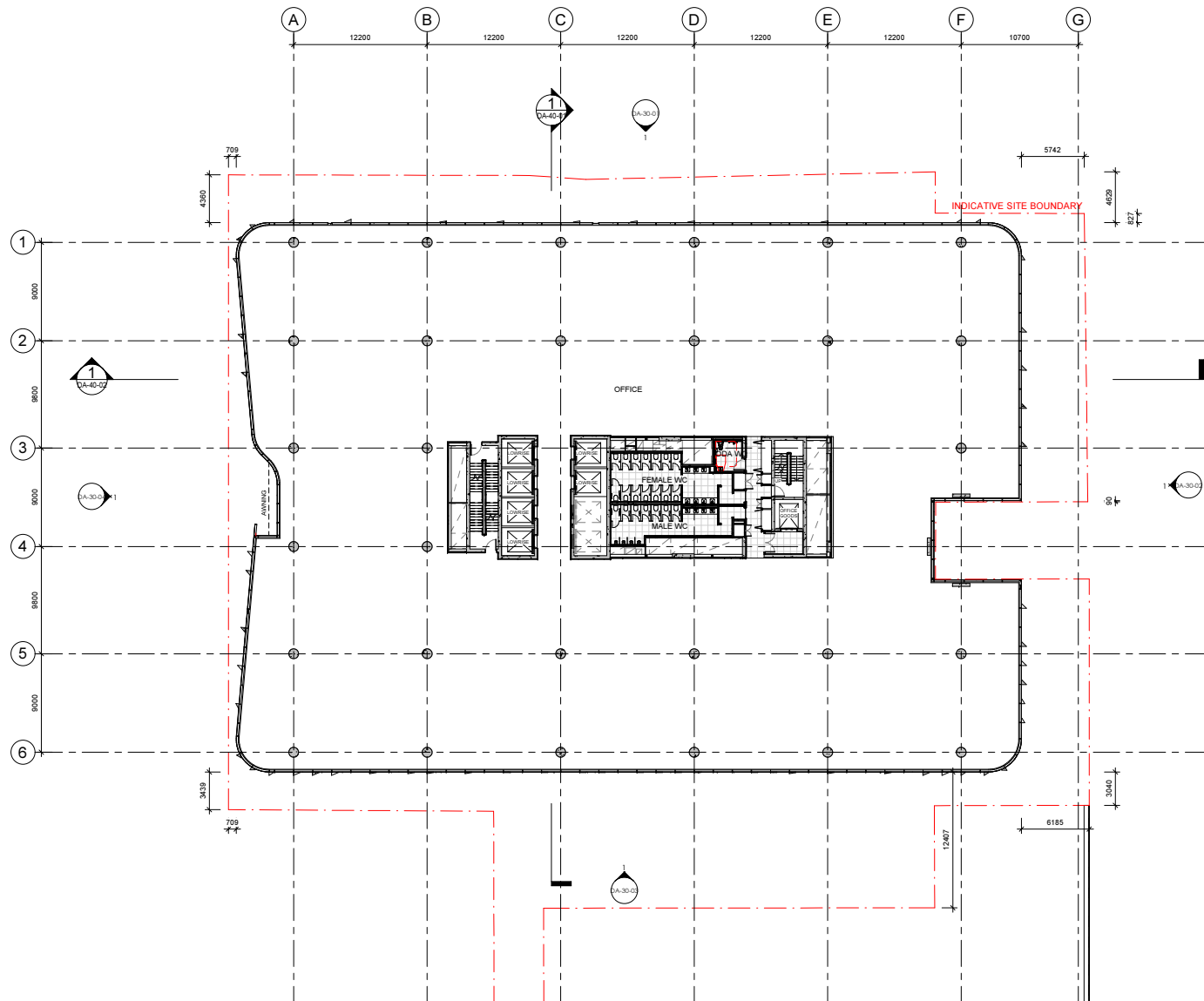


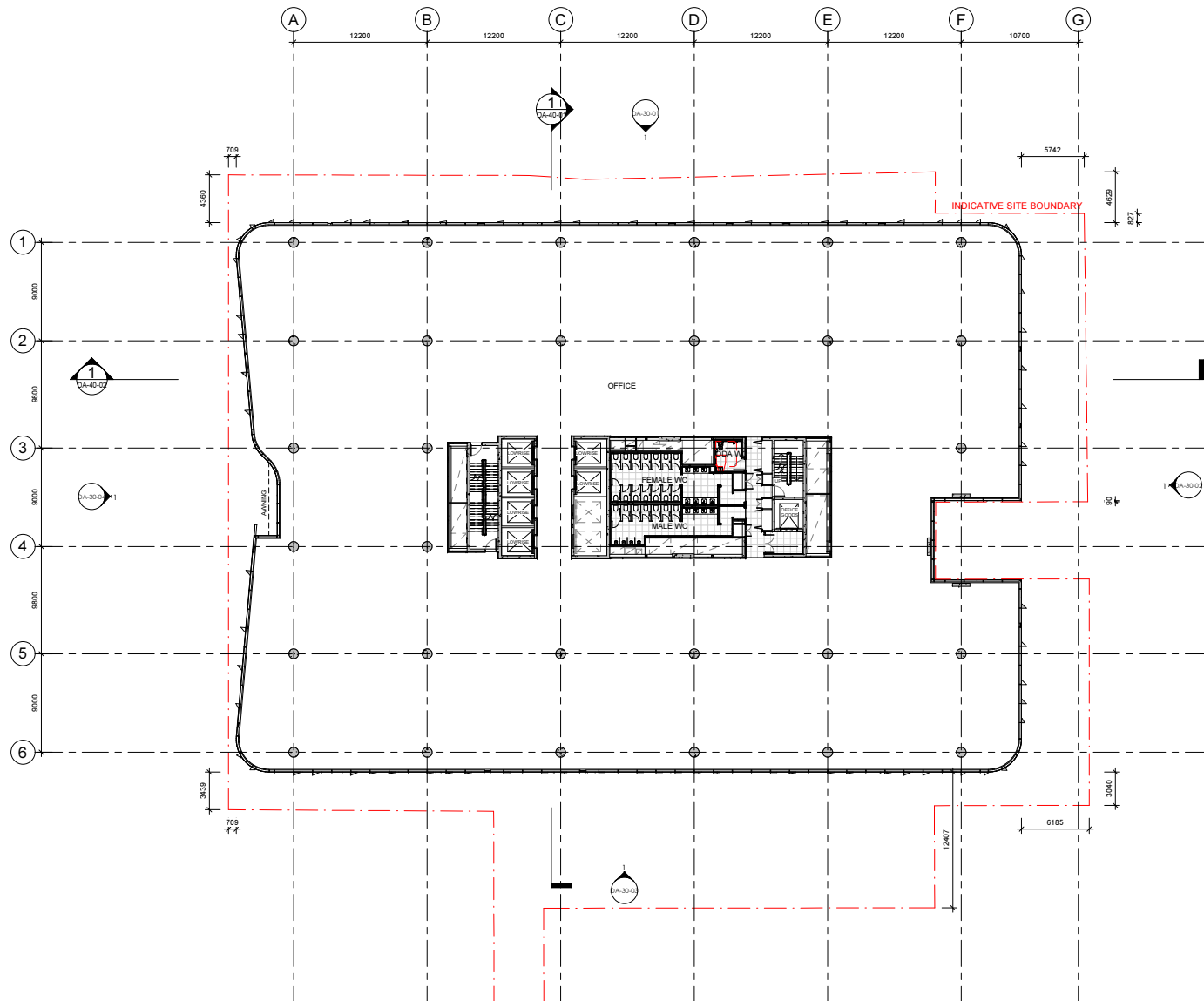




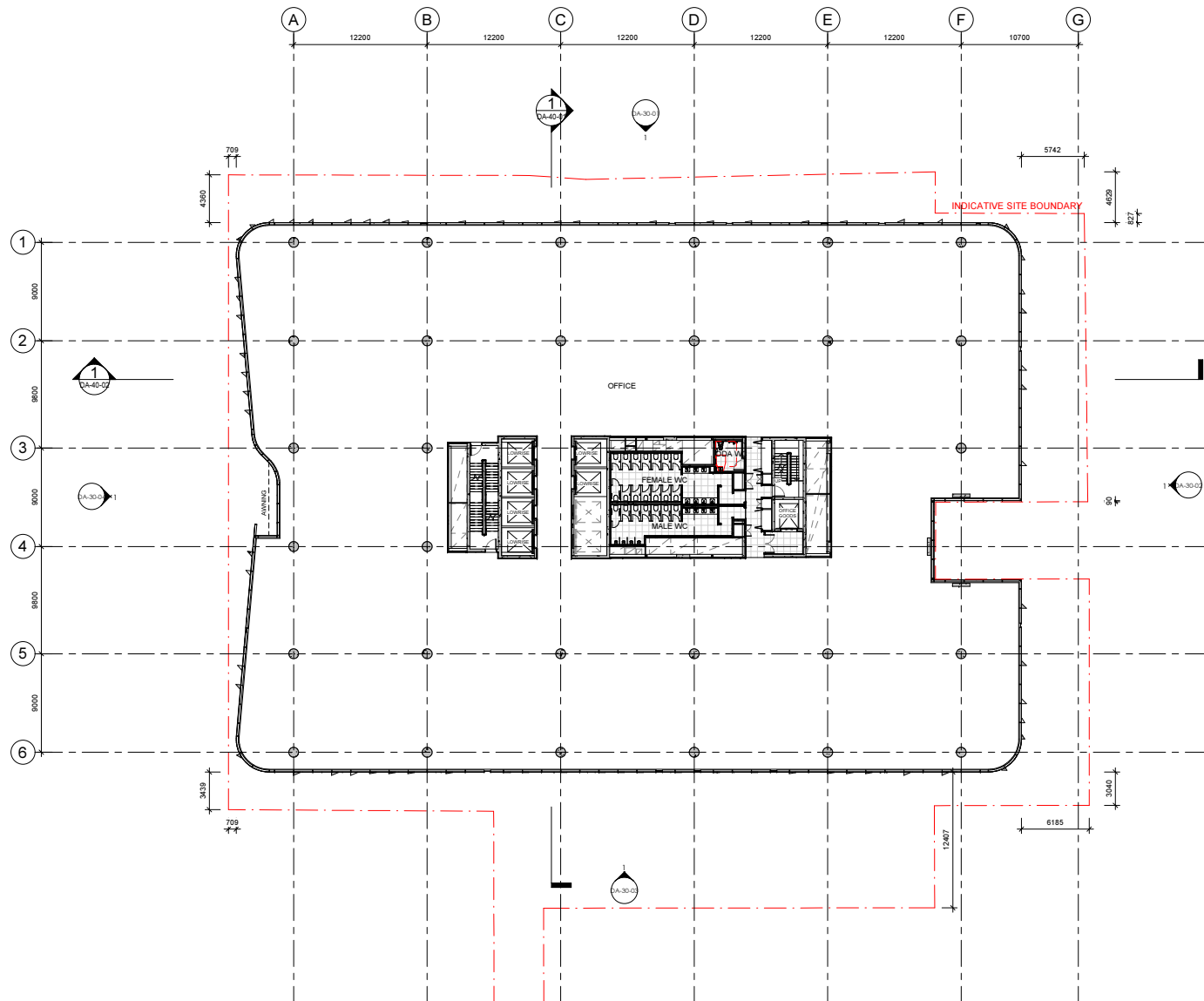


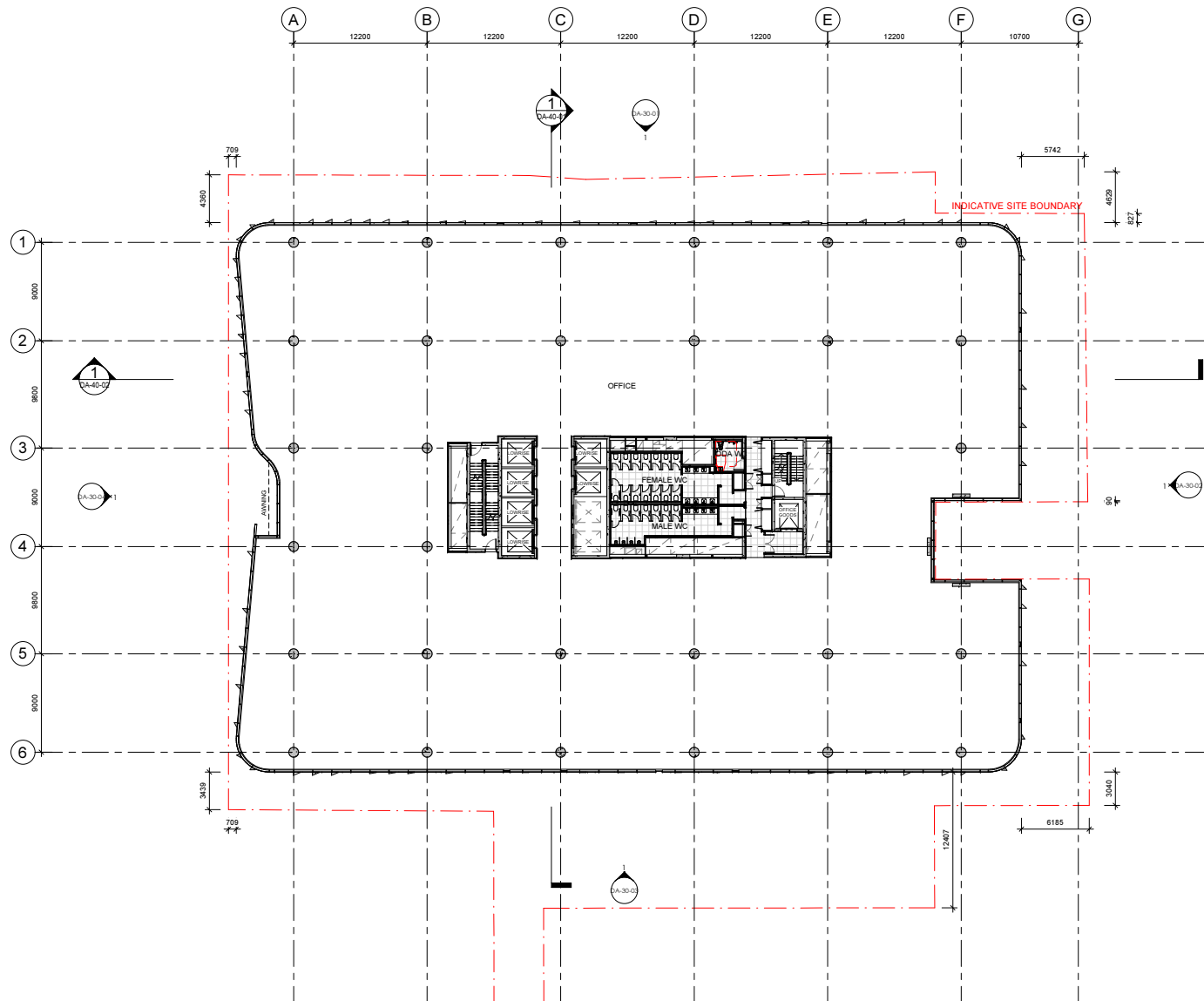


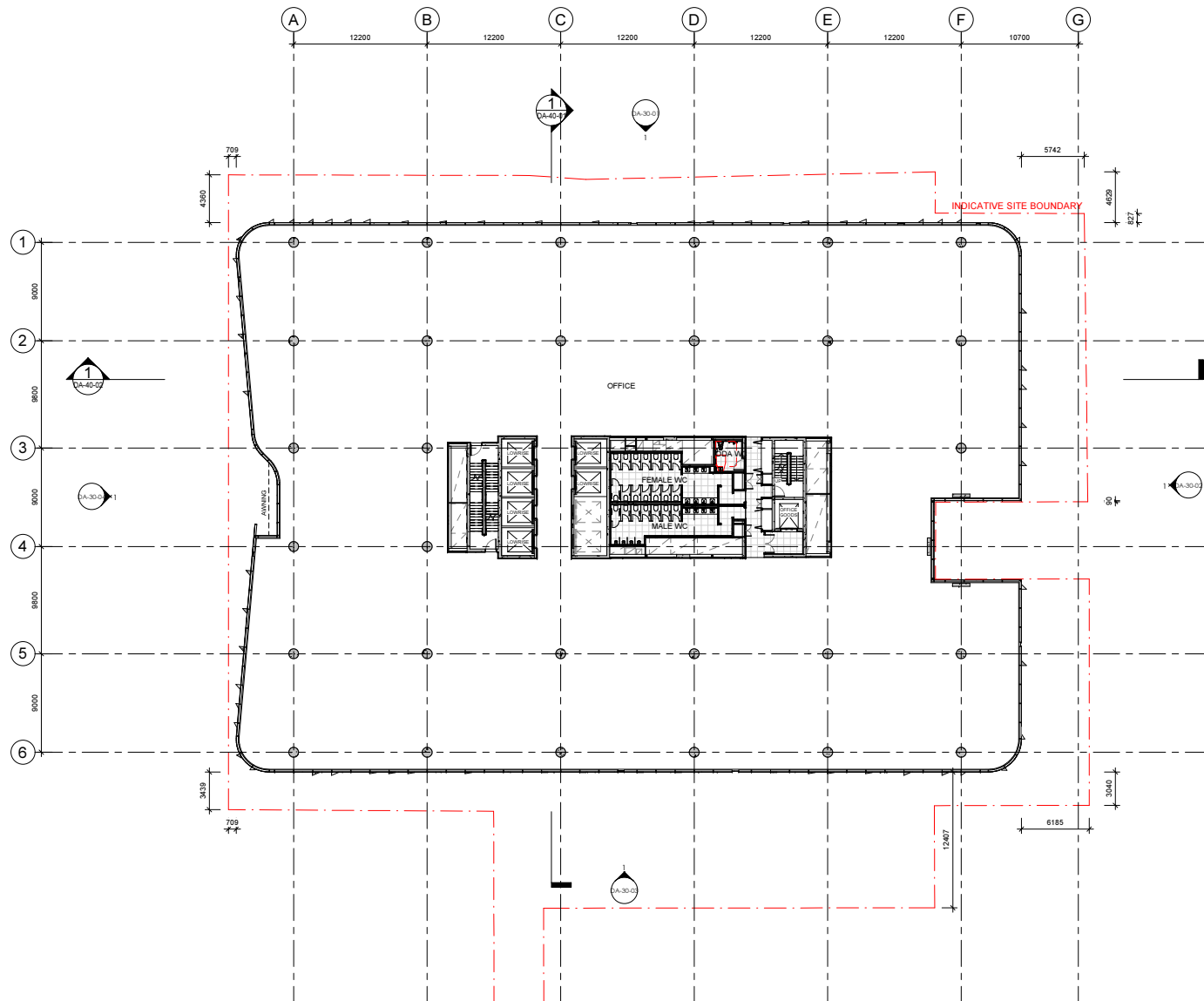


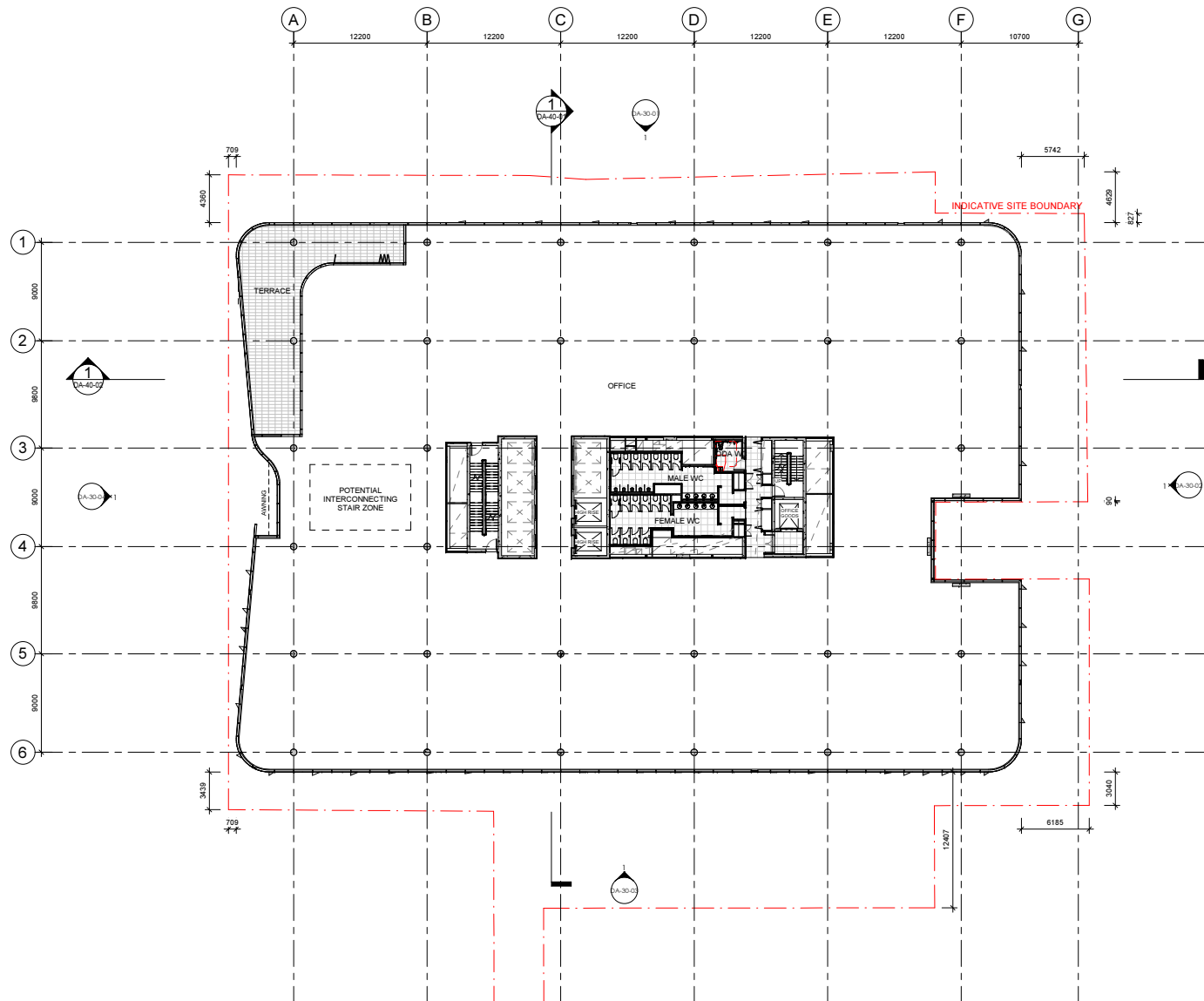


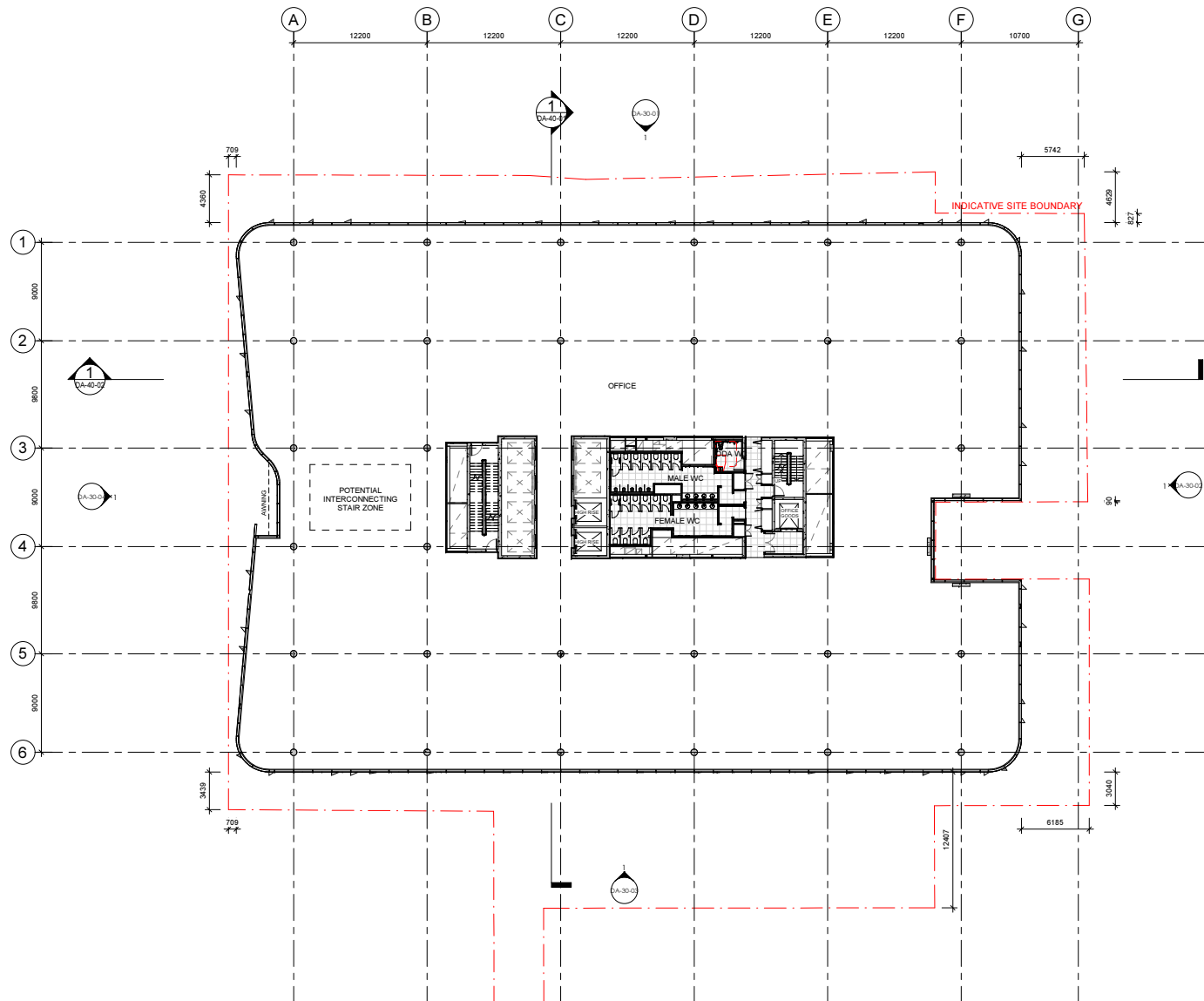




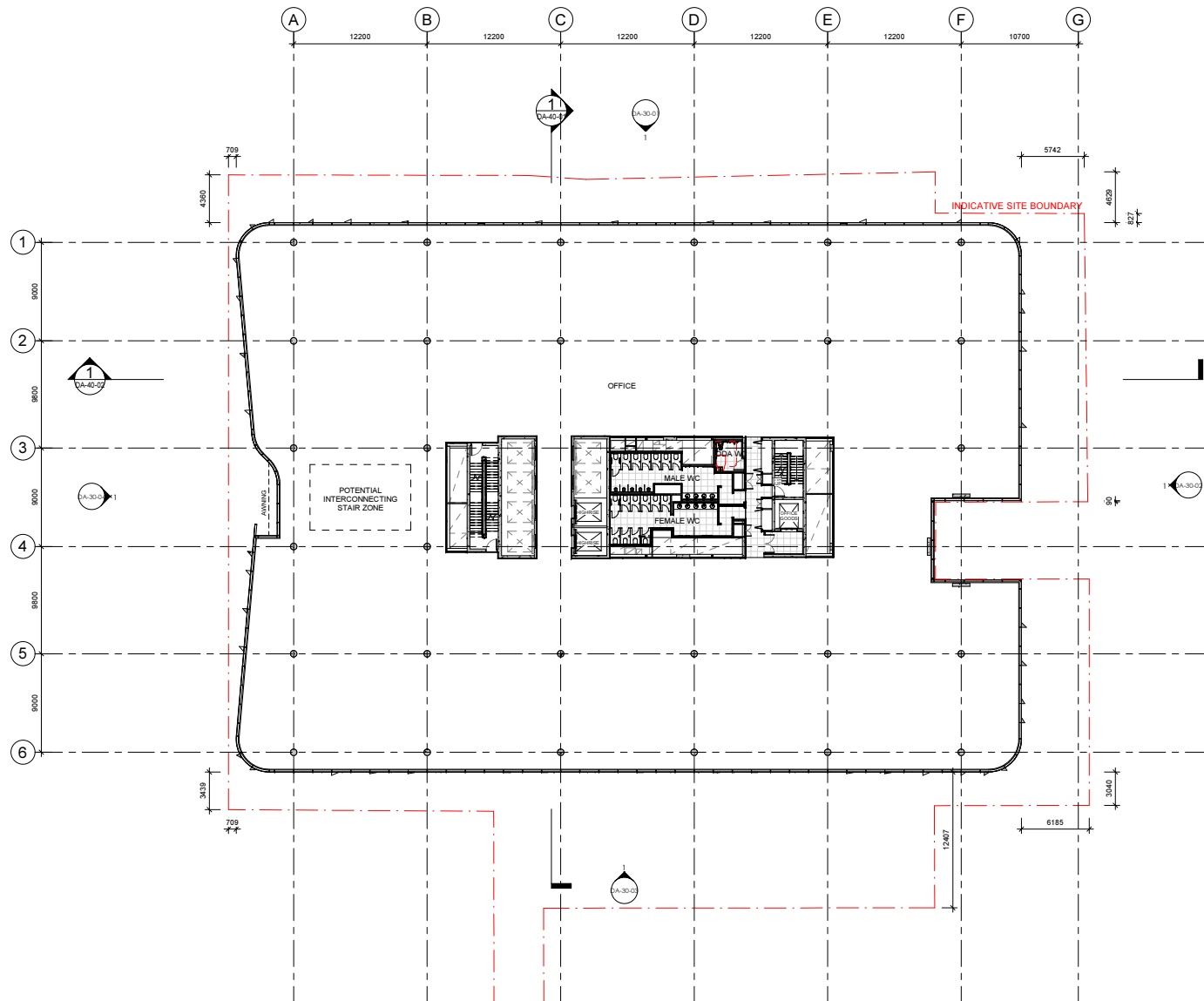


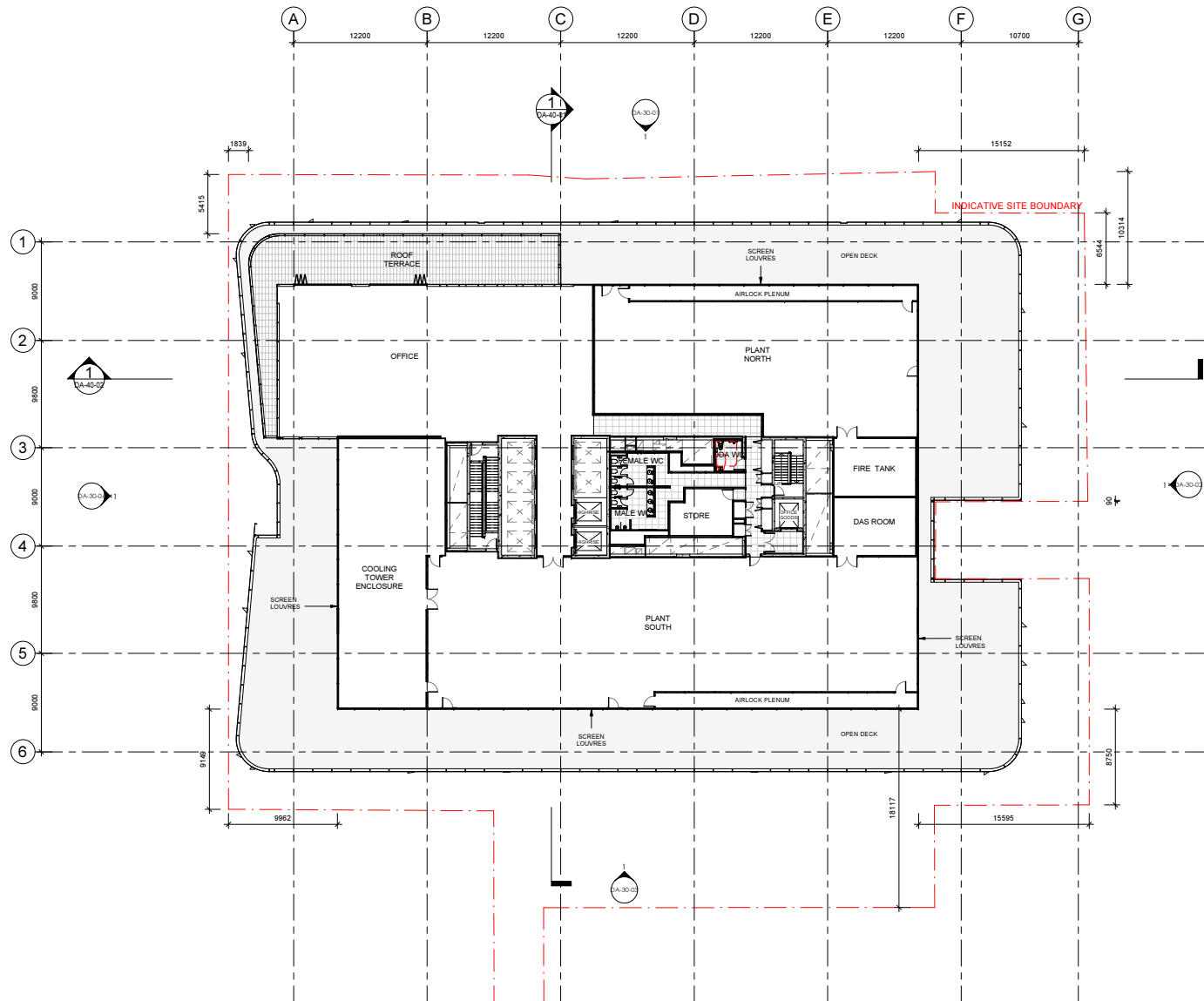


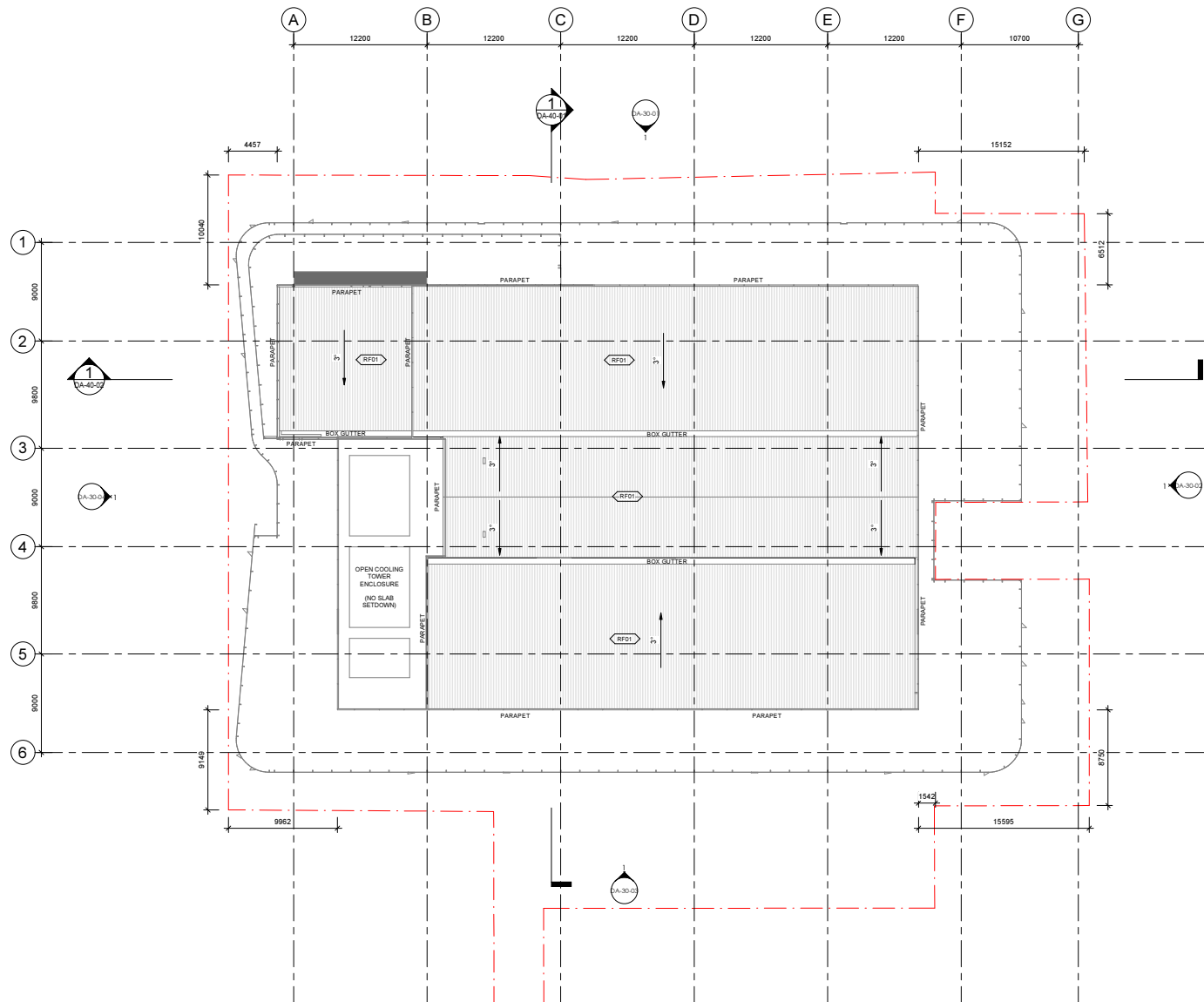


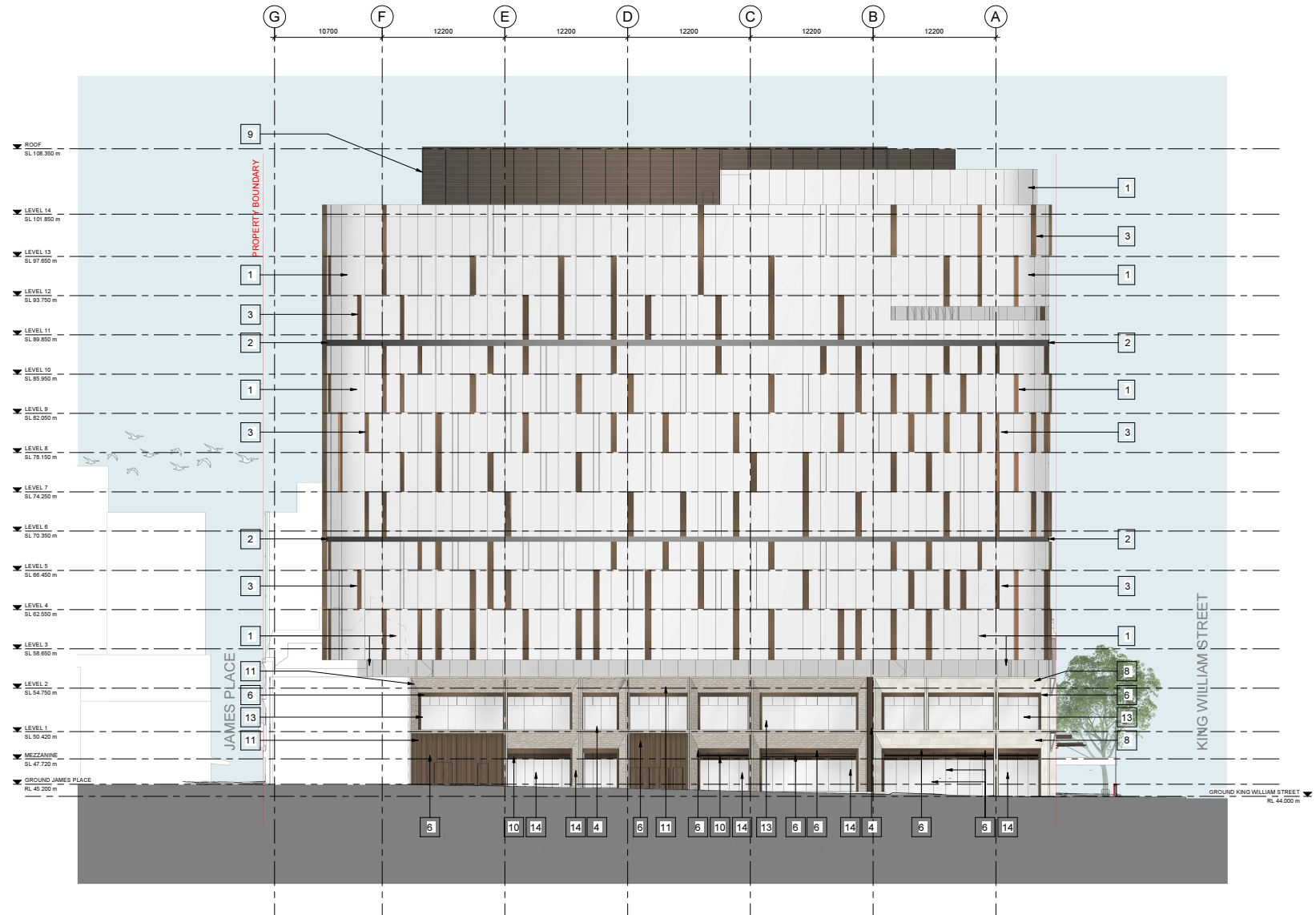












Project:  
**60 KING WILLIAM STREET**  
 NORTH ELEVATION

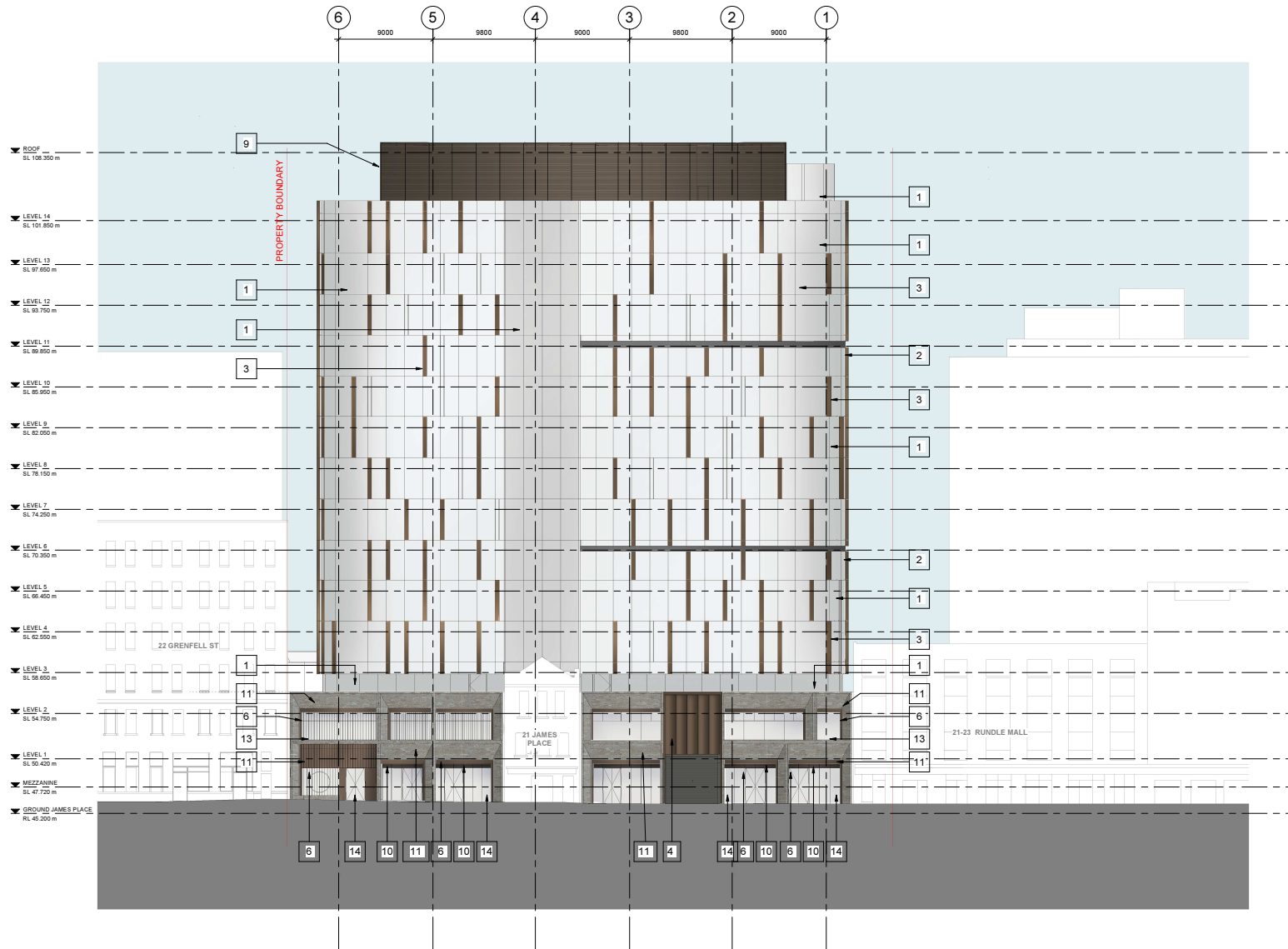
Date: 28/10/20  
 Revision: 8  
 Project Number: 520005  
 Drawing Number: DA-30-01

Scale: 1:200 @ A1



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Project:  
**60 KING WILLIAM STREET**  
 EAST ELEVATION

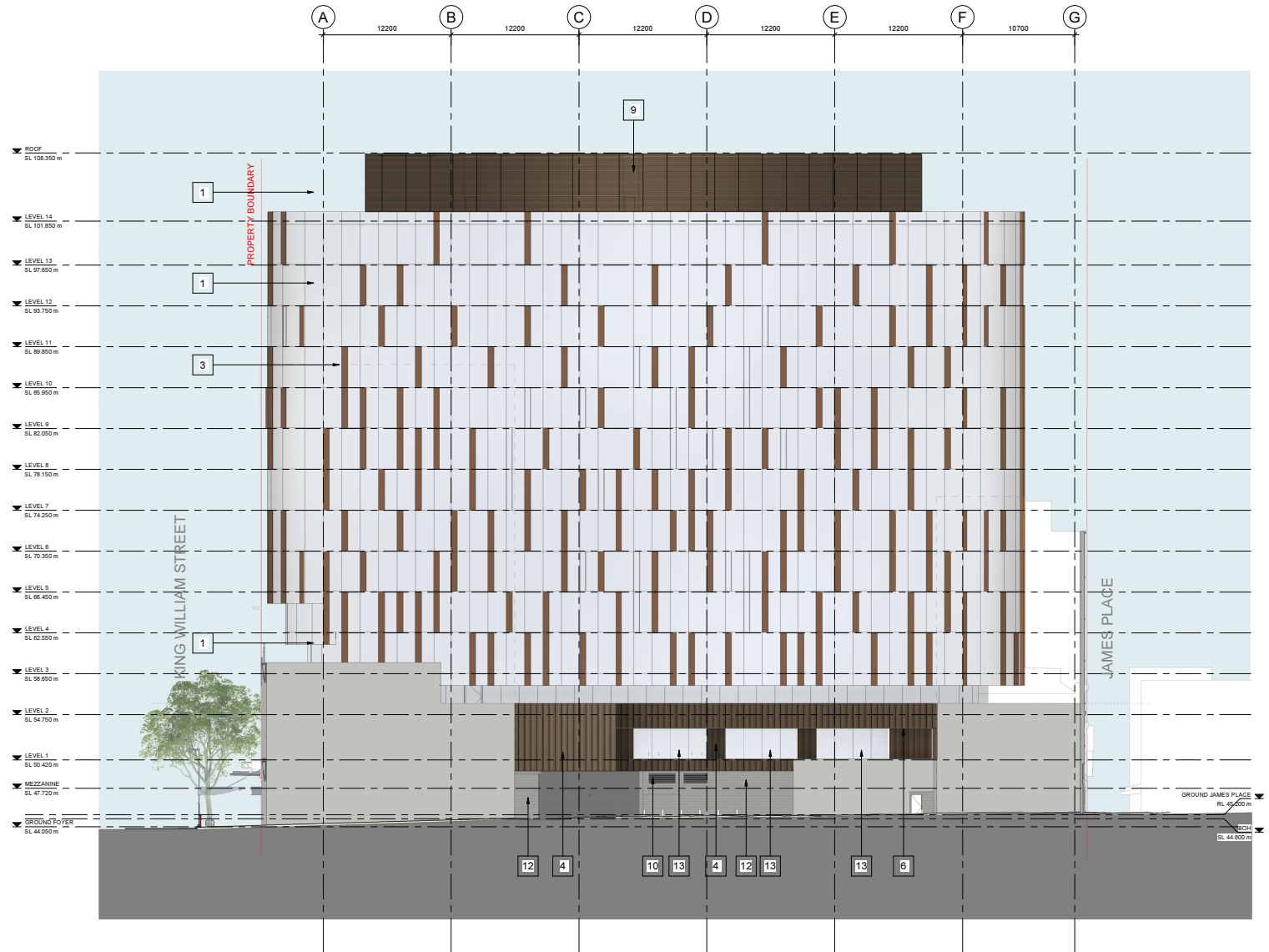
Date: 28/10/20  
 Revision: 8  
 Project Number: 520005  
 Drawing Number: DA-30-02

Scale: 1: 200 @ A1



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Project:  
**60 KING WILLIAM STREET**  
 SOUTH ELEVATION

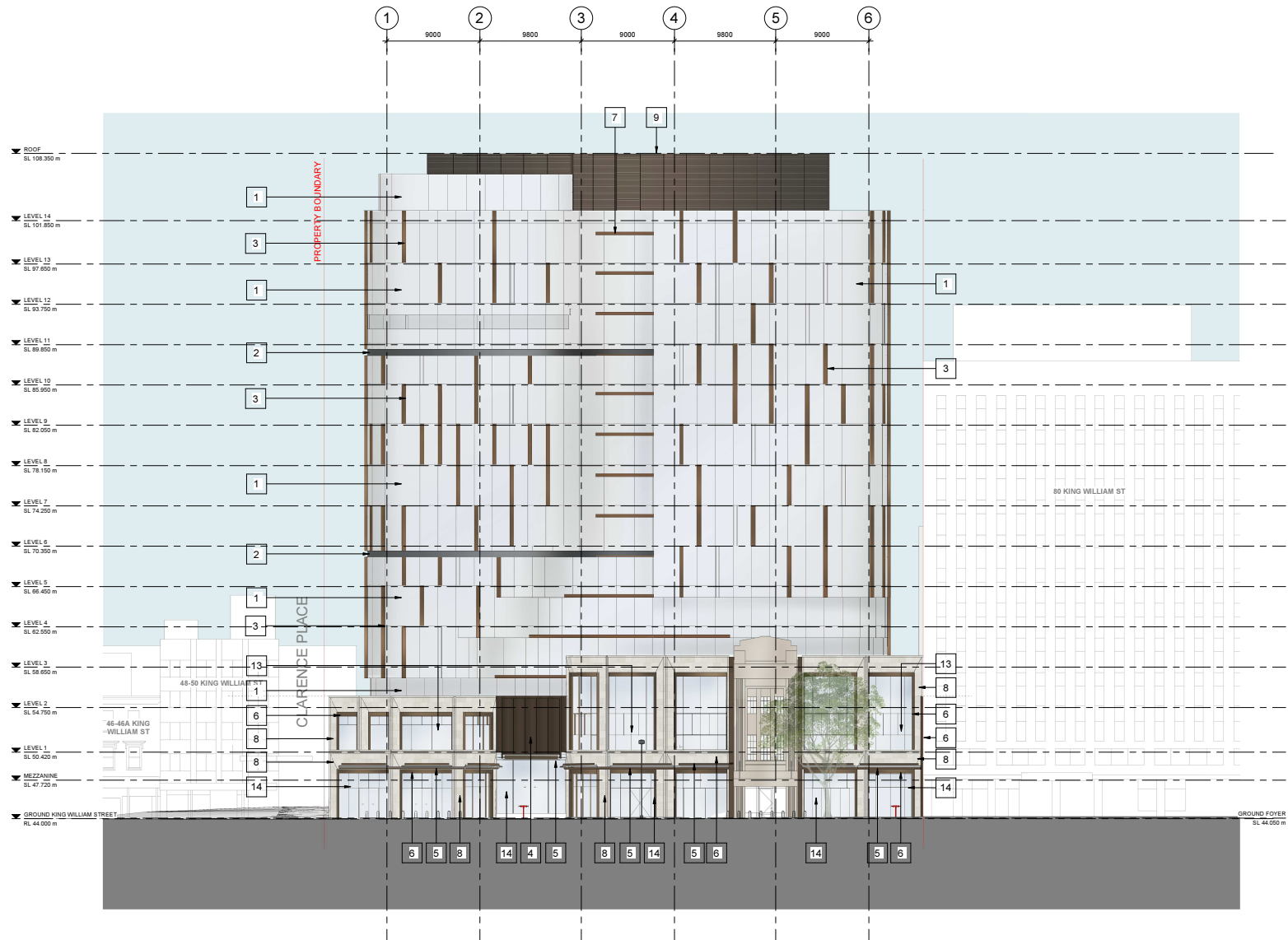
Date: 28/10/20  
 Revision: 8  
 Project Number: 520005  
 Drawing Number: DA-30-03

Scale: 1: 200 @ A1



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Project:  
**60 KING WILLIAM STREET**  
 WEST ELEVATION

Date: 28/10/20  
 Revision: 8  
 Project Number: 520005  
 Drawing Number: DA-30-04

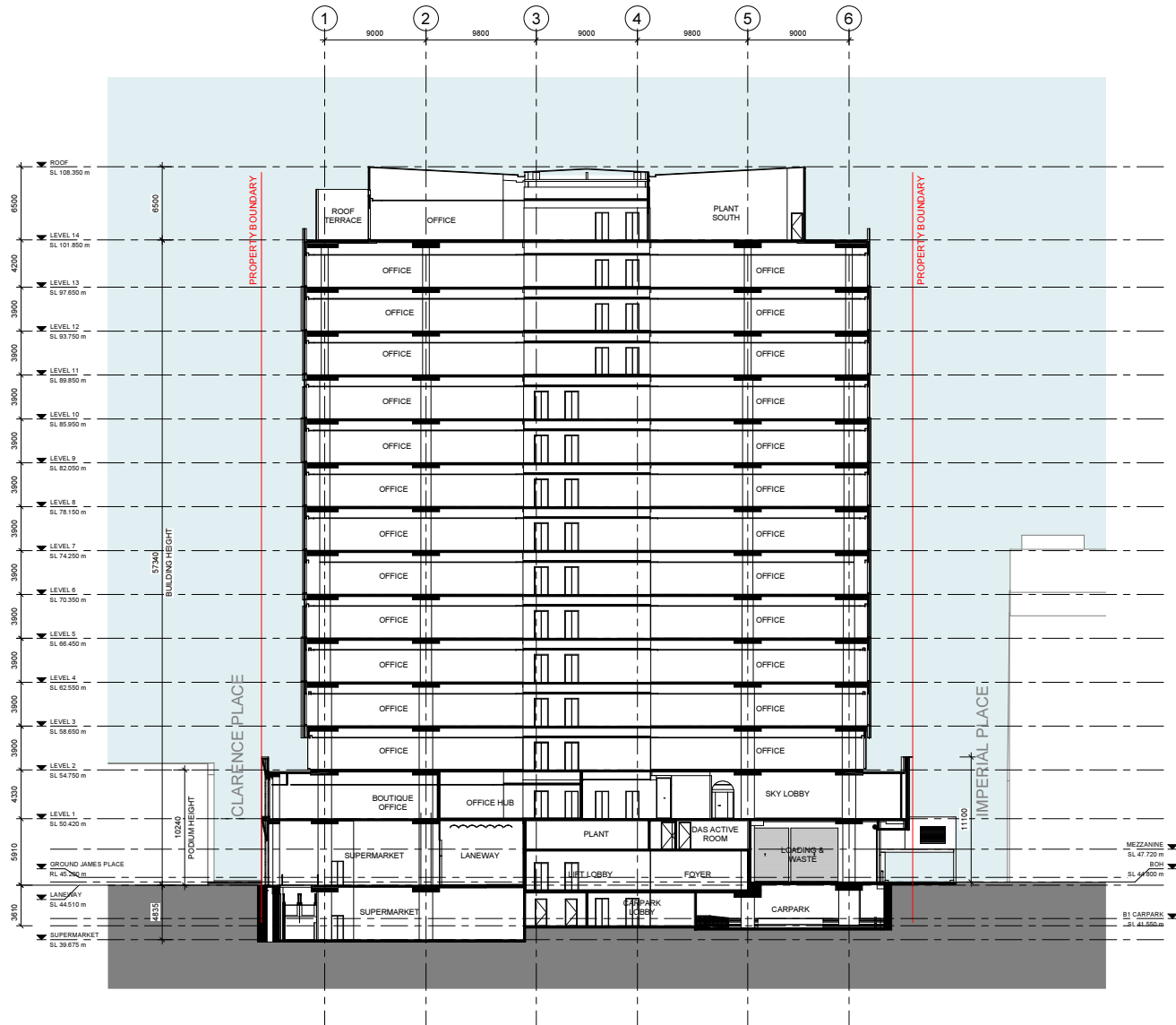
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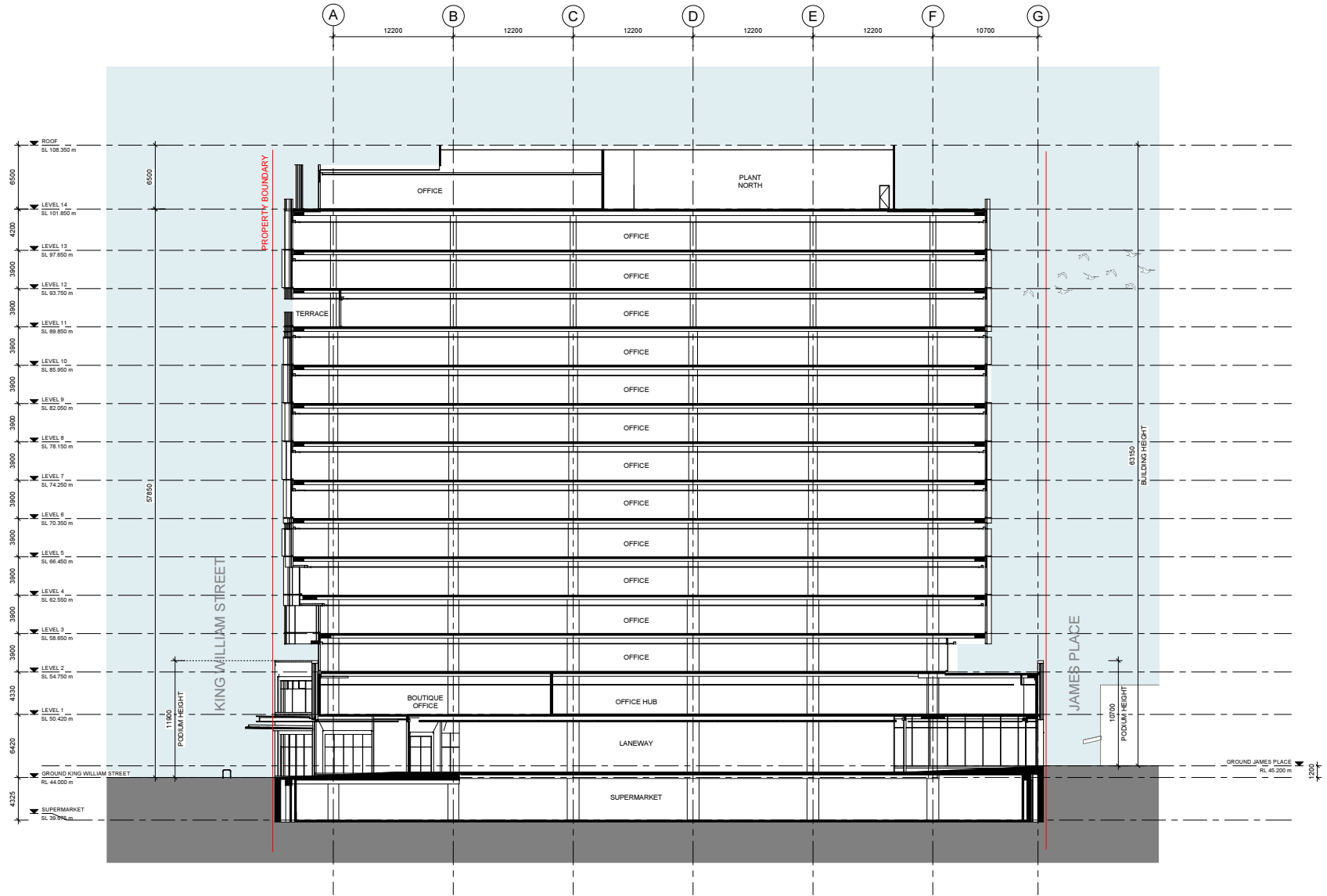


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Project:  
**60 KING WILLIAM STREET**  
KING WILLIAM STREET PERSPECTIVE 01

Date: 28/10/20  
Revision: 0  
Project Number: 620005  
Drawing Number: DA-01-01

Scale: NTS



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Project:  
**60 KING WILLIAM STREET**  
 KING WILLIAM STREET PERSPECTIVE 02

Date: 28/10/20  
 Revision: 8  
 Project Number: 620005  
 Drawing Number: DA-81-02

Scale: NTS

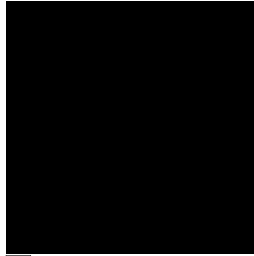


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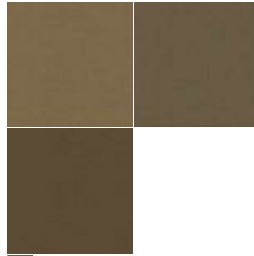
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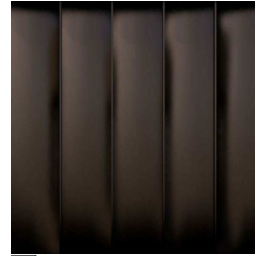
1  
Unfisted curtain wall system  
Clear glazing



2  
Powder coated finish  
Colour: Black



3  
Folded aluminium vertical fins  
Powder coated finish  
Colours: Sensational Champagne  
Brilliance  
Medium Bronze



4  
Solid aluminium  
Anodised finish  
Colour: Dark bronze



5  
Solid aluminium awning and canopies  
Anodised finish  
Colour: Dark bronze



6  
Folded aluminium shroud, reveals and trims  
Anodised finish  
Colour: Dark bronze



7  
Pre-finished solid aluminium cladding  
Colour: Medium bronze metallic



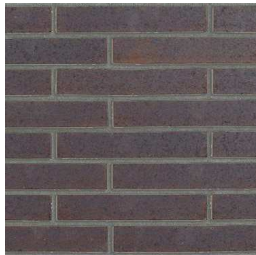
8  
Light shade natural standstone



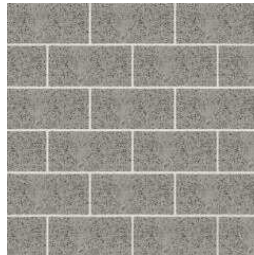
9  
Fixed screen louvers  
Powdercoated finish  
Colour: Black



10  
Fixed louvers  
Anodised finish  
Colour: Dark bronze



11  
Brick  
Colour: Grey/Bronze



12  
Honed blockwork  
Colour: Charcol



13  
Unfisted glazed windows  
Clear glazing



14  
Unfisted glazed windows  
Super clear glazing



15  
Pre-finished metal pan roofing  
Colour: TBC from standard colour range



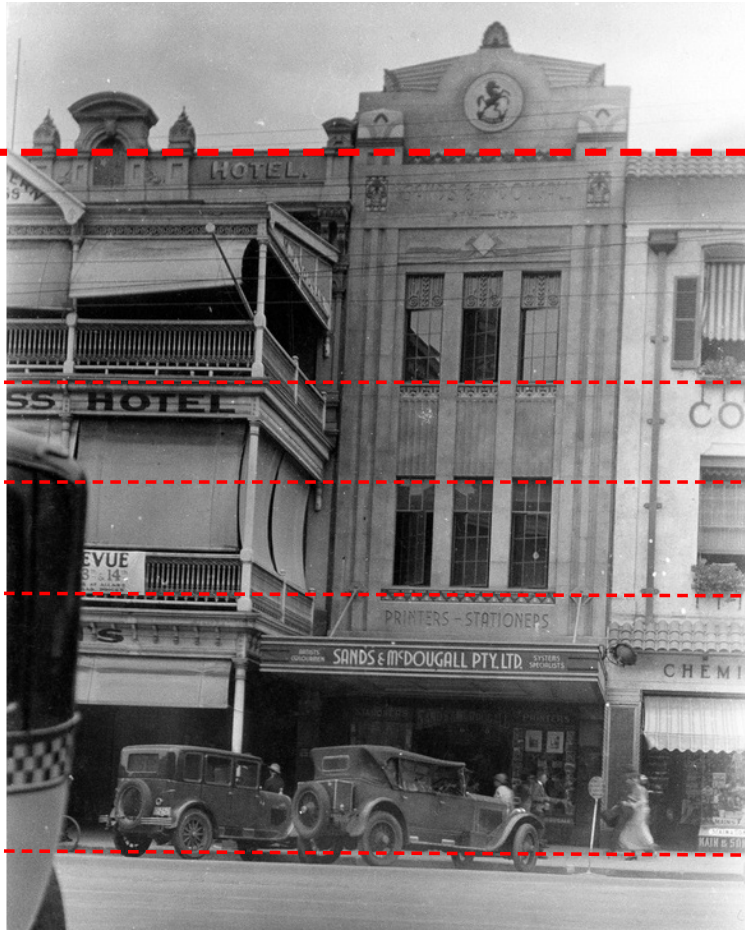
**Charter Hall**  **C O X**

60 King William Street  
Adelaide

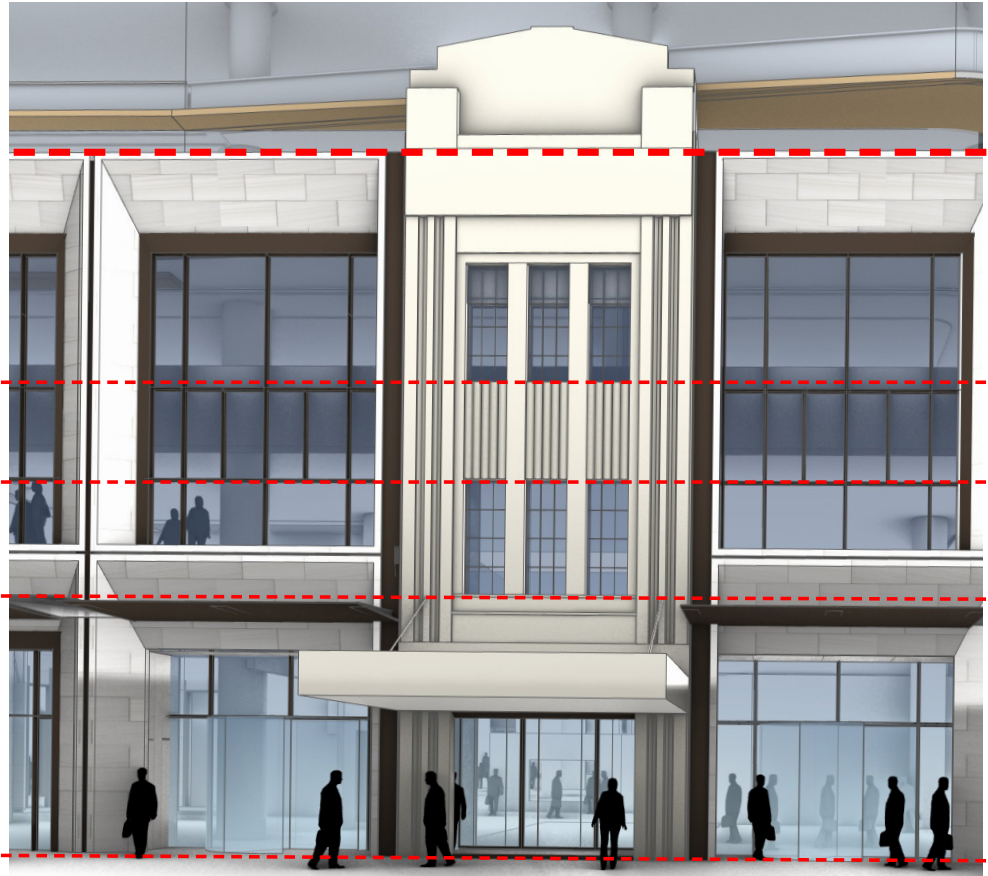
HERITAGE UPDATE  
28 OCTOBER 2020



## Reinstating the King William streetscape.



Circa 1934



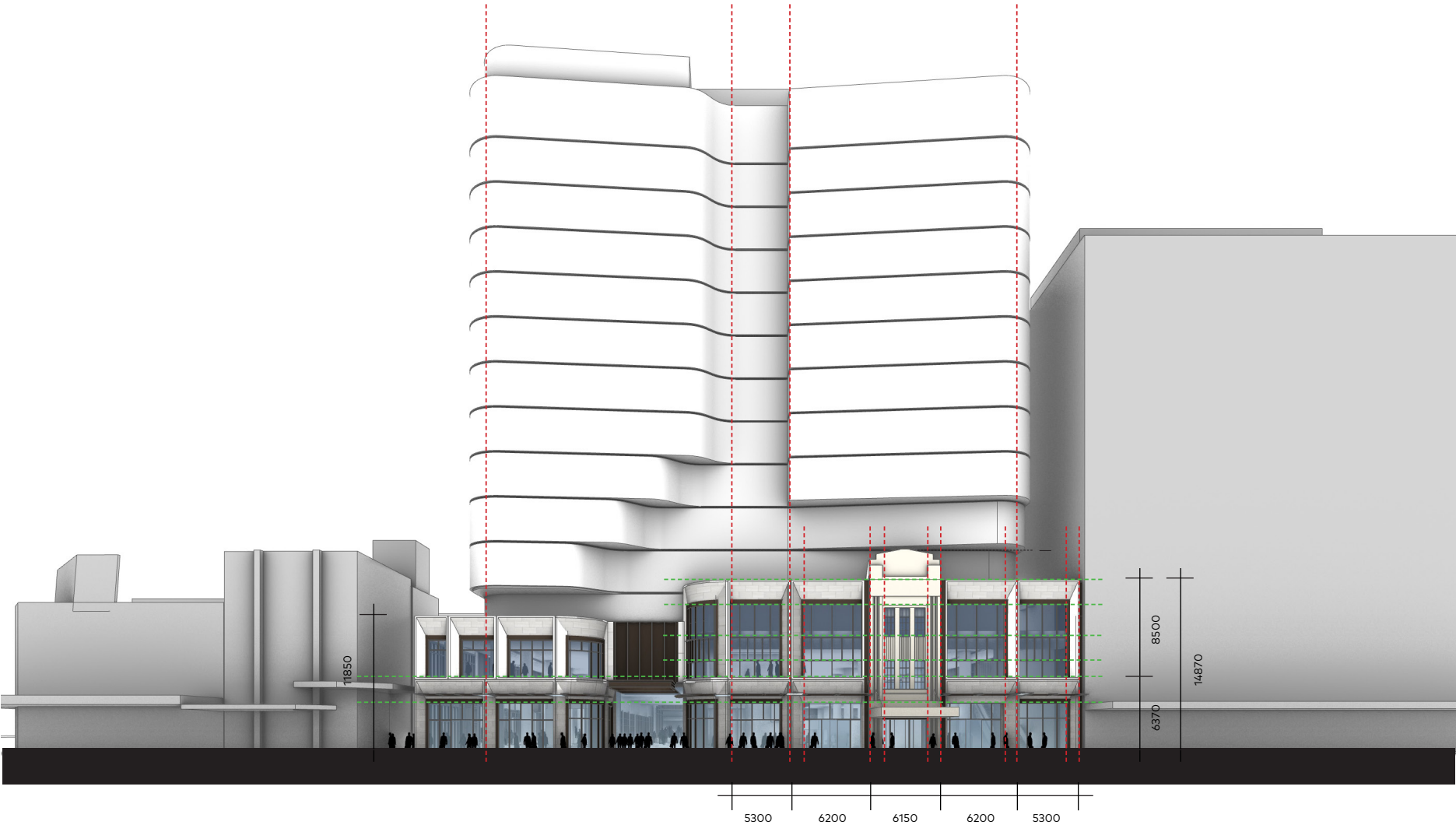
Proposal



King William Street

60 King William Street

Heritage Study



# King William Street

West Elevation



60 King William Street

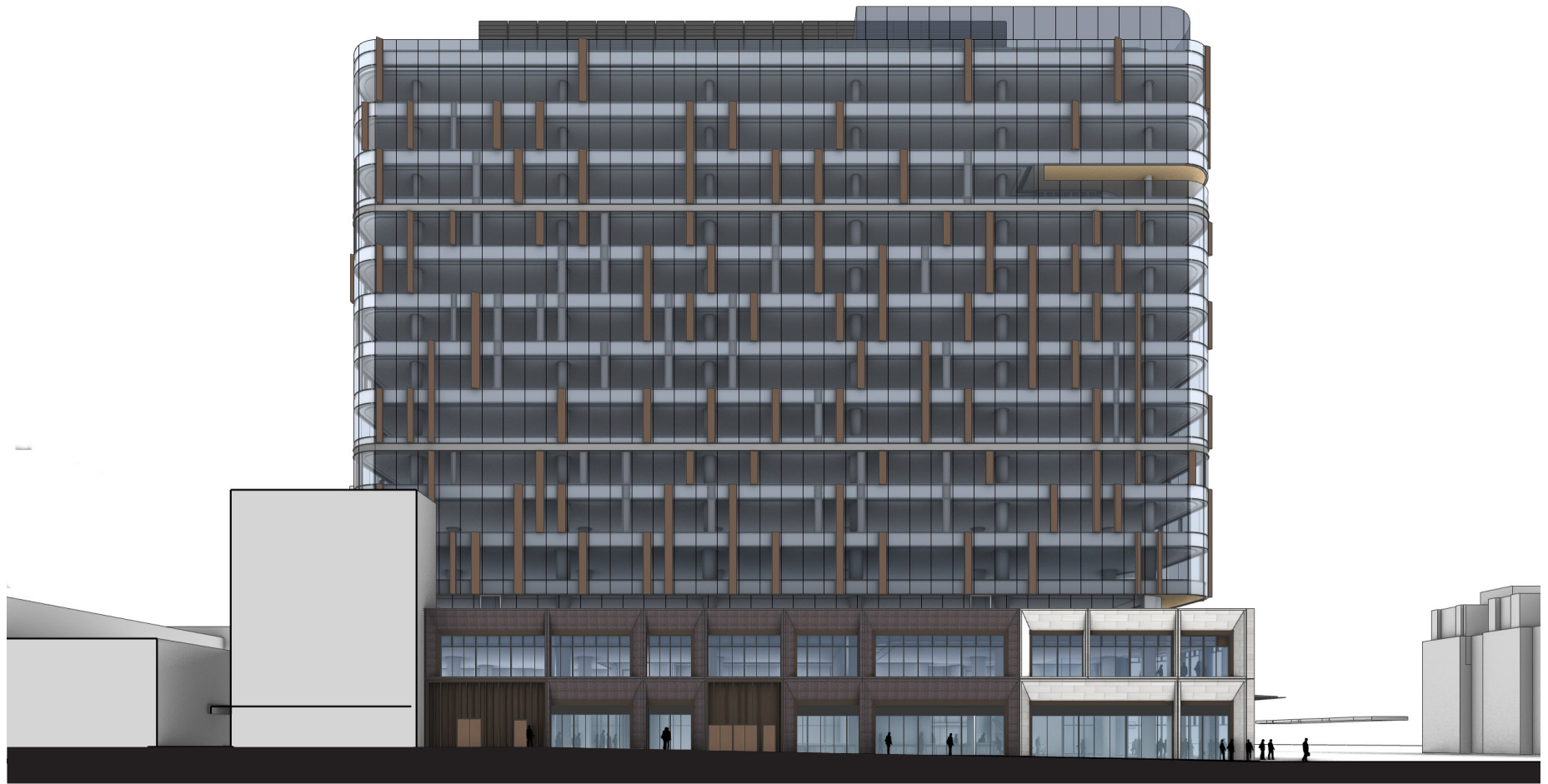
Heritage Study

# Clarence Place

North Elevation

60 King William Street

Heritage Study



COX

# James Place

East Elevation

60 King William Street

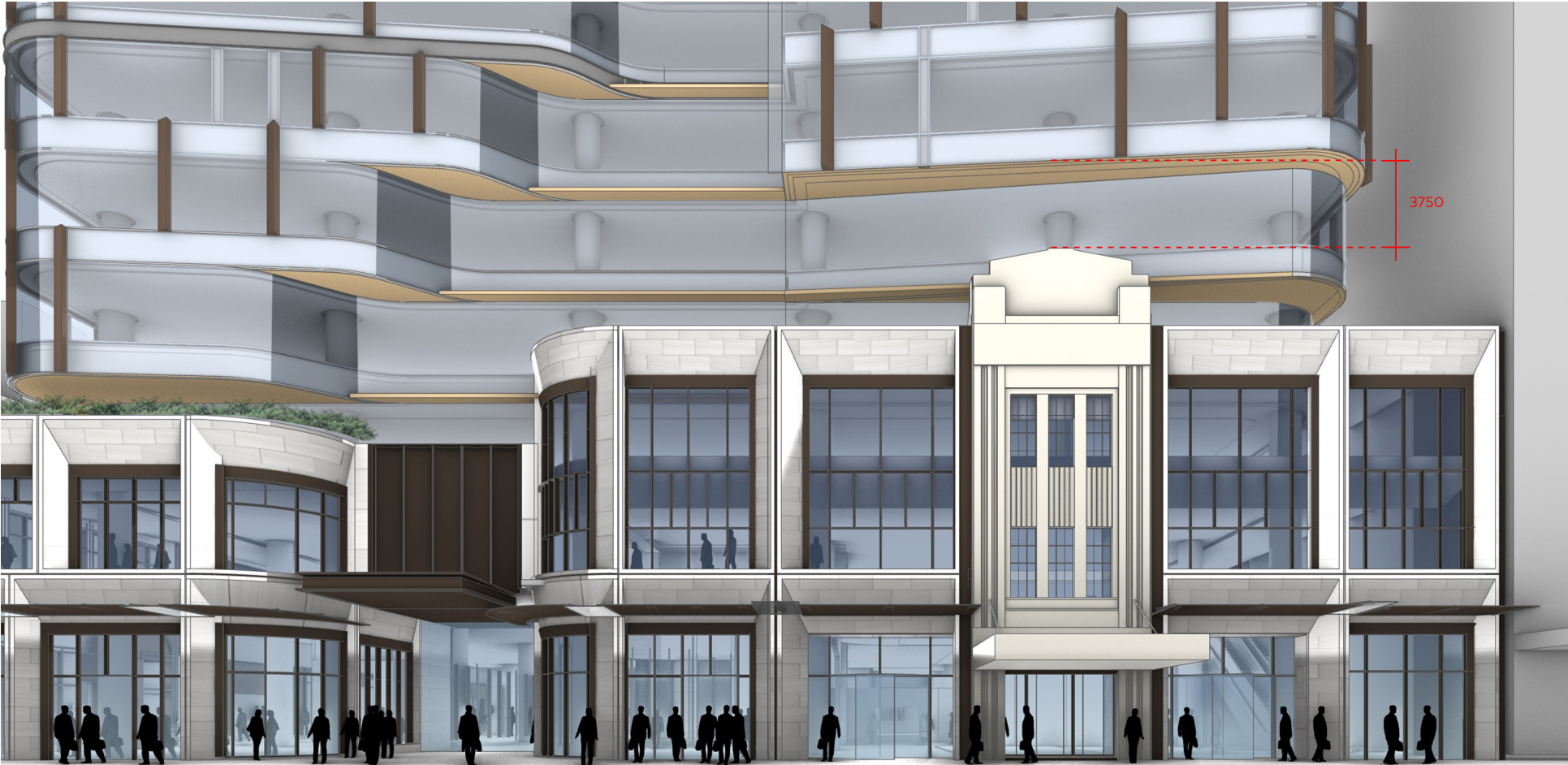
Heritage Study



COX

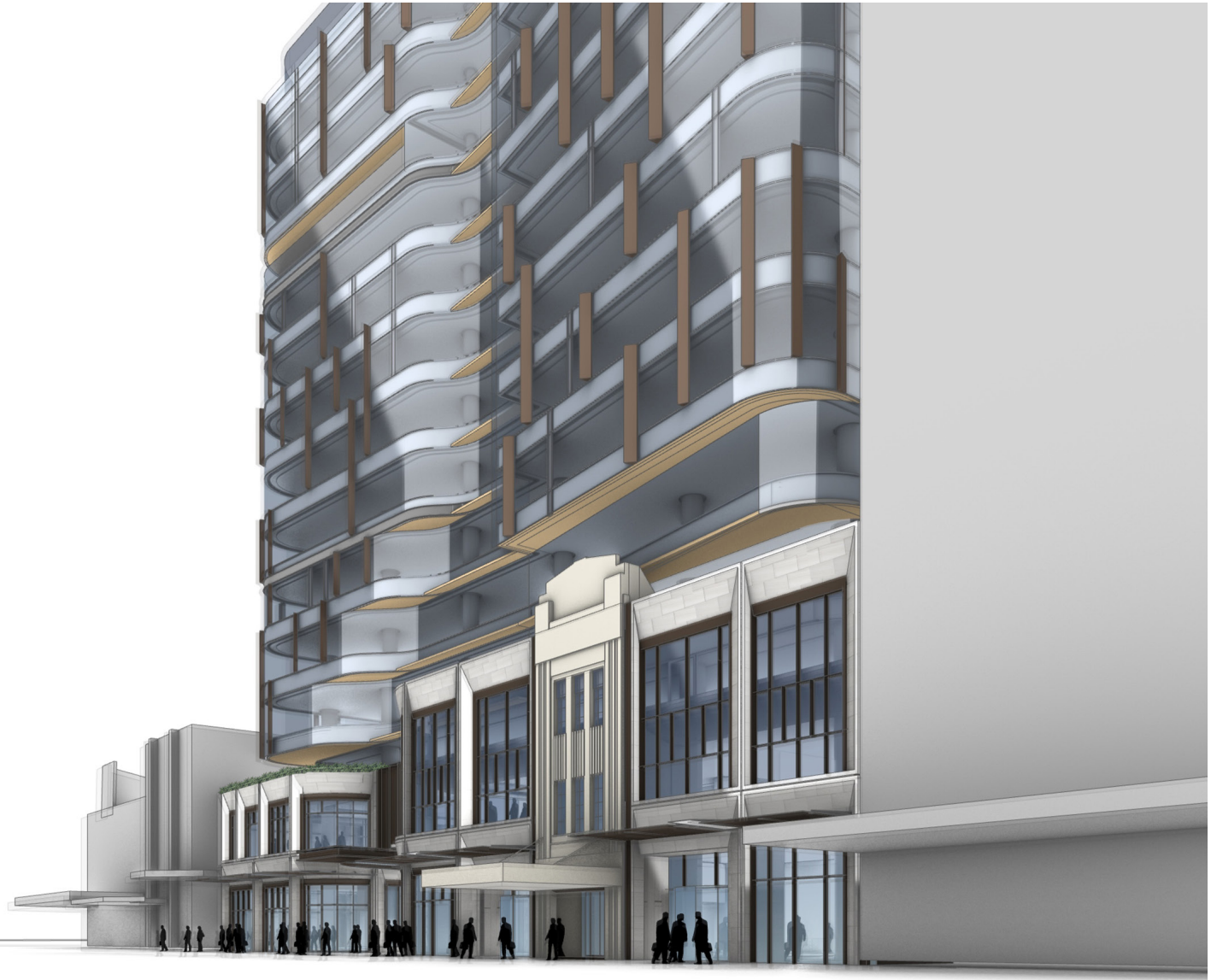


Office Entry



C O X

## View north from King William



COX



## View from escalators

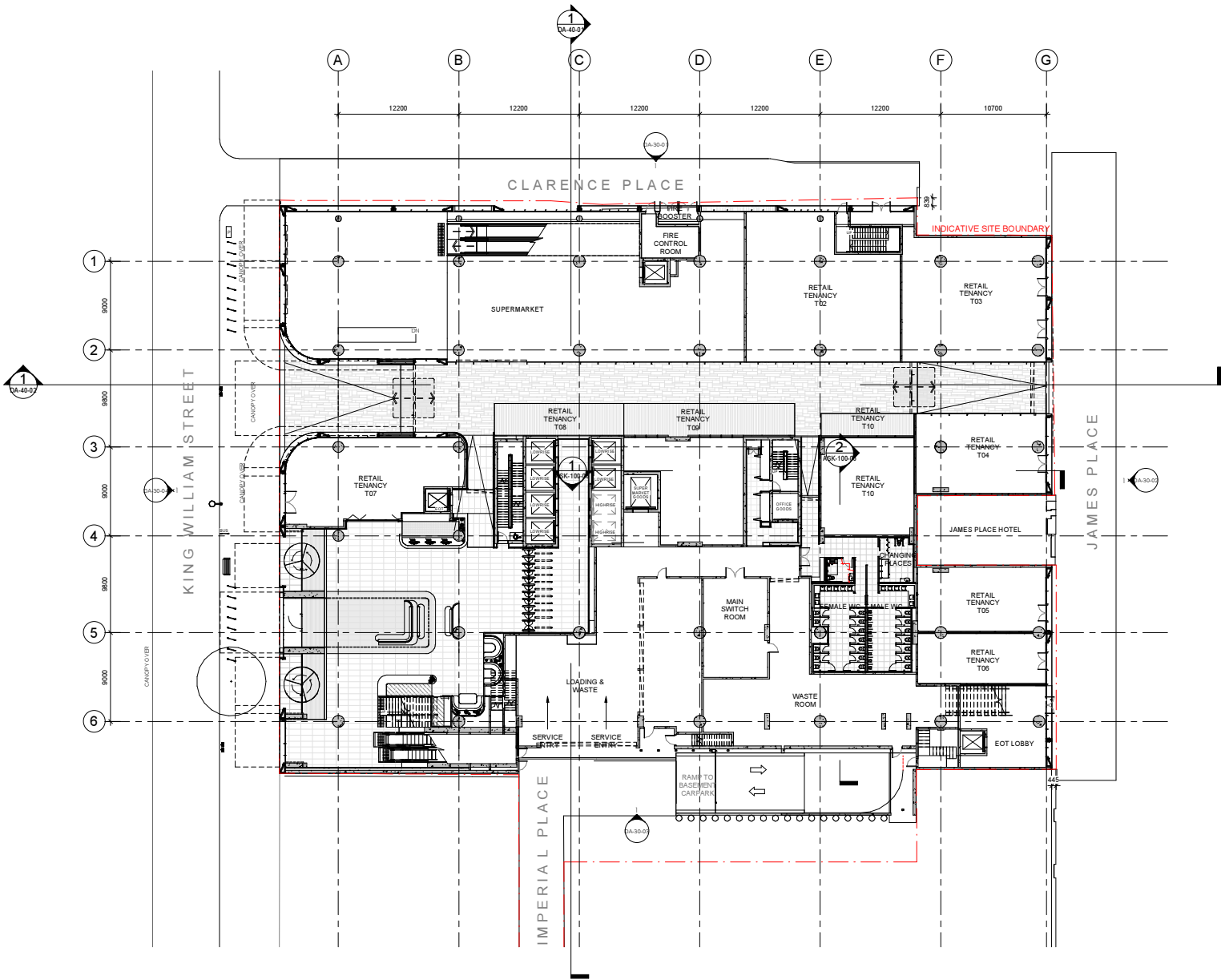


## View from Entry Foyer

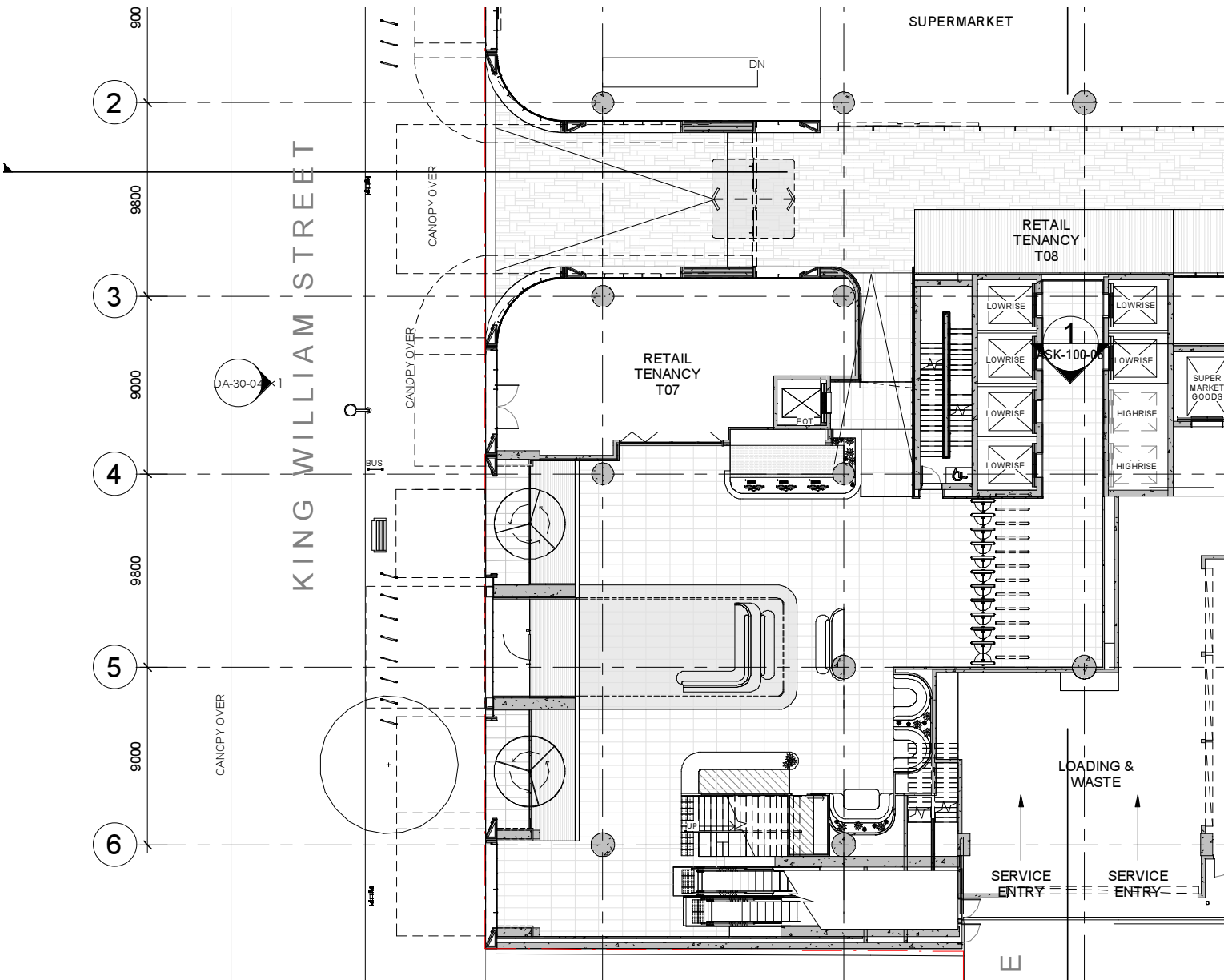




Ground



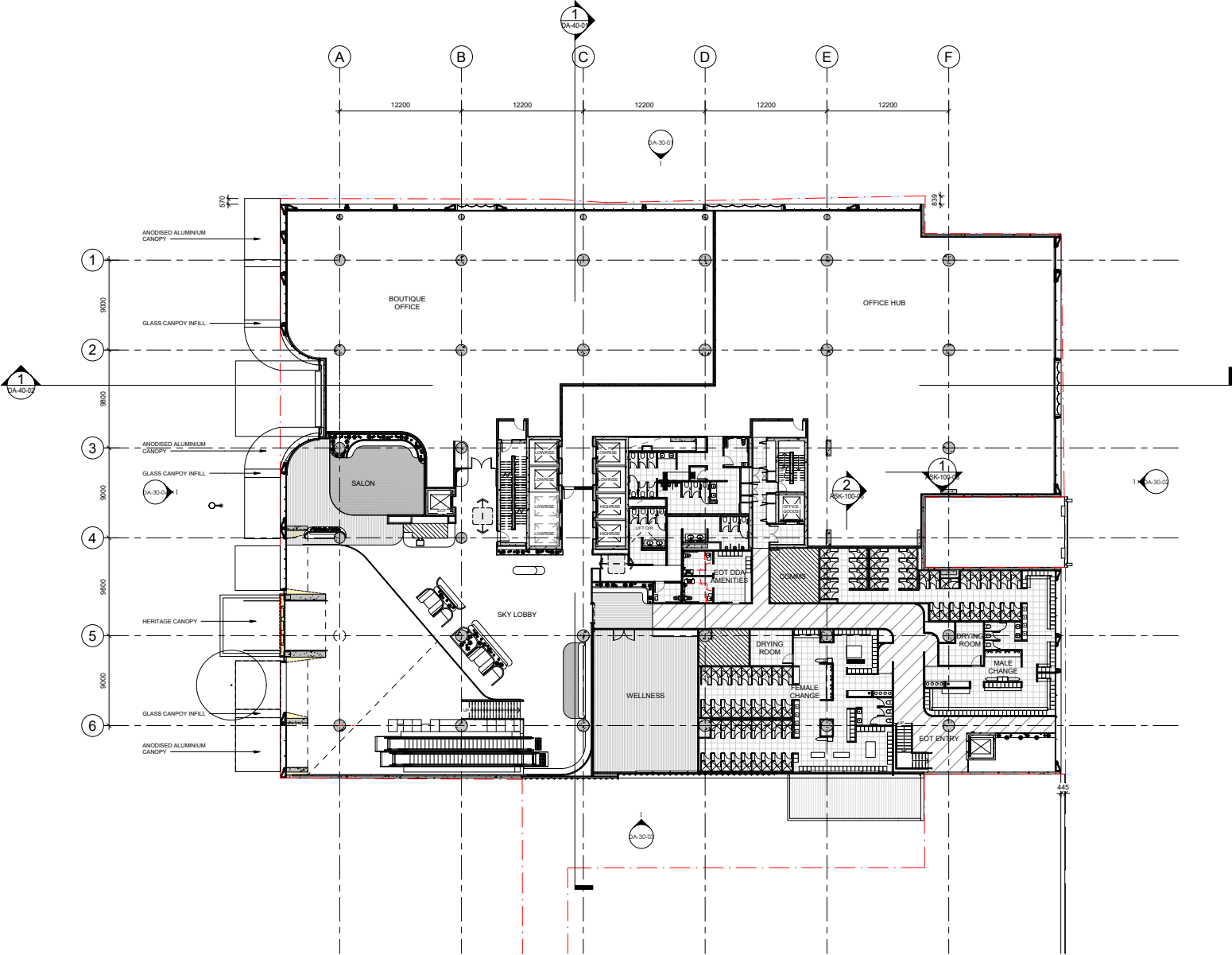
Ground Floor - Foyer



Level 1

60 King William Street

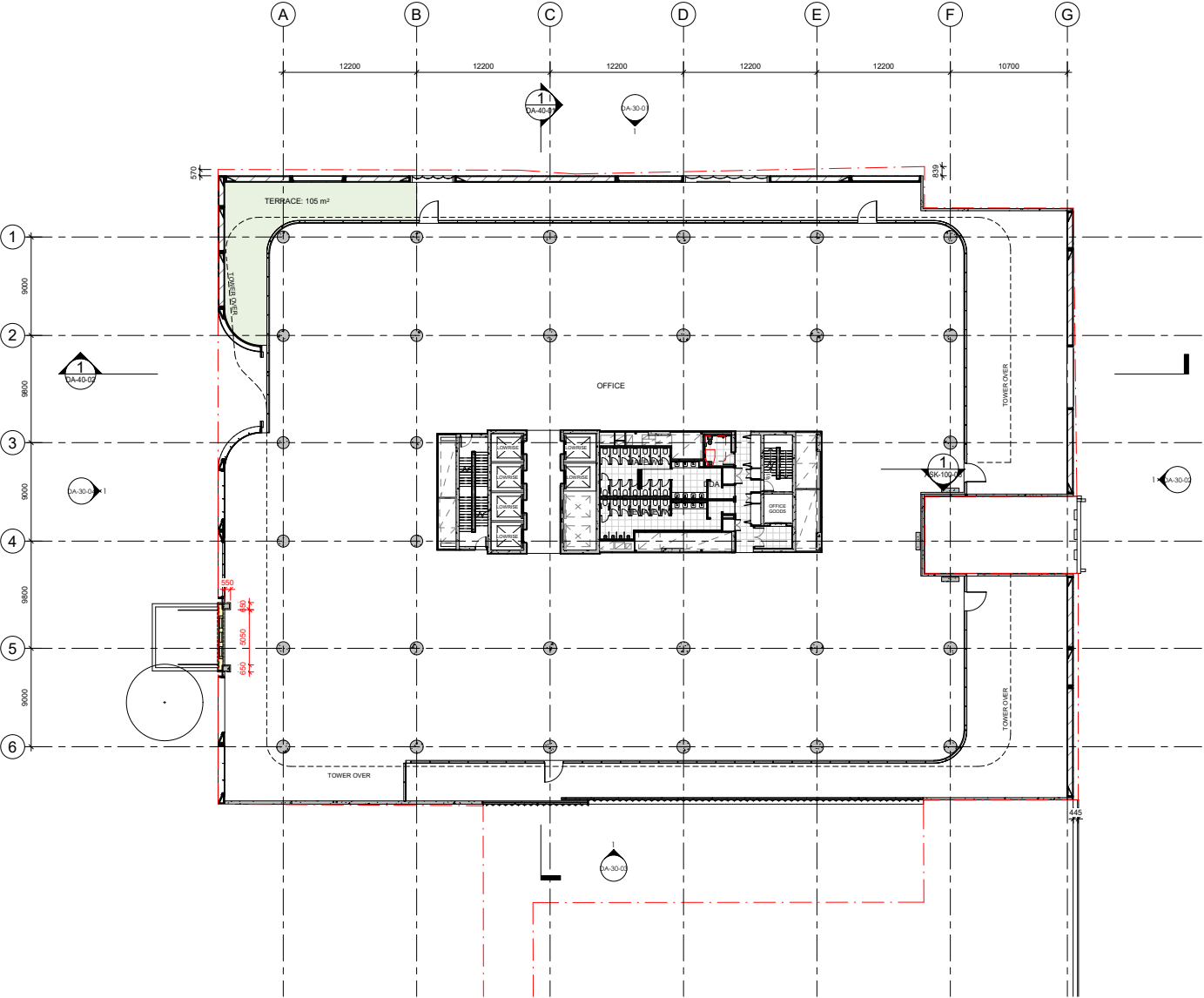
Heritage Study



Level 2

60 King William Street

Heritage Study

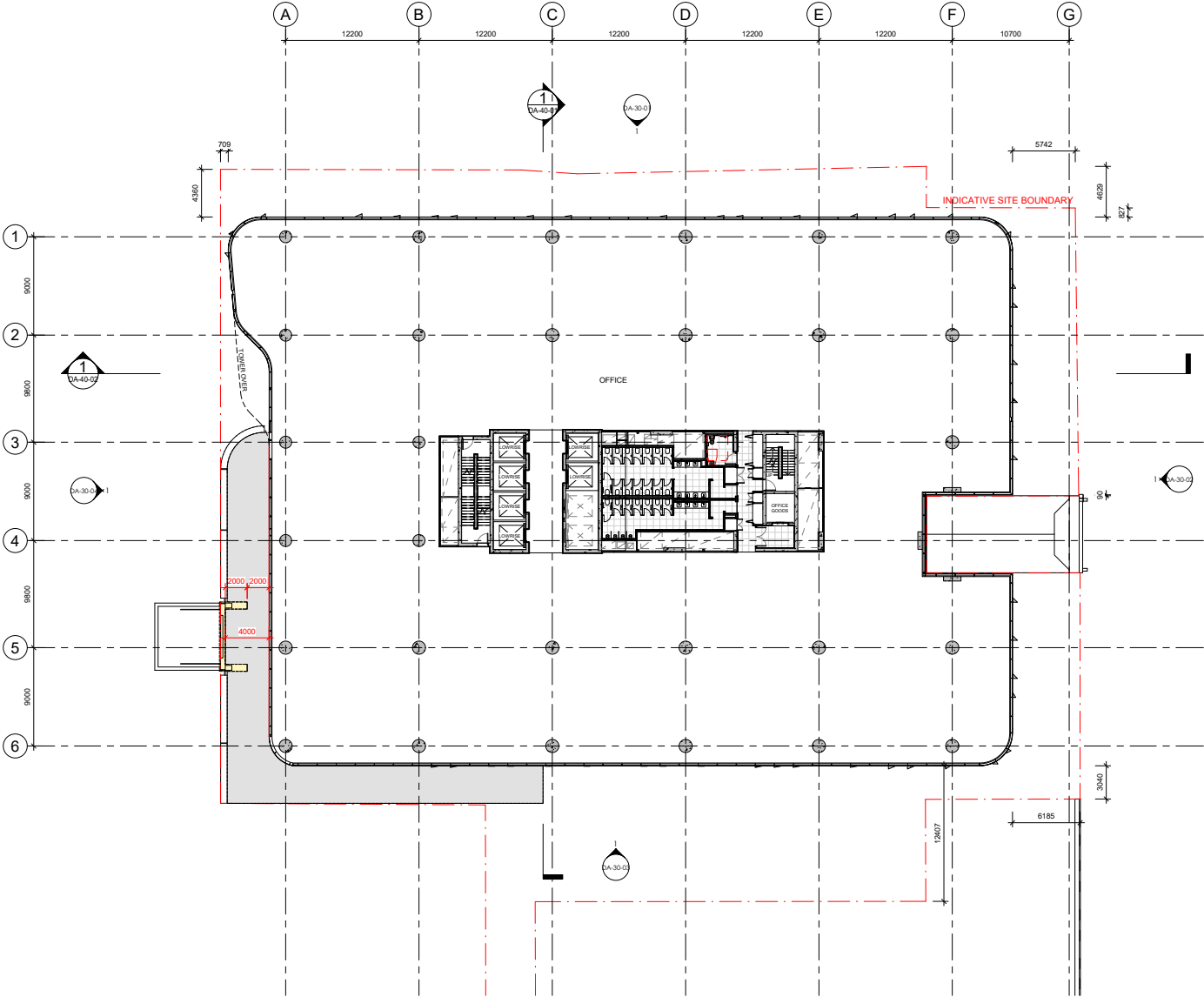


Level 3

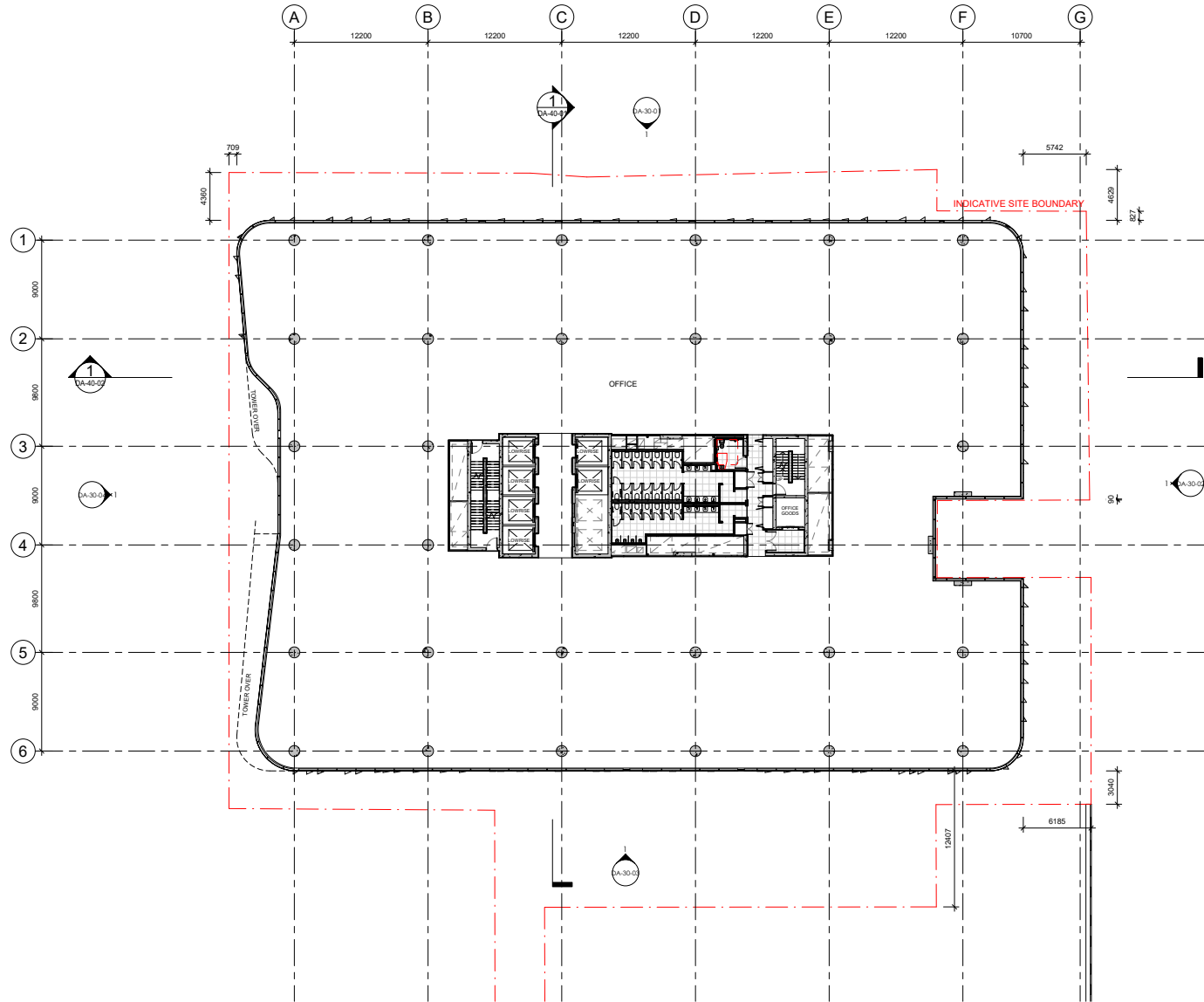
60 King William Street

Heritage Study

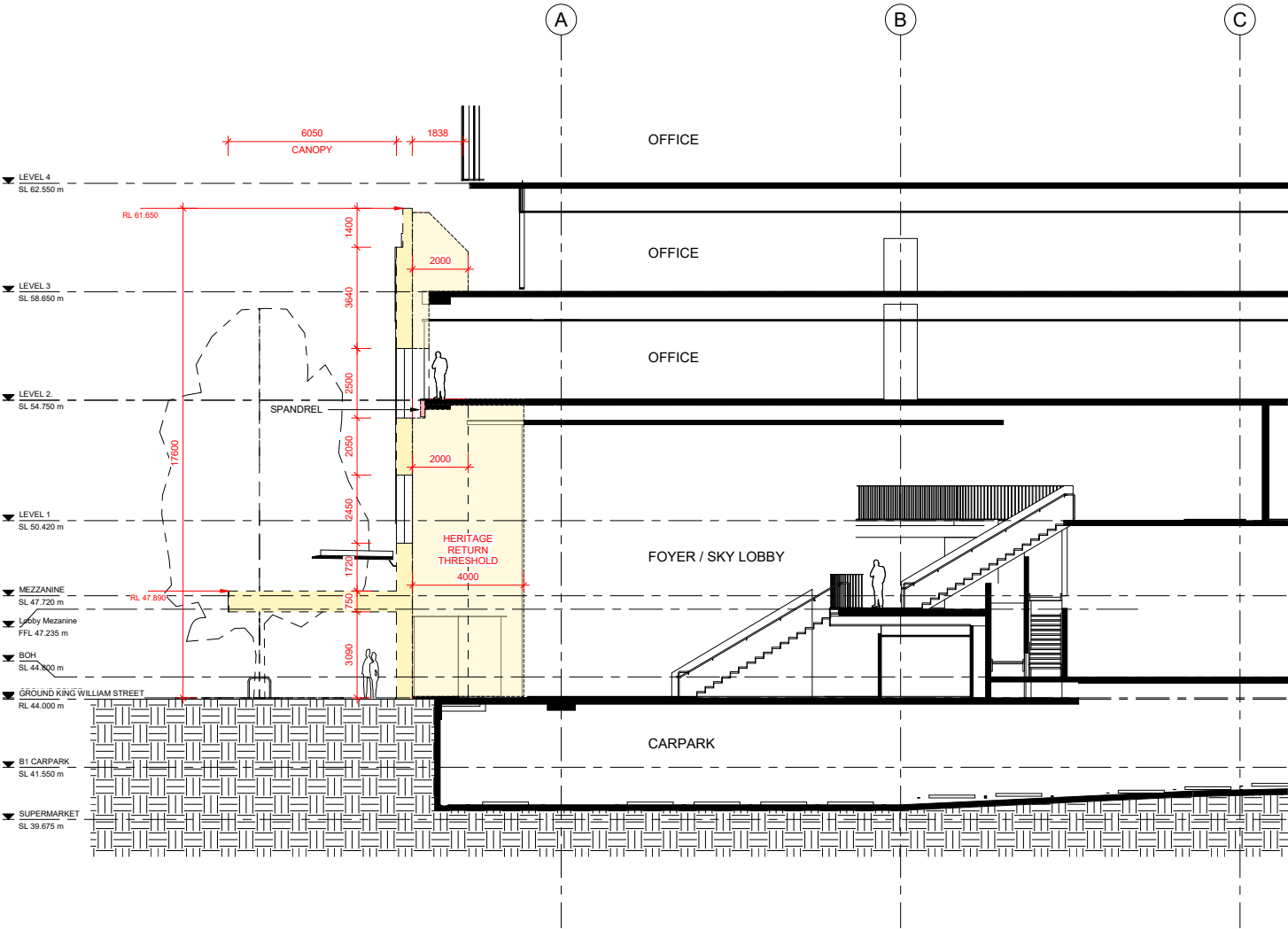
COX



# Level 4



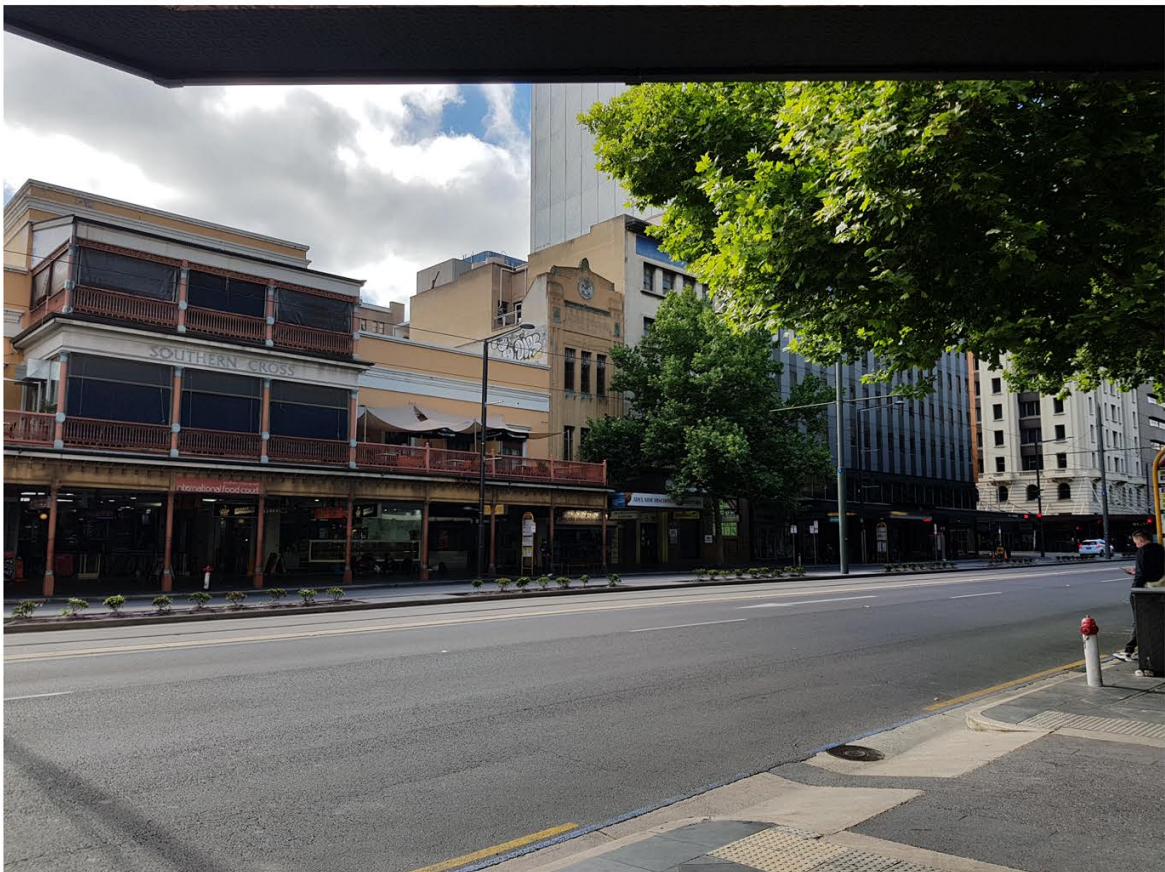
Section







**King William Street**



**King William Street 2**





**James Place**



**King William and Grenfell Street corner**





**Clarence Place**



**Former Sands and McDougall building**





**Grenfell Street**



**Imperial Place**



**PLANNING REPORT**  
**15 STOREY MIXED-USE RETAIL AND COMMERCIAL OFFICE**  
**BUILDING**

52-66 KING WILLIAM STREET, ADELAIDE

Prepared for:  
**Bieson Pty Ltd as trustee for the CH King William Trust**

Date:  
**November 2020**

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V6	Update Bike parking	CV	9/11/2020

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## 1. INTRODUCTION

This report has been prepared to accompany an application by Bieson Pty Ltd as trustee for the CH King William Trust ('the Proponent') for development plan consent ('consent') to:

- retain the State Heritage Place at 64 King William Street, Adelaide (façade and canopy);
- demolish all of the remaining buildings on the subject land; and
- construct a 15-storey mixed-use retail and office building at 52-66 King William Street, Adelaide (the 'subject land').

In preparing this report, we have:

- inspected the site and its surroundings;
- identified, and reviewed, what we consider to be the most pertinent provisions of the Adelaide (City) Development Plan, consolidated on 30 April 2020 ('the Development Plan');
- had regard to the Certificates of Title Appendix 1 and the Land Management Agreement at Appendix 2;
- examined the compendium of architectural drawings at Appendix 3 and the design statement at Appendix 4;
- reviewed, and summarised the key findings of the;
  - » Façade Reflectivity Statement prepared by Prism at Appendix 5;
  - » Heritage Assessment prepared by Lovell Chen at Appendix 6;
  - » Traffic Impact Assessment prepared by GTA at Appendix 7;
  - » Pedestrian Assessment prepared by Arup at Appendix 8;
  - » Acoustic Report prepared by Floth at Appendix 9;
  - » Wind Analysis Report prepared by Vipac at Appendix 10;
  - » Waste Management Plan prepared by Colby Phillips Advisory at Appendix 11;
  - » Sustainability Statement prepared by Floth at Appendix 12;
  - » Stormwater Management Plan prepared by RBG at Appendix 13;
  - » Site History Report prepared by JBS&G at Appendix 14;
- had regard to the:
  - » Site Services Report prepared by Floth at Appendix 15;
  - » the *Development Act, 1993*; and,
  - » the *Development Regulations, 2008* ('the Regulations').

This report contains our description of the site, its surroundings and the proposal, and our assessment of the proposal against what we consider to be the most pertinent provisions of the Development Plan.

## 2. THE SUBJECT LAND

The subject land is shown in Figure 3.1 and comprises nine contiguous allotments bound by Clarence Place to the north, James Place to the east, Imperial Place to the south and King William Street to the west and has a total site area over 4,700 square metres.



**Figure 2.1** *Subject Land*

The nine allotments are identified as follows:

- Lot 2 on File Plan 31390 also known as 66-68 King William Street, Adelaide (CT 5585/337)
- Lot 21 on Deposited Plan 50156 also known as 52-62 King William Street, Adelaide (CT 6129/121)
- Lot 22 of Deposited Plan 50156 also known as 64 King William Street, Adelaide (CT 5686/236)
- Lot 23 on Deposited Plan 50156 also known as 52-62 King William Street, Adelaide (CT 5686/237)
- Lot 51 on Deposited Plan 25900 also known as 27 James Place, Adelaide (CT 5585/341)
- Lot 121 on File Plan 181773 also known as 52-62 King William Street, Adelaide (CT 5585/339)
- Lot 123 on File Plan 181775 also known as 23-25A James Place, Adelaide (CT 5883/435)
- Lot 124 on File Plan 181776 also known as 27 James Place, Adelaide (CT 5585/340)
- Lot 7 which is a private road (Imperial Place) on File Plan 31390 also known as 52-62 King William Street, Adelaide (CT 5585/331)

The certificates of title for the above allotments are included in Appendix 1.

For simplicity, the subject land will be referred to as 52-66 King William Street for the purposes of this report.

The site includes the Southern Cross Arcade and buildings to its immediate south (including a local heritage place) and the Council owned toilet block in James Place. Buildings up to three storeys exist on the land which are occupied by a mix of shops, cafes/food outlets, personal service establishments and offices. Most notably, the Southern Cross Arcade traverses the centre of the site from east to west, providing a pedestrian connection between James Place and King William Street. Accordingly, the primary pedestrian access points are via these two frontages.

Personal access doors, intended for staff use only, are also accessible from Clarence Place along with vehicle access to a waste collection and loading area currently accessible via Clarence Place. Vehicle access is also available via a private road (Imperial Place) which the subject land enjoys a right of way over, to enable access to an at-grade car park.

Part of the façade and canopy of one of the buildings (64 King William Street) is identified as a State Heritage Place.

The subject land is affected by a number of easements, most of which result from the allotments being independently developed and owned. Consequently, easements which are only appurtenant to other allotments which will form part of the subject land, will be extinguished as part of an amalgamation. Easements that provide rights to allotments external to the subject land shall remain. This includes all of Lot 7 which is a private road (Imperial Place) and is subject to free and unrestricted rights of way.

We also note that negotiations are ongoing with the City of Adelaide with respect to allotment 123 and the existing toilet block.

Lot 123 also has right of support over part of the land to the north (James Place Hotel). The management of this building interface and how this right of support will be impacted will be resolved during detailed design.

Lot 21 is subject to a Land Management Agreement (LMA) under the *Development Act 1993*. A copy of this LMA forms Appendix 2.

The LMA also affects adjacent land (Lot 91) which is occupied by the James Place Hotel and it seeks to regulate an opening in the western wall of the James Place Hotel and an opening in one of the eastern walls of Southern Cross Arcade for the purposes of managing fire safety requirements. The proposed development will close this opening and ensure that the wall will comply with the requirements of the Building Code of Australia and satisfying the obligations imposed on Lot 21 within the LMA.

### 3. THE LOCALITY

The subject land is situated within the 'business hub' of the city characterised by a mix of building scales and commercial land uses. More specifically, the land is sited on King William Street, the city's principal north-south boulevard and referred to within the Development Plan as City's '*commercial spine*'. The secondary street frontage is James Place, which features retail and dining in a laneway setting.

Upon undertaking an inspection of the subject land and its surroundings, the following was observed:

- The immediate locality along King William Street is characterised by commercial office and retail buildings of various scales, generally featuring glazed shopfronts at the ground level;
- The eastern side of King William Street, where the development is situated, also features deep footpaths and a reasonably consistent canopy providing protection from the weather;
- To the north, Clarence Place is most accurately described as a service lane providing secondary access to the buildings both the north and south of the laneway and comprises large expanses of uninterrupted walls with rear personal access doors;
- To the east, James Place exhibits a fine grain character featuring a mix of retail and dining in a pedestrian environment. Buildings are consistently built to the front property boundary with narrow awnings or cantilevered verandahs;
- To the south, Imperial Place can also be described as a service access, with the building form overarching the laneway creating a sense that the access is for private use only (consistent with the private tenure of Imperial Place); and
- The area at the end of Imperial Place is utilised as an at-grade car park and waste storage area. Limited buildings overlook this space.

#### **4. BACKGROUND**

For context, the Rundle Mall Masterplan was developed in 2011 and identified James Place as a potential catalyst project for the revitalisation of the south western portion of the Rundle Mall precinct by creating an active day and night dining laneway. In particular, maximizing the day and night food offering through quality dining, wine bars and attractive outdoor dining areas complementary to the adjoining food courts in the Southern Cross Arcade was encouraged.

Charter Hall recognised the opportunity to undertake a holistic redevelopment of the Southern Cross Arcade which capitalised on the intent of the Rundle Mall Masterplan and utilised the commercial potential of the land.

Consequently, Bieson Pty Ltd as trustee for the CH King William Trust has entered into an agreement to acquire the Southern Cross Arcade and proposes to demolish all existing improvements to this site with the exception of the State Heritage Place (façade and canopy of 64 King William Street, Adelaide) to develop a new state of the art commercial office building with lower level retail.



## 5. PROPOSED DEVELOPMENT

The Proponent seeks development plan consent ('consent') to:

- demolish all of the buildings on the subject land with the exception of the State Heritage Place (façade and canopy) at 64 King William Street, Adelaide; and
- construct a mixed-use retail and office building at 60 King William Street, Adelaide (the 'subject land').

The architectural drawings and design statement prepared by COX Architecture form Appendices 3 and 4 respectively.

The proposed building will be 15 storeys plus basement and will be 64.4 metres high above ground level.

The building design incorporates a distinct podium element along both King William Street and James Places that reference both the State Heritage Place, the heritage context at the end of Rundle Mall and the finer grain character of James Place. A canopy varying from 1.9 to 3.0 metres in depth is also proposed for the entire length of this western façade (with the exception of the lower height canopy associated with the State Heritage Place) ensuring the retention of an existing street tree whilst maintaining continuous cover for pedestrians.

Both podiums will feature angular sandstone pillars with floor to ceiling windows and glazed doors. The entry to the new east-west pedestrian link will be highlighted with a dark bronze folded metal fascia above, matching the folded metal window shrouds, canopy soffit and the vertical fins and solid panels incorporated into the tower design above.

The form of the tower above maximises natural light penetration from all aspects and is setback greater than 3.5 metres from the northern and southern boundaries with only a very small of the building within 1 metre at the north east corner. These setbacks further emphasise the podium form.

The tower itself will feature a unitised curtain wall system with folded metal vertical fins and solid panels to cast shade and provide an additional element of interest to the façade. Both the western and eastern elevations of the tower will have a central vertical 'channel'. On the western façade, this is to represent a 'vertical arcade' elevating the alignment of the arcade onto the building surface. To the east, this is a response to the allotment boundaries, which wrap around the James Place Hotel.

As part of the proposal an internal public entry walkway will connect King William Street to James Place in an east to west direction.

The proposal will maintain a pedestrian and food and beverage offering through the site linking James Place with King William Street however will also include a supermarket enhancing overall activation leveraging the highly accessible working population within the site. The food and beverage offering will also build upon the laneway character of James Place extending activity into the evening, improving overall passive surveillance of the area.

Entry to the upper office floors will front King William Street, with appropriate fire exit stairs onto Clarence Place. A loading and waste collection dock will be provided on the ground floor of the building with access to and from Imperial Place.

Vehicle access to a 39 space basement car park will be via a two-way dual lane ramp that will link to Imperial Place. Vehicles will share the same lane on Imperial Place to enter and exit from Grenfell Street in a forward direction.

A total of 283 bicycle parking spaces will be provided in a mezanine end of trip facility as part of the proposal. Access to the bicycle parking will be via an end of trip foyer proposed on James Place.

In relation to energy efficiency, a number of initiatives are proposed in order to achieve the following environmental sustainability certifications related to sustainable design and construction, and to energy efficiency during operation:

- 5 Star Green Star - Design and As-Built v1.2 rating, which represents the standard of "Australian Excellence" in sustainable design and construction and exceed the City of Adelaide ESD requirements; and,
- 5 Star NABERS Energy, which represents "Excellent" energy efficiency in operational performance.

All stormwater drainage will continue to discharge into the existing drainage systems with all new roof runoff directed to a 41,000 litre retention tank in the ground floor mezzanine.

A waste storage area is proposed on the ground floor adjacent the loading dock with an additional temporary waste storage area associated with the supermarket on the basement floor for local aggregating of waste and recycling before transfer to the ground floor. Waste collections are proposed to occur 24 hours a day.

Roof top plant and other services including loading at ground level with access off Imperial Place.

No advertising is proposed as part of this development application.

## 6. PROCEDURAL MATTERS

### 6.1 Nature of Development

The proposed development is accurately described as follows:

*'Demolition of all buildings on site with the exception of the State Heritage Place (façade and canopy) at 64 King William Street, Adelaide, and construction of a 15 storey mixed-use office and retail building with ancillary vehicle parking and end of trip facilities'*

The subject land is situated within Central Business Policy Area 13 of the Capital City Zone.

We note that vehicle parking is non-complying within the Zone except *'where it is ancillary to an approved or existing use'*. Given the proposed vehicle parking is ancillary to the proposed use and would be approved as part of the same development application, the proposed vehicle parking is considered to fulfil this exception.

Accordingly, the proposed development is not identified as a complying or non-complying form of development within the Zone, and accordingly shall be assessed *'on-merit'*.

### 6.2 Relevant Authority

The proposed development is in the area of the Corporation of the City of Adelaide and the development cost far exceeds \$10,000,000. Accordingly, the State Commission Assessment Panel is the relevant authority pursuant to section 34 of the *Development Act 1993*.

### 6.3 Category of Development

The Capital City Zone identifies all forms of development as Category 1 for public notification purposes, except for the following:

*'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.'*

The subject land is not adjacent to land in the City Living Zone or Adelaide Historic (Conservation) Zone and therefore, no public notification is required.

### 6.4 Referrals

A referral is required to the City of Adelaide pursuant to regulation 38(2)(b) of the Regulations.

A referral is required to the Minister administering the Heritage Places Act 1993, as the development is of a kind that directly affects a State heritage place, or materially affects the context within which the State heritage place is situated.

A referral is required to the Government Architect as the development is 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.

We note that the proposed development does not exceed the 110 Obstacle Limitation Surface (OLS) Contour on Airport Building Heights Map Adel/1 (Overlay 5). Consequently, no referral is required to the Commonwealth Secretary for the Department of Transport and Regional Services.

## 7. DEVELOPMENT ASSESSMENT

The subject land is situated within Central Business Policy Area 13 of the Capital City Zone of the Adelaide (City) Development Plan (consolidated 30 April 2020), as identified by Map Adel/18 and Map Adel/49.

The subject land is also within the following areas:

- Core Pedestrian Area as identified on Primary Pedestrian Area Map Adel/1 (Overlay 2A);
- the Precinct of Higher Coverage/Amenity/Safety in the proposed Lighting Framework shown on Map Adel/1 (Overlay 13); and,
- 110 – 120 AHD Obstacle Limitation Surface (OLS) Contour on Airport Building Heights Map Adel/1 (Overlay 5).

In our opinion, the following provisions are relevant to this assessment:

### **Capital City Zone**

Objectives: 1, 2, 4 – 8

Principles of Development Control: 1 – 11, 14, 15, 22, 26 – 29, 31, 32

### **Central Business Policy Area 13**

Objectives: 1 – 3

Principles of Development Control: 1, 2

### **Living Culture**

Objectives: 1 – 3

Principle of Development Control: 1

### **Environmental**

Objectives: 24, 26, 28, 29, 30, 33 – 39, 41 – 44

Principles of Development Control: 82, 84 – 86, 89, 91, 101 – 112, 115, 119, 120, 122 – 142

### **Built Form and Townscape**

Objectives: 46 – 53, 57, 59

Principles of Development Control: 168 – 172, 179, 180, 182, 185 – 190, 192 – 198, 200 – 202, 203, 207 – 209, 211, 217, 220, 223

### **Transport and Access**

Objectives: 60 - 72

Principles of Development Control: 224 – 228, 230 – 245, 247, 248, 251, 252

### **Economic Growth and Land Use**

Objectives: 73 – 76

Principles of Development Control: 266, 270, 271

### **Centres and Main Streets**

Objective: 77

Principles of Development Control: 272, 273

## 7.1 Land Use

The Capital City Zone is the ‘*economic and cultural focus of the State*’ (Desired Character) and offices, shops and restaurants are all envisaged within the Zone (Zone PDC 1). In relation to King William Street in particular, the Zone’s Desired Character states the following:

*‘The City’s boulevards, terraces and Squares will be developed as follows:*

- (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.’*

In addition, the Central Business Policy Area 13 forms the ‘*pre-eminent economic, governance and cultural hub for the State*’ and Policy Area 13 PDC 1 states:

*Policy Area PDC 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.*

Accordingly, the proposed shops, restaurants and office are considered to be entirely consistent with the Desired Character and envisaged land uses within both the Zone and Policy Area.

Furthermore, we also note that an ancillary car park comprising 39 vehicle spaces is proposed. Given the land is situated within a Core Pedestrian Area, the following guidance is provided from a land use perspective:

*Council Wide PDC 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).*

The proposed off-street car parking is ancillary to the proposed office spaces, replaces an existing car parking area of 19-25 vehicle spaces, will utilise an existing laneway (Imperial Place), and will not be situated on a separate title. Therefore, the ancillary car parking area satisfies Council Wide PDC 258 and is considered appropriate from a land use perspective.

## 7.2 Design and Appearance

The Capital City Zone envisages the following with respect to the design and appearance of a development:

Excerpts from Zone’s Desired Character:

*‘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’.*

*‘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.’*

*Zone 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.*

*Zone PDC 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.

*Zone PDC 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.*

The building design incorporates the state heritage place (façade and canopy) which informs a distinct podium element along both King William Street and James Place. The podium design also references the heritage context at the end of Rundle Mall and the finer grain character of James Place. A canopy varying from 1.9 to 3.0 metres in depth is also proposed along the western façade (with the exception of the existing canopy associated with the state heritage place which is to be retained providing continuous weather protection for pedestrians. Such is consistent with the desired character of the Capital City Zone.

Both podiums will incorporate high quality materials and finishes including angular sandstone pillars with floor to ceiling windows and glazed doors in line with Zone PDC 7. The entry to the new east-west pedestrian link will be highlighted with a dark bronze folded metal fascia above, matching the folded metal window shrouds, canopy soffit and the vertical fins and solid panels incorporated into the tower design above. The architectural detailing will remain consistent along the three public road frontages of the site satisfying Zone PDC 15.

The high-scale form of the tower above maximises natural light penetration from all aspects and is setback greater than 3.5 metres from the northern and southern boundaries with only a very small of the building within 1 metre at the north east corner. These setbacks further emphasise podium form.

The tower itself will feature a unitised curtain wall system with folded metal vertical fins and solid panels to cast shade and provide an additional element of interest to the façade. Both the western and eastern elevations of the tower will have a central vertical 'channel'. On the western façade, this is to represent a 'vertical arcade' elevating the alignment of the arcade onto the building surface. To the east, this is a response to the allotment boundaries, which wrap around the James Place Hotel.

The tower form is designed to provide sufficient breathing space behind the state heritage façade forming a contemporary juxtaposition and creating a new setting for the heritage place.

Therefore, in our opinion, the proposed development aligns with the Zone's expectations for design and appearance.

In addition to the above, Central Business Policy Area 13 anticipates the following:

*Excerpt from Policy Area Desired Character: 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.*

In our opinion, the proposed development does exhibit an innovative design with stylish architecture which provides a clear edge to the street. The podium responds to both the heritage context of the site and the broader heritage context and character of King William Street and James Place.

The Council Wide section of Council's Development Plan also provides the following guidance in relation to design and appearance:

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

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

*Council Wide PDC 257: Undercroft parking should project no higher than 1 metre above ground level and should be screened from public view and designed to add interest and creativity to the street frontage.*

The proposed development utilises high quality, durable and neutral external materials which positively respond to the setting of the development site in line with Council Wide PDC 188 and 189. In addition, the undercroft parking will not be visible above ground level and will be screened from public view.

We also note that the Façade Reflectivity Statement prepared by Prism (Appendix 5) confirms that the façade materials for the project have generally been selected to have low-reflectivity finishes, and the specified reference glasses have an external specular reflectivity which is well below the maximum reflectivity index.

### 7.2.1 Building Height

Adelaide (City) Building Heights Concept Plan Figure CC/1 confirms that there is no prescribed height limit for the subject land. Capital City Zone PDC 22 does however prescribe a minimum building height of 28 metres within the Central Business Policy Area, albeit such does not apply to sites which contain a heritage building. Notwithstanding this, the proposed development exceeds the minimum building height envisaged for the Policy Area with an overall building height of 64.4 metres.

The subject land is also within a 110 Obstacle Limitation Surface (OLS) Contour as shown in Adelaide (City) Airport Building Heights Map Adel/1 (Overlay 5). The proposed building does not exceed this contour and therefore is unlikely to affect the long term operational, safety or commercial requirements of the Adelaide Airport. Consequently, we note that the assessment of the building height satisfies the following:

*Central Business Policy Area 13 PDC 2: Buildings should be of a height that ensures airport operational safety is not adversely affected.*

*Council Wide 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.*

### 7.2.2 Public Realm

The Capital City Zone outlines the following expectations for a development's contribution to the public realm:

Excerpt from Zone's Desired Character:

*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.*

*Zone Objective 4: City streets that provide a comfortable pedestrian environment.*

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

*Zone PDC 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.*

*Zone PDC 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.*

*Zone PDC 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.*

*Zone 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.*

*Zone 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).*

The proposal will maintain a pedestrian and food and beverage offering through the site linking James Place with King William Street however it will be much improved as a result of the redevelopment. The ground floor will increase activation along all frontages, as a result of an additional, highly accessible working population within the site. The food and beverage offering will also build upon the laneway character of James Place extending activity into the evening, improving overall passive surveillance of the area and generating high levels of pedestrian activity in line with the Zone's Desired Character.

Internally, the ground floor will feature a supermarket and retail tenancies exposed with food and dining options proposed along the arcade and James Place contributing to a variety of north-south and east-west links in accordance with Zone PDC 26 and 27.

The development is considered to provide a comfortable, inviting and pedestrian oriented environment that adds interest and vitality to King William Street, James Place and Clarence Place achieving Zone Objective 4 and PDC 8.

The floor level of the office space will be at ground level utilising the state heritage façade and canopy as a point of entry and the arcade will include a subtle ramp at both the King William Street and James Places to enable a gentle transition between the ground levels of the two road frontages generally in accordance with Zone PDC 9.

Map Adel/1 (Overlay 2A) confirms that the subject land is within a Core Pedestrian Area and identifies the existing pedestrian route through the Southern Cross Arcade. The proposed development will ensure the existing through-site links are maintained in accordance with Zone PDC 28.

In addition to the above, the Council Wide section provides the following guidance in relation to public realm:

*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.*

*Council Wide PDC 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.*

*Council Wide PDC 171: Where possible, large sites should incorporate pedestrian links and combine them with publicly accessible open space.*

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

*Council Wide 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.*

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

*Council Wide PDC 197: Retail frontages should be designed to provide interest to passing pedestrians at street level and relief to building mass.*

*Council Wide PDC 198: 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.*

*Council Wide PDC 200: Outdoor dining should:*

- a) be located outside the associated premises;*
- b) provide sufficient set-backs, such as from kerbs and property boundaries, and clearances, such as from buildings;*
- c) be located in an area safe for patrons where the security of the building is not compromised;*
- d) ensure the dining area is set back from the building line at street intersections;*
- e) ensure unimpeded pedestrian flow through free and uninterrupted pedestrian paths; and*
- f) ensure wheelchair access to pedestrian ramps is not compromised.*

*Council Wide PDC 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.*



*Council Wide PDC 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.*

The proposed development is consistent with the above for the following reasons:

- A continuous canopy is proposed along King William Street that is designed to retain the existing street tree in line with Council Wide PDCs 123 and 124;
- Pedestrian links have been maintained through the site, from east to west (King William Street to James Place) and north-south connecting to Clarence Place satisfying Council Wide PDC 171;
- A lively pedestrian environment which provides activity and interest is proposed incorporating retail and dining and seeks to provide a high quality experience for workers and visitors achieving Council Wide Objectives 50 and 51 and PDC 196 and 239;
- The retail frontages are visually permeable, comprising predominantly windows and glazed doors and providing interest to passing pedestrians in line with Council Wide PDC 197 and 198;
- Outdoor dining along James Place will ensure that relevant City of Adelaide requirements are met in relation to Council Wide PDC 200; and,
- The proposed canopy will have a minimum clearance of 3 metres satisfying Council Wide PDC 230.

### **7.2.3 Building Setbacks**

The proposed development will be built to the King William Street, James Place and Clarence Place street edge, reinforcing the grid pattern satisfying Capital City Zone PDC 11 and Council Wide PDC 179. Setbacks will be achieved above the podium level for the building tower to maintain access to natural light, particularly to the southern boundary.

### **7.2.4 Landscaping**

The Council Wide policies within the Development Plan provide the following guidance in relation to landscaping:

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

*Council Wide PDC 207: 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.*

*Council Wide PDC 208: 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.*

*Council Wide PDC 209: Landscaping should be provided to all areas of communal space, driveways and shared car parking areas.*

Landscaping will be incorporated within communal areas terrace areas on Level 2 and Level 11. Opportunity also exists to include landscaping on the roof deck. The selection of species has not yet occurred, however will seek to minimise reliance on water and incorporate local indigenous species where possible to align with the above.

### 7.3 Heritage Conservation

The existing building at 64 King William Street, Adelaide is identified as a State Heritage Place. The place is described as a 'Shop (Sands & McDougall)' and the elements of heritage value are the façade and canopy.

Figure 7.1 below is an image of the façade.



**Figure 7.1** Image of 64 King William Street, Adelaide façade (Source: Google Street View, dated Sept 2019 and sourced Mar 2020)

To undertake this assessment, we have reproduced the Objectives and PDCs that we consider most relevant to heritage conservation below:

*Council Wide 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.*

*Council Wide Objective 43: Development that retains the heritage value and setting of a heritage place and its built form contribution to the locality.*

*Council Wide Objective 44: Continued use or adaptive reuse of the land, buildings and structures comprising a heritage place.*

*Council Wide PDC 136: Development of a heritage place should conserve the elements of heritage value as identified in the relevant Tables.*

*Council Wide PDC 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.*

*Council Wide 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.*

*Council Wide 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.*

It's evident that all of the above policies seek to retain or conserve the 'heritage value' of the place.

In terms of the heritage value, the review prepared by Lovell Chen (Appendix 6) confirms the following:

- The heritage value of the building derives from its historical associations in both its original and modified forms, and the role of the [Art Deco] façade as an architectural exemplar.
- There are other examples of similar Art Deco facades, acknowledging that the existing building is not the last remaining example (Truscott's Tailors on Rundle Street and Fredrick's Ladies Hairdressers on the west side of King William Street).
- Beyond the façade, the building has more limited significance.

- The building has undergone several modifications, including changes to the shopfront in 1963 and 1964, modifications to the northern exterior wall following demolition of the adjacent building in 1964, and interior alterations in 1982. The most significant change occurred with the installation of the new 'incongruous' shop front in 1987 with some loss to historic fabric.

With respect to the elements of heritage value, it is important to note that:

- the proposal retains the façade and canopy in full ensuring the heritage value is maintained;
- due to the form and scale of the podium design and relationship to the tower above, the proposal does not materially impact the external heritage value or setting of the façade or canopy;
- due to the three-dimensional quality/volume created internally including the ground plane threshold treatment, an appreciation of the setting of the façade as one enters the building is achieved;
- the proposal will include conservation works such as repair, cleaning, replacement of windows;
- the proposal will facilitate a continued and adaptive use for the canopy and façade providing a key entry point into the office foyer;
- the podium and tower design utilises materials, finishes, setbacks, scale and other built form qualities that are complementary to the façade and canopy;
- recesses are provided either side of the façade and the contemporary podium insertions to enhance the presence of the façade within the streetscape.

Overall, we have formed the opinion that the proposal as depicted in Appendix 3 carefully and successfully integrates the façade and canopy within the overall development so as to retain the heritage value of the heritage place.

## **7.4 Traffic Impact, Access and Pedestrian Movement**

### **7.4.1 Traffic Impact**

A Traffic Impact Assessment have been prepared by GTA and forms Appendix 7. This report confirms the following in relation to traffic impact:

- The site is expected to generate between 9 and 12 vehicle movements in any peak hour and 105 vehicles daily.
- There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.
- The development will also result in the following improvements to traffic safety:
  - » all traffic will now be able to enter and exit Imperial Place in forward gear, noting that large vehicles currently reverse onto Grenfell Street; and,
  - » there will be no vehicles entering / exiting Clarence Place onto King William Street which typically would have vehicles exiting in a reverse motion across the footpath and onto the Roadway.

### **7.4.2 Vehicle Access and Safety**

The proposed development will retain the existing vehicle access from Imperial Place, and will be utilised by refuse and delivery vehicles as well as vehicles accessing the car park.

The use of this access is considered to be consistent with the Development Plan for the following reasons:

- Traffic control measures will be implemented to avoid the risk of conflicting movements within the single lane section of Imperial Place. Where practical, priority will be given to entering vehicles to minimise the risk of any queuing traffic impacting Grenfell Street footpath and roadway satisfying Council Wide PDC 241;
- Access will be obtained from a lane, which currently provides access to the subject land in line with Council Wide PDCs 241, 244 and 247; and
- A loading area is proposed to accommodate deliveries and waste collection and incorporates a turning area in front of, and to the east of, the loading area prior to the car park access ramp. Such has been designed to enable an 11 metre vehicle to undertake a reverse manoeuvre on site and enter Grenfell Street in a forward direction satisfying Council Wide PDCs 242 and 248.

Due to the location of the site within the Core Pedestrian Area, we note that Council Wide PDC 245 indicates that there should be no increase in the number of parking spaces served by the crossing, nor any increase in the number of crossings serving the development.

Whilst there will be a reduction in the number of crossings serving the development, there will be an increase in the number of parking spaces served by the Imperial Place crossing. This is considered appropriate for the following reasons:

- Council Wide PDC 258 identifies circumstances where off-street parking in the Core Pedestrian Area is considered appropriate. The proposed development satisfies this PDC noting that the proposed car parking is ancillary to the proposed office spaces, replaces an existing car parking area, will utilise an existing laneway (Imperial Place) and will not be situated on a separate title;
- The Traffic Impact Assessment (Appendix 7) confirms that the limited additional traffic generated by the proposed development could not be expected to compromise the safety or function of the surrounding road network;
- All traffic will now be able to enter and exit Imperial Place in forward gear, improving the safety of the access and pedestrians on the adjoining Grenfell Street footpath; and
- Traffic control measures will be implemented to avoid the risk of conflicting movements within the single lane section of Imperial Place.

Therefore, the proposed development is considered to provide safe, convenient and comfortable access and movement.

#### **7.4.3 Pedestrian Movement**

A Pedestrian Assessment has been prepared by Arup and forms Appendix 8. The assessment confirms the following:

- The capacities of the doors, circulation areas, escalators, stairs and speed stiles are adequate to support the estimated demand.
- In most cases the capacity substantially exceeds the demand and therefore is readily able to accommodate changes such as changes in behaviours or temporary failure/outage of elements such as revolving doors and speed stiles.
- The retail arcade has spare capacity for over 4,000 people per hour (on top of the commercial tenancy staff) to be used as a thoroughfare, subject to the furniture design.

Consequently, the proposed development is considered to achieve the following Development Plan PDCs:



- The development will maintain the existing east-west pedestrian link from King William Street through to James Street, ensuring that this link has a capacity exceeding 4,000 people per hour and providing pedestrian shelter, satisfying Council Wide PDC 226 and 228;
- Pedestrian movements have been separated from the bicycle entry on Clarence Place and the vehicle access on Imperial Place to avoid adverse impact on safety or amenity;
- The proposed pedestrian links will be continuous and uninterrupted and are provided at ground level, satisfying Council Wide PDC 227; and,
- Access for people with disabilities has been provided to and within all levels via the principal entrance of the building satisfying Council Wide PDC 232.

#### **7.4.4 Bicycle Access**

The Development Plan anticipates greater use of bicycles to and within the City with the supply of secure bicycle parking to support this (Council Wide Objectives 64 and 65).

A total of 283 bicycle parking spaces will be provided in the mezzanine with access to the bicycle parking via a lift lobby on James Place. End of trip facilities including showers, change room and lockers are provided on the lower basement level.

The Traffic Impact Assessment (Appendix 7) confirms that 283 spaces is sufficient to cater for staff. Visitors will have access to the existing bicycle racks on King William Street, noting that the proponent intends to provide a further 14 racks subject to Council consent and resolution of any impact such may have on the existing bus stops. If such is achieved, this will provide a total of 34 spaces for visitors.

Consequently, the proposed bicycle access and facilities are considered to satisfy the following PDCs within the Development Plan:

- An adequate supply of on-site secure bicycle parking is provided for staff which exceeds the requirements set out in Table Adel/6, satisfying Council Wide PDC 234;
- The onsite bicycle parking facilities will be well lit, well-signed and accessible by cycling along a safe and well-lit route with access only available to staff via an access key/pass common to the building in accordance with Council Wide PDC 235;
- The long stay bicycle parking facilities will be provided at the basement level to maximise the streetscape activation at ground level;
- The short stay visitor parking will be provided at the ground floor level, under the canopy, in a well-lit area where passive surveillance is possible and is accessible by cycling along a safe, well-lit route, in accordance with Council Wide PDC 236; and
- On-site shower and changing facilities are provided in accordance with Council Wide PDC 238.

#### **7.4.5 Vehicle Parking**

The Transport Impact Assessment (Appendix 7) confirms that there are currently 16 to 20 formal/informal car parking spaces within Imperial Place and 3 to 5 informal car parking spaces in Clarence Place.

As part of the proposed development, 39 car parking spaces are proposed. The car parking is intended to be used for a limited number of office staff and to accommodate fleet vehicles for office staff use during business hours. No on-site parking is to be provided for supermarket, retail or office customers and visitors.

The subject land is located within the Core Pedestrian Area identified in Map Adel/1 (Overlay 2A) and accordingly, the Development Plan does not require development to provide off-street carparking (note Council Wide PDC 245).

However, the Development Plan does provide the following guidance in relation to the location and design of car parking areas:

*Council Wide PDC 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.*

The proposed car parking area will enable vehicles to enter and exit in a forward direction and will utilise an existing right of way to minimise interruption to the pattern of built form and on-street car parking areas. In addition, the Transport Impact Assessment (Appendix 7) confirms that the car parking area has been designed based on the Australian Standard/New Zealand Standard for Off Street Car parking (AS/NZS2890.1:2004). Consequently, the proposed car parking area is considered to satisfy the above.

## **7.5 Environmental Factors**

### **7.5.1 Crime Prevention**

Development should promote the safety and security of the community in the public realm. In particular, the intent of the relevant crime prevention provisions of the Development Plan seek to provide a safe and secure, crime resistant environment that:

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

In our opinion the proposed development achieves these objectives, and Council Wide PDC 82, 86, and 223 through the following:

- Promoting and improving the natural surveillance of the public realm by:
  - » Orienting the retail tenancies and windows towards the streets frontages;
  - » Orienting the windows from Level 1 and above to overlook Imperial Place and the existing right of way to the south;
  - » Avoiding high walls and blank facades along King William Street, James Place and Clarence Place;

- » Creating a complementary mix of office and commercial retail activities to extend the duration and level of public activity into the evenings and weekends;
- » Locating the entrance to the ground floor toilets via the well-trafficked central east to west pedestrian link;
- » Service areas and end of trip facilities will only be secured and only accessible to staff and service personnel and will have surveillance through video cameras;
- Providing access control by facilitating escape and pathfinding through the development by:
  - » Providing clear and legible pedestrian routes which are straight in alignment providing clear line of sight;
  - » Avoiding opportunities for concealment along the building frontages or within the key pedestrian links on the ground floor. Such has been aided by providing transparent window treatments throughout the ground floor tenancies, overlooking the central pedestrian link and enabling visibility around corners;
  - » Closing the central pedestrian link during the evening (i.e. between 10pm and 7am) to restrict access within the development site;
  - » Ensuring that lift lobbies and stairwells are only accessible to staff with access key cards;
- Promoting 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:
  - » Clear delineation of the public thoroughfare, tenancies and office space through paving, lighting and materiality;
  - » Locating main entrances and exits at the front of a site and in view of a street;
- Providing 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:
  - » Providing points of access to the proposed development, along King William Street and James Place to minimise opportunities for entrapment;
  - » Avoiding blind sharp corners and situate pillars in walls where possible to minimise opportunities for concealment, particularly along the central pedestrian thoroughfare;
  - » Ensuring that the barriers delineating the indoor seating areas are only a metre in height to limit opportunities for concealment;
  - » Providing adequate and consistent lighting of the building entrances, parking and pedestrian areas to avoid the creation of shadowed areas; and,
  - » Using robust and durable design features to discourage vandalism.

### 7.5.2 Noise Emissions

Floth have prepared an acoustic report which forms Appendix 9. The report confirms that:

- In order to meet acceptable internal noise levels, a curtain wall system that achieves a weighted sound reduction index (RW) rating of 32 or greater is required. The acoustic performance of the façade will be reviewed during the detailed design of the proposal. However, the report confirms that an acceptable glazing composition that would achieve this is '*an IGU consisting of 6mm float / 12mm air gap / 6.38mm laminate*' demonstrating that achieving the internal noise levels is feasible.
- The proposed acoustic control principles will ensure that the mechanical plant and equipment will meet the noise criteria from the *Environmental Protection (Noise) Policy 2007* (requiring 57

dB(A) and 50 dB(A) for the day and night periods respectively), noting that Council Wide PDC 93 is not relevant to the development given the ambient noise levels in the area are high,

- Noise from typical car park activities would not result in sleep disturbance at the nearest noise sensitive receivers in accordance with Council Wide PDC 94; and,
- Loading bay and refuse facilities are located on the ground plane and shielded from the nearest noise sensitive receivers by the built form.

Accordingly, the proposed development does not unreasonably interfere with the desired commercial character of the locality by generating unduly annoying or disturbing noise satisfying Council Wide Objective 26 and 89.

The ground level tenancies are anticipated to operate within daytime hours (7am to 10pm) and accordingly live or amplified music is not anticipated at the ground floor retail tenancies. Consequently, an assessment has not occurred against Council Wide PDC 89 or 91.

### 7.5.3 Wind Analysis

Development should be designed minimise micro-climatic impacts including effects of patterns of wind. A Wind Impact Assessment has been undertaken by Vipac Engineers and Scientists which forms Appendix 10. This assessment confirms the following:

- The development would be expected to have wind conditions in the footpath areas within the walking comfort criterion;
- The entries would be expected to have wind conditions within the recommended standing comfort criterion; and
- The communal terraces would be expected to have wind conditions within the recommended walking comfort criterion.

Accordingly, the proposed development is considered to reasonably minimise wind tunnel effect satisfying Council Wide PDCs 119 and 125.

### 7.5.4 Waste Management

A Waste Management Plan has been prepared by Colby Phillips and forms Appendix 11.

- A waste storage area on the ground floor adjacent the loading dock with an additional temporary waste storage area associated with the supermarket on the basement floor for local aggregating of waste and recycling before transfer to the ground floor;
- The waste storage area has sufficient capacity to accommodate the anticipated volume of waste;
- During collection events, the collection vehicle would reverse into the loading dock, park, the waste contractor would alight, fetch the bins and/or storage units from the Shared Waste Storage area, empty or load the bins or storage units onto or into the vehicle, return any empty bins (or pallets), then return to the collection vehicle to leave the Loading Dock. Such is likely to take 10 to 15 minutes; and,
- Some 40 collections are anticipated per week, with collections expected 24 hours a day, Monday to Saturday.

The above is considered to satisfy Council Wide Objective 28 and Council Wide PDCs 101 and 103.

A loading area is proposed to accommodate deliveries and waste collection and incorporates a turning area in front of, and to the east of, the loading area prior to the car park access ramp. Such has been designed to enable an 11 metre vehicle, consistent with the vehicle length nominated in the

Waste Management Plan, to undertake a reverse manoeuvre on site and enter Grenfell Street in a forward direction satisfying Council Wide PDCs 242 and 248.

The waste storage area will be mechanically ventilated to prevent odour build up and this system will need to comply with Australian Standard 1668.2-2002 and Council Wide PDC 104.

We note that the refuse collection is proposed to occur during the evening between 10pm and 7am, contrary to Council Wide PDC 94. Notwithstanding this, in our opinion, collection of waste at night is unlikely to disturb residents, noting that:

- The two nearest noise sensitive receivers (identified in Figure 1 of the Acoustic Report at Appendix 9) are more than 100 metres from the waste collection area itself;
- The *'loading bay and refuse facilities are located on the ground plane and shielded from the nearest noise sensitive receivers by the built form'*, as noted in the Acoustic Report;
- The two nearest noise sensitive noise are separated from the subject land by King William Road, with noise from the tram and train likely to displace any noise emissions from the waste collection area, if audible from King William Road; and,
- The Waste Management Plan confirms night collection already occurs for all other commercial services delivered by major waste contractors in the Adelaide CBD, partly to avoid conflict with daytime traffic.

#### 7.5.5 Energy Efficiency

A Sustainability Statement has been prepared by Floth which forms Appendix 12. The statement confirms that the project is targeting the following environmental sustainability certifications related to holistic sustainable design and construction, and to energy efficiency during operation:

- 5 Star Green Star - Design and As-Built v1.2 rating, which represents the standard of "Australian Excellence" in sustainable design and construction and exceed the City of Adelaide ESD requirements; and,
- 5 Star NABERS Energy, which represents "Excellent" energy efficiency in operational performance.

In order to achieve the above certifications, the statement confirms that the following initiatives have been incorporated throughout the proposed design:

- *'Management initiatives including engagement of a Green Star Accredited Professional, engagement of an Independent Commissioning Agent (ICA), extended building commissioning and tuning, comprehensive energy and water metering and monitoring system (EMMS), environmental management and recycling of operational waste;*
- *Indoor air quality initiatives including ideal outside air intake locations, clean and maintainable air distribution ductwork, outdoor air systems sized to provide 50% improvement to outdoor air rates and controlled in response to space CO<sub>2</sub> sensors to maintain no more than 800ppm CO<sub>2</sub> in each zone served, effective exhaust systems and elimination of indoor pollutants;*
- *Indoor environmental quality initiatives including comprehensive acoustic comfort measures, flicker-free, high colour rendering, glare reducing lighting compliant with best practice general illuminance standards;*
- *Passive design provided by high-performance envelope incorporating low-e double glazing allowing excellent daylight and views access, thermally insulated constructions and considered window to wall ratio, as described in previous section;*
- *Energy efficient mechanical systems as described in the previous section;*

- *Energy efficient electrical systems incorporating LED general office and circulation lighting, addressable lighting control systems with photo-sensor and occupancy sensor switching controllable by occupants and an extensive roof-mounted photovoltaic array, as described in previous section.*
- *Water conservation and energy efficiency features in hydraulic systems including high WELS rated fixtures and fittings, non-potable water used for heat rejection, fire test water recovery and reuse, rainwater harvesting and reuse, as described in previous section.*
- *Transport initiatives including improved access to public transport, reduced carparking provision, end of trip facilities, fuel efficient vehicle initiatives.*
- *Materials initiatives including life cycle impacts optimisation, responsible building materials and sustainable products, best practice remediation of pre-existing hazardous materials, recycling of demolition and construction waste.*
- *Emissions initiatives including peak stormwater discharge reduction, stormwater quality improvement and light pollution controls.*
- *Innovations including Onsite Renewable Energy, Improved Stormwater Pollution Targets, Ultra Low VOC Paints, Supplementary or Tenancy Fitout Systems Review, over 12% sustainable products, and Financial Transparency.'*

The above initiatives are in addition to the extensive end of trip facilities and bike storage provided within the proposed development which encourage sustainable modes of transport.

Consequently, the initiatives proposed to achieve the abovementioned environmental sustainability certifications demonstrates that the development seeks to be compatible with the long-term sustainability of the environment and minimise the consumption of non-renewable resources in line with Council Wide Objective 30. In addition, the above initiatives are considered to align with the intent of Council Wide PDCs 106, 107, 108, 112 and 115.

#### **7.5.6 Stormwater Management**

A Stormwater Management Plan (SMP) has been prepared by the Robert Bird Group and forms Appendix 12. The SMP confirms that all stormwater drainage will discharge into the existing drainage systems and proposes the following stormwater management methodology:

- *'The current Southern Cross Arcade stormwater drainage system discharges to the existing stormwater pipe beneath the King William Street footpath. Since the catchment represents approximately 75% of the future building roof area the existing discharge pipe is considered to be sufficient to support the same level of flow.*
- *To manage the remaining 25% of the catchment it is currently recommended that a second duplicate pipe be installed at the existing King William Street connection point to effectively consolidate the numerous small discharge points for the 4 smaller buildings earmarked for demolition in the south-western and south eastern corner of the site. The existing underground discharge points for the 2 buildings in the south-eastern corner of the site will only be re-used to accommodate overflow pipe discharges for smaller canopies and podium decks.*
- *The existing major stormwater pit in the King William Street footpath zone at the western end of Clarence Place will receive a new connection to new underground stormwater pipes. These new pipes provide drainage for the sections of Clarence Place which have been regraded from north to south to allow for transitions at the ground floor entry points, including the retail frontages. There will be no net increase in runoff.*
- *Regraded portions of the dock in Imperial Place requires a new stormwater pits to be installed to allow for shallow falls in maneuvering areas without ponding. The new underground*



*stormwater pipes and renewed spoon drain will connect to the existing spoon drain and underground stormwater pipe system in Imperial Place.*

- *All exposed surface stormwater features will comply with City of Adelaide specifications. The intent that all downpipes can be incorporated into the façade without encroaching into the public realm and disposal to water table with stormwater pipes to be concealed beneath footpath.*
- *In summary all new roof runoff will be directed to the 41,000 L retention tank in the Ground floor mezzanine which will then discharged to the aforementioned central point on King William Street. The tank is designed for an incoming flow of 165L/s for a Q100 event based on AS/NZS 3500.3 2018.'*

We note that no new stormwater discharge points will be required in James Place and there is no associated increase in roof rainwater catchment in this area.

Based on the above, we note that:

- The development has been designed to protect stormwater from pollution sources (i.e. there is limited surface runoff, and roof runoff will be contained within downpipes before discharge) (Council Wide Objective 36);
- The quality of stormwater is unlikely to be compromised, given mainly roof runoff will occur from the site, and surface stormwater features will comply with the City of Adelaide specifications; and,
- The design capacity of existing or planned downstream systems should not be exceeded with all new roof runoff directed to a retention tank (Council Wide PDC 131).

#### **7.5.7 Site Contamination**

JBS&G Australia Pty Ltd have undertaken an Environmental Due Diligence Site Investigation which forms Appendix 14. The following was identified as part of the investigation:

- *'Based on the analytical results, fill materials underlying the central portion of the site are not considered suitable to remain on site under a commercial land use scenario without some form of management (e.g. on-site containment) and/or remediation... Additional investigation works are recommended (and would be required) to further delineate the lateral and vertical extents of impacted material in other areas of the site.*
- *Soil analytical results for the remainder of site fill/natural materials tested during the limited soil investigation... are not considered to present a risk to current or future site users under commercial land use scenario.*
- *No significant groundwater contamination precluding ongoing commercial land use or requiring ongoing management was identified.'*

Based on the findings above, some management such as on-site containment or remediation will be required in order to make the site suitable for its intended use prior to occupation of the proposed building. Given the extent of excavation proposed, it is likely that remediation and removal will be the approach taken. However, such will need to be informed by the additional investigation works to confirm the lateral and vertical extents of the impacted material.

Notwithstanding this, it is anticipated that with management or remediation that the site will be made suitable for its intended use in line with the expectations of Council Wide PDC 105. We request that confirmation of the remediation approach form a condition of the development plan consent with the additional investigation works to occur concurrently with the planning assessment.

## **8. CONCLUSION**

Based on the assessment above, it is evident that the proposed development aligns with the majority of the relevant provisions within the Development Plan, particularly relating to land use, design and appearance, heritage, traffic impact and environmental considerations.

The proposed development carefully and successfully integrates the façade and canopy comprising the State Heritage Place within the overall development so as to retain and improve the heritage value of the place.

Further, the proposed development exhibits an innovative design with stylish architecture which provides a clear edge to the street. The podium responds to both the heritage context of the site and the broader heritage context and character of King William Street and James Place. The tower form is designed to provide sufficient breathing space behind the state heritage façade forming a contemporary juxtaposition and creating a new setting for the heritage place.

The proposed development offers significant improvements to the public realm, pedestrian amenity and overall streetscape character.

The proposed development represents a significant economic boost for the City with a development cost of around \$470M generating much needed employment and investment.

Having considered the Development Plan as a whole, we have formed the opinion that the proposed development warrants development plan consent.

## **APPENDIX 1.    CERTIFICATES OF TITLE**

## **APPENDIX 2. LAND MANAGEMENT AGREEMENT**

**APPENDIX 3.    ARCHITECTURAL DRAWINGS PREPARED BY COX ARCHITECTURE**

## **APPENDIX 4.    DESIGN STATEMENT**



**APPENDIX 5. FAÇADE REFLECTIVITY STATEMENT PREPARED BY ARUP**

**APPENDIX 6. HERITAGE ASSESSMENT PREPARED BY LOVELL CHEN**

**APPENDIX 7. TRAFFIC IMPACT ASSESSMENT PREPARED BY GTA**

**APPENDIX 8. PEDESTRIAN ASSESSMENT PREPARED BY ARUP**

**APPENDIX 9. ACOUSTIC REPORT PREPARED BY FLOTH**

**APPENDIX 10. WIND ANALYSIS REPORT PREPARED BY VIPAC**



**APPENDIX 11. WASTE MANAGEMENT PLAN PREPARED BY COLBY PHILLIPS**

**APPENDIX 12. SUSTAINABILITY STATEMENT PREPARED BY FLOTH**

**APPENDIX 13. STORMWATER MANAGEMENT PLAN PREPARED BY RBG**

**APPENDIX 14. SITE HISTORY REPORT PREPARED BY JBS&G**

**APPENDIX 15. SITE SERVICES REPORT PREPARED BY FLOTH**

REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5585 Folio 331

Parent Title(s)	CT 5575/995				
Creating Dealing(s)	TG 8361167, TG 8435335, TG 8435337, TG 8435339, TG 8435341, T 8435344				
Title Issued	14/10/1998	Edition	4	Edition Issued	12/10/2002

## Estate Type

FEE SIMPLE

## Registered Proprietor

SOUTHERN CROSS ARCADE PTY. LTD. (ACN: 082 600 815)  
OF SOUTHERN CROSS ARCADE 62 KING WILLIAM STREET ADELAIDE SA 5000

## Description of Land

ALLOTMENT 7 FILED PLAN 31390  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

PORTION OF THE WITHIN PRIVATE ROAD MARKED A EXISTS BELOW A LEVEL OF 49.00  
METRES A.H.D.

## Easements

SUBJECT TO FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A (TG 8361167 TG 8435335 TG 8435337 TG 8435339 AND TG 8435341)

SUBJECT TO EASEMENT(S) WITH LIMITATIONS OVER THE LAND MARKED A AND B (GRO NO.53 BOOK 486)

SUBJECT TO FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D.E AND F

## Schedule of Dealings

Dealing Number	Description
8510306	MORTGAGE TO STATE BANK OF NEW SOUTH WALES LTD.
9436462	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

## Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL

### Registrar-General's Notes

AMENDMENT TO DIAGRAM VIDE 176/2002  
APPROVED FX57810

Administrative Interests	NIL
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Register Search (CT 5585/331)  
10/07/2018 02:02PM  
R\_AB  
20180710007084  
\$28.75

[illegible]

0      4      8      12      16 Metres

REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5585 Folio 339

Parent Title(s) CT 5575/991, CT 5575/995

Creating Dealing(s) TG 8435341, T 8435343

Title Issued 14/10/1998 Edition 4 Edition Issued 12/10/2002

### Estate Type

FEE SIMPLE

### Registered Proprietor

SOUTHERN CROSS ARCADE PTY. LTD. (ACN: 082 600 815)  
OF SOUTHERN CROSS ARCADE 62 KING WILLIAM STREET ADELAIDE SA 5000

### Description of Land

ALLOTMENT 121 FILED PLAN 181773  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A ON FP 31390 (TG 8435341)

TOGETHER WITH EASEMENT(S) OVER THE LAND MARKED A (T 1201300)

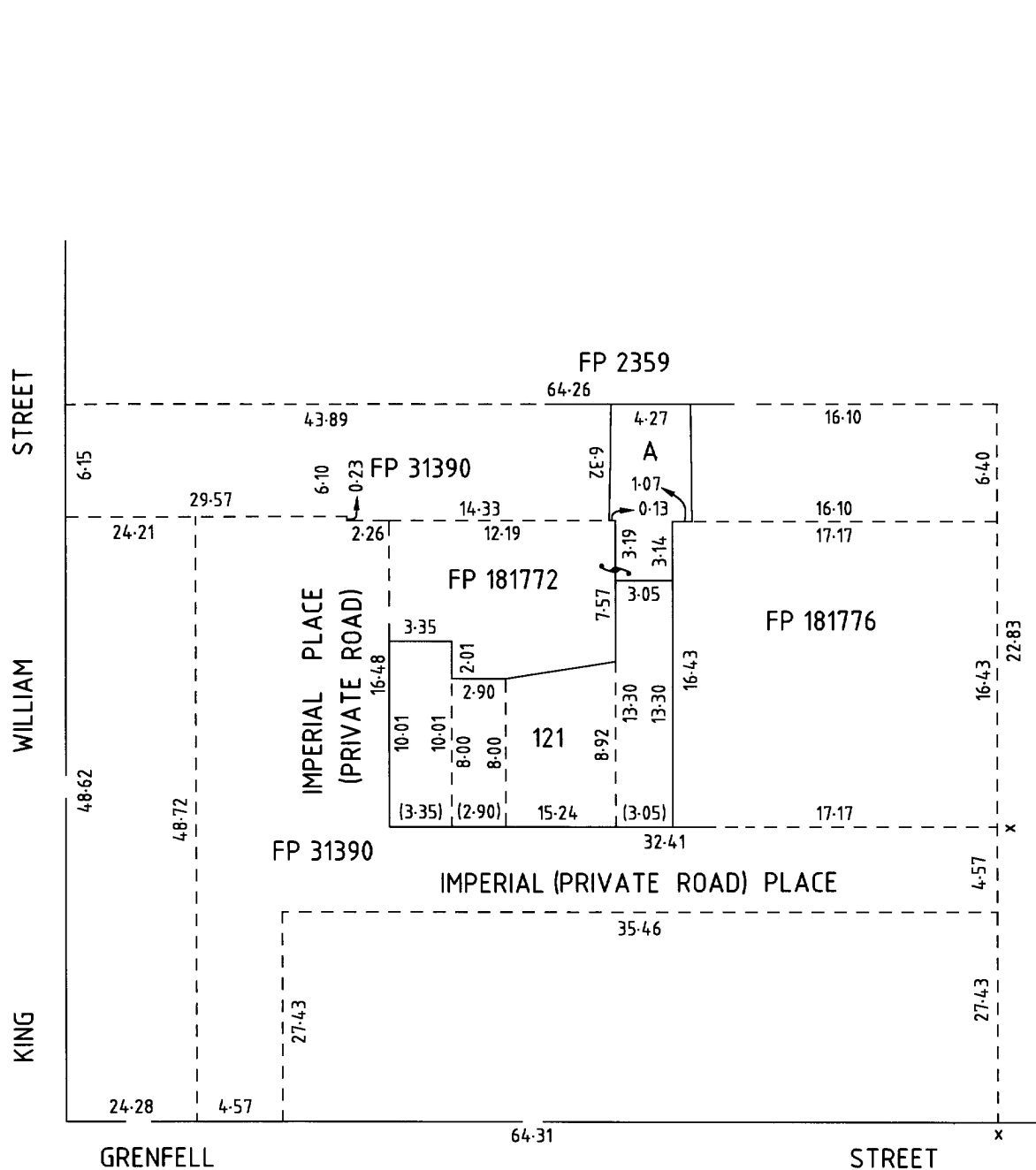
TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D.E AND F ON FP 31390

### Schedule of Dealings

Dealing Number	Description
8510306	MORTGAGE TO STATE BANK OF NEW SOUTH WALES LTD.
9436462	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

### Notations

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



REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5585 Folio 340

<b>Parent Title(s)</b>	CT 5575/992, CT 5575/995				
<b>Creating Dealing(s)</b>	TG 8435341, T 8435342				
<b>Title Issued</b>	14/10/1998	<b>Edition</b>	5	<b>Edition Issued</b>	21/05/2015

## Estate Type

FEE SIMPLE

## Registered Proprietor

27 JAMES PLACE PTY. LTD. (ACN: 007 758 901)  
OF L 2 139 FROME STREET ADELAIDE SA 5000

## Description of Land

ALLOTMENT 124 FILED PLAN 181776  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

## Easements

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A ON FP 31390 (TG 8435341)

TOGETHER WITH EASEMENT(S) OVER THE LAND MARKED A APPURTENANT ONLY TO THE LAND MARKED X (T 1201301)

TOGETHER WITH EASEMENT(S) OVER THE LAND MARKED A FOR LIGHT AND AIR APPURTENANT ONLY TO THE LAND MARKED Y (T 2641303)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D.E AND F ON FP 31390

## Schedule of Dealings

Dealing Number	Description
12313474	MORTGAGE TO NATIONAL AUSTRALIA BANK LTD. (ACN: 004 044 937)

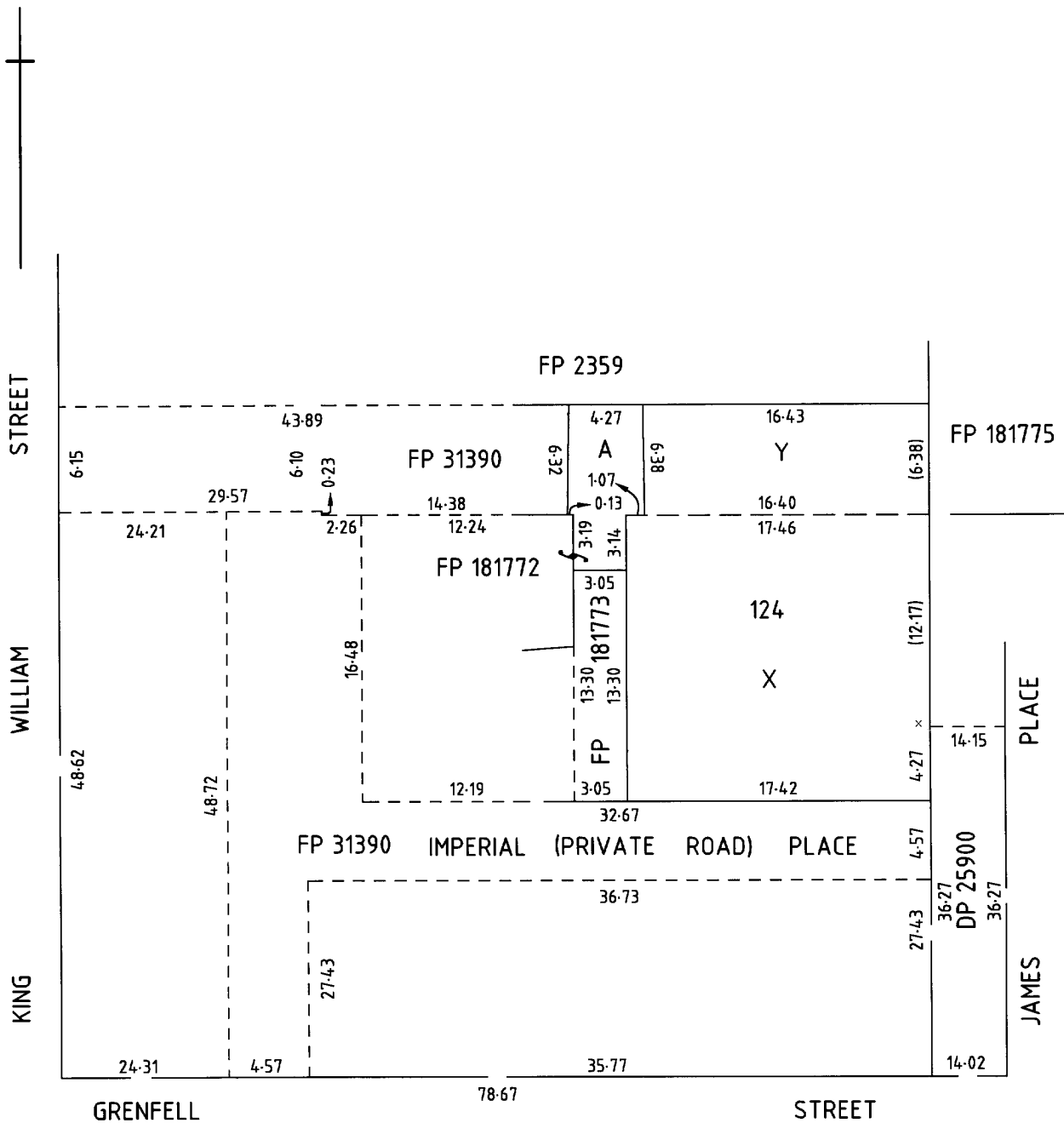
## Notations

<b>Dealings Affecting Title</b>	NIL
<b>Priority Notices</b>	NIL
<b>Notations on Plan</b>	NIL

### Registrar-General's Notes

PLAN FOR LEASE PURPOSES VIDE G9/1993

<b>Administrative Interests</b>	NIL
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REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5585 Folio 341

Parent Title(s) CT 5401/447

Creating Dealing(s) T 8435342

Title Issued 14/10/1998 Edition 5 Edition Issued 21/05/2015

### Estate Type

FEE SIMPLE

### Registered Proprietor

27 JAMES PLACE PTY. LTD. (ACN: 007 758 901)  
OF L 2 139 FROME STREET ADELAIDE SA 5000

### Description of Land

ALLOTMENT 51 DEPOSITED PLAN 25900  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

TOGETHER WITH RIGHT(S) OF SUPPORT OVER THE LAND MARKED G (T 2475926)

### Schedule of Dealings

Dealing Number	Description
6758912	APPLICATION AGREEMENT PURSUANT TO SECTION 39(D) OF THE CITY OF ADELAIDE DEVELOPMENT CONTROL ACT, 1976 FOR CONSERVATION
7126995	APPLICATION AGREEMENT PURSUANT TO SECTION 39(D) OF THE CITY OF ADELAIDE DEVELOPMENT CONTROL ACT, 1976 OVER C.T. 5177/668 FOR CONSERVATION HELD APPURTENANT HERETO
12313474	MORTGAGE TO NATIONAL AUSTRALIA BANK LTD. (ACN: 004 044 937)

### Notations

Dealings Affecting Title NIL

Priority Notices NIL

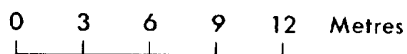
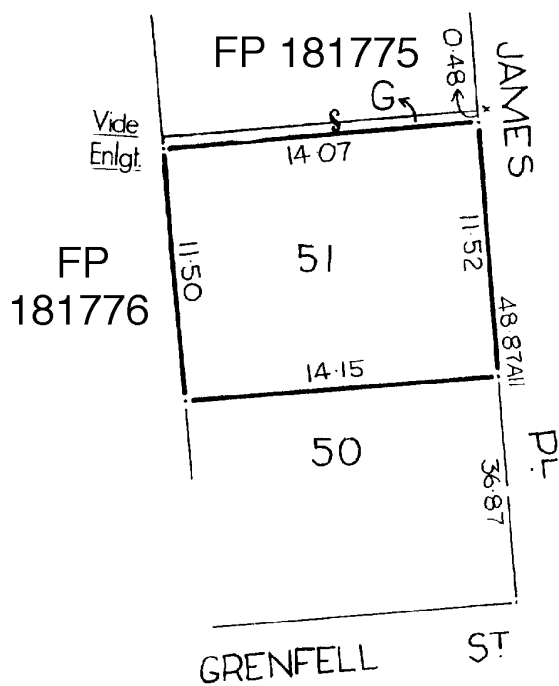
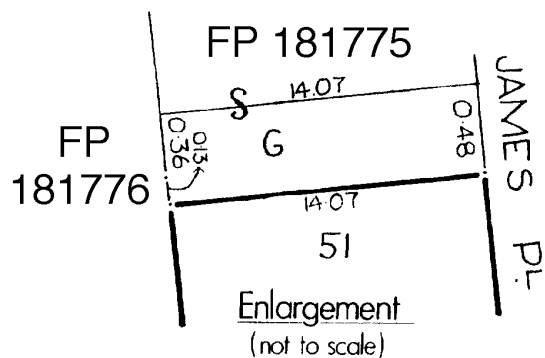
Notations on Plan NIL

#### Registrar-General's Notes

PLAN FOR LEASE PURPOSES VIDE G9/1993

Administrative Interests NIL





REAL PROPERTY ACT, 1886



South Australia

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



## Certificate of Title - Volume 5686 Folio 236

Parent Title(s)	CT 5585/336			
Creating Dealing(s)	RTC 8495363			
Title Issued	27/08/1999	Edition 4	Edition Issued	12/10/2002

### Estate Type

FEE SIMPLE

### Registered Proprietor

PARALANDO PTY. LTD. (ACN: 082 158 450)  
OF SOUTHERN CROSS ARCADE 62 KING WILLIAM STREET ADELAIDE SA 5000

### Description of Land

ALLOTMENT 22 DEPOSITED PLAN 50156  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

SUBJECT TO PARTY WALL RIGHT(S) OVER THE LAND MARKED G (RTC 8495363)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A (TG 8435341)

TOGETHER WITH PARTY WALL RIGHT(S) OVER THE LAND MARKED H (RTC 8495363)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D AND E

### Schedule of Dealings

Dealing Number	Description
9436455	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

### Notations

Dealings Affecting Title NIL

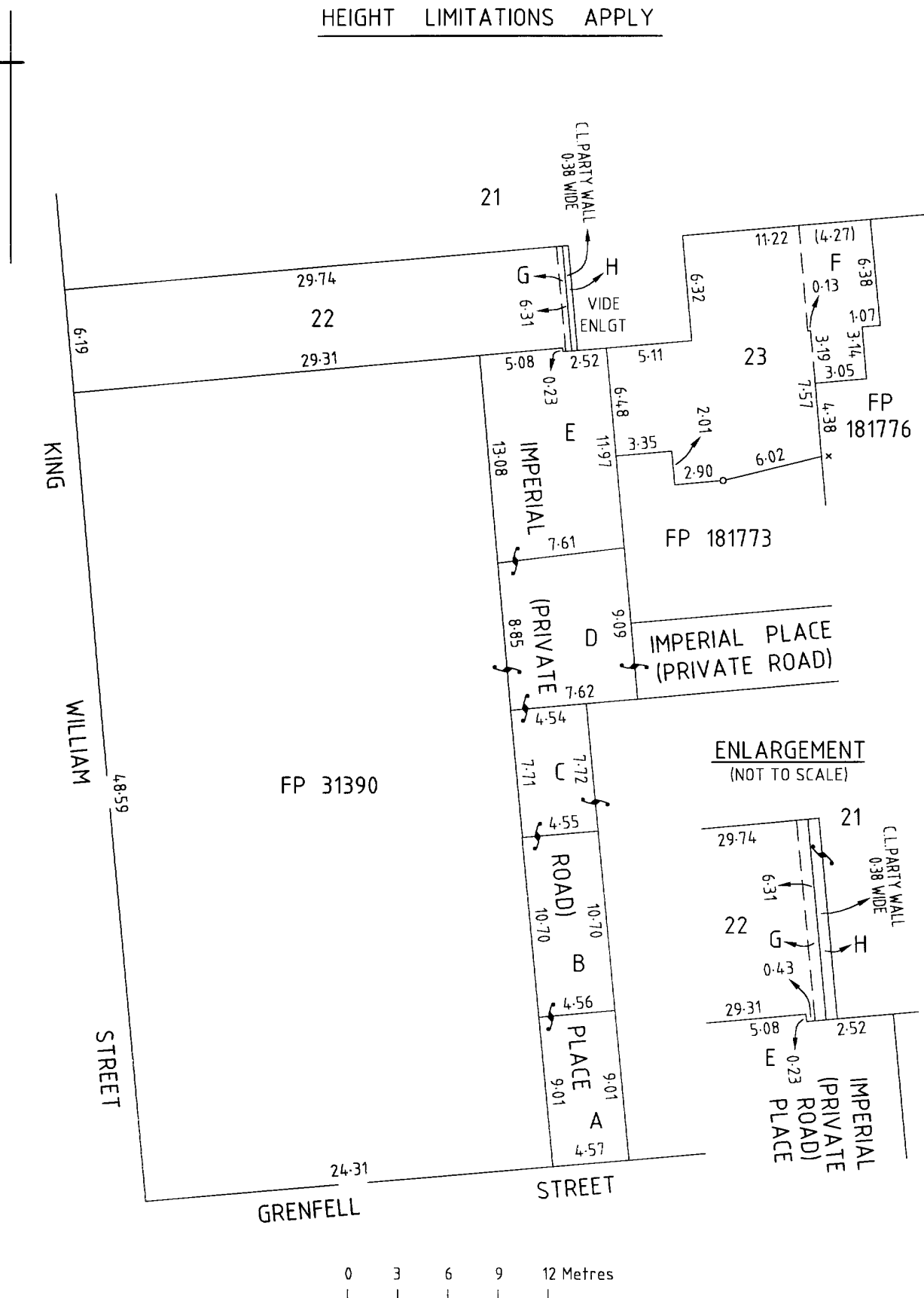
Priority Notices NIL

Notations on Plan NIL

### Registrar-General's Notes

PLAN FOR LEASE PURPOSES VIDE G117/1996  
PLAN FOR LEASE PURPOSES VIDE G604/1995

Administrative Interests NIL





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



## Certificate of Title - Volume 5686 Folio 237

Parent Title(s)	CT 5585/336, CT 5585/338		
Creating Dealing(s)	RTC 8495363		
Title Issued	27/08/1999	Edition 4	Edition Issued 12/10/2002

## Estate Type

FEE SIMPLE

## Registered Proprietor

SOUTHERN CROSS ARCADE PTY. LTD. (ACN: 082 600 815)  
OF SOUTHERN CROSS ARCADE 62 KING WILLIAM STREET ADELAIDE SA 5000

## Description of Land

ALLOTMENT 23 DEPOSITED PLAN 50156  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

## Easements

SUBJECT TO THE EASEMENT(S) FOR LIGHT AND AIR OVER THE LAND MARKED F (T 2641303)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED F (T 1201300 AND T 1201301)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A (TG 8435341)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D AND E

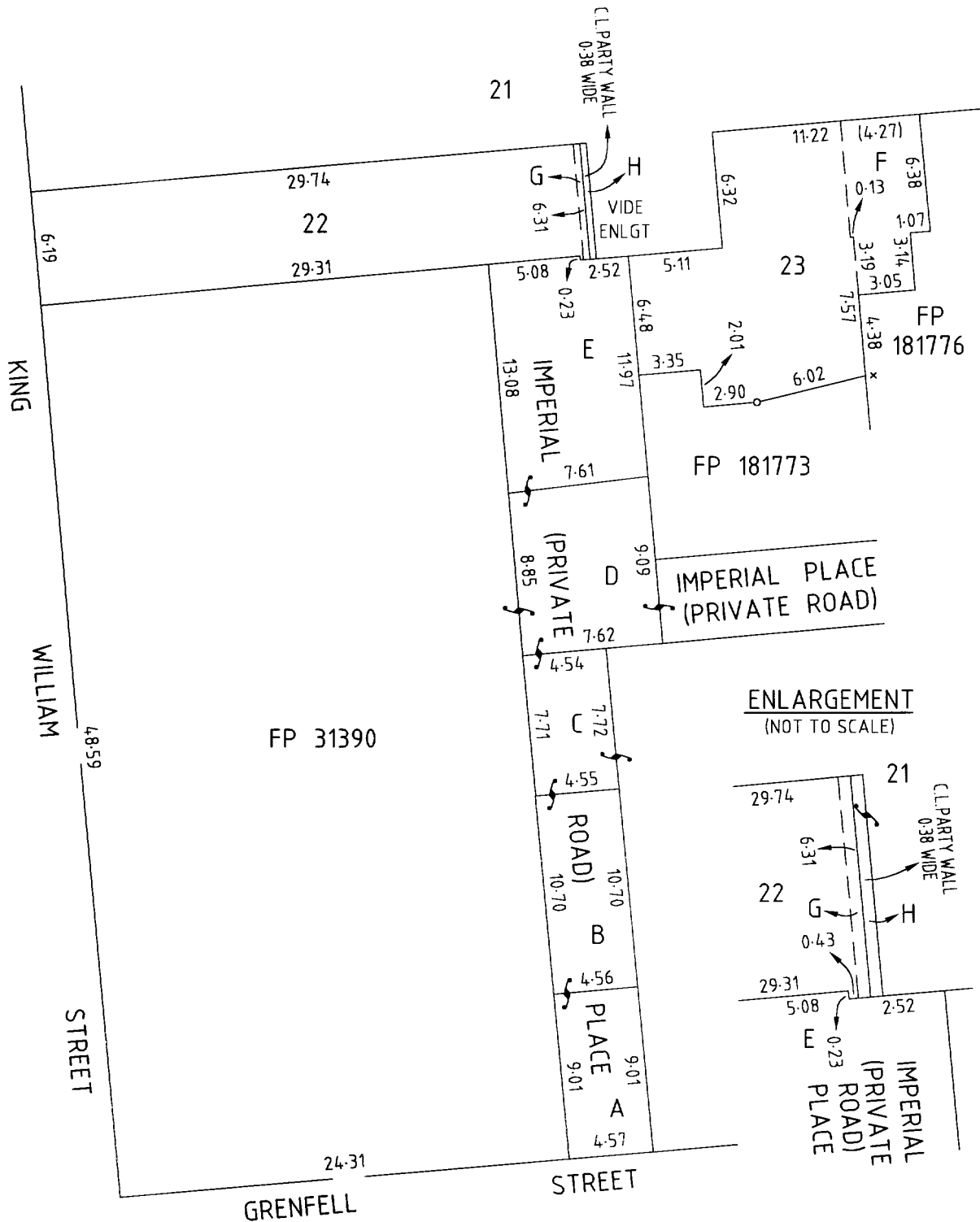
## Schedule of Dealings

Dealing Number	Description
8510306	MORTGAGE TO STATE BANK OF NEW SOUTH WALES LTD.
9436462	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

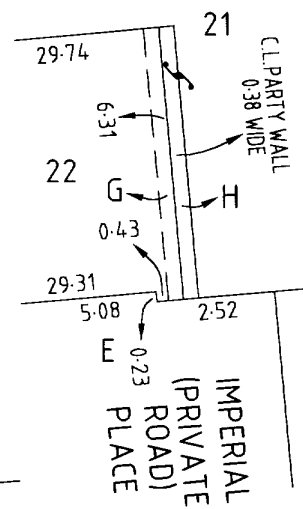
## Notations

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

HEIGHT LIMITATIONS APPLY



ENLARGEMENT  
 (NOT TO SCALE)



REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5883 Folio 435

<b>Parent Title(s)</b>	CT 3199/33			
<b>Creating Dealing(s)</b>	CONVERTED TITLE			
<b>Title Issued</b>	15/11/2002	<b>Edition</b>	1	<b>Edition Issued</b> 15/11/2002

### Estate Type

FEE SIMPLE

### Registered Proprietor

THE CORPORATION OF THE CITY OF ADELAIDE  
OF GPO BOX 2252 ADELAIDE SA 5001

### Description of Land

ALLOTMENT 123 FILED PLAN 181775  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

SUBJECT TO RIGHT(S) OF SUPPORT OVER THE LAND MARKED A (T 2475926)

TOGETHER WITH RIGHT(S) OF SUPPORT OVER THE LAND MARKED B APPURTENANT ONLY TO THE LAND MARKED X (T 2416392)

### Schedule of Dealings

Dealing Number	Description
416670A	ENCUMBRANCE TO GEORGE FRASER OF PORTION
378089	ENCUMBRANCE TO JAMES ANGAS JOHNSON OF PORTION

### Notations

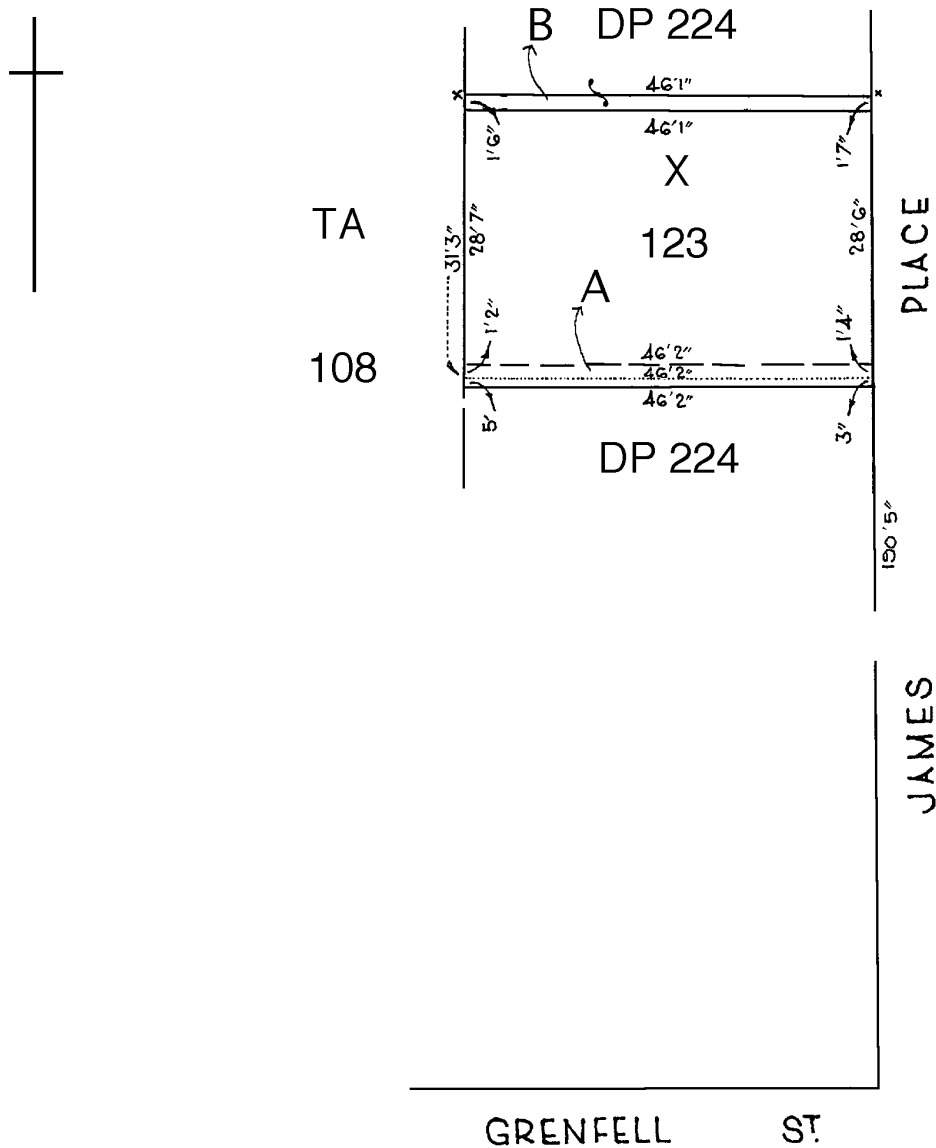
<b>Dealings Affecting Title</b>	NIL
<b>Priority Notices</b>	NIL
<b>Notations on Plan</b>	NIL
<b>Registrar-General's Notes</b>	NIL
<b>Administrative Interests</b>	NIL





THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 3199/33  
SEE TITLE TEXT FOR EASEMENT DETAILS

LAST PLAN REF: DP 224



20 10 0 20 FT  
DISTANCES ARE IN FEET AND INCHES  
FOR METRIC CONVERSION  
1 FOOT = 0.3048 METRES  
1 INCH = 0.0254 METRES

NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION



REAL PROPERTY ACT, 1886



South Australia

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



## Certificate of Title - Volume 6129 Folio 121

Parent Title(s)	CT 5686/235			
Creating Dealing(s)	DDA 12055257			
Title Issued	28/01/2014	Edition 1	Edition Issued	28/01/2014

### Estate Type

FEE SIMPLE

### Registered Proprietor

SOUTHERN CROSS ARCADE PTY. LTD. (ACN: 082 600 815)  
OF LEVEL 1/52-62 KING WILLIAM STREET ADELAIDE SA 5000

### Description of Land

ALLOTMENT 21 DEPOSITED PLAN 50156  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

SUBJECT TO PARTY WALL RIGHT(S) OVER THE LAND MARKED H (RTC 8495363)  
TOGETHER WITH PARTY WALL RIGHT(S) OVER THE LAND MARKED G (RTC 8495363)

### Schedule of Dealings

Dealing Number	Description
7126995	APPLICATION AGREEMENT PURSUANT TO SECTION 39(D) OF THE CITY OF ADELAIDE DEVELOPMENT CONTROL ACT, 1976 FOR THE BENEFIT OF C.T. 5585/341 FOR CONSERVATION
8510306	MORTGAGE TO STATE BANK OF NEW SOUTH WALES LTD.
9436462	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA
9687382	AGREEMENT UNDER DEVELOPMENT ACT, 1993 PURSUANT TO SECTION 57(2) OVER PORTION (X IN GP 325/2002)
9687384	LEASE TO JAMES PLACE HOTEL PTY. LTD. COMMENCING ON 1/8/2001 AND EXPIRING ON 31/7/2021 OF PORTION (21A IN GP 325/2002)

### Notations

Dealings Affecting Title NIL

Priority Notices NIL

Notations on Plan NIL

### Registrar-General's Notes

PLAN FOR LEASE PURPOSES VIDE G117/1996

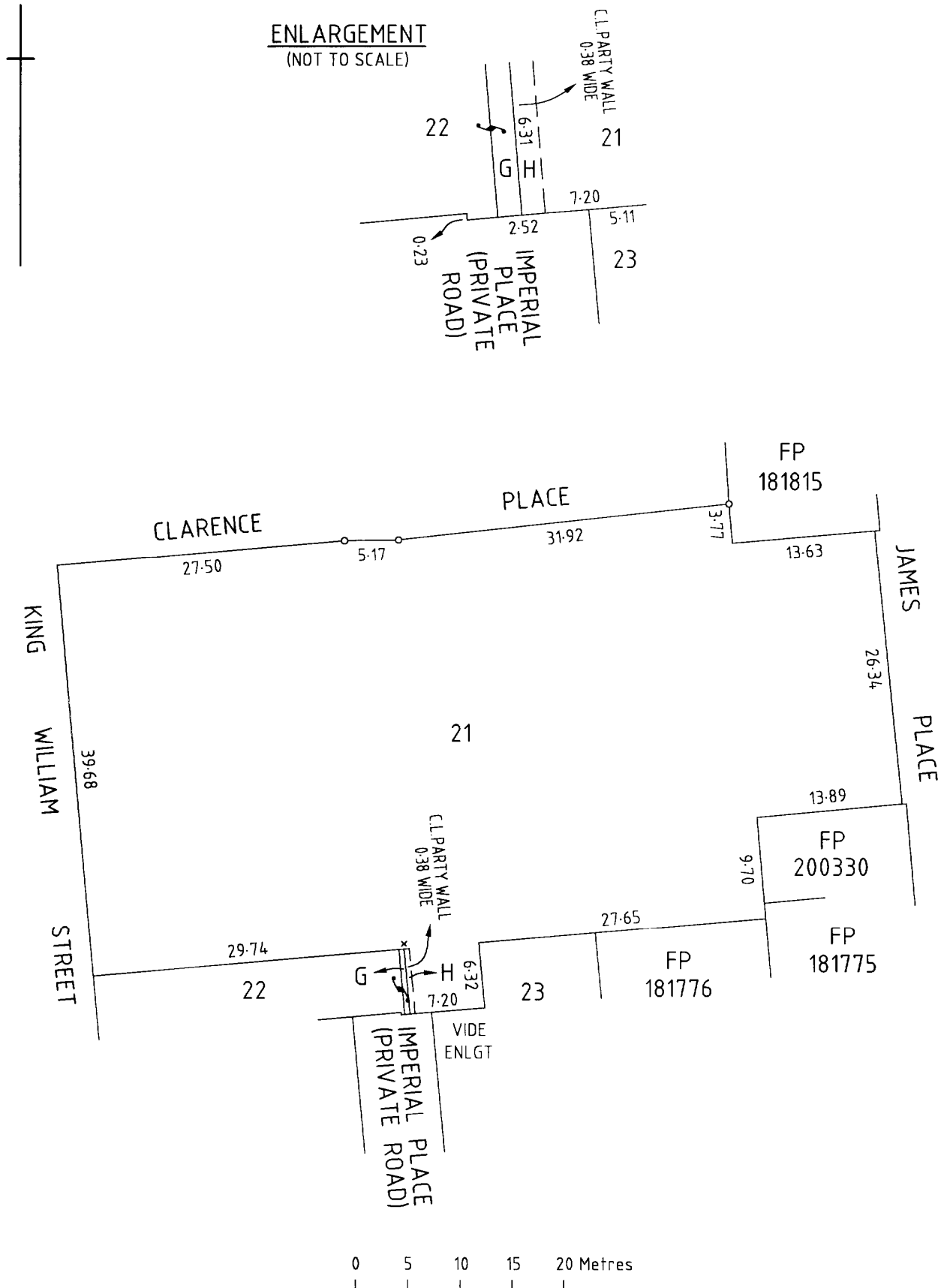


Product	Register Search (CT 6129/121)
Date/Time	10/07/2018 02:00PM
Customer Reference	R_AB
Order ID	20180710007030
Cost	\$28.75

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PLAN FOR LEASE PURPOSES VIDE G1432/1978  
PLAN FOR LEASE PURPOSES VIDE G1751/1981  
PLAN FOR LEASE PURPOSES VIDE G181/2001  
PLAN FOR LEASE PURPOSES VIDE G207/1982  
PLAN FOR LEASE PURPOSES VIDE G2828/1979  
PLAN FOR LEASE PURPOSES VIDE G325/2002  
PLAN FOR LEASE PURPOSES VIDE G358/1983  
PLAN FOR LEASE PURPOSES VIDE G50/1982

**Administrative Interests**            NIL



REAL PROPERTY ACT, 1886



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



## Certificate of Title - Volume 5585 Folio 337

<b>Parent Title(s)</b>	CT 5575/986, CT 5575/995				
<b>Creating Dealing(s)</b>	TG 8435341, T 8435345				
<b>Title Issued</b>	14/10/1998	<b>Edition</b>	3	<b>Edition Issued</b>	12/10/2002

### Estate Type

FEE SIMPLE

### Registered Proprietor

P.A.S. NOMINEES PTY. LTD. (ACN: 007 758 910)  
OF SOUTHERN CROSS ARCADE 62 KING WILLIAM STREET ADELAIDE SA 5000

### Description of Land

ALLOTMENT 2 FILED PLAN 31390  
IN THE AREA NAMED ADELAIDE  
HUNDRED OF ADELAIDE

### Easements

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY WITH LIMITATIONS OVER THE LAND MARKED A (TG 8435341)

TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED B.C.D AND E

### Schedule of Dealings

Dealing Number	Description
9436456	MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

### Notations

<b>Dealings Affecting Title</b>	NIL
<b>Priority Notices</b>	NIL
<b>Notations on Plan</b>	NIL

### Registrar-General's Notes

PLAN FOR LEASE PURPOSES VIDE G474/1995  
AMENDMENT TO DIAGRAM VIDE 176/2002

<b>Administrative Interests</b>	NIL
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Register Search (CT 5585/337)  
10/07/2018 02:08PM  
R\_AB  
20180710007194  
\$28.75

The map shows a property in Grenfell, NSW, with the following details:

- Streets:** KING STREET (North), WILLIAM STREET (West), GRENFELL STREET (South), IMPERIAL PLACE (PRIVATE ROAD) (East).
- Adjacent Property:** DP 25900 (East).
- Lots and Dimensions:**
  - Lot 1:** 43.89, 6.19, 29.31, 14.64, 6.34, 0.23.
  - Lot 2:** 24.23, 12.19, 12.45, 39.71, 5.08, 2.52.
  - Lot 3:** 24.25, 36.40, 19.89, 24.31, 36.27, 19.71.
  - Lot 4:** 18.30, 27.43, 18.40, 27.46, 7.02, 10.35.
  - Lot 5:** 27.47, 1.83, 6.40, 1.83, 2.44, 9.14, 2.44, 10.52, 7.02.
  - Lot 6:** 27.49, 10.43, 2.44, 9.14, 2.44, 10.52, 7.02.
  - Lot 7:** 4.51, 4.57, 4.028 ALL, 4.029 ALL, 32.67.
- Easements and Other Features:**
  - 3/7:** A 3/7 easement is shown on the south boundary of Lot 1.
  - 21.06 ALL:** A 21.06 ALL easement is shown on the east boundary of Lot 2.
  - 4.57:** A 4.57 easement is shown on the east boundary of Lot 3.
  - Other Labels:** FP 181772, FP 181773, FP 181776, Y, C, B, A/X, D, D/F, F, S, R, P, Q.

0      4      8      12      16 Metres

18

day of November

DELADE of Town Hall, King  
with its successors and assigns

210827  
2/2002



- F. As the proposed development is to extend the Hotel such that both Allotment 91 and the adjacent land (hereinafter collectively referred to as "the Land") will be used for hotel related purposes, the Lessee wishes to demolish portions of the Hotel wall and the Southern Cross wall to create an opening in those walls, as depicted on the attached proposal plan (hereinafter referred to as "the opening");
- G. The Council wishes to ensure that the Land is developed and managed in a manner that achieves satisfactory fire safety standards;
- H. The Hotel wall and the Southern Cross wall are "external walls" within the meaning ascribed to that phrase in the Building Rules under the Act (and more particularly, within the Building Code) and as such are required to have a fire resistance level as specified in those Rules;
- I. Creation of the opening would, in the opinion of the Council, result in non-compliance with the requirement referred to in Recital H;
- J. The Council has, however, determined to modify the application of the Building Rules to the proposed development and to permit the opening while the Land remains part of the same business premises and leased by the same person but wishes to ensure that, in the event that there are dealings with the Land, such that the two allotments comprising the Land become separate business premises and/or leased by different persons, both the Hotel wall and the Southern Cross wall shall be reinstated by Roscioli and Southern Cross on Allotment 91 and the adjacent land respectively and that the opening is satisfactorily closed;
- K. Pursuant to the provisions of s57(2) of the Act, Roscioli and Southern Cross have agreed with the Council to enter into this Deed relating to the development and management of the Land, subject to the terms and conditions hereinafter mentioned.

**NOW THIS DEED WITNESSETH:**

**1. INTERPRETATION**

- 1.1 The parties acknowledge that the matters recited above are true and accurate and agree that they shall form part of the terms of this Deed.
- 1.2 In the interpretation of this Deed unless the context shall otherwise require or admit:
- 1.2.1 Words and phrases used in this Deed which are defined in the Act, or in the regulations made under the Act, shall have the meanings ascribed to them by the Act or the regulations as the case may be;
- 1.2.2 References to any statute or subordinate legislation shall include all statutes and subordinate legislation amending, consolidating or replacing the statute or subordinate legislation referred to;

- 1.2.3 The term "Roscioli" where it is a company includes its successors, assigns and transferees and where it is a person, includes his or her heirs, executors, administrators and transferees and where it consists of more than one person or company the term includes each and every one or more of such persons or companies jointly and each of them severally and their respective successors, assigns, heirs, executors, administrators and transferees of the companies or persons being registered or entitled to be registered as the proprietor of an estate in fee simple of Allotment 91, subject however to such encumbrances, liens and interests as are registered and notified by memoranda endorsed on the Certificate of Title thereof;
- 1.2.4 The term "Southern Cross" where it is a company includes its successors, assigns and transferees and where it is a person, includes his or her heirs, executors, administrators and transferees and where it consists of more than one person or company the term includes each and every one or more of such persons or companies jointly and each of them severally and their respective successors, assigns, heirs, executors, administrators and transferees of the companies or persons being registered or entitled to be registered as the proprietor of an estate in fee simple of Allotment 21, subject however to such encumbrances, liens and interests as are registered and notified by memoranda endorsed on the Certificate of Title thereof;
- 1.2.5 The term "Allotment 91" shall include any part or parts of the land comprised in Certificate of Title Register Book Volume 5394 Folio 864, being the land referred to in Recital A;
- 1.2.6 The term "adjacent land" shall include any part or parts of that portion of the land comprised in Certificate of Title Register Book Volume 5686 Folio 235 marked "X" in the proposal plan;
- 1.2.7 The term "person" shall include a corporate body;
- 1.2.8 Any term which is defined in the statement of the names and descriptions of the parties or in the Recitals shall have the meaning there defined;
- 1.2.9 Words importing the singular number or plural number shall be deemed to include the plural number and the singular number respectively;
- 1.2.10 Words importing any gender shall include both genders;
- 1.2.11 Where two or more persons are bound hereunder to observe or perform any obligation or agreement whether express or implied then they shall be bound jointly and each of them severally;
- 1.2.12 "The Building Rules" shall mean any codes (including the Building Code of Australia) or regulations made under the Act (or adopted under the Act) that regulate the performance, standard or form of building work, including any standard or document adopted by or under those codes or regulations, or referred to in those codes or regulations.

1.2.13 "The Building Code of Australia" shall mean the 1996 Edition of the Building Code of Australia published by the Australian Building Codes Board as modified (from time to time) by the variations and additions for South Australia contained in the appendix to that Code;

1.2.14 "The proposal plan" shall mean the plan referred to as such in the Recitals, being the plan annexed hereto and marked "A".

1.3 Clause headings are provided for reference purposes only and shall not be resorted to in the interpretation of this Deed.

1.4 The requirements of this Deed are at all times to be construed as additional to the requirements of the Act and any other legislation affecting the Land.

## **2. UNDERTAKINGS OF ROSCIOLI AND SOUTHERN CROSS**

In the event of the proposed development being undertaken on the Land, Roscioli and Southern Cross agree:

2.1 that the opening in the Hotel wall and the Southern Cross wall referred to in the Recitals will be closed and that Roscioli shall reinstate the Hotel wall and Southern Cross shall reinstate the Southern Cross wall such that the respective walls shall comply with the requirements for external walls specified in the Building Rules, to the reasonable satisfaction of the Council, should the Hotel land and the adjacent land be leased or occupied by persons who use the said area for different purposes and/or under separate management;

2.2 that they will maintain all buildings and structures on the Land in good order and condition.

## **3. OPERATION OF THIS DEED**

The parties to this Deed expressly declare and agree that the provisions of this Deed shall not be binding or impose any obligation upon them unless and until all of the consents necessary for the approval of the proposed development (including a notice of approval pursuant to regulation 46(2) of the regulations under the Act) have been obtained under the Act and are operative within the meaning ascribed to the phrase "the operative date" by regulation 48(4) of the regulations made under the Act.

## **4. RECISSION**

In the event that any development authorisation obtained for the Application lapses or expires by virtue of the provisions of the Act without being implemented, the Council agrees to rescind this Deed at the request of Roscioli and/or Southern Cross and the reasonable costs of, and incidental to, the preparation, stamping and registration of the Deed of Rescission shall be borne by Roscioli and Southern Cross.

## **5. COUNCIL'S POWERS OF ENTRY, ETC**

- 5.1 The Council and any employee or agent of the Council authorised by the Council may at any reasonable time after giving notice to Roscioli in accordance with the provisions of this Deed enter Allotment 91 for the purpose of:
  - 5.1.1 inspecting Allotment 91 and any building or structure thereupon for any reason relating to the subject matter of this Deed;
  - 5.1.2 exercising any other powers of the Council under this Deed or pursuant to law.
- 5.2 If Roscioli is in breach of any provision of this Deed, the Council may, by notice in writing served on Roscioli, specify the nature of the breach and require Roscioli to remedy the breach within such time as may be reasonably nominated by the Council in the notice (being not less than twenty eight (28) days from the date of service of the notice) and if Roscioli fails so to remedy the breach, the Council or its servants or agents may carry out the requirements of the notice and in doing so may enter and perform any necessary works upon Allotment 91 and recover any costs thereby reasonably incurred from Roscioli.
- 5.3 The Council and any employee or agent of the Council authorised by the Council may at any reasonable time after giving notice to Southern Cross in accordance with the provisions of this Deed enter the adjacent land for the purpose of:
  - 5.3.1 inspecting the adjacent land and any building or structure thereupon for any reason relating to the subject matter of this Deed;
  - 5.3.2 exercising any other powers of the Council under this Deed or pursuant to law.
- 5.4 If Southern Cross is in breach of any provision of this Deed, the Council may, by notice in writing served on Southern Cross, specify the nature of the breach and require Southern Cross to remedy the breach within such time as may be nominated by the Council in the notice (being not less than twenty eight (28) days from the date of service of the notice) and if Southern Cross fails so to remedy the breach, the Council or its servants or agents may carry out the requirements of the notice and in doing so may enter and perform any necessary works upon the adjacent land and recover any costs thereby incurred from Southern Cross.
- 5.5 The Council may delegate any of its powers under this Deed to any person.

## **6. VARIATION AND WAIVER**

- 6.1 This Deed may not be varied except by a supplementary Deed signed by the Council and Roscioli and Southern Cross.
- 6.2 The Council may waive compliance by Roscioli and/or Southern Cross with the whole or any part of the obligations of Roscioli and/or Southern Cross

respectively, herein contained, provided that no such waiver shall be effective unless expressed in writing and signed by the Council.

## 7. NOTICES

Notice shall for the purposes of this Deed be properly served on Roscioli and Southern Cross if it is:

- 7.1 posted to Roscioli's and Southern Cross' last address known to the Council; or
- 7.2 affixed in a prominent position on the Land.

## 8. NOTING OF THIS DEED

Each party shall do and execute all such acts, documents and things as shall be necessary to ensure that, as soon as is possible after the execution of this Deed by all necessary parties, this Deed is noted by the Registrar-General, against the respective Certificates of Title for Allotment 91 and the adjacent land, pursuant to the provisions of s57(5) of the Act.

## 9. GOVERNING LAW

The law governing the interpretation and implementation of the provisions of this Deed shall be the law of South Australia.

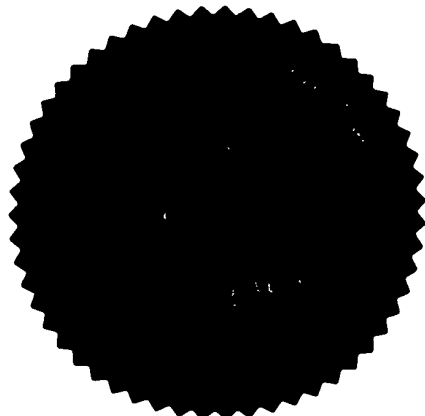
## 10. GENERAL PROVISIONS

- 10.1 If any provision of this Deed shall be found by a court of competent jurisdiction to be invalid or unenforceable in law then and in such case the parties hereby request and direct such court to sever such provision from this Deed.
- 10.2 This Deed contains the whole agreement between the parties in respect of the matters referred to herein.

**EXECUTED** as a Deed

THE COMMON SEAL of the  
CORPORATION OF THE CITY OF  
ADELAIDE was hereunto affixed the  
13<sup>th</sup> day of December 2001.


)  
)  
)  
)



*[Signature]*  
.....  
Lord Mayor

*[Signature]*  
.....  
Chief Executive Officer

~~Chief Executive Officer~~

A circular stamp with a double-lined border. The text "COMMON SEAL" is arched across the top. In the center, "ROSCIOLI" is written above "(PROPERTY No. 2)" and "PTY. LTD.". Below this is a row of three stars, followed by "A.C.N. 008 160 343". A single star is positioned at the bottom center of the circle.

## Director

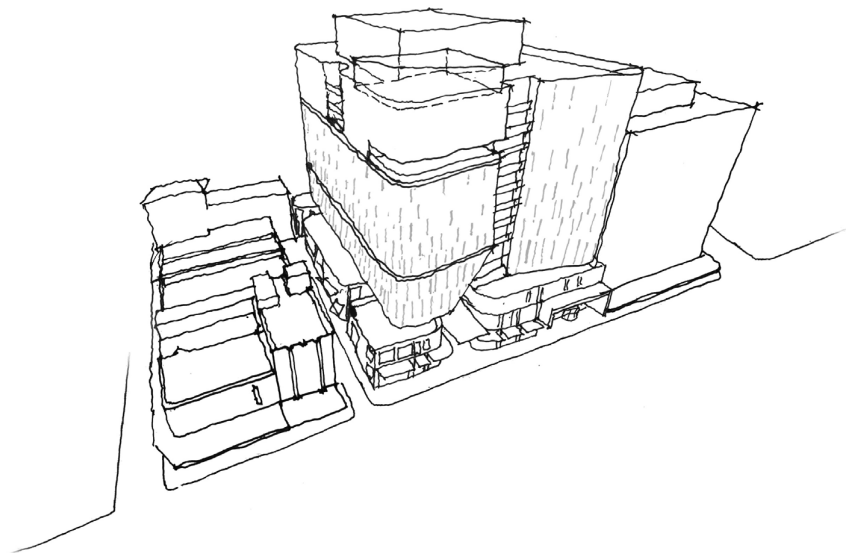
Director/Company Secretary



**COMMON SEAL**  
**SOUTHERN**  
**CROSS**  
**ARCADE**  
**PTY. LTD.**  
 ACN 082 600 815

Director

Director/Company Secretary



## 60 King William Street – Design Statement

**Date:** 23 October 2020

**Client:** Charter Hall

**Prepared by:** COX Architecture





60 King William Street is a mixed-use retail and commercial redevelopment of the Southern Cross Arcade. The development combines a range of public offerings with 40,000m<sup>2</sup> of integrated and contemporary workplace in the heart of Adelaide's business and retail precinct.

#### **Site Context:**

The site is located between King William Street and James Place with close adjacency to Rundle Mall and well serviced to the north and south by existing access roads in Clarence Place and Imperial Place.

The site comprises of a series of existing buildings ranging in scale and era, many of which are tired and currently provide poor amenity to tenants and the broader public. One existing building within the development site will be retained in part. 64 King William Street was originally constructed in the 1880's and was later altered through the application of an Art Deco era façade and canopy. This façade carries heritage significance and therefore is to be retained and integrated with the broader development. Formal heritage buildings located along King William Street transition to finer grain retail buildings skirting James Place. Ultimately the success of this ambitious project is dependent on a considered response to the site and the surrounding urban fabric.

#### **Urban Connectivity:**

The scale of the development presents a unique opportunity for this project to enhance connectivity and contribute a quality urban outcome. The architectural response has largely been driven by activating the ground plane and prioritising safe pedestrian and cyclist movements through the site.

King William Street and James Place are connected by a new public thoroughfare activating retail edges and further reinforcing a thriving food and beverage precinct. Secondary laneways also enable direct connectivity to Clarence Place providing greater public amenity and integration with the surrounding context.

The building's primary frontage presents to King William Street where a generous commercial entry provides connection for employees to access upper workplace levels via a double height entry foyer and sky lobby experience. Employees also have direct access to best-in-class end of trip facilities via dedicated entry at Clarence Place.

**Built Form:**

60 King William looks to reflect the qualities of Adelaide's premium commercial boulevard whilst also balancing the strong streetscape identity that characterises this unique precinct. The built form response comprises of two major elements, podium and tower.

The podium fronting King William Street responds both to the primarily 2-level built form adjacent the site whilst acknowledging the 3-level Art Deco heritage façade. The external design of the podium seeks to integrate and further reinforce the formal scale and heritage qualities once present on King William Street. This design approach also transitions internally through continuation of the external scale, form and materiality.

The podium contains a mix of programme ranging from public realm, retail, food and beverage, end of trip facilities and contemporary workplace offerings. The presentation of the podium to King William Street is both a contextual and contemporary response to the formal character, scale and sandstone materiality synonymous with King William Street. The materiality of the podium transitions from sandstone to textural brickwork reflecting the finer grain qualities of James Place and Clarence Place.

13 levels of contemporary workplace form the tower sitting above the masonry podium and respectfully within its context. The form and materiality are driven by the desire to produce an environmentally sustainable building striving for design and performance excellence. Large-format high performance glazing envelopes the tower and provide tenants with quality access to daylight, aspect and comfort. Integrated sun shading devices are distributed gradually up the tower and dissipate on the upper levels. These vertical aluminium sun shading elements also provide necessary relief and visual contrast to the primarily glazed façade and reference the masonry materiality of the podium.

Both podium and tower combine to produce a building which responds to its context, encourages urban connectivity and delivers a quality built form outcome for the city of Adelaide. This landmark project will be benchmark for mixed-use developments and act as a catalyst for further urban renewal.



Prism Facades  
ABN: 91 607 928 745  
Level 1, 156 Clarence St  
Sydney, NSW 2000  
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Charter Hall  
c/o Brad Steinert, RCP  
Level 2, 13 French Street,  
Adelaide  
SA 5000

25<sup>th</sup> May 2020

Prism Reference: 20016-LTR1

Dear Brad,

**52-68 King William Street: Façade External Reflectivity**

Prism Facades have been engaged to provide façade consultancy services on the proposed new development at 52-68 King William Street. The new façades will be formed predominantly from glass (both high performance insulated glazing and uncoated single glazing) with powder coated aluminium fins, and masonry-like projections.

In relation to the planning requirements for this development, we advise the following:

The façade materials for the project have generally been selected to have low-reflectivity finishes, and a façade performance specification has been prepared which defines a maximum external specular reflectivity limit of visible light (reflectivity index) of 20% for all façade building materials, including the glass.

On this basis, all façade materials selected must have a reflectivity index of 20% or less.

The specified reference glass has an external specular reflectivity which is well below this limit, of approximately 16%.

In addition to the contract limit specified, Prism Facades have been engaged by Charter Hall to act as the façade peer reviewer throughout the construction stage of the project, and we will oversee the final glass and material selection on the building, to ensure that this target is complied with.

We trust that the above meets with your expectations, however please don't hesitate to contact us if you should have any questions.

Yours sincerely,

**Toby Miller**  
Director | Principal Façade Designer  
Prism Facades

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## MEMORANDUM

TO	George Roussos, Charter Hall	FROM	Peter Lovell/Meighen Katz
RE	64 King William Street, Adelaide	DATE	6 April, 2020

**Introduction**

This memorandum provides a high level heritage appraisal and assessment of the property at 64 King William Street Adelaide. The comments and advice provided are based on this preliminary work, and not a detailed investigation into the history or fabric of the building and site.

Due to restrictions on movement arising from the Covid-19 pandemic, neither an on-site assessment of the site or its streetscape context was possible. The following, therefore, is based on available on-line resources.

**Heritage controls and listings**

The property is listed as a 'Local Heritage Place' with the City of Adelaide and included on Table 2 of the Adelaide (City) Development Plan (Consolidated January 2020). The listing is as follows:

Shop (Sands & McDougall); External form, in particular the art deco detailing of King William Street façade. Excludes incongruous later shopfront.

The building is also located within the Capital City Zone and Central Business Policy Area 13 Adelaide (City) Development Plan (Consolidated January 2020). Regarding heritage controls the building and site are subject to the objectives and principles set out in the Local Heritage Places within the Adelaide (City) Development Plan (Consolidated January 2020).

**Description of property and streetscape context**

The property is a three storey brick building on King William Street with a cement rendered facade. The Imperial Alley façade is of painted face brickwork. Known as the Sands & McDougall Building, the original 1881-82 building was refaced in 1933 with an Art Deco façade finished in 'Portland Cement' render. It is well documented and described in the citation contained in the City of Adelaide Heritage Survey, (2008), which notes as follows with regard to the Art Deco style detailing:

Elements of the style used on the façade include the geometric designs below the ledges of the three small-paned metal-framed windows on both the first floor and second floors, and within the upper portion of the windows on the second floor; the elongated pilasters on each side of the façade; the fluting between the first and second floor windows; the pressed cement designs at the tops of the pilasters and the pilaster capitals; the geometric chevron design above the windows and above the 'Sands and McDougall' lettering; the stylised 'Sands and McDougall' lettering between the pilasters and similar 'Printers Stationers' lettering below the first floor

windows; the parapet with fluting and pressed cement shell design and the rearing horse insignia at the centre of this.<sup>1</sup>

The property is located on the east side of King William Street between North Terrace and Grenfell Street in the Central Business Policy Area 13 of the Capital City Zone. The near-by buildings comprise offices and commercial premises which range in age from the second half of the nineteenth century to very recent times.

### **Heritage Assessment**

#### *The current citation*

The 'Statement of Heritage Value' contained in the City of Adelaide Heritage Survey citation in large part focusses on the significance of the Art Deco façade and 'the manner in which it reflects the changing commercial nature of the locality and the manner in which it has undergone adaptation to retain its economic value'.

In concluding, the citation determines that the property meets the following assessment criteria at a local level:

- a) it displays historical, economical or social themes that are of importance to the local area which has continued to be predominantly commercial; and
- (d) it displays aesthetic merit, design characteristics or construction techniques of significance to the local area reflected in the quality of the art deco detailing as it shows an interesting commercial use in Adelaide of the decorative style that later became known as Art Deco, during the later years of the Great Depression; and
- (e) it is associated with a notable local personalities, particularly the stationery firm Sands & McDougall and Adelaide architectural firm Claridge, Bruer and Fisher.<sup>2</sup>

Of these criteria, both (a) and (e) relate to the façade and the original commercial premises as first constructed in 1881-1882, used as a stationers from 1895, and leased by Sands & McDougall between 1925 and 1975. These associations are evidenced through the historic use as a commercial property, and through the lettering on the Art Deco façade indicating the previous ties with Sands & McDougall.

Criterion (d) and the association with Claridge, Bruer and Fisher relate specifically to the addition of an Art Deco façade in 1933. The rendered Portland Cement façade both materially and stylistically is a well resolved example of a design/stylistic response typical of the time. Those responsible for the design, Philip Claridge, L. Gregory Bruer and Norman C. Fisher were important South Australian mid-century architects.

As assessed to date the heritage value of the building derives from its historical associations in both its original and modified forms, and the role of the façade as an architectural exemplar.

#### *Comment*

While the City of Adelaide citation makes mention of the original building, the focus of the citation, as might be expected, is on the Art Deco façade. This is both as an example of the refacing and modernising of buildings during the interwar period and on the design.

In the 1930s, the practice of refacing allowed buildings to be modernised without necessitating a full rebuild; an important consideration during the financial challenges of the Great Depression. Completed

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<sup>1</sup>"Heritage Information Sheets: King William Street to Peel Street", City of Adelaide Heritage Survey 2008, p14.

<sup>2</sup> "Heritage Information Sheets: King William Street to Peel Street", City of Adelaide Heritage Survey 2008, p15.

in 1933 the Sands & McDougall Building façade presents as an early example of this technique. The same approach was later used by a number of businesses in the Adelaide CBD, as evidenced in Truscott's Tailors on Rundle Street (B7049), and Fredrick's Ladies Hairdressers on the west side of King William Street (B7047). Both premises were remodelled to include Art Deco facades in 1936. Even non-commercial establishments employed the technique such as the (former) Jewish Synagogue in Synagogue Place (State Heritage ID 13593) which gained an Art Deco façade in 1938. In this context the Sands & McDougall façade, as with others, reflects the desire of many established businesses to re-present themselves in a contemporary and up to date manner.

In the wider context the Sands & McDougall Building is one of a number of works of the architectural practice, Claridge, Bruer and Fisher constructed in the CBD, and in its Art Deco façade shares a common design language evidenced in a number of near-by heritage places. These include the former Colonial Mutual Life Building (State Heritage ID 11637), now the Mayfair Hotel, also on the same block of King William Street.

Beyond the façade, the surviving external fabric presents from the imagery as an example of a conventional modest commercial premises of the late nineteenth century. While the rear is visible from Imperial Place the structure was otherwise not intended to be observed and is of no particular significance. While the exposed façade in Imperial Place evidences the traditional point of loading into the upper floors of the building, this is not a function which is particular to the Sands & McDougall operations. It is an element of interest rather than significance.

#### *Intactness*

As also a factor in considering the significance of the place is that of intactness. The building has undergone several modifications since the façade construction in 1933. These include changes to the shopfront in 1963 and 1964, modifications to the northern exterior wall following demolition of the adjacent building in 1964, and interior alterations in 1982. The most significant change occurred with the installation of the new 'incongruous' shop front in 1987 with some loss to historic fabric. Notwithstanding this change, the façade above the awning level presents as substantially intact and it is conceivable that the awning verandah, with its horizontal streamlined motif, is contemporary with that construction.

#### **Conclusion:**

The conclusion of this high level review of the assessed significance of 64 King William Street is that it is reasonably recognised as a heritage place primarily as related to the 1933 Art Deco façade. The façade evidences the long historical association of the site with printers and stationers, Sands & McDougall, the work of the architectural practice Claridge, Bruer and Fisher and the response of building owners in seeking to modernise their buildings, particularly during the interwar period. Beyond the facade the building is of more limited significance and presents as a relatively conventional example of a late nineteenth century commercial premises.

Regarding the future development of the site, it is understood that Charter Hall seeks to develop the greater site (i.e. Southern Cross Arcade) including the subject site. In this regard it is recognised that the approach to the treatment of 64 King William Street will be a matter which is addressed in the context of all relevant planning provisions, one of which will be heritage.

**Sources Consulted:**

C. Cosgrove, 'Rethinking Modern Architecture: HASSELL's Contribution to the Transformation of Adelaide's Twentieth Century Urban Landscape', Flinders Journal of History and Politics, Vol 27, 2011.

'Heritage Information Sheets: King William Street to Peel Street', City of Adelaide Heritage Survey 2008, pp.13-17 <https://www.cityofadelaide.com.au/development/city-heritage/heritage-listings-explained/> (Accessed March 25, 2020)

State Library of South Australia, Pictorial Collection.

'Nomination Form: Sands and McDougall Building', South Australia Heritage Register. <https://www.environment.sa.gov.au/topics/heritage/sa-heritage-register/entries-confirmations> (Accessed March 25, 2020)

South Australia Heritage Database

B. Williamson, 'Iconic Buildings of Adelaide: The Colonial Mutual Life Building', ABC News, <https://www.abc.net.au/news/2016-05-17/iconic-buildings-of-adelaide-the-colonial-mutual-life-building/7420816> (Accessed Mar 27, 2020)



# 60 King William Street

Adelaide

Transport Impact Assessment



Prepared by: GTA Consultants (SA) Pty Ltd for Charter Hall

on 23/10/2020

Reference: S184900

Issue #: D

# 60 King William Street

Adelaide

## Transport Impact Assessment

Client: Charter Hall

on 23/10/2020

Reference: S184900

Issue #: D

### Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	22/05/2020	Final	Greg Pollard	Timothy Jones	Paul Froggatt	PF
B	28/05/2020	Final-amended	Greg Pollard	Timothy Jones	Paul Froggatt	PF
C	23/10/2020	Final-amended	Timothy Jones	Paul Froggatt	Paul Froggatt	PF
C	23/10/2020	Final-amended	Timothy Jones	Paul Froggatt	Paul Froggatt	

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# 1. INTRODUCTION

## 1.1. Background

A development application is to be submitted for a proposed mix-use office and retail development on land fronting 60 King William Street in Adelaide. The ground floor and basement will include a mix of retail, supermarket office entry, storage/loading facilities and a pedestrian walkway connecting James Place to King William Street. Car parking will be provided in the basement with bicycle parking on an above ground mezzanine level. The remaining upper levels will be dedicated to office space.

GTA Consultants was commissioned by Charter Hall Holdings in 2020 to undertake a transport impact assessment of the proposed development.

## 1.2. Purpose of this Report

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

1. Existing traffic and parking conditions surrounding the site
2. Proposed access arrangements for the site
3. Pedestrian, bicycle and public transport facilities around the site
4. Parking demand likely to be generated by the proposed development
5. Suitability of the proposed parking in terms of supply (quantum) and layout
6. Traffic generation characteristics of the proposed development
7. Transport impact of the development proposal on the surrounding road network.

## 1.3. References

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

- Adelaide (City) Development Plan Consolidated – 30<sup>th</sup> April 2020
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- plans for the proposed development prepared by Cox Architecture, dated 14 May 2020
- traffic and car parking surveys undertaken by GTA Consultants as referenced in the context of this report
- various technical data as referenced in this report
- an inspection of the site and its surrounds
- other documents as nominated.

## 2. EXISTING CONDITIONS

### 2.1. Subject Site

The subject site is located at 60 King William Street in the City of Adelaide. The site of approximately 4,400m<sup>2</sup> has frontages of 55m to King William Street, 64m to Clarence Place, 45m to James Place to the west, north and east sides respectively. To the south the site has frontages to adjacent buildings, the east-west section of Imperial Place and 5m to Grenfell Street at the site access.

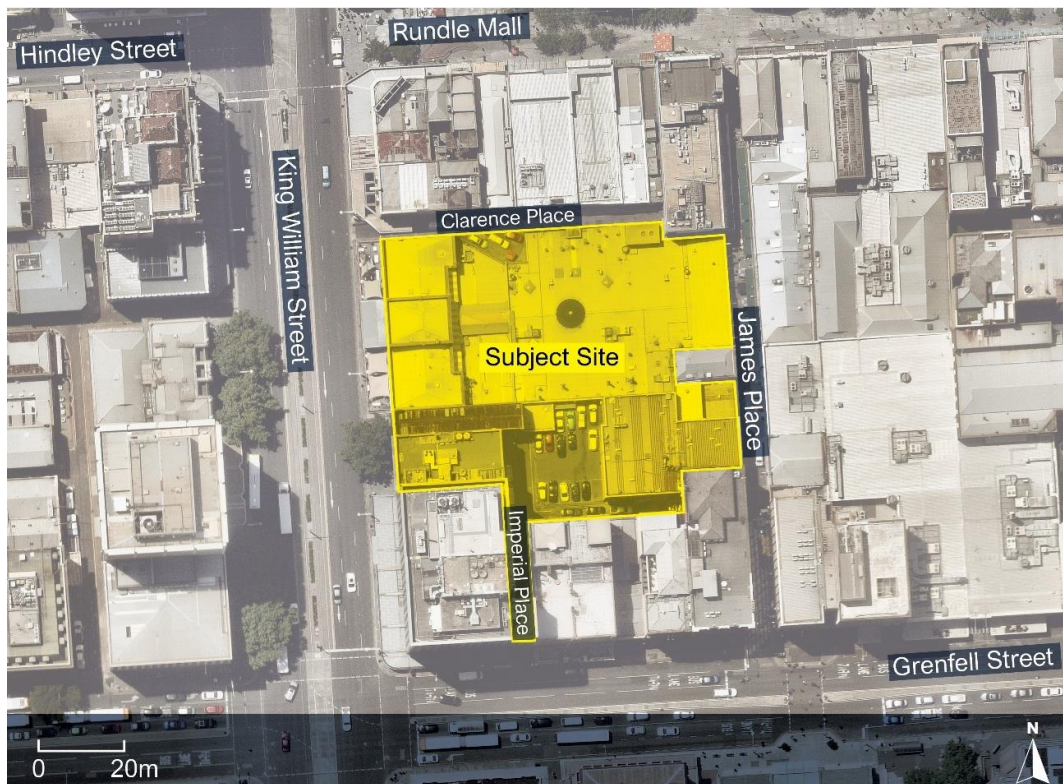
The site is located within the “Core Pedestrian Area” zone in the City of Adelaide.

The site is located within a retail/commercial land use zone and is currently occupied by a hostel on the first floor, Southern Cross Arcade on the ground floor, which includes a range of shops, food court eateries, toilets and a ‘Cheap as Chips’ store on the basement level.

The surrounding properties include a mix of retail, commercial and office uses.

The location of the subject site and the surrounding environs is shown in Figure 2.1, and the surrounding city precincts are shown in Figure 2.2.

Figure 2.1: Subject Site and its Environs

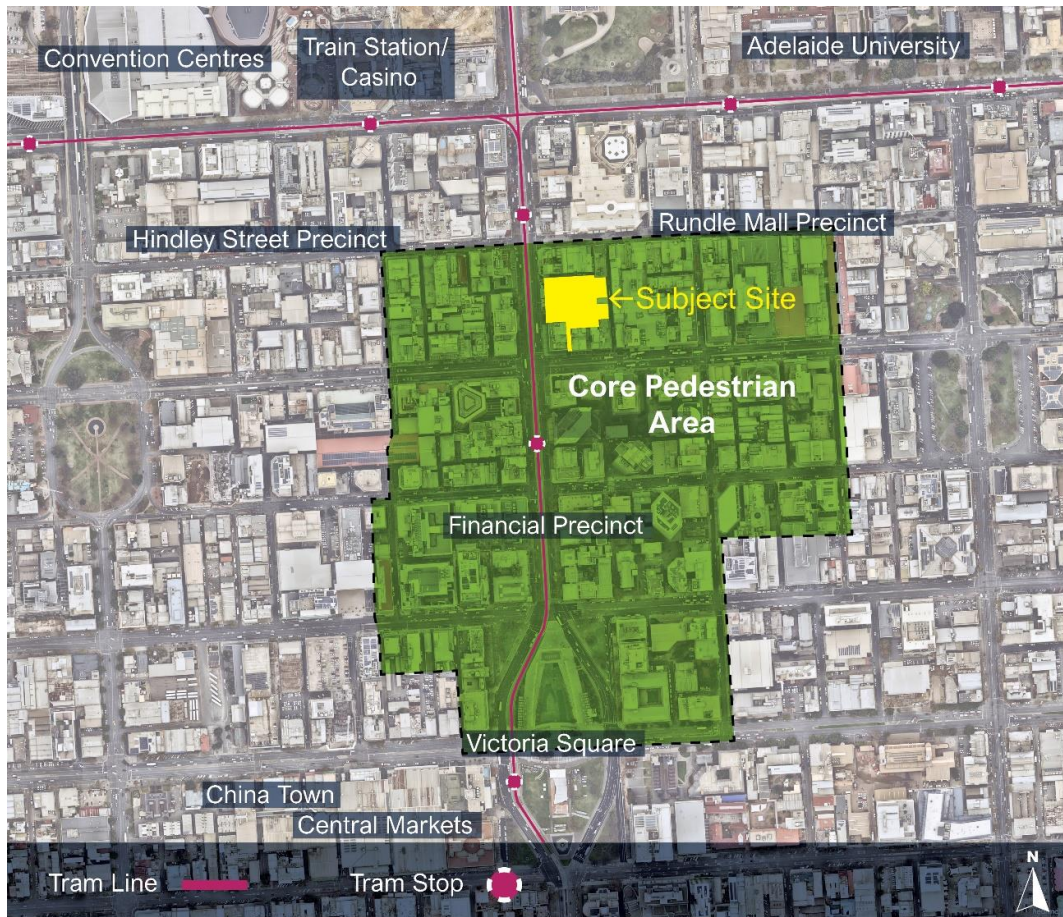


(PhotoMap courtesy of NearMap Pty Ltd)  
(Reproduced with Permission from Melway Publishing Pty Ltd)



## EXISTING CONDITIONS

Figure 2.2: Surrounding Precincts



## 2.2. Road Network

### 2.2.1. Adjoining Roads

The adjacent roads and their characteristics are set out below, including an image of each road indicating their dimensions.



## EXISTING CONDITIONS

### King William Street

King William Street is a four lane sub-arterial road aligned in a north to south direction that is owned and maintained by the City of Adelaide. There is a dual tram track that runs in the centre of the roadway with centre median tram platforms. The street has a maximum speed limit of 50km/h and has an average daily traffic volume of 23,200. Electrical tram poles/wires run along the centre median of King William Street. Street lighting poles are on both sides of King William Street. There is a 'bus zone at all times' on King William Street in front of the subject site. The typical dimensions of the roadway and footpath widths are shown in Figure 2.3.

Figure 2.3: King William Street looking north



## EXISTING CONDITIONS

### Grenfell Street

Grenfell Street is a four lane sub-arterial road aligned in an east to west direction that is owned and maintained by the City of Adelaide. The street has a maximum speed limit of 50km/h and has an average daily traffic volume of 18,400 vehicles per day. Grenfell Street has bus lanes that operate from 7am-7pm Monday to Friday on each side of the street. Street lighting is present on both sides of the street along with digital bus stops and bus shelters. The typical dimensions of the roadway and footpath widths are shown in Figure 2.4.

Figure 2.4: Grenfell Street looking west



Directly west of Imperial Place there is one on-street parallel parking bay with the following parking restrictions:

- Loading Zone: 7am-2pm Monday to Friday
- No Stopping: 2pm-7pm Monday to Friday
- 30-minute parking 7am-7pm Saturday and Sunday
- Unrestricted: At All Other Times

Directly east of Imperial Place there is one on-street parallel parking bay with the following parking restrictions:

- Loading Zone: 7am-2pm Monday to Friday
- Bus Zone: 2pm-7pm Monday to Friday
- 30-minute parking 7am-7pm Saturday and Sunday
- Unrestricted: At All Other Times

Further east of the on-street parallel parking bay that is directly east of Imperial Place is a Bus Zone at all times.

## EXISTING CONDITIONS

### James Place

James place is primarily a pedestrian mall providing direct access to a variety of shops and the City Cross and Southern Cross Arcades. The southern end of James Place operates as a no through road single access lane providing vehicle access to an underground loading area and car park primarily associated with City Cross Arcade. Vehicles exit from this area via an exit point located on Grenfell Street

The street runs in a north to south direction and is owned and maintained by the City of Adelaide. Vehicle access is via Grenfell Street with bollards installed in the middle of James Place to restrict vehicles accessing Rundle Mall. Access can be made to Rundle Mall, however, a key code is required to lower the bollards for vehicular movement. . Outdoor dining is permitted along the James Place and street lighting is installed along the building facades. The street and typical dimensions are shown in Figure 2.5.

Figure 2.5: James Place looking north

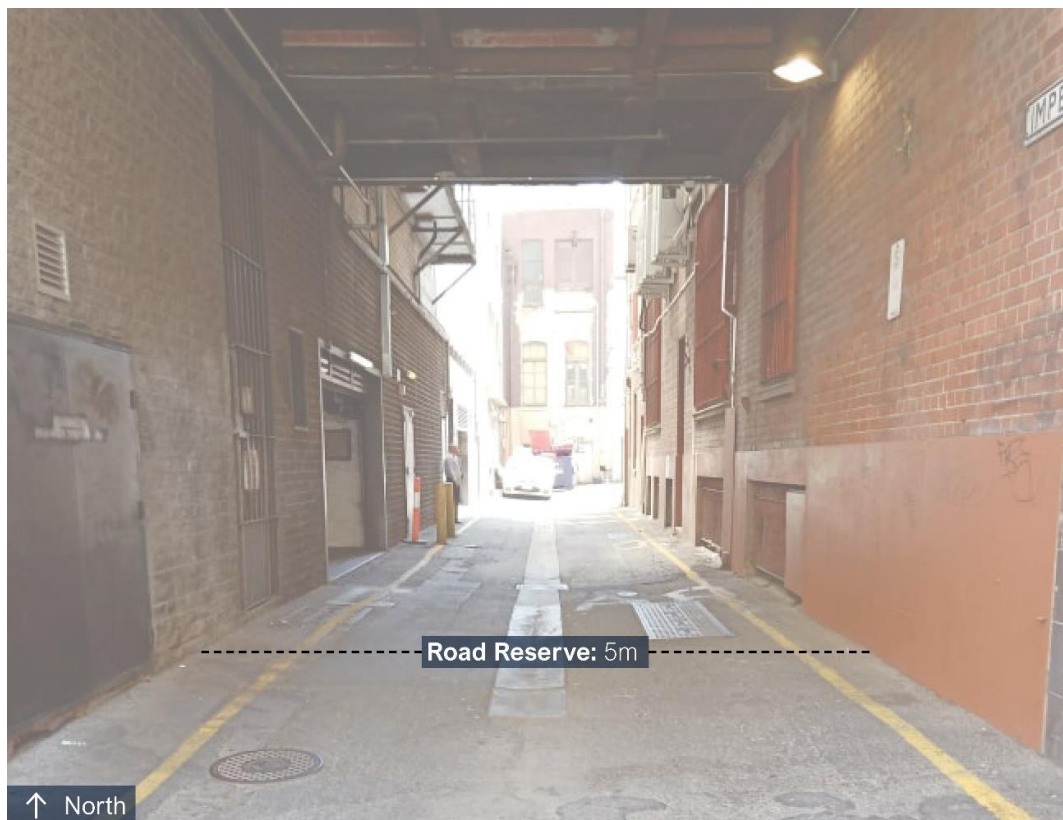


## EXISTING CONDITIONS

### Imperial Place

Imperial Place is a no through road single lane private access aligned in a north to south direction. Access to the lane is only via Grenfell Street. The road leads to a parking/loading area with approximately 16-20 formal/informal parking spaces within the area. An underground carpark for the adjoining building to the west has access from Imperial Place via a vehicle lift. The typical dimensions and the lane are shown in Figure 2.6.

Figure 2.6: Imperial Place looking north



Imperial Place also has a reduced height clearance of around 4.3 metres, limiting large vehicles from entering the site.

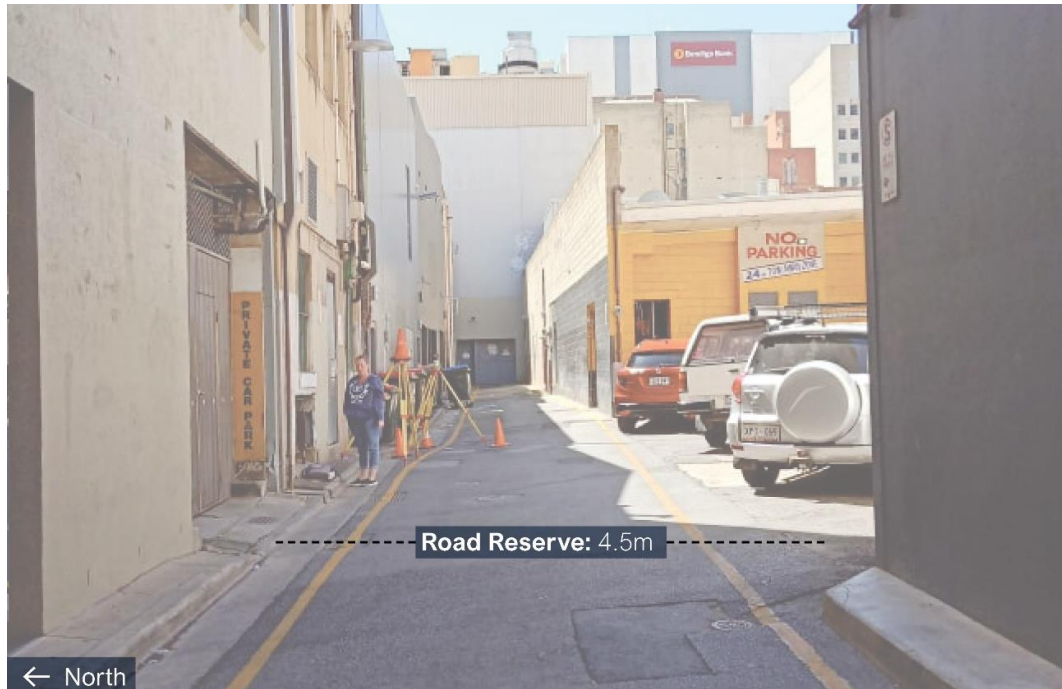


## EXISTING CONDITIONS

### Clarence Place

Clarence Place is a no through road single access lane aligned in an east to west direction that is owned by the City of Adelaide. Access is via King William Street and there is 'No Stopping' allowed along Clarence Place with three to five informal parking spaces on the southern side. The typical dimensions and the street are shown in Figure 2.7.

Figure 2.7: Clarence Place looking east



### Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- King William Street / Grenfell Street (signalised junction)
- Imperial Place / Grenfell Street (laneway access)
- Clarence Place / King William Street (laneway access)
- James Place / Grenfell Street (laneway access).

#### 2.2.2. Traffic Volumes

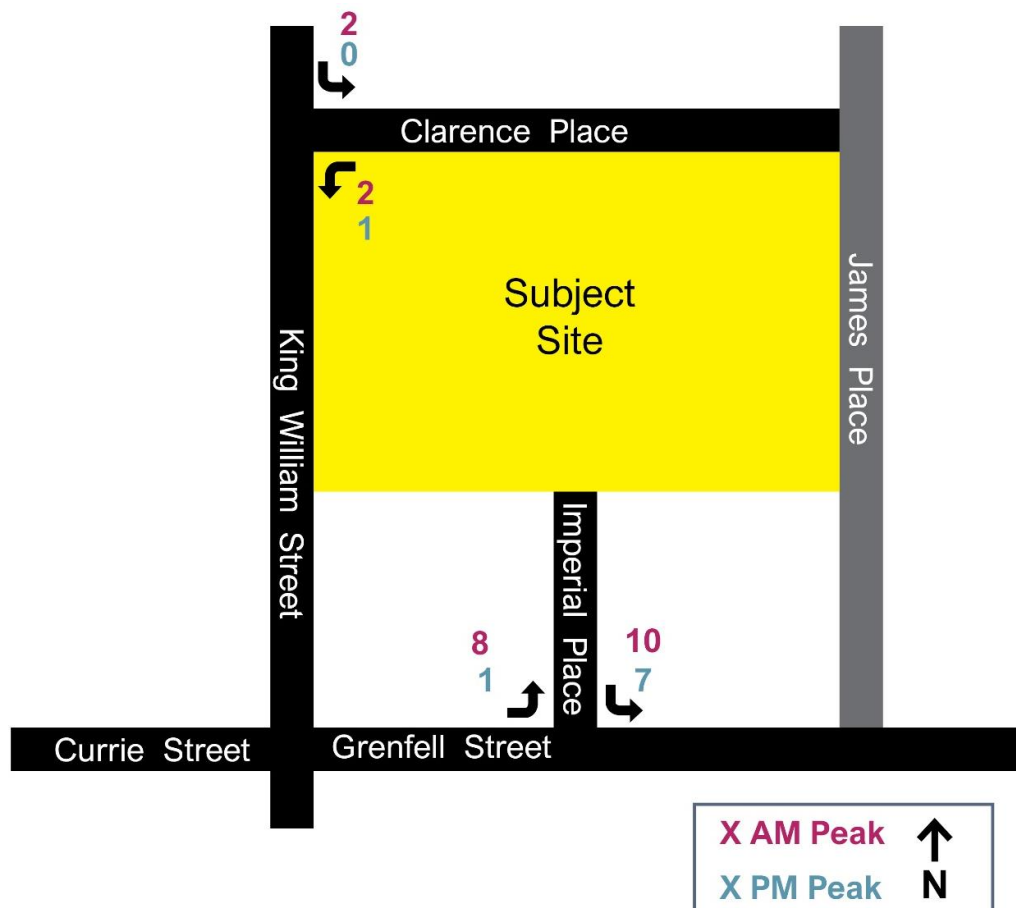
GTA Consultants undertook traffic movement counts on the current access lanes for the site on 26<sup>th</sup> February 2020 during the following peak periods:

- 7:30am - 9:00am
- 4:30pm - 6:00pm.

The AM and PM peak hour traffic volumes are shown in Figure 2.8 respectively.

## EXISTING CONDITIONS

Figure 2.8: Existing AM Peak (8am-9am) and PM Peak (4:30pm-5:30pm) Traffic Volumes



Information provided by the City of Adelaide indicates that Imperial Place generates approximately 180 movements between 6am and 8pm, of which approximately 12 are heavy vehicles.

### 2.2.3. Crash Statistics

A review of the reported crash history for the last five years (2014-2018) have been sourced from Location SA. Although the Grenfell / King William Street intersection has had 26 crashes in the past five years, there is only one crash recorded within or associated with the subject site. This crash (Hit Fixed Object) occurred on Imperial Place at night with 'Property Damage Only'.

## 2.3. Car Parking

### 2.3.1. Existing Car Parking

There are currently 16 to 20 formal/informal car parking spaces within Imperial Place and three to five informal car parking spaces in Clarence Place as shown in Figure 2.9 and Figure 2.10. There is also a loading zone in Imperial Place, but it is understood both Imperial and Clarence Place are used for informal loading where space is available and negotiated between drivers. The parking areas have been observed to be fully occupied during the day time in Imperial Place and Clarence Place.

## EXISTING CONDITIONS

Figure 2.9: Existing Car Parking in Imperial Place

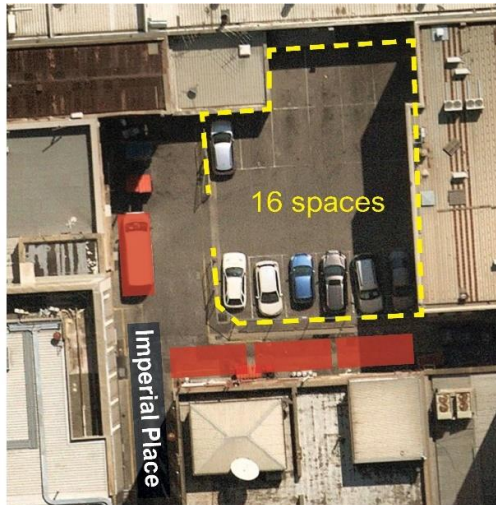
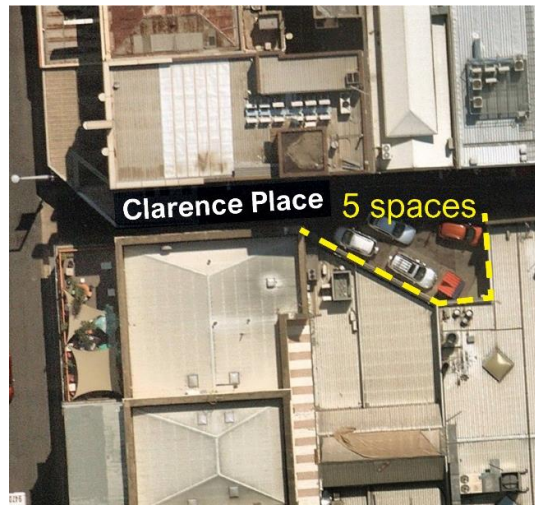


Figure 2.10: Existing Car Parking in Clarence Place



## 2.4. Sustainable Transport Infrastructure

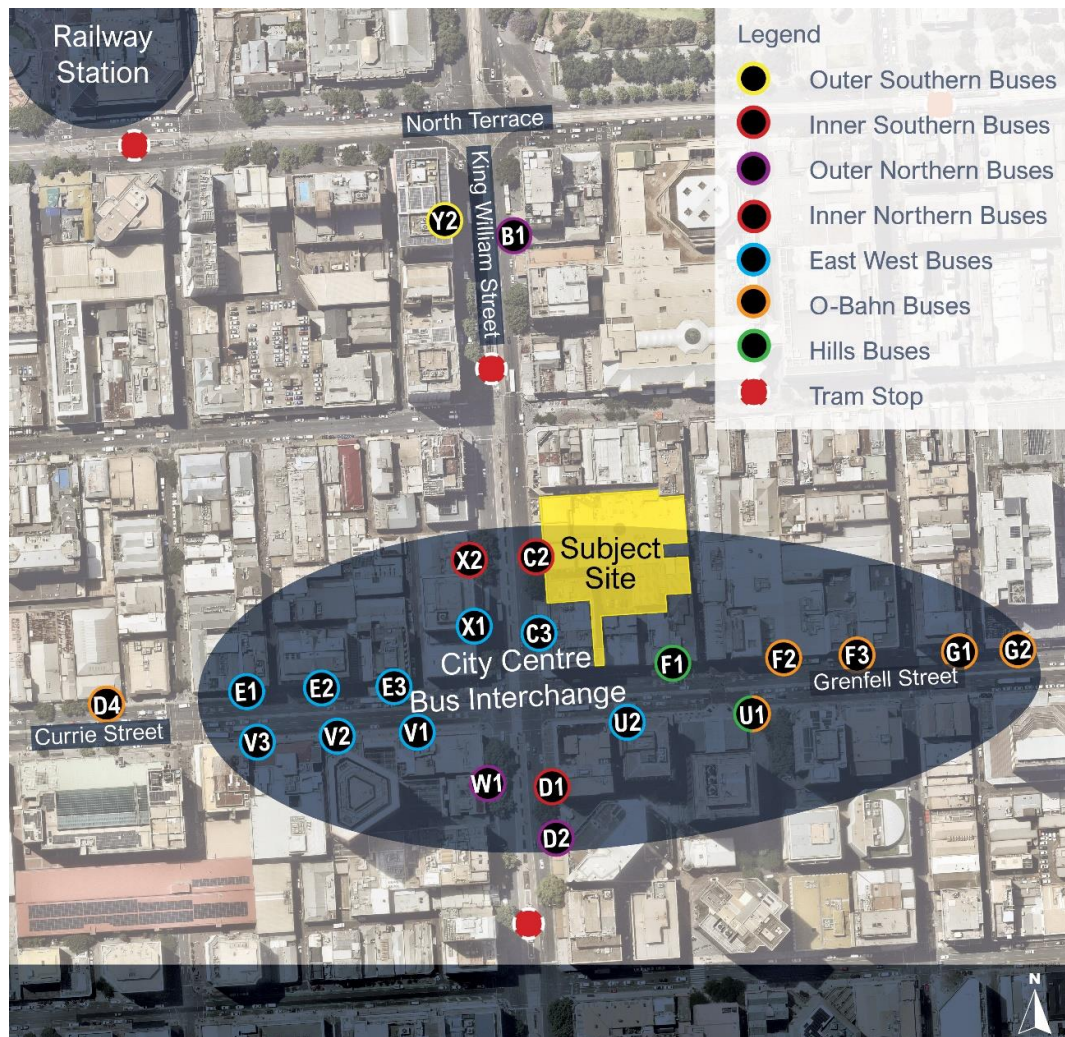
### 2.4.1. Public Transport

The subject site is within a short walk from the Adelaide Central Train Station, and the primary City Centre Bus Stops as shown in Figure 2.11. There are also two tram stops that are within an easy walking distance along King William Street.



## EXISTING CONDITIONS

Figure 2.11: Public Transport Map

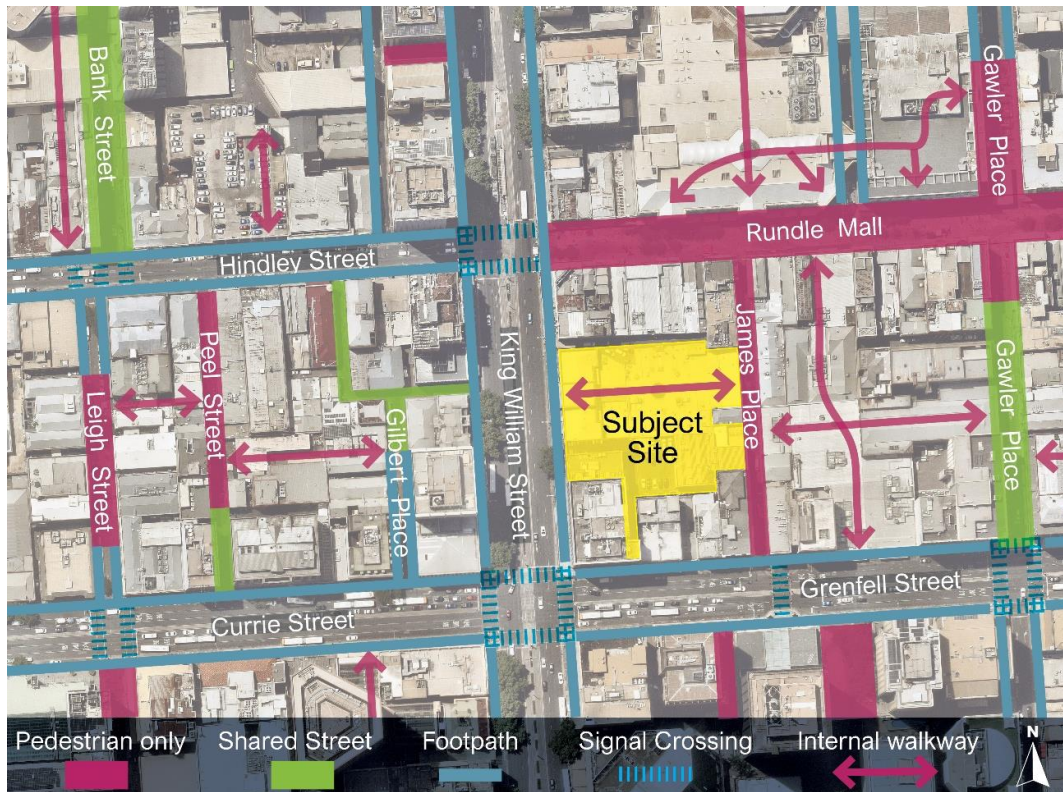


### 2.4.2. Pedestrian Infrastructure

The subject site is within the Rundle Mall Precinct with Rundle Mall less than a minute walk away. An existing internal pedestrian walkway runs through the subject site in an east to west direction connecting King William Street to James Place. Adjoining nearby internal walkways include the City Cross pedestrian link that connects James Place to Gawler Place and Rundle Mall to Grenfell Street. The footpath connectivity, signalised crossings and shared paths are shown in Figure 2.12.

## EXISTING CONDITIONS

Figure 2.12: Surrounding Pedestrian Infrastructure



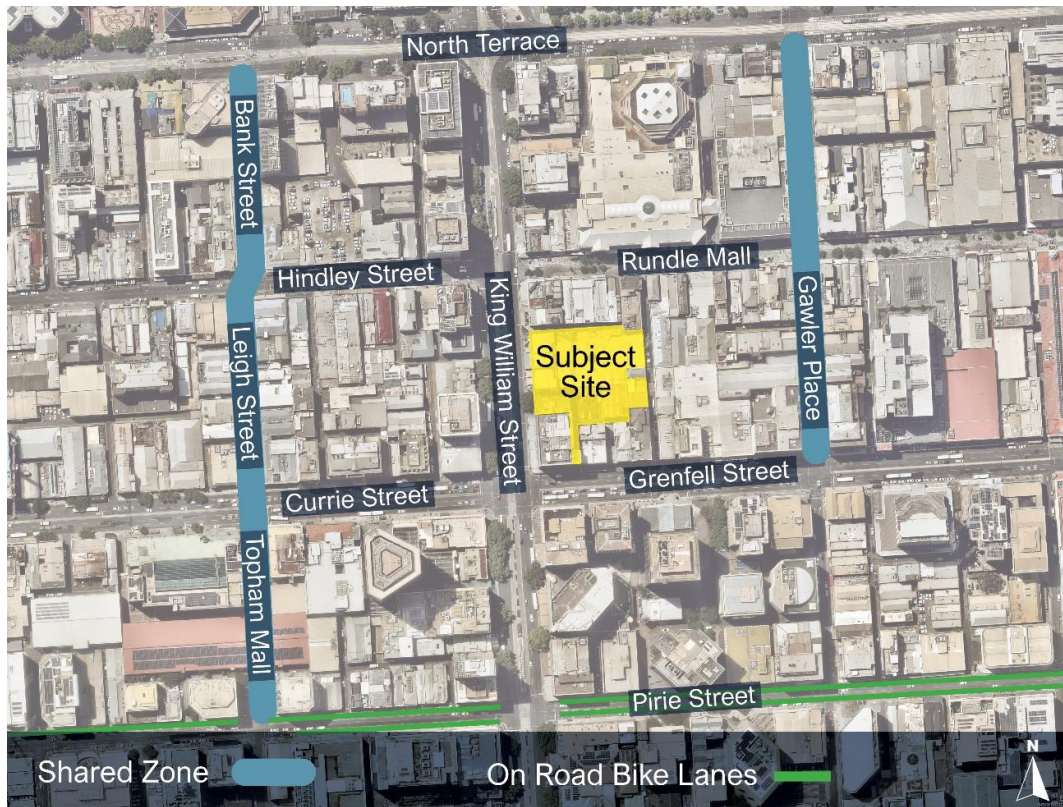
### 2.4.3. Bicycle Infrastructure

The nearest designated bicycle infrastructure is on Pirie Street and Waymouth Street with on-road bike lanes 'At All Times' as shown in Figure 2.13. However, Bank Street, Leigh Street and sections of Topham Mall and Gawler Place permit cycling through their designation as Shared Zones.



## EXISTING CONDITIONS

Figure 2.13: Surrounding Cycling Infrastructure



There are a small number of public bicycle parking hoops located on King William Street close to Clarence Place as shown in Figure 2.14. Observations on site indicate that these bicycle parks are well used with the parks full and additional bicycles observed parked nearby.

Figure 2.14: Existing Three Bicycle Hoops on King William Street

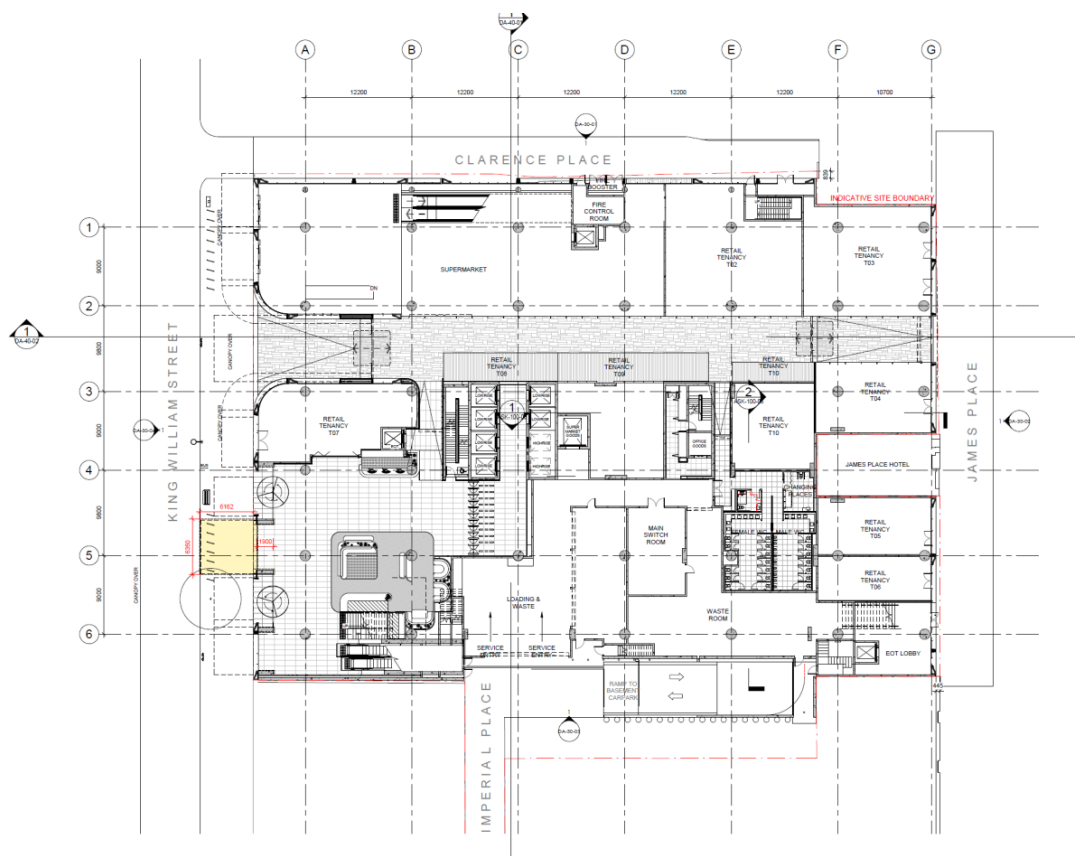


## 3. DEVELOPMENT PROPOSAL

### 3.1. Background

The proposal includes the construction of a 14 storey building with a supermarket and car parking in the basement level, retail tenancies, including additional supermarket floor space, public amenities and a pedestrian walkway on the ground level, mezzanine level bicycle parking and end of trip facilities and office floors in the upper level. The proposed ground floor plan is shown in Figure 3.1.

Figure 3.1: Proposed Ground Floor Plan

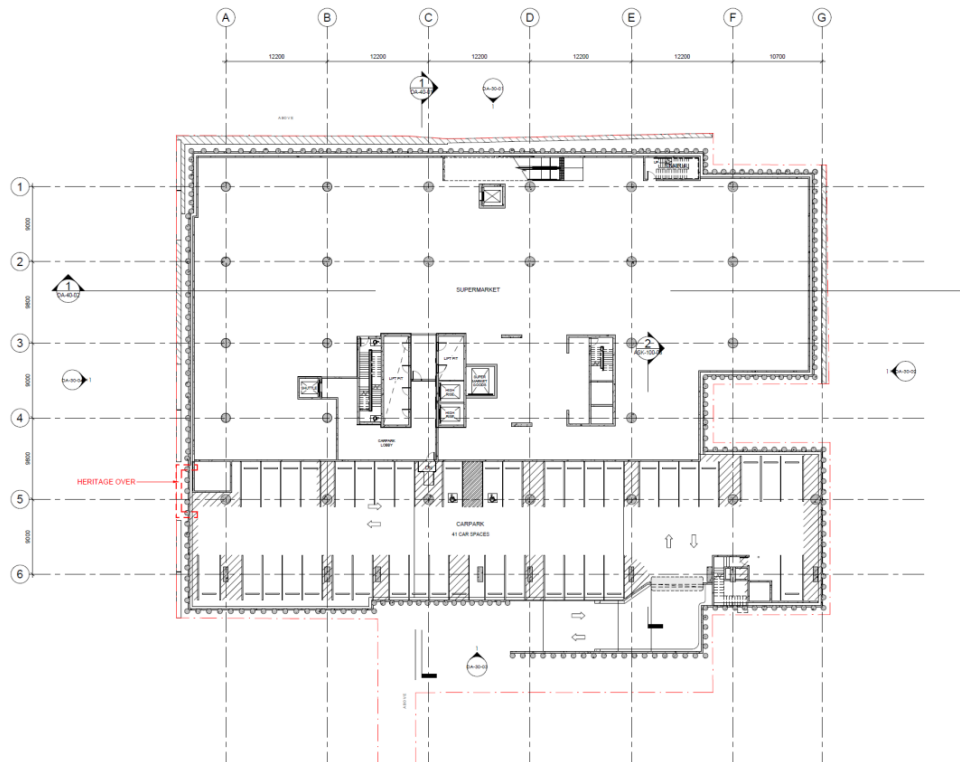


Source: Cox Architecture

### 3.2. Car Parking

A total of 40 car parking spaces (including 2 accessible spaces) are to be provided in the basement as part of the development proposal as shown in Figure 3.2.

Figure 3.2: Proposed Development Basement Car Parking



## 3.3. Vehicle Access

Access to the basement car park will be via a two-way dual lane ramp that will link to Imperial Place as shown in Figure 3.2. Vehicle control of the roller door will be activated from the top of the ramp using licence plate recognition technology. Vehicles will utilise Imperial Place to enter / exit from Grenfell Street in a forward direction. Mirrors are proposed to be added to the Imperial Place exit to Grenfell Street to assist with improving pedestrian and vehicle safety.

## 3.4. Bicycle Facilities

A total of 283 bicycle spaces will be provided in the mezzanine level end of trip facility as part of the proposal. Access to the bicycle parking will be via a separate end of trip facility lobby accessed via James Place. People riding bikes will need to dismount before entering/exiting the site via James Place, providing connections to Grenfell Street and Rundle Mall.

## 3.5. Pedestrian Facilities

As part of the proposal an internal public entry walkway will connect King William Street to James Place in an east to west direction. Entry to the basement supermarket will have two escalators and a lift. Entry to the upper office floors will front King William Street, with appropriate fire exit stairs onto Clarence Place.

### 3.6. Loading Areas

A loading and waste collection dock will be provided on the ground floor of the building with access to and from Imperial Place. All vehicles associated with the subject site will enter / exit Imperial Place in a forward direction.

## 4. CAR PARKING

### 4.1. Statutory Car Parking Requirements

Statutory requirements for the provision of car parking within the Core Pedestrian Area are set out in Clause 245 of the Adelaide (City) Development Plan. The parking supply objectives are:

*“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.”*

The on-site Car Parking Provisions in Table Adel/7 in the Adelaide (City) Development Plan do not have any minimum parking provisions for offices within the Capital City Zone in the Primary Pedestrian Area.

Table Adel/7 further identifies a requirement of 1 space in every 30 spaces to be reserved as parking for people with a disability. Therefore, the development with 40 car parking spaces has a requirement for 1.33 accessible spaces. Two (2) accessible are to be provided within the basement car park.

### 4.2. Adequacy of Parking Supply

The provision of 40 car parking spaces including two (2) accessible spaces is considered appropriate for the development given its central Adelaide CBD location with good public transport, walking, and cycling connections.

The car parking is intended to be used for a limited number of office staff and to accommodate fleet vehicles for office staff use during business hours. No on-site parking is to be provided for supermarket, retail or office customers and visitors.

### 4.3. Car Parking Layout

The parking areas have been designed based on the Australian Standard/New Zealand Standard for Off Street Car parking (AS/NZS2890.1:2004).

Key provisions include:

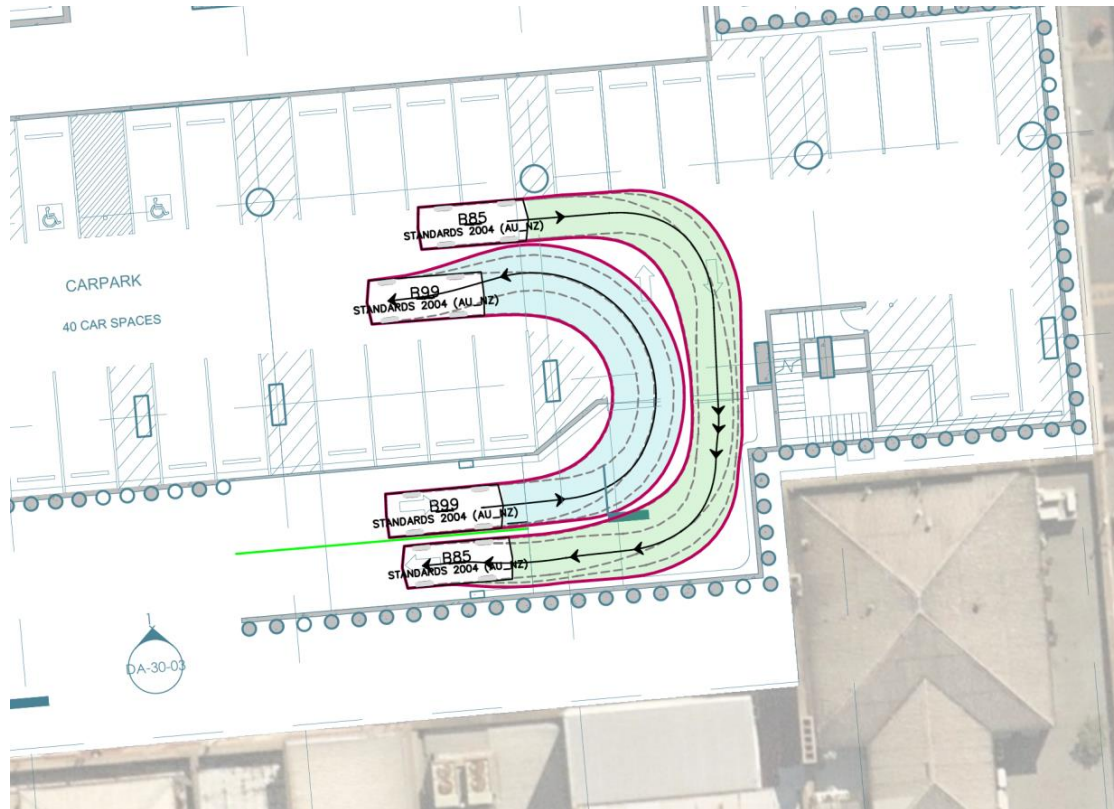
- parking spaces with a minimum width of 2.4m and length of 5.4m, meeting the requirements for a User Class 1A parking facility.
- parking areas are set within a minimum aisle width of 5.8m, which meets the requirements for a User Class 1A parking facility.
- Structural columns within the car park are located outside of the car park design envelope and with a minimum of 300mm clearance to the parking aisle.
- 1.0m blind aisle extensions are provided where required.
- No turn around provision is required, as the parking spaces are to be allocated for staff use only.
- Access ramp with transition grades of 1 in 8 at either end, with a maximum grade of 1 in 4.
- Parking spaces for people with disabilities will be a minimum 2.4m wide and 5.4m long, set within a minimum 5.8m wide aisle, with an adjacent associated shared space of the same dimensions, meeting the requirements of AS/NZS2890.6:2009.



## CAR PARKING

At the bottom of the access ramp, vehicles will enter the parking aisle. Figure 4.1 shows the simultaneous entry and exit movements for a B85 and B99 vehicle.

Figure 4.1: Car Park Entry and Exit Movements



### 4.4. Access Control

The car park will be secured through the use of a roller door at the bottom of the ramp and a boom gate towards the top of the ramp, located clear of the loading dock manoeuvring area. The boom gate and roller door will be activated through the use of licence plate recognition technology located at the top of the ramp. An intercom and emergency contact details will be available at the top of the ramp in the event of system malfunction or driver error.

## 5. SUSTAINABLE TRANSPORT INFRASTRUCTURE

### 5.1. Bicycle End of Trip Facilities

The City of Adelaide Development Plan (30 April 2020) seeks to encourage cycling as a mode of transport with the provision of secure, accessible and convenient bicycle parking spaces and associated end of trip shower and change facilities.

The standard requirement for the provision of bicycle facilities for the subject use is set out in Table 5.1.

Table 5.1: Standard Requirement for Bicycle Facilities

Use	Employee Rate	Visitor Rate
Office/ Retail Space	1 per 200sqm of GLFA	2 plus 1 per 1000 sqm of GLFA

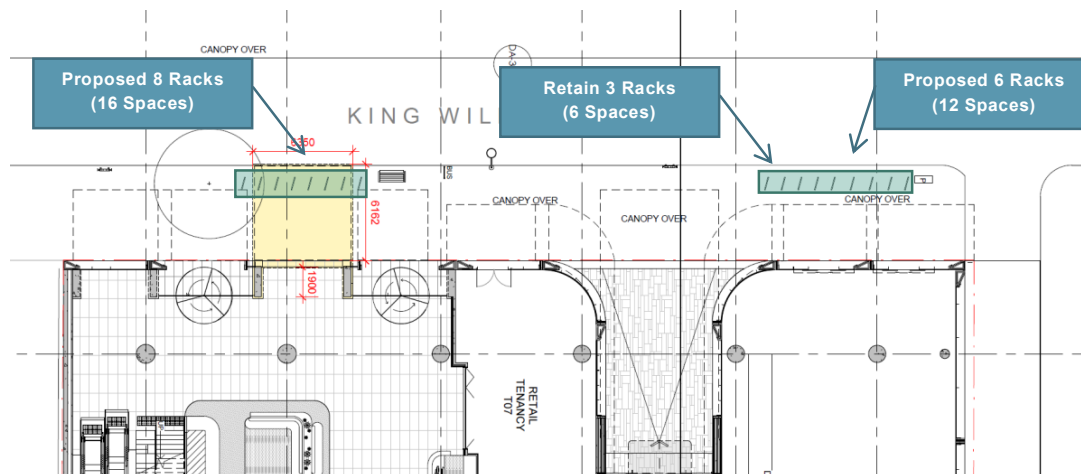
The bicycle parking spaces generated for each use are summarised in Table 5.2.

Table 5.2: Total bicycle parking spaces generated for each use

Use	GLFA	Rate	Visitor Rate	Total Employee Bicycle Spaces	Total Visitor Bicycle spaces	Total Required
Retail Space	3,803	1 per 200sqm of GLFA	2 plus 1 per 1000 sqm GLFA	19	6	25
Office	38,911			195	41	236
Total				<b>214</b>	<b>47</b>	<b>261</b>

A total of 261 bicycle parking spaces are required comprising 214 staff and 47 visitors. The proposed development is to have 283 spaces in the mezzanine level end of trip facility which is sufficient for the staff uses. Visitors would not have access to the end of trip bicycle parking area but instead use on-street bicycle racks. There are currently three bicycle racks (six spaces) on King William Street in front of the proposed development. These are planned to be retained, with an additional 14 bicycle racks proposed on King William Street (additional 28 spaces) as shown in Figure 5.1.

Figure 5.1: Proposed On-Street Bicycle Racks



The location of the indicative bike parks has been determined by the need to retain access to the bus stops on this section of King William Street, with sufficient distance from the bus stop to accommodate the front and central doors of two standard buses or one articulated bus. The location and format of this proposed visitor bicycle parking will need to be confirmed with the City of Adelaide. Implementation of the additional spaces will provide a total of 34 spaces which would be expected to accommodate most of the visitor bike parking demand.

Therefore, the proposed development of 283 end of trip bicycle spaces and 34 on-street bicycle spaces is deemed sufficient.

## 5.2. Walking Network

The proposed development will include an internal walking connection between King William Street and James Place that was previously accessible with the existing site. Walking along King William Street will have pedestrian improvements with the removal of existing verandah poles on the footpath whilst providing a new pedestrian canopy for shelter.

## 5.3. Cycling Network

As part of the proposal, it is expected cyclists will enter and exit via James Place onto either Grenfell Street or Rundle Mall. Cyclists will be required to dismount prior to entering James Place and/or Rundle Mall to access the end of trip facilities.

The surrounding road network, such as Grenfell Street and King William Street, have no bicycle infrastructure and are a main road corridors for buses/vehicles along with a high pedestrian volume on both footpaths. As a result, cycling connectivity will be limited to access the site. Rundle Mall to the north of the subject site does not allow cyclists to ride through it, requiring cyclists to dismount prior to entering/exiting the area surrounding the subject site.

The increased number of people riding bicycles to the proposed development will have limited nearby infrastructure to access the site and will either need to negotiate with vehicles/buses on the adjoining road network or with pedestrians on adjoining footpaths. Alternatively, they may walk/ride their bicycle to a certain location and then mount/dismount their bicycle. This will be particularly encouraged in James Place to provide a safe access for cyclists and maintain pedestrian safety and amenity.

## 5.4. Public Transport

As discussed in section 2.4.1 the site is within one-minute walking distance to tram stops and the closest City Centre bus stops along with approximately a five minute walk to the Adelaide Railway Station.

## 6. LOADING FACILITIES

### 6.1. Statutory Requirements

Statutory requirements for the provision of loading within the City of Adelaide are set out in Clause 242 and 248 of the Adelaide (City) Development Plan. The loading objectives are:

***"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."***

***"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)."***

Loading movement in relation to the subject site will enter and exit Imperial Place in a forward direction accessing Grenfell Street.

### 6.2. Proposed Loading Arrangements

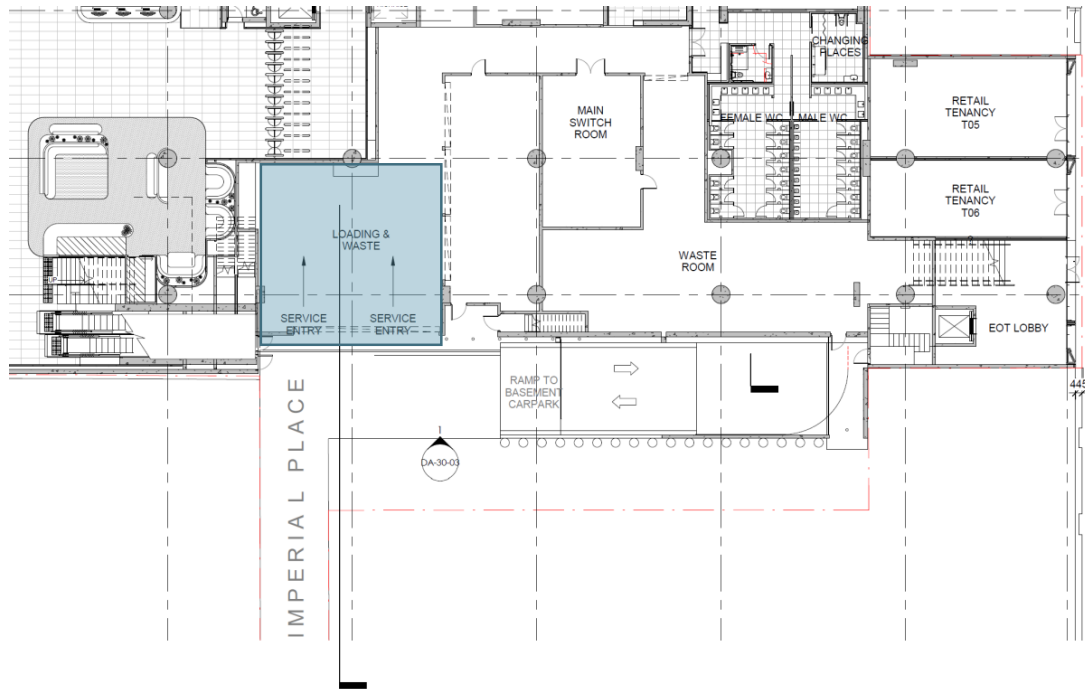
A loading area is proposed on the ground floor of the development with access from Imperial Place. Vehicles will enter the site in forward gear from Grenfell Street and will be able to turn east to reverse into the loading area or enter the loading area forwards and reverse to the east prior to turning to exit the site in forward gear. A turning area is proposed in front of and to the east of the loading area prior to the car park access ramp.

Waste collection will also take place from this loading area.

Enabling vehicles to turn round within the site and loading area will remove the need for vehicles to reverse out onto Grenfell Street as currently happens, improving the safety and amenity of Grenfell Street and pedestrians on the footpath. To further improve the safety of the Imperial Place exit, it is proposed to install mirrors on either side of the exit to Grenfell Street. Figure 6.1 shows the proposed loading area.

## LOADING FACILITIES

Figure 6.1: Proposed Loading Dock



The loading area has been designed to accommodate vehicles up to an 8.8 metre MRV in length, which are anticipated to be required for the waste collection and supermarket delivery. The loading area can accommodate simultaneous access for two 8.8m MRV vehicles, without impacting on Imperial Place. Figure 6.2 and Figure 6.3 show the proposed entry and exit arrangements for these vehicles.



## LOADING FACILITIES

Figure 6.2: Vehicle Entry to Loading Area

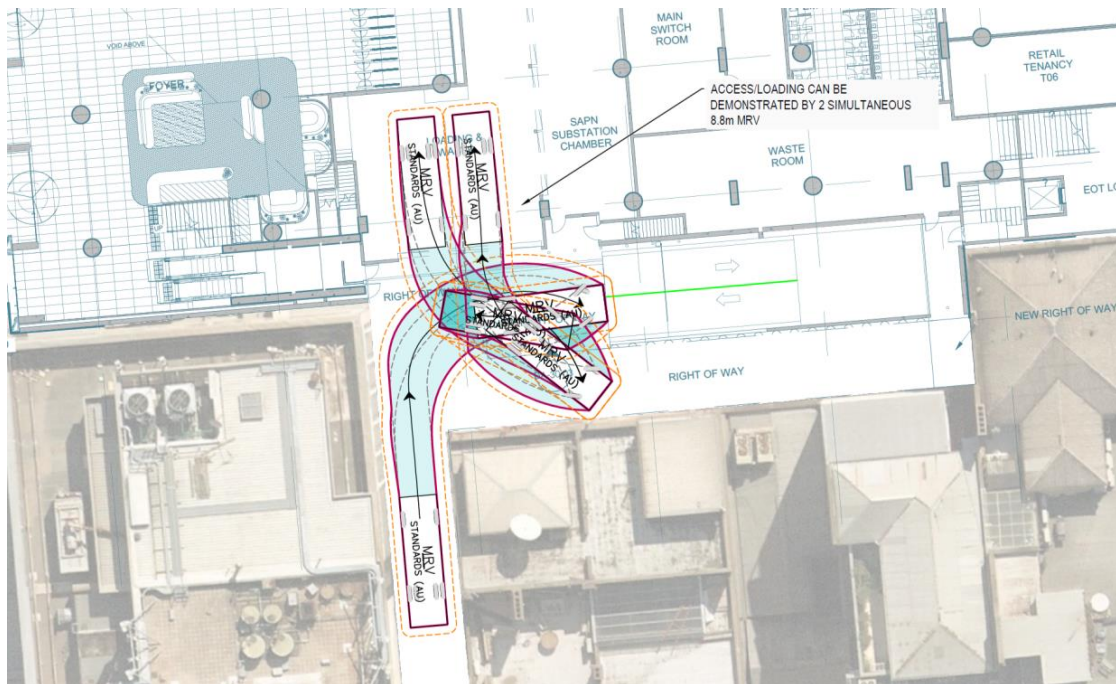
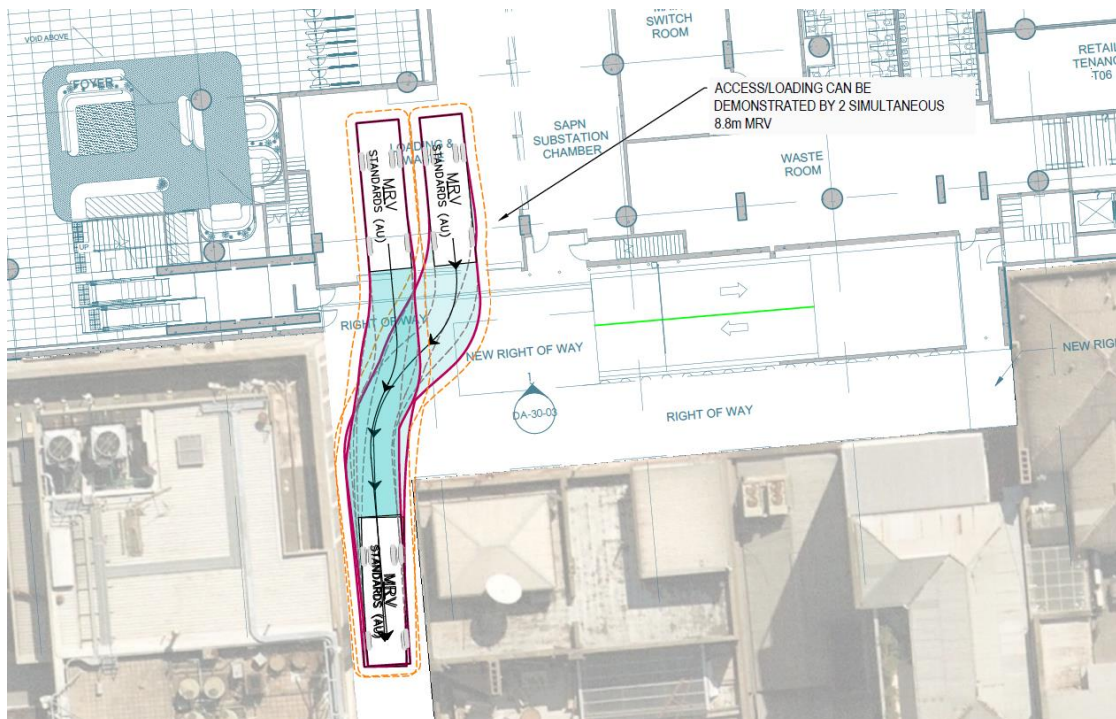


Figure 6.3: Vehicle Exit from Loading Area





## 7. TRAFFIC IMPACT ASSESSMENT

### 7.1. Traffic Generation

#### 7.1.1. Car Parking

The proposed development incorporates 40 car parking spaces. Empirically it is unlikely that these spaces will all fill within the peak hour. Lower rates are supported by a parking survey conducted by GTA at a nearby car park that previously operated on the site of the new GPO Exchange Building Place. Trip generation rates of 0.29 and 0.22 movements per space in the AM and PM peak periods were recorded. The existing site car park was of a similar size to the proposed development and was similarly used primarily as car parking to support offices.

Based on the above assumptions and rates, Table 7.1 has been prepared to show the estimated traffic generation of the proposed site.

**Table 7.1: Empirical Trip Generation Estimates**

Car Parking Spaces	Period	Trip Generation Rate	Total Vehicle Movements
40	AM Peak	0.29	<b>12</b>
	PM Peak	0.22	<b>9</b>
	Daily Trips	Average peak periods 10% of daily traffic	<b>105</b>

#### 7.1.2. Waste

Details of the waste streams and anticipated volumes have been provided by Colby Phillips Advisory (Table 5.4 of Colby Philips Report) and a general list of the waste that is expected to be generated from the building along with the frequency and time of collection are shown in Table 7.2. .

**Table 7.2: Waste Types and Collection Times / Frequency**

Waste Type	Collections Per Week	Maximum Day (Friday)	Collection Time Period	Collection During Day
General Waste	6	1	10pm-7am	
Dry Comingled Recycling	5	1	10pm-7am	
Cardboard	5	1	10pm-7am	
Office Paper	5	1	10pm-7am	
Confidential Paper	5	1	7am-6pm	Yes
Soft Plastic	3	1	10pm-7am	

Waste Type	Collections Per Week	Maximum Day (Friday)	Collection Time Period	Collection During Day
Recycled Deposit Containers	3	1	7am-6pm	Yes
Food/Garden Organics	6	1	4am-9am	Yes
Cooking Oil	2	1	7am-6pm	Yes
<b>Total</b>		<b>10</b>		

It is expected seven (7) waste types will be collected on any given weekday with Friday having every waste type collected with a total of 10 collections. Of the 10 waste types, six (6) will be collected between 10pm-7am each night. The remaining four (4) waste types would be collected during 7am-6pm except for food waste being collected between 4am-9am. The day-time waste collections will be programmed for collection outside of peak times where possible to reduce the impact on Imperial Place. Therefore, waste is not expected to impact on the peak periods and have a maximum of 10 collections per day and a daily trip generation of 20 trips. Of these trips, 4 collections leading to 8 trips would be during 7am to 6pm business hours.

## 7.1.3. Loading / Deliveries

An assumption has been made on the various types of loading / deliveries the proposed building would receive on any given weekday. The supermarket is estimated to receive one (1) trip per type of fresh produce (meat, bread, Fruit/Veg etc) and one (1) grocery trip per day. It is assumed the supermarket would operate in the same way as Coles Rundle Place store with fresh produce arriving before the AM peak period and the general grocery and other deliveries arriving throughout the day outside of the peak periods. An estimated 10 deliveries per day for the supermarket is anticipated leading to 20 trips.

The proposed retail stores are estimated to receive in the order of two (2) deliveries per week (4 trips) per tenancy. It is estimated that approximately 80% of these deliveries will occur between 7am and 6pm on any given day.

A summary of the AM, PM and daily loading and delivery trips are shown in Table 7.3

**Table 7.3: Peak and Daily loading delivery trips**

Use	AM Peak Deliveries	PM Peak Deliveries	Daily Deliveries	Daily trips	7am-6pm trips
Supermarket	2	1	10	20	16
Retail	-	-	20	40	32
<b>Total</b>	<b>2</b>	<b>1</b>	<b>30</b>	<b>60</b>	<b>48</b>

Combining all the uses of the proposed building, an estimated 60 trips are expected daily of which around 48 would be within 7am to 6pm business hours.

## 7.1.4. Imperial Place Summary

Based on the car parking spaces, loading and waste, a total of 185 daily trips are expected for the proposed building. Of these approximately 161 trips would be expected to occur during business hours of 7am to 6pm. This would be broadly consistent with the time period of the previous City of Adelaide surveys for Imperial Place that identified a total of 195 trips between 6 am and 8 pm. These surveys

would also have included trips associated with the Westpac car park and the buildings to the east of Imperial Place.

During the AM Peak it is expected 14 vehicles would enter Imperial Place and two (2) will exit as part of the proposed development. During the PM peak, it is expected 10 vehicles will exit and one (1) vehicle will enter Imperial Place. These estimates are also comparable to the current peak hour volumes using Imperial Place.

A summary of Imperial Place trips are shown in Table 7.3. The table below indicates a two way flow of 16 trips in the AM peak, and 11 trips in the PM peak.

**Table 7.4: Imperial Place Peak and Daily Trips**

Use	AM Peak		PM Peak		Daily Trips
	<i>Entering</i>	<i>Exiting</i>	<i>Entering</i>	<i>Exiting</i>	
Car Parking	12	-	-	9	105
Waste	-	-	-	-	20
Loading	2	2	1	1	60
<b>Total vehicles movements</b>	<b>14</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>185</b>
<b>Total Two-Way Flow</b>	<b>16</b>		<b>11</b>		<b>185</b>

## 7.1.5. Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development will remain as the existing site with all traffic moving through Imperial Place and arriving / departing from Grenfell Street on a left-in and left-out basis. No vehicular traffic associated with the site is anticipated to use Clarence Place, which will remove all of the previous trips recorded for Clarence Place.

## 7.2. Traffic Impact

Against existing traffic volumes in the vicinity of the site, the limited additional traffic generated by the proposed development could not be expected to compromise the safety or function of the surrounding road network. Furthermore, all traffic will now be able to enter and exit Imperial Place in forward gear, improving the safety of the access and pedestrians on the adjoining Grenfell Street footpath.

As part of the proposed development, there will be no vehicles entering / exiting Clarence Place onto King William Street which typically would have vehicles exiting in a reverse motion across the footpath and onto the roadway.

In order to manage the additional movements within the site, traffic control measures will be implemented to avoid the risk of conflicting movements within the single lane section of Imperial Place. Where practical, priority will be given to entering vehicles to minimise the risk of any queuing or waiting traffic impacting Grenfell Street footpath and roadway.

## 8. CONCLUSION

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

1. The proposed development site is located within Adelaide CBD within the core pedestrian area and close to the primary retail and commercial activity within the CBD.
2. Due to the location within Adelaide CBD, the site does not have a statutory parking requirement.
3. The site is located in close proximity to the tram line and bus stops on Grenfell Street and King William Street and is within an easy walking distance of Adelaide Railway Station. Rundle Mall is adjacent to the site as are many other city centre retail and commercial activities.
4. The proposed supply of 40 spaces is considered to be appropriate having consideration to the site location and proposed operation of the site and represents only a small increase from the current on-site parking provision. Use of the car parks will be restricted to a limited number of office staff and fleet vehicles.
5. The proposed parking layout is consistent with the dimensional requirements as set out in the Municipality Planning Scheme and/or Australian/New Zealand Standards for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009).
6. The provision for bicycle parking and end of trip facilities will be in a mezzanine level with access to James Place with a staircase and bicycle ramp.
7. A total of 283 bicycle spaces are deemed sufficient exceeding the development plan requirement of 214 staff bicycle parking spaces.
8. A location for a total of 34 on-street bicycle spaces is proposed on King William Street which is expected to accommodate most of the visitor bicycle parking demand and will be subject to agreement with the City of Adelaide.
9. The provision of loading accessing the ground level to a loading dock, with all vehicles able to enter and exit Imperial Place in a forward direction on Grenfell Street. The access to Grenfell Street will also be provided with mirrors to assist vehicle and pedestrian safety. The loading area has been designed to accommodate the largest vehicle expected to access the site for waste collection purposes.
10. The site is expected to generate between 16 and 11 vehicle movements in the AM and PM peak hour respectively and 185 vehicles daily.
11. There is adequate capacity in the surrounding road network to cater for the traffic generated by the proposed development.
12. There will be no vehicles entering / exiting Clarence Place as part of the development.



Charter hall  
**60 King William St**  
Pedestrian Planning Assessment

201026 60KW Pedestrian Planning Assessment Final 3

Final 3 | 26 October 2020

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 276464

Arup Australia Pty Ltd ABN 76 625 912 665

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**ARUP**

# Document verification

ARUP

<b>Job title</b>		60 King William St		<b>Job number</b> 276464	
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<b>Document ref</b>		201026 60KW Pedestrian Planning Assessment Final 3			
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Draft 1	15 May 2020	<b>Description</b>	First draft		
			Prepared by	Checked by	Approved by
		Name	Michael Rumbold	Manuel Lawrence	Michael Rumbold
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			Prepared by	Checked by	Approved by
		Name	Michael Rumbold	Manuel Lawrence	Michael Rumbold
		Signature			
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# 1 Introduction

## 1.1 Project Summary

60 King William Street is a 13-storey office building development on King William Street. It will house a mix of tenants as well as ground floor retail. The ground floor is made up of two areas, one provides access to the commercial tenancies and another for access to the retail arcade with a pedestrian connection between the two, as shown in Figure 1.

The building has three entrances, two on King William Street (one into the arcade, and one to the commercial lobby) as well as one at the rear on James Place. The retail arcade provides for public thoroughfare in the east-west direction. The ground floor commercial lobby provides for lift access to the low rise floors which is secured with speedstiles. The high rise floors are accessed via the sky lobby on level one, which is accessed via a staircase and two escalators from the ground level.

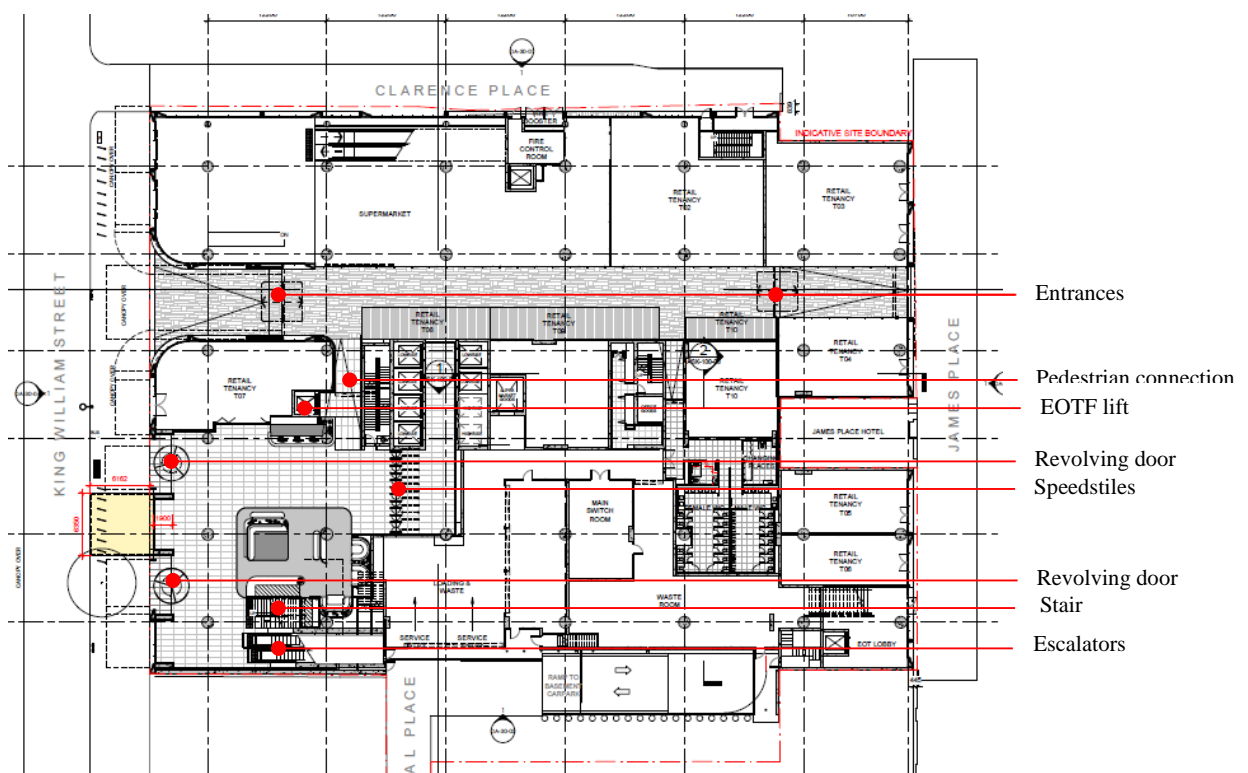


Figure 1 - Ground Floor GA Plan (dated 07/05/20)

## 1.2 Objective

The objective of this pedestrian planning assessment is to provide confidence that the design supports a positive user experience for staff and visitors in the publicly accessible areas. Preliminary outcomes of the assessment have informed some design changes, and this assessment outlines some areas for future consideration.

### 1.3 Scope

The scope of the assessment includes the publicly accessible areas on the ground floor, basement and sky lobby. Specifically, the assessment addresses:

- Entry capacity (sliding doors and revolving doors)
- Vertical transport capacity (stairs and escalators, but not lifts)
- Number of speedstiles
- Size of the connection between the retail arcade and commercial lobby
- Latent capacity of the arcade for retail movements or public thoroughfares

### 1.4 Approach

The approach is Static assessment that quantitatively assesses the capacity of the key elements listed in the scope. This is based on an assessment of the AM peak (largest one-way movement) and the Midday peak (largest bidirectional movement). This assessment has the following key steps:

- Kaleidoscope assessment of transport mode share and estimated approach direction to the building to inform door choice and route through the building
- Demand profile estimation. Using the building population and a profile of arrivals/departures from another building we estimate the minute by minute demand in the two peak periods
- The demand is then compared to the capacity of each element to confirm the suitability of the design

## 2 Inputs and Assumptions

---

### 2.1 Building Population

The NLA and assumed population for the various sections of the building are outlined in Table 1. It is assumed that the population density is 1:10, that is 1 person per 10m<sup>2</sup> of NLA. The access cation is also provided to indicate which lobby provides access to the relevant sections of the building. This shows a total of 39,700m<sup>2</sup> NLA and 3,970 staff, of which 2,850 access their floors via lifts on the ground level and 1,120 staff accessing their floors via the Sky Lobby on level 1, see Table 1.

Table 1: Building population

Building Section	Floor(s)	NLA	Population	Access Location
Boutique	1	1,200m <sup>2</sup>	120	Sky Lobby
Low Rise	2-10	28,500m <sup>2</sup>	2,850	Ground
High Rise	11-13	10,000m <sup>2</sup>	1,000	Sky Lobby
<b>Total</b>		<b>39,700m<sup>2</sup></b>	<b>3,970</b>	
Subtotal – Ground Access			2,850	
Subtotal – Sky lobby access			1,120	

With respect to building access the building also includes:

- 40 car parking spaces
- 290 bike racks and lockers in the end of trip facilities
- It is assumed that these are fully utilised

## 2.2 Arrival and Departure profiles

Arup has a data set of arrival and departure profiles for a commercial building in a CBD environment. This profile is shown in Figure 2 and Figure 3 and is an estimate of the potential rate of arrivals/departures to the 60 King William St building when scaled to the appropriate building population.

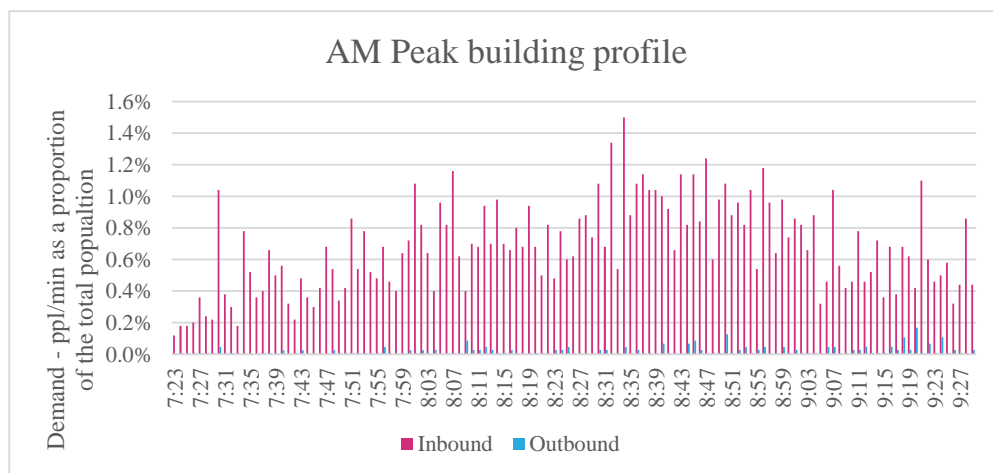


Figure 2 - AM Peak building profile

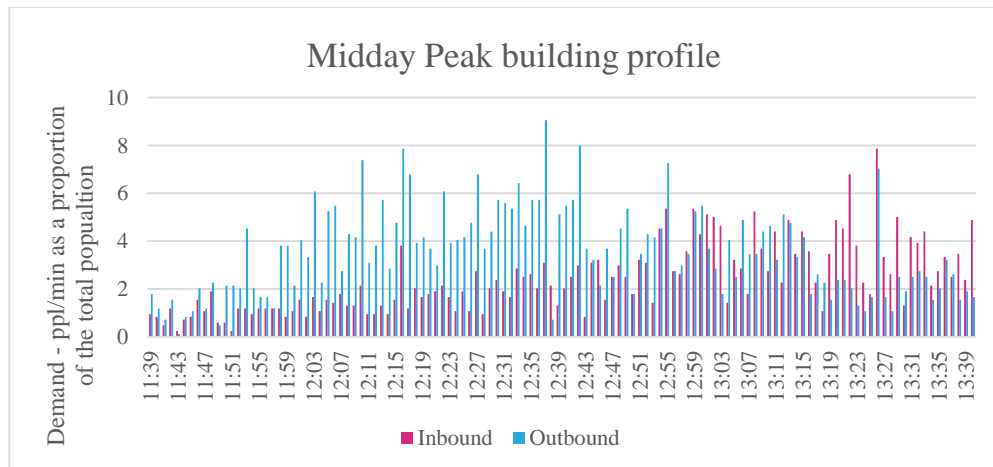


Figure 3 - Midday Peak building profile

## 2.3 Criteria of Assessment and Element Capacities

The static assessment of the various elements of the design assumed the following capacities. These are based on observations of actual use in office building environments (rather than manufacturer specifications).

- 3.6m revolving door: 35ppl/min per direction
- Speedstile (operating uni-directionally): 20ppl/min
- Walkway or sliding door opening: 33ppl/m/min
- Stair: 23ppl/m/min
- Escalator: 60ppl/min

## 2.4 Journey to Work Census Data

2016 Journey to work census data has been used to inform the Kaleidoscope assessment of approach direction to the building. The mode share observed from this data set (for the transport zone that encapsulates the 60 King William St site) is outlined in Table 2. It is assumed that the mode share for staff at 60 King William Street will generally align with the 2016 census data.

Table 2: Mode share assumption

Mode	Census mode share
Train	13%
Tram	5%
Bus	33%
Car	41%
Walk	4%
Bicycle	2%
Motorbike	1%
Other	1%

## 3 Assessment

---

### 3.1 Kaleidoscope Approach Origins (AM peak)

The Kaleidoscope tool uses the 2016 census data, specifically the Journey to Work data to assess the potential locations of arrival for staff into the building. This is needed to estimate the use of the various building entrances and internal spaces. The journey to work data (from home) it is used to inform the AM peak movements. A separate analysis has been undertaken for Midday movements.

The tool assesses each mode separately and allocates the proportion of staff in each mode to one or more adjacent stops/car parks/directions based on their proximity and quantity of routes. Figure 4 provides a summary of the arrival directions by mode. In summary it shows an arrival split of:

- 1,725 (43%) from the north on King William St
- 1,722 (43%) from the south on King William St
- 367 (9%) from the east on James Place
- 136 (3%) from the car park/EOTF shuttle lift inside the building

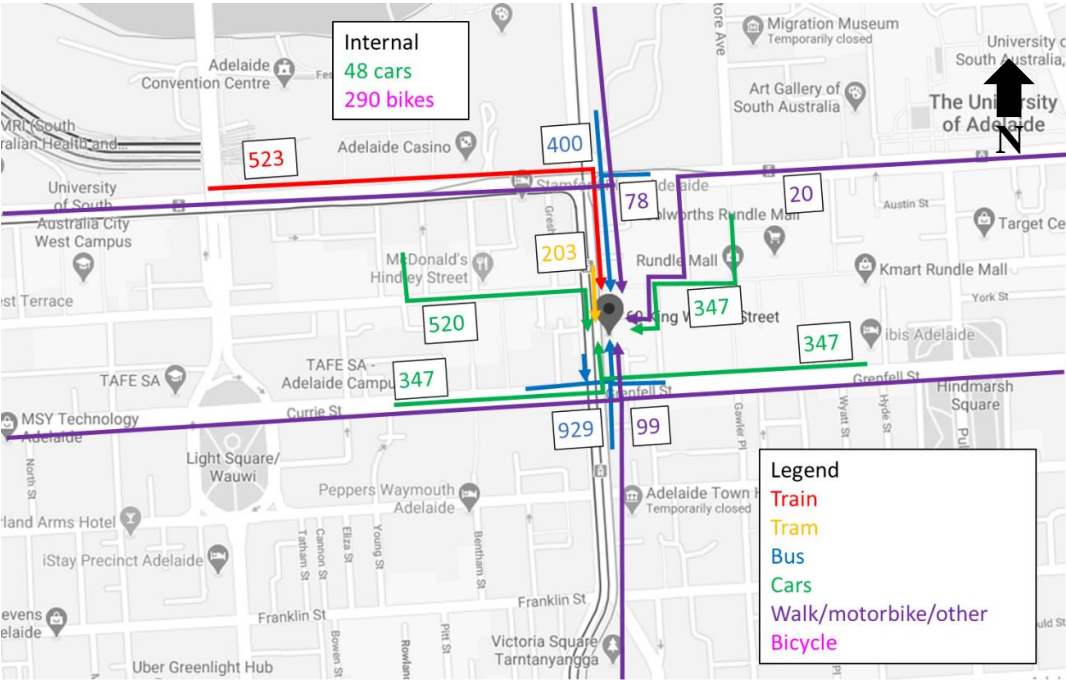


Figure 4 - AM Peak estimated arrival locations using Kaleidoscope tool

### 3.2 Midday movements

In the midday peak, staff movements are generally towards the surrounding retail opportunities, particularly food and beverage but also general retail. The building is located within the major retail strip of Hindley Street and Rundle mall. Analysis of the relative footprint areas of the zones that would use each building entry are shown in Figure 5.

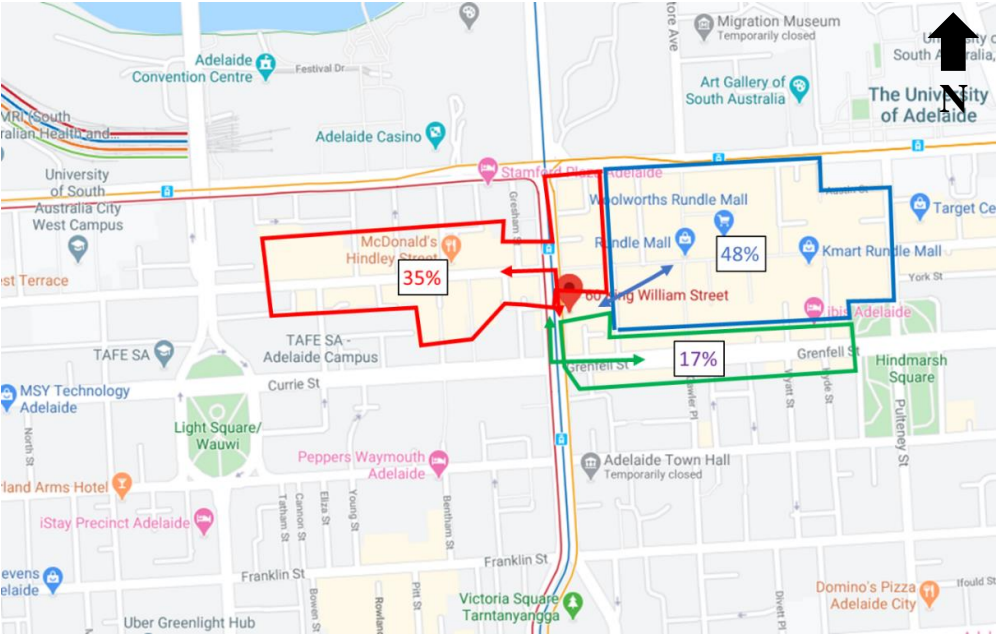


Figure 5 - Midday peak estimated movement directions



### 3.3 Movement Through the Foyer

Depending on the direction of arrival and the lift core that staff are targeting (ground or sky lobby) there are different routes through the building. It is assumed that staff take the shortest route to their destination. Figure 6 and Figure 7 identify the shortest route to each lobby from each entrance. These routes, the precinct origins/destinations and the building population are used to identify the demand at various elements within the design.

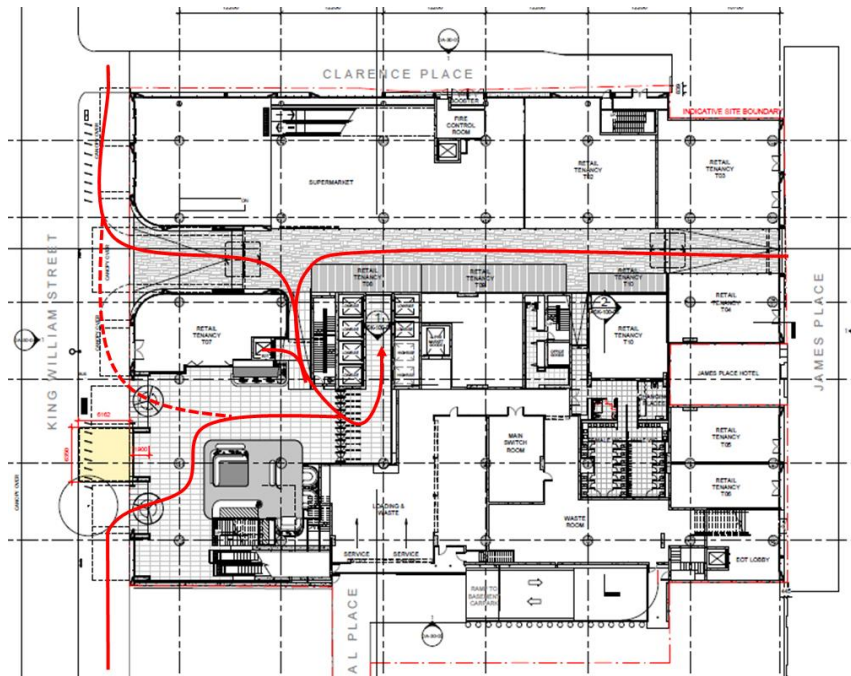


Figure 6 - Routes to ground floor lift lobby

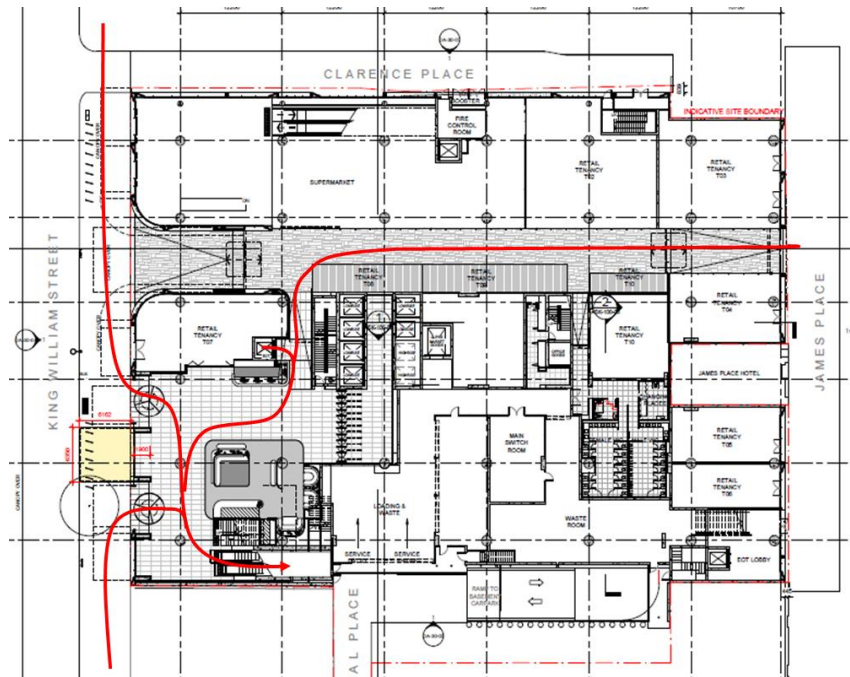


Figure 7 - Routes to sky lobby

### 3.4 Capacity Assessment

The capacity assessment compares the demand at the various elements of the design against their capacity to confirm that the design is adequate to support the estimated demand. Table 3 provides a summary of the capacity assessment, comparing the capacity of each design element against the estimated peak minute demand. For the purpose of this assessment the maximum demand has been assumed as the design case. It is noted that the maximum demand in the profiles is a single spike that is not observed consistently but given that the design satisfies the requirements for maximum demand, this has been provided. The results show that all design elements have adequate capacity to support the peak demand, and in most cases there is substantial spare capacity. This spare capacity supports potential changes to the precinct splits or higher spikes in the movement profiles; and provides a level of resilience for mechanical failure (eg. an out of service revolving door or speedstile).

Table 3: Capacity Assessment

Design Element	Quantity	Capacity (ppl/min)		AM Demand		Midday Demand	
		In	Out	In	Out	In	Out
KW Retail door	4m	132		19		25	
KW Revolving doors	2 x 3.6m	70	70	26	3	9	10
James Pl door	3.6m	119		6		48	
Retail connection	3m	99		25		72	
VT to Sky Lobby	1.8m stair + 2 esc	81	81	17	2	15	17
Inbound speedstiles*	3no.	60	-	60		52	

\*see section below for detailed analysis, including outbound direction

### 3.4.1 Speedstile assessment

The assessment of the speedstiles is slightly more complicated due to the variable operations available and ability to match capacity to the dominant direction. 11 speedstiles are required, including at least 1 wide speedstile. For the purpose of this analysis the wide speedstile is excluded, which also represents a level of redundancy in the assessment.

The inbound demand for the speedstiles is driven by the arrival rate into the building, as defined in the movement profiles. Whereas the outbound demand for the speedstiles is driven by the potential group of people arriving in a short period of time from one or more lifts. Table 3 shows that the maximum inbound demand is estimated to be 60ppl/min and 52ppl/min in the AM and Midday peaks respectively. This demand level requires three inbound speedstiles during both peak periods. This leaves seven speedstiles available to support the outbound movements.

Seven outbound speedstiles provides capacity of 140ppl/minute or 2.3ppl/second. Our observations at existing lifts reveal that the flow rate of people walking through the lift door is approximately 1.1ppl/second. Therefore, the provision of 7 outbound speedstiles (2.3ppl/sec capacity) can comfortably support the concurrent egress of two lifts (2.2ppl/sec demand) without generating a queue.

Given that there are only 5 lifts in the bank, the arrival of more than two lifts concurrently is unlikely. However, if a third lift was to arrive, and all lifts had 12 people in them, the maximum queue expected is 2 people per speedstile (assuming even distribution of queue) which can be accommodated within the queue zone without impacting the lift lobby.

### 3.4.2 Movements through the arcade

The retail arcade provides east-west connectivity between King William Street and James Place. The static assessment above has been used to estimate the demand through the arcade that is solely based on the commercial tenancies staff. The focus of this assessment is on the Midday peak when demand through the arcade is at its highest. The following has been estimated:

- The maximum demand from commercial tenancy staff is estimated to be 48ppl/min (2-way)
- This level of demand requires 1.4m of circulation width through the arcade based on the capacities outlined in section 2.3.

Movement through the arcade in addition to the commercial tenancy staff will need additional width on top of the 1.4m noted. The GA plans do not currently show the furniture layout. In lieu of that, the current constraints on capacity are the sliding doors at King William Street (4m) and James place (3.6m). The spare capacity is constrained at the James Place door and is 2.2m, representing a capacity of 73ppl/min. This equates to a capacity of over 4,000 people per hour.

## 4 Conclusions

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The assessment of the design has shown:

- The capacities of the doors, circulation areas, escalators, stairs and speedstiles are adequate to support the estimated demand.
- In most cases the capacity substantially exceeds the demand and therefore provides resilience to changes in behaviours compared to the assumptions and/or temporary failure/outage of elements such as revolving doors and speedstiles.
- The retail arcade has spare capacity for over 4,000 people per hour (on top of the commercial tenancy staff) to be used as a thoroughfare, subject to the furniture design.

## 60 King William Street

Adelaide

Town Planning Phase – Acoustic Report



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**CLIENT**

Charter Hall



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**ARCHITECT**

Cox












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**PROJECT MANAGER**

RCP



## Amendment Register

Rev. No	Section & Page No.	Issue/Amendment	Author	Project Engineer	Checked	Date
A	-	Preliminary Issue	JC	JC	JC	28/02/2020
						
B	-	First Revision	JC	JC	JC	30/06/2020
						
C	-	Second Revision	SS	JC	JC	23/10/2020
						



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## EXECUTIVE SUMMARY

Floth Pty Ltd (Floth) has been commissioned by Charter Hall to provide Acoustic Engineering Services for the proposed mixed-use development at 60 King William Street, Adelaide.

This report presents the noise impact assessment for the proposed development as part of a Town Planning submission to the local authority, City of Adelaide Council. The noise impact assessment has been prepared in accordance with the Adelaide (City) Development Plan and the South Australian Environmental Protection (Noise) Policy.

The noise impacts that have been considered as part of this assessment are as follows:

- Noise intrusion from external sources onto the proposed development;
- Noise emission from the typical retail and commercial operations, including:
  - Mechanical plant and equipment
  - Loading / unloading, compacting and delivery noise, and
  - Car-parking noise.

Other noise sources associated with the proposed development are expected to be less significant compared with those listed above. The dominant noise emission sources from the proposed development are expected to be the mechanical plant and equipment. The details of the mechanical plant are not yet known, however detailed noise predictions shall be conducted during the detailed design phases of the project to ensure that the noise emissions satisfy the noise criteria derived in this report.

The noise intrusion assessment showed that the dominant noise source affecting the proposed development is road traffic noise, as expected. Preliminary building envelope requirements have been determined within this report.

In conclusion, the noise impact assessment has shown that compliance with the relevant noise criteria can be achieved, and that adverse noise impacts on the surrounding NSRs can be minimised through standard design practices.

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## 1. INTRODUCTION

Charter Hall wish to develop the site at 60 King William Street, Adelaide into a mixed-use development with approximately 40,000 m<sup>2</sup> of Nett Lettable Area (NLA) across 14-storeys. There is a supermarket proposed across Basement and Ground levels as well as an End-of-Trip Facility (EOTF) located on Level 1. The proposed occupancy / uses in the preliminary scheme are presented in Table 1.

**Table 1: Proposed Mixed-Use Scheme**

LEVEL	TYPE OF OCCUPANCY / USE
Basement 1	Supermarket, Car Park
Ground	Retail, Office Entry
Mezzanine	EOT Bike Store
Level 1	Sky Lobby, Boutique Office, Office Hub, ETOF
Level 2 – 13	Commercial Office
Level 14	Commercial Office, Plant

Floth Pty Ltd (Floth) has been commissioned by Charter Hall to provide acoustic engineering services for the project. This report presents the noise impact assessment for the proposed development as part of the Development Application to the local authority, City of Adelaide. The noise impact assessment has been prepared in accordance with the Adelaide (City) Development Plan and the South Australian Environmental Protection (Noise) Policy.

The noise impacts that have been considered as part of this assessment are as follows:

- Noise intrusion from external sources onto the proposed development;
- Noise emission from the typical retail and commercial operations, including:
  - Mechanical plant and equipment
  - Loading / unloading, compacting and delivery noise, and
  - Car-parking noise.

Any potential noise impacts from the above noise sources must be assessed and appropriately mitigated at surrounding noise sensitive receivers (NSRs).

## 2. PROPOSED SITE AND SURROUNDING AREA

### 2.1 Site Details

The proposed development site is located at 60 King William Street, Adelaide as presented in Figure 1. The site is bounded by commercial developments to the north and south, James Place followed by commercial properties to the east and King William Street and the Adelaide Metro tramway to the West. This noise impact assessment has been based on the architectural documentation / information prepared by Cox on 20<sup>th</sup> October 2020.

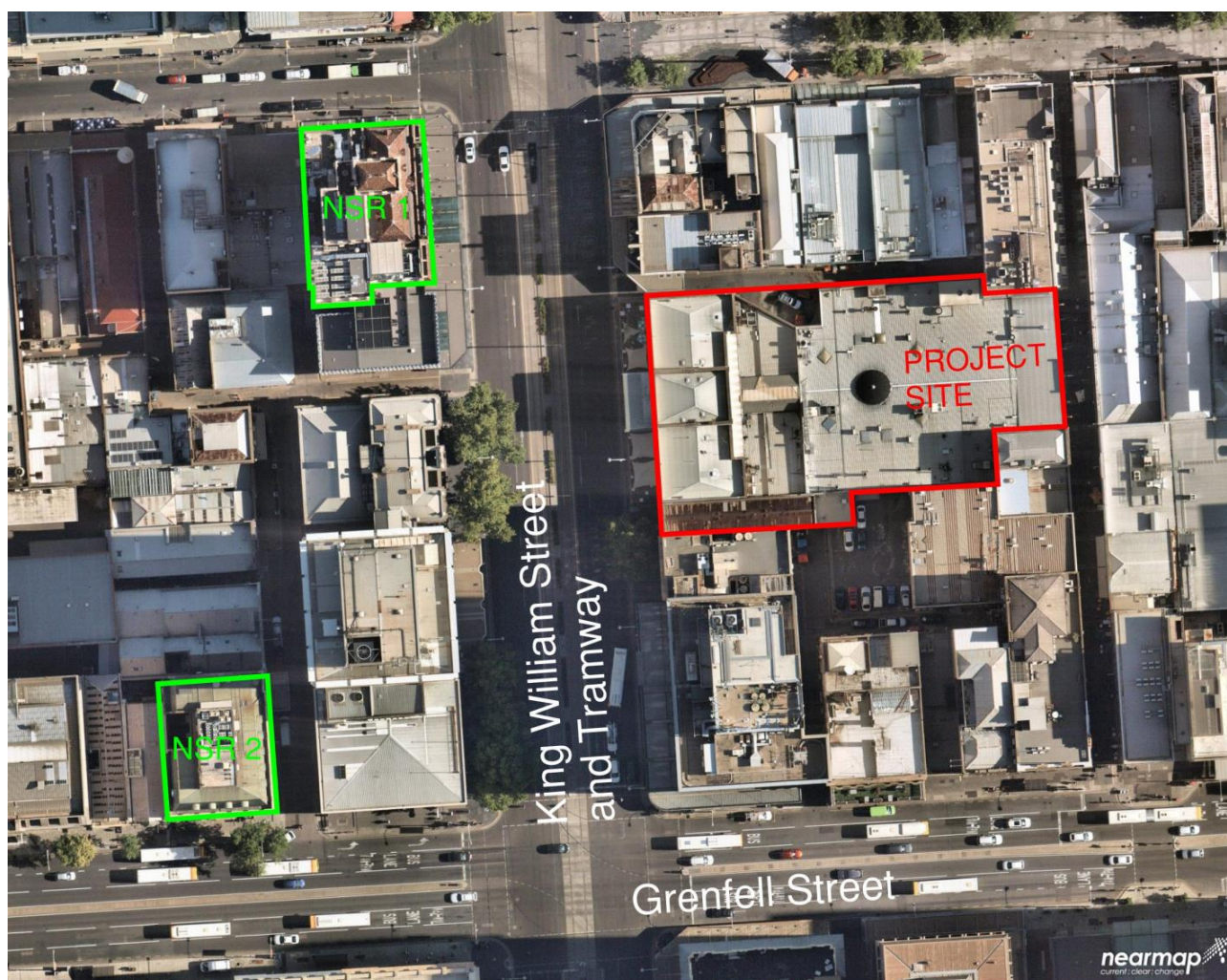


Figure 1: Subject Site and Surrounding Area (Ref. Nearmap)

The City of Adelaide zoning maps indicate that the site is located within the Capital City (CC) zone, with property details as presented in Table 2.

**Table 2: Property Details of the Subject Site**

PROPERTY DETAILS	DESCRIPTION
Property Address	60 King William Street, Adelaide. 5000
Site Area	4897 m <sup>2</sup>
Development Plan	Adelaide (City) Development Plan
Zone Name	Capital City (Map Adel/18)
Policy Area	Central Business (Map Adel/49)

The existing ambient noise environment is characterised by typical urban hum and transportation noise (both road traffic and tramway). The site is not affected by the Aircraft Noise Exposure Forecast (ANEF) contours (refer to Map Adel/1 Overlay 6) and as such, aircraft noise is not a feature of the site.

## 2.2 Noise Sensitive Receivers

The main sources of noise emission from the proposed development that will be controlled to satisfy the noise limits at the surrounding NSRs and commercial premises are from mezzanine and rooftop mechanical plant and equipment, loading bay, car park and refuse facility noise emission. The onsite car parking is contained within the basement levels, and as such is not expected to cause any negative noise impacts at the surrounding NSRs.

The indicative distance separation between the nearest NSRs and the proposed development are presented in Table 3.

**Table 3: Nearest Noise Sensitive Receivers Surrounding Proposed Development Site**

NSR	DESCRIPTION	ADDRESS	DISTANCE SEPARATION
NSR 1	Mayfair Hotel – 10 storey hotel building	45 King William Street, Adelaide	~40m
NSR 2	The Chancellor on Currie – 6 storey hotel building	18 Currie Street, Adelaide	~80m

## 2.3 Existing Road Traffic Volumes

Existing road traffic volumes were obtained from the South Australian Department of Planning, Transport and Infrastructure (DPTI) website are presented in Table 4 for reference.

**Table 4: Existing Road Traffic Volumes (Ref. DPTI)**

ROAD	AADT <sup>1</sup>	% COMMERCIAL VEHICLE	POSTED SPEED (KM/HR)
King William Street	23,200	14	50

## 2.4 Tram Frequency

The trams along King William Street operate at 5 to 10-minute intervals during peak times.

---

<sup>1</sup> Annual Average Daily Traffic

### 3. EXISTING NOISE LEVELS

Due to time constraints and current access restrictions at the project site, noise monitoring could not be completed prior to writing this report. Instead, reference will be made to previously approved Development Application reports for estimates of existing ambient noise levels for the purpose of determining noise criteria for this Noise Impact Assessment. An assessment of the background noise at the project site may be completed during the design phases.

The referenced Acoustic Report<sup>2</sup> was prepared for the GPO Exchange Development Application by Aurecon on the 1<sup>st</sup> May 2015. Although the GPO Exchange project site (corner of King William Street and Franklin Street) is approximately 350 metres south of the 60 King William Street site, it is an equivalent distance from the major noise sources in the area, King William Street and the Adelaide Metro Tramway. As such, it is expected that the noise monitoring conducted for the GPO Exchange will be representative of the noise levels at 60 King William Street.

Table 5 and Table 6 show the measured ambient noise levels from the aforementioned Acoustic Report<sup>2</sup>. Figure 2 shows the proximity of the measurement locations to the project site.

**Table 5: Summary of Attended Noise Measurements – Measurement Location A<sup>2</sup>**

LOCATION	MEASUREMENT TIME	NOISE DESCRIPTOR IN dB(A)			
		L <sub>AMAX</sub> <sup>3</sup>	L <sub>AEQ</sub> <sup>4</sup>	L <sub>A10</sub> <sup>5</sup>	L <sub>A90</sub> <sup>6</sup>
Location A (King William Street)	8:20AM – 8:35AM	86	70	73	64

**Table 6: Summary of Unattended Noise Logging at King William Street – Measurement Location B<sup>2</sup>**

LOCATION	MEASUREMENT TIME	NOISE DESCRIPTOR IN dB(A) - AVERAGE			
		L <sub>AEQ</sub> <sup>4</sup>	L <sub>A10</sub> <sup>5</sup>	L <sub>A90</sub> <sup>6</sup>	L <sub>AMIN</sub> <sup>7</sup>
Location B (Balcony of Electra House)	Day (7am to 10pm)	71	73	61	57
	Night (10pm to 7am)	68	69	55	50

<sup>2</sup> Reference: Lee, Y K., & Mackenzie, N. (2015). GPO Redevelopment – DA Acoustic Planning Assessment. Aurecon. (246549 R1)

<sup>3</sup> L<sub>AMax</sub> is the average of the maximum A-weighted sound pressure levels occurring within consecutive 15-minute samples

<sup>4</sup> L<sub>Aeq</sub> is the A-weighted equivalent or energetic-averaged sound pressure level over a specified time-period

<sup>5</sup> L<sub>A10</sub> is the A-weighted sound pressure level exceeded for 10% of the specified time-period

<sup>6</sup> L<sub>A90</sub> is the A-weighted sound pressure level exceeded for 90% of the specified time-period

<sup>7</sup> L<sub>Amin</sub> is the average of the minimum A-weighted sound pressure levels occurring within consecutive 15-minute samples





**Figure 2: Noise Monitoring Locations**

#### 4. NOISE CRITERIA

The noise criteria for the proposed mixed-use development are defined by Local Council requirements, South Australian Legislation and applicable Australian and International Standards and guidelines. The relevant noise criteria for the proposed development are presented in Table 7.

**Table 7: Applicable Noise Policies and Guidelines**

ASSESSMENT	APPLICABLE REFERENCES	NOISE SOURCES
External Noise Intrusion onto the Development	Australian / New Zealand Standard 2107: 2016 (Ref. 6)	Road traffic and tram noise from the surrounding transport network; Noise from mechanical plant associated with surrounding commercial buildings
Noise emissions from the proposed development	SA Environmental Protection (Noise) Policy 2007 (Ref. 2)	Mechanical plant noise
	Adelaide (City) Development Plan (Ref. 3)	Noise from car parking, refuse and loading activities
	WHO guidelines (Ref. 8)	

#### 4.1 Steady State and Quasi Steady State Noise Intrusion Criteria

Intruding noise from steady state and quasi steady state external sources such as road traffic and mechanical plant shall achieve compliance with the recommended design sound levels specified in Table 1 of Australian Standard AS/NZS 2107:2016 *Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors*. The design sound limits for the commercial and retail components of the proposed development are presented in Table 8.

**Table 8: Internal Design Sound Levels from AS/NZS 2107:2016**

TYPE OF OCCUPANCY / ACTIVITY	STEADY STATE & QUASI STEADY STATE NOISE SOURCES
	DESIGN SOUND LEVEL ( $L_{Aeq,T}$ ) RANGE, dB(A)
<b>Commercial Building</b>	
Corridors and lobbies	45 to 50
General office areas	40 to 45
Public spaces	40 to 50
Reception areas	40 to 45
Toilets	45 to 55
Undercover carparks	< 65
<b>Shop / Public Building</b>	
Small retail stores (general)	< 50
Restaurants	40 to 50
Coffee shops	40 to 50
Supermarkets	< 55

## 4.2 Noise Emission Criteria

### 4.2.1 Environmental Protection (Noise) Policy 2007

The South Australian Environmental Protection (Noise) Policy 2007 provides the basis for a consistent approach to issues relating to noise in the determination of applications for development authorisation under the Development Act 1993.

Part 5 of the policy identifies noise goals for planning purposes of future noise sources, based on the land use and zoning. Noise emissions from a future noise source are considered acceptable when the predicted source noise level (continuous) does not exceed the relevant indicative noise level minus 5 dB(A). The Adelaide (City) Development Plan shows that the project site and nearest noise sensitive receivers are located within the Capital City (CC) zone (refer to Table 2).

As such, the applicable environmental noise emission limits for the planning phase are derived in Table 9.

**Table 9: Environmental Noise Limits for Continuous Noise Sources (Ref. EPP (Noise) 2007)**

RECEIVER ZONE	NOISE CRITERIA FOR CONTINUOUS NOISE EMISSIONS, dB(A)	
	DAY (7AM TO 10PM)	NIGHT (10PM TO 7AM)
Commercial	57	50

The policy requires that these criteria be further penalised by 5 dB(A) when the receiving noise at a noise sensitive place contains unwanted characteristics including tonality, impulsiveness, spectral imbalance or modulation (up to a maximum of 10 dB(A)).

### 4.2.2 Adelaide (City) Development Plan

The City of Adelaide Development Plan includes provisions that relate to noise emissions from development in the city. The Objectives and Principles of Development Control (PDC) are summarised as follows:

- Objectives: 26, 27;
- PDC: 89, 90, 91, 92, 93 and 94.

**Objective 26** requires that a development shall not unreasonably interfere with the desired character of the locality by generating unduly annoying or disturbing noise; and

**Objective 27** requires that a noise sensitive development is 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.

In order to achieve these objectives, the Adelaide (City) Development Plan nominates the following PDCs relevant to the proposed development:



#### 4.2.2.1 PDC 89

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

#### 4.2.2.2 PDC 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 dBA during daytime (7.00am to 10.00pm) and 45 dBA 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.*

#### 4.2.2.3 PDC 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 7:00 am 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.*

#### 4.2.3 Project-Specific Noise Emission Target

The background ( $L_{A90}$ ) noise levels presented in Table 6 demonstrate that the ambient noise levels in the area are high, with background noise levels of 61 and 55 dB(A) for the day and night periods respectively. As such, it can be demonstrated that the Principle of Development Control 93 is not appropriate for this development. Instead, the noise emission criteria derived from the South Australian Environmental Protection (Noise) Policy are proposed as per Table 9 (i.e. **57 dB(A)** and **50 dB(A)** for the day and night periods respectively).

---

## 5. PRELIMINARY BUILDING ENVELOPE RECOMMENDATIONS

A preliminary acoustic assessment was conducted to determine appropriate acoustic performance criteria for the building façade. The assessment was based on the road traffic volumes presented in Table 4 and the noise monitoring data presented in Table 5. An incident noise level of up to 70 – 72 dB(A)  $L_{Aeq}$  was predicted at the façade during peak hours. In order to meet acceptable internal noise levels as presented in Table 8, a curtain wall system that achieves a weighted sound reduction index ( $R_w$ ) rating of 32 or greater is required. An acceptable glazing composition would be:

- An IGU consisting of 6mm float / 12mm air gap / 6.38mm laminate.

The acoustic performance of the façade will be reviewed during the detailed design stage for appropriate detailing at façade junctions and façade openings (e.g. entry doors and intake / discharge louvres).

## 6. MECHANICAL PLANT NOISE EMISSION

The noise emissions from mechanical plant and equipment must comply with the noise limits derived in Section 4.2.3. The nearest noise sensitive receiver is located approximately 40 metres to the northwest on the opposite side of King William Street. A combination of high existing ambient background noise levels and significant distance attenuation is expected to mask and attenuate noise from the proposed development to acceptable levels.

A detailed assessment of the mechanical plant noise emissions must be completed during the detailed design phases once equipment selection and layouts are known, however the following acoustic control principles can be incorporated into the design where required to ensure that compliance can be achieved:

- Orientate intake and discharge louvres for significant noise generating equipment away from noise sensitive receivers;
- Select 'low noise' plant and equipment;
- Acoustically treat enclosed plant rooms with acoustic insulation and acoustic louvres or plenums as required to mitigate breakout noise;
- Provide shielding in the form of barriers / screens for exposed roof top plant;
- Install attenuators or acoustically lined ductwork on fans;
- Utilise variable speed controls to enable plant and equipment to respond to demand, and ramp-down when not required.

A combination of the above acoustic control principles will enable the development to achieve compliance with the noise criteria.



---

## 7. INTERMITTENT NOISE EMISSION

The following intermittent noise sources have been considered as part of the mixed-use development:

- Car parking;
- Loading bay activities;
- Refuse collection.

### 7.1 Car Parking

The proposed car parking is contained within the basement level and receives significant shielding from the building envelope. Additionally, the commercial tenancy is expected to operate within standard business hours on weekdays only. As such, noise from typical car park activities would not result in sleep disturbance at the nearest noise sensitive receivers in accordance with PDC 94 (refer to Section 4.2.2.3).

### 7.2 Loading Bay and Refuse Collection

The loading bay and refuse facilities are located on the ground plane and shielded from the nearest noise sensitive receivers by the built form (refer to architectural drawings). In addition, the hours of operation will be restricted to the day period in accordance with PDC 94 (refer to Section 4.2.2.3).

---

## 8. RETAIL TENANCY NOISE EMISSION

The types of retail tenancies that may occupy the ground floor are not known at this stage. It is noted that the existing site already caters for a range of food and beverage outlets and as such, these types of tenancies are not expected to result in any new noise impacts at the surrounding noise sensitive receivers.

However, in order to maintain the acoustic amenity, live or amplified music should not be permitted within the proposed retail outlets unless a supplementary acoustic assessment is conducted.

---

## 9. REFERENCES

1. South Australian Environmental Protection Act 1993;
2. South Australian Environmental Protection (Noise) Policy 2007;
3. South Australian Department of Planning, Transport and Infrastructure Adelaide (City) Development Plan, consolidated 16<sup>th</sup> January 2020
4. Lee, Y K., & Mackenzie, N. GPO Redevelopment – DA Acoustic Planning Assessment. Adelaide (AU): Aurecon Australasia Pty Ltd; 1st May 2015. 19 p. 246549 R1
5. Australian Standard AS 1055 *Acoustics – Description and measurement of environmental noise*
6. Australian / New Zealand Standard AS/NZS 2107 *Acoustics – Recommended design sound levels and reverberation times for building interiors*
7. Australian Standard AS 2021 *Acoustics – Aircraft noise intrusion – Building siting and construction*
8. “Guidelines for Community Noise” published by WHO (World Health Organization), Switzerland, 1999.

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## **Vipac Engineers & Scientists**

Resource Co-ordination Partnership Pty Ltd

**60 King William Street, Adelaide**

### **Wind Impact Assessment**



30N-20-0045-TRP-6773958-2

22 October 2020



<b>Job Title:</b> 60 King William Street, Adelaide			
<b>Report Title:</b> Wind Impact Assessment			
<b>Document Reference:</b> 30N-20-0045-TRP-6773958-2			
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<b>REVISION HISTORY:</b>			
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Rev. 00	Original issue	02/03/2020	S Lamande
Rev. 01	Plans updated	30/06/2020	S Lamande
Rev. 02	Plans updated	22/10/2020	E Yuen

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## EXECUTIVE SUMMARY

**Resource Co-ordination Partnership Pty Ltd** commissioned Vipac Engineers and Scientists Ltd to prepare a statement of wind effects for the proposed development at **60 King William Street, Adelaide**. This appraisal is based on Vipac's experience as a wind-engineering consultancy.

Drawings of the proposed development were provided by **Cox Architecture** in **February, June and October 2020**, as described in Appendix C of this report.

The findings of this study can be summarized as follows:

- With proposed design the development would be expected to have wind conditions in the footpath areas within the recommended walking comfort criterion;
- With proposed design, the building entrances would be expected to have wind conditions within the recommended standing comfort criterion;
- With proposed design, the rooftop terrace would be expected to have wind conditions within the recommended walking comfort criterion;

The assessments provided in this report have been made based on experience of similar situations in Adelaide and around the world. As with any opinion, it is possible that an assessment of wind effects based on experience and without experimental validation may not account for all complex flow interactions. We recommend wind tunnel testing be conducted to verify these predictions in the detailed design phase.





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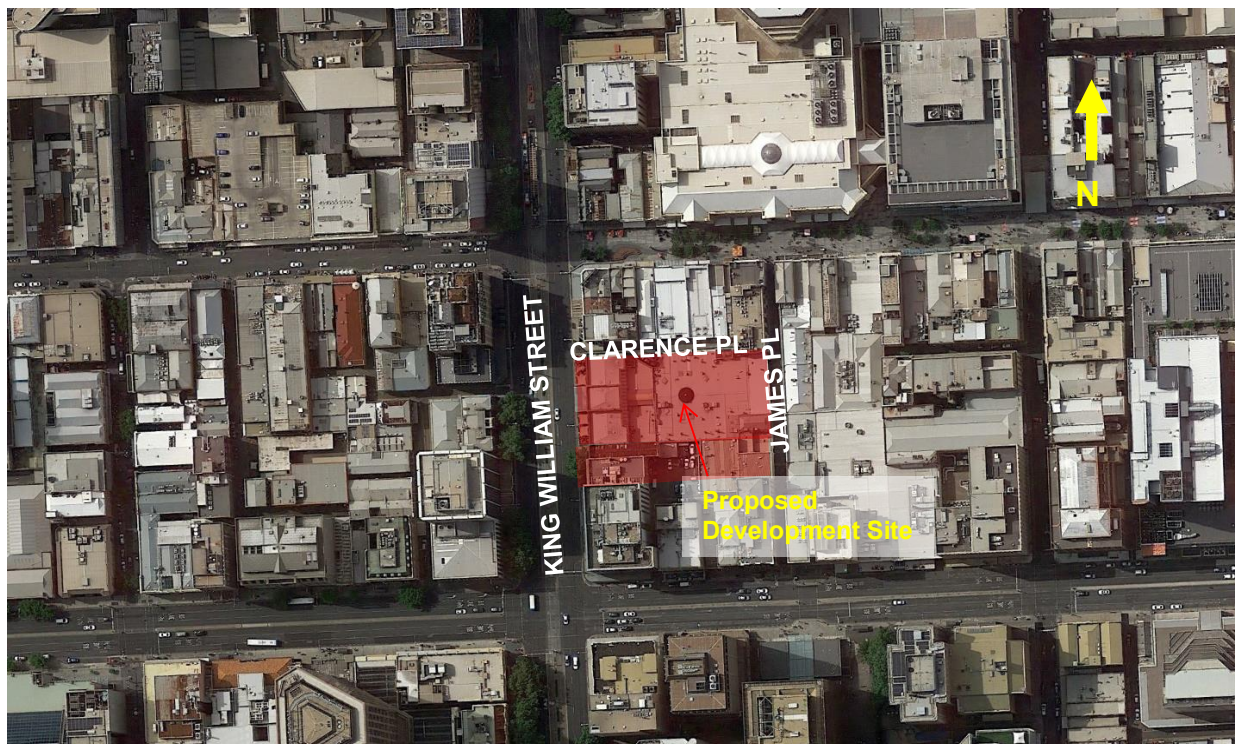
## 1 INTRODUCTION

**Resource Co-ordination Partnership Pty Ltd** commissioned Vipac Engineers and Scientists Ltd to prepare a statement of wind effects for the proposed development at **60 King William Street, Adelaide**. This appraisal is based on Vipac's experience as a wind-engineering consultancy.

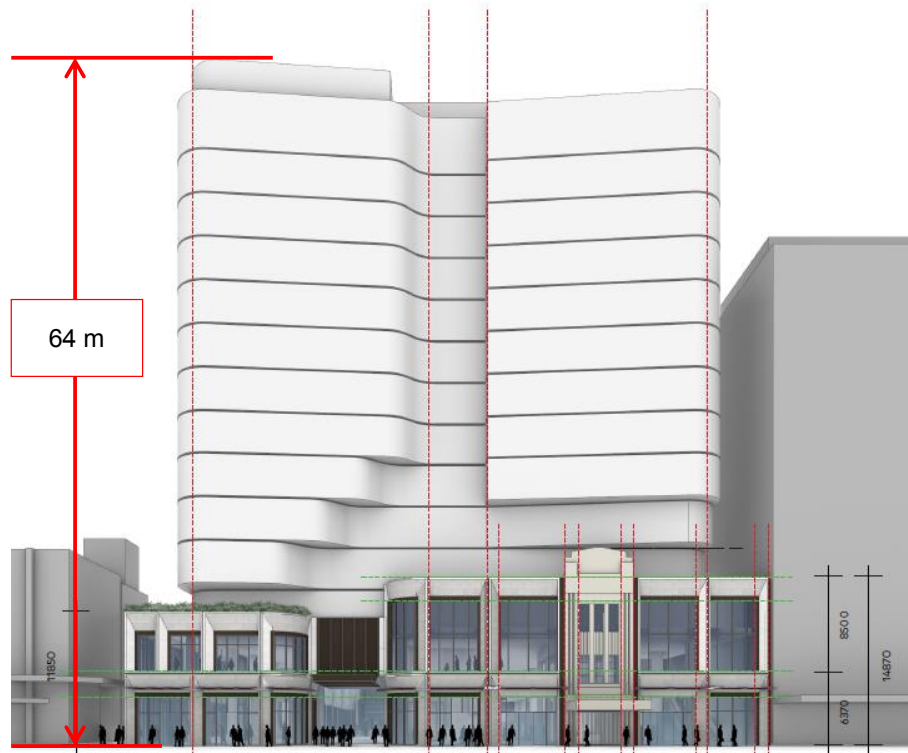
The proposed development site is bounded by King William Street to the west; Clarence Place to the north; James Place to the east and existing buildings in the south (See Figure 1). The west elevation of the proposed scheme showing the approximate height is shown in Figure 2.

This report details the opinion of Vipac as an experienced wind engineering consultancy regarding the wind effects in ground level public areas and access-ways adjacent to the development as proposed. No wind tunnel testing has been carried out for this development at this stage. Vipac has carried out wind tunnel studies on a large number of developments of similar shape and having similar exposure to that of the proposed development. These serve as a valid reference for the prediction of wind effects for this development. Empirical data for typical buildings in boundary layer flows has also been used to estimate likely ground level wind conditions adjacent to the proposed development [2] & [3].

Drawings of the proposed development were provided by **Cox Architecture** in **February, June and October 2020**, as described in Appendix C of this report.



*Figure 1: Aerial view of the proposed development site*



*Figure 2: West elevation of the proposed development.*

## 2 ANALYSIS APPROACH

When considering whether a proposed development is likely to generate adverse wind conditions in adjacent ground level areas, Vipac considers five main points:

- The exposure of the proposed development to wind;
- The regional wind climate;
- The geometry and orientation of the proposed development;
- The interaction of flows with adjacent developments;
- The assessment criteria, determined by the intended use of the public areas affected by wind flows generated or augmented by the proposed development.

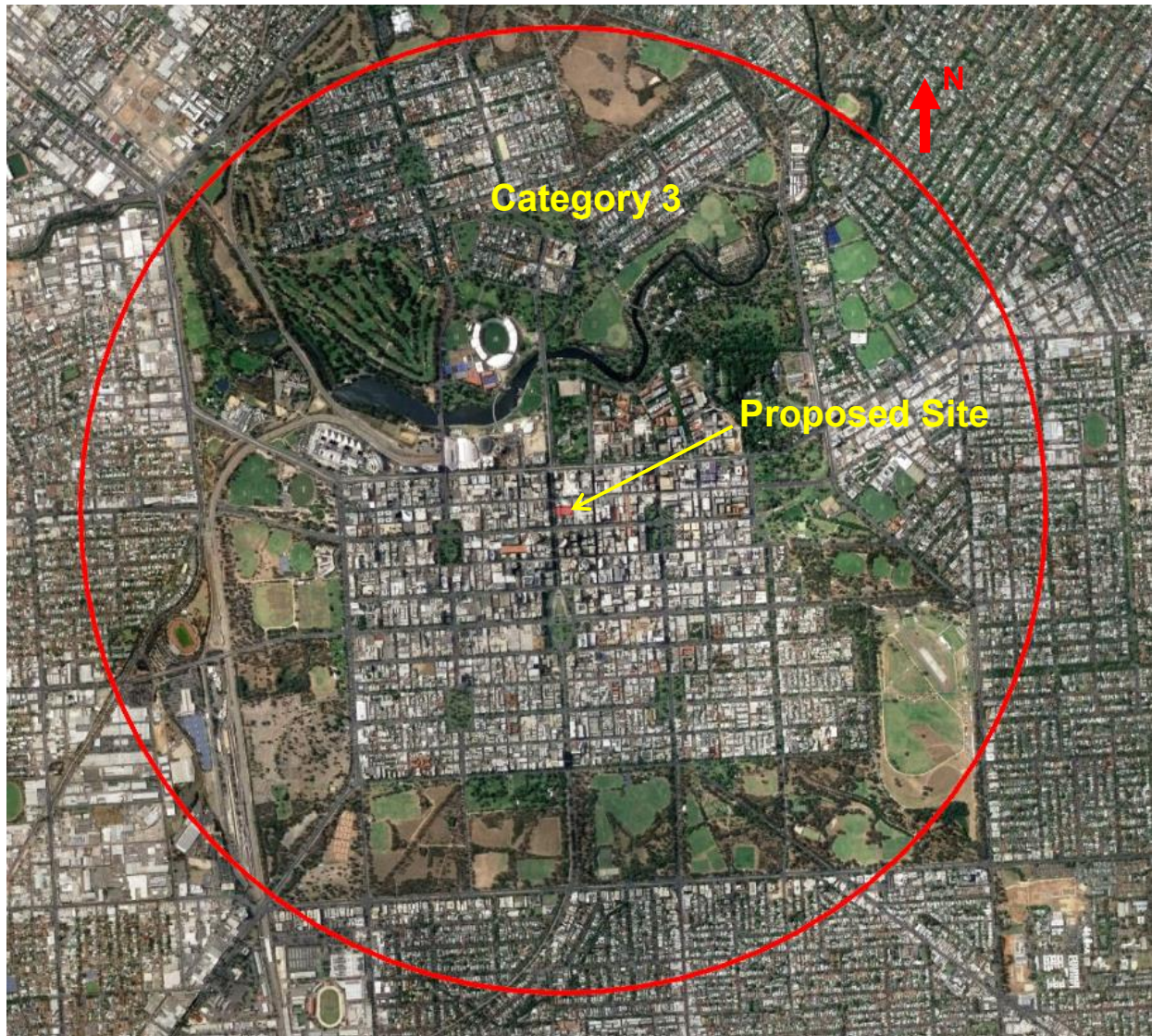
The pedestrian wind comfort at specific locations around a site may be assessed by predicting the worst annual 3-second wind gust expected at that location. The location may be deemed generally acceptable for its intended use if the annual 3-second gust is within the threshold values noted in Section 2.5. For cases where Vipac predicts that a location would not meet its appropriate comfort criterion we may recommend the use of wind control devices and/or local building geometry modifications to achieve the desired comfort rating. For complex flow scenarios or where predicted flow conditions are well in excess of the recommended criteria, Vipac recommends scale model wind tunnel testing to determine the type and scope of the wind control measures required to achieve acceptable wind conditions.



## 2.1 SITE EXPOSURE

The proposed development site is located on the north of the Adelaide CBD. The surrounding developments (within 2.5 km radius) are low rise residential and parklands, with the taller buildings of the CBD to the south.

Therefore, for the current study, the exposure of the site is considered to be within Terrain Category 3 for all wind directions [1] (see Figure 3).



*Figure 3: Assumed terrain categories for wind speed estimation.*

## 2.2 REGIONAL WIND CLIMATE

The mean and gust wind speeds have been recorded in the Adelaide area for 30 years. These data have been analysed and the directional probability distribution of wind speeds have been determined. The directional distribution of hourly mean wind speed at the gradient height ( $\approx 500\text{m}$ ), with a probability of occurring once per year (i.e. 1 year return period) is shown in Figure 4. The wind data at this free stream height are common to all Adelaide city sites and may be used as a reference to assess ground level wind conditions at the site. Figure 4 indicates that the stronger winds can be expected from the south-westerly, north-westerly and westerly directions.

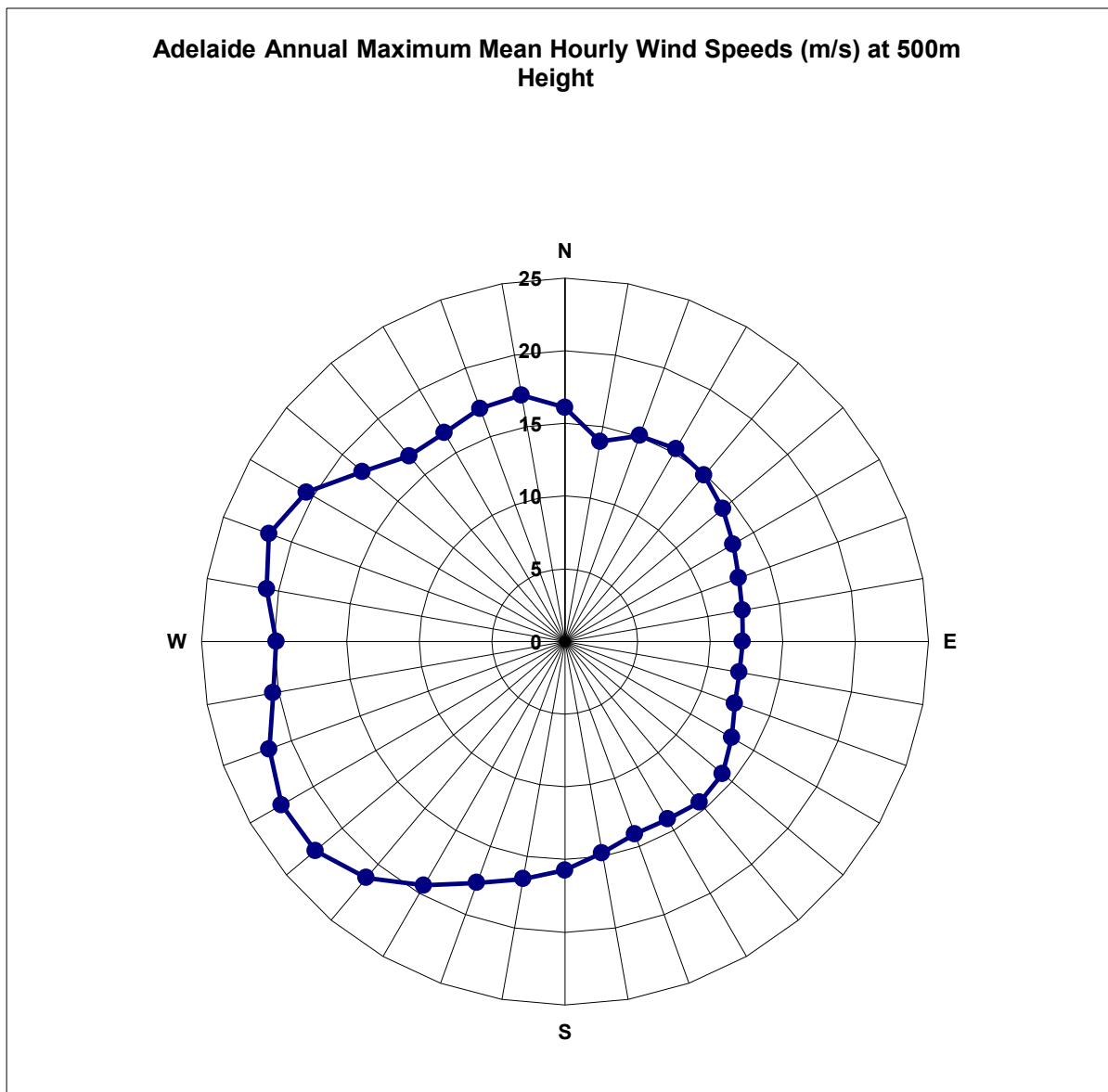


Figure 4: Directional Distribution of Annual Return Period Maximum Mean Hourly Wind Velocities (m/s) at gradient height of 500m in Adelaide.

## 2.3 SITE GEOMETRY AND ORIENTATION

The proposed development has a rectangular plan with the approximate dimensions of 55 m x 83 m as shown in Figure 5.

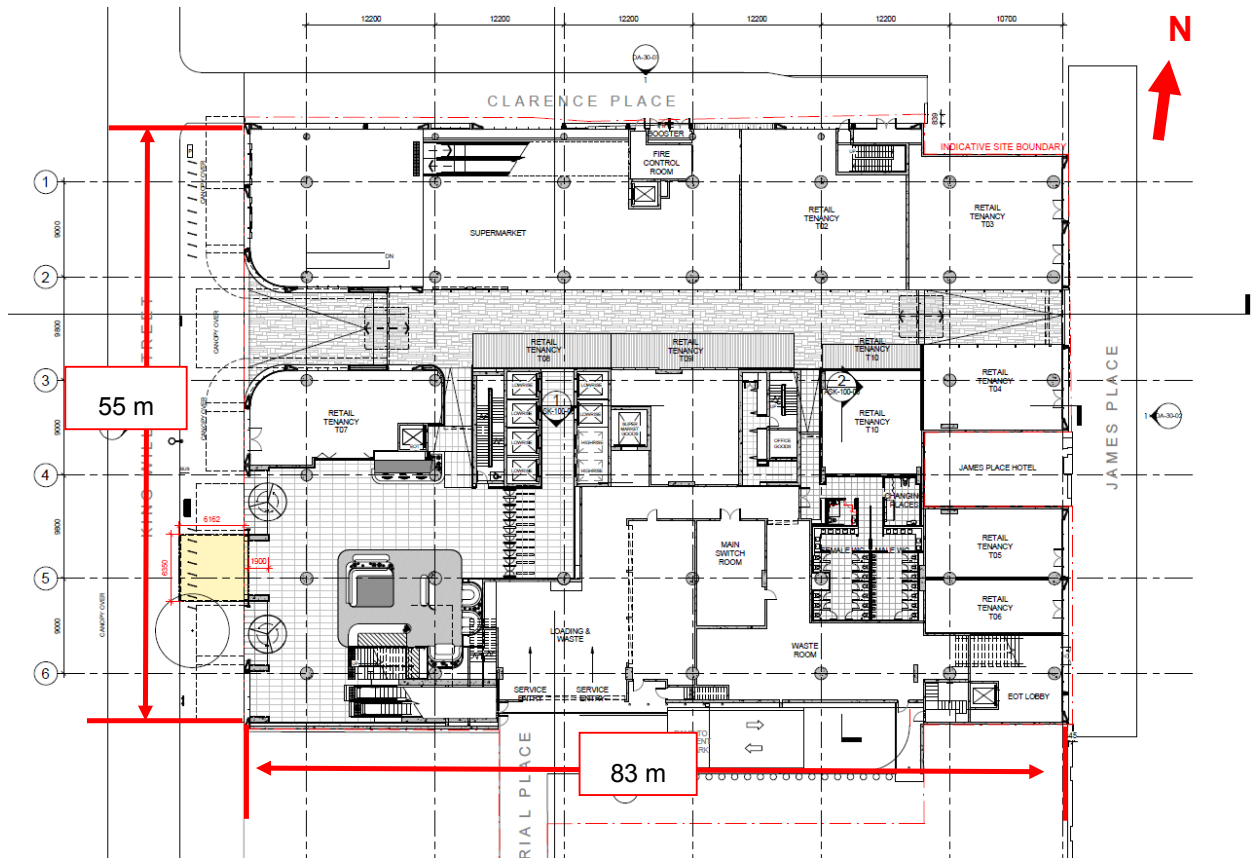


Figure 5: Ground floor plan of the development



## 2.4 FLOW INTERACTIONS WITH ADJACENT DEVELOPMENTS

The buildings immediately adjacent to the development site, with their approximate height in storeys, are shown in Figure 6.

The site is surrounded by 3 to 19 storey buildings. The winds from the southwest through west to northwest are high in strength on the proposed site due to the regional wind climate. The surrounding buildings will provide some shielding from these predominant winds at the ground level.



Figure 6: Immediately adjacent buildings and their approximate height in storeys (F).

## 2.5 ASSESSMENT CRITERIA

With some consensus of international opinion, pedestrian wind comfort is rated according to the suitability of certain activities at a site in relation to the expected annual peak 3-second gust velocity at that location for each wind direction. Each of the major areas around the site are characterized by the annual maximum gust wind speeds. Most patrons would consider a site generally unacceptable for its intended use if it were probable that during one annual wind event, a peak 3-second gust occurs which exceeds the established comfort threshold velocity (shown in Table 1). If that threshold is exceeded once per year then it is also likely that during moderate winds, noticeably unpleasant wind conditions would result, and the windiness of the location would be considered as unacceptable.

Table 1: Recommended Wind Comfort and Safety Gust Criteria

Annual Maximum Gust Speed	Result on Perceived Pedestrian Comfort
>23m/s	Unsafe (frail pedestrians knocked over)
<20m/s	Acceptable for <b>fast walking</b> (waterfront or particular walking areas)
<16m/s	Acceptable for <b>walking</b> (steady steps for most pedestrians)
<13m/s	Acceptable for <b>standing</b> (window shopping, vehicle drop off, queuing)
<11m/s	Acceptable for <b>sitting</b> (outdoor cafés, gardens, park benches)

In a similar manner, a set of hourly mean velocity criteria (see Table 2) with a 0.1% probability of occurrence are also applicable to ground level areas in and adjacent to the proposed development. An area should be within both the relevant mean and gust limits in order to satisfy the particular human comfort and safety criteria in question.

Table 2: Recommended Wind Comfort and Safety Mean Criteria

Mean wind speed exceeded 0.1% of the time	Result on Perceived Pedestrian Comfort
>15m/s	Unsafe (frail pedestrians knocked over)
<13m/s	Acceptable for <b>fast walking</b> (waterfront or particular walking areas)
<10m/s	Acceptable for <b>walking</b> (steady steps for most pedestrians)
<7m/s	Acceptable for <b>standing</b> (window shopping, vehicle drop off, queuing)
<5m/s	Acceptable for <b>sitting</b> (outdoor cafés, gardens, park benches)

### Recommended Criteria

The following table lists the specific areas adjacent to the development and the corresponding recommended criteria.

*Table 3: Recommended application of criteria*

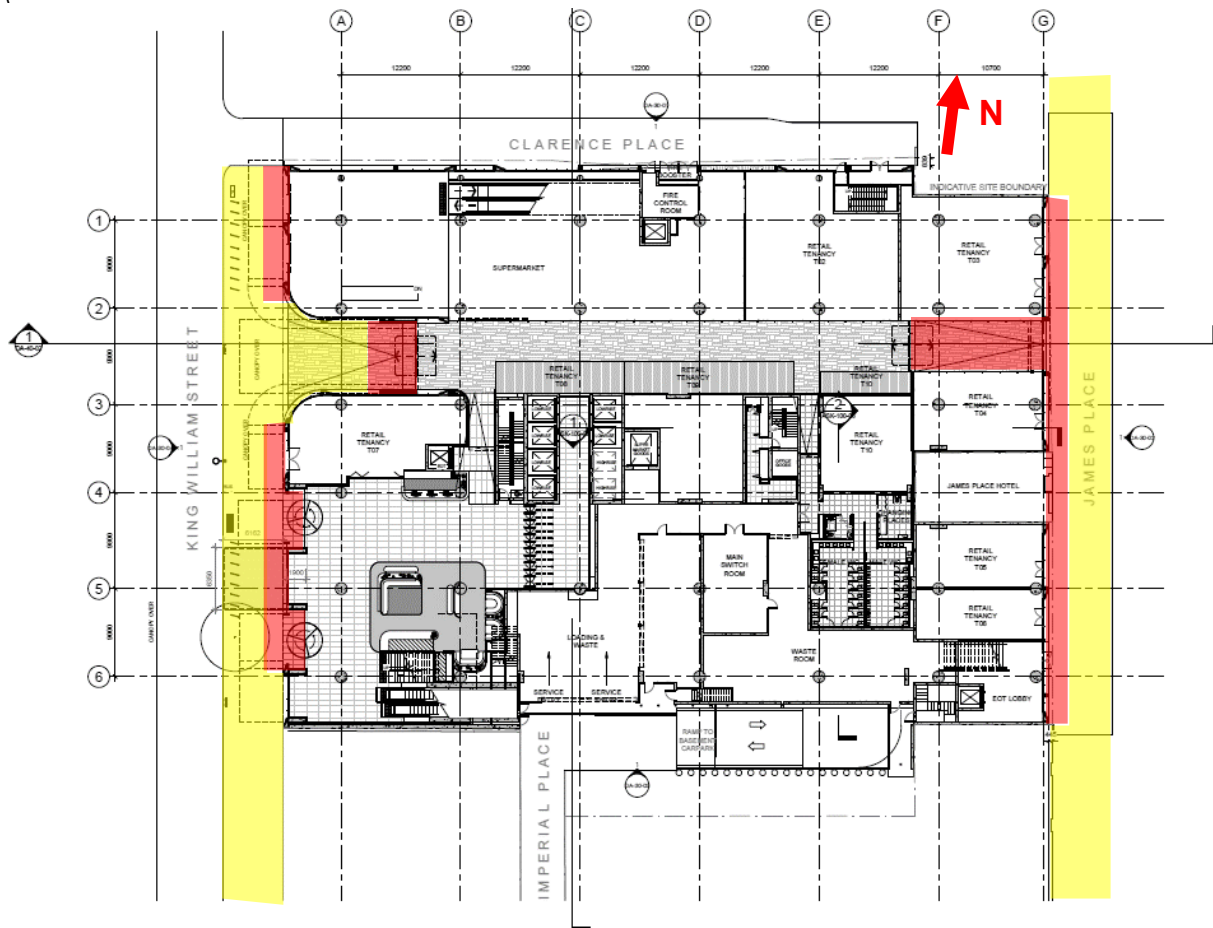
Area	Specific Location	Recommended Criteria
Footpaths	Around the development on King William St, Clarence PI and James Place (Figure 7)	Walking
Building Entrances	East and west sides of the building (Figure 7)	Standing
Communal Terrace	Level 2 and the Rooftop	Walking (refer to discussion below)

### Upper Level Terrace Recommended Criterion Discussion

Vipac recommends as a minimum that rooftop terrace areas and apartment balconies meet the criterion for walking since:

- these areas are not public spaces;
- the use of these areas is optional;
- many similar developments in Brisbane and other Australian capital cities experience wind conditions on balconies and elevated deck areas in the vicinity of the criterion for walking.

Vipac wishes to state that meeting the walking criterion on elevated recreation areas will be no guarantee that occupants will find wind conditions in these areas acceptable at all times.



Recommended to fulfil Walking  Recommended to fulfil Standing

Figure 7: Ground level Plan view of the proposed development with recommended wind criteria overlaid

### 3 PEDESTRIAN LEVEL WIND EFFECTS AND RECOMMENDATIONS

#### Ground Level

The pedestrian pathways on King William Street, Clarence Place and James Place are expected to have wind conditions within the recommended walking comfort criterion with the proposed design.

The building entrances are shielded by proposed canopies and/or recessed within the building envelope. As such, these areas will be expected to have wind levels within the recommended standing comfort criterion.

#### Level 2 Terrace

Located on the North western corner of the podium rooftop, this terrace is expected to experience high corner accelerating winds. However, with the proposed landscaping and high balustrades, this area is expected to be within the recommended walking comfort criterion.

#### Rooftop Terrace

The rooftop terrace is expected to have wind levels within the recommended walking comfort criterion with the proposed design. If more stringent comfort criteria for standing or sitting are required, additional landscaping, pergolas or high balustrades can be used to shield this area from adverse winds.

Whilst wind conditions on the proposed terrace will frequently be acceptable for outdoor recreation, during moderate to strong winds, conditions in this area may exceed human comfort criteria. Terrace areas on similar developments in many major Australian capital cities typically experience similar elevated wind conditions. High exposure, corner acceleration flows and standing vortices would sometimes preclude these areas from use for outdoor recreation.

#### 3.1 RECOMMENDATIONS

After careful consideration of the form and exposure of the proposed development, Vipac predicts that most areas will satisfy the various recommended comfort criteria at the adjacent ground level areas and communal terraces. As such, Vipac makes no recommendation for the alteration of the design as proposed.

It should be noted that this study is based on experience only and has not utilised any experimental data for the analysis. We recommend wind tunnel testing be conducted in the detailed design phase to verify these predictions.



## 4 CONCLUSIONS

An appraisal of the likely wind conditions for the proposed development at 60 King William Street, Adelaide has been made.

Vipac has carefully considered the design and exposure of the proposed development, nominated criteria for various public areas according to their function and referred to past experience to produce our opinion of likely wind conditions. Based on this assessment, the following conclusions are drawn:

- With proposed design the development would be expected to have wind conditions in the footpath areas within the walking comfort criterion;
- With proposed design, the entries would be expected to have wind conditions within the recommended standing comfort criterion;
- With proposed design, the communal terraces would be expected to have wind conditions within the recommended walking comfort criterion;

The assessments provided in this report have been made based on experience of similar situations in Adelaide and around the world. As with any opinion, it is possible that an assessment of wind effects based on experience and without experimental validation may not account for complex flow interactions in the vicinity. We recommend wind tunnel testing be conducted to verify these predictions in the detailed design phase.

*This Report has been Prepared  
For  
Resource Co-ordination Partnership Pty Ltd  
By  
VIPAC ENGINEERS & SCIENTISTS PTY LTD*



## Appendix A: ENVIRONMENTAL WIND EFFECTS

### Atmospheric Boundary Layer

As wind flows over the earth it encounters various roughness elements and terrain such as water, forests, houses and buildings. To varying degrees, these elements reduce the mean wind speed at low elevations and increase air turbulence. The wind above these obstructions travels with attenuated velocity, driven by atmospheric pressure gradients. The resultant increase in wind speed with height above ground is known as a wind velocity profile. When this wind profile encounters a tall building, some of the fast moving wind at upper elevations is diverted down to ground level resulting in local adverse wind effects.

The terminology used to describe the wind flow patterns around the proposed Development is based on the aerodynamic mechanism, direction and nature of the wind flow.

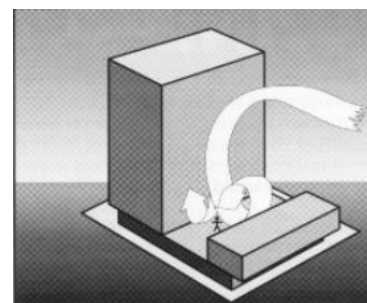
**Downwash** – refers to a flow of air down the exposed face of a tower. A tall tower can deflect a fast moving wind at higher elevations downwards.

**Corner Accelerations** – when wind flows around the corner of a building it tends to accelerate in a similar manner to airflow over the top of an aeroplane wing.

**Flow separation** – when wind flowing along a surface suddenly detaches from that surface and the resultant energy dissipation produces increased turbulence in the flow. Flow separation at a building corner or at a solid screen can result in gusty conditions.

**Flow channelling** – the well-known “street canyon” effect occurs when a large volume of air is funnelled through a constricted pathway. To maintain flow continuity the wind must speed up as it passes through the constriction. Examples of this might occur between two towers, in a narrowing street or under a bridge.

**Direct Exposure** – a location with little upstream shielding for a wind direction of interest. The location will be exposed to the unabated mean wind and gust velocity. Piers and open water frontage may have such exposure.












## Appendix B: REFERENCES


- [1] *Structural Design Actions, Part 2: Wind Actions*, Australian/New Zealand Standard 1170.2:2011
- [2] *Wind Effects on Structures* E. Simiu, R Scanlan, Publisher: Wiley-Interscience
- [3] *Architectural Aerodynamics* R. Aynsley, W. Melbourne, B. Vickery, Publisher: Applied Science Publishers



## Appendix C: DRAWING LIST

Name	Date modified
 520005.00 60 King William Street.rvt	28/02/2020 8:32 AM
 ASK-01 - BASEMENT PLAN[]	28/02/2020 8:32 AM
 ASK-02 - GROUND FLOOR PLAN[]	28/02/2020 8:32 AM
 ASK-03 - LEVEL 1 PLAN[]	28/02/2020 8:32 AM
 ASK-04 - LEVEL 2 PLAN[]	28/02/2020 8:32 AM
 ASK-05 - TYPICAL FLOOR PLAN - LEVEL 3-8[]	28/02/2020 8:32 AM
 ASK-06 - TYPICAL FLOOR PLAN - LEVEL 9-10[]	28/02/2020 8:32 AM
 ASK-07 - TYPICAL FLOOR PLAN - LEVEL 11-13[]	28/02/2020 8:32 AM
 ASK-08 - ROOF PLAN[]	28/02/2020 8:32 AM

Name	Date modified
 Updated Docs - Wind	30/06/2020 11:41 AM

Name	Date modified
 201020_60KW Briefing	22/10/2020 10:07 AM



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# Waste Management Plan (Planning Approval)

Development at:

60 King William St, Adelaide

Prepared for: Charter Hall

October 2020

Revision

- IMPORTANT NOTES-

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Document verification

Description	Waste Management Plan (Planning Approval) for Development at 60 King William St, Adelaide		
Version	Revision FINAL		
Issued	22 October 2020		
Verification	Prepared by	Checked by	Approved by
Name	C. Colby	RCP / Charter Hall	C Colby
Signature			

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# 1 Introduction

This document presents waste management plan (WMP) to support planning approval for a proposed commercial development (the Development) in Adelaide's Central Business District (CBD) at 60 King William St, Adelaide.

- The Building is a (15 storey) Multi-storey Office Building with ca. 39,000 m<sup>2</sup> of office Gross Floor Area (GFA) across upper levels (1 to 14), Retail and Food & Beverage at Ground Level, plus Supermarket at Ground and Basement Level with tenant amenities on a Mezzanine Level.
- The Project Architect is Cox Architecture, Developer is Charter Hall, and Traffic Engineer is GTA Consultants.
- The Development is in the Adelaide City Council (ACC/ Council) area.

This WMP describes the waste management system (WMS) proposed for the Development at planning stage and explains how the WMS can manage waste to achieve planning, regulatory and design objectives.

- The principal focus of the WMP at planning approval stage is demonstrating enough storage space for waste and recyclables (including to promote waste minimisation and landfill diversion by recycling), and ensure that efficient and safe access arrangements for collection vehicles are in place.
- For commercial buildings (as is case here) more comprehensive details of the construction fit-out and day-to-day operation of the waste system will be developed later (following planning approval) during detailed design, when prospective tenants are engaged and the operational Waste Management Plan (WMP) can be developed and finalised.

The content of the WMP (for planning approval) is aligned to that recommended by the South Australian Better Practice Guide – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014) (viz. Appendix D).

Council has already been provided with and provided feedback that indicates that they would support proposed collection access and WMS design arrangements (Colby Phillips Advisory, 1 April 2020).

## 2 Status of this document

This WMP for planning approval is based on most recent building plans and information (including likely tenant attributes) provided by the Project Architect. It may need to be updated if the design for the Development is changed.

## 3 Reference Information

### 3.1 Development

The following description is based on information provided by the Developer and Architect and proposed Building Plans: 60 KING WILLIAM STREET, Design Update, 20 October 2020.

The Development will be located on a ca. 4,000m<sup>2</sup> site at 60 King William St, Adelaide – see Figure 3-1 overleaf for Ground Level plan. The property fronts onto King William St (West side), Clarence Place (North side) and James Place (East side). Access to the property is from Grenfell St via Imperial Place. The Development would be a 15-storey Office building plus Basement level comprising:

- Levels 1 to 14 – Offices
- Mezzanine Level – for bike storage and some amenities.
- Ground Level – Entry Lobby, Arcade with Food & Beverage and Retail tenancies, Supermarket Access, Loading Dock and Back-of-House Areas including amenities
- Basement – Supermarket plus Car Parking

Table 3-1 below summarizes the expected Development metrics by Land Use.

Table 3-1 – Development metrics – summary per Design Update, 20 October 2020

Land Use	Description	Site Location	Land Use Type*	Dev. Metric(s)	
Commercial	Supermarket (Medium Format)	Basement with Ground Floor Access	Supermarket	2,750	m <sup>2</sup> Active Retail GFA
	Food & Beverage (F&B)	Ground	Light Café	610	m <sup>2</sup> GFA
	Retail		Dry Retail > 100m <sup>2</sup>	390	m <sup>2</sup> GFA
	Building Management Office / Reception		Office	38,925	m <sup>2</sup> GFA
	Office tenant(s)	Levels 1 - 14			m <sup>2</sup> GFA
	Amenities	Ground – Level 14	Showrooms	1,725	m <sup>2</sup> GFA
	Public Foyer / Lobbies	Ground & Level 1		630	m <sup>2</sup> GFA

\* Classification per South Australian Better Practice Guide – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014)

### 3.2 Regulatory compliance, planning &/or design requirements

The following regulatory compliance, planning &/or design requirements were considered relevant to and used to guide design of the waste system and information presented in this planning approval WMP.

- The South Australian Environment Protection (Waste to Resources) Policy 2010 (W2REPP) (2011).
- South Australian Better Practice Guide – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014).

{Cont. two pages over}



0m					
4.5m					
7.5m					
15m					



## Briefing

60 King William Street

- Adelaide City:
  - Development Plan (ACC, 30 April 2020)
  - Council Policy on Waste & Recycling Services (ACC, 22 July 2014)
  - *Adelaide City Council information on "Rubbish collection for business":*  
<https://www.cityofadelaide.com.au/business/support-resources/bins-rubbish-collection-hard-waste/>
- The South Australian Environment Protection (Noise) Policy 2007 (2008)
- South Australian Local Nuisance and Litter Control Act 2016 (2017)

### 3.3 Design data

- SUEZ (Developer's Proposed Principal Waste Contractor)
  - Services and collection vehicles available for the Development.
- GPO Exchange Building – Waste management data and learnings from other recently opened Adelaide CBD site (GPO Exchange Building at 10 Franklin Street), which is owned and operated by the Developer and (principally) serviced by SUEZ.

## 4 Design assumptions

### 4.1 Stakeholder consultation

Discussions were held with the Developer and Project Architect to identify market and end-user requirements or preferences for the Waste Management System (WMS) in the Development.

A visit was undertaken to the GPO Exchange Building, a similar-sized office building (with 28,500m<sup>2</sup> GFA of office space) that has recently been built by the Developer and became operational in November 2019. This site is principally serviced by SUEZ and it was expected that they too would be engaged by the Developer to service the new Development once it became operational.

Consequently, SUEZ was contacted to confirm their service availability for the Adelaide CBD.

A preliminary design for the WMS was sent to Council to obtain their feedback on and support for WMS design and collection access arrangements (Colby Phillips Advisory, 1 April 2020).

### 4.2 Collection service availability

Table 4-1 overleaf summarises SUEZ's collection service availability for service types relevant to this Development in the Adelaide CBD.

- SUEZ (along with all the other major waste contractors in Metropolitan Adelaide) already routinely deliver daily weekday services to the Adelaide CBD (plus some on Saturday and Sundays) to commercial businesses, including similar and neighbouring buildings.
- In general:
  - These services cover all major waste and recycling streams, including general waste, recycling, feed waste, cardboard and paper and confidential paper.
  - They can be provided for collection of front-lift (e.g. 1.5/3/4 m<sup>3</sup>) and/or rear-lift (e.g. 140/240 LMGB and 660/1100L skips) bins depending on the service.
  - Collections using other types of trucks (flat bed, box, Marrel, tanker, etc.) are readily available for cardboard bales, recycled deposit containers, confidential paper bins, sanitary bins, cooking oil, etc.
  - Most of these services to the CBD for bin collection occur at night between 9pm and 6am or early morning until 9am.
  - Other services can occur at night or during the day where less routine and/or smaller sized trucks are being used.
- For this site in this WMP:
  - Rear-lift services and all other services proposed and required can be supported by a  $\leq 8.8$ m length or MRV size truck provided by SUEZ (SUEZ, 24 October 2020).

Table 4-1 – Relevant SUEZ Collection Services availability in Adelaide CBD. All Services can be supported by SUEZ with a ≤ 8.8m length or MRV size truck

Service	Vehicle Type*	No. collections / week	Days Operating to Adelaide CBD						
			M	T	W	T	F	Sa	Su
General Waste - Dry	REL	6	X	X	X	X	X		
General Waste - Wet	REL	7	X	X	X	X	X	X	X
Dry Recycling (exc. Glass)	REL	5	X	X	X	X	X		
Cardboard	REL &/or Flat Bed	5	X	X	X	X	X		
Paper & Cardboard	REL	5	X	X	X	X	X		
Confidential Paper	Box Truck	5	X	X	X	X	X		
Soft Plastics	REL	5	X	X	X	X	X		
Food Waste	REL	6	X	X	X	X	X	X	

REL = Rear-lift

### 4.3 Regulatory, policy &/or planning considerations

Design and operation of the proposed WMS in this WMP has considered:

- The South Australian Environment Protection (Waste to Resources) Policy 2010 (W2REPP) (Government of South Australia, 2011), e.g.
  - Waste must subject to resource recovery processes, which can include source separation, before disposal to landfill.
- Adelaide (City) Development Plan includes requirements for waste management in new developments, e.g.
  - Waste Management:
    - Objective 28: Development which supports high local environmental quality, promotes waste minimisation, re-use and recycling ...
    - 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.
      - 103 Development greater than 2 000 square metres of total floor area should manage waste by ...:
        - (b) on-site storage and management of waste;
        - (c) disposal of non-recyclable waste; ...
  - Centres and Main Streets
    - Principles of Development Control:
      - 273 Provision for the movement of people and goods should comply with the following:
        - (d) development should include adequate and convenient provision for service vehicles and the storage and removal of recyclables, waste goods and materials
- South Australian Better Practice Guide – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014), which:
  - Provides guidance on expected design and operation of waste management systems for medium to high density residential and mixed-use developments.
- Council Policy on Waste & Recycling Services:

- Commercial premises and /or building are responsible for providing their own waste and or recycling services to their premises except where Council offers a suitable service to businesses.
- Council services to business include kerbside bin collection where appropriate (i.e. single premises with dedicated frontage, limited to kerbside sized bins) and/or cardboard collection service (where < 0.25m<sup>3</sup> presented each week)

#### 4.4 Design & operating provisions

The following site design and /or operational requirements or provisions were proposed for the waste system at the Development during Stakeholder Consultation and/or from considering relevant Regulatory, Policy &/or Planning considerations.

- Waste System Management – A shared system for all commercial tenants in the building, managed by the Building Owner, would be implemented to maximise recycling, minimise space and service costs, and control number of collection vehicles accessing the site.
- Waste Management Area – To be located at Ground level near the Loading Dock for collection access (via Imperial Place).
- Collection access – Would through the Loading Dock at Ground Level with ≤ 8.8m length or MRV size vehicles entering the Dock from Grenfell St via Imperial Place and using the Right-of-Way area in front of the Dock to manoeuvre and enable forward entry and forward exit from and to Grenfell St.
- Scope of Services provided to the Development – Would reflect best practice expectations for recycling by commercial tenancies at the site, including future aspirations for NABERS Waste Rating by Building Owner.
- Hard waste – Would be managed by the Building Owner using commercial services on an at-call and/or or on a periodic basis using (larger) skip bins temporarily placed in the Loading Dock.
- Bin washing – A bin wash area would be provided on-site, which would be multi-purposed with bin storage and set up as required.
- Specific commercial tenant requirements –
  - Office tenant(s) – May require secure area for confidential paper bin presentation in the Waste presentation area.
  - Supermarket – As principally located at Basement level, may require consideration of additional Back-of-House (BOH) waste storage to simplify logistics and minimise daily transfers to Ground Level waste area (for presentation &/or consolidation in shared bins/receptacles).

## 4.5 Services

Table 4-2 overleaf summarizes the proposed waste and recycling collection services to the Development. They are classified into different service types, which determine how they will be provided:

- Routine – Picked up on a regular basis (e.g. weekly, fortnightly, etc.)
- On-Call – Collected only when required (or as needed by calling in a waste contractor)
- Maintenance Services – The waste materials may be collected and disposed of by maintenance staff (e.g. lighting, sanitary, etc.)
- External Drop-off – Residents or tenants can take these waste/recyclable materials to an external drop off point (e.g. printer cartridges can be dropped off at an Officeworks store)

The scope of services available at the site is considered best practice for commercial building of this type. It can enable a future NABERS Waste Rating to be achieved if user disposal arrangements in tenancies are appropriately designed to encourage correct diversion of waste materials to recycling.

## 4.6 Waste & Recycling Volumes

Table 4-3 two pages overleaf summarizes the estimated waste and recycling volumes for different land uses in Litres/week.

- For the Offices and Supermarket tenancies, the Waste Resource Generation Rates (WRGRs) are based on proprietary values:
  - The Office WRGRs are based on waste and recycling generation seen at the GPO Exchange Building.
  - The Supermarket WRGRs are based on real-world data from similar size and format supermarkets previously observed (and confirmed) by Colby Phillips Advisory at other sites.
- For other land use types, estimated volumes are based on WRGRs recommended by the South Australian Better Practice Guide (SABPG) – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014), applying the most relevant 'Land Use Activity' Classification (per Table 3-1).
- Where appropriate, the following refinements were made during the assessment of waste and recycling volumes.
  - GFAs were converted to active Net Floor Area (NFA) for application of WRGRs.
  - SABPG recommended WRGRs were reasonably derated to reflect likely real-world generation rates observed in similar situations for this scale of development (*based on Colby Phillips Advisory's industry experience*).

Table 4-2 – Recommended services by land use type (and service type)

Service Type	Land Use						
	Basement	Ground Level			Level 1 – Level 14	Basement B2 – Level 14	Ground & Level 1
	Supermarket tenant <sup>^</sup>	Retail tenant(s) <sup>^</sup>	F&B tenant(s) <sup>^</sup>	Building Reception / Management Office(s)	Office tenant(s) <sup>^</sup>	Amenities	Public Foyer / Lobbies
Routine (regularly scheduled)	· General Waste	· General Waste			· General Waste		
	· Dry Recycling (Other)	· Dry Recycling		· Dry Recycling		· Sanitary Paper (to Food Organics)	
	· Cardboard	· Cardboard (& Paper)		· Cardboard			
	· Soft Plastics (Recyclable)	· Soft Plastics (Recyclable)		· Secure/ Confidential Paper			
	· Office Paper (OPTION)	· Food Organics		Soft Plastics (Recyclable)			
	· Secure/ Confidential Paper (OPTION)	· Recycled deposit containers		· Office Paper			
	· Food Organics	· Food Organics		· Food Organics			
	· Cooking Oil (OPTION)						
	· Recycled deposit containers (OPTION)						
	Pallets (Surplus/ Broken) *						
At-call (as needed)				· Hard/E-waste			
				· Printer Cartridges			
				· Batteries			
Maintenance (waste removed by contractor)				· Lighting (where applicable)		· Hygiene (Amenity / toilet areas)	
External (by tenant off-site)				Not applicable			

\* Pallets are usually reused and returned to the distribution centre or suppliers; temporary on-site storage is required for this purpose.

<sup>^</sup> Final configurations to be determined at time of lease negotiation when the Building becomes operational



Table 4-3 – Estimated Waste & Recycling volumes (uncompacted) for each service by Land Use Type

Waste/Recycling Service	Supermarket*	Retail <sup>^</sup>	F&B <sup>^</sup>	Office(s)*	Amenities*	Public Foyer / Lobbies*
	L/week	L/week	L/week	L/week	L/week	L/week
General Waste	8,133	1,289	5,829	14,013	863	992
Dry Commingled Recycling	1,877	328	833	7,007		
Cardboard (Uncompacted)	27,528	786	2,082	3,503		
Office Paper	938			10,510		
Confidential Paper	188			8,758		
Soft Plastic (Uncompacted)	2,503	197	555			
Recycled Deposit Container			1,041			
Sanitary Paper					2,760	
Food / Garden Organics	3,128	55	5,551	3,503		
Cooking Oil	125		104			
Hard waste	250	22	28	1,752	69	19
E-waste	50	4	6	350	14	4
Lighting waste	19	3	4	175	5	1
Printer Cartridges/ Batteries	4	0.7	1	105.10		
Sanitary					69	
TOTAL	44,742	2,684	16,032	49,676	3,779	1,016

\* Based on Proprietary Waste Resource Generation Rates informed by real-world data for these types of Land Uses and/or expected tenants

<sup>^</sup> Based on State Guideline WRGs using GFA and assumed active areas and adjusted to reflect actual expected real-world outcomes using Consultant's own experience

## 5 Waste System

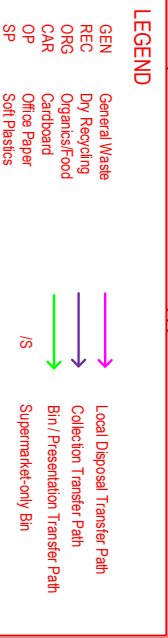
### 5.1 Waste Storage

The key waste storage (and presentation) areas in the WMS for the Development are listed below.

#### 5.1.1 Building Shared Waste Storage area

- Located at Ground Level near the Loading Dock – see Figure 5-1 overleaf that shows location and example configuration.
  - This area would contain all the necessary bins, equipment, and space for Routine and other Services to dispose of and manage waste and recycling for the entire site.
  - This includes the Supermarket tenancy even though this tenancy would have a separate area at Basement level (see further below) for local aggregation of waste and recycling in bins before bringing these bins up to the Building Shared Waste Storage area for presentation and/or consolidation.
- Table 5-1 two pages overleaf gives the Routine Services' schedule for bins or other storage units (e.g. cardboard bales on pallets) that would be required for storage in this area (based on the estimated waste and recycling volumes and collection frequencies indicated in this Table).
  - Figure 5-1 illustrates an example configuration of these bins and storage units, along with recommended equipment and space required to support other non-Routine services.
- This recommended equipment and/or space for the Building Shared Waste Storage area includes (but is not limited to):
  - Skip bin press for general waste – to compact the general waste in these bins and thus reduce number of bins and storage space needed
  - Cardboard compactor – to compact and bale cardboard, which would be loaded onto pallets (or mobile trolley) for storage to enable transfer to Loading Dock for collection
  - Soft plastics Bale Frame – to compact soft plastics into bags plus storage space
  - Confidential paper secure storage – a secure (fenced) area where confidential paper bins deemed sensitive by office tenants can be stored until collection for disposal.
  - Storage for general waste, recycling, food waste, recycled deposit container (or CDL) and paper bins.
  - Weigh platform (1.5m×1.5m) – that can be used by tenants and/or Building Manager to measure weights of waste and recycling brought to the area or leaving for collection (and would be essential for achieving a future NABERS Waste Rating).
  - Bin wash area (3.2m×2.7m) – Multipurposed with bin storage, this area can be temporarily set up (by relocating bins) as needed to clean the bins (or mobile equipment being used)

{Cont. two pages overleaf}



Colby Phillips Advisory

Table 5-1 – *Routine Services' bin schedule for the site* (inc. bin presented by Supermarket tenancy in Waste Management area)

Waste Storage Area(s)	Location	Routine Service	Collection Form	Estimated Waste/Recycling Volumes (L/week)	Vehicle Type	Service Provider	Collection Frequency (Events/ week)	Max. Bins/ Items Stored & Collected (per Event)		
								No.	Size (L)	Type
Loading Dock Waste Room	Ground Level	General Waste	Compacted (Bin Press)	9,194	REL	Private / Commercial	6	2	1100	Rear-lift Skip Bin
			Uncompacted	8,133				2	1100	
		Dry Comingled Recycling	Uncompacted	10,044	Flat bed		5	3	1100	Rear-lift Skip Bin
		Cardboard	Baled	11,300			5	5	550	Compacted Bale
		Office Paper	Uncompacted	11,448	REL		5	3	1100	Rear-lift Skip Bin
		Confidential Paper	Uncompacted	8,946	Box		5	13	140	MGB
		Soft Plastic	Manually Compacted	1,627	Flat-bed or REL		3	4	150	Manually Compacted Bag
		Recycled Deposit Container	Loose	1,041			3	2	240	MGB
		Food / Garden Organics	Uncompacted	13,814	REL		6	4	660	Rear-lift Skip Bin
		Cooking Oil	Uncompacted	229	Delivery or Flat bed		2	7	20	Can / Container

- Storage and/or presentation areas for sanitary, lighting, batteries and/or printer cartridges where collection is not supplied by Maintenance contractors.
  - Storage and staging areas for the trolleys / bins used by tenants to bring waste and/or recycling from their tenancy areas to the Shared Waste Storage area.
  - Hand wash bin.
  - Cupboards / shelving for storage of bags, liners and or other consumables (e.g. bale ties) needed for operation of the waste area.
- The Building Shared Waste Storage area is connected to tenancies by the Lift system and/or connecting corridors at Ground Level, which enable tenants to bring their waste and recycling to this area and dispose of it into bins or equipment provided so it can be aggregated and/or consolidated (see Local Disposal transfer pathways illustrated in Figure 5-1).
- It is also connected to the Loading Dock where the bins and/or storage units can be transferred to collection or emptying by the Waste Contractor (see Collection Transfer Pathway in Figure 5-1).
  - The Loading Dock area would have space for a broken pallet bin and temporary placement of Hard Waste/E-waste skip bin and/or cardboard bales.
- During collection events, the collection vehicle would reverse into the Loading Dock, park, the waste contractor would alight, fetch the bins and/or storage units from the Shared Waste Storage area, empty or load the bins or storage units onto or into the vehicle, return any empty bins (or pallets), then return to the collection vehicle to leave the Loading Dock.

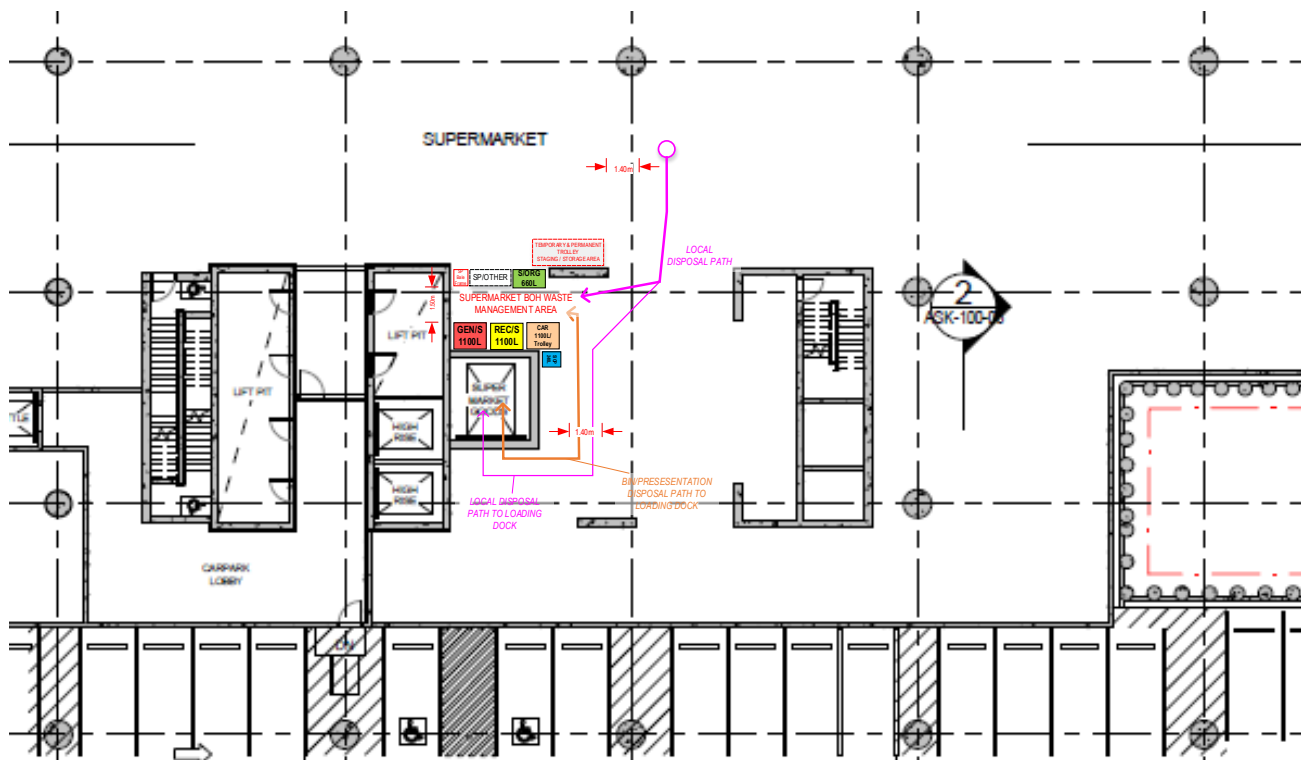
#### 5.1.2 Supermarket BOH Waste Management area

Due to location of most activities at Basement level and scale of operation, the Supermarket BOH would have its own local waste management area.

- An example location and layout for this area is illustrated in Figure 5-2 overleaf.
- It would contain bins and trolleys to enable local aggregation of waste and recycling by the Supermarket tenant, which would be transferred to the Ground Level Building Shared Waste Storage area for presentation and/or consolidation, e.g.
  - General waste (1100L skip), recycling (1100L skip), spare confidential paper (140/240L MGB) and food waste (660L skip) bins and soft plastic bags (trolley) – would be transferred and presented at Ground Level
  - Cardboard – would be aggregated in a Trolley or bin, which when full would be taken to Building Shared Waste Storage area and unloaded into the Baler.
  - Paper – would be aggregated in a Trolley and transferred to Building Shared Waste Storage area for disposal (into the 1100L skip bin provided).
  - Other waste & recycling – would likewise be transferred to Building Shared Waste Storage area for disposal, consolidation and/or presentation.
- This arrangement simplifies the waste management logistics for the Supermarket tenant by minimising the number of trips per day they would need to make to Ground Level to transfer bins and/or dispose of waste and/or recycling.

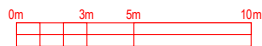
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60KWS  
Basement Level  
Supermarket BOH (Local) Waste Management Area  
PRELIMINARY DESIGN CONCEPT ONLY



**NOTES:**

1. CARDBOARD AND OFFICE PAPER TRANSFERRED TO GROUND LEVEL FOR AGGREGATION OR COLLECTION
2. ALL OTHER WASTE & RECYCLING DISPOSED OF IN BOH WITH BIN / RECEPTACLE TRANSFERRED TO GROUND FOR PRESENTATION / COLLECTION (WHERE SPARE BINS ARE KEPT TOO)



**LEGEND**

GEN	General Waste	→	Local Disposal Transfer Path
REC	Dry Recycling	→	Collection Transfer Path
ORG	Organics/Food	→	Bin / Presentation Transfer Path
CAR	Cardboard		
OP	Office Paper		
SP	Soft Plastics		
/S	Supermarket-only Bin		

Figure 5-2 – Basement BOH Waste Management area for the Supermarket tenancy

## 5.2 Operation

### 5.2.1 Routine Services

The following provides an overview of how each step in the operation of WMS for Routine Services would operate. Many of the internal details for User Storage (e.g. bin in tenancies) and equipment (e.g. Trolleys) for transfer to Local Disposal points will be clarified during detailed design and finalised when the building becomes operational when further information about individual tenant requirements can be confirmed. These details are therefore not provided here but will be developed as part of the operational WMP during detailed design (see additional comments in Section 5.2.7) that will inform the construction fit-out requirement.

- User Storage – The types and size of user receptables and/or trolleys for each tenancy would be decided during detailed design and development of the operational WMP.
  - These user receptables and/or trolleys would reflect and align to the waste and recycling services recommended for each land use type, i.e. see Table 4-2, and be designed, positioned and signed so as to encourage source separation to maximise recycling (including to enable the Building to achieve a future NABERS Waste Rating), e.g.
    - Office tenants – would have under-desk paper only bins; bin stations (e.g. see example in Figure 5-3 overleaf) throughout office areas and in kitchens with general waste, dry recyclables, paper only, soft plastics, and food waste; and separate confidential paper and paper and cardboard bins plus battery and printer cartridge bins in stationery rooms.
    - F&B tenants – would have bins, receptables and/or trolleys for general waste, cardboard, recycled deposit containers, soft plastics, other dry recyclables, food waste, and cooking oil.
    - Retail tenants – would have bins, receptables and/or trolleys general waste, cardboard, soft plastics, other dry recyclables plus food waste.
    - Supermarket tenant – would have bins, receptables and/or trolleys for general waste, cardboard, recycled deposit containers, soft plastics, other dry recyclables, food waste, and cooking oil plus similar arrangements to those outlined for Office tenants in their Office areas.
    - Amenities – would have sanitary paper and general waste bins.
    - Public place areas – would have general waste bins in suitable and clearly articulated enclosures.
  - These user receptables and/or trolleys would allow tenants and/or their staff and/or cleaners to safely load or empty and transfer the waste and recycling to their respective waste storage area for disposal.
  - They would be properly labelled, and colour coded (in line with those recommended in AS 4213) and with signage to signal how they should be correctly used to maximise source separation.

{Cont. overleaf below Figure 5-4}





Figure 5-3 – Example of a bin station with waste and recycling bins



Figure 5-4 – Example of a trolleys to aggregate and transfer waste from tenancy to Waste Area for bin disposal used by office tenants at GPO Exchange Building, and the weigh platform at this site

- Local Disposal – Tenancy staff and/or cleaner(s) would transfer waste & recycling from User Storage to their respective waste storage area(s) (see below) and empty it into the bins provided.
  - They may be required (by the Building Owner and/or Manager) to weigh the material in these user receptacles and/or trolleys using a weigh platform provided in the Building Shared Waste Storage Area (see Figure 5-4 above), especially if data is being collected for a NABERS Waste Rating.

- Waste Storage areas – The waste storage areas have been outlined in Section 5.1 and illustrated in Figure 5-1 and Figure 5-2.
  - Building Shared Waste Management Area – Would be used by the Office and Ground-level Retail and F&B tenants and Building Management for disposal, aggregation and/or presentation of their waste and recycling as well as the Supermarket tenant for aggregation and/or presentation of their waste and recycling.
  - Supermarket BOH Waste Management Area – Would be a local waste management area used by the Supermarket tenant to aggregate major waste and recycling materials before transferring them to the Building Shared Waste Management Area for consolidation and/or presentation.
- Collection – Would be a pull-in, pull-out service (i.e. collecting the waste, recycling and/or bin directly from the Building Shared Waste Storage area) by a commercial / private contractor (e.g. SUEZ), temporarily parking in the Loading Dock at Ground Level.
  - For cardboard bales on pallets, these may be transferred to a presentation area in Loading Dock using a motorised pallet trolley or walker, so collection by waste contractor can occur more conveniently and quickly.
  - The same could occur for other services if space in Loading Dock permits and/or Loading Dock staff can facilitate the transfer before collection occurs.

## 5.2.2 At-call Services

### 5.2.2.1 Hard waste/ E waste

This service would be coordinated and/or organised by the Building Manager for tenants (for periodic disposal events) and/or at a tenant's request (in event of lease vacating or tenancy clean-out, or another event).

- It can involve a Marrel-type skip bin (e.g. 2.5-5m<sup>3</sup>) being dropped off in the Loading Dock by a waste contractor, where it would reside for a specified period (e.g. 24-48 hours) during which the tenant(s) can load their Hard waste/ E-waste into it.
  - Figure 5-1 illustrates an example of where such a bin could be positioned in the Loading Dock for this purpose.
- Alternatively, tenants can organise for a hard waste contractor to park in Loading Dock and directly transfer the waste from tenancy and onto or into a truck.

### 5.2.2.2 Hygiene – Public toilets / Amenities

There will be End-of Trip and/or toilets across the Development to service the public and/or staff working for tenants.

- If collection of hygiene waste is organised separately to cleaning services, this service is usually provided by a specialist (commercial) contractor with smaller collection vehicle and would be coordinated and/or scheduled by Building Management in consultation with the tenants.
- This specialist contractor can temporarily park in the Loading Dock when collecting and/or replacing sanitary waste receptacles (but may also park elsewhere if permitted as the vehicle is usually smaller).

#### 5.2.2.3 Lighting, Batteries, Printer Cartridges, and other Waste items

Storage receptacles and/or space would be provided in the Shared Building Waste Management area for disposal and /or presentation of these items (where not being met by Maintenance Services).

- Collections for these items would be organised by the Building Owner and /or Manager as required.
- This waste contractor would temporarily park in the Loading Dock when collecting these waste items.

#### 5.2.3 External Services

Tenants would not require access External Services as all waste and recycling disposal needs would be met by Routine, At-call and Maintenance Services provided by the Building Owner and /or Manager.

#### 5.2.4 Maintenance Services

Maintenance Services at the Building (e.g. replacing lighting, photocopier/printer servicing, building repair work, etc.) would usually dispose of the waste that these maintenance activities generate.

- These waste materials would be handled and disposed of by the contractor undertaking these services.
- This could include any garden waste/ clippings (if any) that may arise at the Development.
- [Dedicated on-site storage for these waste materials is therefore not necessarily needed but temporary storage provision for presentation in the Building Waste Management Area at Ground Level has been allowed for.]

#### 5.2.5 Transfer pathways

The transfer pathways for the WMS are highlighted in Sections 5.1 and 5.2 and on Figure 5-1 and Figure 5-2.

- The table overleaf provides a guide for sizing and designing these pathways.
- Inspection of the current plans indicate that these requirements should be met by the Building design at this planning approval stage.
- All relevant transfer pathways however should be reviewed and confirmed at detailed design stage to ensure they are appropriate.

Table 5-2 – Guidelines for sizing and design of Transfer Pathways

- Transfer pathways –
  - Local disposal – less than 30m and free of steps, no grades greater than 1:15.
  - Bin transfers – less than 30m with no grades greater than 1:10.
  - Collection – less than 30m with no grades greater than 1:10
- Corridor widths –
  - 240L MGBs or smaller bins / loads – min. 900 mm (although min. 1,200mm would be recommended in highly trafficked areas)
  - 660L or larger skips and/or waste loads – min. 1,500mm (with 1,800mm recommended in highly trafficked areas)
- Doors –
  - Local disposal access – 800mm
  - Transfer pathways– Appropriate to the size of bin to be transported, e.g.
    - 240L MGB – min. 850mm
    - 660L skip – min. 1,200mm
    - 1,100L skip – min 1,400mm
- Floors – Hard surfaces where bins and skips are to be carted
- Lifts – Where relevant, all lifts should be sized to allow for bins, pallets and/or bulky hard waste items.

### 5.2.6 Bin Cleaning

The site would be provided with an on-site bin wash area, which would be located in the Building Shared Waste Management area – see Figure 5-1.

- This area would be 3.2m×2.7m to accommodate cleaning of a standard 1,100L skip.
- It would be graded (with no steps) from room floor level to a drain (within the area) connected to sewer with basket screen to catch solids.
- The walls (to 1.5m) and floor (including to 1m perimeter around) would be tiled or epoxy lined to waterproof the area.
- The area would be fitted with an industrial power point and cold-water supply and faucet.
- The area would be multipurposed with bin storage and temporarily set up (with bunding) for operation when needed by moving bins.

Alternatively, if more convenient, bin cleaning may be outsourced to an external contractor, e.g. <http://binforce.com.au/>).

- These external contractors generally have self-contained bin washing systems on back of ute or truck that enable them to clean bins on site – Figure 5-5 below.
  - Or some will remove bins from site, replacing them with an empty spare, clean the bins, then return them to site.
- Their vehicles can usually access basements, undercrofts, or other on-site covered parking areas where waste storage areas are located (e.g. to min. clearance of 2.2m).
  - Or in this case it could park at Ground Level in the Loading Dock (with bins temporarily brought to it for cleaning).



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

#### 5.2.7 Operation, Management & Communication

- Waste system operation and management –
  - The Building Owner and Manager would be responsible for managing and operating the waste system at the site.
  - Commercial / private contractors engaged by the Building Owner and Manager would be responsible for delivering waste collection services.
  - There would be one waste contractor per service.
- Operational Waste Management Plan –
  - During detailed design of the building, the Developer should develop an operational WMP that should further outline and confirm the services for expected tenants, outline the details of User Storage and Local Disposal systems in each tenancy, and clarify the location and layout of waste areas and collection arrangements – so these can guide the construction fit-out to meet expected future waste management requirements and inform the content of Building User Manual below.
  - This operational WMP should be updated as the Building becomes operational and tenant leases are confirmed, to ensure it reflects the management requirements of the site.
- Building User Manual –
  - Advice and instructions on waste management and using the waste systems should be included by the Building Owner and Manager in the Building User Manuals developed for commercial tenants, including contact information for further information, questions, and issues.
  - This advice / information would include advice to tenants on how to access hard waste services and/or properly dispose of other waste / recycling items including lighting and batteries.

- Tenancy arrangements –
  - Obligations for commercial tenants to properly access, operate and use the waste systems at the Building should be written into rental or lease tenancy agreements.
- Emergency Response / Site Managements Plan –
  - Should include response measures (or contingencies) for:
    - Waste collection services suspended or not available; and
    - Lift access failure.

### 5.3 Other Waste System Design or Management Issues

The following should be considered and/or implemented with these details fully resolved at detailed design stage with the waste contractor and building designer and incorporated into the operational WMP.

- 1) Bins – These should comply with Australian Standard for Mobile Waste Containers (AS 4213).
- 2) Signage – Appropriate signage in all User Disposal, Local Disposal and Waste Storage Areas should be used to ensure correct disposal of waste and recycling:
  - Signage should conform to the requirements recommended in the South Australian Better Practice Guide – Waste Management in Residential or Mixed-Use Developments (Zero Waste SA, 2014).
- 3) Weigh Platform – Consideration may need to be given as to its accuracy including whether it needs to comply with relevant National Measurement Institute standards for trade measurements.
- 4) Vermin, hygiene & odour management (inc. ventilation)
  - Inspection & Cleaning –
    - An inspection and cleaning regime should be developed and implemented by the Building Owner and/or Manager, including ensuring that surfaces and floors around user and/or local disposal areas, transfer pathways and waste storage and/or presentation areas are kept clean and hygienic and free of loose waste and recycling materials.
  - Odour Control –
    - The Waste Storage areas shall be mechanically ventilated to ensure negative pressure for control of odours.
      - The ventilation would extract to atmosphere, to prevent odour build up.
      - The extraction vent discharge location would be selected to avoid impact on neighbouring properties and / or the public.
    - It should be a requirement for food waste bin(s) that lids are closed after disposal events.
  - Bin cleaning –
    - As already mentioned, an on-site bin wash area has been provided and/or bin cleaning may also be outsourced to an external contractor.
    - Bin washing activity should be coordinated and managed by the Building Owner and/or Manager, so it occurs on a regular basis to keep bins in a sanitary condition.
- 5) Access & security –
  - Access to the Building Shared Waste Storage Area for disposal or collection should be secure and only accessible by key or fob or access code.

- This key or fob or access code would be provided to commercial tenant(s) and waste contractor(s) delivering services to the Development.
  - CCTV is recommended to monitor waste disposal practices in all Waste Storage Areas.
- 6) Grease trap waste
  - This liquid waste stream is not considered in this report, and if relevant to the Development, should be addressed separately as part of a Building Services assessment.

## 5.4 Collection arrangements

### 5.4.1 Vehicles

Table 5-3 below summarizes the type and size of collection trucks that would be collecting waste and/or recycling at the Development.

- These dimensions allow for standard waste collection vehicles used by commercial waste contractors.
- Note: There a range of different sized trucks available and it would be incumbent on the Building Owner or Manager to engage a contractor with suitable sized trucks depending on selection of collection access and point.

Table 5-3 – Typical dimensions and clearance requirements for largest waste trucks expected at this development

Type of Vehicle	Rear-lift truck*	Pan-tech/skip/ flat-bed truck
Vehicle Dimensions	Up to 3.7m (h) x 2.7m (w) x ≤8.8m (l) (final dimensions depend on collection access requirement)	Up to 3.8m (h) x 2.7m (w) x ≤8.8m (l) (final dimensions depend on collection access requirement)
Vehicle turning circle	15-20m (depending on truck selection)	15 -20m (depending on truck selection)
Travel/ Access provisions:	See Vehicle Dimensions above Vertical Clearance: Up to 4m clearance (depending on truck selection)	See Vehicle Dimensions above Vertical Clearance: Up to 4m clearance (depending on truck selection)
Operating provisions (when parked & loading)	Parking Space Length: Up to 11m Vertical Clearance: Up to 4m (depending on truck selection & allowing for rear loading)	Parking Space Length: 10-11m Vertical Clearance: Up to 4m (depending on truck selection & allowing for rear waste loading)

### 5.4.2 Access

Proposed collection arrangements for the above vehicles have been reviewed with the Traffic Engineer – see Traffic Engineer’s report for further details and discussion of relevant traffic matters

- Waste collection trucks would access the site (in forward direction) from Grenfell St via Imperial Place.
- The size of trucks that can be accommodated and have been designed for is ≤8.8m
- The trucks would manoeuvre in the Right-of-Way area outside the Loading Dock (see Figure 5-1) and reverse into and park in the Loading Dock.
- After collection events (or bin drop-off), the trucks would exit the site (in forward direction) back onto Grenfell St.

The Traffic Engineer has prepared Swept Path Modelling to confirm that the above manoeuvring is feasible for a ≤8.8m is feasible and can be safely undertaken – see Figure 5-6 overleaf for example of this modelling.



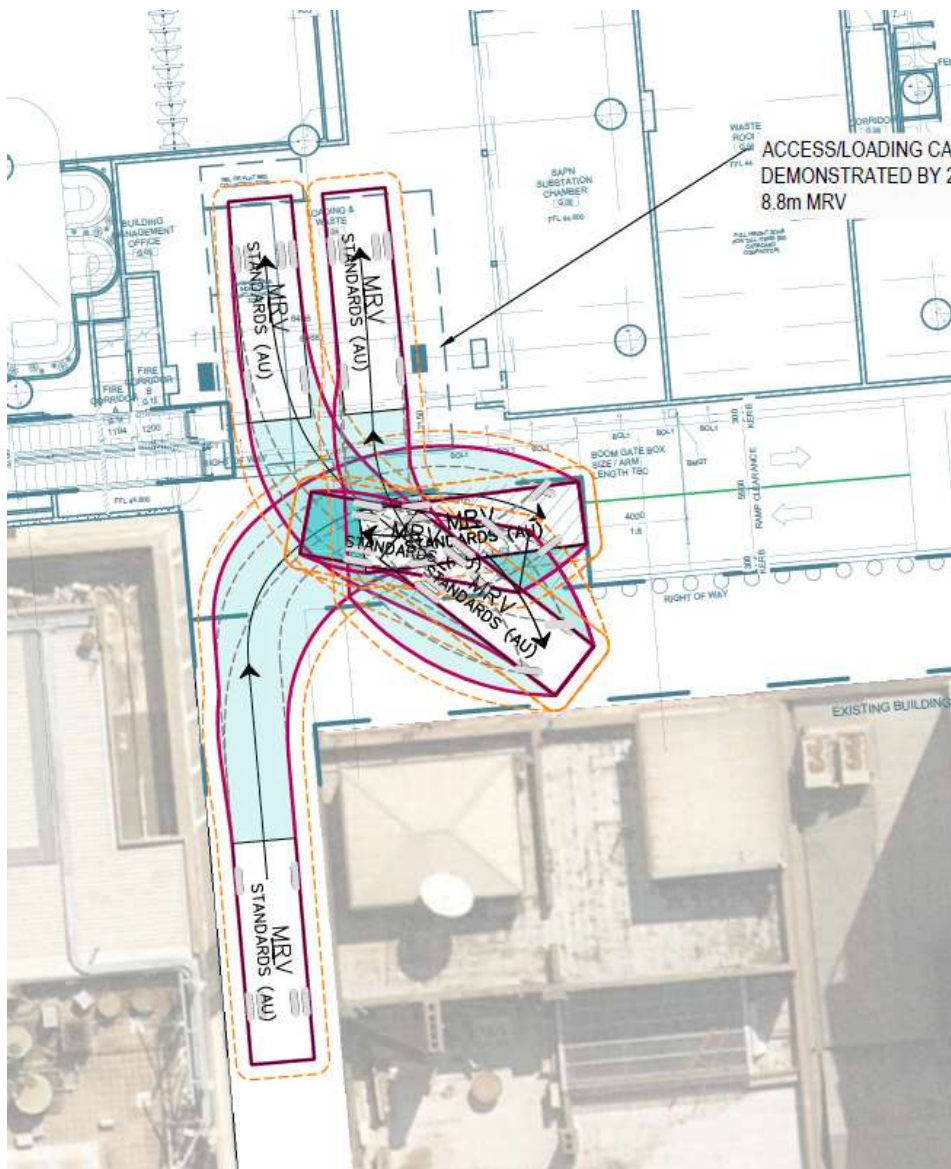


Figure 5-6 – Swept path modelling for a REL MRV-sized truck entering via Imperial Place and manoeuvring to reverse into Loading Dock (after which it would exist in forward direction) – as provided by Traffic Engineer, GTA Consultants, 9 September May 2020, refer to their report for further details

#### 5.4.3 Frequency

Table 5-1 on pg. 14 gives the collection frequency of the Routine Services that would be occurring at the site. This schedule is illustrated by the example in Table 5-4 overleaf to show how this could translate into days when these collections would occur. Also indicated in Table 5-4 is the likely timing of when these services during the day. Note: This schedule assumes a single (or one) waste contractor per service for the site.

In addition, there would be periodic At-call collections for Hard/E-waste, sanitary and other items. These which may occur 1-2 times per week to several times a month depending on service.

Table 5-4 – Potential Routine scheduled service collection events & Scheduling

Routine Service	Collection Frequency (Events/wk)	Expected Collection Period	Collection Event Scheduled						
			M	T	W	Th	F	Sa	Su
General Waste	6	10pm - 7am	X	X	X	X	X	X	
Dry Comingled Recycling	5		X	X	X	X	X		
Cardboard	5		X	X	X	X	X		
Office Paper	5		X	X	X	X	X		
Confidential Paper	5	7am - 6pm	X	X	X	X	X		
Soft Plastic	3	10pm - 7am	X		X		X		
Recycled Deposit Container	3	7am - 6pm	X		X		X		
Food / Garden Organics	6	4am - 9am	X	X	X	X	X	X	
Cooking Oil	2	7am - 6pm		X			X		

#### 5.4.4 Duration

- Waste collections (in Loading Dock) for Routine Services should only take 5 to 15 min to complete depending on the service and number of bins or waste items to transfer from the Shared Building Waste Management area at Ground level.to the Loading Dock.
- The duration of a Hard waste collection events may be up to 10 to 15 min to lift the skip bin in the Loading Dock onto the back of a truck.
- Sanitary collections may take 5 to 10 min if receptables are collected from the Shared Building Waste Management area at Ground level., but longer times may occur if being collected directly from toilets depending on their number and locations across the site.
- Duration of other collection would be <10 to 15 min where these items are presented in the Shared Building Waste area at Ground level.

#### 5.4.5 Scheduling

Table 5-4 above indicated the expected scheduling of Routine Services.

- Most will occur at night between 10pm and 7am (as already occurs for all other commercial services delivered by major waste contractors in the Adelaide CBD).
  - All existing neighbours are commercial premises so night-time and/or early morning operation of collection services should not cause a noise nuisance perceived as problematic.
- For other less frequent services, some of these services may occur during the day, usually early morning.
- These final collection times and schedules should be confirmed when the building becomes operational based on advice from the Traffic Engineer, in consultation with Council, selected waste contractor, and other relevant authorities and/or stakeholders.

#### 5.4.6 Potential Traffic Impacts

If collections are scheduled as outlined above, we would not expect that proposed waste services to this Development should cause any substantive extra impact on traffic on Grenfell St and in Imperial Place (or in surrounding streets), outside what already occurs to support existing and neighbouring land uses around this site.

- As mentioned above, most commercial waste and recycling services to the Adelaide CBD already occur daily at night to avoid conflict with daytime traffic.
- In this respect:
  - The existing commercial use of the site already has waste services entering and exiting Imperial Place.
  - These existing services involve lifting bins presented in Imperial Place using front-lift trucks that likely enter Imperial Place in forward direction and exit back to Grenfell St by reversing.
  - The waste system proposed for the Development will improve this situation by ensuring that all emptying of bins occurs on-property in the Loading Dock and trucks enter and exit Imperial Place in a forward direction only.
- Council has viewed on the proposed arrangements for collection access to the Development and are supportive (Colby Phillips Advisory, 1 April 2020).

## 6 References

- ACC. (22 July 2014). Council Policy - Waste & recycling Services (ACC20 14/ 11502).
- ACC. (30 April 2020). Development Plan (Consolidated). Department of Planning, Transport & Infrastructure.
- Colby Phillips Advisory. (1 April 2020). Email exchange with Vitor Martins, Manager Waste, Cleansing & Fleet, Adelaide City Council providing and confirming appropriateness of design details for Waste Management System at 60 King William St.
- Government of South Australia. (2011, November 24). Environment Protection (Waste to Resources) Policy 2010.
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- South Australian Government. (2017). Local Nuisance and Litter Control Act 2016.
- SUEZ. (24 October 2020). Email confirmation with Peter Young that 8.8m trucks were available for proposed services and collection frequencies at 60 King William St development.
- Zero Waste SA. (2014). South Australian Better Practice Guide – Waste Management in Residential or Mixed Use Developments.

## Adelaide

[illegible]

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**CLIENT**

Charter Hall



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**ARCHITECT**

COX



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**PROJECT MANAGEMENT**

RCP



## Amendment Register

Rev. No	Section & Page No.	Issue/Amendment	Author	Project Engineer	Checked	Date
P1	-	Original	AM	TP	WL	25/05/2020

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## 1. INTRODUCTION

This Sustainability Statement has been prepared for the 60 King William Street, Adelaide project, and summarises the sustainability targets and strategies used to minimise the development's environmental impact throughout design, construction and operation.

**The project is targeting the following environmental sustainability certifications related to holistic sustainable design and construction, and to energy efficiency during operation:**

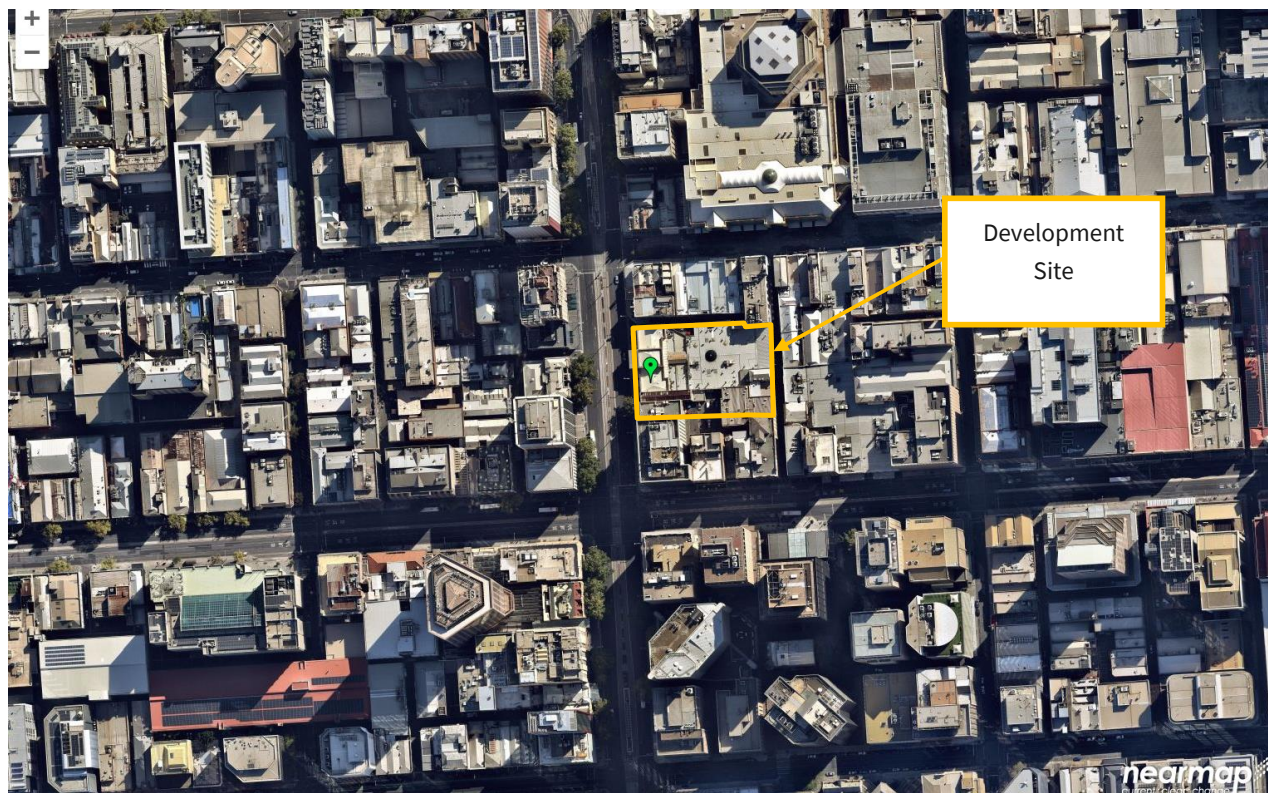
- **5 Star Green Star - Design and As-Built v1.2 rating, which represents the standard of "Australian Excellence" in sustainable design and construction.**
- **5 Star NABERS Energy, which represents "Excellent" energy efficiency in operational performance.**

This report is structured as follows:

- A synopsis of the development;
- A discussion of the current Green Star and NABERS rating schemes; and
- A list of the initiatives targeted by the design to achieve the above environmental targets.

## 1.1 Development Description

**Location:** The project site is at 60 King William Street, Adelaide. It is bounded on three sides by King William Street, Clarence Place and James Place. The location of the development site is shown on the figure below:



## 1.2 Project Synopsis

The proposed 60 King William Street project will consist of the demolition of existing buildings and construction of a new commercial office tower development facing onto King William Street in Adelaide.

Incorporating leading sustainable design and construction features, the project is proposed to incorporate the following:

- Basement carparking, loading dock, bicycle store, supermarket, fire pump room and End of Trip Facility (EOTF),
- Ground Floor incorporating Entry foyer, Retail & Café tenancies,
- Mezzanine back of house areas including fire tanks & mechanical plant
- Level 01 to L13 Commercial Office Levels,
- Level 14 Plantroom level,
- Level 15 Roof

A primary aim of the development is to create a commercial office tower with leading yet practical sustainable design and construction for the temperate climate. Significant work will be undertaken to firmly establish leading practice sustainable design into the proposed development.

This sustainability performance will be achieved by the holistic integration of ESD elements throughout the building and site design. Wherever possible the ESD elements will be integrated into the building function to achieve the desired level of sustainable performance.

### 1.3 Green Star – Design and As-Built Sustainable Building Rating Scheme

Green Star is a comprehensive, national, voluntary environmental rating system administered by the Green Building Council of Australia<sup>1</sup> that evaluates the environmental design and construction of buildings. With more than 26 million square metres of Green Star-certified space around Australia, Green Star has transformed Australia's property and construction market.



Green Star covers the following nine categories to assess the environmental impact that is a direct consequence of project site selection, design, construction and maintenance:

- Management;
- Indoor Environment Quality;
- Energy;
- Transport;
- Water;
- Materials;
- Land Use and Ecology;
- Emissions; and
- Innovation.

Green Star certification is subject to meeting four (4) eligibility criteria: Spatial Differentiation, Space Use, Conditional Requirements, and Timing of Certification. If one or more of the eligibility criteria are not achieved, the project cannot be certified.

Each category is divided into credits, each of which addresses an initiative that improves or has the potential to improve environmental performance. Points are awarded in each credit for actions that demonstrate that the project has met the overall objectives of Green Star.

The following Green Star certified ratings are available:

- 4 Star Green Star Certified Rating, signifies 'Best Practice' in environmentally sustainable design and construction;
- 5 Star Green Star Certified Rating, signifies 'Australian Excellence' in environmentally sustainable design and construction;
- 6 Star Green Star Certified Rating, signifies 'World Leadership' in environmentally sustainable design and construction.

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<sup>1</sup> <http://www.gbca.org.au>

The proposed strategy is to target a 5 Star Green Star - Design and As-Built v1.2 certified rating, demonstrating 'Australian Excellence', with a buffer of credit points to provide a nominal design margin. Green Star certification is subject to meeting the prescribed eligibility criteria and assessment of the design by the Green Building Council of Australia.

Green Star certification is awarded by the Green Building Council of Australia on the basis of a Green Star Assessment undertaken by an Independent third-party Assessor. The optional Green Star Design Review rating is assessed by the Green Building Council of Australia independent assessor on the basis of the Tender or For Construction documentation. The Green Star - Design and As-Built certified rating is assessed on the basis of As-Built documentation together with commissioning data. The Green Building Council of Australia would grant a certificate to confirm the rating achieved, which will be effective for the life of the building.

#### 1.4 NABERS Operational Sustainable Building Rating Scheme

NABERS – the National Australian Built Environment Rating System – is a performance-based rating system for operational buildings. NABERS rates a building on the basis of its measured operative impacts on the environment, and provides a simple measure of how well these environmental impacts are managed compared with peers and neighbouring buildings.



NABERS was originally developed by the Australian Department of Environment and Heritage and is currently administered by the NSW Department of Planning, Industry and Environment (DPIE).

NABERS for offices currently incorporates four components

- NABERS Energy: assess Greenhouse Gas (GHG) emissions as a measure of energy efficiency;
- NABERS Water: assess potable and non-potable water use as a measure of water efficiency;
- NABERS Waste: assess general and recyclable waste generation rates as a measure of waste and recycling efficiency;
- NABERS Indoor Environment: assess thermal and acoustic comfort, indoor air quality, lighting and layout as a measure of indoor environment efficiency.

The project is targeting the following NABERS rating relating to energy efficiency during operation:

- 5 Star NABERS Energy rating.

The development would be registered with the National NABERS Administrator for a NABERS Office Energy (Base Building) Commitment Agreement at a 5 star rating level, approaching "Excellent Performance".

The proposed strategy would be to target in excess of a 5 star modelled Energy rating in order to provide a design margin that would best satisfy NABERS independent design review expectations.

Upon reaching the planned date for the NABERS ratings, a NABERS accredited assessor would be arranged to carry out the performance assessment of the premises. The National NABERS Administrator would grant a certificate to confirm the rating achieved, which will be effective for a 12 month period. Building management would be required to manage and undertake annual NABERS ratings to maintain their currency during building operation.

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## 2. SUSTAINABLE DEVELOPMENT INITIATIVES

This section of the report addresses the sustainability components of the development and summarises the sustainability benefits of the new development.

The sustainability requirements of the building have been addressed with respect to:

- The project-specific environmental design initiatives incorporated.
- The Green Star rating tool.

Key passive design and building services initiatives proposed to be incorporated into the development are summarised. The project team has identified these initiatives and design strategies, which are proposed to comply with the environmental rating requirements.

### 2.1 Building Facade

The commercial building facades will incorporate high performance glazing designed to significantly reduce energy consumption within the building and address thermal discomfort issues. The building façade will have a maximum average sound pressure level from outside noise intrusion that does not exceed 50 dBA.

#### 1.1.1 Passive building design

- High performance vision panel IGU glazing system. A glazed façade system with optimised solar heat gain coefficient (SHGC) and visual light transmittance (VLT) that can control solar ingress while providing excellent daylight penetration.
- Insulated, high air-tightness building envelope, to minimise thermal losses and leakage to the external environment.
- Shading of glazing areas to reduce solar penetration to be considered as required.

#### 1.1.2 Reduction of Thermal Load

Optimised window to wall ratios and shading devices will be explored to ensure that heat load will be reduced on the external façade and control solar penetration as required.

### 2.2 Energy and Water Efficiency Strategies

To complement the passive design initiatives incorporated into the built form the following energy and water efficiency measures will be implemented in the engineering services provided within the development to minimise utilities consumption and therefore greenhouse gas emissions and peak demands.

#### 2.2.1 Mechanical Services

The air conditioning systems will be designed to respond to the environmental performance of the building's façade in order to maximise thermal comfort and reduce energy costs.

The following energy initiatives are intended to be adopted:

- High efficiency electric centrifugal chillers with a minimum COP of 5.8 and a full load efficiency of 0.17 kWE/kWR in a parallel configuration;
- Variable speed chilled water pumps controlled so that they always operate at the minimum possible speed to satisfy the load.
- Variable speed fans controlled so that they always operate at the minimum possible speed to satisfy the load.

- Low temperature variable-air volume air conditioning system that matches the air supply to the actual load (not the peak load).
- Separate air handling units for each façade and the interior zone to eliminate re-heat and maximise economy cycle operation.
- Design outside air quantity improved by 50% beyond NCC requirements and demand controlled in response to CO2 sensors to adjust outside air rates to occupancy rates while maintaining high indoor air quality.
- High quality return air filtration.
- Fresh air dampers shut during early morning warm-up.
- Low bleed rate cooling towers to minimise water consumption.
- Variable speed car park ventilation fans controlled by CO sensors.
- Unoccupied areas isolated to prevent air conditioning to these areas.
- Variable speed fan for the tenants' fresh air system.
- Variable speed pumps for the tenants' condenser water system.
- Major fans to have efficiencies greater than 69%.
- High efficiency motors used throughout.
- Multiple chillers including a small capacity (low load) machine used to allow the chillers to operate at an efficient band during medium and low cooling load periods.
- Low duct velocities employed to reduce fan energy.
- Mechanical equipment sound levels to open offices and lobbies to have a maximum noise criteria (NC) of 40.

#### **2.2.2 Photovoltaic Solar System**

- A photovoltaic solar array will be designed for the roof of the building and the size of the array will be maximised.

#### **2.2.3 Lighting**

The following lighting initiatives are intended to be adopted:

- Energy efficient LED light sources will be used for the office lighting which does not contain any mercury; any fluorescents included in the design will be specified as low-mercury.
- Office lights will be installed to provide illumination and glare control better than Australian Standard requirements. Power for lighting will be less than 5 W/m2.
- Intelligent programmable, digitally addressable lighting control system incorporating movement and ambient light sensors and enabling individual occupant control by commercial office tenants.
- Lighting system will be designed to limit glare.
- Amenities on office floors will be activated by movement sensors in the access corridors.
- Lighting in car parks will be controlled after hours by movement sensors.

#### **2.2.4 Power Factor Correction**

- Power factor correction plant will be provided as required to reduce the kVA electrical demand of the building on the external electricity distributor's network.



### 2.2.5 Hydraulic Services

The energy used for the hydraulic services is low in an office building. Domestic hot water will be provided by efficient heat pump equipment for the End of Trip facilities and by point of use electric heaters for the office floors.

Water efficient fittings and fixtures reduce the pumping otherwise required.

Circulating pumps will be a shut off after business hours.

The following features will be incorporated to significantly reduce potable water consumption:

- 6 Star WELS rated urinals
- 4 Star WELS rated toilets
- 6 Star WELS rated tapware
- 3 Star WELS rated showers for EOT facilities
- Rainwater and condensate harvesting
- Fire test water storage/reuse

### 2.2.6 Lift Services

The lifts are not large energy consumers. Nevertheless, the following features will be incorporated:

- High efficiency drives with a power factor greater than 0.9.
- Sophisticated control system to optimise the movement of the lifts.
- Re-generative electrical control which reduces energy usage.
- Switching off lift car lights and ventilation during period of inactivity.

### 2.2.7 Building Control Systems

The following control facilities will be incorporated in the design to assist the building managers optimise the operation of the various building services systems and therefore avoid energy and water wastage.

- Building management and control system (BMCS) incorporated to optimise building control.
- Dedicated energy metering and management system (EMS) incorporated to optimise utilities consumption.
- Extensive electrical, thermal energy, gas and water metering connected to the EMS to facilitate management of utilities usage.
- Facilities for offsite monitoring of the building performance via the internet.



## 2.3 Key Sustainability Initiatives

The following summary defines the initiatives targeted by the development organised under the categories of the project environmental 5 Star Green Star - Design & As Built v1.2 'Australian Excellence targets, which exceed the City of Adelaide ESD requirements. These initiatives have been developed in collaboration with the design team and have been incorporated throughout the design being conducted to date.

- Management initiatives including engagement of a Green Star Accredited Professional, engagement of an Independent Commissioning Agent (ICA), extended building commissioning and tuning, comprehensive energy and water metering and monitoring system (EMMS), environmental management and recycling of operational waste;
- Indoor air quality initiatives including ideal outside air intake locations, clean and maintainable air distribution ductwork, outdoor air systems sized to provide 50% improvement to outdoor air rates and controlled in response to space CO2 sensors to maintain no more than 800ppm CO2 in each zone served, effective exhaust systems and elimination of indoor pollutants;
- Indoor environmental quality initiatives including comprehensive acoustic comfort measures, flicker-free, high colour rendering, glare reducing lighting compliant with best practice general illuminance standards;
- Passive design provided by high-performance envelope incorporating low-e double glazing allowing excellent daylight and views access, thermally insulated constructions and considered window to wall ratio, as described in previous section;
- Energy efficient mechanical systems as described in the previous section;
- Energy efficient electrical systems incorporating LED general office and circulation lighting, addressable lighting control systems with photo-sensor and occupancy sensor switching controllable by occupants and an extensive roof-mounted photovoltaic array, as described in previous section.
- Water conservation and energy efficiency features in hydraulic systems including high WELS rated fixtures and fittings, non-potable water used for heat rejection, fire test water recovery and reuse, rainwater harvesting and reuse, as described in previous section.
- Transport initiatives including improved access to public transport, reduced carparking provision, end of trip facilities, fuel efficient vehicle initiatives.
- Materials initiatives including life cycle impacts optimisation, responsible building materials and sustainable products, best practice remediation of pre-existing hazardous materials, recycling of demolition and construction waste.
- Emissions initiatives including peak stormwater discharge reduction, stormwater quality improvement and light pollution controls.
- Innovations including Onsite Renewable Energy, Improved Stormwater Pollution Targets, Ultra Low VOC Paints, Supplementary or Tenancy Fitout Systems Review, over 12% sustainable products, and Financial Transparency.

Please refer to the following Green Star matrix for further details.

### 2.3.1 Green Star Pathway

The following matrix details the targeted minimum Green Star performance characteristics of the building's design and final construction for the Design and As-Built rating, allowing for further review and development of the Green Star targets and documentation during all project stages

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
<b>Management</b>							
<b>Green Star Accredited Professional</b>	To recognise the appointment and active involvement of a Green Star Accredited Professional in order to ensure that the rating tool is applied effectively and as intended.	1.0	Accredited Professional	1	1		GSAP contractually engaged since early design stages. GSAP shall deliver workshop and hold follow up meetings.
		2.0	Environmental Modelled Targets	Credit Condition	Complies		Targets to be nominated under Owners Project Requirements.
<b>Commissioning and Tuning</b>	To encourage and recognise commissioning, handover and tuning initiatives that ensure all building services operate to their full potential.	2.1	Services and Maintainability Review	1	1		Service and Maintainability Report' with coverage of commissionability, controllability, maintainability & operability. (expected from ICA where appointed)
		2.2	Building Commissioning	1	1		Includes 'Commissioning Plan' (expected from ICA where appointed). This includes commissioning of the building envelope and air tightness testing.
		2.3	Building Systems Tuning	1	1		Includes 'Building Tuning Plan' (expected from ICA where appointed)
		2.4	Independent Commissioning Agent	1	1		Appoint ICA or FM to advise, monitor, and verify commissioning from design to tuning phases.
<b>Adaptation and Resilience</b>	To encourage and recognise projects that are resilient to the impacts of a changing climate and natural disasters.	3.1	Implementation of a Climate Adaptation Plan	2	2		'Adaptation Plan' to AS 5334:2013 required and incorporated into design.
<b>Building Information</b>	To recognise the development and provision of building information that facilitates understanding of a building's systems, operation and maintenance requirements, and environmental targets to enable the optimised performance.	4.0	Building Operations and Maintenance Information	1	1		O&M Manual and Building Log Book to CIBSE TM31: Building Log Book. Building User Information to be provided to all stakeholders in digital format.

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Commitment to Performance	To recognise practices that encourage building owners, building occupants and facilities management teams to set targets and monitor environmental performance in a collaborative way.	5.1	Environmental Building Reporting	1		1	Building owner and tenants to commit to performance targets and measure and report on a min of 2 indicators: energy, water, indoor environment and waste. Innovation point to be awarded for all 4. Best practice green lease agreements or memorandums of understanding required.
		5.2	End of Life Waste Performance	1		1	Building owner to commit to extending life of finishes for at least 10 years, "Make-good" clauses required for tenant/owner leases which will include end-of-life reporting procedures and metrics.
Metering and Monitoring	To recognise the implementation of effective energy and water metering and monitoring systems.	6.0	Metering Strategy	Credit Condition	Complies		Water and Energy metering and monitoring system to be in place. Common uses for energy include anything greater than 5% of the total energy or 100kW where previously it was 100kVA. Also, meters for anything greater than 10% of the water use.
		6.1	Monitoring Strategy	1	1		
Construction Environmental Management	To reward projects that use best practice formal environmental management procedures during construction.	7.0	Environmental Management Plan	Credit Condition	Complies		Create and implement a Construction Environmental Management Plan. Regular inspections shall take place during construction.
		7.1	Formalised Environmental Management System	1	1		The system shall be certified against one of the following standards: AS/NZS ISO 14001, BS 7750 or European Community's EMAS.
		7.2	High Quality Staff Support	1	1		High quality staff support practices are in place to promote positive mental and physical health and site workers knowledge of sustainable practices are enhanced.
Operational Waste	To recognise projects that implement waste management plans that facilitate the re-use, upcycling, or conversion of waste into energy and stewardship of items to reduce the quantity of outgoing waste	8.1	Waste in Operations	1	1		Two options: Waste Management Plan by Qualified Auditor OR prescriptive approach inc. separation of waste streams, dedicated area, access to area.

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Total				14	12	2	
Indoor Environment Quality							
Quality of Indoor Air	To recognise projects that provide high air quality to occupants.	9.1	Ventilation System Attributes	1	1		Design to comply with ASHRAE 62.1 separation distances btw pollution sources & outdoor air intakes, design for ease of maintenance & cleaning, clean ductwork.
		9.2	Provision of Outside Air	2	1		1 /2 points for 50%/100% O/A improvement on AS1668.2. Innovation credit for exceeding benchmark possible.
		9.3	Exhaust or Elimination of Pollutants	1	1		Limit source pollution or exhaust directly to the outside, nominated pollutants include: printing equipment, cooking equipment, vehicle exhaust.
Acoustic Comfort	To reward projects that provide appropriate and comfortable acoustic conditions for occupants.	10.1	Internal Noise Levels	1	1		Internal noise levels cannot exceed 5 dBA above the "satisfactory" sound levels provided in Table 1 of AS/NZS 2107:2000.
		10.2	Reverberation	1	1		Reverberation time below max. recommended in Table 1 of AS/NZS 2108
		10.3	Enclosed Spaces	1	1		Rw45 partitions.
Lighting Comfort	To encourage and recognise well-lit spaces that provide a high degree of comfort to users.	11.0	Minimum Lighting Comfort	Credit Condition	Complies		Electronic drivers with min. 12-bit resolution, Minimum CRI of 80.
		11.1	General Illuminance and Glare Reduction	1	1		Lighting levels to AS1680.2, compliance with luminaire selection system per section 8.3.4 of AS1680. Model required to verify compliance.
		11.2	Surface Illuminance	1			Compliant surface illuminance values calculated per AS/NZS 1680 Appendix B.
		11.3	Localised control	1	1		Localised lighting control via programmable lighting control system (PLCS) employing the DALI protocol (Digital Addressable Lighting Interface) capable of individual control of fittings

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Reduced Exposure to Pollutants	To recognise projects that safeguard occupant health through the reduction in internal air pollutant levels.	13.1	Paints, adhesives, sealants and carpets	1	1		Adhere to VOC limits for paints, adhesives, sealants and carpets.
		13.2	Engineered wood products	1	1		All engineered wood products meet low formaldehyde limits.
Thermal Comfort	To encourage and recognise projects that achieve high levels of thermal comfort.	14.1	Thermal Comfort	1	1		The office NLA shall be thermally modelled to show an acceptable level of thermal comfort for the occupied hours. PMV within +/-1
		14.2	Advanced Thermal Comfort	1	1		The office NLA shall be thermally modelled to show an improved level of thermal comfort for the occupied hours. PMV within +/-0.5
Total				17	12		
Energy							
Greenhouse Gas Emissions	To encourage the reduction of greenhouse gas (GHG) emissions associated with the use of energy in building operations.	15.E-0	Reference Building Pathway	Credit Condition	Complies		Benchmark Building shall achieve a 10% reduction over the Reference building which is based on NCC Section J DTS requirements.
		15.E-1	Intermediate Building Performance	4	1	1	Intermediate building achieves a 5%/20%/15%/20% reduction in GHG emissions.
		15.E-2	GHG emissions reduction	16	7	1	5 Star GHG emissions reductions based on Section J DTS reference, intermediate and proposed building energy models.
Peak Electricity Demand Reduction	To encourage the reduction of peak demand load on the electricity network infrastructure.	16.1-A	Deemed to Satisfy Pathway	1			15% peak energy demand reduction for 1-point limit
		16.1-B	Reference Building Pathway	2	1	1	20%/30% for 1/2 points. This is based on the energy model.
Total				22	9	3	
Transport							

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Sustainable Transport	To reward projects that implement design and operational measures that reduce the carbon emissions arising from occupant travel to and from the project, when compared to a benchmark building. This also promotes the health and fitness of commuters, and the increased liveability of the location.	17-B.1	Access by Public Transport	3	3		Points are determined by the Public Transport calculator based on project location.
		17-B.2	Reduced Car Parking Provision	1	1		The number of carparks required is determined by the accessibility rating of the project and peak occupancy.
		17-B.3	Low Emission Vehicle Infrastructure	1	1		15% fuel efficient vehicle parks (of which max 5% can be motorcycle) or 5% Electric Vehicle parks.
		17-B.4	Active Transport Facilities	1	1		Cycle facilities for 7.5% of staff and 5% of visitors.
		17-B.5	Walkable Neighbourhood	1	1		8 amenities within 400m or Walk Score of at least 70. This project has a walkscore of 100 due to its central location.
Total				10	7	0	
Water							
Potable Water	To encourage building design that minimises potable water consumption in operations.	18-A.1	Potable Water - Modelled Pathway	12	6	0.5	Points verified based on a percent reduction via potable water calculator using WC (4 Star WELS), Urinal (6 Star WELS), Showers (3 Star WELS), Taps (6 Star WELS), rainwater & AHU condensate harvesting, landscape drip irrigation, cooling tower bleed water recycling, fire test water recovery.
Total				12	6	0.5	
Materials							
Life Cycle Impacts	To reward the reduction of the environmental impacts of building materials for the whole building over its entire life cycle.	19.B.1	Concrete	3	1	1	30% reduction in Portland Cement content in concrete, additional point if 50% water reduction and aggregates reduction achieved.
		19.B.2	Steel	1	1		5% reduction in reinforcing steel similar to offsite optimal fabrication techniques

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
		19.B.3	Building Reuse	4			No building reuse planned for the project.
Responsible Building Materials	To reward projects that include materials that are responsibly sourced or have a sustainable supply chain.	20.1	Responsible Steel Maker and Fabricator	1	1		Certified steel contractor required
		20.2	Timber	1	1		All timber is certified or from a reused source
		20.3	Cables, pipes, floors and blinds	1	1		All permanent formwork, pipes, flooring, blinds, cables meet Best Practice PVC or do not contain PVC and have an Environmental Product Declaration.
Sustainable Products	To encourage sustainability and transparency in product specification.	21.1	Sustainable Products	3	3		1/2/3 points for 3/6/9% sustainable products based on manufacturer documentation
Construction and Demolition Waste	To reward projects that reduce construction waste going to landfill by reusing or recycling building materials	22.1	Reduction of Construction and Demolition Waste	1		1	1 point for 90% diversion OR less than 10 kg/m2 of GFA. Waste contractor shall have a Compliance Verification Summary. Subject to Waste Contractor
Total				14	8	2	
Ecological Value	To reward projects that improve the ecological value of their site.	23.0	Endangered, Threatened or Vulnerable Species	-	Complies		There may be no critically endangered or vulnerable species, or ecological communities present on the site at the time of purchase.
		23.1	Ecological Value	3		1	1%/10%/20% improvement for 1 /2/3points. This is determined using the Ecological Value calculator.
Sustainable Sites	To reward projects that choose to develop sites that have limited ecological value, re-use previously developed land and remediate contaminate land.	24.0	Conditional Requirement	-	Complies		The project site does not contain a wetland, old growth forest or any "Matters of National Significance"
		24.1	Reuse of Land	1	1		75% of the site was previously developed
		24.2	Contamination and Hazardous Materials	1	1		Best practice remediation of site contamination and/or hazardous materials audit and stabilisation/removal in existing buildings.



CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Heat Island Effect	To encourage and recognise projects that reduce the contribution of the project site to the heat island effect.	25.1	Heat Island Effect Reduction	1		1	At least 75% of total project site area comprises building or landscaping elements that reduce impact of heat island effect. Requires >82% solar reflectance for a flat roof or green roof. Roof-mounted PV area is excluded.
<b>Total</b>				<b>6</b>	<b>2</b>	<b>2</b>	
<b>Emissions</b>							
Stormwater	To reward projects that minimise peak stormwater flows and reduce pollutants entering public sewer infrastructure.	26.1	Peak Discharge to Sewer	1	1		Design the site so that there is increase in peak discharge.
		26.2	Pollution Targets	1	1		Additional points available for improved pollution reduction for TSS, Gross Pollutants, Total Nitrogen, Total Phosphorus, Total Petroleum Hydrocarbons, and Free Oils.
Light Pollution	To reward projects that minimise light pollution.	27.0	Light Pollution to Neighbouring Properties	-	Complies		Outdoor lighting to comply with AS 4282:1997 Control of Obtrusive Effects of Outdoor Lighting
		27.1	Light Pollution to Night Sky	1	1		Upward Light Output Ratio (ULOR) no more than 5% or no more than 0.5Lux to site boundary and 0.1Lux to 4.5m into night sky
Refrigerant Impacts	To encourage operational practices that minimise the environmental impacts of refrigeration equipment.	29.1	Refrigerant Impacts	1		1	Assessed by refrigerant impact calculator which limits global warming potential and ozone depletion potential. Automatic refrigerant leak detection and pump down system as required.
<b>Total</b>				<b>5</b>	<b>3</b>	<b>1</b>	
<b>Innovation</b>							<b>Bolded means targeted or to be confirmed.</b>
Innovative Technology or Process	The project meets the aims of an existing credit using a technology or process that is considered innovative in Australia or the world.	30.A	Innovative Technology or Process	10	1		<p>Examples of Potential Credits (proposed innovations):</p> <ul style="list-style-type: none"> <li><b>*Onsite Renewable Energy – 1 / 2 pts for a min 5% / 10% renewable energy system.</b></li> </ul>

CATEGORY / CREDIT	AIM OF THE CREDIT	CODE	CRITERIA	POINTS AVAILABLE	POINTS TARGETED	TO BE CONFIRMED	REMARKS
Market Transformation	The project has undertaken a sustainability initiative that substantially contributes to the broader market transformation towards sustainable development in Australia or in the world.	30.B	Market Transformation			1	Examples of Potential Credits (proposed innovations): <ul style="list-style-type: none"> <li>BSRIA Soft Landings Framework for building commissioning and tuning</li> </ul>
Improving on Green Star Benchmarks	The project has achieved full points in a Green Star credit and demonstrates a substantial improvement on the benchmark required to achieve full points.	30.C	Improving on Green Star Benchmarks	10	4	1	Examples of Potential Credits (proposed innovations): <ul style="list-style-type: none"> <li>Building Air Permeability Rates – 1 point for 5 m<sup>3</sup>/(h.m<sup>2</sup>) (TBC) or 2 points for 2 m<sup>3</sup>/(h.m<sup>2</sup>)</li> <li>Stormwater Pollution Targets - improved to B for 1 point or C for 2 points</li> <li>Commissioning and Tuning - Supplementary or tenancy systems review for 1 point</li> <li>Indoor Pollutants - Ultra Low VOC paints for 1 point</li> <li>Sustainable Products – Improved to 12% for 1 point</li> </ul>
Innovation Challenge	Where the project addresses a sustainability issue not included within any of the Credits in the existing Green Star rating tools.	30.D	Innovation Challenge		1		Examples of Potential Credits (proposed innovations): <ul style="list-style-type: none"> <li>High Performance Site Offices for 1 point - TBC</li> <li>Financial Transparency: Agree on a disclosure template that comprehensively itemises design, construction, documentation and project costs. Agree to partake in yearly GBCA report using anonymised data for 1 point.</li> </ul>
Global Sustainability	Project teams may adopt an approved credit from a Global Green Building Rating tool that addresses a sustainability issue that is currently outside the scope of this Green Star rating tools.	30.E	Global Sustainability			2	Examples Potential Credits (proposed innovations): <ul style="list-style-type: none"> <li>Beauty and Spirit (Living Building Challenge 3.0) for 1 point - TBC</li> <li>LEED Integrative Design Process for 1 point- TBC</li> </ul>
Total				10	6	4	
TOTAL				110	65	14.5	5 Star (60 points plus buffer to ensure target is achieved)

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18 May 2020

Mr George Roussos  
Charter Hall  
Level 2, 80 Pirie Street  
ADELAIDE SA 5000

C/- Mr. Tom Dalrymple  
RCP  
Level 2, 13 French Street  
ADELAIDE SA 5000

Dear Sir

**RE: PROPOSED STORMWATER MANAGEMENT PLAN  
60 KING WILLIAM STREET**

The purpose of this letter is to outline the stormwater management plan forming the basis of design for the proposed new office building at 60 King William Street.

The stormwater drainage design of the project will be carried out in accordance with the relevant local, state and national design guidelines and Australian Standard Codes of Practice including but not limited to the following:

- Australian Rainfall and Runoff (2001 Edition) Volumes 1 and 2.
- AS 3500 National Plumbing Code Part 3 – Stormwater Drainage.

The table below provides a summary of the key parameters that have guided our design:

Rainfall Intensities	Design rainfall intensities will be based on the latest published data from Australian Rainfall and Runoff (2001 Edition) Volumes 1 and 2.
Time of Concentration	Time of concentration will be calculated using Kinetic Wave Equation, with the common "Urban catchment" time of 5 minutes generally adopted.
Rainfall Return Periods	Sub-surface drainage systems will be designed for the peak flow from a 20-year Average Recurrence Interval (Q20) storm event. Where building drainage is designed to a higher ARI standard than the sub-surface drainage, the excess flow will be designed to surcharge at locations clear of the buildings and flow down roadways without entering buildings. Overland flow paths will be designed to accommodate the difference between the capacity of the sub-surface piped system and the peak flow from a 100-year Average Recurrence Interval (Q100) storm event. Where this is not achievable, the underground piped system will be designed for the Q100 storm event.
Roadway Trafficability	Gully pits will be located at spacings which will ensure that the loading dock is trafficable during the Q20 storm event. At sag points, gully pits will be sized to ensure that the depth of ponding during the Q20 storm event will not exceed the top of kerb level nor enter the basement access driveway or loading dock.
Tributary Catchment Area	Current total impermeable area within future site boundary = 4646.5m <sup>2</sup> Proposed total impermeable area within future site boundary = 4645.7m <sup>2</sup> (negligible change)

All stormwater drainage will discharge into existing drainage systems. Discharge points include the following locations:

- The current Southern Cross Arcade stormwater drainage system discharges to the existing stormwater pipe beneath the **King William Street** footpath. Since the catchment represents approximately 75% of the future building roof area the existing discharge pipe is considered to be sufficient to support the same level of flow. To manage the remaining 25% of the catchment it is currently recommended that a second duplicate pipe be installed at the existing **King William Street** connection point to effectively consolidate the numerous small discharge points for the 4 smaller buildings earmarked for demolition in the south-western and south eastern corner of the site. The existing underground discharge points for the 2 buildings in the south-eastern corner of the site will only be re-used to accommodate overflow pipe discharges for smaller canopies and podium decks.
- The existing major stormwater pit in the **King William Street** footpath zone at the western end of **Clarence Place** will receive a new connection to new underground stormwater pipes. These new pipes provide drainage for the sections of Clarence Place which have been regraded from north to south to allow for transitions at the ground floor entry points, including the retail frontages. There will be no net increase in runoff.
- Regraded portions of the dock in **Imperial Place** requires a new stormwater pits to be installed to allow for shallow falls in maneuvering areas without ponding. The new underground stormwater pipes and renewed spoon drain will connect to the existing spoon drain and underground stormwater pipe system in Imperial Place.
- No new stormwater discharge points are required within **James Place** and there is no associated increase in roof rainwater catchment in this area. The stormwater discharge system for the James Place Hotel is intended to remain unaffected by the proposed development.
- All exposed surface stormwater features will comply with City of Adelaide specifications. The intent that all downpipes can be incorporated into the façade without encroaching into the public realm and disposal to water table with stormwater pipes to be concealed beneath footpath.
- In summary all new roof runoff will be directed to the 41,000 L retention tank in the Ground floor mezzanine which will then discharged to the aforementioned central point on **King William Street**. The tank is designed for an incoming flow of 165L/s for a Q100 event based on AS/NZS 3500.3 2018.

We trust that this letter provides a informative suitable summary of the stormwater management plan. Should there be any queries arising we recommend that they be directed to the undersigned.

Yours faithfully

ROBERT BIRD GROUP PTY LTD



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DAVID KENNEDY  
Principal



Charter Hall  
Environmental Due Diligence Investigation

60 King William Street,  
Adelaide SA 5000

31 January 2020  
58015- 127,052 (RevA)  
JBS&G Australia Pty Ltd



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## Abbreviations

Term	Definition
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AF/FA	Asbestos Fines / Fibrous Asbestos
AHD	Australian Height Datum
bgl	Below Ground Level
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
Charter Hall	Charter Hall Group
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
CT	Certificate Of Title
DBYD	Dial Before You Dig
DD	Due Diligence
DP	Deposited Plan
DQI	Data Quality Indicator
DQO	Data Quality Objectives
EPA	Environment Protection Authority
ESL	Ecological Screening Level
GME	Groundwater Monitoring Event
Ha	Hectare
HBMS	Hazardous Building Materials Survey
HIL	Health-based Investigation Level
HSL	Health Screening Level
JBS&G	JBS&G Australia Pty Ltd
LAA	Licensed Asbestos Assessor
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measures
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PID	Photo-ionisation Detector
PPM	Parts Per Million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percentage Difference
SA	South Australia
SFA	Solid Flight Auger
site	60 King William Street, Adelaide
TEQ	Toxic Equivalence Quotient
TOC	Top of Casing
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
uPVC	Unplasticised Polyvinyl Chloride
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOC	Volatile Organic Compound



## Executive Summary

JBS&G Australia Pty Ltd (JBS&G) was engaged by Charter Hall Developments Pty Ltd (the client) to undertake an Environmental Due Diligence (DD) Site Investigation at the properties located at 60 King William Street, Adelaide, South Australia (the 'site').

The site occupies an area of approximately 0.48 hectares (ha) and comprises eight (8) separable land parcels, legally identified as follows (refer **Figures 1 and 2**);

- Allotment 21 in D50156, Certificate of Title (CT) 6129/121;
- Allotment 22 in D50156, CT 5686/236;
- Allotment 2 in F31390, CT 5585/337;
- Allotment 23 in D50156, CT 5686/237;
- Allotment 121 in F181773, CT 5585/339;
- Allotments 3 and 7 in F31390, CT 5585/331;
- Allotment 51 in D25900, CT 5585/341; and
- Allotment 124 in F181776, CT 5585/340;

It is understood that Charter Hall requires this information as part of the Environmental DD process for potential acquisition of the site for a proposed mixed-use redevelopment comprising retail/commercial land use overlying a site wide multi-storey basement.

To achieve the project objectives, the following scope of work was undertaken;

- Detailed site history review comprising the following;
- Completion of a non-intrusive Hazardous Building Materials Survey (HBMS) by one of JBS&G's trained and experienced Licenced Asbestos Assessors (LAA). The HBMS has been documented in a standalone report (JBS&G 2020, included as **Appendix A**);
- Limited Soil investigation comprising the following:
  - Drilling and sampling of a total of 7 soil boreholes to a maximum depth of 14.0 m below ground level (bgl) at accessible locations across the site; and
  - Analysis of selected soil samples for a broad range of chemicals.
- Groundwater investigation comprising the installation, sampling and analysis of one groundwater well for a broad range of chemicals; and
- Documentation of the outcomes of the above detailed scope of works in an Environmental DD report as documented herein.

Based on the scope of work completed and subject to the limitations in **Section 8**, the following was concluded;

- Based on the analytical results, fill materials underlying the central portion of the site are not considered suitable to remain on site under a commercial land use scenario without some form of management (e.g. on-site containment) and/or remediation. Further, these materials have been identified to exceed Waste Fill, Intermediate Waste and Low-Level Contaminated Waste material classifications based on chemical composition. As such, for the purposes of offsite disposal, the materials would be classified as High-Level Contaminated Waste without some form of pre-treatment or remediation (noting additional testing of the materials would still be required in order to meet minimum sampling

densities). The impacted fill materials were vertically delineated to a maximum depth of approximately 1.2m bgl in the areas investigated. Due to the limited scope of works completed as requested by Charter Hall and access constraints, the lateral extent of the impacted material, and vertical extent in areas outside the current investigation locations, has not been accurately defined. Additional investigation works are recommended (and would be required) to further delineate the lateral and vertical extents of impacted material in other areas of the site;

- Soil analytical results for the remainder of site fill/natural materials tested during the limited soil investigation were below the Tier 1 screening criteria for commercial land use. As such, these materials are not considered to present a risk to current or future site users under a commercial land use scenario. Should the materials become surplus during any future development of the site, it is likely they would be classified as Waste Fill for offsite disposal purposes (subject to additional testing to meet minimum sampling densities);
- No significant groundwater contamination precluding ongoing commercial landuse or requiring ongoing management was identified. Slightly elevated concentrations of heavy metals (mercury and zinc) were identified in groundwater, however, these concentrations are not considered to be site derived, but rather representative of regional groundwater conditions within the Adelaide area.

## **1. Introduction and Objectives**

### **1.1 Introduction**

JBS&G Australia Pty Ltd (JBS&G) was engaged by Charter Hall Developments Pty Ltd (the client) to undertake an Environmental Due Diligence (DD) Site Investigation at the properties located at 60 King William Street, Adelaide, South Australia (the 'site').

The site occupies an area of approximately 0.48 hectares (ha) and comprises eight (8) separable land parcels, legally identified as follows (refer **Figures 1 and 2**);

- Allotment 21 in D50156, Certificate of Title (CT) 6129/121;
- Allotment 22 in D50156, CT 5686/236;
- Allotment 2 in F31390, CT 5585/337;
- Allotment 23 in D50156, CT 5686/237;
- Allotment 121 in F181773, CT 5585/339;
- Allotments 3 and 7 in F31390, CT 5585/331;
- Allotment 51 in D25900, CT 5585/341; and
- Allotment 124 in F181776, CT 5585/340;

It is understood that Charter Hall requires this information as part of the Environmental DD process for potential acquisition of the site for a proposed mixed-use redevelopment comprising retail/commercial land use overlying a site wide multi-storey basement.

The information presented herein pertains to Environmental DD Site Investigation works undertaken at the site.

### **1.2 Objectives**

The objective of the Environmental DD Site Investigation was to assess whether there are any significant contamination issues at the site resultant of current and/or historic site uses which may present an unacceptable risk to future site users in the context of the proposed redevelopment and ongoing commercial land use.



## 2. Scope of Work

To achieve the project objectives outlined in **Section 1.2**, The following scope of work was undertaken at the site between December 2019 and January 2020:

- Site history review comprising the following:
  - Detailed site inspection by a suitably trained and experienced environmental consultant to identify any areas of environmental concern (AECs), including Interviews with people involved in historical site activities (if available) and sources of information which may relate to chemical storage, waste and wastewater disposal occurring onsite;
  - Historical aerial photograph review;
  - Identification of potential site contamination issues associated with surrounding properties that may affect the site, including observation of the surrounding land uses and a search of the South Australian Environment Protection Authority (SA EPA) Public Register Directory, which lists sites for which the SA EPA holds information in relation to site contamination;
  - Review of historical uses of the sites including historical site ownership;
  - Review of local geology and hydrogeology;
  - Review of any other available relevant information detailing activities that have taken place on the site;
  - Search of EPA records for the site (Section 7 search);
  - Council records and historical searches;
  - Current and historical dangerous goods licences; and
  - Review of any previous environmental investigation reports made available pertaining to the site.
- Completion of a non-intrusive Hazardous Building Materials Survey (HBMS) by one of JBS&G's trained and experienced Licenced Asbestos Assessors (LAA). The HBMS has been documented in a standalone report (JBS&G 2020<sup>1</sup>, included as **Appendix A**);
- Limited Soil investigation comprising the following:
  - Drilling and sampling of a total of 7 soil boreholes to a maximum depth of 14.0 m below ground level (bgl) at accessible locations across the site; and
  - Analysis of selected soil samples for a broad range of chemicals.
- Groundwater investigation comprising the installation, sampling and analysis of one groundwater well for a broad range of chemicals; and
- Documentation of the outcomes of the above detailed scope of works in an Environmental DD report as documented herein.

<sup>1</sup> Charter Hall, Hazardous Building Materials Survey – 60 King William Street, Adelaide, SA. JBS&G Australia Pty Ltd dated 31 January 2020 reference 58015/126625 Rev 0 (JBS&G 2020)

### 3. Site History

#### 3.1 Review of CT Ownership

JBS&G obtained land ownership records for each of the titles relating to the site through historical CT searches from Land Services SA which date back to 1869. The site is comprised of parts of Town Acre Lots 79, 80, 107 and 108. The historical CT details are presented in **Appendix B** and summarised below.

**CT 5585\_341:** First dated 1869. No significant ownership records that would indicate industrial activities or likely potentially contaminating activities (PCAs).

**CT 5686\_236:** First dated 1895. No significant ownership records that would indicate industrial activities or likely potentially contaminating activities (PCAs).

**CT 5686\_237:** First dated 1895. No significant ownership records that would indicate industrial activities or likely potentially contaminating activities (PCAs).

**CT 6129\_121:** First dated 1886. No significant ownership records that would indicate industrial activities or likely potentially contaminating activities (PCAs).

Each of the titles show ownership initially by individuals, then trust funds and corporations. None of the entries gives an indication that industrial or manufacturing type activities were conducted at the site, or an indication of obvious PCAs being conducted at the site.

#### 3.2 Historical Aerial Review

**Table 3.1** presents a summary of the review of historical aerial photographs relating to the site. Copies of aerial photographs are included in **Appendix C**, with the approximate site boundaries shown for reference.

**Table 3.1: Historical Aerial Photograph Summary**

Date	Comments
1949	<ul style="list-style-type: none"> <li>This aerial photograph is black and white.</li> <li>The site is entirely covered by commercial buildings with exception of the laneways.</li> <li>The surrounding landuse appears generally consistent with the site and appears to comprise of a range commercial buildings.</li> <li>Tram lines are evident in the centres of King William and Grenfell Streets.</li> </ul>
1959	<ul style="list-style-type: none"> <li>This aerial photograph is black and white.</li> <li>There are no discernible differences in land use and development between the previous aerial photograph for the site and immediate surrounds.</li> </ul>
1968	<ul style="list-style-type: none"> <li>This aerial photograph is black and white.</li> <li>The site is similar in appearance to the previous aerial photograph except for the redevelopment of a multi-storey building in the south-east corner.</li> <li>Offsite features appear similar, with redevelopment of the building adjacent the site to the south-west, and a building on the north side of Clarence Place. The tram tracks have also been removed from King William and Grenfell Streets.</li> </ul>
1979	<ul style="list-style-type: none"> <li>This aerial photograph is colour.</li> <li>The northern end of the site has been completely redeveloped to what is now known as Southern Cross Arcade. The southern portion of the site appears relatively unchanged from the previous photograph.</li> <li>Offsite features appear relatively unchanged from the previous photograph, however the adjacent multi-storey building offsite to the south-west has now been extended to encompass the whole area between the intersection of King William and Grenfell Streets and the edge of 'the site'.</li> </ul>
1989	<ul style="list-style-type: none"> <li>This aerial photograph is colour.</li> <li>The site appears relatively unchanged from the previous photograph.</li> <li>Offsite features also appear relatively unchanged from the previous photograph.</li> </ul>



Date	Comments
1999	<ul style="list-style-type: none"> <li>This aerial photograph is colour.</li> <li>The site appears to be similar to the previous aerial photograph, except for the demolition of a small building near the centre of the site which appears to have been converted to a car parking area (which is more obvious in subsequent aerals).</li> <li>Offsite features appear relatively unchanged from the previous photograph.</li> </ul>
2006	<ul style="list-style-type: none"> <li>This aerial photograph is colour.</li> <li>The site appears relatively unchanged from the previous photograph.</li> <li>Offsite land use appears to remain relatively similar to the north, south and west to the previous photograph. Significant demolition and redevelopment has occurred on the eastern side of James Place with the construction of what is now City Cross Arcade.</li> </ul>
2019	<ul style="list-style-type: none"> <li>This aerial photograph is colour.</li> <li>The site appears relatively unchanged from the previous photograph.</li> <li>Offsite features also appear relatively unchanged from the previous photograph.</li> </ul>

### 3.3 Surrounding Land Use

The following is a list of the surrounding land uses (refer **Figure 3**) based on the review of aerial photographs and subsequent site inspection:

- **North** – Clarence Place, then commercial (several commercial premises, then Rundle Mall);
- **East** – James Place, then commercial (several commercial premises);
- **South** – Commercial (Westpac bank building and other commercial premises), then Grenfell Street; and
- **West** – King William Street (and associated tram line running north-south), then commercial.

### 3.4 Review of Available EPA Records

JBS&G has conducted a review of publicly available SA EPA records including Section 7 searches and the EPA's Site Contamination Index<sup>2</sup> for the site and individual allotments within.

#### 3.4.1 Section 7 Searches

JBS&G conducted Section 7 searches for each of the current CTs outlined in **Section 1** above, with the results of the search summarised below:

- EPA does not hold information relating to orders or agreements under the *Environment Protection Act 1993* (the Act) in relation to the parcels of land;
- EPA does not hold information relating to current or historic licences/authorisations issued under the Act in relation to the parcels of land;
- EPA does not hold information relating to activities of environmental significance, waste depots or activities producing listed wastes, current or historic in relation to the parcels of land;
- EPA does not hold information relating to the existence of site contamination, including:
  - Copies of environmental reports that are required to be recorded in the EPA Public Register;
  - Copies of a site contamination audit report (including pre- 2009) or the commencement or termination of a site contamination audit;

Copies of the EPA responses to the Section 7 searches are included in **Appendix D**.

<sup>2</sup> [https://www.epa.sa.gov.au/data\\_and\\_publications/site\\_contamination\\_index/search-the-contamination-register](https://www.epa.sa.gov.au/data_and_publications/site_contamination_index/search-the-contamination-register), accessed 22 January 2020

### 3.4.2 Site Contamination Index

A search of the Public Register Directory: Site Contamination Index which lists notifications or reports including S83A notifications, Audit notifications, Audit terminations, and Audit reports which have been received by the EPA since 1 July 2009 was undertaken on 22 January 2020.

A search of the Adelaide area identified well over 100 notifications. Many of the notifications related to former rail operations on the northern side of North Terrace, and others related to city parklands, former council operations, and unspecified activities to all extents of the Adelaide area, however none appeared to be related to the portion of the city in which the site was located. Due to the large number of notifications, an approximate radius of 200m from the site was used to refine relevant notifications. No notifications were recorded for the refined selected area.

### 3.5 Review of SafeWork SA Dangerous Goods Storage Licence Records

A SafeWork South Australia (SA) Dangerous Goods Storage Licence search was conducted on the addresses pertaining to the site. SafeWork SA advised that it cannot exclude the site as having a historical Dangerous Goods Storage Licence. As such, the following responses were provided:

- 27 James Place Adelaide – No current or historical records
- 52-62 King William Street Adelaide – 1x 10.9kL Class 3 Liquid<sup>3</sup> underground tank external
- 64 King William Street Adelaide – 1x 10.9kL Class 3 Liquid underground tank external
- 66-68 King William Street Adelaide – 1x 10.9kL Class 3 Liquid underground tank external

Given the responses for the three addresses on King William Street specify the same details, it is considered likely that the records relate to the same tank. Copies of the SafeWork SA letter responses are included in **Appendix E**.

### 3.6 Review of Available Reports

No previous environmental reports were made available to JBS&G for review. Copies of asbestos registers pertaining to all buildings on site were provided, reviewed and the findings summarised in the HBMS completed for the site (JBS&G 2019, **Appendix A**).

### 3.7 Site Inspection

A site inspection was completed by one of JBS&G's trained and experienced environmental consultants on 13 December 2019. Photographs from the site inspection, as discussed in the below sections, are included in **Appendix F**.

As discussed in **Section 1.1**, the site comprised of multiple buildings generally used for commercial purposes (**Photographs 1 to 6**). The northern most premises (CT 6129/121) comprised the 'Southern Cross Arcade', used for a variety of commercial purposes, primarily retail and food outlets (**Photographs 6 to 9**). The multi-level building included a single basement level extending across the entire building footprint, and first floor at grade with the surrounding ground level. The building was constructed of solid brick and concrete walls, concrete floors and columns with a galvanised metal roof. Internal walls generally comprised concrete block or plasterboard, with ceilings comprising acoustic tiles or perforated metal (**Photographs 10 to 14**). The western extent of this portion of the site comprised an additional multi-storey building extending above the arcade, used as the 'Blue Galah Backpackers Hostel' (**Photographs 15 to 16**). Building materials were noted to be consistent with the aforementioned.

Directly south of the 'Southern Cross Arcade' was the commercial premises 'Adelaide Discounts & Souvenirs' (CT 5686/236). The premises comprised a multistorey building of solid brick and concrete

<sup>3</sup> Class 3 relates to a flammable liquid, as defined in the *Dangerous Substances (General) Regulations 2017*



walls with a galvanised metal roof (**Photographs 13 and 17 to 19**). Internal walls generally comprised brick or plasterboard, with ceilings comprising plasterboard (**Photographs 17 to 19**). The ground floor was noted to be used for retail purposes, with the second floor used for general retail storage. The second floor was vacant, comprising timber floors and likely used for historic warehousing of goods. An external loading bay area was located on the northern extent of the building (**Photograph 20**).

Directly south of 'Adelaide Discounts & Souvenirs' was a commercial premises occupied by Kawaii and International Student Exchange Services (ISES, CT 5585/337, **Photographs 20 to 21**). The building was noted to comprise a 4 storey building of solid brick and concrete walls (**Photograph 23**). A single-level brick-lined basement (previously used as a bank vault, now used for general storage) extended across the entire building area (**Photographs 24 to 27**). Internal walls generally comprised brick or plasterboard, with ceiling linings comprising plasterboard (**Photographs 28 to 30**). It is noted that only the ground and fourth floors of the building were tenanted, with the remaining floors observed to be vacant. The rooftop comprised an open area which housed engine rooms for both air conditioning and elevator systems servicing the building (**Photographs 31 to 33**).

The central portion of the site (CTs 5585/339 and 5585/331) was observed to comprise vacant carpark and driveway areas sealed with bitumen (**Photographs 34**). The periphery of these areas was utilised for general storage (bins, goods crates, etc.).

The south eastern portion of the site was occupied by an additional commercial premises, 'Tommy Gun's Barber Shop' and 'Media Makeup' (shown in **Photographs 3 and 4**). The premises comprised a multistorey building of solid brick and concrete walls with plasterboard ceilings (**Photographs 35 to 38**). The building was observed to have recently undergone refurbishment, with building materials and the external façade observed to be newer than the surrounding site buildings.

### 3.8 Anecdotal Information

During site inspection activities, JBS&G interviewed Mr Peter Tunno, the current site owner, who advised the following;

- Mr Tunno has owned the site since circa mid-1990s. During Mr Tunno's ownership, the site has only been used for commercial purposes.
- The site underwent large scale internal refurbishment during the mid-1990s, including removal of some identified asbestos containing materials (ACMs) and reconfiguration of some commercial premises.
- Mr Tunno was not aware of any large-scale chemical storage or chemical spills at the site during his ownership, nor was he aware of any underground storage tanks (USTs) or aboveground storage tanks (ASTs) being located on the site.

Contrary to the above, it is noted that review of SafeWork SA dangerous goods records (discussed in **Section 3.5**) could not exclude the site as having a historical Dangerous Goods Storage Licence, (or potential historic presence) of UST infrastructure within the site. Notwithstanding, the exact location of the UST could not be identified during site inspection and subsequent intrusive investigation activities, and as such it is unknown whether the UST or any associated infrastructure (e.g. fill points, pipework) remains on site.

### 3.9 Summary of Historical Land Use

The site is situated in the Adelaide CBD, where the predominant occupancy involves office, retail and residential complexes.

Early historical aerial photography (1949 - 1989) indicates that the site area historically comprised a number of smaller buildings. The current site layout was established between 1968 and 1979 with the development of the Southern Cross Arcade complex stretching between King William Street to

the west, James Place to the east, and Clarence Place to the north. A laneway (Imperial Place) provides access to the site from the south (Grenfell Street). Aside from the demolition of a building central to the site between 1979 and 1989 and conversion to a carpark, the site area has remained relatively unchanged since the main redevelopment. Historical Certificates of Title do not indicate the presence of any industrial manufacturing or processing undertaken at the site. Light rail (tram) infrastructure was historically located on King William and Grenfell Streets prior to 1968.

A search of SafeWork SA's dangerous goods storage licence records indicated the potential historical presence of a single 10.9kL UST, however the potential presence and location of the UST was unable to be identified during site inspection and subsequent intrusive investigation activities.

### 3.10 Potentially Contaminating Activities (PCAs)

#### 3.10.1 On Site PCAs

Based on the observations made during the site inspection and results of the desktop review (both historic and current), **Table 3.2** presents the PCAs either known to exist on site or perceived to exist on site.

**Table 3.2: On Site PCAs**

Potential Contaminating Activity	Comment
<ul style="list-style-type: none"> <li>Fill or soil importation</li> <li>Bulk chemical storage</li> <li>Asbestos containing materials</li> </ul>	<ul style="list-style-type: none"> <li>Importation of soil material onsite – Indicated in location of former building and laneways.</li> <li>Potential presence and location currently unknown.</li> <li>Asbestos containing materials were identified in a number of locations and buildings on site, as discussed in the HBMS Report provided as <b>0</b>. As identified in historical aerial imagery, several buildings have been demolished/subject to redevelopment on site. As such, there is also potential for asbestos impacts in surficial soils.</li> </ul>

#### 3.10.2 Off Site PCAs

A list of the PCAs off site that may affect the site contamination status of the site are presented below in **Table 3.3**.

**Table 3.3: Off Site PCAs**

Potential Contaminating Activity	Comment
<ul style="list-style-type: none"> <li>Fill or soil importation</li> <li>Bulk chemical storage</li> </ul>	<ul style="list-style-type: none"> <li>Importation of soil material in construction of roadways and building and potential presence of volatile contaminants in imported soil and fill that may impact soil vapour beneath the site.</li> <li>Anecdotal evidence suggesting the presence of fuel storage tanks (signage, vent pipes, associated generator signs and exhaust pipes) was observed during field works, most notably in the building to the south-west of the site.</li> </ul>

In addition to off site PCAs noted in **Table 3.10.2**, it is noted that buildings surrounding the site and underlying fill materials may contain ACM. Although asbestos in adjacent site soils/buildings does not present a migration risk to the site, it should be noted that materials handling procedures on adjacent sites during any future development works may have the potential to impact the contamination status of the site.



## 4. Environmental Setting

### 4.1 Regional Topography

Review of published regional topographic data via the South Australian Government Spatial Information (LocationSA Mapviewer<sup>4</sup>) indicated that the site lies at an elevation of approximately 45 m relative to the Australian Height Datum (AHD). The site is situated on a regional flat area extending to the approximate boundary of the Adelaide CBD; to the north past North Terrace, the elevation decreases towards the River Torrens, which is situated 540 m north-west of the site at an elevation of 23 m AHD.

Site levels as confirmed during the site inspection (surrounding the building) are relatively flat with a gentle slope to the north within the open space / car park areas.

### 4.2 Regional Hydrology

Review of LocationSA Mapviewer indicated that the closest down-gradient surface water body is the River Torrens and is approximately 540 m north-west of the site.

The River Torrens meanders south west 85km across the Adelaide Plains from Mount Pleasant (through the Adelaide CBD) and ultimately draining to the Saint Vincent Gulf between Henley Beach South and West Beach.

Areas external to structures on-site were entirely covered (asphalt or concrete). As such, precipitation falling onto the site is expected to be collected by the site's, or nearby streets, metropolitan stormwater drainage network and transferred to the regional stormwater network.

### 4.3 Regional Geology and Soils

#### 4.4 Geology

Review of the South Australia Resource Information Geoserver (SARIG, 2019<sup>5</sup>) indicates that the site is underlain by Quaternary sediments of the Keswick Clay. The Keswick Clay unit is noted to comprise of yellow-grey to green-grey clay-rich sediments, silty to gritty, with quartz sand and silt lenses interbedded (Geoscience Australia, 2019<sup>6</sup>). The stratigraphic unit is a terrestrial alluvial fan deposit, ranging from 0.5 to 6.8 m thick and overlies the Hindmarsh Clay.

#### 4.5 Soils

Review of the SARIG (2019<sup>7</sup>), indicates that the soils across the site comprise mainly of red-brown clay soils with granular structure over clay with variable lime, with minor heavy red-brown clay soils and mottled silty clay over brown silty clay, becoming sandy at depth. In addition, the site might be underlain by soils of layered stream alluvium-silts, sands and gravels.

#### 4.6 Regional Hydrogeology

Registered bore information obtained from the SA Department for Environment and Water (DEW) WaterConnect database (WaterConnect, 2019<sup>8</sup>) is included as Error! Reference source not found.. The search identified 1383 licensed wells within a 2km radius of the centre of the site. A refined search revealed 404 licenced groundwater bores and 321 engineering bores within a 1 km radius of the centre of the site and are summarised below in **Table 4.1**.

<sup>4</sup> LocationSA website, <http://location.sa.gov.au/viewer/>, date accessed 22 January 2020

<sup>5</sup> South Australia Resource Information Geoserver, 100k Geology – Surface Geology, SARIG, <https://map.sarig.sa.gov.au/>, Government of South Australia, date accessed 22 January 2020.

<sup>6</sup> Australian Stratigraphic Unit Database – Keswick Clay, Geoscience Australia, <https://asud.ga.gov.au/>, date accessed 22 January 2020

<sup>7</sup> South Australia Resource Information Geoserver, 100k Geology – Soil Adelaide Metropolitan Region, SARIG, <https://map.sarig.sa.gov.au/>, Government of South Australia, date accessed 22 January 2020.

<sup>8</sup> WaterConnect, Department of Environment and Water, South Australian Government, <https://www.waterconnect.sa.gov.au/Pages/Home.aspx>, date accessed 6 December 2019.



**Table 4.1: Registered Groundwater Bore Details Summary**

Well Detail	Summary
Status	<ul style="list-style-type: none"> <li>Of the identified 404 water wells within 1km of the site: <ul style="list-style-type: none"> <li>28 wells were identified as operational</li> <li>102 backfilled, dry or abandoned</li> <li>274 had no status listed</li> </ul> </li> </ul>
Purpose	<ul style="list-style-type: none"> <li>All 28 bores listed as operational are listed as drainage wells. The closest (6628-611) is located approximately 300 m to the south-east of the site, at the intersection of Gawler Place and Pirie Street.</li> <li>71 locations were observation/monitoring/investigations wells – all abandoned or backfilled</li> </ul>
Standing Water Level (SWL)	<ul style="list-style-type: none"> <li>Recorded standing water levels for wells within 1km of the site ranged from 0 to 40 m below top of casing</li> </ul>
Depth	<ul style="list-style-type: none"> <li>Bore depth ranges from 0.61 to 160.0 m (total depth)</li> </ul>
Aquifer	<ul style="list-style-type: none"> <li>Bores are installed in the following aquifers: Tapley Hill formation, Hindmarsh Clay, Blanche Point formation, South Maslin Sand, Chinaman Gully formation, Tandanya Sand member, Port Willunga formation, Hallett Cove sandstone, Carisbrook sand, Coonambidgal formation, and Quarternary alluvial/fluvial formation.</li> </ul>

One registered bore is located on the site (6628-233), identified only as a water well with a depth of 17 m. An abandoned engineering/water observation well (6628-11105) is located immediately adjacent the site to the west drilled to 31m with a standing water level of 19m.

In addition to the above, it is anticipated that groundwater underlying the site flows in a general west to north-westerly direction toward the Gulf St Vincent.

#### 4.7 Acid Sulfate Soils

Based on review of geology maps, soil maps, site topography and site observations it is unlikely that acid sulfate soils would be present onsite. Based on the site's elevation, the reported geology and with regard to the Atlas of Australian Acid Sulfate Soils (ASRIS, 2019<sup>9</sup>), no further consideration of requirements for the management of acid sulfate soil is considered necessary.

<sup>9</sup> Atlas of Australian Acid Sulfate Soils, Australian Soil Resource Information System, CSIRO Australia, <http://www.asris.csiro.au/themes/AcidSulfateSoils.html>, viewed 22 Jan 2020.

## 5. Site Investigation Activities

As discussed in **Section 2**, following the site history review and detailed site inspection, intrusive assessment activities were undertaken in accessible areas of the site comprising a soil and groundwater assessment. Soil and groundwater investigation locations are shown graphically on **Figure 4**. Investigation methodologies, analytical schedules and regulatory guidance and screening criteria are discussed in the following sections.

### 5.1 Soil Sampling Methodology

#### 5.1.1 Soil Regulatory Guidance

Soil investigation works were undertaken in general accordance with the methodologies outlined in the following guidance documents:

- The National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (NEPM 1999);
- *Guide to the Sampling and Investigation of Potentially Contaminated Soils, Part 1: Non-volatile and semi-volatile compounds (AS4482.1-2005)*, Standards Australia, November 2005 (Standards Australia 2005);
- *Guide to the Sampling and Investigation of Potentially Contaminated Soils, Part 2: Volatile substances (AS4482.2-1999)*, Standards Australia, September 1999 (Standards Australia 1999); and
- *Guidelines for the Assessment, Remediation and Management of Asbestos-Contamination Sites in Western Australia*, Western Australian Department of Health (WA DoH) and Western Australian Department of Environment and Conservation (WA DEC), May 2009 (WA DoH / WA DEC 2009)<sup>10</sup>.

#### 5.1.2 Sampling Methodology

A total of 7 soil boreholes were advanced to a maximum depth of 14.0 m bgl at accessible locations across the site in January 2020. Soil sampling locations are shown on **Figure 4**. The following sampling methodology was undertaken for the assessment of site soils:

- All soil borehole locations were cleared for underground services by a professional underground service locator following review of dial before you dig (DBYD) plans, prior to drilling;
- Soil boreholes were then advanced using a combination of manual (hand auger) and mechanical (push tube) techniques to depths ranging from 1.6m bgl to 14.0m bgl. Manual sampling equipment was decontaminated via the use of phosphate-free detergent (decon-90) between each sample location and sample lithology to minimise the potential for cross contamination. For mechanical techniques, a new PVC liner was used at each depth interval at each drilling location to minimise the potential for cross contamination. Decontamination records are present with field logs in **Appendix H**;
- The soils encountered were logged in accordance with the Unified Soil Classification System (USCS) by an experienced environmental scientist. The materials encountered were logged and photographed by an experienced field scientist wearing fresh disposable nitrile gloves at the time of sampling. Soil logs are presented in **Appendix H**;

<sup>10</sup> These guidelines are referred to for guidance in addition to the ASC NEPM and where State-based guidance for South Australia does not exist



- Samples were placed directly into Teflon sealed sample jars provided by the laboratory, with zero headspace. Samples were labelled with a unique identifier, date and sampler. A duplicate soil sample was collected at each sample location interval for field screening for potential volatile contaminants using a photo-ionisation detector (PID). The PID was calibrated using isobutylene to 100 parts per million (ppm) prior to use. Soil sample details and PID measurements are included in the field logs in **Appendix H**;
- Collected soil samples were placed in laboratory supplied sample jars with no headspace, and sealed with a Teflon-lined screw closure. Sample containers were then placed in a pre-cooled insulated box for sample preservation prior to and during shipment to the testing laboratory;
- Collected samples were transported under standard JBS&G chain-of-custody (COC) protocols within specified holding times for relevant analytes to National Association of Testing Authorities (NATA) accredited laboratories for the required analyses (as discussed in **Section 5.4**); and
- The locations of each soil sample/sampling location were recorded using a hand-held global positioning system (GPS, accuracy to 0.3 m) for future reference and geographical information system (GIS) mapping purposes (as shown on **Figure 4**).

## 5.2 Groundwater Sampling Methodology

### 5.2.1 Groundwater Regulatory Guidance

Groundwater investigation works were undertaken in general accordance with the methodologies outlined in the following guidance documents:

- ASC NEPM (1999);
- *Regulatory monitoring and testing - Groundwater sampling*, Environment Protection Authority South Australia, 2007 (EPA 2007 (as amended 2019));
- *AS/NZS 5667.1: Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*, Australian / New Zealand Standards, 1998a (Australian / New Zealand Standards 1998a); and
- *AS/NZS 5667.11: Water quality – Sampling, Part 11: Guidance on sampling of groundwaters*, Australian / New Zealand Standard, 1998b (Australian / New Zealand Standards 1998b).

### 5.2.2 Groundwater Well Installation

One groundwater well (GW01) was installed on 13 January 2020 as per the following installation methodology:

- A well permit was obtained from the DEW. The well permit is included in **Appendix I**;
- The location of the groundwater well was marked and cleared by a professional underground service locator following review of DBYD plans;
- Downhole drilling equipment was decontaminated prior to the commencement of drilling to minimise the potential for cross contamination. A rinsate sample was collected in order to validate decontamination techniques;
- GW01 was drilled to a total depth of 14.0m bgl using solid flight augers (SFA) by a Class 1 licensed driller;
- The soils encountered during drilling of the groundwater well were logged in accordance with the USCS by an experienced environmental scientist. Soil samples were collected and placed directly into Teflon sealed laboratory supplied sample jars with zero headspace.

Samples were labelled with a unique identifier, date and sampler. Duplicate soil samples were collected at each sample location for field screening for potential volatile contaminants using a PID as per the screening methodology outlined in **Section 5.1**. Soil sample details and PID measurements are included in the groundwater well logs in **Appendix H**;

Following completion of drilling, the groundwater well was installed as follows:

- The groundwater well was constructed using 50mm Class 18 unplasticised polyvinyl chloride (uPVC) screen and casing (pressure rated to conform to AS1477). The National Water Commission (NWC)<sup>11</sup> recommends Class 12 is used for most bore construction applications, with Class 9 suitable for some shallow bores. Class 18 as used in construction of groundwater wells at the site is considered suitable. The uPVC screen and casing pipe had machine cut threads with rubber o-rings to ensure a tight seal between casing lengths and to avoid the use of glues / lubricants in constructing the groundwater well. The uPVC is inert and compatible with the chemicals of interest. A screen length of 6 m was installed. A summary of the groundwater well construction details are included below in **Table 5.1**;
- A graded sand pack was installed from the bottom of the drilled borehole to approximately 0.5 m above the screened interval;
- A bentonite seal of a minimum of 1 m was installed above the sand layer;
- The groundwater well was completed to the surface with cement / bentonite grout and was finished at the surface with a flush mounted gatic cover;
- A lockable end cap was fitted over the top of the groundwater well (beneath the gatic cover) to prevent any ingress of water to the groundwater well; and
- The newly installed groundwater well was developed within 24 hours of installation to ensure adequate hydraulic connection with the aquifer using low density polyethylene (LDPE) tubing and footvalves. The development of the groundwater well consisted of purging four casing volumes, with greater volumes purged if fine sand / silt / clay was still evident or field parameters had not stabilised (three consecutive bore volumes) within the ranges presented by EPA (2007 (as amended 2019)). The location of the groundwater well is shown in **Figure 4**.

The construction details are summarised below in **Table 5.1**. Groundwater well construction details and the log of soils encountered is included with field documentation in **Appendix H**.

**Table 5.1: Groundwater Well Construction Details**

Well ID	Date Installed	Groundwater Well Permit Number	Installed depth	Screened Interval	SWL (27-Aug-18)
			mbgl	mbgl	mTOC
GW01	13-Jan-2020	58348	14.0	14.0 to 8.0	11.318

**Abbreviations:**

mTOC: metres below top of casing.

SWL: standing water level

### 5.2.3 Groundwater Sampling

GW01 was sampled on 16 January 2020 using Low flow sampling techniques (micro-purge). The following methodology was undertaken for the sampling of the groundwater well:

- The newly installed groundwater well was sampled a minimum of 72 hours post-installation/development;

<sup>11</sup> Minimum Construction Requirements for Water Bores in Australia, National Water Commission, February 2012 (NWC 2012).



- The Interface Probe (IP) and low flow pump were decontaminated using phosphate free detergent prior to sampling to minimise the chances of cross-contamination. A rinsate sample was collected off the clean low flow pump to validate decontamination procedures;
- The groundwater well was gauged prior to sampling using the IP to measure the depth to water, depth to non-aqueous phase liquid (NAPL), if present, and total depth of the groundwater well;
- GW01 was then sampled using low flow techniques, as follows:
  - Dedicated LDPE twin tubing was attached to the low flow pump. The low flow pump was lowered into the groundwater well so that the pump intake point was set in the approximate centre of the water column. It is noted the entire water column was within the screened interval;
  - The low flow pump was then used to purge the groundwater well at a rate to establish a stabilised pumping rate while minimising drawdown. A maximum drawdown of 100 mm was adopted for the investigation;
  - Following the establishment of the flow rate, water quality parameters (including dissolved oxygen [DO], redox potential, electrical conductivity [EC], temperature and pH) were measured to determine when purging was complete (i.e. when water quality parameters were considered stable in accordance with EPA SA (2007 (as amended 2019))). Water quality parameters were recorded every 3 minutes along with the depth to water and time on the groundwater field sampling sheets (included in **Appendix H**). The presence or absence of visual and/or olfactory evidence of contamination, turbidity and colour were also noted on the field sampling sheets. The water quality meter was calibrated prior to sampling; and
  - Following stabilisation, a primary groundwater sample was collected in appropriately preserved sample bottles (provided by the laboratory) for the chemicals of interest, using the same method employed throughout purging. Duplicate samples were also collected in this manner.
- All samples were transported in a chilled cool box to the laboratory for selected chemical analysis under COC documentation. All primary groundwater samples were analysed for contaminants of potential concern (COPCs) as discussed in **Section 5.4**.

### 5.3 Assessment Criteria

#### 5.3.1 Soil Tier 1 Screening Levels

Assessment works were primarily undertaken such that Charter Hall could inform its potential acquisition of the site from a potential site contamination perspective. It is understood that following any potential purchase, the site would be redeveloped for ongoing commercial land use.

Soil results from soil boreholes have been compared against soil Tier 1 screening levels appropriate to commercial landuse in order to assess whether there is any potential risk to current or future site users under a commercial landuse scenario. It is understood that future redevelopment works may comprise a single multi-level basement to approximately 5m bgl. As such, soil results have also been compared against relevant offsite disposal criteria in order to provide a preliminary classification for soils which may be surplus to construction requirements. It is noted that sampling locations completed to date have been based on site access constraints and the limited scope requested by Charter Hall, and that additional sample analysis would be required to meet minimum densities prior to any offsite disposal of material.

### 5.3.2 Site Suitability

The adopted Tier 1 screening criteria (both ecological and human health) are based on the proposed landuse. Four generic land use scenarios are considered in the ASC NEPM in relation to the assessment of risk to human health, with associated Health Investigation and Screening Levels (HILs/HSLs) which are intentionally conservative, based on a reasonable worst-case scenario. Scenario D for commercial / industrial landuse has been adopted and is considered appropriate given the current and proposed land use. In relation to the assessment of risk to potential environmental receptors, the ASC NEPM identifies three generic land use scenarios. Once again, the commercial/industrial land use scenario has been adopted as appropriate for the site. An exceedance of an investigation or screening level does not indicate that there is an unacceptable risk to human health and/or the environment, but rather that further site-specific assessment / consideration is required to assess the potential risk to human health and/or the environment in this landuse scenario.

#### 5.3.2.1 Ecological Screening Levels

Ecological screening levels have been excluded from this assessment given the current and proposed future site configuration (i.e. no unsealed surfaces or ecological receptors).

#### 5.3.2.2 Human Health Screening Levels

Investigation and screening levels provided in the ASC NEPM (1999) have been adopted in the first instance. The ASC NEPM (1999) provides three types of screening levels for soils, as follows:

- Health Based Investigation Levels (HILs);
- Soil Health Screening Levels (HSLs) for Vapour Intrusion and asbestos contamination in soil.
- Management Limits; and

The HILs include screening levels for a number of chemicals and are to be adopted in the first instance to assess potential risks to human health from chronic exposure to contamination. The HILs are considered to be applicable to a depth of 1m bgl in a commercial landuse scenario, as consistent with the applicable depth outlined for this landuse within *Technical Report No. 10 - Health screening levels for petroleum hydrocarbons in soil and groundwater*, CRCCARE, 2011 (CRCCARE 2011) – this has been adopted for the site.

The ASC NEPM (1999) also provides Soil HSLs for Vapour Intrusion for various petroleum hydrocarbon compounds. These HSLs provide a soil concentration above which there is potential for a human health risk to be present via the inhalation pathway. The HSLs are dependent on landuse, soil type and depth of sample – sandy soils have been adopted from 0 to <2m and clay soils have been adopted from 2 m to >4 m based on soil physical properties encountered during investigation works, discussed in **Section 5.5**.

Like the HSLs, the Management Limits apply only to petroleum hydrocarbons. The Management Limits are used to avoid / minimise the potential effects of petroleum hydrocarbons including fire / explosive hazards and effects on buried infrastructure. The Management Limits are dependent on soil texture and landuse – coarse textured soils have been adopted as a conservative measure, based on soil physical properties encountered during investigation works, discussed in **Section 5.5**. The Management Limits are considered to be applicable to a depth of 2m bgl, consistent with the likely maximum depth of services requiring installation at the site.

The ASC NEPM (NEPM 1999) HSLs for asbestos contamination in soil are adopted from WA DoH WA DEC (2009). A concentration of 0.001 %w/w is adopted for friable asbestos for all landuses. There is also a requirement for no visible ACM in surface soil.



### 5.3.3 Off Site Disposal of Soils

Soil results have also been compared against criteria outlined within the SA EPA *Waste Disposal Information Sheet: Current Criteria for the Classification of Waste – Including Industrial and Commercial Waste (Listed) and Waste Soil*, March 2010 (SA EPA, 2010) in order to provide a preliminary classification, noting that additional samples would be required to meet the sampling density to facilitate offsite disposal due to the limited scope of works undertaken.

### 5.3.4 Groundwater Tier 1 Screening Levels

The *Environment Protection (Water Quality) Policy 2015* (WQEPP 2015) identifies a range of protected beneficial uses of underground waters in South Australia. EPA<sup>12</sup> provides the following hierarchical order for the protected environmental values of groundwater:

1. Drinking water
2. Recreation and aesthetics
3. Aquatic ecosystem (marine and freshwater)
4. Primary industries (agriculture [irrigation, general water uses and livestock] and aquaculture)

In addition, human health in non-use scenarios (i.e. exposure to volatile chemicals via vapour intrusion) is required to be considered.

### 5.3.5 Assessment of Relevant Protected Environmental Values of Groundwater

The risk-based approach for assessing groundwater contamination outlined in the ASC NEPM (1999) is based on protection of relevant (i.e. current or realistic) environmental values of groundwater. The assessment of relevant environmental values of groundwater at any given site includes the following in accordance with EPA (2019):

1. Assessment of environmental values of groundwater on the basis of total dissolved solids (TDS) – environmental values of groundwater which are assessed by this step include drinking water and primary industries (agriculture [irrigation, general water uses and livestock] and aquaculture). Recreation and aesthetics, and aquatic ecosystems (marine and freshwater) are not assessed on the basis of TDS. The TDS assessment is included in **Section 5.3.5.1**;
2. Identification and assessment of surface water bodies within a 2 km radius of the site – environmental values of groundwater which are assessed by this step include recreation and aesthetics, and aquatic ecosystems (marine and freshwater). Drinking water and primary industries (agriculture [irrigation, general water uses and livestock] and aquaculture) are not assessed on the basis of proximity to surface water bodies. The surface water body assessment is included in **Section 5.3.5.2**; and
3. Identification and assessment of registered bores within a 2 km radius of the site – environmental values of groundwater which are assessed by this step include drinking water, recreation and aesthetics, and primary industries (agriculture only [irrigation, general water uses and livestock]). The assessment of registered bores within a 2 km radius of the site is included in **Section 5.3.5.3**.

#### 5.3.5.1 Assessment of Total Dissolved Solids at the Site

The WQEPP (2015) provides TDS ranges for the protected environmental values of groundwater. Where groundwater has TDS above the range for a particular protected environmental value, the groundwater quality is unlikely to support this particular protected environmental value of

<sup>12</sup> *Guidelines for the assessment and remediation of site contamination*, Environment Protection Authority South Australia, November 2019 (EPA 2019).



groundwater. However, environmental values of groundwater cannot be excluded on the basis of TDS alone.

As stated above, the only environmental values of groundwater which can be assessed by this step are drinking water and primary industries (agriculture [irrigation, general water uses and livestock] and aquaculture).

A summary of the assessment of protected environmental values of groundwater based on TDS at the site is included below in **Table 5.2**.

**Table 5.2: Summary of Assessment of Protected Environmental Values of Groundwater Based on Total Dissolved Solids at the Site**

Protected Environmental Value of Groundwater	TDS Range (WQEPP 2015)	Lowest TDS Reported at the Site	Relevant at the Site Based on TDS?
Drinking water	Below 1,200 mg/L	Approximately 1,018 mg/L <sup>#1</sup>	Relevant
Primary industries – irrigation and general water uses	Below 3,000 mg/L		Relevant
Primary industries – livestock	Below 13,000 mg/L		Relevant
Primary industries – aquaculture and human consumption of aquatic foods	Below 13,000 mg/L		Relevant

**Notes:**

#1: Based on field data; converted from electrical conductivity of 1.591 mS/cm reported at GW01.

### 5.3.5.2 Assessment of Surface Water Bodies Within a 2 km Radius of the Site

An assessment of surface water bodies within a 2 km radius of the site was undertaken in order to assess whether surface water bodies within this radius of the site were present, and if present, whether there was potential inter-connectivity with groundwater. As stated above, the environmental values of groundwater which are assessed by this step include recreation and aesthetics, and aquatic ecosystems (marine and freshwater).

The surface water bodies identified within a 2 km radius of the site are shown in **Appendix J**. A summary of the assessment of surface water bodies within a 2 km radius of the site is included below in **Table 5.3**. Based on the below, there is potential for groundwater to discharge to the River Torrens and Glen Osmond Creek (both freshwater). Therefore, recreation and aesthetics, and aquatic ecosystems (freshwater) are relevant environmental values of groundwater at the site.

**Table 5.3: Assessment of Surface Water Bodies Within a 2 km Radius of the Site**

Surface Water Body	Distance from Surface Water Body to Site	Details	Potential Discharge of Groundwater to Surface Water Body?
River Torrens - Karrawirra Parri	<ul style="list-style-type: none"> <li>554 m to the north-west of the site</li> </ul>	<ul style="list-style-type: none"> <li>Natural river system (freshwater)</li> <li>Potential interactions with groundwater due to the likely shallow depth of groundwater in this area</li> </ul>	Yes
Main Lake / Kainka Wirra	<ul style="list-style-type: none"> <li>1.06 km to the north-east of the site</li> </ul>	<ul style="list-style-type: none"> <li>Man-made wetland (freshwater), likely to be above the groundwater table</li> </ul>	No
Rymill Park Lake	<ul style="list-style-type: none"> <li>1.17 km to the south-east</li> </ul>	<ul style="list-style-type: none"> <li>Man-made wetland (freshwater), likely to be above the groundwater table</li> </ul>	No
Glen Osmond Creek	<ul style="list-style-type: none"> <li>1.83 km to the south-east of the site</li> </ul>	<ul style="list-style-type: none"> <li>Natural river system (freshwater)</li> <li>Potential interactions with groundwater due to the likely shallow depth of groundwater in this area</li> </ul>	Yes

#### 5.3.5.3 Assessment of Registered Bores Within a 2 km Radius of the Site

A search of the WaterConnect<sup>13</sup> database was undertaken on 22 January 2020 in order to assess whether operational bores were present within a 2 km radius of the site, and if present, whether these bores were likely targeting the shallow aquifer and used for beneficial purposes. As stated above, the environmental values of groundwater which are assessed by this step include drinking water, recreation and aesthetics, and primary industries (agriculture only [irrigation, general water uses and livestock]).

The search identified a total of 1383 registered bores within a 2 km radius of the site. The following registered bores within a 2 km radius of the site were then excluded:

- Bores with type other than 'water well' (i.e. engineering wells, stratigraphic wells);
- Bores which have been backfilled, abandoned or collapsed;
- Bores with purposes of observation/investigation/monitoring, environmental, drainage and construction materials;
- Bores with no listed purpose; and
- Bores installed within a deeper aquifer which has been assumed to be all bores installed to depths greater than 25 mbgl.

Following the above exclusions, a total of nine bores remained. These bores were registered for the following purposes:

- Four bores were registered for domestic use – three of which have no status listed; and
- Two bores were registered for recreation;
- One bore was registered for observation and stock watering – which has no status listed;
- One bore was registered for recharge; and
- One bore was registered for town water supply.

The closest registered bore to the site was 6628-16087, approximately 1km north of the site.

In addition, one registered bore 6628-233 was located on the site. It has no purpose or status recorded.

Information from the WaterConnect database for these bores is included in **Appendix G**.

Given the above, drinking water, recreation and aesthetics, and primary industries (agriculture [irrigation and general water uses]) are relevant at the site. In addition, primary industries (agriculture [stock]) may also be relevant as domestic use may include this purpose.

#### 5.3.5.4 Summary of Relevant Protected Environmental Values of Groundwater

Based on the TDS assessment, the assessment of surface water bodies within a 2 km radius of the site and the registered bore search within a 2 km radius of the site, no protected environmental values of groundwater outlined in **Table 5.2** were able to be excluded and thus the following environmental values of groundwater have been considered as relevant at the site:

- Drinking water;
- Recreation and aesthetics;
- Aquatic ecosystem (freshwater); and

<sup>13</sup> <https://www.waterconnect.sa.gov.au/Systems/GD/Pages/Default.aspx> (accessed online 22 January 2020)



- Primary industries (agriculture [irrigation, general water uses and livestock] and aquaculture).

### 5.3.6 Sources of Tier 1 Screening Levels

Groundwater results were compared against the Tier 1 screening levels outlined in **Table 5.4** for the relevant protected environmental values of groundwater outlined in **Section 5.3.5**. In addition, inhalation of vapour has also been considered with regard to VOCs in groundwater. It is noted both the protected environmental values of groundwater and the sources of the Tier 1 screening levels are listed in hierarchical order.

**Table 5.4: Adopted Tier 1 Screening Levels for Relevant Protected Environmental Values of Groundwater Based on Total Dissolved Solids at the Site**

Protected Environmental Values of Groundwater Based on TDS at the Site		Adopted Tier 1 Screening levels	
Hierarchical Order	Description	Hierarchical Order	Reference
1	Drinking water	a	ADWG#1 (NHMRC 2011) Health
		a	ADWG#1 (NHMRC 2011) Aesthetics
		b	Drinking Water Guidelines (WHO 2011)
2	Recreation and aesthetics	a	ADWG#1 (NHMRC 2011) Health x10#2
		a	ADWG#1 (NHMRC 2011) Aesthetics
		b	Drinking Water Guidelines (WHO 2011) x10#2
3	Aquatic ecosystems – Freshwater	a	ANZWQG#3 (ANZG, 2018) Default Guideline Values (DGVs) for Freshwater Aquatic Ecosystems, 95 % level of species protection
		a	ANZWQG#3 (ANZG, 2018) DGVs for Freshwater Aquatic Ecosystems, low reliability
4	Primary Industries – Irrigation	a	ANZWQG#3 (ANZG, 2018) Irrigation#4, short term
		a	ANZWQG#3 (ANZG, 2018) Irrigation#4, long term
4	Primary Industries – Livestock	a	ANZWQG#3 (ANZG, 2018) Livestock#4
N/A	Vapour Inhalation	N/A	ASC NEPM (NEPC 1999) Groundwater Health Screening Levels for Vapour Intrusion (commercial / industrial landuse, clay, depth to groundwater of 4m bgl to <8m bgl and >8m bgl)

**Notes:**

#1: *Australian Drinking Water Guidelines 6*, National Health and Medical Research Council, 2011 (NHMRC 2011).

#2: As per the *Guidelines for Managing Risks in Recreational Water*, National Health and Medical Research Council, 2008 (NHMRC 2008), a recreational exposure is assumed to be consumption of 100 ml/day to 200 ml/day and thus drinking water criteria (which assumes consumption of 2 L/day) can be adjusted to account for this difference in exposure by multiplication of drinking water criteria by a factor of 10.

#3: *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Governments (ANZG), 2018

#4: Noting the guidelines still refer to the DGVs defined in the 2000 version of the national water quality guidelines (ANZECC and ARMCANZ, 2000).

### 5.4 Laboratory Analysis

JBS&G contracted Eurofins | MGT (Eurofins) as the primary laboratory for all analyses. The secondary laboratory for the investigation was Envirolab Services Pty Ltd (Envirolab). Both laboratories are NATA accredited for all analytical works performed. Laboratory analysis of samples was conducted as summarised in **Table 5.5**. Copies of the laboratories Certificates of Analysis are provided in **Appendix I**.

**Table 5.5: Sampling and Analytical Program**

Sample Media	No. of Sampling Locations	Analyses (exc. QA/QC)
Soil	7	Heavy Metals* – 22 samples PAHs – 23 samples TRH – 22 samples VOCs – 5 samples OCPs/OPPs – 23 samples PCBs – 18 samples Asbestos NEPM (500g) – 8 samples Phenols – 4 samples Total Cyanide – 4 samples Fluoride – 4 samples; and Hexavalent Chromium – 4 samples
Groundwater	1	Heavy Metals* – 1 sample PAHs – 1 sample TRH – 1 sample VOCs – 1 sample OCPs/OPPs – 1 sample PCBs – 1 sample Phenols – 1 sample Total Cyanide – 1 sample Fluoride – 1 sample; and Hexavalent Chromium – 1 sample

**Abbreviations:** TRH – total recoverable hydrocarbons; VOCs – volatile organic compounds; PAH – polycyclic aromatic hydrocarbons; OCPs – organochlorine pesticides; OPPs – organophosphorus pesticides; PCBs – polychlorinated biphenyls.

**Notes:**

\*:Heavy Metals (8) includes arsenic, cadmium, copper, chromium (total), mercury, nickel, zinc and lead.

In addition to the above analyses, for QA/QC purposes field duplicates and triplicates were collected and analysed for each sampled media at a rate of at least 1/20. Rinsate samples were obtained from all reusable sampling equipment per day of sampling, and trip blank samples accompanied samples to the testing laboratory for each batch of samples submitted to the laboratory. Detailed QA/QC discussion is provided in **Section 7**.

## 5.5 Soil Results

**Soil results summary** tables are provided as an attachment to this report. Laboratory Certificates of Analysis are included as **Appendix K**. Soil sampling locations are presented on **Figure 4**, and exceedances of adopted site investigation criteria (as shown in the **Soil results summary** tables) are presented on **Figures 5 and 6** for onsite retention and offsite disposal respectively.

### 5.5.1 Sub-Surface Observations

Surface treatments across the site comprised a combination of asphaltic bitumen and concrete materials. Bituminous surfaces ranged from 0.02 to 0.05m in thickness. Concrete surfaces ranged from 0.1 to 0.12m in thickness at two locations sampled. It is noted however that two locations on site were unable to be advanced due to concrete thickness. One location was attempted in the central basement area of the 'Southern Cross Arcade', however the vertical extent of the concrete had not been reached at 1.4m bgl and as such the location was abandoned. One additional location was attempted in the loading bay at the northern site extent adjacent Clarence Place. Concrete depths in this portion of the site were noted to be approximately 0.3m bgl, however the slab in this area of the site appeared to be suspended over either a historic basement and/or a large service tunnel and as such was reinstated and abandoned without drilling.

Fill materials of varying thicknesses were encountered at each location below surface treatments. Fill materials ranged in depths from 0.4 to 2.2m below surface treatments and were variable in nature, comprising gravelly sands and clays. Anthropogenic inclusions were observed to be minimal, however black stained soils reminiscent of slag, ash and cinders and gravels were noted between



surface and approximately 1.0m bgl at locations SB04 and SB05 along with minor detections of volatile contaminants following PID screening of soils (i.e. <6 ppm).

Underlying natural soils comprised brown clayey sands transitioning to red-brown silty clays with depth. Soil logs are provided with field records in **Appendix H**.

## 5.5.2 Soil Analytical Results

### 5.5.2.1 Tier 1 Screening Assessment – Site Suitability (Commercial Land Use)

A summary of soil results exceeding the adopted Tier 1 screening criteria is summarised below in **Table 5.6**. All other results were below the adopted criteria.

**Table 5.6: Soil Sample Concentrations Exceeding Adopted Soil Tier 1 Screening Levels (Commercial Landuse)**

Analyte	Sample ID	Concentration (mg/kg)	Investigation Level Exceeded
TRH			
C10-C16	SB04_0.2-0.5	1,100	• Management Limits (commercial landuse) – 1,000 mg/kg
	SB05_0.1-0.3	2,400	
C16-C34	SB04_0.2-0.5	7,700	• Management Limits (commercial landuse) – 1,000 mg/kg
	SB05_0.1-0.3	12,000	
PAH			
Benzo(a)pyrene TEQ (LOR)	SB04_0.2-0.5	410	• HIL, commercial – 40 mg/kg
	SB04_0.7-0.9	53	
	SB05_0.1-0.3	260	
	SB05_0.6-0.8	120	
Benzo(a)pyrene TEQ calc (Half)	SB04_0.2-0.5	410	• HIL, commercial – 40 mg/kg
	SB04_0.7-0.9	53	
	SB05_0.1-0.3	260	
	SB05_0.6-0.8	120	
Benzo(a)pyrene TEQ calc (Zero)	SB04_0.2-0.5	410	• HIL, commercial – 40 mg/kg
	SB04_0.7-0.9	53	
	SB05_0.1-0.3	260	
	SB05_0.6-0.8	120	

### 5.5.2.2 Preliminary Classification of Soils for Offsite Disposal

Several analytes reported concentrations exceeding the Waste Fill classification criteria including heavy metals (mercury and zinc), TPH (C10-C36 Fraction (Sum of Total)) and PAH B(a)P and PAHs (Sum of total)).

In addition, some PAH (B(a)P and PAHs (Sum of total)) and TPH (C10-C36 Fraction (Sum of Total)) concentrations were reported exceeding both the Intermediate Waste Soil criteria and Low-Level Contaminated Waste criteria.

A summary of the concentrations exceeding offsite disposal criteria have been included in **Table 5.7**.

**Table 5.7: Soil Sample Concentrations Exceeding Offsite Disposal Criteria**

Analyte	Sample ID	Concentration (mg/kg)	Investigation Level Exceeded
<b>Heavy Metals</b>			
Mercury	SB03_0.7-0.9	1.2	• Waste Fill: 1 mg/kg
	SB06_0.35-0.6	1.4	
Zinc	SB05_0.6-0.8	250	• Waste Fill: 200 mg/kg
<b>PAH</b>			
Benzo(a)Pyrene	SB02_0.3-0.5	2.1	• Intermediate Waste: 2 mg/kg
	SB05_1.2-1.4	4.2	
	SB05_1.5-1.7	3.4	
	SB04_0.2-0.5	300	• Low-Level Waste: 5 mg/kg
	SB04_0.7-0.9	34	

Analyte	Sample ID	Concentration (mg/kg)	Investigation Level Exceeded
PAHs (Sum of total)	SB05_0.1-0.3	180	
	SB05_0.6-0.8	75	
	SB02_0.3-0.5	33.3	• Waste Fill: 5 mg/kg
	SB05_1.5-1.7	33	• Intermediate Waste: 40 mg/kg
	SB05_1.2-1.4	49.8	
	SB04_0.2-0.5	3,268	• Low-Level Waste: 200 mg/kg
	SB04_0.7-0.9	492.5	
	SB05_0.1-0.3	3,494	
	SB05_0.6-0.8	837.7	
<b>TPH</b>			
C10-C36 Fraction (Sum of Total)	SB04_0.2-0.5	9,670	• Waste Fill: 1,000 mg/kg
	SB04_0.7-0.9	1,896	
	SB05_0.6-0.8	2,981	
	SB05_0.1-0.3	16,200	• Low-Level Waste: 10,000 mg/kg

## 5.6 Soil Discussion

### 5.6.1 Soils Remaining Onsite

As shown above in **Table 5.6** and the **Soil results summary** tables attached, several analytes reported concentrations exceeding the adopted Tier 1 criteria for commercial land use. The investigation results have identified the presence of an impacted fill layer located in the central portion of the site, the vertical extent of which has been delineated to a maximum depth of approximately 1.2m bgl in the locations investigated. Additional investigation works would be required to identify the lateral extents of impacted fill materials, and vertical extent in other areas, owing to the limited nature of the soil investigations conducted to date.

Underlying natural soils did not report any analyte concentrations exceeding the adopted Tier 1 human health criteria for commercial land use.

### 5.6.2 Offsite Disposal of Soils

As shown above in **Table 5.7** and the **Soil results summary** tables attached, several investigation locations reported results above Waste Fill, Intermediate Waste and/or Low-Level Contaminated Waste criteria for offsite disposal.

As discussed in **Section 5.6.1**, the reported exceedances are associated with an impacted fill layer in the central portion of the site extending to approximately 1.2m bgl (based on current investigation observations).

The lateral extent of the impacted material (and vertical extent in areas outside the current investigation locations) may be further delineated via advancement of additional soil bores throughout the site.

## 5.7 Groundwater Results

### 5.7.1 Field Observations

The following key field observations were made during the groundwater monitoring program:

- NAPL was not observed in groundwater well GW01;
- No obvious odour or sheen was observed in groundwater well GW01;
- GW01 reported a sustainable yield of 214 ml/min;
- Groundwater was observed to be of low to medium turbidity; and
- The standing water level (SWL) in GW01 was recorded as 11.318m TOC.



As only one groundwater well was installed during the investigation, interpretation of the groundwater flow direction and hydraulic gradient across the site could not be determined.

### 5.7.2 Water Quality Parameters

Water quality parameters including DO, redox potential, pH, EC and temperature were collected during sampling of all groundwater wells. A summary of the field parameters has been included in the **Groundwater summary tables** attached to this report, and the field sampling sheets are included in **Appendix H**.

The following groundwater conditions were noted:

- DO was recorded at 2.71 ppm;
- Redox potential was recorded at 100.1 mV (Standard Hydrogen Electrode - SHE), indicating oxidising conditions were present across the site;
- The pH of the groundwater was recorded at 6.05 pH units, indicating a slightly acidic pH; and
- EC was recorded at 1,591  $\mu\text{S}/\text{cm}$ .

### 5.7.3 Analytical Results

The groundwater laboratory certificates of analysis and COC documentation are included in **Appendix K**. Analytical results from the groundwater monitoring event has been tabulated and included in the **Groundwater summary tables** attached to this report.

All results were reported at concentrations below the LOR with the exception of zinc and copper which reported concentrations slightly above the adopted assessment criteria, as summarised in **Table 5.8** below.

**Table 5.8: Groundwater Concentrations Exceeding Tier 1 Screening Levels**

Chemical	Groundwater Well ID	Concentration mg/L	Tier 1 Groundwater Screening Level Exceeded <sup>#1</sup>
Zinc	GW01	0.01	• 3(a). Aquatic Ecosystems – ANZG (2018) Freshwater, 95% species protection: 0.008
Copper	GW01	0.004	• 3(a). Aquatic Ecosystems – ANZG (2018) Freshwater, 95% species protection: 0.0014

## 5.8 Groundwater Discussion

Elevated concentrations of copper and zinc as detailed above in **Table 5.8** are considered likely to be attributed to natural and/or ambient background concentrations in the Adelaide area, and are therefore not considered to represent site contamination caused by site activities. Subject to no extraction of groundwater onsite for beneficial use, these slightly elevated concentrations are not considered to present a risk to current or future site users, and are unlikely to result in the need for any ongoing management / monitoring, under a commercial landuse scenario.

## 6. Quality Assurance/Quality Control

An assessment of QA/QC was undertaken by assessment of data quality indicators (DQIs). Compliance with the pre-determined DQIs is discussed further in **Appendix L**.

Based on the results of the evaluation of the QA/QC data, it is considered that:

- The field and laboratory quality assurance measures implemented provide an acceptable level of confidence that the data collected and reported is appropriately complete, comparable and representative; and
- The field and laboratory quality control measures implemented provide an acceptable level of confidence that the data collected and reported is appropriately accurate and precise.

Therefore, the data collected for the soil and groundwater investigations is considered to be reliable and suitable for the assessment of the condition of the site, relative to the scope of work agreed with the client.

## 7. Conclusions and Recommendations

Based on the scope of work completed and subject to the limitations in **Section 8**, JBS&G notes the following conclusions:

- Based on the analytical results, fill materials underlying the central portion of the site are not considered suitable to remain on site under a commercial land use scenario without some form of management (e.g. on-site containment) and/or remediation. Further, these materials have been identified to exceed Waste Fill, Intermediate Waste and Low-Level Contaminated Waste material classifications based on chemical composition. As such, for the purposes of offsite disposal, the materials would be classified as High-Level Contaminated Waste without some form of pre-treatment or remediation (noting additional testing of the materials would still be required in order to meet minimum sampling densities). The impacted fill materials were vertically delineated to a maximum depth of approximately 1.2m bgl in the areas investigated. Due to the limited scope of works completed as requested by Charter Hall and access constraints, the lateral extent of the impacted material, and vertical extent in areas outside the current investigation locations, has not been accurately defined. Additional investigation works are recommended (and would be required) to further delineate the lateral and vertical extents of impacted material in other areas of the site;
- Soil analytical results for the remainder of site fill/natural materials tested during the limited soil investigation were below the Tier 1 screening criteria for commercial land use. As such, these materials are not considered to present a risk to current or future site users under a commercial land use scenario. Should the materials become surplus during any future development of the site, it is likely they would be classified as Waste Fill for offsite disposal purposes (subject to additional testing to meet minimum sampling densities);
- No significant groundwater contamination precluding ongoing commercial land use or requiring ongoing management was identified. Slightly elevated concentrations of heavy metals (mercury and zinc) were identified in groundwater, however, these concentrations are not considered to be site derived, but rather representative of regional groundwater conditions within the Adelaide area.



## **8. Limitations**

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

## Figures











#### Legend

  Site Boundary



Job No: 58015

Client: Charter Hall

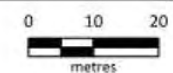
Version: DRAFT

Date 23-Jan-20

Drawn By: AS

Checked By: JL

Scale 1:1,000



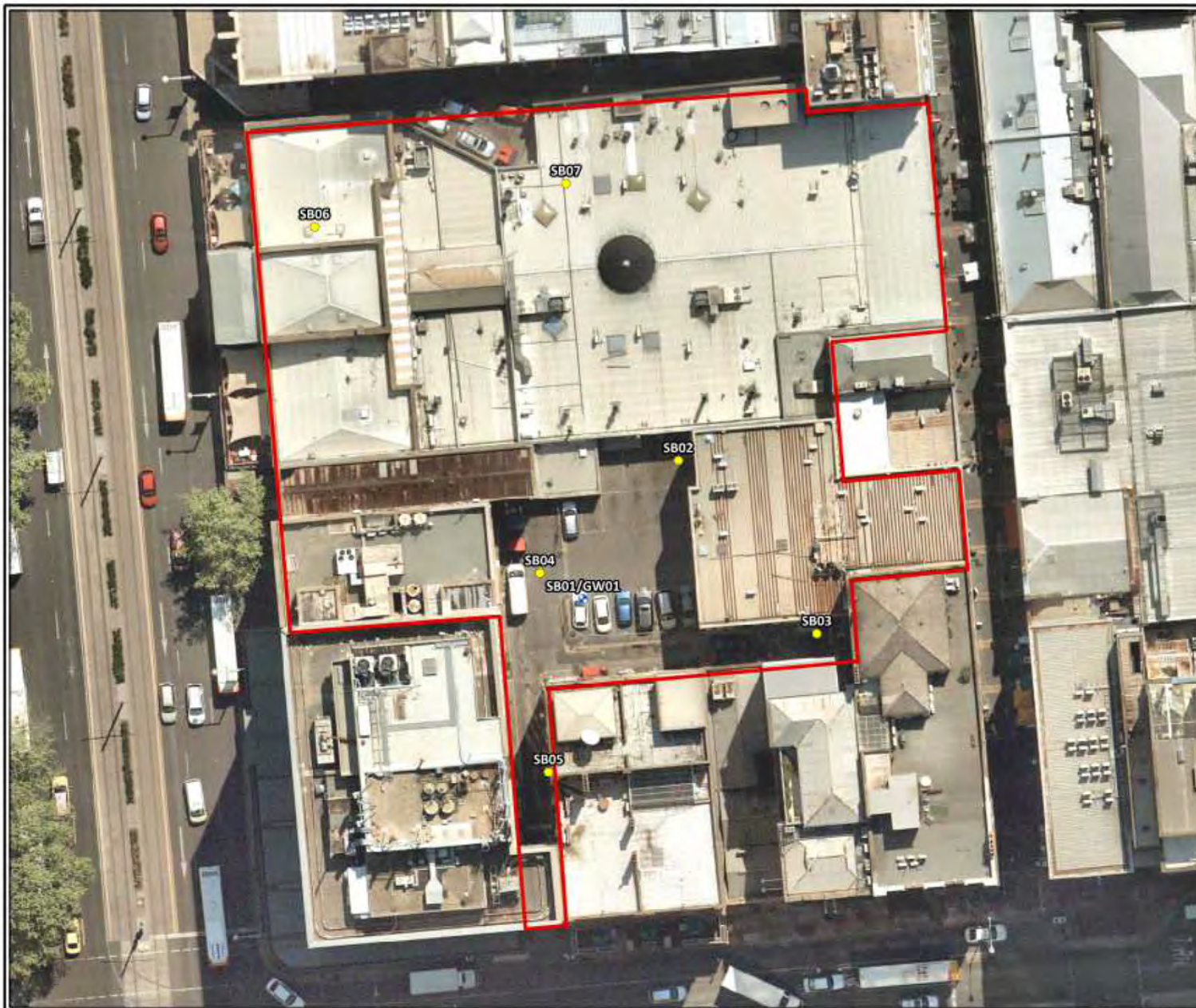
Coord. Sys. GDA 1994 MGA Zone 54

**52-62 King William Street,  
Adelaide, South Australia**

**SURROUNDING LAND USE**

**FIGURE 3**





#### Legend

- ▬ Site Boundary
- Soil Borehole
- Groundwater Monitoring Well



Job No: 58015

Client: Charter Hall

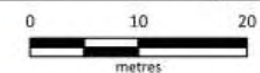
Version: DRAFT

Date 23-Jan-20

Drawn By: AS

Checked By: JL

Scale 1:600



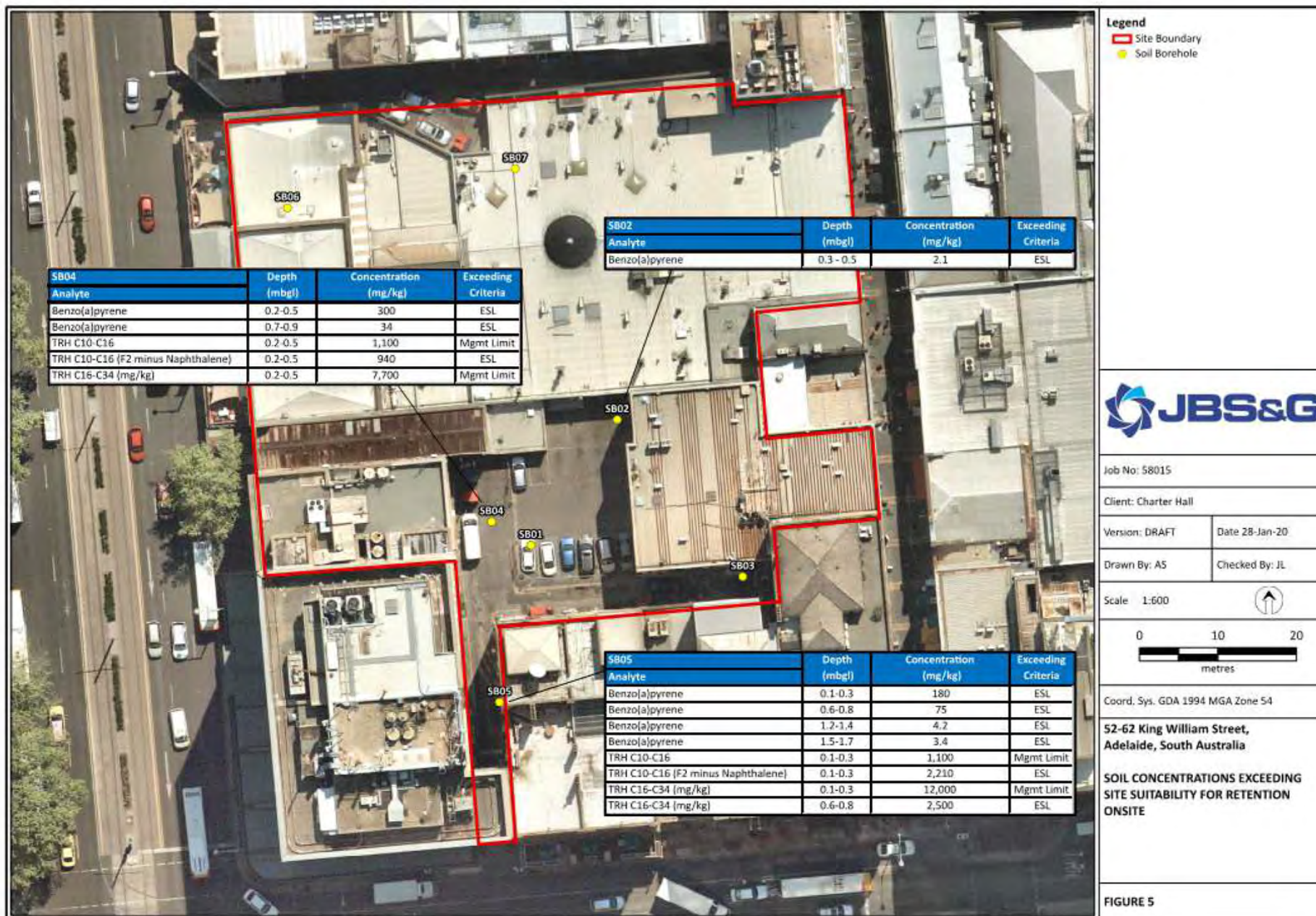
Coord. Sys. GDA 1994 MGA Zone 54

52-62 King William Street,  
Adelaide, South Australia

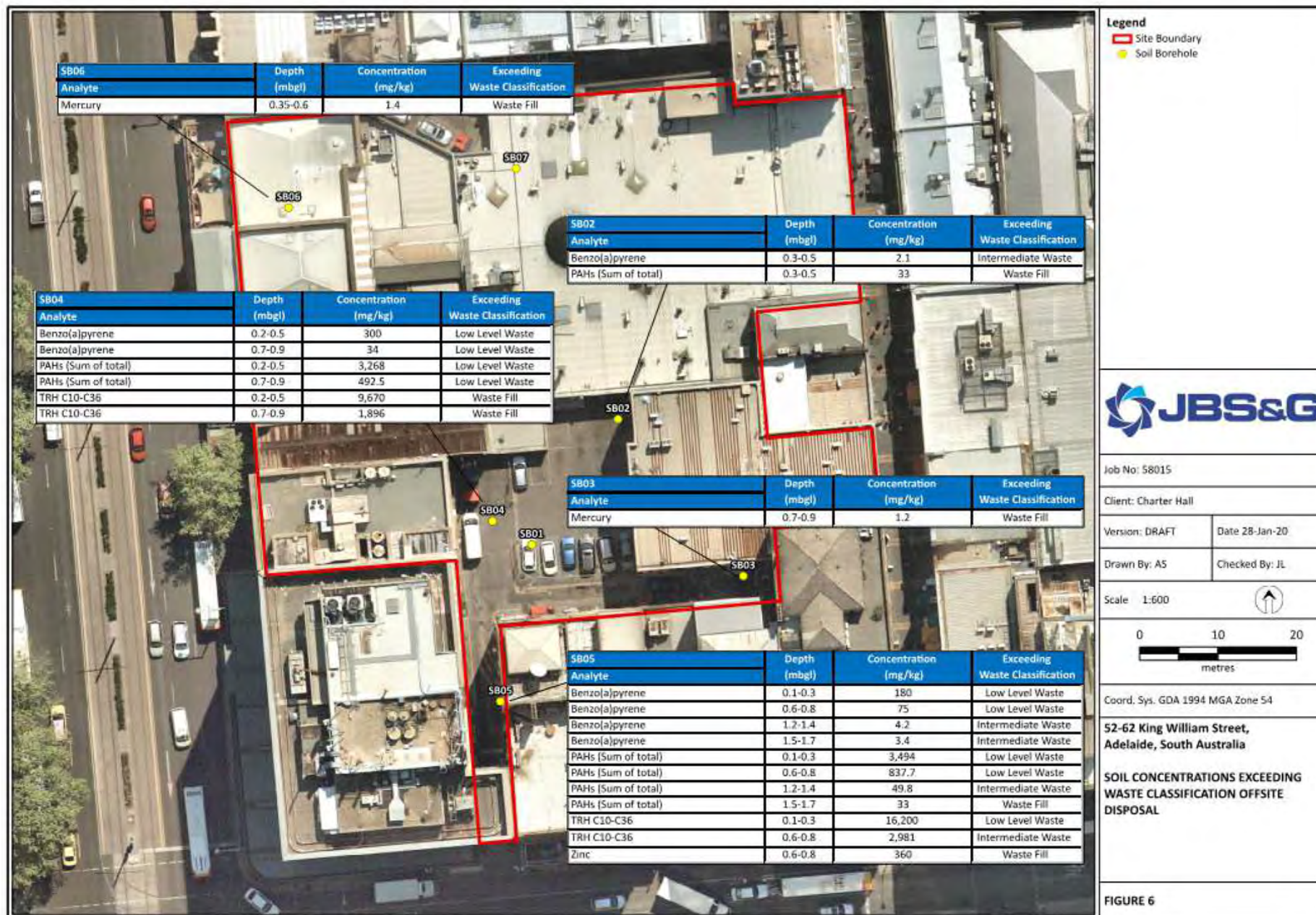
**SOIL AND GROUNDWATER  
INVESTIGATION LOCATIONS**

**FIGURE 4**











## Consultant Advice Notice (CAN)

19514  
20/05/2020

**CAN No.:** 19514-C-CAN-001  
**Project Name:** 60 King William Street  
**Services:** Combined Services

### SITE SERVICES & AUTHORITY CONNECTIONS

The proposed development located at 60 King William Street, Adelaide, requires services connections and supplies from various utilities and authority infrastructure assets to enable the operation of the site.

Required supply connections and associated authorities relevant to the site include:

Utility	Relevant Authority / Network Operator
Water	SA Water
Sewer	SA Water
Natural Gas	APA Group
Electricity	South Australian Power Networks (SAPN)
Communications	NBN Co. Telstra TPG
Stormwater*	City of Adelaide

*\*Capacities of the surrounding Council stormwater drainage networks and suitability for connection of the development shall be confirmed by the project Civil Engineer. No assessment of this infrastructure or authority liaison has been complete by Floth.*

Floth, through the ongoing development of the building services design and documentation for the building, have undertaken liaison and coordination with the relevant authorities to understand the available supply capacities. Based on the proposed incoming services connections to the site (water, gas, power, etc.) the building is able to operate as intended.

Please refer to Appendix A 'Site Services Report' for further detailed information in relation to existing authority infrastructure surrounding the site.

Yours sincerely,  
Floth Pty Limited

Tim Philp  
Director | Victoria & Western Australia

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## APPENDIX A – 60 KING WILLIAM STREET – SITE SERVICES REPORT

# Site Services Report

60 King William Street

A large grid of red plus signs (+) on a white background. The plus signs are arranged in a pattern that resembles a stylized 'X' or a cross shape, with the density of the plus signs decreasing towards the edges. The grid is composed of many small plus signs, creating a textured, pixelated effect. The overall shape is roughly rectangular, with the plus signs concentrated in the center and becoming sparser towards the top, bottom, left, and right edges.

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**CLIENT**

Charter Hall



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**ARCHITECT**

COX



## Amendment Register

Rev. No	Section & Page No.	Issue/Amendment	Author	Project Engineer	Checked	Date
P1	-	Preliminary Issue	TA	SB	IO	11.03.2020

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## EXECUTIVE SUMMARY

The proposed site for the 60 King William Street project has a number of utility services infrastructure assets that are located on the property boundaries.

As there are no current as-constructed sizes of the existing connections for the site it is likely that the existing water connections will not be sufficient for the proposed development. New dual connections will be required to service the site. The new connections are likely to be fed from the Ø200 CICL main on King William Street. It is recommended further information is requested from SA Water to confirm capacity of the water network and details of the existing infrastructure. Dial before you dig plans show multiple water services which maybe be impacted by the construction. There is no recycled water reticulation to the site.

There are existing sewer mains located in Clarence Place & James Place with the existing Ø225 trunk main to the West of the project in King William Street. It is recommended that further information is requested from SA Water to confirm the properties of this main such as, invert levels, size and remain capacities of the existing trunk sewer mains.

The existing stormwater services serving the site is situated on Clarence Place & James Place. Further investigation is required to confirm the suitability of the existing legal point of discharge for the site's post development which is to be advised by the civil engineer.

There is an existing medium pressure gas mains located in Clarence Place & James Place. Dial before you dig plans indicate multiple dedicated supplies to the site. Further discussions will be required with APA and the Client's preferred energy retailer to understand the extent of work and cost associated with a new or modified gas supply connection.

There are existing SA Power Networks 11 kV cables in both King William Street and James Place with a 11 kV connection to the site from James Place and switching cubicle located on the site.

There are a number of low voltage connections to the site from all street frontages.

All the electrical connections to the site will need to be disconnected and abolished before demolition can commence.

There are several communications services providers that indicated that have connections to the site and there are connections from all streets except Clarence Place. All the customers of these communications service providers will need to transfer their service to another location or disconnect the service before the service providers will abolish the connection to the site.

Confirmation of flooding risks shall be advised by the civil engineer.

In general, any amplification and/or extension of existing infrastructure to serve the site will be undertaken as required by the relevant utility authorities. Further engagement with civil engineer and utility authorities, including formal applications to connect and payment of associated authority fees, will be required to confirm existing infrastructure details and capacities, determine connection locations and any diversion/amplification works required, and headworks costs for the development.

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Sewerage Service	2
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Stormwater	3
<b>CITY OF ADELAIDE</b>	<b>3</b>
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<b>APA 4</b>	
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## EXISTING UTILITIES

### General

The information in this section of the report is based upon a desktop analysis of the documentation provided from the utility service providers. The documentation was provided through the “Dial Before You Dig” website. The documentation indicates the underground assets in the area immediately surrounding the site. This “Dial Before You Dig” (DBYD) documentation has been provided in the relevant appendices to this report. For accurate information on the exact location of any underground services additional detailed survey information will be required and could potentially involve the potholing of the streets and footpaths around the site.

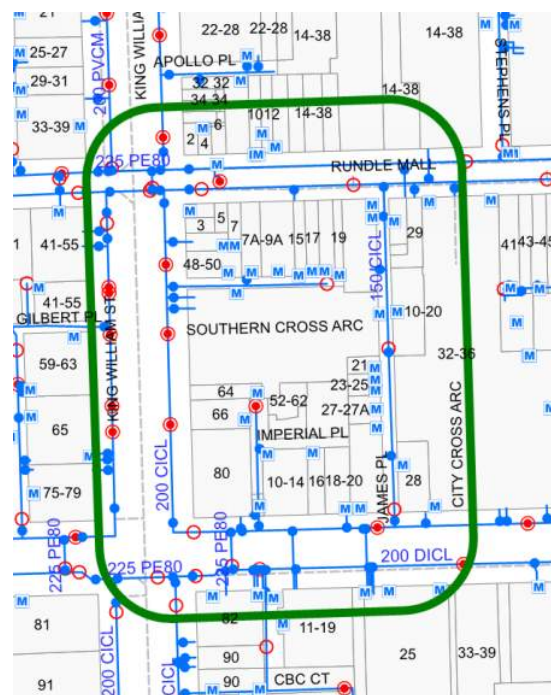
## WATER SUPPLY

### SA Water

There is SA Water supply network and infrastructure located on King William Street within the vicinity of the site.

There appears to be existing water connections to the site from King William Street but the size and capacity is currently unknown. The development will likely have an increased pressure and flow demand which would result in the existing water connections being undersized or inadequate. Further investigations will be required to determine capacity, pressures and adequacy of the existing supplies and whether these are suitable to meet the demands of the new development. If the existing supplies are found to be unfavourable an upgrade to the sites’ water connection will be required and the existing connections to be disconnected, capped and removed in an approved manner.

Further discussions with SA Water and submission of application to SA Water will be required to determine if there is adequate capacity (flow) and pressure for the proposed development. The result of this will determine whether onsite pumps and or tanks are required for the potable and fire water systems.



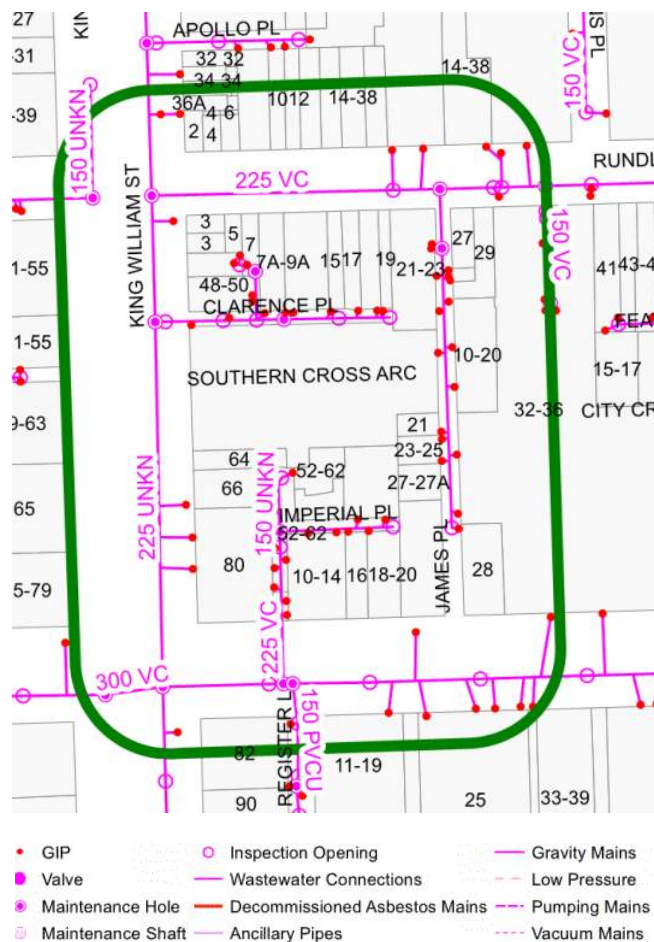
- Water Valves
- Water Main
- Water Main (Decommissioned)
- Decommissioned Asbestos Mains
- Water Pillar Hydrant
- Water Hydrant
- ▲ CP Facility
- CP = Cathodic Protection

Refer to SA Water Water Map drawings in Appendix A.

## SEWERAGE SERVICE

### SA Water

There are existing sewer mains located in along the northern frontage of Clarence Place and an existing trunk main reticulating to the west of the project along King William Street. From the SA Water infrastructure maps there appears to be several inspection openings located along Clarence Place with a manhole structure located where King William Street and Clarence Place junctures. It is unclear if the existing connections in James Place and Clarence Place are adequate in terms of size and remaining capacity for the development. It is recommended that further information is requested from SA Water to confirm the properties, invert level and size of the existing connection.



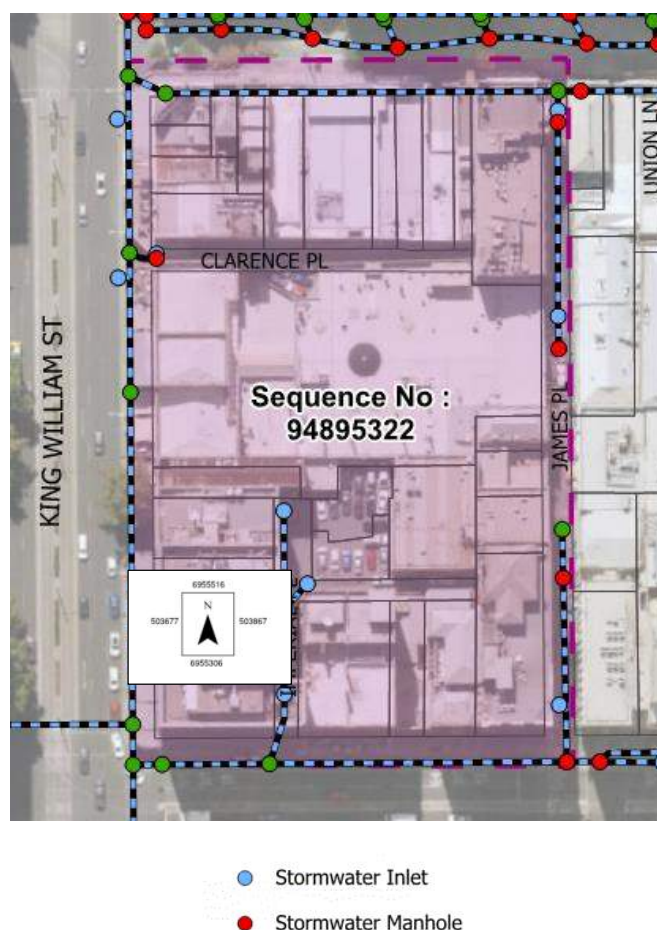
Refer to SA Water drawings in Appendix A.

## STORMWATER

### City of Adelaide

The existing stormwater infrastructure within the vicinity of the project is owned by the City of Adelaide. Based on the information obtained it appears that the site connections are located in Clarence Place & James Place which forms the legal points of discharge.

Further investigations and confirmation from the Civil Engineer will be required to confirm whether the site requires a stormwater management plan (SWMP) to align with the controlling authorities' requirements in terms of characteristics of discharges and pre and post development flows. If no formal SWMP is required, the site's stormwater discharge would need to be within acceptable ranges to meet the current discharge flows and location for the current stormwater infrastructure.



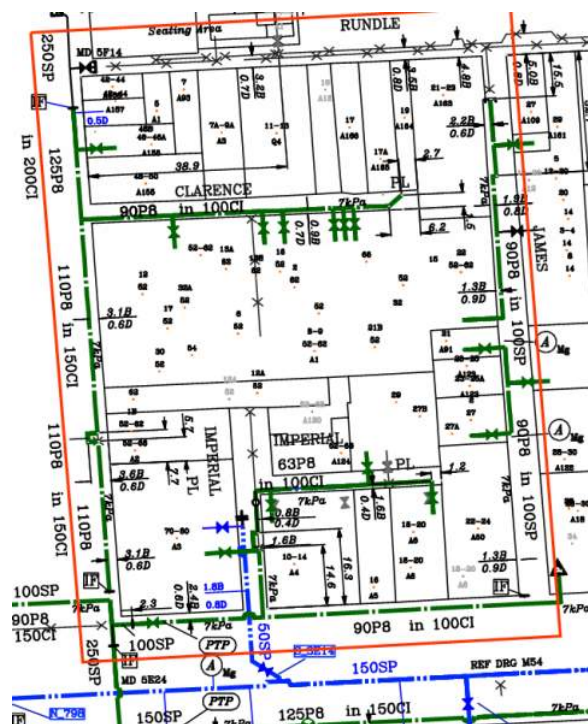
Refer to City of Adelaide drawings in Appendix B.

## NATURAL GAS

### APA

The APA natural gas infrastructure reticulates along the northern edge of Clarence Place & James Place via 100mm medium pressure mains.

Dial before you dig plans indicate multiple dedicated supplies to the site. Further discussions will be required to be undertaken with APA and the Client's preferred energy retailer to understand the extent of work and cost associated with a new or modified gas supply connection.



ITEM	SYMBOL
LOW PRESSURE 1.2 - 1.7kPa	— — — — —
MEDIUM PRESSURE 35 - 100kPa	— — — — —
HIGH PRESSURE 70 - 350kPa	— — — — —
TRANSMISSION PRESSURE 900 - 15000kPa	— — — — —
PROPOSED MAIN (COLOUR BY PRESSURE)	— — — — —
ABANDONED MAIN	— — — — —

Refer to APA drawings in Appendix C.



## ELECTRICITY

### South Australia Power Networks

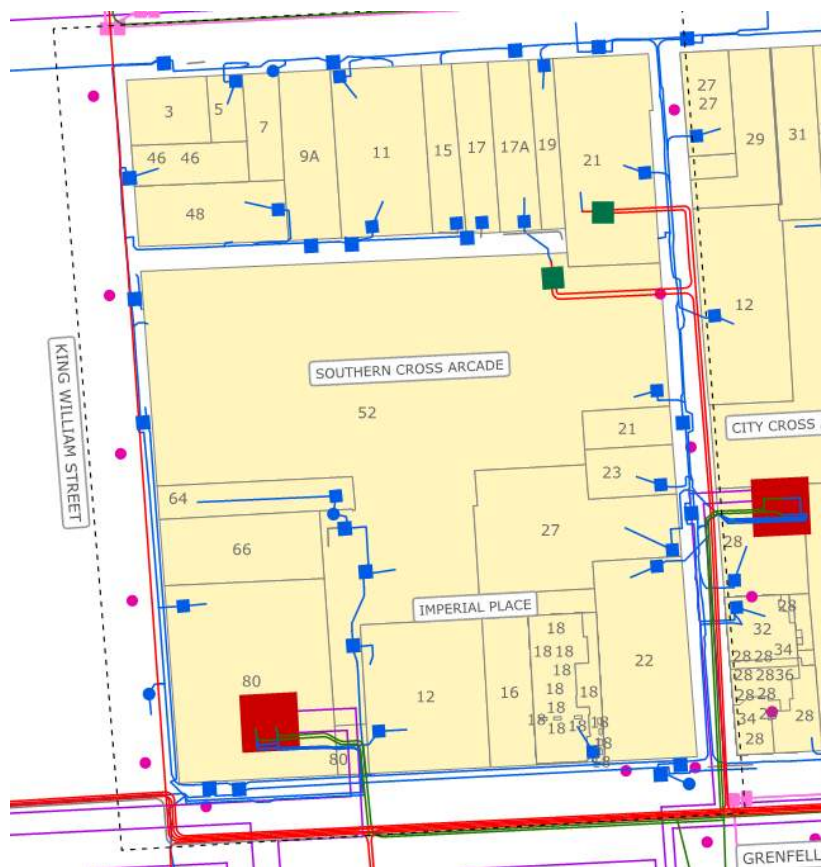
South Australia Power Networks (SAPN) have 11 kV and low voltage cables running past the site in both King William Street and James Place. There are also low voltage cables run in both Clarence Place and Imperial Place.

The Southern Cross Arcade building, 52 King William Street, is supplied from the 11 kV cable running in James Place. The SAPN plans indicate that Southern Cross Arcade Building has a 11 kV switching cubicle but no transformer cubicle or substation and this suggests that the building has a private substation however this will need to be confirmed with SAPN. The SAPN plans also indicate that a low voltage supply comes out of the 11 kV switching cubicle to supply the lot at 17A Rundle Mall which would suggest that there is a SAPN transformer at 52 King William Street. The plans also indicate that there is a low voltage supply to 52 King William Street from James Place as well as from King William Street.

The two adjacent lots on King William Street that form part of the site, 64 King William and 66 King William, are both supplied via low voltage supplies from the rear of the lots from Imperial Place.

The adjacent lot on James Place that forms part of the site, 27 James Place, is supplied via a low voltage supply from James Place.

(Refer to the below to South Australia Power Networks Map).



South Australia Power Networks Map



Therefore, before demolition can commence the following electrical connections to the site will need to be abolished by SAPN:

- 11 kV switching station and cables from James Place to 52 King William Street
- Low voltage supply to 52 King William Street from King William Street
- Low voltage supply to 52 King William Street from James Place
- Low voltage supply to 64 King William Street from Imperial Place
- Low voltage supply to 66 King William Street from Imperial Place
- Low voltage supply to 27 James Place from James Place

To enable the above connections to be abolished the individual customers that are supplied by these connections will need to contact their Energy Retailer and ask for their electricity supply to be disconnected.

Refer to the South Australia Power Networks drawings in Appendix D.

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## COMMUNICATIONS

### NBN Co.

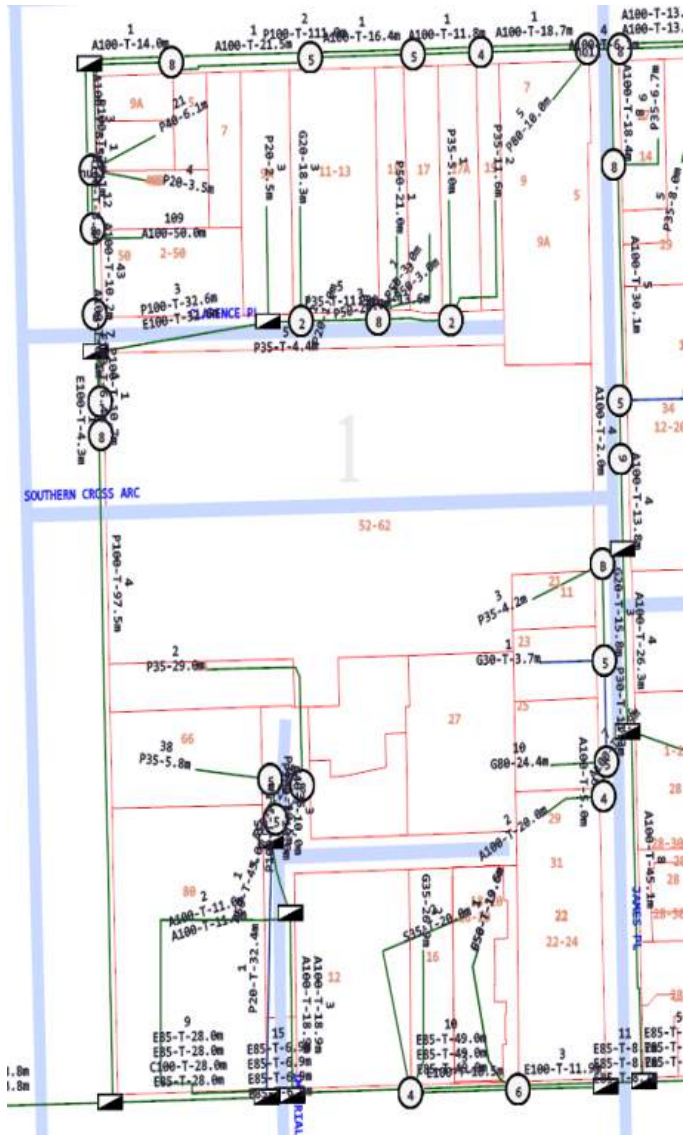
NBN Co. are utilising the Telstra conduit network around the site. There are conduits that run past the site in King William Street. There is a manhole located on the corner of King William Street and Clarence Place and two Type 8 pits between the manhole and the entrance to Southern Cross Arcade. While it is not shown it is suspected that this is the location from where the Southern Cross Arcade would be connected to the NBN Co network.

There are conduits and pits in Clarence Place but they do not serve the Southern Cross Arcade.

There are conduits that run past the site in James Place. There is a manhole located close to the boundary of the site and 21 James Place along with a Type B pit from where the service to 21 James Place originates. There is a Type 5 pit in front of 27 (25) James Place from where the service to 27 James Place originates. There is a Type 4 near the site boundary with 22 Grenfell Street from where the service to 22 Grenfell Street originates.

There are conduits and pits in Imperial Place. There is a manhole and Type 5 pit near the boundary of the site with 80 King William Street. There is a Type 5 pit at the rear of 66 King William Street from where the service to 66 King William originates. Adjacent to the Type 5 pit is a Type 8 pit from where the service to 64 King William Street originates.

(Refer to the below NBN Co Map)



Before demolition can commence the individual tenants will need to contact their Internet Service Provider and request that their service be either transferred to another location or disconnected. Once all services on any particular connection have been transferred or disconnected it can then be abolished by NBN Co.

Refer to the NBN drawings in Appendix E.

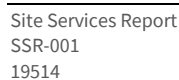
**Telstra**

As noted in the above NBN Co section Telstra have conduits that run past the site in King William Street, Clarence Place, James Place and Imperial Place.

There is a manhole located on the corner of King William Street and Clarence Place and a Type 8 pit between the manhole and the entrance to Southern Cross Arcade. The Type 8 pit is where Telstra lead-in cable enters the Southern Cross Arcade and runs on cable tray to the building main distribution frame room. The map indicates that lead in cables are fibre optic cables.

There are two manholes, one Type 4 pit, three Type 5 pits, one Type 6 pit and one Type B pit in James Place. Only the Type 5 pit located in front of 27 James Place has service emanating from it on to the site to service the existing building at 27 James Place.

(Refer to the below Telstra map)



Before demolition can commence the individual tenants will need to contact Telstra and request that their service be either transferred to another location or disconnected. Once all services on any particular connection have been transferred or disconnected it can then be abolished by Telstra.

Refer to the Telstra drawings in Appendix F.

#### **AARNet**

AARNet do not have any underground assets with the vicinity of the site.

Refer to the AARNet drawings in Appendix G.

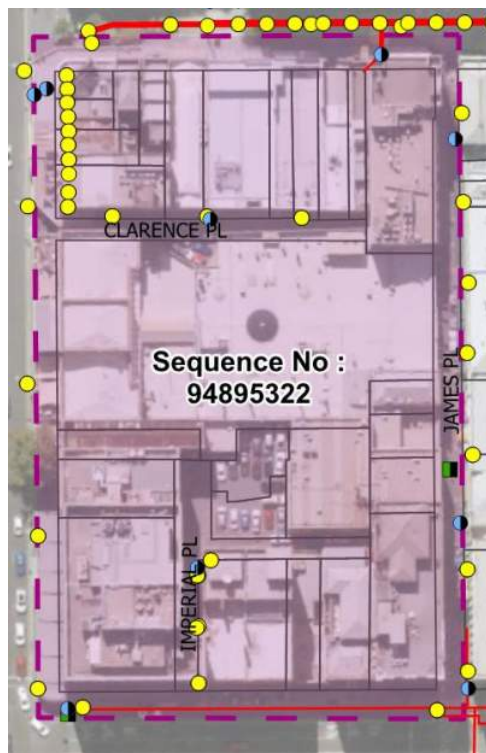
#### **City of Adelaide**

The City of Adelaide has number of street lights around the site. There is one street light on King William Street in front of the site. There are three street lights in Clarence Place which are located on the opposite side of the lane way to the site. There are street lights in James Place located on the opposite side of the lane way to the site. There are only three of these street lights that opposite the site boundary. There are street lights in Imperial Place with only one located on the opposite side of the laneway on the rear of 10 Grenfell Street.

There is a lighting switching board located in Clarence Place adjacent the centre street light.

There is a metered board in James Place in front of 27 James Place. The plan provided by City of Adelaide does not provide enough detail to determine where this metered board is located and further on site investigation is required.

(Refer to the below City of Adelaide map)



Refer to the City of Adelaide drawing in Appendix H.

## NextGen

Nextgen do not have any underground assets with the vicinity of the site.

Refer to the Nextgen drawings in Appendix I.

## Optus

Optus do not have any underground assets with the vicinity of the site.

Refer to the Optus drawings in Appendix J.

## StateNet Services

StateNet Services do not have any underground assets with the vicinity of the site.

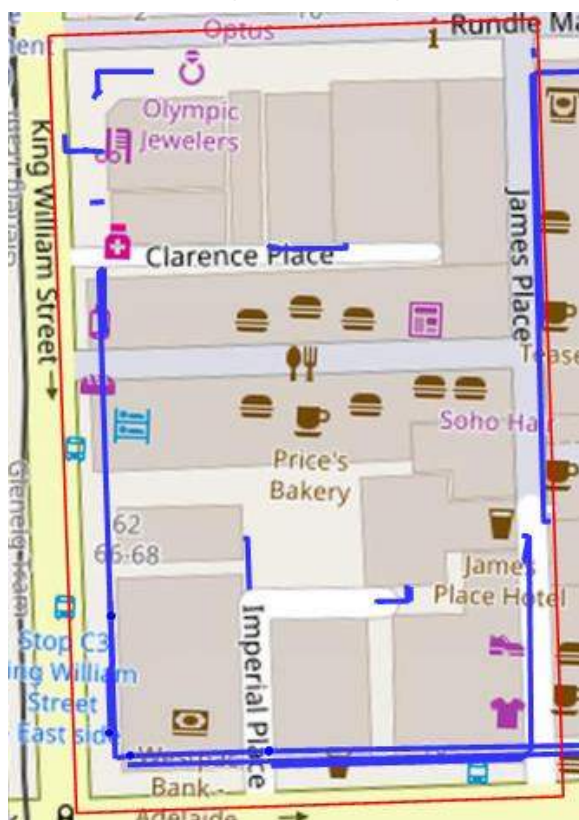
Refer to the StateNet Services drawings in Appendix K.

## TPG

TPG utilise the Pipenetworks underground infrastructure and they have ducts in King William Street, Clarence Place, James Place and Imperial Place. There is a note on their map that indicates that they also utilise third party ducts and their cover letter indicates that these are the Telstra conduits.

There is a TPG duct in James Place that connects to 27 James Place. There is a duct in Imperial Place that connects to 66 King William Street. There is a duct in Imperial Place that connects to 27 King William Street.

(Refer to the below Pipenetworks map)



Refer to the TPG (Pipenetworks) drawings in Appendix L.



## **Vocus**

Vocus do not have any underground assets with the vicinity of the site.

Refer to the Vocus drawings in Appendix M.

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## **SURVEY**

There is no survey drawing showing the existing services pits, poles and underground alignments available at the time of the review of existing services. We recommend that one be undertaken including necessary potholing where required to confirming the existing services locations and depths.

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## **FLOOD AFFECTED AREA**

Confirmation of flooding risks shall be advised by the civil engineer.



## Appendix A - SA Water Supply And Sewer Drawings

Notification number: 19051179  
Sequence number: 94895327  
Enquiry date: 17/02/2020 5:16:00 PM  
Enquiry location: 60 King William Street, Adelaide SA 5000

Mr Ian Osborne  
Floth Sustainable Building Consultants  
Level 2 69 Robertson Street  
Fortitude Valley QLD 4006

### Dial Before You Dig Response – SA Water Assets Identified

Dear Mr Ian Osborne

Thank you for contacting Dial Before You Dig (DBYD) prior to engaging in work or activities which may affect the water and sewerage infrastructure of SA Water Corporation.



**Our records indicate there has been SA Water infrastructure identified within your nominated search area and has been shown on the attached plan.**

#### Disclaimer

The information has been generated by an automated system based on the area highlighted. It is your responsibility to ensure that the dig site is properly defined when submitting your Dial Before You Dig enquiry. If the information does not match the dig site or you have received this message in error please resubmit your enquiry.

This advice and/or information is given for your private use only. The accuracy of the advice and information is not guaranteed and no responsibility is accepted by the crown, the South Australian Water Corporation or their officers, agents or servants for any loss or damage caused by reliance upon this advice and/or information, as a result of any error, omission, incorrect description or statement therein whether caused by negligence or otherwise.

The information contained in this message may be confidential and may also be subject of legal, professional or public interest immunity. If you are not the intended recipient any use, disclosure or copying of this document is unauthorised. If you have received this message in error, please contact Dial Before You Dig.

For further enquiries or assistance with interpretation of plans and search content, or to report any obvious errors with the data provided, please contact our DBYD support team via email [dialbeforeyoudig@sawater.com.au](mailto:dialbeforeyoudig@sawater.com.au)

Thank you for contacting DBYD service.

Yours sincerely

Dial Before You Dig Support Team  
SA Water Corporation

**Please note: Any damage to SA Water infrastructure must be reported immediately to Service Faults and Emergencies (24 hours, 7 days) on 1300 883 121**

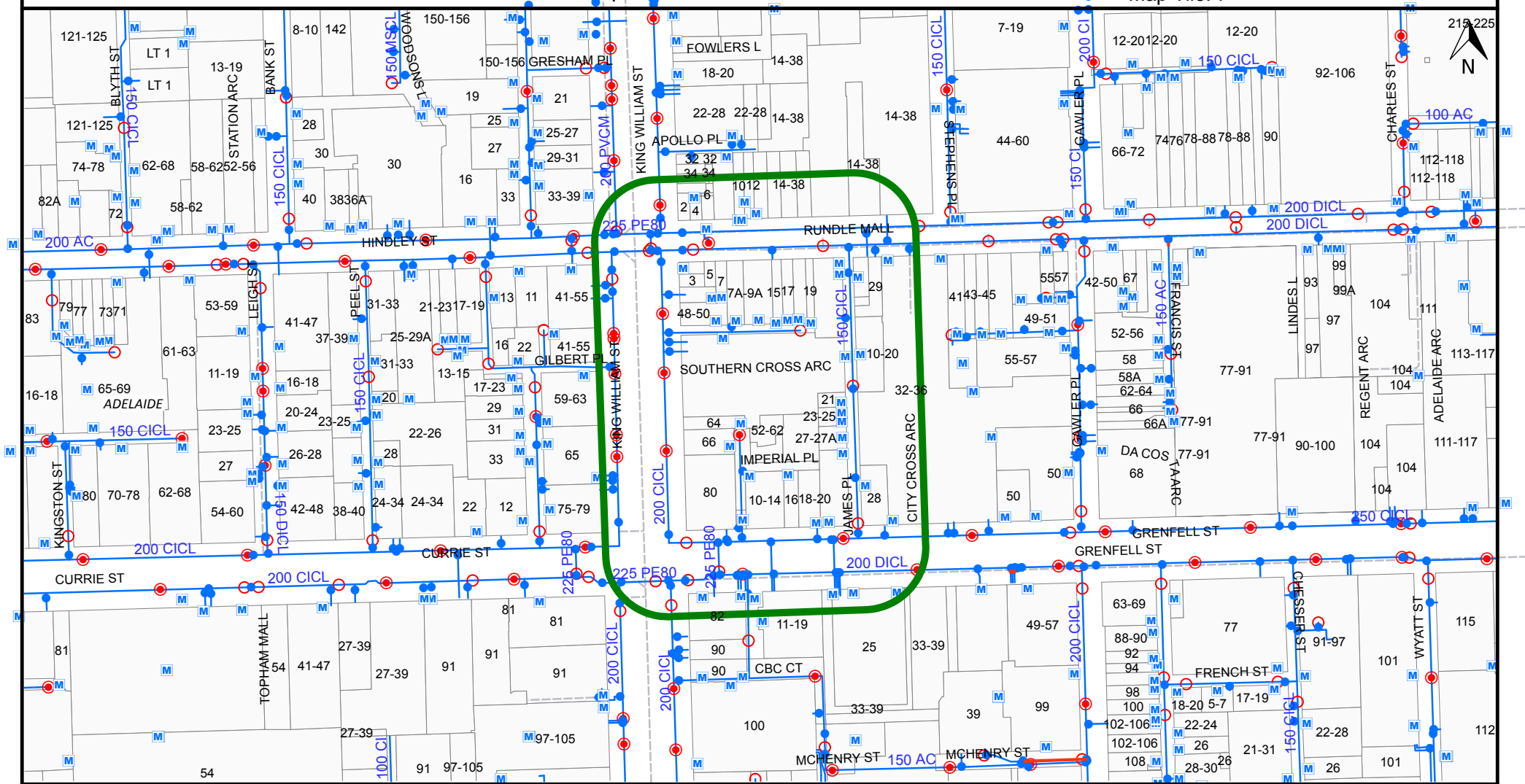


# South Australian Water Corporation

## WATER RETICULATION

DBYD Sequence No: 94895327

Map Tile: 1



- Water Valves
  - Water Main
  - - - Water Main (Decommissioned)
  - Decommissioned Asbestos Mains
  - Water Pillar Hydrant
  - Water Hydrant
  - ▲ CP Facility
  - CP = Cathodic Protection
  - CP Anode/Cathode Cables
  - - - CP Electricity Supply Cables
  - CP Anode Bed Outlines
  - Railway
  - Land Parcels
  - M Water Meter\*
  - M Shifted Water Meter\*
- \* Connection between water meter and pipe not shown

This advice and/or information is given for your private use only. The accuracy of the advice and information is not guaranteed and no responsibility is accepted by the crown, the South Australian Water Corporation or their officers, agents or servants for any loss or damage caused by reliance upon this advice and/or information, as a result of any error, omission, incorrect description or statement therein whether caused by negligence or otherwise.

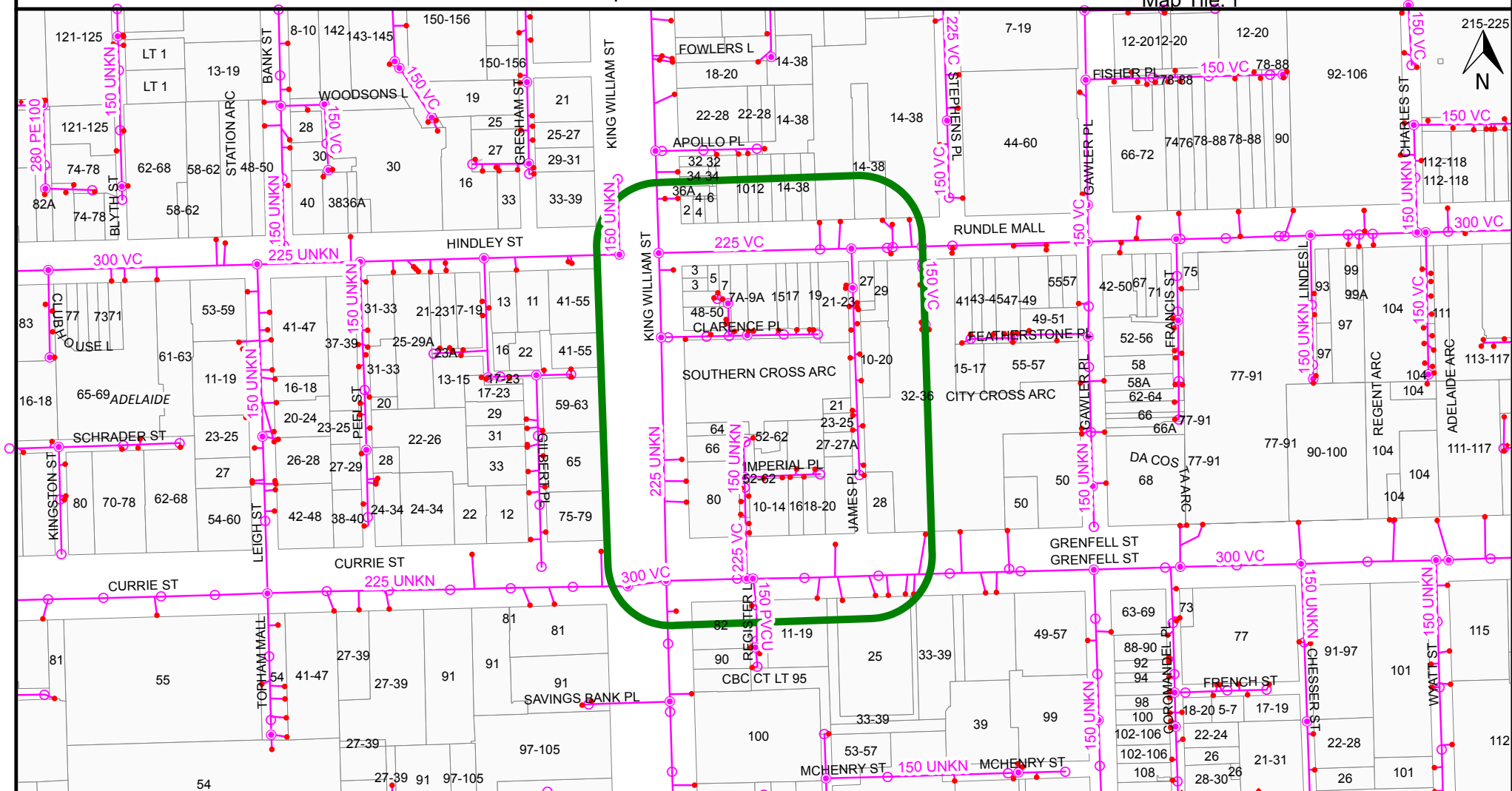
Scale @ A4: 1:2500

# South Australian Water Corporation

## WASTEWATER RETICULATION

DBYD Sequence No: 94895327

Map Tile: 1



- |                     |                                 |                    |                |                                    |
|---------------------|---------------------------------|--------------------|----------------|------------------------------------|
| • GIP               | ○ Inspection Opening            | — Gravity Mains    | — Railway      | — CP Anode/Cathode Cables          |
| ● Valve             | — Wastewater Connections        | - - - Low Pressure | □ Land Parcels | - - - CP Electricity Supply Cables |
| ⊙ Maintenance Hole  | — Decommissioned Asbestos Mains | — Pumping Mains    | ▲ CP Facility  | □ CP Anode Bed Outlines            |
| ⊕ Maintenance Shaft | — Ancillary Pipes               | - - - Vacuum Mains |                | CP = Cathodic Protection           |

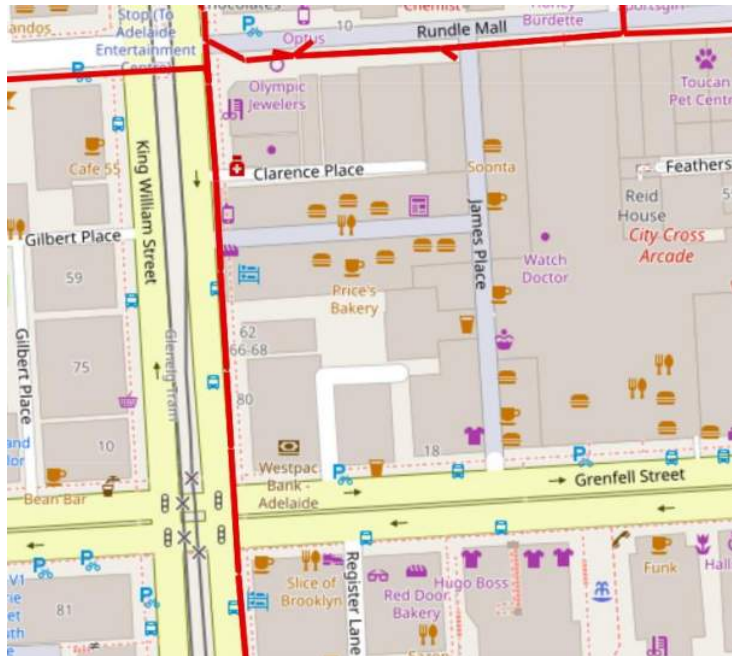
Scale @ A4: 1:2500

This advice and/or information is given for your private use only. The accuracy of the advice and information is not guaranteed and no responsibility is accepted by the crown, the South Australian Water Corporation or their officers, agents or servants for any loss or damage caused by reliance upon this advice and/or information, as a result of any error, omission, incorrect description or statement therein whether caused by negligence or otherwise.

## Appendix B - City Of Adelaide Stormwater

City Of Adelaide  
ABN 20 903 762 572  
Customer Centre  
25 Pirie Street, Adelaide  
GPO Box 2252 Adelaide  
South Australia 5001  
Tel 08 8203 7203  
Fax 08 8203 7575  
[city@cityofadelaide.com.au](mailto:city@cityofadelaide.com.au)

Sequence Number: 94895322  
Job Number: 19051179



## KEY

 Fibre Cable

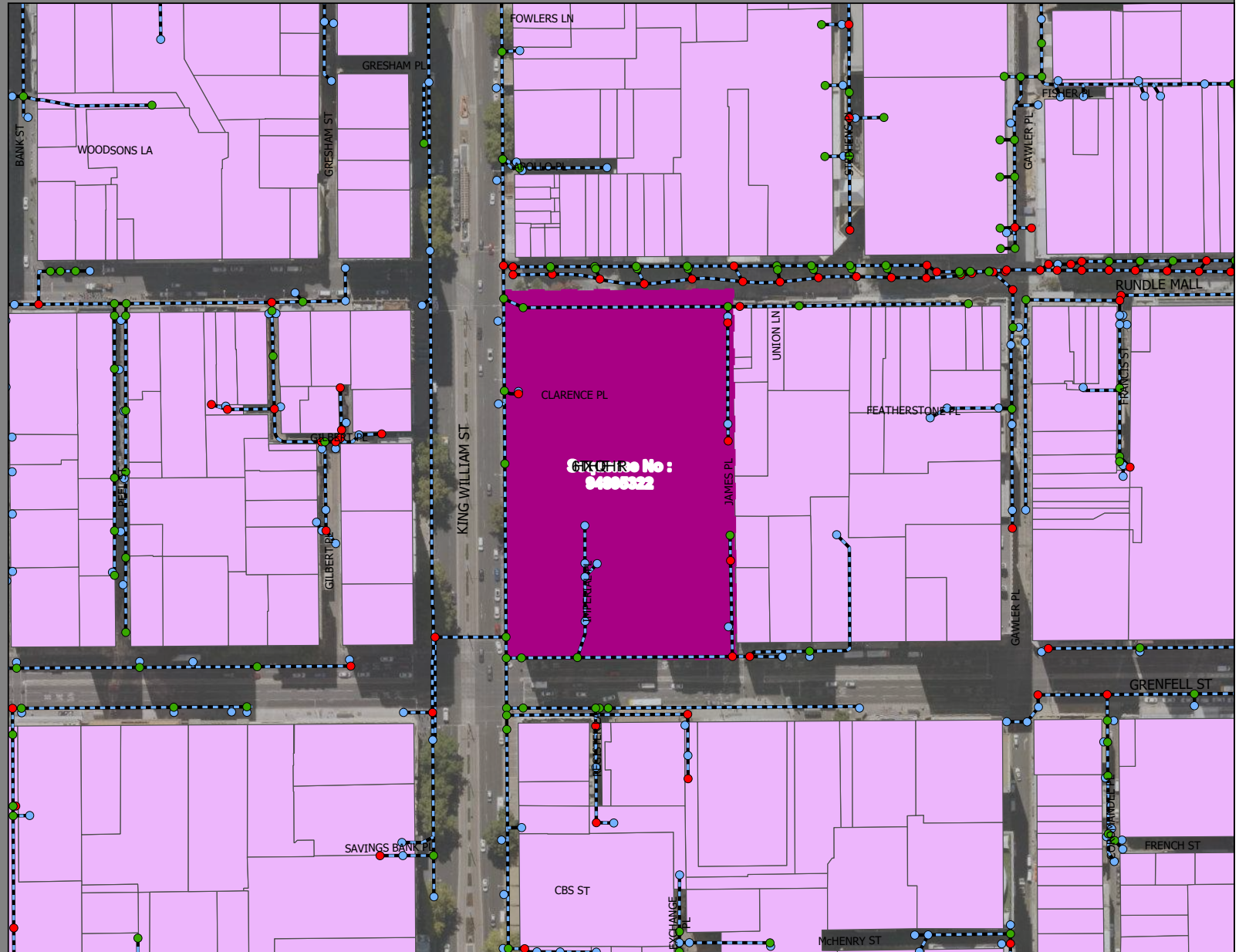
### Indicative Information Only

*While reasonable effort has been taken to ensure the accuracy of the fibre optic cable location map provided, the City of Adelaide makes no representation, expressly or impliedly, as to the accuracy, currency, reliability or suitability of the map. The City of Adelaide expressly disclaims responsibility for any damages that may be caused by the contents of the map provided. Underground services should be confirmed on site and located by hand digging.*

ICT City of Adelaide



## Dial Before You Dig - Stormwater Infrastructure



## Appendix C - APA Gas Drawings



APA Group  
PO Box 6014 Halifax Street  
South Australia 5000

17/02/2020

Floth Sustainable Building Consultants  
Mr Ian Osborne  
Level 2 69 Robertson Street  
Fortitude Valley  
QLD 4006

iosborne@floth.com.au

Dear Mr Ian Osborne

**Sequence Number:** 94895326  
**Worksite Address:** 60 King William Street  
Adelaide  
SA 5000

Thank you for your Dial Before You Dig enquiry regarding the location of Gas Assets, we can confirm that the APA Group's Network's Division has **Critical Gas Assets** in the vicinity of the above location.

**You are hereby notified that before you commence any works you are required to complete the attached 'Work In The Vicinity Of Critical Gas Assets' request form and forward this to APA asap**

As laid out in the **Duty of Care** requirements supplied, any activity in the vicinity of Critical Gas Assets operated by APA requires a Third Party Works Authorisation and potentially attendance on site by an APA representative during any work. Please ensure you read and comply with all the relevant requirements. Should you have any questions with regards to the attached information please contact our DBYD officer - 1800 085 628.

**Caution - Damage to gas assets could result in possible explosion and fire with the risk of personal injury. For Gas Emergencies please call 1800 GAS LEAK (1800 427 532)**

Please find enclosed the following information:-

- APA's Duty of Care, If you are unclear of your obligations under these requirements please contact the APA Representative listed above immediately
- An overview map with your requested area highlighted to assist in locating APA's Gas Assets
- A map(s) showing APA's Gas Assets in the requested area, this information is valid for 30 days from the date of this response, **please check this represents the area you requested**, if it does not, please contact the APA Representative listed above immediately
- A 'Work In The Vicinity Of Critical Gas Assets' request form, please complete and forward to APA asap via [DBYDNetworksAPA@apa.com.au](mailto:DBYDNetworksAPA@apa.com.au), Fax (08) 7131 0132 or the address above

The outcome of this request maybe that a qualified APA Group Representative will be required on site when you undertake your proposed works, if this is the case, this will need to be arranged dependent on their availability. Whilst we will aim to facilitate this within 2 business days from a decision, **this cannot be guaranteed.**

**Please Note:** For some DBYD enquiries, you might receive 2 responses from the APA Group. Please read both responses carefully as they will relate to different assets. It is your responsibility to action all requirements set out in APA Group responses.

Please take some time to review the entire response document and check the information supplied and please let us have any feedback by sending an email to [DBYDNetworksAPA@apa.com.au](mailto:DBYDNetworksAPA@apa.com.au) or contacting us direct on 1800 085 628.

## Duty of Care - Working Around Gas Assets

### General Conditions

- This location enquiry is valid for 30 days from the date of this response
- Expired locations, i.e., over 30 days from the date of this response, require a new Dial Before You Dig request to validate location information
- The location information supplied in this document shall be used as a guide only. APA Group shall not be liable or responsible for the accuracy of any such information supplied pursuant to this request
- It is the responsibility of the excavator to expose all Gas Assets, including Gas Services pipelines (see below), **by hand** (Please Note: Do not use vacuum excavation systems as damage to Gas Assets may occur). Gas Asset depths may vary according to ground conditions
- Gas Service pipelines (inlet service) connecting Gas Assets in the street to the gas meter on the property are typically **not** marked on the map
- Generally, a map of the Gas Service pipeline (inlet service) connection can be found inside the gas meter box
- This information has been generated by an automated system based on the area highlighted in your DBYD request and has not been independently verified. **It is your responsibility** to ensure that the information supplied in this response matches the dig site you defined when submitting your Dial Before You Dig enquiry. If the information does not match the dig site or you have any question, please contact APA immediately using the details listed on the first page and / or please resubmit your enquiry
- For **Gas Emergencies** please call **1800 GAS LEAK (1800 427 532)**

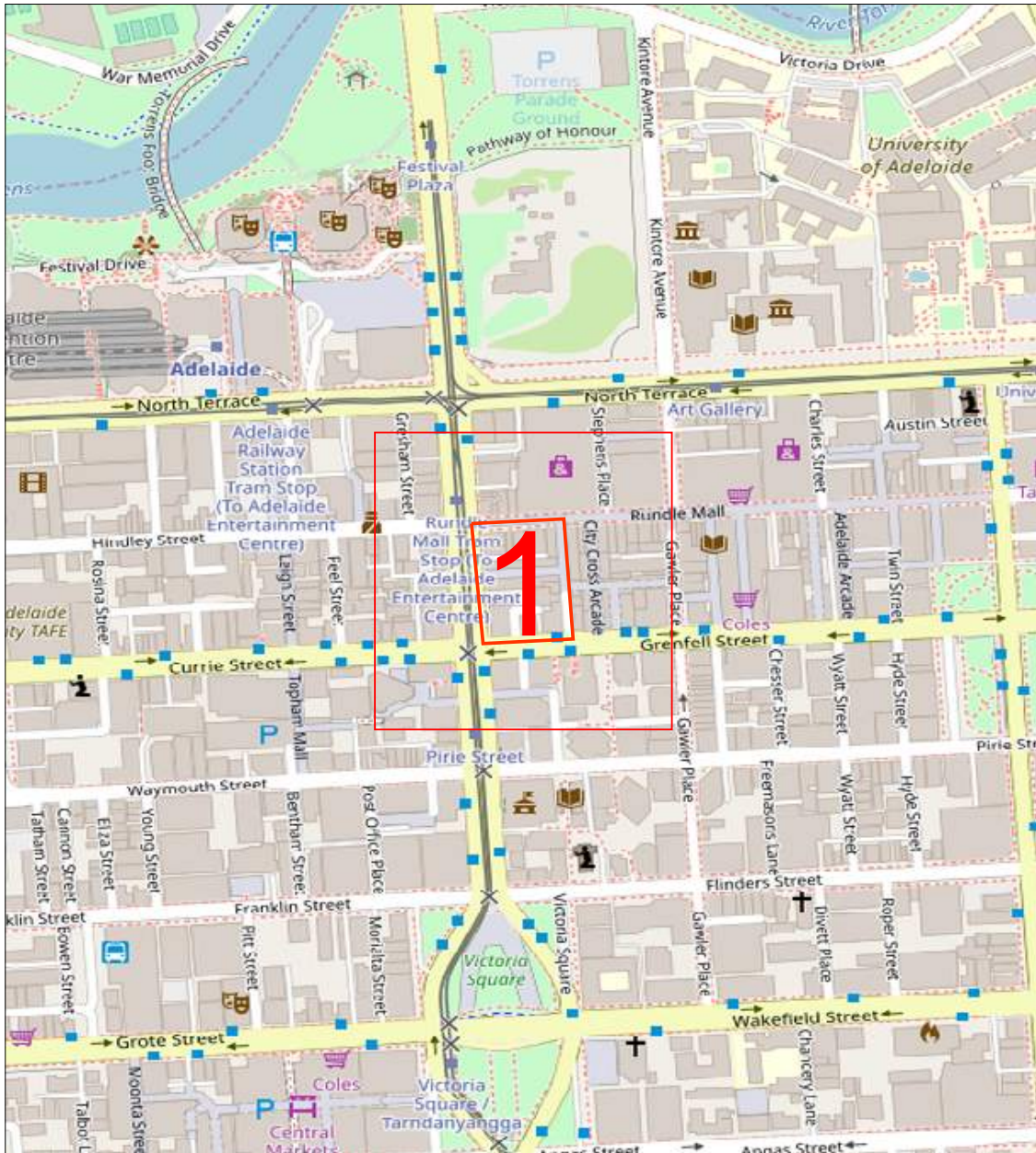
### Critical Gas Assets - Conditions

It is your responsibility to follow these important conditions when working in the vicinity of Critical Gas Assets:-

- **PRIOR** to any work commencing, a 'Work In The Vicinity Of Critical Gas Assets' request form **must be submitted** to APA Group, see form attached.
- Once submitted, if you have not received any response from APA within 2 business days please contact us immediately via 1800 085 628
- If a qualified APA Group Representative is required on site when you undertake your proposed works, this will need to be arranged dependent on their availability.
- Whilst we will aim to facilitate this within **2 business days** from a decision, **this cannot be guaranteed**. Charges for APA Group supervision may apply
- Penalties apply to excavators commencing work in the vicinity of Critical Gas Assets **prior to receiving an APA Group 'Third Party Works Authorisation'**



<b>Site Address</b>	60 King William Street Adelaide 5000	<b>Sequence No</b>	94895326
<b>Name</b>	Mr Ian Osborne		
<b>Email</b>	iosborne@floth.com.au		



Scale 1: 6000

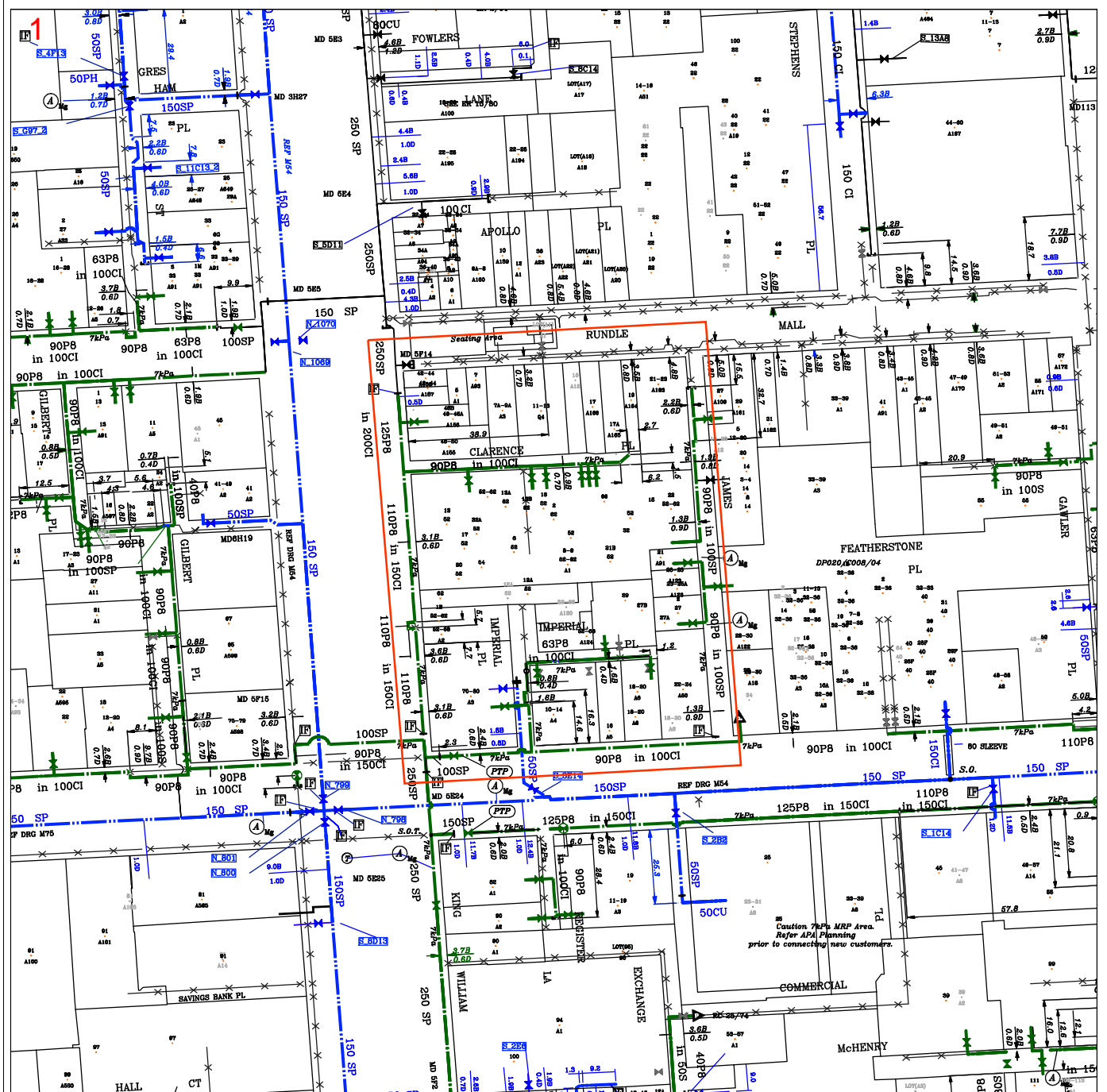


Enquiry Area

Map Key Area 

<b>Site Address</b>	60 King William Street Adelaide 5000	<b>Sequence No</b>	94895326
<b>Email</b>	iosborne@floth.com.au	<b>Map Reference</b>	UbdAde 118F10

**Before you commence any works you are required to complete the attached 'Work In The Vicinity Of Critical Gas Assets' request form and forward this to APA asap**



ITEM	SYMBOL	TERMS	ITEM	SYMBOL
LOW PRESSURE 1.2 - 1.7kPa	—	B = BOUNDARY	DIAL BEFORE YOU DIG REQUESTED AREA	<span style="border: 2px solid red; padding: 2px;">1</span>
MEDIUM PRESSURE 35 - 100kPa	- - -	D = DEPTH	PRIORITY MAIN COVERAGE	<span style="background-color: yellow; border: 1px solid black; padding: 2px;">1</span>
HIGH PRESSURE 70 - 350kPa	- . - . -	Bok = BACK OF KERB		
TRANSMISSION PRESSURE 900 - 1500kPa	- . . . -	Fok = FRONT OF KERB		
PROPOSED MAIN (COLOUR BY PRESSURE)	- - - - -			
ABANDONED MAIN	- x - x - x -			

Map Key

1

Scale 1:1000

0 0.01km





## WORK IN THE VICINITY OF CRITICAL GAS ASSETS

It is **your responsibility** to read and complete this request form

1. This request is required to confirm whether you need a 'Third Party Works Authorisation' and a qualified APA Group Representative on site when you undertake your proposed works
2. You **must not commence any excavation activity** in relation to this request without receiving a verbal or written confirmation re the outcome from an APA Group Representative. Once submitted, if you have not received any response from APA within 2 business days please contact us immediately via 1800 085 628
3. If a qualified APA Group Representative is required on site when you undertake your proposed works, this will need to be arranged dependent on their availability. Whilst we will aim to facilitate this within 2 business days from a decision, **this cannot be guaranteed**. Charges for APA Group supervision may apply
4. Penalties apply to excavators commencing work in the vicinity of Critical Gas Assets **prior to receiving an APA Group 'Third Party Works Authorisation'**
5. This request form must be accompanied by a detailed schedule of works

For further information refer to:

South Australia: Gas Industry Act 1997 – Section 83, Notice of work that may affect gas infrastructure.

Northern Territory: Energy Pipelines Act as in force at 8 March 2007 – Section 66, Threat to pipeline.

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**Return to:** [DBYDNetworksAPA@apa.com.au](mailto:DBYDNetworksAPA@apa.com.au) or APA Group, PO Box 6014, Halifax Street, SA 5000 or Fax to (08) 7131 0132 (Please note – new fax number)

### Enquiries:

Should you have any questions with regards to the attached information please contact our Dial Before You Dig officer - 1800 085 628.

---

### Work / Excavation Site Details:

Number:	Street:		
Suburb:		State:	
Sequence Number: 94895326			
Company Name			
Site Contact Person:			
Phone:		Mobile:	

### Description of Work / Excavation:

Describe the work to be undertaken.			
<b>Tick Applicable Box</b>			
Excavation		Change to surface level	
Service crossing		Boring	
Proving		Other (provide details)	
Earthworks			
Excavator Size, Tooth Type & Tooth Size (provide details)			

### Work / Excavation Drawings Attached:

Yes ☐

No ☐

### Proposed Dates and Times:

From			To	
Excavation	Date	Time	Date	Time
	/ /	am/pm	/ /	am/pm
Backfill	Date	Time	Date	Time
	/ /	am/pm	/ /	am/pm

### Third Party Works Authorisation requested by:

Company Name			
Requestors Name			
Phone:		Mobile:	
Fax:		Email:	
Signature			

## Appendix D - South Australia Power Networks Drawings

**To:**

Floth Sustainable Building Consultants - Mr Ian Osborne  
 Level 2 69 Robertson Street  
 Fortitude Valley QLD 4006

Enquiry Details	
Utility ID	50800
Sequence Number	94895323
Enquiry Date	17/02/2020 17:16
Response	<b>HIGH RISK – DO NOT CONTINUE WORK</b>
Address	60 King William Street Adelaide
Location in Road	CarriageWay, Footpath, Nature Strip
Activity	Mechanical Excavation

Enquirer Details			
Customer ID	412645		
Contact	Mr Ian Osborne		
Company	Floth Sustainable Building Consultants		
Email	iosborne@floth.com.au		
Phone	0735138000	Mobile	0419246542

## Underground cable locations ASSETS FOUND

### The process:

1. You made an enquiry with Dial Before You Dig (1100).
2. Dial Before You Dig referred your enquiry to SA Power Networks (South Australia's Distribution Network).
3. SA Power Networks has checked their records and have found underground assets in your request area.
4. **DO NOT CONTINUE WORK UNTIL YOU RECEIVE FURTHER NOTIFICATION FROM SA POWER NETWORKS.**
5. Your DBYD request is in the vicinity of critical SA Power Networks infrastructure. To help you excavate safely SA Power Networks will send further information to assist you to define and locate these critical assets.

Expect to receive a further response within 2 working days.

If your excavation needs to be undertaken in emergency conditions, please call SA Power Networks cable locations on (08) 8292 0218 (7am – 4pm) or Emergency Dispatch on 131366 out of business hours.

**Please note: Underground services in the vicinity of any proposed earthworks must be located by hand digging (pot-holing) prior to the commencement of works. Persons conducting works will be held responsible for any resulting loss or damage to the services associated with infrastructure**

### Important information and conditions of use for users of underground services information supplied by SA Power Networks

#### Indicative information only

The accompanying information is intended only to indicate the presence of SA Power Networks' underground services and/or to convey general indicative information in respect of the location marked on the plans. **The information does not necessarily provide current, comprehensive or accurate description or location of the underground services or associated infrastructure.**

The information may also describe or indicate the presence of underground services or infrastructure not owned by SA Power Networks, for example, electrical services connected to an SA Power Networks' service point. SA Power Networks takes no responsibility for services or infrastructure that is not owned or operated by SA Power Networks or the accuracy or completeness of their description or location in the accompanying information.

Additional technical information may be requested from SA Power Networks for planning or engineering design (non-digging) purposes. Such requests are to be directed to SA Power Networks Builders and Contractors Electrical Service Line (1300 650 014).

### **Identifying the location of underground services**

Working near or around live electrical cables can be hazardous. **An on-site assessment is strongly recommended prior to undertaking ANY works and is necessary to determine the location of the underground services.** This can be undertaken by SA Power Networks or an alternative professional locating service provider. Enquiries can be made about SA Power Networks' cable location service by telephoning (08) 8292 0218.

Restrictions may apply in regard to your excavation particularly if your excavation is greater than 300mm below ground level and less than 3.0m from an SA Power Networks asset. Further explanation regarding restricted exclusion zones can be found at <http://www.sapowernetworks.com.au/public/download.jsp?id=1775> OR search sapowernetworks.com.au for NICC 404 and by referring to the figures on pages 10, 11 or 12.

Underground services in the vicinity of any proposed earthworks must be located by hand digging (pot-holing) prior to the commencement of the works. Persons conducting works will be held responsible for any resulting loss or damage to the services or associated infrastructure.

### **Working near high voltage 66kV underground cables**

Persons intending to conduct earthworks in the vicinity of an SA Power Networks high voltage 66kV underground cable MUST first obtain a site-specific clearance by contacting the SA Power Networks Cable Management Technical Officer on 0403 582 174.

### **Basis of information supply**

The accompanying information is supplied at the request of, and is only provided for use by, the requestor. The information is valid for 30 days from the date of issue.

SA Power Networks, its employees, agents and contractors shall accept no responsibility for any inaccuracy or incompleteness in the information provided or liability in respect of any personal injury, death, loss or damage to any real or personal property or otherwise that arises out of or in connection with, directly or indirectly, the provision of or reliance upon the information.

It is the requestor's responsibility to ensure that the information provided accords with the area depicted on the requestor's Dial Before You Dig request. The information provided should not be used in respect of any area outside of the area depicted on the Dial Before You Dig request. SA Power Networks does not warrant that the information is suitable for the requestor's intended purposes.

**Any use of the accompanying information is subject to the requestor's agreement to the conditions contained in this document.** Upon acceptance of these conditions, SA Power Networks grants the requestor permission to use the information. The information must be returned to SA Power Networks if the conditions are not accepted.

***Important note: It is an offence under the Electricity Act 1996 (SA) to cause damage to or interfere with electrical infrastructure***

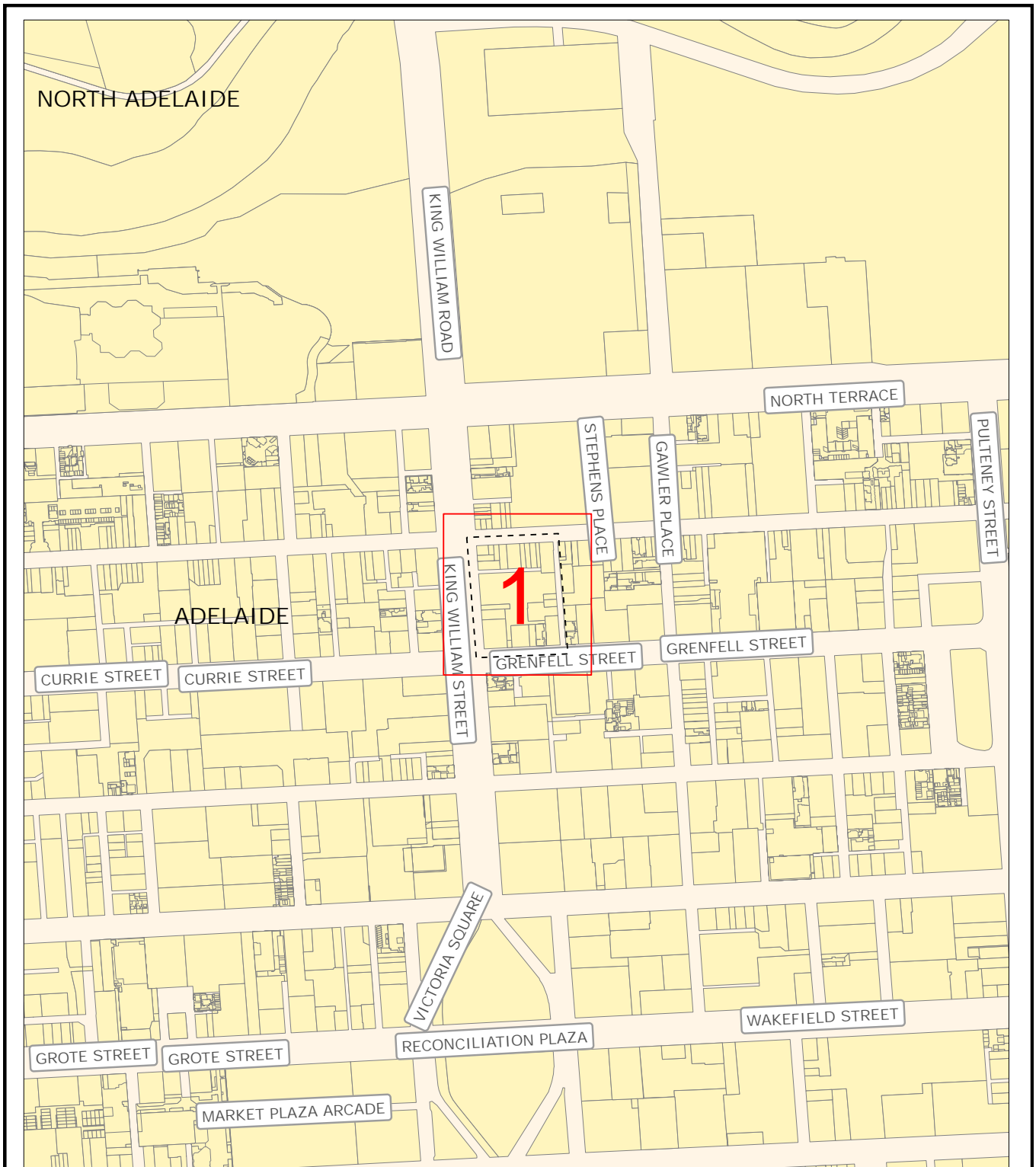




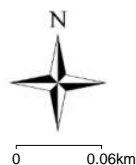
# Overview Map

Sequence No: 94895323

60 King William Street Adelaide



**Disclaimer:** The Plan/Sketch is supplied at your request and is subject to your agreement that SA Power Networks shall not be liable or responsible for the correctness or otherwise of any such information supplied pursuant to this request. Upon acceptance of this condition SA Power Networks grants you permission to use the Plan/Sketch as a guide to the location of SA Power Networks assets. The Plan/Sketch must be returned to SA Power Networks if you fail to accept the conditions of use.



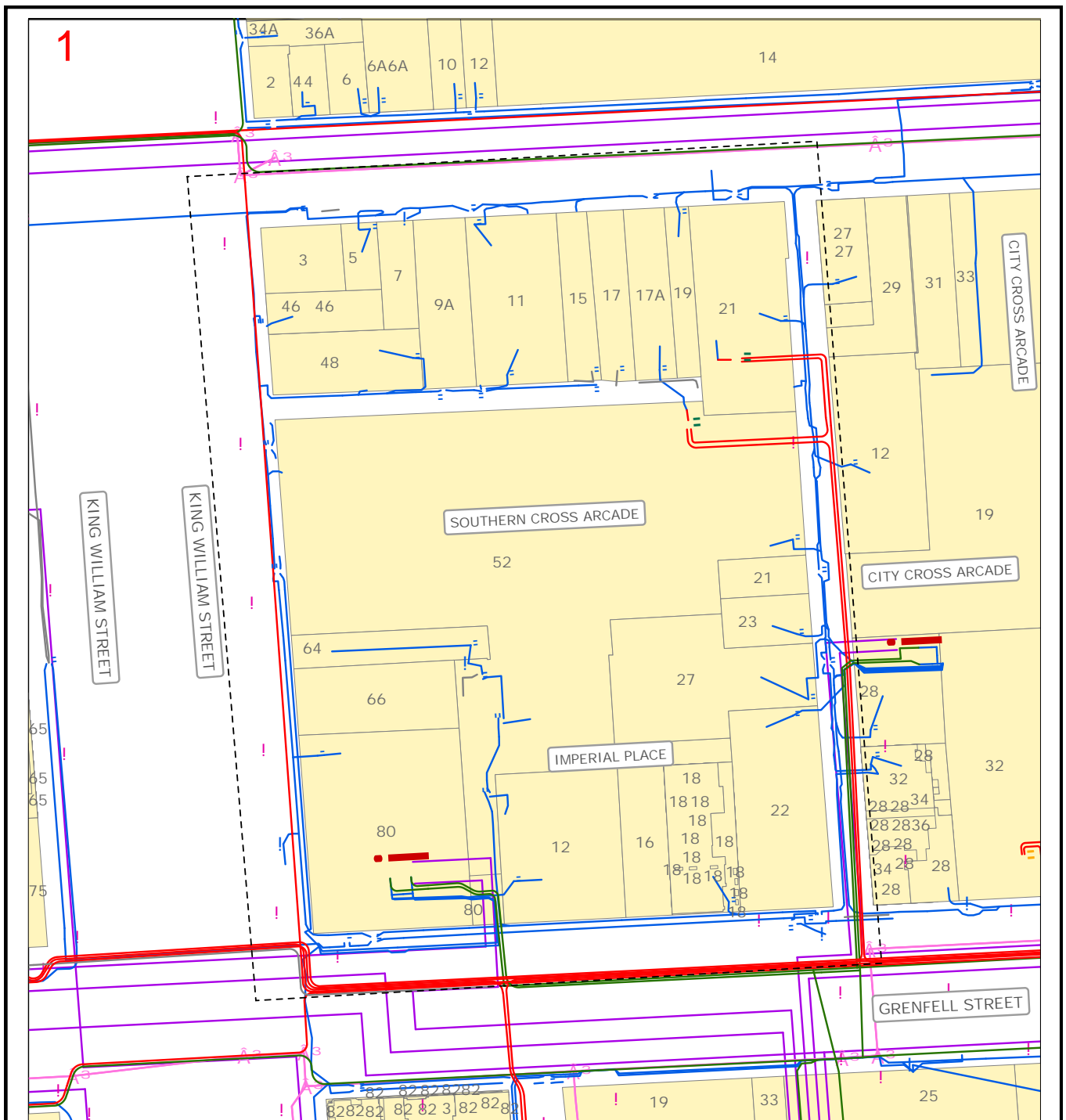
## LEGEND:



Detail Map































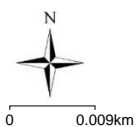
DBYD Requested Area

**Map 1****Sequence No: 94895323****60 King William Street Adelaide**

Note: The presence of lighting columns and cable exits may indicate unidentified additional cables.

**LEGEND:**

Cable Exits	Cables	DBYD Requested Area	Fibre Optic Cable/Duct
 66kV/132kV	 66kV/132kV	 DBYD Requested Area	 Fibre Optic Cable/Duct
 33kV	 33kV	 HV Switching Cubicle	 Fibre Manhole/Pit
 19kV	 19kV	 Transformer Cubicle	 Pilot Cable
 11kV	 11kV	 Cable Joint Bay	 Pilot Manhole/Pit
 7.6kV	 7.6kV	 LV Switching Cubicle/Pit	 Substation
 Not In Service	 Not In Service	 Service Pit/Pillar	 Electricity Pole
 Low Voltage	 Low Voltage	 Earthing Grid	 Light Column



## Appendix E - NBN Co. Drawings



**To:** Mr Ian Osborne  
**Phone:** 0419246542  
**Fax:** Not Supplied  
**Email:** iosborne@floth.com.au

<b>Dial before you dig Job #:</b>	19051179	 <b>DIAL BEFORE YOU DIG</b> www.1100.com.au
<b>Sequence #</b>	94895328	
<b>Issue Date:</b>	17/02/2020	
<b>Location:</b>	60 King William Street , Adelaide , SA , 5000	Some impact. No onsite action required.

## Information

The area of interest requested by you contains one or more assets.

nbn Assets	Search Results
<b>Communications</b>	Asset identified
<b>Electricity</b>	No assets

In this notice **NBN Facilities** means *underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by nbn*

## Location of Underground Power Facilities

We thank you for your enquiry. In relation to your enquiry at the above address:

- **nbn's** records indicate that there **ARE nbn** Facilities in the vicinity of the location identified above ("Location").
- **nbn** indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of **nbn** Facilities shown on the Plan/s.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- You should note that, at the present time, the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables. As such, consistent with the notes below, particular care must be taken by you to make your own enquiries and investigations to precisely locate any power cables and manage the risk arising from such cables accordingly.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out



above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your cost to locate **nbn** Facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. If you are planning to excavate and require further information, please contact **nbn** on 1800 626 329. For any enquiries related to moving assets or Planning and Design activities, please visit the **nbn** [Commercial Works](#) website to complete the online application form.

#### Notes:

1. You are now aware that there are **nbn** Facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the *Criminal Code Act 1995* (CoA) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by **nbn** can interact with **nbn's** network facilities.
3. Any information provided is valid only for **28 days** from the date of issue set out above.

## Referral Conditions

The following are conditions on which **nbn** provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition, and not in replacement of, any duties and obligations you have under applicable law.

1. **nbn** does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators at your expense to locate **nbn** Facilities during any activities you carry out on site).
2. You acknowledge that **nbn** has specifically notified you above that the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables.
3. You should not assume that **nbn** Facilities follow straight lines or are installed at uniformed depths along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.
4. In carrying out any works in the vicinity of **nbn** Facilities, you must maintain the following minimum clearances:
  - 300mm when laying assets inline, horizontally or vertically.
  - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates.
  - 1000mm when operating mechanical excavators.
  - Adherence to clearances as directed by other asset owner's instructions and take into account any uncertainty for power cables.
5. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as **nbn** fibre optic, copper and coaxial cables, and power cable feed to **nbn** assets). Damage to underground electric cables may result in:
  - Injury from electric shock or severe burns, with the possibility of death.
  - Interruption of the electricity supply to wide areas of the city.
  - Damage to your excavating plant.
  - Responsibility for the cost of repairs.
6. You must take all reasonable precautions to avoid damaging **nbn** Facilities. These precautions may include but not limited to the following:
  - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to



minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.

- If any undisclosed underground cables are located, notify **nbn** immediately.
  - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
  - The safety of the public and other workers must be ensured.
  - All excavations must be undertaken in accordance with all relevant legislation and regulations.
7. You will be responsible for all damage to **nbn** Facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by **nbn** as a result of any such damage.
  8. You must immediately report any damage to **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.
  9. Except to the extent that liability may not be capable of lawful exclusion, **nbn** and its servants and agents and the related bodies corporate of **nbn** and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any plans(including Indicative Plans) attached hereto. Except as expressly provided to the contrary in this information sheet or the attached plans(including Indicative Plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

All works undertaken shall be in accordance with all relevant legislations, acts and regulations applicable to the particular state or territory of the Location. The following table lists all relevant documents that shall be considered and adhered to.

State/Territory	Documents
<b>National</b>	Work Health and Safety Act 2011
	Work Health and Safety Regulations 2011
	Safe Work Australia - Working in the Vicinity of Overhead and Underground Electric Lines (Draft)
	Occupational Health and Safety Act 1991
<b>NSW</b>	Electricity Supply Act 1995
	Work Cover NSW - Work Near Underground Assets Guide
	Work Cover NSW - Excavation Work: Code of Practice
<b>VIC</b>	Electricity Safety Act 1998
	Electricity Safety (Network Asset) Regulations 1999
<b>QLD</b>	Electrical Safety Act 2002
	Code of Practice for Working Near Exposed Live Parts
<b>SA</b>	Electricity Act 1996
<b>TAS</b>	Tasmanian Electricity Supply Industry Act 1995
<b>WA</b>	Electricity Act 1945
	Electricity Regulations 1947
<b>NT</b>	Electricity Reform Act 2005
	Electricity Reform (Safety and Technical) Regulations 2005
<b>ACT</b>	Electricity Act 1971

Thank You,

**Network Operations Centre - Assurance**






Date: 17/02/2020

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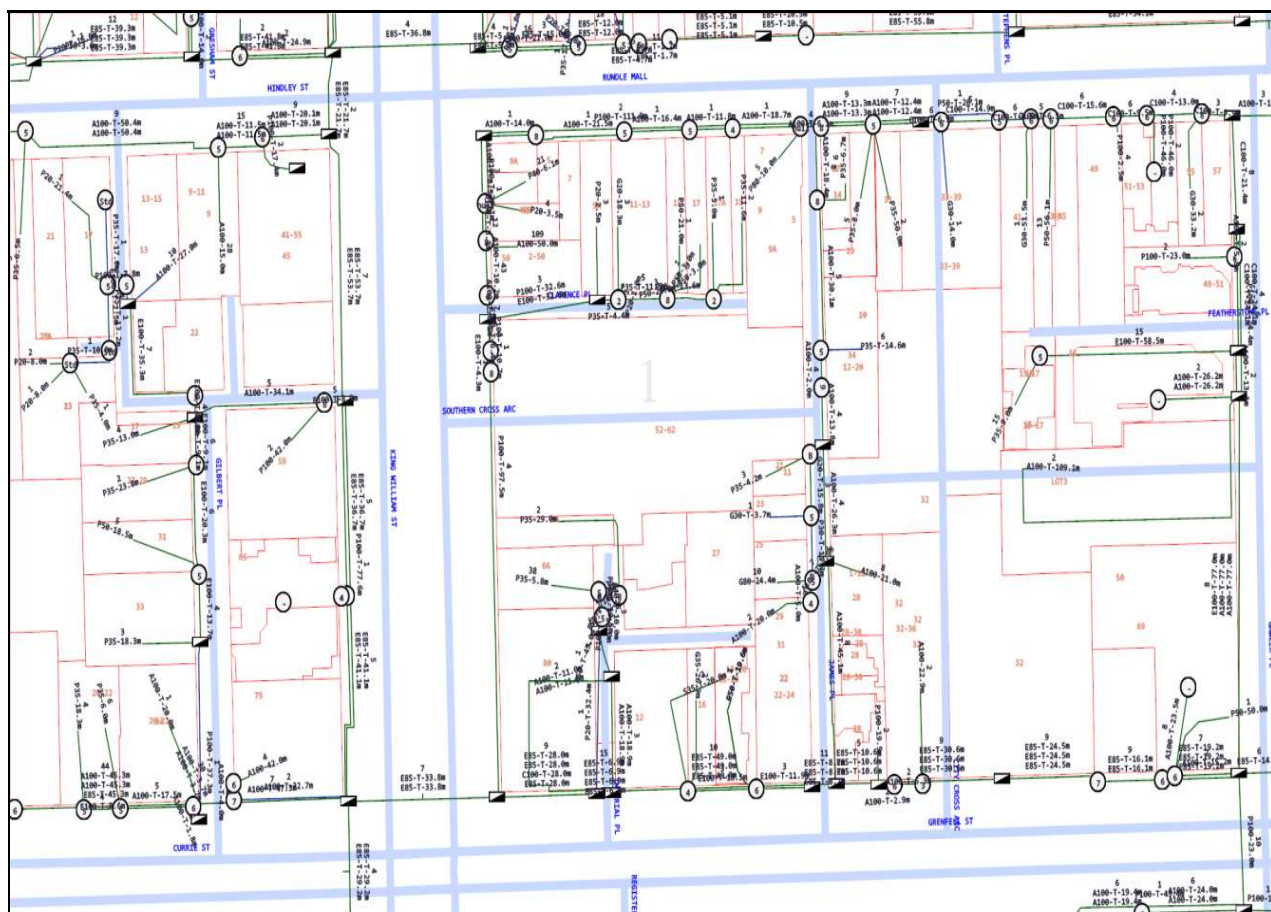
## Indicative Plans

Issue Date:	17/02/2020	 The logo features a red circle with a black diagonal line through it, containing a black silhouette of a person digging. To the right of the circle, the text 'DIAL BEFORE YOU DIG' is written in bold, with 'DIAL' and 'BEFORE' in red and 'YOU DIG' in black. Below this, the website 'www.1100.com.au' is written in a smaller font.
Location:	60 King William Street , Adelaide , SA , 5000	

1



	<div> </div> <div> <h1>LEGEND</h1> </div>
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any <b>INSERVICE/CONSTRUCTED</b> (Copper/RF/Fibre) cables.
	Trench containing only <b>DESIGNED/PLANNED</b> (Copper/RF/Fibre/Power) cables.
	Trench containing any <b>INSERVICE/CONSTRUCTED</b> (Power) cables.
	Road and the street name "Broadway ST"
<div> Scale </div>	<div> 0    20    40    60    Meters 1:2000 1 cm equals 20 m </div>



## Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

## Appendix F - Telstra Drawings

# DUTY OF CARE



TELSTRA CORPORATION ACN 051 775 556

## IMPORTANT:

When working in the vicinity of telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. The 5 P's to prevent damage to Telstra assets are listed below. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

(The following pages contain more detail on each step below and the contact details to seek further advice. AS5488-2013 is the Australian Standard for the Classification of Subsurface Utility Information.)

## 1 PLAN:

### *The essential first step in preventing damage -*

You must have current Telstra plans via the DBYD process. Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013. This means the information is indicative only, not a precise location. **The actual location may differ substantially from that shown on the plans** - refer to steps 2 & 3 to determine actual location prior to proceeding with construction.

## 2 PREPARE:

### *The essential second step in preventing damage -*

Engage a Telstra Accredited Plant Locator. To be able to trace and identify individual subsurface cables and ducts requires access to Telstra pits and manholes. Only a Telstra Accredited Plant Locator (TAPL) is authorised to access Telstra network for locating purposes. A TAPL can interpret plans, validate visible assets and access pits and manholes to undertake electronic detection of underground assets prior to further validation. All Telstra assets must be located, validated and protected prior to commencing construction. **If you are not authorised to do so by Telstra, you must not access Telstra network or locate Telstra network.** All Telstra Accredited Plant Locators are required to have DBYD Locator Certification.

## 3 POTHOLE:

### *The essential third step in preventing damage -*

All Telstra assets must be positively identified (i.e. validated), by physically sighting them. For underground assets this can be done by potholing by hand or using non-destructive vacuum extraction methods (Refer to 'validation' as defined in AS5488-2013 QL-A). **Underground assets located by electronic detection alone (step 2), are not deemed to be 'validated' and must not be used for construction purposes.** Some TAPL's can assist with non-destructive potholing for validation purposes. **If you cannot validate the Telstra network, you must not proceed with construction.** Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

## 4 PROTECT:

### *The essential fourth step in preventing damage -*

Telstra assets must be protected to avoid damage from construction activities. Minimum working distances around Telstra network must be maintained. These distances are provided in this document. Telstra can also provide advice and assistance in regards to protection – refer to the following pages.

## 5 PROCEED:

Only proceed when the above steps have been completed.



# STEP 1 - PLAN

## Dial Before You Dig / Telstra Plans

**The actual location of Telstra assets may differ substantially from that shown on the plans. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for the accuracy shown on the plans. Steps 2 and 3 must also be undertaken to determine actual location of network.**

- Telstra DBYD plans are not suitable for displaying Telstra network within a Telstra exchange site. For advice on Telstra network within a Telstra exchange site contact Telstra Plan Service on 1800 653 935.
- Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.
- Telstra plans or other details are provided only for the use of the applicant, its servants, agents or Telstra Accredited Plant Locators. The applicant must not give the plans or details to any parties other than these, and must not generate profit from commercialising the plans or details.
- Please contact Telstra Plan Services immediately should you locate Telstra assets not indicated on these plans.
- Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.
- Please ensure Telstra plans and information provided remains on-site at all times throughout the inspection, location and construction phase of any works.
- Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

- **Emergency situations - receiving Telstra plans** Telstra's automated mapping system (TAMS) will provide a fast response for emergency situations (faster than an operator can provide manually via a phone call - see below for fast response requirements). Automated responses are normally available 24/7.

**To receive a fast automated response** from Telstra your request must -

- Be a web request lodged at DBYD ([www.1100.com.au](http://www.1100.com.au)). The request will be then forwarded to Telstra.
  - Contain your current email address so you can receive the automated email response.
  - Be for the purposes of 'mechanical excavation' or other ground breaking DBYD activity. (Requests with activity types such as conveyancing, planning & design or other non-digging activities may not be responded to until the next business day).
  - Be for an area less than 350 metres in size to obtain a PDF map (over 350 metres will default to DWF due to size) this does not include congested CBD areas where only DWF may be supplied.
  - Be for an area less than 2500 metres in size to obtain a DWF map (CBD's less)
- **Data Extraction Fees.** In some instances a data extraction fee may be applicable for the supply of Telstra information. Typically a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Plan Services.
  - **Electronic plans - PDF and DWF maps** If you have received Telstra maps via email you will have received the maps as either a PDF file (for smaller areas) or DWF file (for larger area requests). All requests over approximately \*350m or in congested CBD areas can only be supplied in DWF format. There are size limits on what can be provided. (\* actual size depends on geographic location of requested area). If you are unable to launch any one of the softcopy files for viewing and printing, you may need to download and install one or more of the free viewing and printing products such as Adobe Acrobat Reader (for PDF files) or Autodesk Design Review (for DWF files) available from the internet
    - **Pdf files** - PDF is the default softcopy format for all requests for areas up to approx \*350m in length. (\*depends on geographic location of request). The PDF file is nominally formatted to A3 portrait sheet however it can be printed on any size sheet that your printer supports, e.g. either as the full sheet or selected areas to suit needs and legibility. (to print a selected area zoom up and print 'current view') If there are multiple layers of Telstra network you may receive up to 2 sheets in the single PDF file attachment supplied. There are three types or layers of network normally recorded - local network, mains cables or a combined layer of local and mains (usually displayed for rural or semi-rural areas). If mains cable network is present in addition to local cables (i.e. as separate layer in a particular area), the mains will be shown on a separate sheet. The mains cable information should be read in conjunction with the local cable information.

- **DWF files** – DWF is the default softcopy format for all requests for areas that are over 350m in length. Maximum length for a DWF automated response is approx 2500m - depending on geographic location of request (manually-processed plans may provide larger coverage). The DWF files differ from PDF in that DWF are vector files made up of layers that can be turned on or off and are not formatted to a specific sheet size. This makes them ideal for larger areas and for transmitting electronically.
  - **How to view Telstra DWF files –**  
Telstra DWF files come with all layers turned on. You may need to turn individual layers on or off for viewing and printing clarity. Individual layer names are CC (main cable/conduit), DA (distribution area network) and sometimes a combined layer - CAC. Layer details can be viewed by either picking off the side menu or by selecting 'window' then 'layers' off the top menu bar. Use 'layers' to turn individual layers off or on (double click or right click on layer icon).
  - **How to print Telstra DWF files –**  
DWF files can be printed on any size sheet – either their entirety or by selected areas of interest. Some DWF coverage areas are large and are not suited to printing legibly on a single A4 sheet - you may need several prints if you only have an A4 printer. Alternatively, an A3, A1 or larger printer could be used. To print, zoom in or out and then, by changing the 'print range' settings, you can print what is displayed on your screen to suit your paper size. If you only have a small printer, e.g. A4, you may need to zoom until the text is legible for printing (which is why you may need several prints). To print what is displayed on your screen the 'view' setting should be changed from 'full page' to 'current view'. The 'current sheet' setting should also be selected. You may need to print layers separately for clarity and legibility. (Details above on how to turn layers on or off)
  - **How to change the background colour from white to black (when viewing) Telstra DWF files –**  
If using Autodesk Design Review the background colour can be changed by selecting 'Tools' then 'options' then 'sheet'. Tick the box 'override published paper colours' and select the colour required using the tab provided.

## STEP 2 – PREPARE

### Telstra Accredited Plant Locator (TAPL):

**Utilising a TAPL is an essential part of the process to identify network and to trace subsurface network prior to validating. A TAPL can provide plan interpretation, identification and electronic detection. This will assist in determining the position of subsurface assets prior to potholing (validating). Some TAPL's can also assist in validating underground detected network. Electronic detection is only an indication of the existence of underground network and can be subject to interference from other services and local conditions. Electronic detection must not be used solely to determine location for construction purposes. The electronic (indicative) subsurface measurements must be proven by physically sighting the asset (see step 3 – Pothole ).**

- All TAPL's locating Telstra network must be able to produce a current photo ID card issued by Telstra. A list of TAPL's is provided with the Telstra Dial Before You Dig plans.
- All TAPL's in addition to the Telstra photo ID card must also have current DBYD Locator Certification with ID card.
- Telstra does not permit external parties (non-Telstra) to access or conduct work on Telstra network. Only Telstra staff, Telstra contractors or locators whom are correctly accredited are authorised to work on or access Telstra manholes, pits, ducts, cables etc. This is for safety as well as for legal reasons.
- The details of any contract, agreement or retainer for site assistance to locate telecommunications plant shall be for you to decide and agree with the Telstra Accredited Plant Locator engaged. Telstra is not a party to any contract entered into between you and a Telstra Accredited Plant Locator.
- Payment for the site assistance will be your responsibility and payment details must be agreed before the engagement is confirmed.
- Telstra does not accept any liability or responsibility for the performance of or advice given by a Telstra Accredited Plant Locator. Accreditation is an initiative taken by Telstra towards the establishment and

maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

- Neither the Telstra Accredited Plant Locator nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Telstra Accredited Plant Locator or its employees.

- **Electronically derived subsurface measurements (e.g. depths/alignments by locating devices)**

**All locator provided measurements for Telstra assets must have the AS5488-2013 quality level specified - (e.g. QL-A, B, C or D).** These quality levels define the accuracy of subsurface information and are critical for determining how the information is later used – for example if suitable for excavation purposes.

**1) An example of a subsurface measurement with no quality level specified – (i.e. not to be used)**

Telstra cover - 0.9m

*The measurement above has no AS5488-2013 quality level specified and **must not be provided by a locator or used for design or construction.** This is because it is not known whether the measurement is actual or derived (where 'actual' means validated and 'derived' means assumed and not validated, e.g. electronic or other). Typically damages occur by constructors incorrectly using unvalidated measurements as actual measurements.*

**2) An example of a subsurface measurement with quality level B specified –**

Telstra cover - 0.9m (QL-B)

Where (QL-B) complies with AS5488-2013 QL-B (for example an electronic location that complies with QL-B)

*(Note QL-B means it has not been validated and must not be used for construction purposes around Telstra network, however it would assist further investigation to determine the actual location)*

**3) An example of a subsurface measurement with the quality level A specified –**

Telstra cover - 0.6m (QL-A)

Where (QL-A) complies with AS5488-2013 QL-A (and is deemed suitable for excavation purposes). In this example the asset has been electronically located first, (QL-B) and then physically exposed (QL-A).

**Note** -Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers if unvalidated subsurface measurements are used for construction and subsequently result in damage to Telstra assets. Only measurements conforming to AS5488-2013 (QL-A) are deemed by Telstra to be validated measurements.

- **Rural landowners - Rural Locations Subsidy Scheme** Where Telstra-owned cable crosses agricultural land, Telstra may provide on-site assistance with cable location. **You must contact Telstra Plan Services to determine eligibility and to request the service.**

Please note the following –

- If eligible, the location assistance must be approved and organised by Telstra. Telstra will not pay for a location that has not been approved and facilitated by Telstra (Telstra is not responsible for payment assistance when a customer engages a locator directly).
- Telstra will only “subsidise” the location up to \$330 (Incl. GST). This will cover one hour on-site location only, private lead-in locations are for lead-ins 100m or longer. Any time required in addition to Telstra-funded time can be purchased directly from the assigned Telstra Accredited Plant Locator.
- This service does NOT include the use Mechanical Aids or Hydro Excavation (Vac Trucks) to locate and should be discussed between the Accredited Plant Locator and the private rural landowner
- The exact location, including depth of cables, must be validated by potholing, which may not be covered by this service.
- This service is nominally only available to assist private rural land owners.
- This service nominally covers one hour on-site only, private lead-in locations are for lead-ins 100m or longer. Any time required in addition to Telstra-funded time can be purchased directly from the assigned Telstra Accredited Plant Locator.
- This service does not apply to previously located network at the same location (i.e. it is a once off).
- This service does not apply to other carriers' cables (marked as 'OC' on Telstra plans).

## STEP 3 – POTHOLE

**Validation** as defined in AS5488-2013 (QL-A).

After utilising a Telstra Accredited Plant Locator and prior to commencing construction, any electronically detected underground network must be positively identified (validated) by physically sighting it. This can be done by careful hand digging or using non-destructive water jet methods to expose the network.

Manual potholing needs to be undertaken with extreme care and by employing techniques least likely to damage cables. For example, align shovel blades and trowels parallel to the cable rather than digging across the cable. Some Telstra Accredited Plant Locators are able to provide or assist with non-destructive potholing methods to enable validation of underground cables and ducts.

**If you cannot validate the underground network then you must not proceed with construction. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.**

**Important note:** The construction of Telstra's network dates back over many years. Some of Telstra's pits and ducts were manufactured from asbestos-containing cement. You must take care in conducting any works in the vicinity of Telstra's pits and ducts. You must refrain from in any way disturbing or damaging Telstra's network infrastructure when conducting your works. We recommend that before you conduct any works in the vicinity of Telstra infrastructure that you ensure your processes and procedures eliminate any possibility of disturbing, damaging or interfering in any way with Telstra's infrastructure. Your processes and procedures should incorporate appropriate measures having regard to the nature of this risk. For further information -

<https://www.telstra.com.au/consumer-advice/digging-construction/relocating-network-assets>

## STEP 4 – Protect:

**You must maintain the following minimum clearance distances between construction activity and the validated position of Telstra plant.**

<b>Jackhammers/Pneumatic Breakers</b>	<i>Not within 1.0m of <b>actual validated location</b>.</i>
<b>Vibrating Plate or Wacker Packer Compactor</b>	<i>Not within 0.5m of <b>actual validated location</b> of Telstra ducts. 300mm compact clearance cover before compactor can be used across Telstra ducts.</i>
<b>Boring Equipment (in-line, horizontal and vertical)</b>	<i>Not within 2.0m of <b>actual validated location</b>. Constructor to hand dig or use non-destructive water jet method (pothole) and expose plant.</i>
<b>Heavy Vehicle Traffic (over 3 tonnes)</b>	<i>Not to be driven across Telstra ducts (or plant) with less than 600mm cover. Constructor to check actual depth via hand digging.</i>
<b>Mechanical Excavators, Farm ploughing and Tree Removal</b>	<i>Not within 1.0m of <b>actual validated location</b>. Constructor to hand dig or use non-destructive water jet method (pot-hole) and expose plant.</i>

- For blasting or controlled fire burning please contact Telstra Plan Services.
- If conducting roadworks all existing Telstra pits and manholes must be a minimum of 1.2m in from the back of kerb after the completion of your work.
- After the completion of any ground work in footways or roadway whereby the existing levels are being changed the depth of cover of the existing Telstra asset at the completion of work must not be less than the existing level before work commenced.

Regardless of whether the surface is being raised or lowered, any work impacting the depth of cover of Telstra underground assets should not commence before consultation with Telstra Network Integrity representatives, to discuss the possibility of 'protection' or relocation (including lowering of the asset)".

- For clearance distances relating to Telstra pillars, cabinets and RIMs/RCMs please contact Telstra Plan Services.
- If Telstra plant is situated wholly or partly where you plan to work (i.e. in conflict, where a pit or manhole would be in a driveway or other vehicle thoroughfare), then Telstra's Network Integrity Group must be contacted to discuss possible engineering solutions to protect Telstra assets.  
Please phone **1800 810 443** or email [NetworkIntegrity@team.telstra.com](mailto:NetworkIntegrity@team.telstra.com)
- You are not permitted to relocate or alter or repair any Telstra assets or network under any circumstances.

**It is a criminal offence under the *Criminal Code Act 1995 (Cth)* to tamper or interfere with communication facilities owned by a carrier. Heavy penalties may apply for breach of this prohibition, and any damages suffered, or costs incurred by Telstra as a result of any such unauthorised works may be claimed against you.**

Only Telstra and its contractors may access and conduct works on Telstra's network (including its plant and assets). This requirement is to ensure that Telstra can protect the integrity of its network, avoid disruption to services and ensure that the relocation meets Telstra's requirements.

- If Telstra relocation or protection works are part of the agreed solution, then payment to Telstra for the cost of this work shall be the responsibility of the principal developer, constructor or person for whom the work is performed. The principal developer or constructor will be required to provide Telstra with the details of their proposed work showing how Telstra's plant is to be accommodated and these details must be approved by the Regional Network Integrity Manager prior to the commencement of site works.  
Please phone 1800 810 443 or email [NetworkIntegrity@team.telstra.com](mailto:NetworkIntegrity@team.telstra.com)  
Further information - <https://www.telstra.com.au/consumer-advice/digging-construction/relocating-network-assets>

**Damage to Telstra's network must be reported immediately -**

<https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>

- You will be held responsible for all plant damage that occurs or any impacts to Telstra's network as a result of your construction activities. This includes interfering with plant, conducting unauthorised modification works and interfering with Telstra's assets in a way that prevents Telstra from accessing or using its assets in the future.
- Telstra reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses.

## FURTHER INFORMATION - CONTACTS

### NATURAL DISASTERS

Natural Disasters include (amongst other things) earthquakes, cyclones, floods and tsunamis. In the case of such events, urgent requests for plans or information relating to the location of Telstra network can be made directly to Telstra Network Integrity Team Managers as follows:

NSW –	John McInerney	0419 485 795
NT/WA/QLD –	Glenn Swift	0419 660 147
SA/VIC/TAS -	David Povazan	0417 300 947

## TELSTRA PLAN SERVICES - for all Telstra Dial Before You Dig related enquiries

Email - [Telstra.Plans@team.telstra.com](mailto:Telstra.Plans@team.telstra.com)

Phone - 1800 653 935 (general enquiries, business hours only)

Accredited plant locator enquiries - Glen (07)34551011

Telstra easements - Glen (07)34551011

*\*Please note - to make a Telstra plan enquiry the plans must be current (within 60 days of issue). If your plans have expired you will need to submit a new request via DBYD prior to contacting Telstra Plan Services.*

### Information for new developments (developers, builders, home owners)

Telstra Smart Communities - <https://www.telstra.com.au/smart-community>

### Asset relocations

Please phone 1800 810 443 or email [NetworkIntegrity@team.telstra.com](mailto:NetworkIntegrity@team.telstra.com)

<https://www.telstra.com.au/consumer-advice/digging-construction/relocating-network-assets>

**Telstra offers free Cable Awareness Presentations**, if you believe you or your company would benefit from this offer please contact Network Integrity on 1800 810 443 or

[NetworkIntegrity@team.telstra.com](mailto:NetworkIntegrity@team.telstra.com)

### PRIVACY NOTE

*Your information has been provided to Telstra by DBYD to enable Telstra to respond to your DBYD request. Telstra keeps your information in accordance with its privacy statement entitled "Protecting Your Privacy" which can be obtained from Telstra either by calling 1800 039 059 or visiting our website at [www.telstra.com.au/privacy](http://www.telstra.com.au/privacy)*

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# LEGEND

For more info contact a Telstra Accredited Locator or Telstra Plan Services 1800 653 935

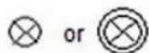
IT'S HOW  
WE CONNECT



**Exchange**  
(major cable present)



**Footway access chamber**  
(can vary from 1-lid to 12-lid)



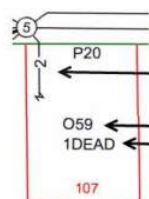
**Pillar/cabinet**  
(above the ground / free standing)



**Above ground complex equipment housing (eg RIM)**

Please Note: This equipment is powered by 240V electricity.

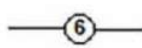
OC other carrier



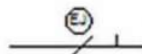
2 pair lead-in to property from pit in street

1 pair working (pair ID 059)

1 pair dead (i.e. spare, not connected)



**Cable jointing pit**  
(number indicating pit type)



**Elevated cable joint**  
(above ground joint on buried cable)



**Telstra Plant in shared utility trench**



**Aerial Cable**  
(above ground)



**Aerial Cable**  
(attached to joint use pole e.g. power)



**Direct buried cable**



**Marker post installed**



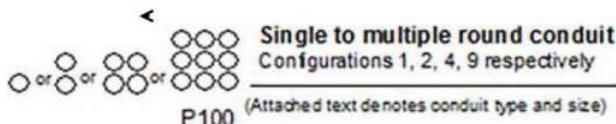
**Buried transponder**



**Marker, transponder**



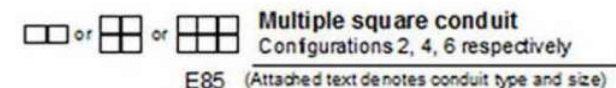
**Optical fibre cable direct buried**



**Single to multiple round conduit**

Configurations 1, 2, 4, 9 respectively

(Attached text denotes conduit type and size)



**Multiple square conduit**

Configurations 2, 4, 6 respectively

(Attached text denotes conduit type and size)

**Some examples of conduit type and size:**

A - Asbestos cement, P - PVC / plastic, C - Concrete, GI - Galvanised iron, E - Earthenware.

Conduit sizes *nominally* range from 20mm to 100mm.

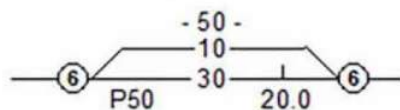
P50 50mm PVC conduit

P100 100mm PVC conduit

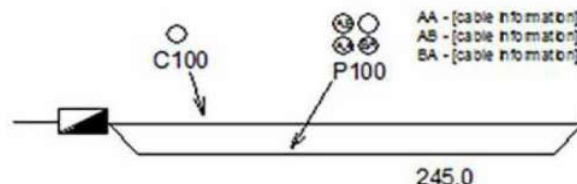
A100 100mm asbestos cement conduit

E 85 85mm square earthenware conduit

**Some examples of how to read Telstra plans:**

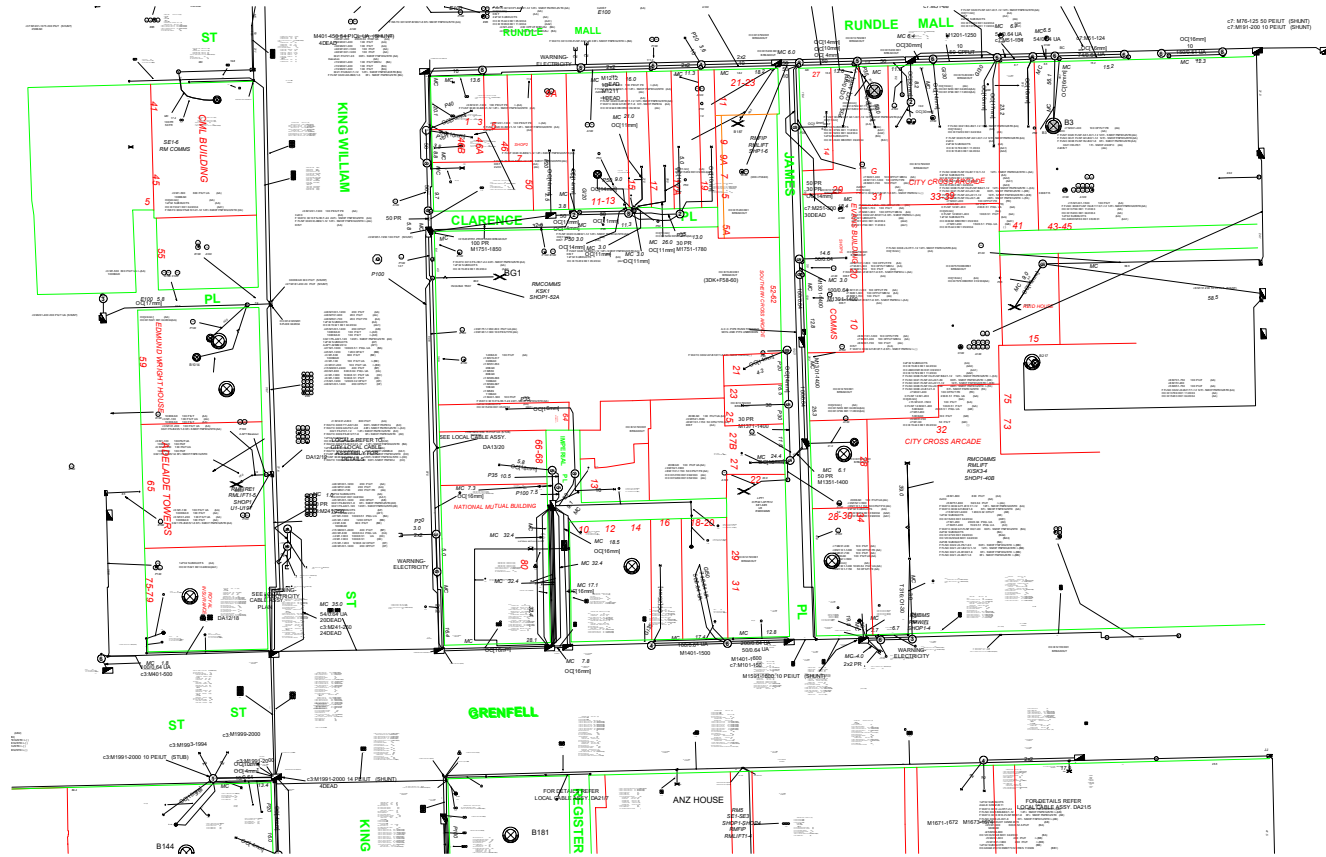


One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits, 20.0m apart, with a direct buried 30-pair cable along the same route.



Two separate conduit runs between two footway access chambers (manholes) 245m apart. A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along the same route.

**WARNING:** Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK. A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works. The exact position of Telstra assets can only be validated by physically exposing it. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.



## Appendix G - AARNet Drawings

17/02/2020

To:  
Mr Ian Osborne  
Floth Sustainable Building Consultants  
Level 2 69 Robertson Street  
Fortitude Valley, 4006

Sequence No: 94895329

Job No: 19051179

Location: 60 King William Street  
Adelaide, SA, 5000

Commencement Date: 16/03/2020

### **Dial Before You Dig Response – Underground Fibre Assets**

Dear Mr Ian Osborne

This letter is in relation to the proposed work at location detailed above is in the vicinity and may impact AARNet fibre optic cable assets.

Attached is a map indicating the approximate location of the AARNet assets in relation to your enquiry area. A detailed Plan is normally attached to this response. There may be additional AARNet assets in this area contained within Telstra duct. No work is to take place until plans have been obtained from Telstra and reviewed as necessary

Any information provided is valid for 28 days from the date of issue of this document.

Please review the map and if you have any further concerns, contact the AARNet NOC on 1300 APL NOC (1300 275 662).

If you are proposing to carry out digging in the vicinity of AARNet underground infrastructure you will need to carry out these works in accordance with the guidelines below.

### **WARNING**

Where AARNet plans have been attached, they are indicative of the position of AARNet Pty Ltd's (AARNet) fibre optic installation/s only. Services belonging to other third parties are not included on these plans.

These plans have been prepared solely for the use of AARNet and any reliance placed on these plans by you is entirely at your own risk. The plans may show the position of our assets relative to fences, buildings etc., as they existed at the time the fibre etc. was installed. The plans may not have been updated to take account of any subsequent change in the location or style of those features since the time at which the plans were initially prepared.



While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

General Enquires **1300 APL NOC (1300 275 662)**

To resubmit or change the nominated search area contact DBYD via Phone 1100 or [www.1100.com.au](http://www.1100.com.au)

AARNet makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error, omission, lack of detail, transmission failure or corruption in the information provided. AARNet does not accept any responsibility for any loss that you or anyone else may suffer in connection with the provision of these plans, however that loss may arise (including whether or not arising from the negligence of AARNet, its employees, agents, officers or contractors).

The recipient of these plans must use their own care and diligence in carrying out their works and must carry out further surveys to locate services at their work site. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to AARNet's fibre optic installations.

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

#### **All Areas**

Under no circumstances shall construction, digging or excavating work entailing crossing AARNet plant be carried out without first exposing or locating the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

Manual pot-holing needs to be undertaken with extreme care, common-sense and employing techniques least likely to damage cables. For example, orientate shovel blades and trowels parallel to the cable rather than digging across the cable.

Visual location of asset must be carried out by hand digging or using non-destructive water jet method (pot holing) where construction activities may damage or interfere with AARNet assets.

The following minimum clearances must be maintained between mechanical construction activity and the located AARNet asset.

<b>Jackhammers / Pneumatic Breakers</b>	Not within 1.0m of actual location
<b>Vibrating Plate or Wacker Packer Compactor</b>	Not within 0.5m of actual location 300mm compact clearance before compactor can be used over AARNet conduits. 750mm compact clearance cover before compactor can be used Over AARNet Direct Buried cable
<b>Boring Equipment (in-line, horizontal and vertical)</b>	Not within 5.0m of actual location without supervision of accredited plant location contractor onsite OR AARNet asset must exposed via hand dig or nondestructive water jet method (pot holing). AND AARNet asset must not be crossed without first exposing the asset at the crossing point and not without an accredited plant location contractor representative onsite



While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

General Enquires **1300 APL NOC (1300 275 662)**

To resubmit or change the nominated search area contact DBYD via Phone 1100 or [www.1100.com.au](http://www.1100.com.au)



<b>Heavy vehicle Traffic (over 3 tonnes)</b>	Not to be driven over AARNet conduits or assets with less than 600mm of cover. Depth to be verified via hand digging
<b>Mechanical Excavators, Farm ploughing, Boring, Tree removal, fencing</b>	Not within 1.0m of actual location. Constructor to hand dig or use non-destructive water jet method (pot holing) and expose asset

#### Urban Areas

Under no circumstances shall construction, digging or excavating work be carried out: within 1.5m of AARNet assets without first locating and identifying the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

#### Rural Areas

Under no circumstances shall construction, digging or excavating work be carried out within 10m of AARNet plant be carried out without first locating and identifying the AARNet asset by an accredited locator and under the supervision of an accredited plant location contractor.

#### ASSET RELOCATIONS

**You are not permitted to relocate, modify or alter any AARNet assets under any circumstances. Please contact AARNet Infrastructure Development Group via email [apl-dig@aarnet.edu.au](mailto:apl-dig@aarnet.edu.au) for all enquiries relating to the relocation of AARNet assets.**

#### DAMAGE

AARNet will seek Compensation for any loss caused by damage to its assets. Damage to any AARNet asset must be immediately reported to AARNet NOC on 1300 APL NOC (1300 275 662).

#### FURTHER ASSISTANCE

Assistance can be obtained by contacting AARNet NOC on 1300 APL NOC (1300 275 662) Where an on-site location is provided by an accredited locator, the owner is responsible for all costs associated with hand digging or use of non-destructive water jet method (pot holing) to visually locate AARNet assets. If plant location drawings or visual location of AARNet assets by digging reveals that the location of AARNet plant is situated wholly or partly within the owner work area, then AARNet Infrastructure Development Group [apl-dig@aarnet.edu.au](mailto:apl-dig@aarnet.edu.au) **must be contacted to discuss possible engineering solutions.**

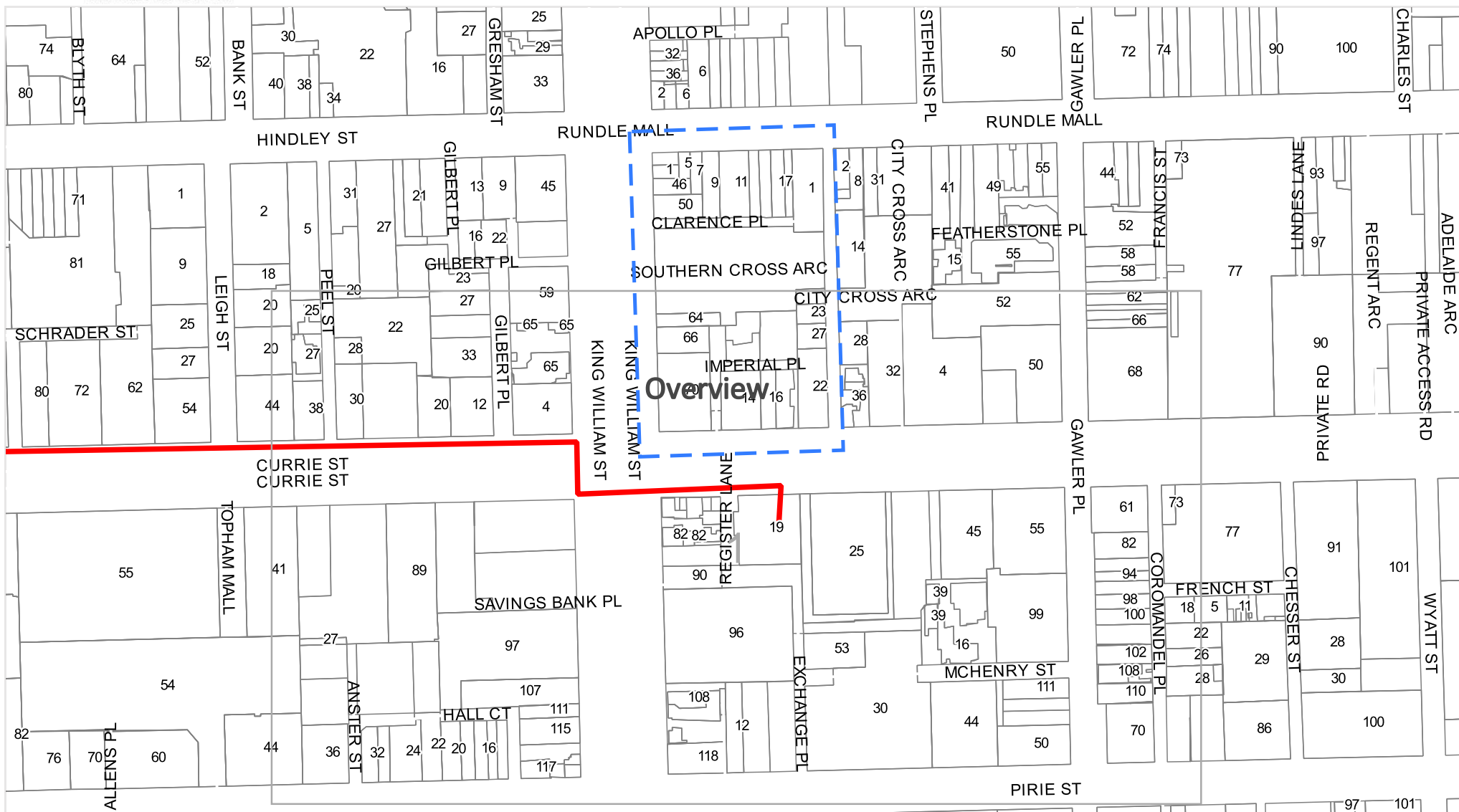


While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

General Enquires **1300 APL NOC (1300 275 662)**

**To resubmit or change the nominated search area contact DBYD via Phone 1100 or [www.1100.com.au](http://www.1100.com.au)**



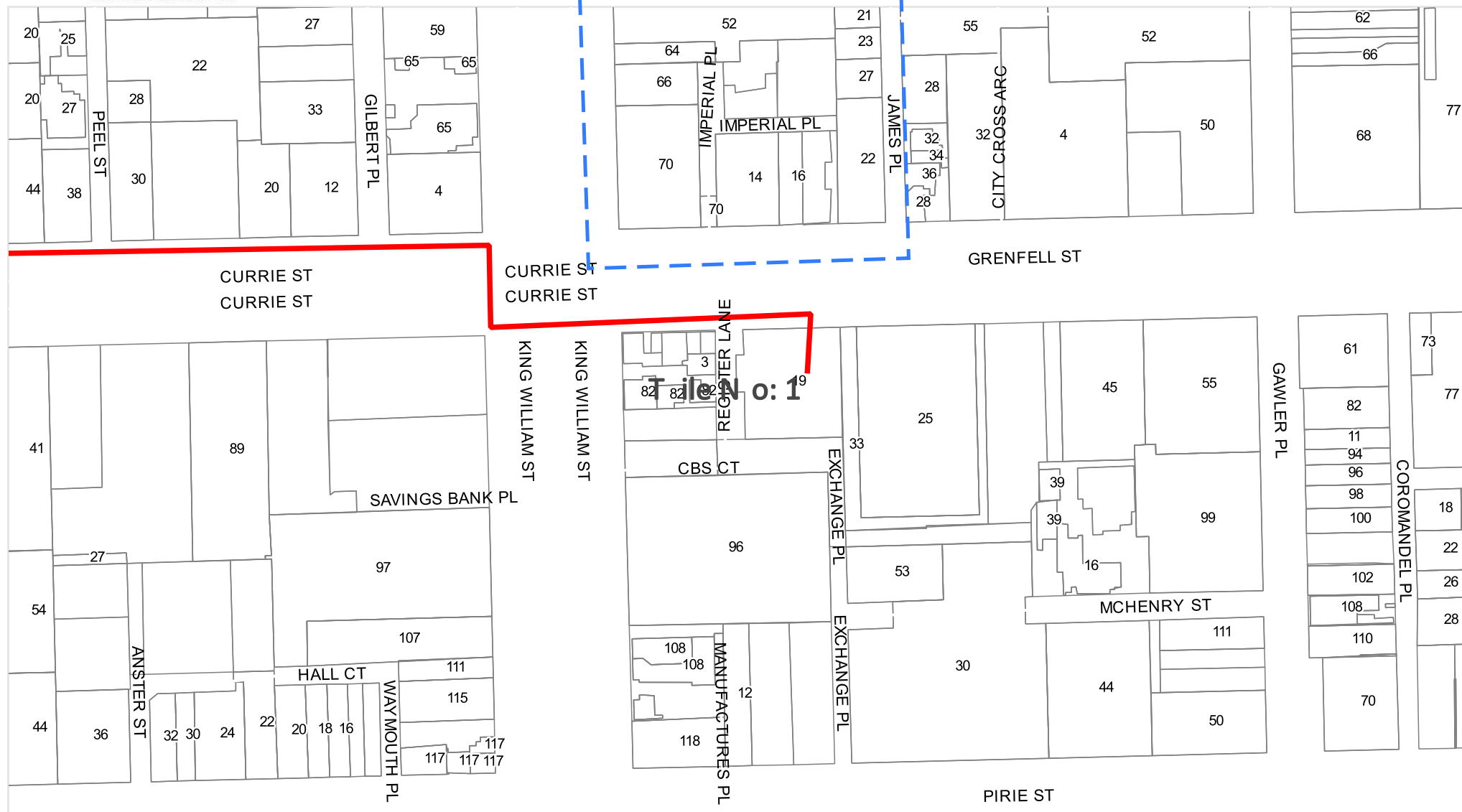


Legend | Scale: 1:2358



- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastral

**DISCLAIMER:** While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.



Legend | Scale: 1:1500



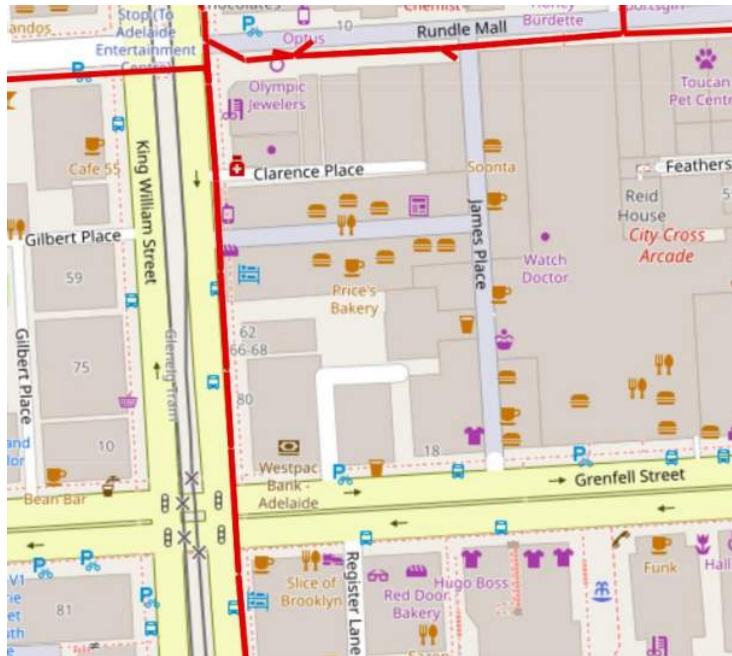
- Enquiry Area
- AARNet Fibre Optic Assets
- AARNet Power Assets
- Cadastre

**DISCLAIMER:** While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither AARNet or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

## Appendix H - City Of Adelaide Lighting & Electrical Drawings

City Of Adelaide  
ABN 20 903 762 572  
Customer Centre  
25 Pirie Street, Adelaide  
GPO Box 2252 Adelaide  
South Australia 5001  
Tel 08 8203 7203  
Fax 08 8203 7575  
[city@cityofadelaide.com.au](mailto:city@cityofadelaide.com.au)

Sequence Number: 94895322  
Job Number: 19051179



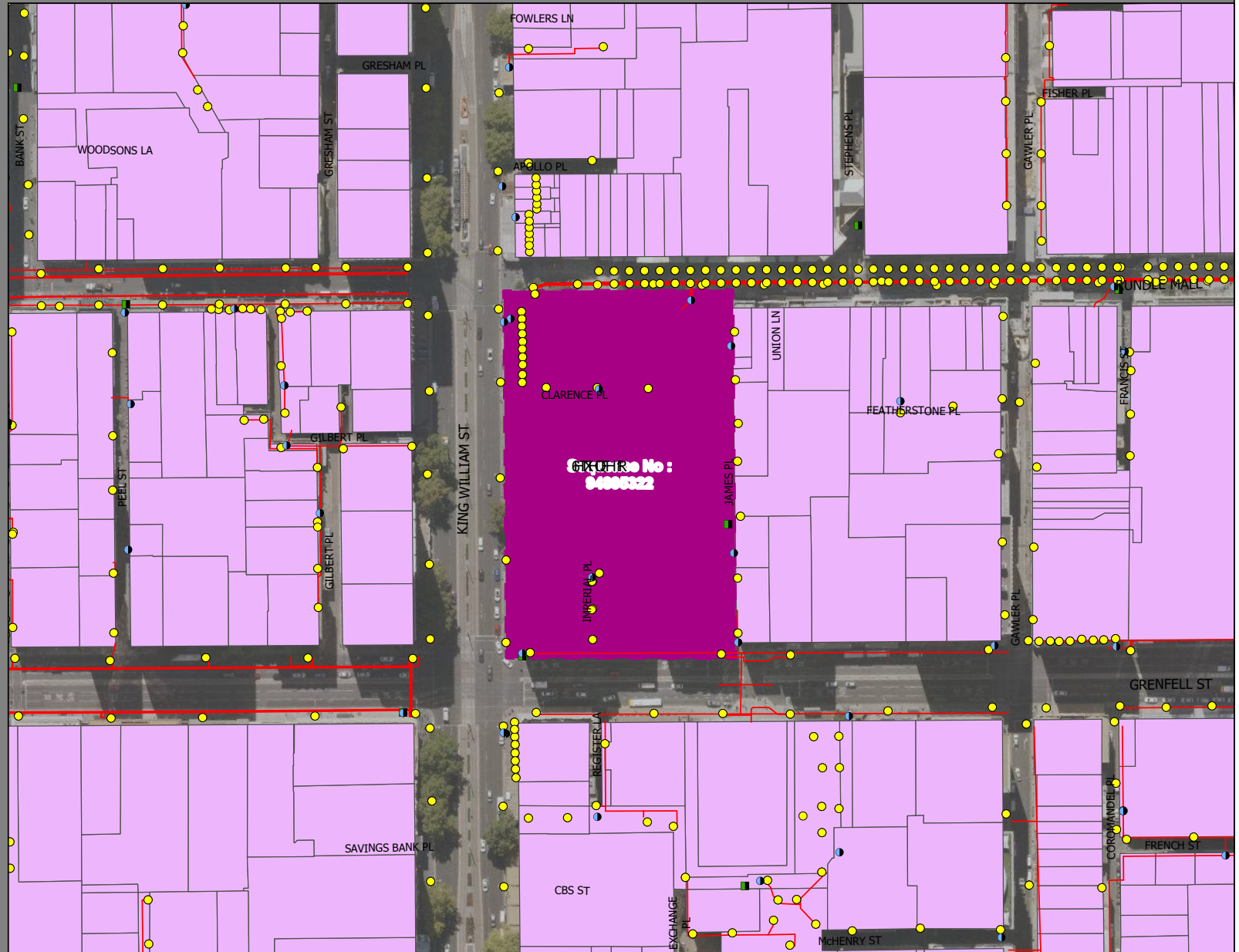
## KEY

 Fibre Cable

### Indicative Information Only

*While reasonable effort has been taken to ensure the accuracy of the fibre optic cable location map provided, the City of Adelaide makes no representation, expressly or impliedly, as to the accuracy, currency, reliability or suitability of the map. The City of Adelaide expressly disclaims responsibility for any damages that may be caused by the contents of the map provided. Underground services should be confirmed on site and located by hand digging.*

ICT City of Adelaide



## Appendix I - Nextgen Drawings



## Plant Location Details



17/02/2020

Mr Ian Osborne  
Floth Sustainable Building Consultants  
Level 2 69 Robertson Street  
Fortitude Valley QLD 4006  
Phone: 0735138000  
Fax: Not Supplied

Nextgen Networks Pty Ltd  
Level 6, 333 Collins Street  
Melbourne VIC 3000  
T 1800 032 532  
E [Damage.Relocations@vocus.com.au](mailto:Damage.Relocations@vocus.com.au)

Dear Mr Ian Osborne

The following is a response to your Dial Before You Dig enquiry

**Assets Affected:** Nextgen Assets

**Sequence No:** 94895320

**Location:** 60 King William Street, Adelaide SA 5000

### **IMPORTANT:**

- Please read and understand all the information and disclaimers provided below
- Sketches and Plans provided by Nextgen Networks are circuit diagrams only and indicate the presence of telecommunications plant in the general vicinity of the geographical area shown; exact ground cover and alignments cannot be given with any certainty and cover may alter over time. Telecommunications plant seldom follow straight lines and careful on site investigation is essential to uncover and reveal its exact position
- The accuracy and/or completeness of the information in the plans can not be guaranteed often due to changes in the surrounding land subsequent to Nextgen's deployment and, accordingly the plans are intended to be indicative only

### **"DUTY OF CARE"**

When working in the vicinity of telecommunications plant you have a legal "Duty of Care" that must be observed. The following points must be considered:

1. It is the responsibility of the owner and any consultant engaged by the owner, including an architect, consulting engineer, developer, and head contractor to design for minimal impact and protection of Nextgen Networks plant. Nextgen Networks will provide free plans and sketches showing the presence of its network to assist at this design stage.
2. It is the owner's (or constructor's) responsibility to:
  - a) Request plans of Nextgen Networks plant for a particular location at a reasonable time before construction begins
  - b) Visually locate Nextgen Networks plant by vacuum excavation (pot-holing) where construction activities may damage or interfere with Nextgen Networks plant (see "Essential Precautions and Approach Distances" section for more information)
  - c) Contact Nextgen Networks Network (see below for details) if Nextgen Networks plant is wholly or partly located near planned construction activities

### **DAMAGE**

**ANY DAMAGE TO Nextgen Networks NETWORK MUST BE REPORTED TO 1800 032 532 IMMEDIATELY**

- The owner is responsible for all plant damage when works commence prior to obtaining Nextgen Networks plans, or failure to follow agreed instructions
- Nextgen Networks reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses

## **CONCERNING NEXTGEN NETWORK PLANS**

- Phone 1100. Dial Before You Dig for free plans of Nextgen Networks plant locations. Please give at least 2 business days notice
- Nextgen Networks plans and information provided are valid for 30 days from the date of issue
- Nextgen Networks retains copyright in all plans and details provided in conjunction with your request. These plans and or details should be disposed of by shredding or any other secure disposal method after use
- Nextgen Networks plans or other details are provided for the use of the applicant, its servants, or agents, and shall not be used for any unauthorised purpose
- Please contact the Network Help Desk (see below for details) immediately should you locate Nextgen Networks assets not indicated on these plans
- Nextgen Networks, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Nextgen Networks against any claim or demand for any such loss or damage
- Please ensure Nextgen Networks plans and information provided remains on-site at all times throughout your construction phase

## **ESSENTIAL PRECAUTION AND APPROACH DISTANCE**

**NOTE: If the following clearances cannot be maintained, please contact the Nextgen Network Help Desk (see below for details) for advice on how best to resolve this situation**

1. On receipt of plans and sketches and before commencing excavation work or similar activities near Nextgen Networks plant, carefully locate this plant first to avoid damage. Undertake prior exposure (vacuum excavation) such as potholing when intending to excavate or work closer to Nextgen Networks plant than the following approach distances:
  - Where Nextgen Networks plant is in an area where road and footpaths are well defined by kerbs or other features a minimum clear distance of 600mm must be maintained from where it could be reasonably presumed that plant would reside
  - In non established or unformed reserves and terrain, this approach distance must be at least 1.5 metres
  - In country/rural areas which may have wider variations in reasonably presumed plant presence, the following minimum approach distances apply:
    - d) Parallel to major plant: 10 metres (for optic fibre cable)
    - e) Parallel to other plant: 5 metres

Note: Even pot-holing needs to be undertaken with extreme care, common sense and employing techniques least likely to damage cables. For example - vacuum excavation.

  - If construction work is parallel to Nextgen Networks plant, then careful pot-holing at least every 5m is required to establish the location of all plant, hence continuing nominal locations before work can commence
2. Maintain the following minimum clearance between construction activity and actual location of Nextgen Networks Plant.

<b>Jackhammers/Pneumatic Breakers</b>	<i>Not within 1.0m of actual locations</i>
<b>Vibrating Plate or Wackers Packer Compactors</b>	<i>Not within 0.5m of Nextgen Networks ducts 300mm compact clearance cover before compactor can be used across Nextgen Networks ducts, and 600mm clearance across Nextgen Networks cables in the solid</i>
<b>Boring Equipment (in-line, horizontal and vertical)</b>	<i>Not within 2.0m of actual location Constructor to check depth via vacuum excavation (pot-hole)</i>
<b>Heavy Vehicle Traffic (over 3 tonnes)</b>	<i>Not to be driven across Nextgen Networks ducts with less than 600mm cover. Not to be driven across Nextgen Networks fibre with less than 1.2m cover Constructor to vacuum excavate (pot-hole) and expose plant</i>
<b>Mechanical Excavators, Boring and Tree Removal</b>	<i>Not within 1.0m of actual location Constructor to vacuum excavate (pot-hole) and expose plant</i>

- All Nextgen Networks pits and manholes should be a minimum of 1.2m in from the back of kerb after the completion of your work
- All Nextgen Networks conduit should have the following minimum depth of cover after the completion of your work:

**Footway 450mm**

**Roadway 450mm at drain invert and 600mm below the pavement subgrade level invert**

- All Nextgen Networks fibre in the solid should have the following minimum depth of cover after the completion of your work:

**Footway 600mm**

**Roadway 1200mm at drain invert and 1200mm below the pavement subgrade level invert**

- For clearance distances relating to Nextgen Networks above ground infrastructure please contact the Network Help Desk (see below for details)

### **FURTHER ASSISTANCE**

Over-the-phone assistance can be obtained by calling the Network Help Desk below.

**Nextgen require 5 clear business days notice to conduct an on-site location.** The initial on site location visit will not normally incur a charge, but at the discretion of Nextgen subsequent site visits may incur a charge to be applied at an hourly rate.

Where an on-site location is provided, the owner is responsible for all vacuum excavation work (pot-holing) to visually locate and expose Nextgen Networks plant.

If plant location plans or visual location of Nextgen Networks plant by vacuum excavation reveals that the location of Nextgen Networks plant is situated wholly or partly where the owner plans to work, then **Nextgen Networks** must be contacted through the **Network Help Desk** to discuss possible engineering solutions.

The contact number for the **Network Help Desk** is 1800 032 532.

### **NOTE:**

If Nextgen Networks relocation or protection works are part of the agreed solution, then payment to Nextgen Networks for the cost of this work shall be the responsibility of the principal developer. The principal developer will be required to provide Nextgen Networks with the details of their proposed work showing how Nextgen Networks plant is to be accommodated and these details must be approved by the Nextgen National Operations Manager prior to the commencement of site works.

## **RURAL LANDOWNER - IMPORTANT INFORMATION**

Where Nextgen Networks owned cable crosses agricultural land Nextgen Networks will provide a one off free-on-site electronic cable location. Please note that the exact location of cables can only be verified by visual proving by pot holing, which is not covered by this service. The Network Integrity HelpDesk Officer will provide assistance in determining whether a free-on-site location is required. Please ring the Nextgen Network Help Desk as listed above.

## **PRIVACY NOTE**

Your information has been provided to Nextgen Networks by DBYD to enable Nextgen Networks to respond to your DBYD request. Nextgen Networks keeps your information in accordance with its privacy statement entitled 'Protecting Your Privacy' which can be obtained from Nextgen Networks either by calling 1800 032 532 or visiting our website [www.nextgengroup.com.au](http://www.nextgengroup.com.au)

**Warning:** Nextgen Networks plans show only the presence of cables and plant. They only show their position relative to road boundaries, property fences etc, at the time of installation and Nextgen Networks does not warrant or hold out that such plans are accurate thereafter due to changes that may occur over time.

DO NOT ASSUME DEPTH OR ALIGNMENT of cables or plant as these vary significantly.

The customer has A DUTY OF CARE when excavating near Nextgen Networks cables and plant. Before using machine excavators NEXTGEN PLANT MUST FIRST BE PHYSICALLY EXPOSED BY VACUUM EXCAVATION (potholing) to identify its location.

Nextgen Networks will seek compensation for damages caused to its property and losses caused to Nextgen Networks and its customers.

## **EXPERIENCED PLANT LOCATORS (for your area)**

On-site assistance should be sought from an Experienced Plant Locator if the telecommunications plant cannot be located within 2.5 metres of the locations indicated on the drawings provided. On-site advice should be obtained from a suitably qualified contractor highly skilled in locating Nextgen Networks plant. If there is any doubt whatsoever about the actual location of the telecommunications plant, the best method for locating the telecommunications plant or the correct interpretation of the drawings provided. In the case where Nextgen Networks plant is outside a recognised road reserve Nextgen Networks recommends that the **Network Help Desk** is contacted for assistance prior to engaging an Experienced Plant Locator.

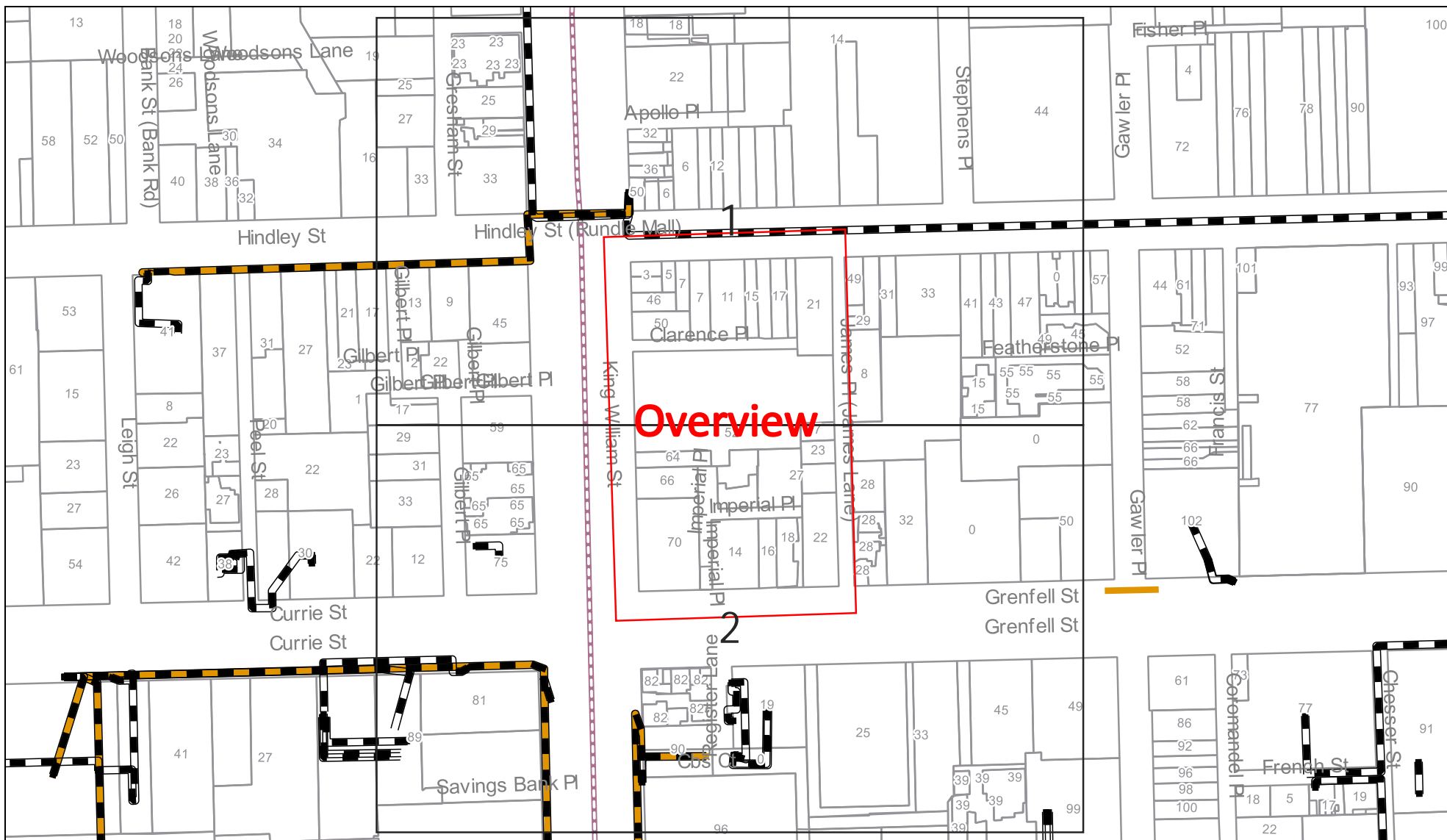
For the assistance of customers Nextgen Networks has established strict criteria to assess the skill of contractors that may be engaged by owners requiring Nextgen Networks plant locating services to perform any of the following activities if requested to do so by the owner:

- Review Nextgen Networks plans to assess the approximate location of Nextgen Networks plant
- Advise owners of the approximate location of Nextgen Networks plant according to the plans
- Advise the owners of the best method for locating Nextgen Networks plant
- Advise owners of the hazard of unqualified persons attempting to find the exact location of Nextgen Networks plant and working in the vicinity of Nextgen Networks plant without first locating its exact position
- Perform trial hole explorations by vacuum excavation (pot-holing) to expose Nextgen Networks plant with a high degree of skill, competence and efficiency and utilising all necessary safety equipment

Nextgen Networks does not accept any liability or responsibility for the performance of or advice given by any Plant Locator engaged by you but we will, if requested, recommend suitably qualified plant locators.

## **GENERAL DISCLAIMER**

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Nextgen or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.



Sequence Number: 94895320

Date: 17/02/2020

**DISCLAIMER: THIS DRAWING SHOULD NOT BE SCALED TO LOCATE CABLES. NO WARRANTY IS GIVEN THAT THE INFORMATION IS ACCURATE OR COMPLETE. IF YOU REQUIRE INFORMATION REGARDING LOCATING THE CABLE PLEASE CALL NEXTGEN. THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR DIAL BEFORE YOU DIG USE. THIS PLAN CONTAINS COMMERCIAL SENSITIVE INFORMATION AND IS TO BE TREATED ACCORDINGLY. NO SUCH INFORMATION IS TO BE PASSED ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.**



## LEGEND

### Digsite



Area

### Assets



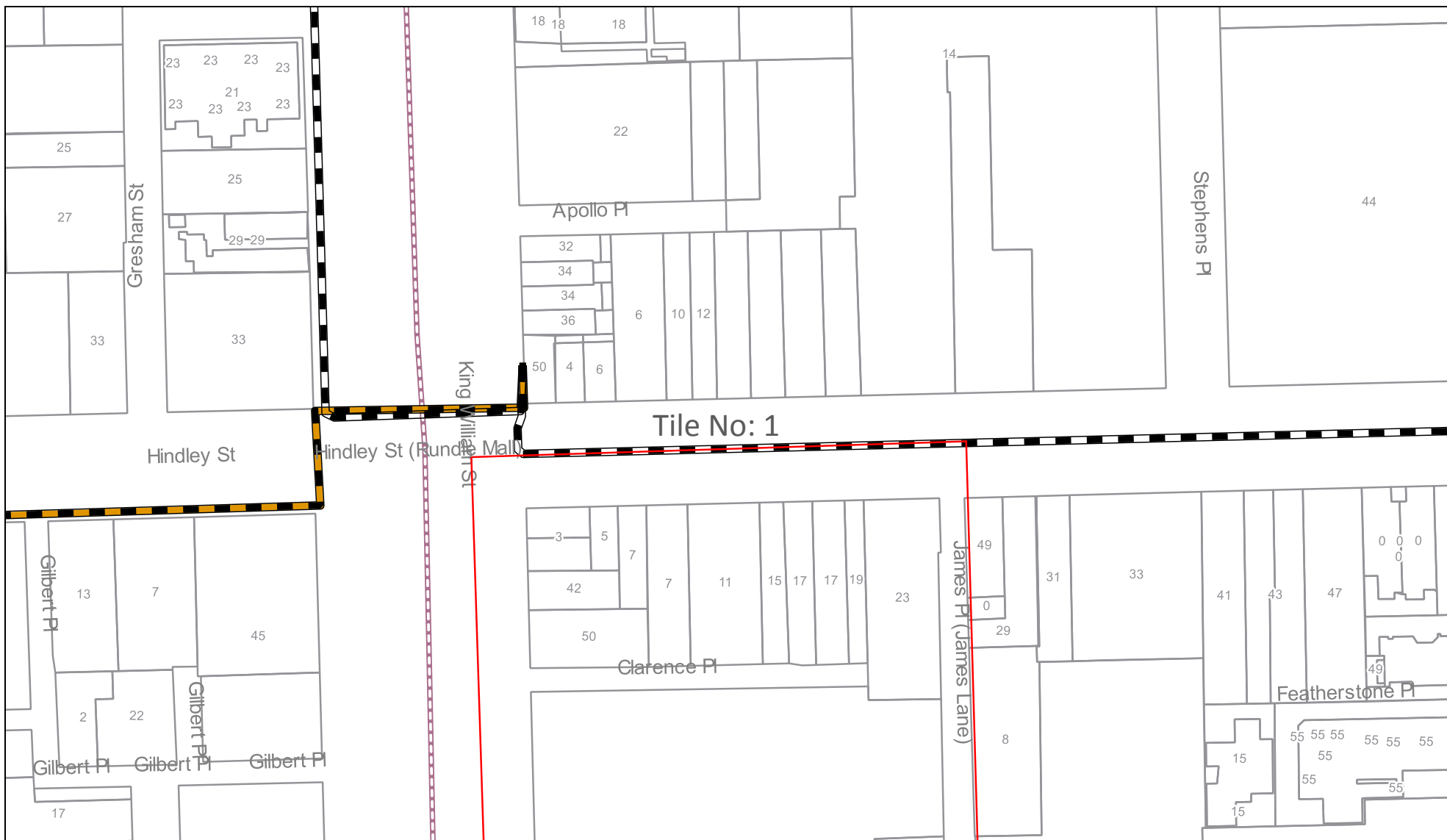
Cable



3rd Party Duct



Marker Post



Sequence Number: 94895320

Date: 17/02/2020

**DISCLAIMER: THIS DRAWING SHOULD NOT BE SCALED TO LOCATE CABLES. NO WARRANTY IS GIVEN THAT THE INFORMATION IS ACCURATE OR COMPLETE. IF YOU REQUIRE INFORMATION REGARDING LOCATING THE CABLE PLEASE CALL NEXTGEN. THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR DIAL BEFORE YOU DIG USE. THIS PLAN CONTAINS COMMERCIAL SENSITIVE INFORMATION AND IS TO BE TREATED ACCORDINGLY. NO SUCH INFORMATION IS TO BE PASSED ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.**



## LEGEND

### Digsite



Area

### Assets



Cable

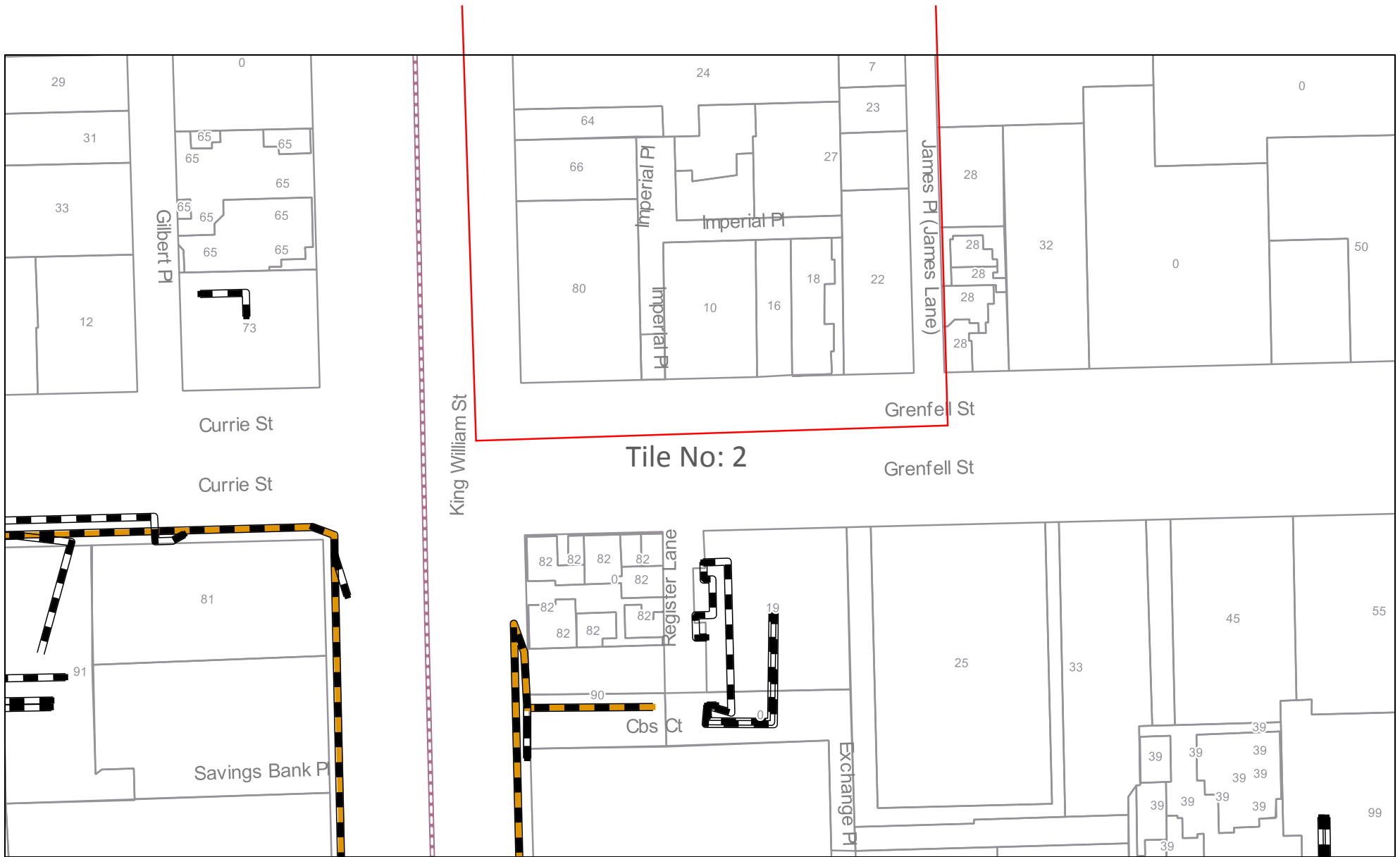


3rd Party Duct



Marker Post





Sequence Number: 94895320

Date: 17/02/2020

**DISCLAIMER: THIS DRAWING SHOULD NOT BE SCALED TO LOCATE CABLES. NO WARRANTY IS GIVEN THAT THE INFORMATION IS ACCURATE OR COMPLETE. IF YOU REQUIRE INFORMATION REGARDING LOCATING THE CABLE PLEASE CALL NEXTGEN. THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR DIAL BEFORE YOU DIG USE. THIS PLAN CONTAINS COMMERCIALLY SENSITIVE INFORMATION AND IS TO BE TREATED ACCORDINGLY. NO SUCH INFORMATION IS TO BE PASSED ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD.**



### LEGEND

Digsite		Assets	
	Area		Cable
			3rd Party Duct
			Marker Post

## Appendix J - Optus Drawings

Date: 17/02/2020  
To: Mr Ian Osborne  
Company: Floth Sustainable Building Consultants  
Address: Level 2 69 Robertson Street  
Fortitude Valley, QLD 4006

## ENQUIRY DETAILS

Location: 60 King William Street, Adelaide, SA 5000  
Sequence No.: 94895325  
DBYD Reference: 19051179

In relation to your enquiry concerning the above location, Optus advises as follows:

**Optus records indicate that there ARE underground Optus FIBRE OPTIC TELECOMMUNICATIONS ASSETS in the vicinity of the above location as per the attached drawing(s).**

**This reply is valid for a period of 30 days from the date above.**

## IMPORTANT INFORMATION

Asset location drawings provided by Optus are reference diagrams and are provided as a guide only. The completeness of the information in these drawings cannot be guaranteed. Exact ground cover and alignments cannot be provided with any certainty as these may have altered over time. Depths of telecommunications assets vary considerably as do alignments. It is essential to identify the location of any Optus assets in the vicinity prior to engaging in any works.

**All Optus assets in the vicinity of any planned works will need to be electronically located to ascertain their general location. Depending on the scope of planned works in the vicinity, the assets may also need to be physically located.**

**You MUST engage the services of one of the Optus Asset Accredited Locators to carry out asset location (refer to list of Accredited Locators attached to this DYBD response).**

**Unless otherwise agreed with Optus, where an on-site asset location is required, the requestor is responsible for all costs associated with the locating service including (where required) physically exposing the Optus asset.**

## DUTY OF CARE

When working in the vicinity of telecommunications assets you have a legal "Duty of Care" and non-interference that must be observed.

It is your responsibility as the requesting party (as a landowner or any other party involved in the planned works) to design for minimal impact to any existing Optus asset. Optus can assist at the design stage through consultation.

It is also your, as the requesting party (or your representative's), responsibility to:

- a) Obtain location drawings (through the Dial Before You Dig process) of any existing Optus assets at a reasonable time before any planned works begin;
- b) Have an Optus Accredited Asset Locator identify the general location of the Optus asset and physically locate the asset where planned works may encroach on its alignment; and
- c) Contact Optus for further advice where requested to do so by this letter.

45-- 6-- 76,

You, your head contractor and any relevant subcontractor are all responsible for any Optus asset damage as a result of planned activities in the vicinity of Optus assets.

This applies where works commence prior to obtaining Optus drawings, where there is failure to follow instructions or during any construction activities.

Optus reserves the right to recover compensation for loss or damage to its assets including consequential loss. Also, you, your head contractor and any relevant subcontractor may also be liable for prosecution under the Criminal Code Act 1995 (Cth).

You are not permitted by law to relocate, alter or interfere with any Optus asset under any circumstance. Any unauthorised interference with an Optus asset may lead to prosecution under the Criminal Code Act 1995 (Cth).

Enquiries relating to the relocation of Optus assets must be referred to the relevant Optus Damages and Relocations Team (refer to "FURTHER ASSISTANCE").

On receipt of Optus asset location drawings and prior to commencing any planned works near an Optus asset, engage an Optus Accredited Locator to undertake a general location of the Optus asset.

Physical location of the Optus asset by an Optus Accredited Locator will also be required where planned works are within the following approach distances of the general location of the Optus asset:

- In built up metropolitan areas where road and footpaths are well defined by kerbs or other features a minimum clear distance of 1 meter must be maintained from the general location of the Optus asset.
- In non-established or unformed metropolitan areas, a minimum clear distance of 3 meters must be maintained from the general location of the Optus asset.
- In country or rural areas where wider variations may exist between the general and actual location of an Optus asset may exist, then a minimum clear distance of 5 meters must be maintained from the general location of the Optus asset.

If planned works are parallel to the Optus asset, then the Optus asset must be physically located by an Optus Accredited Locator at a minimum of 5 meter intervals along the length of the parallel works prior to work commencing.

Under no circumstances is crossing of any Optus asset permitted without physical location of the asset being carried out by an Optus Accredited Locator. Depending on the asset involved an Optus representative may be required onsite.

The minimum clearances to the physical location of Optus assets for the following specific types of works must be maintained at all times.

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Jackhammers / Pneumatic Breakers	Not within 1 meter.
Light duty Vibrating Plate or Wacker Packer type compactors (not heavy road construction vibrating rollers etc.)	500mm compact clearance cover before a light duty compactor can be used over any Optus conduit. No compaction permitted over Optus direct buried cable without prior approval from Optus.
Boring Equipment (in-line, horizontal and vertical)	Not within 5 meters parallel of the Optus asset location without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite. Not to cross the Optus asset without an Accredited Optus Asset Locator physically exposing the Optus asset and with an Optus representative onsite.



# OPTUS

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Alan Cordner	Alcom Fibre Services Pty Ltd	0400 300 337	<a href="mailto:alcomfibre@bigpond.com">alcomfibre@bigpond.com</a>	NSW / ACT	Sydney
Brad McCorkindale	Bradmac Locating Services	0434 157 409	<a href="mailto:brad.mac@bigpond.com">brad.mac@bigpond.com</a>	NSW / ACT	All
Troy Redden	On Point Utility Locating	1300 6676 468	<a href="mailto:troy@onpointlocating.com.au">troy@onpointlocating.com.au</a>	NSW	Sydney Only
Shane Buckley	Cable & Pipe Locations	0408 730 430	<a href="mailto:sabuckley@bigpond.com">sabuckley@bigpond.com</a>	NSW / QLD	Armidale, Casino, Coffs Harbour, Dorrigo, Glenn Innes, Grafton, Inverell, Kempsey, Lismore, Nambucca, Port Macquarie, Tamworth, Taree, Tenterfield, Yamba
Philip Pegler	Down Under Detection Services (DUDS)	0418 267 964	<a href="mailto:apegler@duds.net.au">apegler@duds.net.au</a>	NSW	All
Noreen Egan	SureSearch Underground Services	1300 884 520 0418 920 245	<a href="mailto:Noreen@suresearch.com.au">Noreen@suresearch.com.au</a>	NSW / ACT / QLD	NSW, Sydney, Northern NSW, Canberra, QLD, South East QLD.
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George Koenig	Downunder Locations NSW Pty	0438 243 856	<a href="mailto:Downunderlocations@gmail.com">Downunderlocations@gmail.com</a>	NSW	Tweed Heads, Gold Coast, Brisbane
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Rodney Pullen	Provac	0450 268 012	<a href="mailto:rod@provac.net.au">rod@provac.net.au</a>	NSW /QLD	South East QLD, Northern NSW
Rodney Pullen	One Find Cables	0451 268 012	<a href="mailto:rod@provac.net.au">rod@provac.net.au</a>	NSW /QLD	South East QLD, Northern NSW
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Liam Bolger	Brandon Construction Services	0438 044 008	<a href="mailto:liam.bolger@hotmail.com">liam.bolger@hotmail.com</a>	NSW	Bathurst, Orange, Dubbo
Brett Pickup	All About Pipes	02 8763 4200	<a href="mailto:Brett.Pickup@allaboutpipes.com.au">Brett.Pickup@allaboutpipes.com.au</a>	NSW / VIC	All
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Timothy Laidler	Locate & Map	0431 191 669	<a href="mailto:tim@locateandmap.com.au">tim@locateandmap.com.au</a>	NSW	Sydney, Central Coast
Ken Brown	Riteway Traffic Control Pty Ltd	0419 212 969	<a href="mailto:kbrowne@ritewaytc.com.au">kbrowne@ritewaytc.com.au</a>	NSW	Central Coast, Hunter
Walter R Johansen	Steger & Associates	02 6296 4089	<a href="mailto:enquiries@steger.com.au">enquiries@steger.com.au</a>	ACT / NSW	Canberra
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Gilbert J Cook	Datateks Communications Specialists	0408 693 660	<a href="mailto:datateks@datateks.com.au">datateks@datateks.com.au</a>	NSW	Southern NSW

Damien Black	Mid North Coast Hydro Digging	0418 409 465	<a href="mailto:dblack1@bigpond.com">dblack1@bigpond.com</a>	NSW	Newcastle –Foster –Taree -Wauchope -Port Macquarie -Kempsey -Coffs harbour
Neil Blenkinsop	Utility Mapping Pty Ltd	0427 318 681	<a href="mailto:nblenkinsop@utilitymapping.com.au">nblenkinsop@utilitymapping.com.au</a>	NSW	Sydney
Daniel Fox	Epoca Environmental Pty Ltd	02 4739 2465 0433 100 642	<a href="mailto:daniel@epocaenvironmental.com.au">daniel@epocaenvironmental.com.au</a>	NSW	All NSW, ACT
Rod Shaw	Cable Find	0478 887 073	<a href="mailto:rod@cablefind.com.au">rod@cablefind.com.au</a>	NSW	Northern Rivers
Danny Carter	Online Pipe & Cable Locating	1300 665 384	<a href="mailto:danny@onlinepipe.com.au">danny@onlinepipe.com.au</a>	NSW	Sydney, Newcastle, Canberra, Blue Mountains
Sam Romano	Locating Services	0403 065 510	<a href="mailto:sam.romano@locatingservices.com.au">sam.romano@locatingservices.com.au</a>	NSW	NSW All
Scott Allison	Crux Surveying Australia	02 9540 9940	<a href="mailto:sydneyoffice@cruxsurveying.com.au">sydneyoffice@cruxsurveying.com.au</a>	NSW	Sydney Metro & Surrounding Areas
Ian Brown	Peter Ellsmore & Associates	0439 423 708	<a href="mailto:ian.brown@ellsmore.com.au">ian.brown@ellsmore.com.au</a>	NSW	Wollongong, Illawarra, South Coast, Southern Highlands, Macarthur & Sydney
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Andrew Findlay	LiveLocates	0429 899 777	<a href="mailto:info@livelocates.com.au">info@livelocates.com.au</a>	NSW	South Coast/ACT, Snowy Mountains
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Tim Galaz	Utec Solutions	02 9389 0040	<a href="mailto:office@utecsolutions.com.au">office@utecsolutions.com.au</a>	NSW/QLD /VIC	All areas, NSW, QLD, VIC

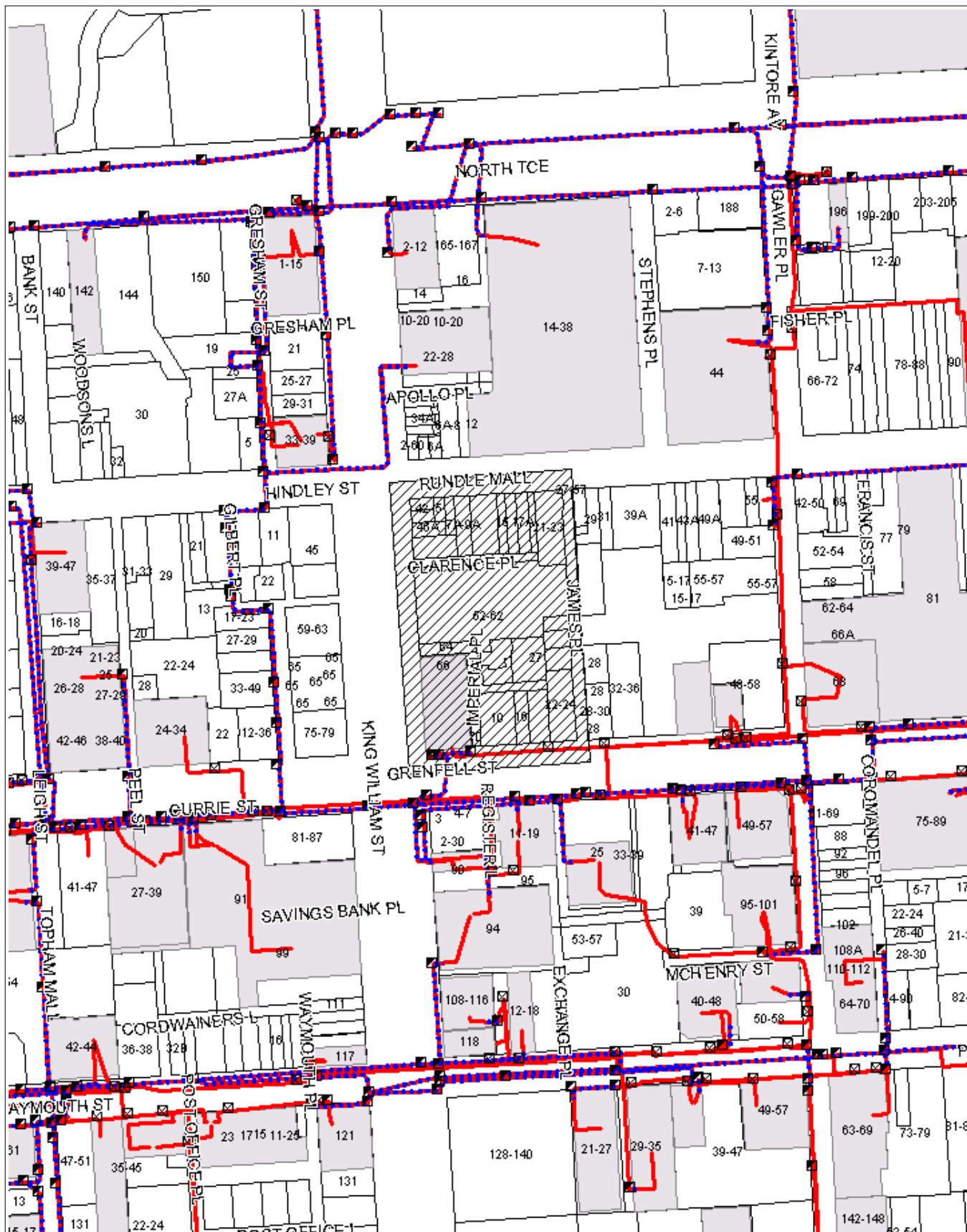
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Reece Gainsford	East Coast Locating Services	0431 193 111	<a href="#">_____</a>	NSW	Sydney, Maitland, Newcastle, Hunter, Port Stephens, Central Coast
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Craig Vallely	Aqua Freeze & Locate Pty Ltd	0458 774 440	<a href="mailto:service@aquafreeze.com.au">service@aquafreeze.com.au</a>	NSW	Sydney
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Brendon Smith	Dynamic Hydro Excavations		<a href="mailto:admin@dynamicexcavation.com.au">admin@dynamicexcavation.com.au</a>	QLD	QLD, NSW, VIC
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David Kelleher	Construction Sciences	03 9553 7236	<a href="mailto:utilities@constructionsciences.net">utilities@constructionsciences.net</a>	VIC	Victoria
Stuart Miles	ELS Environmental Location Systems	03 8795 7461	<a href="mailto:accounts@radiodetection.com.au">accounts@radiodetection.com.au</a>	VIC	Victoria
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SADB	SADB Civil Construction & Trenchless	08 8168 7200	<a href="mailto:reception@sadb.com.au">reception@sadb.com.au</a>		
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Ben Upton	TerraVac Vacuum Excavation	0427 531 119	<a href="mailto:locations@terravac.com.au">locations@terravac.com.au</a>	WA	All
Dale Shearsmith	Subtera Subsurface Locating	1300 046 636	<a href="mailto:dale@subtera.com.au">dale@subtera.com.au</a>	WA	All
Liam Davies	Bunbury Telecom Service Pty Ltd	08 9726 0088	<a href="mailto:liam@btswa.com.au">liam@btswa.com.au</a>	WA	South West WA
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Nigel Nunn	CCS Group / Utility Locating Solutions	08 9385 5000	<a href="mailto:enquiry@ccswa.com.au">enquiry@ccswa.com.au</a>	WA	Perth

Paul Stevenson	Geographe Underground Services	0427 523 811	<a href="mailto:paul.stevenson@geographeunderground.com.au">paul.stevenson@geographeunderground.com.au</a>	WA	All
Jeremy Brown	Spotters Asset Locations Pty Ltd	0459 130 677	<a href="mailto:jeremy@spottersassetlocations.com.au">jeremy@spottersassetlocations.com.au</a>	WA	All
Reece Topham	Prime Locate	0400 888 406	<a href="mailto:reece@primelocate.com.au">reece@primelocate.com.au</a>	WA	All
Jonathon Sylva	Advance Scanning Services	1300 738 118	<a href="mailto:bookings@advancescanning.com">bookings@advancescanning.com</a>	WA	All
Tim Daws	Award Contracting	0411 878 895	<a href="mailto:info@awardcontracting.com.au">info@awardcontracting.com.au</a>	WA	City & Regional
Dave Turner	Anywair Pipe & Cable	0418 890 071	<a href="mailto:dave@anywair.com.au">dave@anywair.com.au</a>	NT	All NT, WA, QLD
Steve Gault	Northern Comms	0407 904 319	<a href="mailto:steve@northerncomms.net.au">steve@northerncomms.net.au</a>	NT	All
Wayne Parslow	Danisam	0417 089 865	<a href="mailto:danisam@westnet.com.au">danisam@westnet.com.au</a>	NT	Darwin NT and Surrounds
Elizabeth Young	Archers Underground Services Locations (AUS Locations)	03 6245 1298	<a href="mailto:admin@auslocations.com.au">admin@auslocations.com.au</a> <a href="mailto:auslocations@bigpond.com">auslocations@bigpond.com</a>	TAS	All
Patrick Monaghn	Paneltec Group	0447 797 544	<a href="mailto:patrick@paneltec.com.au">patrick@paneltec.com.au</a>	TAS	All
Scott Richardson	AJ Water & Leak Detection	0457 710 680	<a href="mailto:admin@ajwater.com.au">admin@ajwater.com.au</a>	TAS	All





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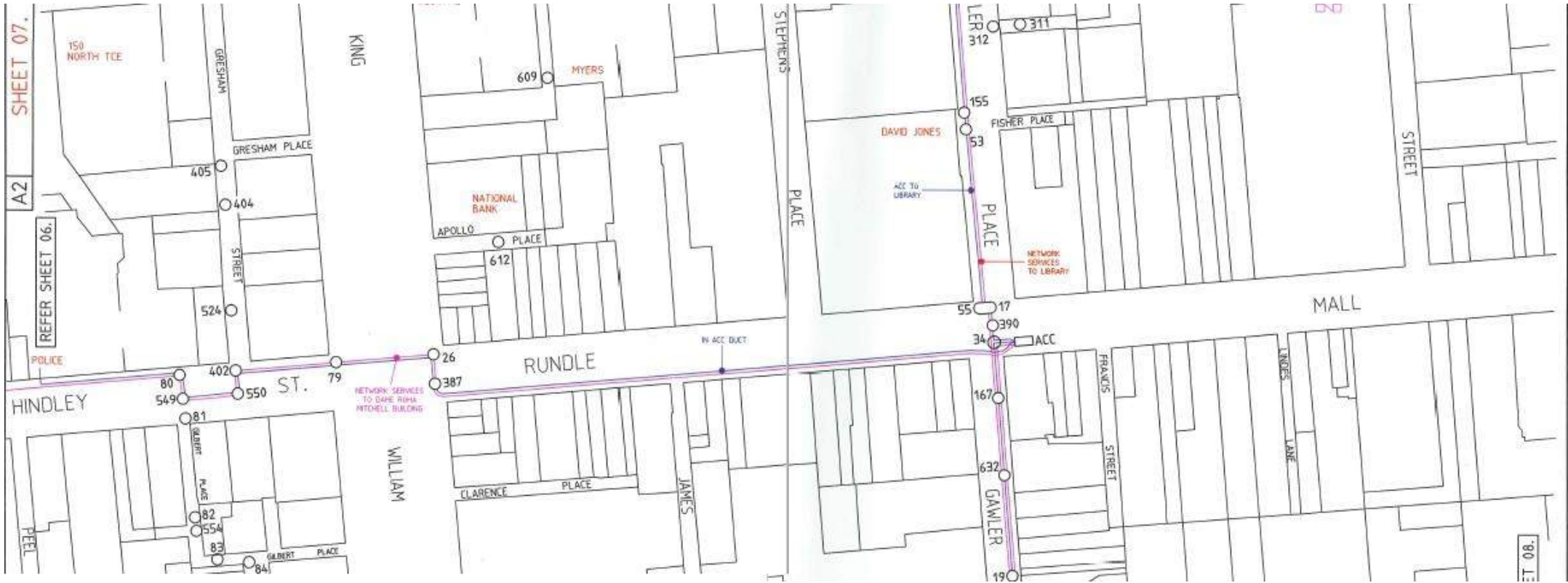


For all Optus DBYD plan enquiries –  
Email: [Fibre.Locations@optus.net.au](mailto:Fibre.Locations@optus.net.au)  
For urgent onsite assistance contact 1800 505 777  
Optus Limited ACN 052 833 208



## Appendix K - StateNet Services Drawings





## Appendix L - TPG Drawings



Level 17, PIPE Networks House, 127 Creek Street, Brisbane 4000  
PH: (07) 3233 9895 FAX: (07) 3233 9885

### **DBYD ENQUIRY RETURN:**

PIPE Networks **DOES** own or operate telecommunications network infrastructure within the request area detailed above.

The affected network infrastructure is contained within the **Telstra** duct network and can be found listed on the appropriate **Telstra** duct Network plans.

THIS NETWORK IS VITAL TO OUR OPERATIONS AND AS SUCH, IT IS CRITICAL THAT **NO WORKS** COMMENCE WITHIN THE AREA UNTIL YOU HAVE RECEIVED AND APPRAISED THE TELSTRA DUCT PLANS FOR THIS AREA.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from issue.

PIPE Networks will seek compensation for any damage to its network through negligence or ignorance of your duty of care.

PIPE NETWORKS  
Ph (07) 3233 9895  
Email: dbyd@pipenetworks.com  
(for information specifically on this job only)





## Response Cover Letter

Date: 17/02/2020

**PIPE Networks**  
Level 17, 127 Creek St  
Brisbane QLD 4000  
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Fax: +61 732339880

**To:**

Mr Ian Osborne - Customer ID: 412645  
Floth Sustainable Building Consultants - Mr Ian Osborne  
Level 2 69 Robertson Street  
Fortitude Valley  
QLD  
4006

Email: iosborne@floth.com.au  
Phone: 0735138000  
Fax: Not Supplied  
Mobile: 0419246542

Dear Mr Ian Osborne

The following is our response to your Dial Before You Dig enquiry.

**Assets Affected:** PIPE Networks

**Sequence Number:** 94895321

**Location:** 60 King William Street  
Adelaide  
SA  
5000

**Commencement Date:** 16/03/2020

Please read over the attached documents for more information about your enquiry.

**DISCLAIMER:** No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence.

**Note:** If the works fall in an area that adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**



Level 17, PIPE Networks House, 127 Creek Street, Brisbane 4000  
PH:(07) 3233 9895 FAX:(07) 3233 9880

Attention: Mr Ian Osborne  
Fax: Not Supplied  
DBYD Enquiry Number: 94895321

Date: 17/02/2020

Location: 60 King William Street  
Adelaide  
SA  
5000

#### DBYD ENQUIRY RETURN:

PIPE Networks **DOES** own or operate telecommunications network infrastructure within the area detailed above.

The affected network **is contained in the PIPE Networks duct network** and can be found on **PIPE Networks** own network plans.

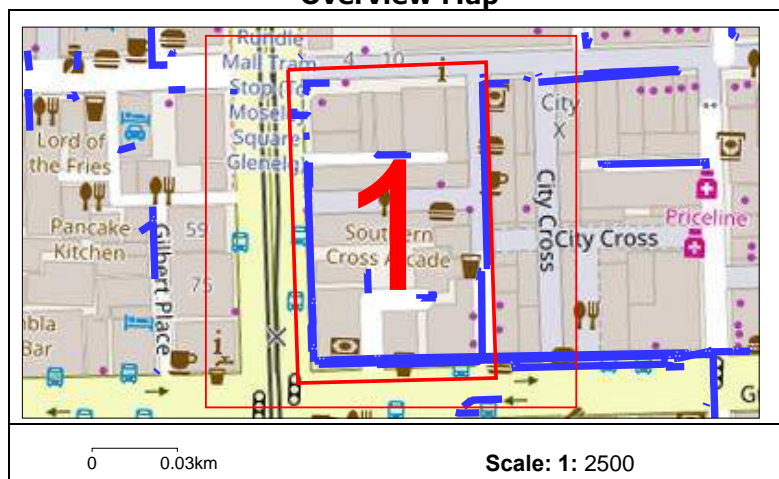
**This network is vital to our operations and as such, it is critical that no works commence within the area until a PIPE Networks representative has contacted you.**

A PIPE Networks representative will contact you within 24 hours to further discuss your intended works. If you do not hear from PIPE networks within 24hours please call us for assistance.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from issue.

PIPE Networks will seek compensation for any damage to its network through negligence or ignorance of your duty of care.

#### Overview Map



PIPE Networks (for information specific to this job only)

Ph (07) 3233 9895

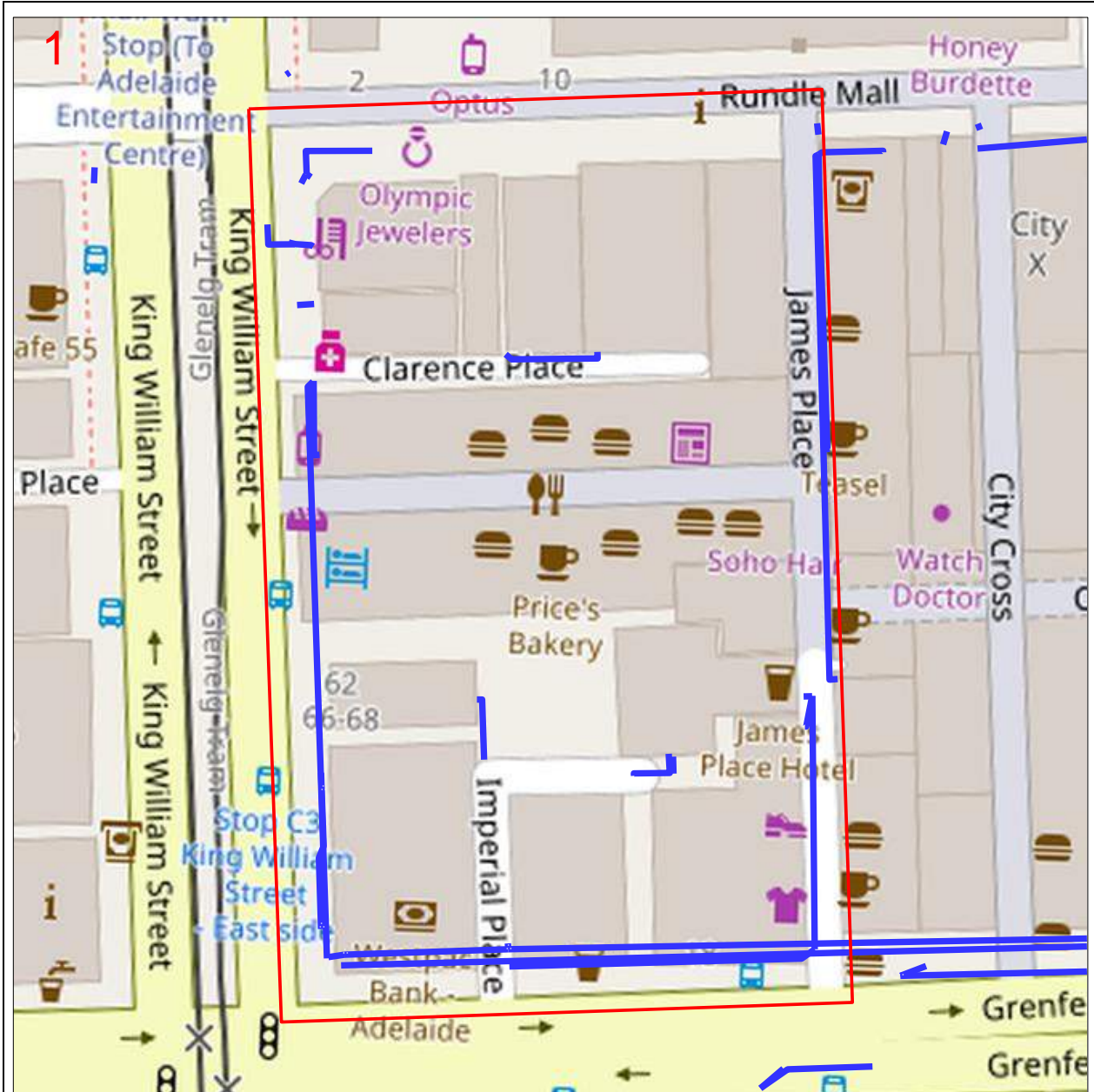
Email: [dbyd@pipenetworks.com](mailto:dbyd@pipenetworks.com)

**DISCLAIMER:** No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence.

**Note:** If the works fall in an area that adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**

Only PIPE Networks' duct displayed.

For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.



Enquiry Number: 94895321

Map Sheet: 1

Scale: 1:750

0 0.008km

#### LEGEND

DBYD Request Area Asset

Line

Area

Manhole

Duct



**DISCLAIMER:** No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence. © 2013 PIPE Networks Ltd.

**Note:** If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**

## Appendix M - Vocus Drawings

17/02/2020

Mr Ian Osborne  
Floth Sustainable Building Consultants  
Level 2 69 Robertson Street  
Fortitude Valley QLD 4006

Dear Mr Ian Osborne

DIAL BEFORE YOU DIG - JOB: 19051179 SEQ: 94895319

Thank you for your enquiry regarding the below mentioned area.

Enquiry Date: 17/02/2020  
Address: 60 King William Street  
Suburb: Adelaide  
State: SA, 5000

Additional Information:

**YES – We can confirm, the Vocus Group has Fibre Optic Services within the vicinity.**

Please find attached a copy of the services plan for the location you have specified. These plans are valid for 30 days from the date requested.

**IMPORTANT INFORMATION**

Drawings and plans provided by the Vocus Group are reference diagrams which were correct at the time the asset was built. Exact ground cover and alignments cannot be provided with any certainty, as these may alter over time. Depth of the Telecommunications asset can vary considerably as can alignments. The plans provided are to be used as a guide only.

Identifying the Vocus Group asset visually is critical. Information on how this can be arranged is provided in this document.

Please email [Damage.Relocations@vocus.com.au](mailto:Damage.Relocations@vocus.com.au) for general enquiries about the information provided within this response.

Yours sincerely,  
Vocus Group DBYD Team

**EMERGENCY CONTACT: 1800 262 663**

---

Vocus Group  
Level 12, 60 Miller Street  
NORTH SYDNEY NSW 2060  
T: 1300 88 99 88 E: [info@vocus.com.au](mailto:info@vocus.com.au)

## **DUTY OF CARE**

The Constructor has a legal “Duty of Care” that must be observed when working in the vicinity of any Vocus Group asset.

It is the responsibility of the Constructor to design their works with no impact to the Vocus Group asset.

The Constructor must;

- a. Obtain and review plans for a specified area through Dial Before You Dig within a reasonable timeframe before construction begins.
- b. Visually locate the Vocus Group asset, using a Vocus Group Accredited Locator who will vacuum excavate (potholing) where construction activities may damage or interfere with the Vocus Group asset. Refer to ***“Clearances for Work in the Vicinity of the Vocus Group Asset”*** section below for more information.
- c. Contact the Vocus Group if the Vocus Group asset is wholly or partly located near planned construction activities.

**NOTE:** Plans are provided free of charge from DBYD. Request for plans of a larger area may incur a cost.

## **DAMAGE**

The Constructor will be held responsible for all asset damage when work commences prior to obtaining the Vocus Group plans, or failure to follow instructions.

### **ANY DAMAGE TO THE VOCUS GROUP ASSET MUST BE REPORTED TO 1800 262 663 IMMEDIATELY**

The Vocus Group reserves all rights to recover compensation for loss or damage to its cable network or other property including consequential losses.

## **ASSET RELOCATIONS**

**The Constructor is not permitted to relocate or alter any Vocus Group asset or network under any circumstance.**

For all enquiries relating to the relocation of a Vocus Group asset please email [Damage.Relocations@vocus.com.au](mailto:Damage.Relocations@vocus.com.au)

## **RESOLUTION OF POINTS OF CONFLICT**

Should asset location and potholing reveal points of conflict between the Constructors planned works and the existing Vocus Group asset, the Constructor should contact the Vocus Group for advice and to discuss possible solutions.

Please contact the Fibre Assurance Team

**Phone:** 1800 262 663

**Email:** [Damage.Relocations@vocus.com.au](mailto:Damage.Relocations@vocus.com.au)

## **ASSESSMENT OF RISK AND PROTECTIVE ACTIONS**

Where “Protective works” are required around existing the Vocus Group asset, a solution will be confirmed on a case by case basis. The cost of the Protective works are the responsibility of the Constructor and the works will be carried out by a Vocus Group Accredited Contractor.

Where “Relocation works” of the Vocus Group asset is part of an agreed solution, a Project Manager will be assigned to work with the Constructor. The cost of the Relocation works are the responsibility of the Constructor and the works will be carried out by a Vocus Group Accredited Contractor.



Region	Onsite Locations Contact	Phone	Mobile	Fax	After Hours
Sydney, NSW	QC Communications	(02) 9620 2407		(08) 9620 1701	
Alice Springs, NT	Chambers Engineering	(08) 8955 5022	0418 837 833 0427 971 931	(08) 8955 5322	
Darwin, NT	Anywair Electrics		0418 890 071		0418 890 071
Darwin, NT	Northern Comm.'s		0407 904 319		0407 904 319
Brisbane, QLD	Optilinx	(07) 3901 7353	A/Hours or Emergency 0404 010 658	(07) 3901 7352	
Adelaide, SA	TPC	(08) 8376 5911		(08) 8376 5944	
Melbourne, VIC	Linktech	(03) 8805 0300			
Perth, WA	Abaxa	1300 369 642	A/Hours or Emergency 0411 746 657	(08) 9256 2922	

**If any of the above numbers are uncontactable and your call is urgent,  
please call the Vocus National Service Desk on 1800 262 663**

The Vocus Group accepts no liability for the information provided to the Constructor by the Locators listed above.

Further to this, the Constructor acknowledges that the Locator is the agent of the Constructor and that the Vocus Group takes no responsibility for the Locators' acts or omissions.

- For all work within 2.5 metres of nominal location, the Constructor is required to prove the actual location of the asset by potholing and exposing before commencing work.
- Potholing to expose and locate the Vocus Group asset is required before work commences and every 3 metres where the Constructors works are parallel to the Vocus Group asset.
- The Constructor is responsible for all asset damages when works commence without the Vocus Group plans or by failure to follow advice and/or instructions from the Vocus Group.

**NOTE: No machinery shall be used within 1 metre of the Vocus Group asset until the actual location has been determined by potholing using hand tools.**

**NOTE: No heavy earth working machinery shall be used within 5 metres of the Vocus Group asset until the actual location has been determined by potholing using hand tools.**

## **CLEARANCES FOR WORK IN THE VICINITY OF THE VOCUS GROUP ASSET**

These figures represent the minimum clearance cover to be maintained over the Vocus Group asset. Please note that the actual cover over existing asset may be greater or less than recommended figures. Exact alignment and depths cannot be given with certainty as such levels can change over time.

<b>Footpath and Verge Areas</b>	450mm
<b>Roadways</b>	600mm

These figures represent the minimum clearance between construction and actual location of the Vocus Group asset.

<b>Jackhammers / Pneumatic Breakers</b>	Not within 2.5 metres of actual location
<b>Vibrating Plate or Wacker Packer Compactors</b>	Not within 500mm of actual location
<b>Heavy Vehicle Traffic</b>	Not to be driven across the Vocus Group asset with less than 600mm cover. The Constructor is to check the depth by potholing using hand tools.
<b>Mechanical Excavators</b>	Not within 1 metre of actual location. The Constructor is to pothole and expose the asset using hand tools.
<b>Boring Equipment (in-line, horizontal and vertical)</b>	Not within 2.5 metres of actual location. The Constructor is to pothole and expose the asset.

Access to the Vocus Group pits must remain accessible and at ground level at all times.

Any information provided is valid for 30 days only from the date of issue of this document. If the works extend beyond this period, or if the designs are altered in any way, you are requested to re-submit your proposal for re-assessment by contacting Dial Before You Dig.

Phone 1100 or check the website for more details <http://www.1100.com.au>

<b>Schedule</b>	The Criminal Code
<b>Chapter 10</b>	National infrastructure
<b>Part 10.6</b>	Telecommunications Services
<b>Division 474</b>	Telecommunications offences

#### **474.6 Interference with facilities**

- (1) A person is guilty of an offence if the person tampers with, or interferes with, a facility owned or operated by:

- (a) a carrier; or
- (b) a carriage service provider; or
- (c) a nominated carrier.

Penalty: Imprisonment for 1 year.

- (2) For the purposes of an offence against subsection (1), absolute liability applies to the physical element of circumstance of the offence, that the facility is owned or operated by a carrier, a carriage service provider or a nominated carrier.

- (3) A person is guilty of an offence if:

- (a) the person tampers with, or interferes with, a facility owned or operated by:

- (i) a carrier; or
- (ii) a carriage service provider; or
- (iii) a nominated carrier; and

- (b) this conduct results in hindering the normal operation of a carriage service supplied by a carriage service provider.

Penalty: Imprisonment for 2 years.

- (4) For the purposes of an offence against subsection (3), absolute liability applies to the following physical elements of circumstance of the offence:

- (a) that the facility is owned or operated by a carrier, a carriage service provider or a nominated carrier;

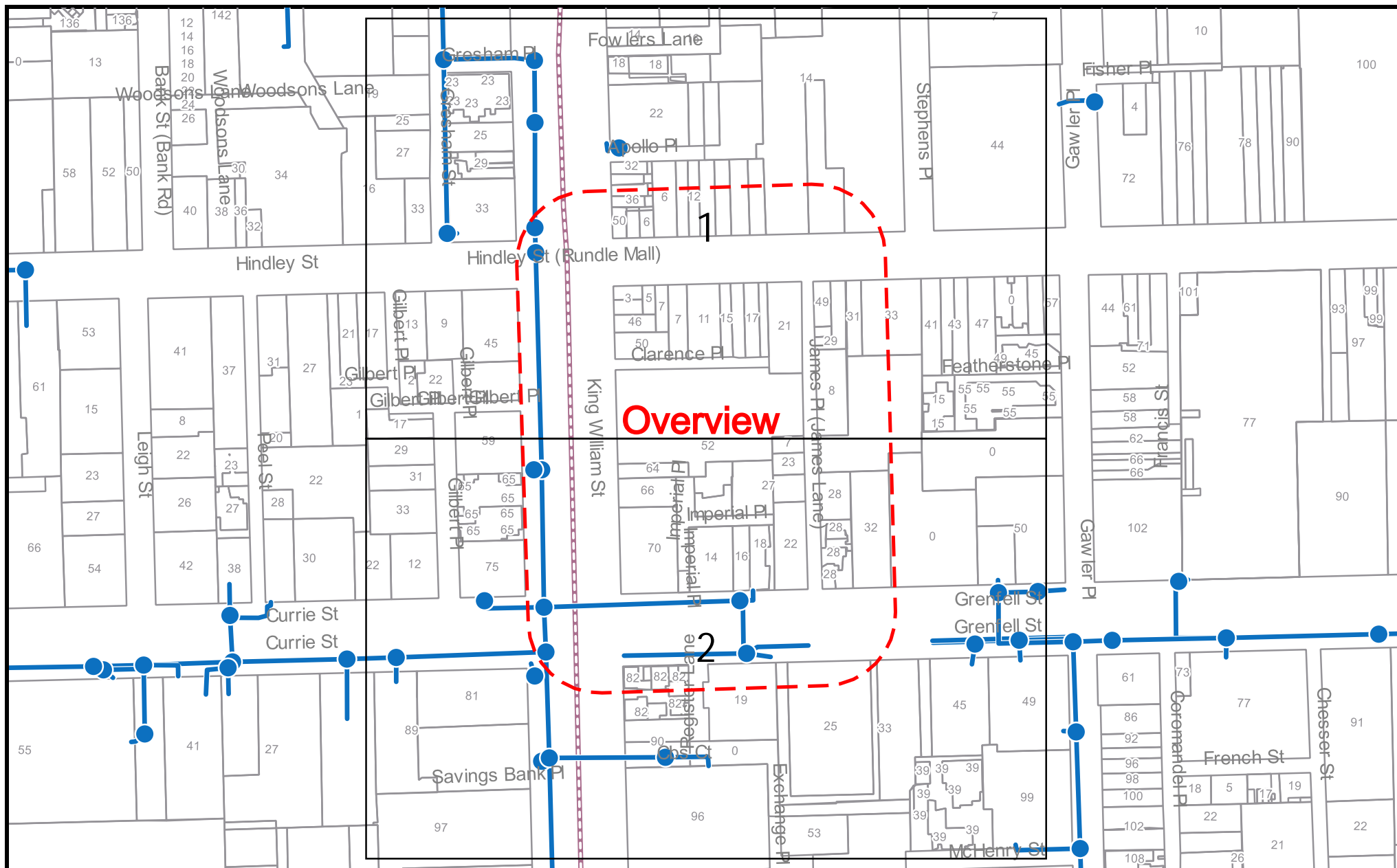
- (b) that the carriage service is supplied by a carriage service provider.

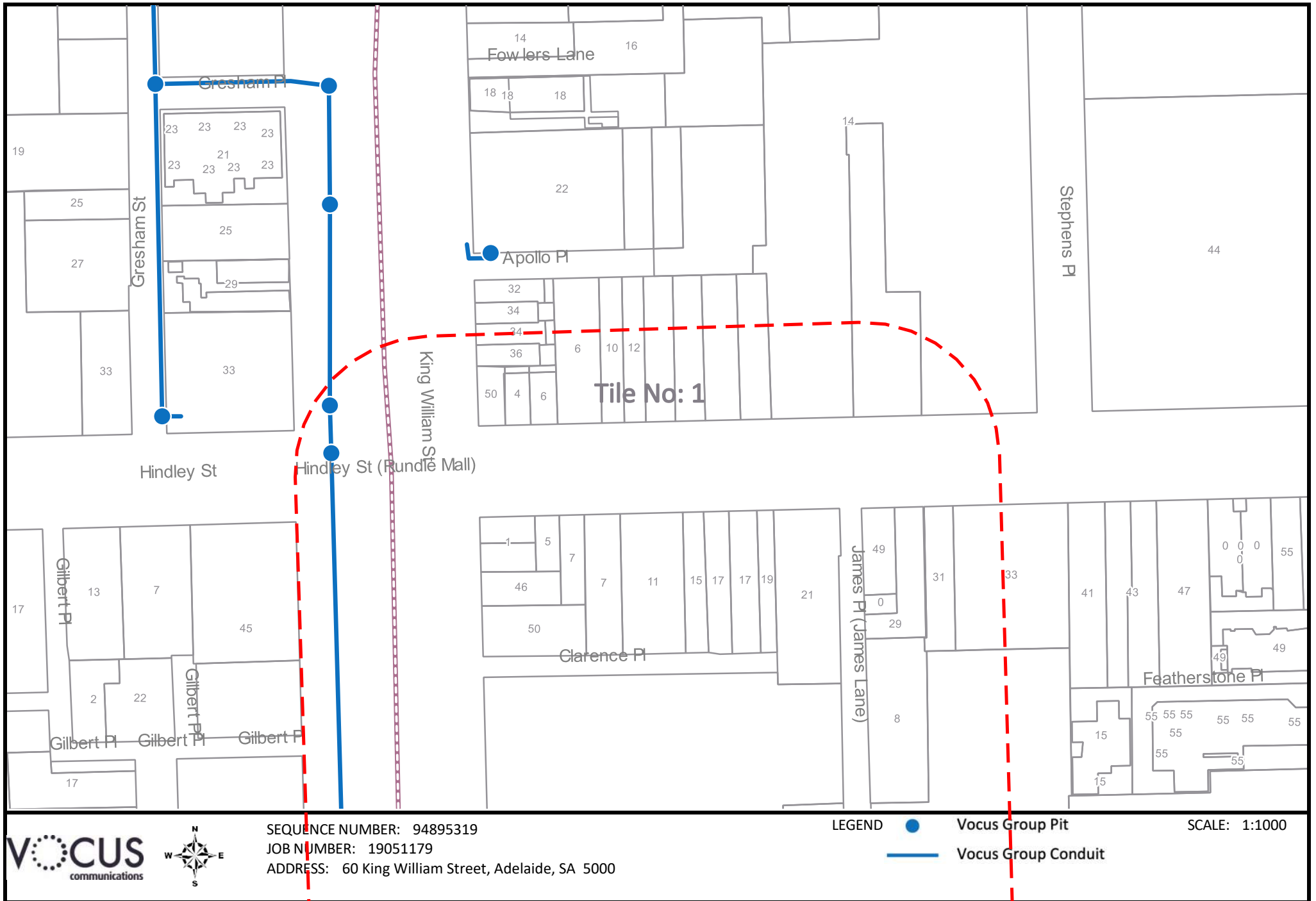
- (5) A person is guilty of an offence if:

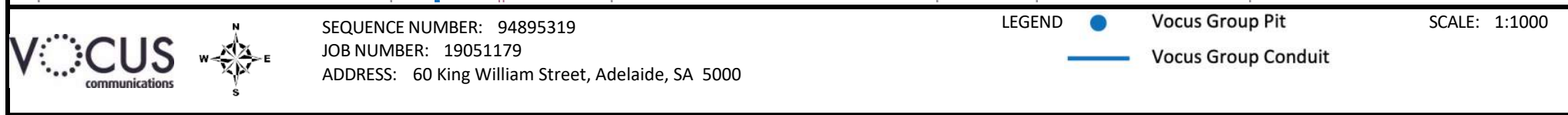
- (a) the person uses or operates any apparatus or device (whether or not it is comprised in, connected to or used in connection with a telecommunications network); and

- (b) this conduct results in hindering the normal operation of a carriage service supplied by a carriage service provider.

Penalty: Imprisonment for 2 years.









[floth.com.au](http://floth.com.au)



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**JAKARTA**

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+62 21 781 6326  
[floth@flothindonesia.com](mailto:floth@flothindonesia.com)

File No:  
2020/07983/01

2 November 2020

Ref No:  
16251017

Gabrielle McMahon  
Team Leader – Inner Metropolitan Development Assessment  
Planning and Land Use Services  
Attorney-General's Department  
Level 5, 50 Flinders Street  
Adelaide SA 5000

[gabrielle.mcmahon@sa.gov.au](mailto:gabrielle.mcmahon@sa.gov.au)

For the attention of the State Commission Assessment Panel

## **Southern Cross 60 King William Street, Adelaide**

Further to the referral 020/A143/20 received 30 October 2020 pertaining to the development application at the above address and in my capacity as a statutory referral in the State Commission Assessment Panel, I would like to provide the following comments for your consideration.

The project's original proposal was presented to the Design Review panel on three occasions, over which period the applicant positively responded to the advice provided. A pre-lodgement agreement was reached for the original proposal. This revised proposal has not been presented to the Design Review panel, however due to the significance of the project and to ensure consistency of advice, one Design Review panel member was invited to provide independent comments to inform this referral response. Due to time constraints a pre-lodgement agreement for the revised scheme was not reached in advance of lodgement.

I acknowledge the improvements to the design throughout the Design Review process. I commend the level of contextual analysis and presentation material that clearly demonstrate the design intent and the relationship of the building base to the State heritage place (Sands & McDougall building) and street, and the visual impact of the development from long view perspectives.

I strongly support the proposal for a mixed use development on this site and the ambition of the project team to positively contribute to the streetscape, pedestrian experience and city amenity. I also welcome the benefit the increased daily population could bring to the precinct. Development of this site presents a rare opportunity due to the site's size and central location within the city of Adelaide. I am of the opinion that any development on this site has a responsibility to deliver a high benchmark for good design. Fulfilling this responsibility will be contingent on achieving a high quality design outcome particularly in terms of the response to heritage and streetscape, architectural expression, materiality,

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of South Australia

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2020/07983/01

Ref No:  
16251017

contribution to the public realm, workplace amenity and expression of the proposed building relative to its current and future context.

The subject site is located at 52-66 King William Street, on the east side of the city's principal north-south boulevard and commercial spine. The subject site is significant for the city and precinct with an area of approximately 4,700 square metres and is located in the Capital City Zone Central Business Policy area with no prescribed height limit. The site falls approximately 1.2 metres with a high point at James Place (east boundary) and a low point at King William Street (west boundary). To the north of the site is Clarence Place, which is a single lane dead end roadway that provides service access to a number of properties fronting King William Street and Rundle Mall. To the east of the site is James Place, which is a highly pedestrianised character laneway with a focus on small scale food and beverage and retail offerings. To the south of the site is Imperial Place, a right of way that currently provides service access and at-grade car parking for a number of properties.

The surrounding area is predominantly low in scale and characterised by a mix of contemporary commercial buildings of varying heights. Full width continuous canopies covering the full depth of the footpath are a feature of the east side of King William Street. A number of State and Local heritage listed places are located within the context of the site on King William Street, Rundle Mall and Grenfell Street. A 12 storey contemporary commercial building is located immediately south of the site with frontage to King William and Grenfell Streets.

The subject site currently comprises a number of commercially operated buildings of varying character, including the Southern Cross Arcade with a food court, cafes and retail tenancies fronting King William Street. Southern Cross Arcade currently provides a public pedestrian link from King William Street to James Place. Two properties with frontage to James Place are not under ownership by the proponent team, namely the James Place Hotel (private owner) and a washroom facility under ownership of the City of Adelaide. I understand a Land Management Agreement exists and discussions are ongoing with both owners of these sites with the intent to improve opportunities for activation along James Place.

A portion of the subject site includes a State heritage place located at 64 King William Street. Known as the Sands & McDougall building, the original 1881-82 former shop was refaced in 1933 with an Art Deco facade finished in Portland Cement render. The City of Adelaide Council Heritage Survey (2008) notes the Art Deco facade as an early architectural exemplar of the refacing and modernising of buildings during the Interwar period. Several modifications to the building were undertaken in the 1960s and 1980s that resulted in a loss of heritage fabric. Notwithstanding these alterations, the facade above the 1980s awning is substantially intact. I acknowledge the studies undertaken to retain and meaningfully integrate the heritage fabric with functionality and architectural expression of the contemporary base of the building, and the project team's acknowledgement of the contribution of the State heritage place to the identity of the development overall.

The proposal is for a 15 storey tall mixed use development with an above ground height of 63 metres to the top of the roof plant. The development comprises one

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basement level for a supermarket and car parking, ground floor supermarket, retail, food and beverage facilities, office lobby and services, level one End of Trip (EOT) facilities, 13 levels of office space and rooftop plant services and an office space. I support the proposed height of the building given the inner city location.

I strongly support the project team's approach to consider the site as a precinct and the unique opportunities that a development of this scale and significance can offer this part of the city. The proposal also seeks to enhance the laneway character and reinforce pedestrian links through the ground plane of the building, and maximise activation to all site edges through the inclusion of retail and food and beverage tenancies along King William Street, Clarence Place and James Place. The ground floor office foyer and level one lobby are proposed at the south west corner of the site with frontage to King William Street. Back of House and service areas are consolidated to the southern portion of the site with access from Imperial Place. The proposal includes an activated through-site laneway link on the ground floor level, retaining the principle of the existing arcade connection between King William Street and James Place. The EOT lobby is proposed at the south east corner of the site from James Place.

I strongly support the project ambitions to activate the site edges and provide an activated through-site laneway link. I also support the north south connection that connects the office lobby and the laneway link. I support the design approach to the through-site link as an activated laneway arrangement with tenancies and localised seating, with the intent to reflect the character of James Place, as in my view it will further improve connectivity and activation of the link and contribute to the project's identity. I support the location of retail tenancies to frame the key public entrance to the laneway link and the consolidation of the southern retail space to provide a more visually connected and generous office foyer, cognisant of anticipated peak pedestrian movements. I acknowledge the amendment since the Design Review sessions to include a ground floor supermarket, escalators and fire services infrastructure at the north portion of the site adjacent Clarence Place. The Design Review process strongly supported the project ambitions of activating Clarence Place through retail, food and beverage tenancies and two north south connections to the laneway link. In my view, the opportunity exists to further enhance the laneway culture and address existing Crime Prevention through Environmental Design (CPTED) issues. To that end, I recommend ongoing consideration of the presentation and visual permeability of Clarence Place, including the King William Street corner to ensure delivery of a highly activated, visually connected and welcoming development that will also facilitate future laneway improvements and connections. I also recommend development of a robust retail tenancy framework and guidelines to support the design intent for visual permeability to the site edges, and provide a consistent approach to lighting, signage and furniture to assist with creating and maintaining the fine grain character of the development. I also anticipate as the design progresses that signage and lighting strategies will be developed. In my view, signage and lighting at the lower levels should be integral with the overall architectural expression.

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I support the provision of extensive bicycle storage areas and EOT facilities within the development to support the project's sustainability ambitions. Additionally I support the proposed location for the EOT entry on James Place that further reinforces the existing laneway connections. In my view, development of this site presents a unique opportunity to improve safety and connections, and facilitate



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potential future links within the precinct. I encourage the design team to continue discussions with the City of Adelaide and adjoining property owners with the view to achieving a more direct connection from Clarence Place to James Place. The revitalisation of the laneways as safe and welcoming public spaces and provision of meaningful connections to the wider Rundle Mall precinct should reinforce the existing fine grain character of the laneways, and be informed by CPTED principles, urban design and landscaping strategies.

The base of the building is a two to three storey podium that is differentiated from the upper element through materiality, architectural expression and setbacks. The podium is built to all site boundaries, and reflects the predominantly two storey scale of buildings to the north and east of the site, including the James Place Hotel at the centre of the James Place podium. The King William Street podium element rises to three storeys at its southern end, with the intent to integrate the retained State heritage listed Sands & McDougall building. I acknowledge the streetscape analysis and support the design approach for a low scale podium element with a fine grain expression and masonry portal language that responds to the State heritage place as well as the broader streetscape context. I also support the inclusion of curved corners and the raised canopy to highlight the key public entrance to the laneway link. I support the design approach and rationale for the portal language of the three storey podium section that responds to the scale, masonry character, strong vertical proportions and articulation of the State heritage place.

I support the use of genuine brickwork and sandstone to the podium that responds to the different streetscape and laneway contexts. I also support the highlighting of the key public entrances to the central laneway through a double storey recessed element articulated with vertically seamed metal cladding that contributes to the fine grain character and assists with intuitive wayfinding. In my view, the quality and detailing of the materiality of the podium element and its response to the State heritage place is critical to the success of the proposal and will significantly contribute to the identity of the development overall. I support the rhythm, scale and detailing of the retail fenestration that reinforces the fine grain articulation of the podium. I recommend further detailed consideration of the material performance and detailing of the curved components of the King William Street entrance to ensure delivery of the proposed design intent.

In principle, I support the scale, materiality and continuation of the masonry portal language to the King William Street podium that assist with visually anchoring the building, providing a coherent podium composition and contribution to the streetscape, as well as a convincing integration of the State heritage place. I also support the design approach to celebrate the heritage facade and three dimensional quality of the building through provision of a unique and generous arrival experience and foyer commensurate with the significant scale of the development. However, I recommend ongoing consideration of the fenestration proportions within the three storey podium element with the view to achieving a respectful relationship with the heritage context and better reflect the strong vertical proportions of the State heritage place. Additionally I recommend detailed design development of the interface and new interior works to the State heritage listed facade including the new glazed doors and interior finishes behind the retained facade to ensure delivery of the design intent for a high quality and contemporary response to the heritage fabric.

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Above the podium, the through-site link is also expressed in the form of the office component, extending as a vertical recess that separates the upper office volume into two elements. I support this expression and its potential to provide a bold identity to the building. I also support the inclusion of stair connections and voids to the upper office levels that enable communication and engagement across the building levels and provide some visual movement from street level. To that end, I also support the inclusion of an outdoor terrace with soft landscaping at the north west corner of the top of the level two podium that provides opportunities for outlook and views of King William Street and the State heritage listed Edmund Wright House. I support the design intent for built form setbacks above the podium element on all sides, in particular the vertical and horizontal setbacks of the office component from the State heritage place with the view to provide appropriate curtilage. The northern office element is articulated by a single continuous wintergarden to the west facade of level 11 that wraps to the north facade with the view to delineating the high rise tenancy from the lower tenancy. In my view, the wintergarden level provides additional amenity for the users and also maintains the simplicity and purity of the overall built form which I consider critical to the overall success of the development as a significant city landmark. A terrace, office space and plant services areas are located at the rooftop. I support the western orientation for the terrace space to provide outlook to King William Street and further celebrate the inner city location, and recommend review of opportunities to increase the depth of the terrace to maximise usability.

The development aims to provide a contemporary workplace with high levels of amenity for all users, which I strongly support. The office levels are typically 18 metres in depth, with workstations located on the north and south facade edges, and breakout spaces in the central portion of the floor plate. I recommend ongoing review of the internal environmental conditions with the view to supporting the project ambitions for high quality amenity for all areas of the floorplate.

I acknowledge and support the design team's commitment to high quality materiality and detailing of the office facade in response to specific environmental conditions and the recognition of the significance of this development for the precinct. I strongly support the project team's ambitions to deliver a 5-star Green Star Design and As-built development in addition to a 5-star NABERS Energy rating. I acknowledge the design intent for the density of the facade shading fins to feather and dissolve towards the top of the building. I recommend ongoing modelling and testing of the facade's performance, including clear glass specification, proportion of solid to void, and distribution and depth of integral shading fins to ensure delivery of the project's Ecologically Sustainable Design ambitions, while maintaining amenity and outlook from the office levels, and reducing reliance on glazing performance to address solar loads. I strongly support the inclusion of curved glass sections within the facade that define the northern edge of the vertical recess. In my view, the curved glass assists with softening the upper built form in addition to reinforcing and reflecting the architectural language of the key entrance below. I anticipate further development of the materiality of the soffits, curved glass components and curtain wall system, and the rooftop plant services screening strategy will be undertaken in the next phase of design development. Delivery of the architectural expression and high quality materiality presented will be critical to my ongoing support for this proposal.

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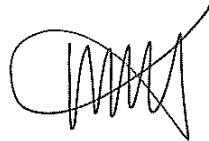
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Ref No:  
16251017

To ensure the most successful design outcome is achieved the State Commission Assessment Panel may like to consider particular aspects of the project that would benefit from further review, conditions or reserved matters to protect the following elements of the proposal, as design details are produced in due course:

- Final samples of selected materials.
- Detailing of the curved stone components of the King William Street entrance.
- Review of the fenestration proportions of the three storey podium element to reflect the vertical proportions of the State heritage listed facade.
- Detailing of the interface and new interior works to the State heritage listed facade including the new glazed doors and interior finishes behind the retained facade.
- Detailing of the curved glass curtain wall system for the office building.
- Review of opportunities to increase the depth of the roof terrace to maximise usability.

Yours sincerely



Kirsteen Mackay  
South Australian Government Architect

cc:

Damian Dawson	Assessment Planner	<a href="mailto:damian@planningchambers.com.au">damian@planningchambers.com.au</a>
Belinda Chan	ODASA, AGD	<a href="mailto:belinda.chan@sa.gov.au">belinda.chan@sa.gov.au</a>

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Government  
of South Australia



Government of South Australia

Department for Environment  
and Water

**Heritage South Australia**

Environment, Heritage and  
Sustainability Division

81-95 Waymouth Street  
Adelaide SA 5000

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Adelaide SA 5001  
Australia  
DX138

Ph: +61 8 8124 4922  
Fax: +61 8 8124 4980

[www.environment.sa.gov.au](http://www.environment.sa.gov.au)

Ref: SH/10844D  
Date: 2 November 2020

Secretary  
State Commission Assessment Panel  
GPO Box 1815  
ADELAIDE SA 5001  
Attention: Gabrielle McMahon

Dear Ms McMahon

**DESCRIPTION: DEMOLITION OF EXISTING BUILDINGS AND THE CONSTRUCTION OF A 15-STOREY MIXED-USE RETAIL AND OFFICE BUILDING INCLUDING RETENTION OF STATE HERITAGE PLACE – SANDS AND MCDUGALL BUILDING FAÇADE – 52-68 KING WILLIAM STREET & 23-27 JAMES PLACE, ADELAIDE**

Application number: 020/A143/20  
Referral received: 29/10/2020  
State heritage place: SH/26502—Frontage of Shop (former Sands & McDougall Building), 64 King William Street ADELAIDE  
SH/10858—Edmund Wright House (former Bank of South Australia Head Office, later Union Bank, then ANZ Bank), 59 King William Street ADELAIDE  
SH/11704—Executor Trustee Office, 22 Grenfell Street ADELAIDE  
SH/11637—Mayfair Hotel, CML (Colonial Mutual Life Assurance Society Ltd) Building, 41-49 King William Street ADELAIDE  
SH/13105—Tattersalls Building, 10-14 Grenfell Street ADELAIDE  
SH/13371—Waterhouse Chambers Offices, 42-46 King William Street ADELAIDE  
SH/13592—Office (former Alliance Assurance Company Building), 18 Grenfell Street ADELAIDE  
SH/14099—Ferrari House (former Eagle Star Insurance Building), 28-30 Grenfell Street ADELAIDE  
Documentation: As referred, plus further information received by email 30/10/2020

The above application has been referred to the Minister for Environment and Water in accordance with Section 37 of the *Development Act 1993* as development that directly affects a State heritage place or, in the opinion of the relevant authority, materially affects the context within which a State heritage place is situated.

The subject application directly affects the Sands and McDougall building (SH/26502). The façade and awning are to be retained, conserved and incorporated into the new development, and the remainder of the building is to be demolished.

Not directly affected, but within the immediate vicinity of the subject site, are Edmund Wright House directly opposite and the Mayfair Hotel (former CML building) to its north; Waterhouse Chambers on the King William Street/Rundle Mall corner; and four State heritage places to the south of the subject site on Grenfell Street (the Tattersalls building, the former Alliance Assurance building, the Executor Trustee building and the former Eagle Star Insurance building).

The *Planning Report* (Future Urban, October 2020) refers to a heritage assessment prepared by heritage consultants Lovell Chen of the Sands and McDougall building as a local heritage place (prior to being provisionally entered in the South Australian Heritage Register as a State heritage place).

The Lovell Chen assessment formed the view that:

- *The heritage value of the building derives from its historical associations in both its original and modified forms, and the role of the [Art Deco] façade as an architectural exemplar.*
- *Beyond the façade, the building has more limited significance.*

It also notes that:

*The building has undergone several modifications, including changes to the shopfront in 1963 and 1964, modifications to the northern exterior wall following demolition of the adjacent building in 1964, and interior alterations in 1982. The most significant change occurred with the installation of the new 'incongruous' shop front in 1987 with some loss to historic fabric.*

In considering the building against the State heritage criteria of the *Heritage Places Act 1993*, the South Australian Heritage Council resolved in August 2020 to provisionally enter the property in the South Australian Heritage Register as a State heritage place, identifying the fabric of heritage significance as the Art Deco façade and awning as indicated below.

## SITE PLAN

**Frontage of Shop (former Sands & McDougall Building)  
64 King William Street, Adelaide**

**PLACE NO.: 26502**



Frontage of Shop (former Sands & McDougall Building) CT 5686/236 D50156 A22

- The extent of listing is CT 5686/236 D50156 A22 and the portion of the footpath encompassed by the awning.
- The significant components of the SHP include the Art Deco façade and awning.

N ↑

### LEGEND

- Parcel boundaries (Indicates extent of Listing)
- Outline of Elements of Significance for State Heritage Place

### **Statement of State heritage significance – former Sands and McDougall building**

*The former Sands & McDougall building façade is an outstanding and early example of Art Deco architecture in South Australia. The façade is highly intact and demonstrates many of the key attributes of the style, including vertical form; concentration of ornamentation at the top of the building; and stylised decorations made from coloured-pressed Portland cement, copper panels, and metal grilles to the upper storey windows. The Art Deco remodelling of the façade transformed the nineteenth century classical building, eschewing the past and expressing optimism for the future.*

The Sands & McDougall Building is a nineteenth century, three-storey, concrete-rendered brick building, with shop-front at ground level and an Art Deco façade and awning applied to the first and second stories of the front of the building. The Art Deco façade features rich-cream-coloured Portland cement, pressed Portland cement and copper decorations. In some instances, grey colouring has been applied to the decorative elements of the façade.

The Art Deco façade features many of the key elements that define the style including symmetrical arrangement, the concentration of ornament on the upper part of the façade and pilasters and fluted spandrels to create vertical emphasis. Specific attributes of the façade are as follows.

- Multi-paned, metal-framed windows to the first and second floors with pressed-cement band above the second-storey windows, fluted spandrels between the first and second-storey windows, decorative-metal grilles in a geometric design applied to the top of the second-floor windows; decorative copper ledges beneath second floor windows; and copper friezes beneath the rondel and first floor windows, all in a stylised geometric zig zag (chevron) and fan design.
- Pilasters to the sides of the façade, with pressed cement capitals featuring rectangular decorations in copper in a stylised geometric and frond design.
- Stylised lettering 'Sands and McDougall Pty Ltd' features at the top of the façade and 'Printers Stationers' below the first-storey windows.
- The parapet features a rounded pediment, central bas-relief rondel with a figure of a rearing horse, and three acroterions with stylised-shell design, one at the top of parapet and one either side of it with pressed-cement fluting in a semi-radiant pattern.
- Metal verandah canopy or awning attached to the building with metal tie rods.

The final drawing set (Cox Architecture, 31 sheets, Revision B dated 29/10/2020) generally reflects the heritage matters discussed during pre-lodgement, but it is recommended that a number of matters should be clarified and confirmed preferably prior to planning consent or otherwise as reserved matters, as follows.

- a) Demolition drawing DA-15-02 West Elevation shows the first and second floor windows being removed. The steel-framed windows and associated wrought iron grilles are an intrinsic component of heritage significance, and their removal is not supported. Re-glazing the original frames may be acceptable subject to further investigation of the existing glass and proposed replacement, and the ability of the sashes to accommodate replacement glass.
- b) Demolition drawing DA-15-02 West Elevation also shows the removal of all below-canopy fabric. Although the existing 1987 shopfront is of no heritage significance, the demolition of other fabric to the sides and above should be informed by first stripping back later facings to determine the extent of significant fabric remaining. Refer to the attached drawing extracts calling for marble facings to be applied as part of the 1933 upgrade. It is recommended that the final extent of below-canopy demolition should be determined once the potential heritage value of any extant underlying fabric has been confirmed.
- c) Level 2 plan DA-21-06 defines a rectangular zone behind the retained heritage façade. In the absence of any notation or cross-section, it is unclear what this zone signifies. From pre-lodgement discussions, it is understood that the Level 2 floor slab will incorporate a localised set-down to the original Sands and McDougall second floor level to enable a meaningful engagement with the retained façade at this level. Based on the dimensioned levels from

the original architectural drawing and the current drawing set, it is estimated that this set-down would be in the vicinity of 1.6 metres. It is therefore recommended that this detail should be satisfactorily resolved prior to planning consent or development approval.

- d) Level 3 plan DA-21-07 shows shallow parapet returns for the retained façade of approximately 500mm in depth. The pre-lodgement 'Heritage Update' set dated 23/10/2020 shows raked returns of 2 metres in depth, in approximation of the existing 1933 return profile and depth. It is recommended that the profile and depth of the returns should be confirmed in accordance with the 23/10/2020 drawings prior to planning consent or development approval, in order to adequately present the façade as a three-dimensional object in the streetscape.

Subject to the recommendation set out below, the proposed development is considered to be acceptable in relation to the above State heritage place for the following reason/s.

- The fabric of heritage value (Art Deco façade and canopy) is to be retained and conserved.
- The southern podium height responds to and reinforces the height of the retained facade. The form, modulation and materiality of the podium is sympathetic to the scale, articulation and materiality of the Sands and McDougall façade without replication of historic detail. The setback of the tower and increased setback at the third floor level allow the retained façade to maintain its streetscape presence and legibility with an adequate sense of space above its parapet.
- The inclusion of parapet returns approximating the profile and depth of the existing allows the façade a suitably three-dimensional presence in the streetscape. This is assisted by the recessed podium junctions to either side of the façade. The proposal to carry the existing pilaster profile down to the pavement level will successfully ground the façade, although this differs from the original design and it is suggested that other options might be considered. The inset of the new shopfront adds to the three-dimensional presentation of the façade and is a reasonable compromise between the conflicting qualities of the Art Deco era shopfront—which was retained in its earlier Victorian form of a deeply-recessed central door flanked by display cases (refer to attached drawing detail) and therefore had no Art Deco design relevance.
- The height, form and scale of the proposed development will significantly alter the built form of the locality, but is not considered to appreciably impact the townscape context of other State heritage places in the vicinity. The immediate streetscape context of Edmund Wright House and the former CML building on the opposite side of King William Street will not be directly affected. Waterhouse Chambers on the Rundle Mall corner is separated from the subject development by Clarence Place and the former Singapore Airlines building, and its scale is reinforced by the two-storey height of the northern podium. For the four State heritage places along Grenfell Street, the tower will form a prominent but relatively neutral backdrop, set well back with no direct impact on their streetscape presence.
- Internally, the deep portal and spatial demarcation associated with the Sands and McDougall façade give it a sense of prominence, place and identity, assisted by the intended function of this zone as a dedicated seating/meeting/waiting area separating the two foyer zones. The bulkhead over the recessed entrance fenestration will allow the existing Sands and McDougall building's ground floor ceiling and first floor levels to be represented.
- At the second floor level, the intended localised set-down to the existing Sands and McDougall second floor level will provide a meaningful engagement with the façade by defining a dedicated internal zone associated with the building's exterior and allowing users to experience the windows at the correct height relationship. Within the foyer, the set-down should also allow the existing first floor ceiling level to be interpreted.

## Recommendation

**A. With reference to the discussion above, the following matters should be resolved to the satisfaction of the State Commission Assessment Panel prior to planning consent, or reserved for further consideration prior to development approval, in consultation with Heritage South Australia (Department for Environment and Water).**

- 1. The retention and conservation of the existing steel-framed windows at first and second floor levels and their associated decorative metalwork.**
- 2. The extent of any remnant below-canopy heritage fabric concealed behind later facings.**
- 3. The form, dimensions and detail of localised set-down in the second floor slab to the existing original second floor level of the Sands and McDougall building.**
- 4. The profile and depth of parapet returns to the Sands and McDougall façade.**

**B. The following condition/s should be incorporated into any consent or approval.**

**Condition 1: A schedule of conservation works to the heritage fabric shall be prepared and the works documented in consultation with Heritage South Australia (Department for Environment and Water), to the satisfaction of the relevant planning authority. Consideration should be given to lighting the heritage façade.**

*Reason for condition: The application confirms the inclusion of conservation works as part of the project but lacks detail of the works. Conservation of heritage fabric should be carried out using appropriate materials, methods, finishes and workmanship.*

**Condition 2: In the detailed design of the foyer portal to the Sands and McDougall facade, the existing original floor and ceiling levels shall be represented. Material expression and finishes for the portal, the internal face of the façade and the floor of the demarcated seating zone shall be determined to the satisfaction of the relevant planning authority in consultation with Heritage South Australia.**

*Reason for condition: To assist a meaningful internal engagement with the retained facade.*

**Condition 3: The articulation and modulation of fenestration to the three-storey podium portals shall be developed to the satisfaction of the relevant planning authority in consultation with Heritage South Australia and the Government Architect.**

*Reason for condition: To better respond to the vertical proportions of the Art Deco façade.*

**Condition 4: The below-canopy design including the new shopfront infill, its flanking structure and reveals shall be developed to the satisfaction of the relevant planning authority in consultation with Heritage South Australia and the Government Architect.**

*Reason for condition: The proposed continuation of the above-canopy pilasters, although convincingly grounding the façade above, does not represent the original 1930s design, and other options should be explored to determine the optimum approach. The below-canopy design and materiality should be stylistically compatible with the Art Deco façade without adopting Art Deco detailing..*

**Condition 5: A strategy and work method statement for support, stabilisation and protection of the Sands and McDougall façade and canopy during the construction-phase and for the demolition of the balance of the building shall be developed and documented to the satisfaction of the relevant planning authority in consultation with Heritage South Australia. The permanent support strategy for the façade and canopy shall likewise be developed and documented to the satisfaction of the relevant planning authority in consultation with Heritage South Australia.**

*Reason for condition: Information not yet available to ensure a successful outcome.*



### General notes

1. Any changes to the proposal for which planning consent is sought or granted may give rise to heritage impacts requiring further consultation with the Department for Environment and Water, or an additional referral to the Minister for Environment and Water. Such changes would include for example (a) an application to vary the planning consent, or (b) Building Rules documentation that incorporates differences from the proposal as documented in the planning application.
2. To ensure a satisfactory heritage outcome, the relevant planning authority is requested to consult the Department for Environment and Water in finalising any conditions or reserved matters above.
3. In accordance with Regulation 43 of the *Development Regulations 2008*, please send the Department for Environment and Water a copy of the Decision Notification.
4. The relevant planning authority is requested to inform the applicant of the following requirements of the *Heritage Places Act 1993*.
  - (a) If an archaeological artefact believed to be of heritage significance is encountered during excavation works, disturbance in the vicinity shall cease and the SA Heritage Council shall be notified.
  - (b) Where it is known in advance (or there is reasonable cause to suspect) that significant archaeological artefacts may be encountered, a permit is required prior to commencing excavation works.

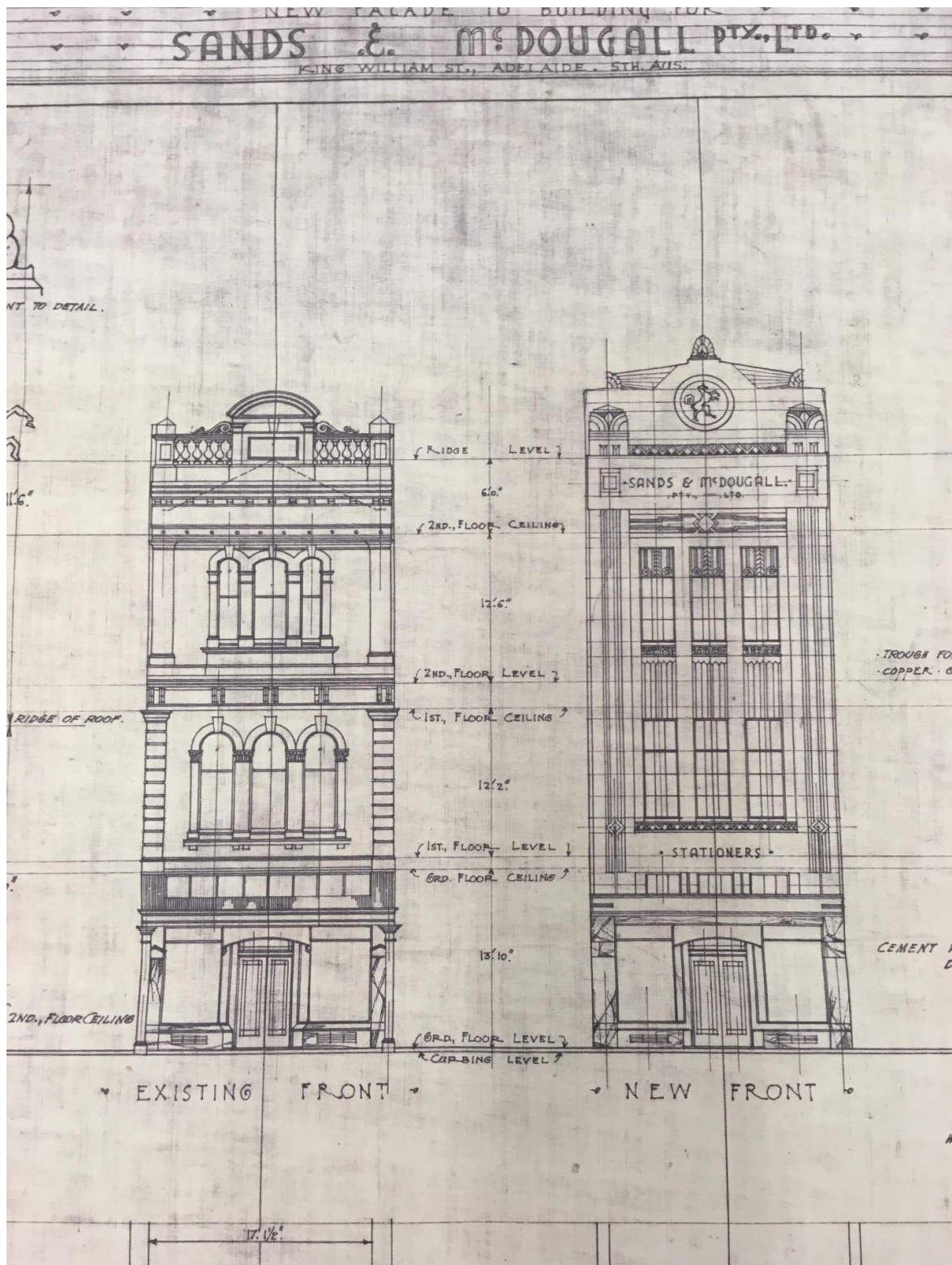
For further information, contact the Department for Environment and Water.
5. The relevant planning authority is requested to inform the applicant of the following requirements of the *Aboriginal Heritage Act 1988*.
  - (a) If Aboriginal sites, objects or remains are discovered during excavation works, the Aboriginal Heritage Branch of the Aboriginal Affairs and Reconciliation Division of the Department of the Premier and Cabinet (as delegate of the Minister) should be notified under Section 20 of the *Aboriginal Heritage Act 1988*.

For any enquiries in relation to this application, I can be contacted on telephone 8124 4935 or e-mail [peter.wells@sa.gov.au](mailto:peter.wells@sa.gov.au).

Yours sincerely

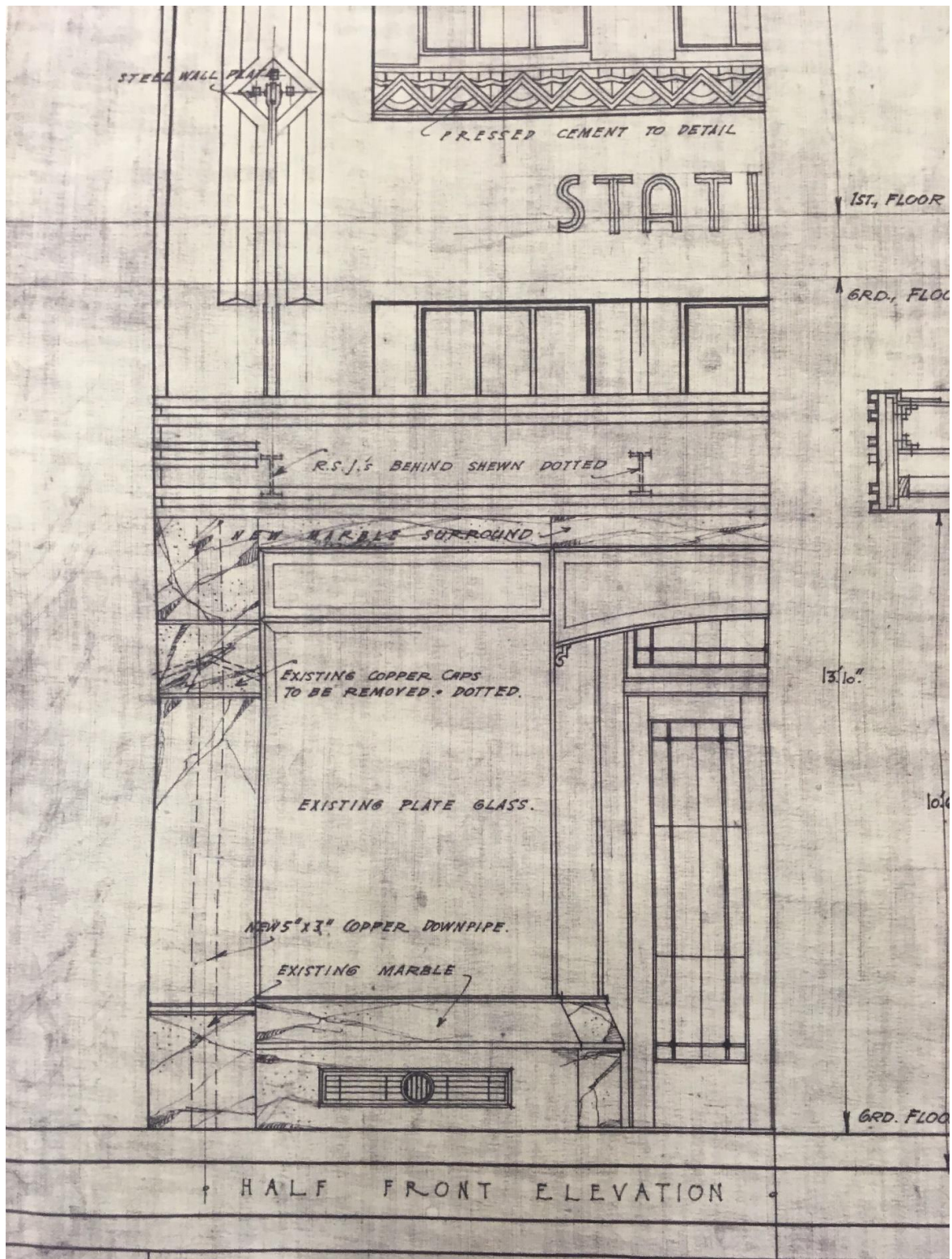


Peter Wells  
**Principal Conservation Architect**  
 DEPARTMENT FOR ENVIRONMENT AND WATER  
 as delegate of the  
**MINISTER FOR ENVIRONMENT AND WATER**

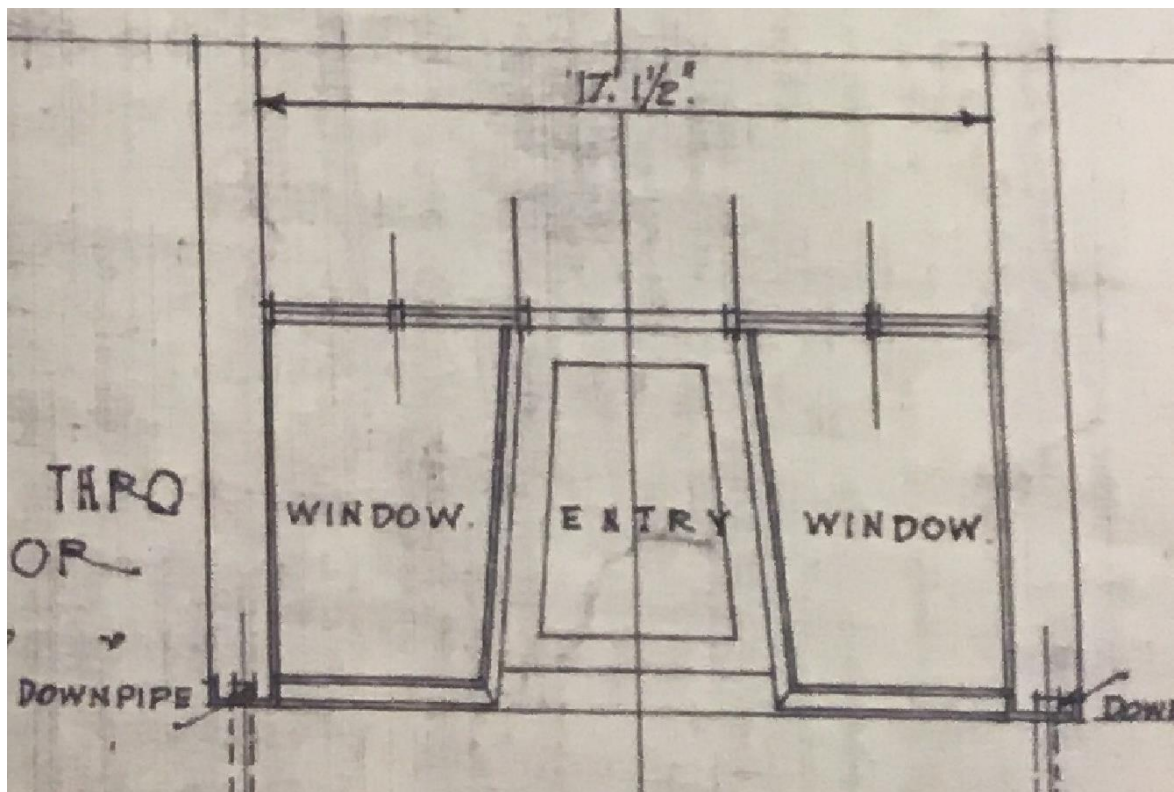


Extract from Claridge/Bruer/Fisher architectural drawing showing original 1881-82 façade and proposed Art Deco façade – note retention of earlier shopfront





Detail from Claridge/Bruer/Fisher architectural drawing showing redressing of shopfront margins with new marble facings



Detail from Claridge/Bruer/Fisher architectural drawing showing format of earlier shopfront retained in the 1933 Art Deco scheme

**Enquiries:** Edouard Pool 8203 7771  
**CoA Ref:** S10/52/2020  
**SCAP Ref:** 020/A143/20

5 November 2020

State Commission Assessment Panel  
GPO Box 1815  
Adelaide SA 5001

**Attention: State Commission Assessment Panel**

Dear Sir/Madam

**Application:** S10/52/2020  
**Applicant:** BIESON P/L  
**Address:** 52-64 KING WILLIAM STREET, ADELAIDE SA 5000  
**Description:** DEMOLITION OF ALL EXISTING BUILDING AND CONSTRUCT A 15 STOREY MIXED USE RETAIL AND OFFICE BUILDING

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

**ROADS /  
FOOTPATHS  
ENGINEERING**

1. There is a major footpath zones along James Place and King William Street, these will need to be maintained such to enable pedestrian movement through the development.
2. There are also several bus stops on King William street in the locality of the development where access will need to be maintained throughout the development.

**TORRENS &  
STORM WATER**

1. Stormwater runoff from the proposed development must be contained within the property boundaries, collected and discharged to King William Street using a single underground stormwater property connection into the existing City of Adelaide 1,050mm diameter stormwater pipe within the eastern footpath of King William Street.
2. A final stormwater management plan is to be approved in writing by the City of Adelaide's Technical Services Team.

**LIGHTING /  
ELECTRICAL /  
CCTV**

1. Canopies shall incorporate lighting to meet the City of Adelaide's under verandah/awning lighting requirements.
2. The proposed development works may impact on the public lighting within the proximity of the development site. The existing street lighting on King William Street is owned and maintained by the City of Adelaide including a street light in front of the building and the applicant must address any impact caused by the development.
3. The lighting in James Place is also owned and maintained by Council and is wall mounted but installed on the western side of the street. Council seeks discussion regarding maintenance of public lighting mounted upon the proposed building.



## **TRAFFIC / TRANSPORT**

1. The traffic report does not provide a total volume for Imperial Place post development, but states that the proposed car parking would operate similarly to the existing in terms of vehicle trip generation. Based on this the current car park (if we assume the maximum stated number of 20 spaces are in use) generates a total of 55 vehicle movements per day. A survey recorded a 12-hour traffic volume of 180 vehicle movements per day. This indicates that 125 vehicle movements per day are currently generated from adjacent sites using Imperial Place. The report estimates that the proposed development will generate 185 vehicle movements per day. This will result in a total traffic volume of 310 vehicles per day on Imperial Place, which represents a 70% increase on current volumes.
2. Traffic control measures are recommended to appropriately control traffic on Imperial Place but are not described in the report. "In order to manage the additional movements within the site, traffic control measures will be implemented to avoid the risk of conflicting movements within the single lane section of Imperial Place. Where practical, priority will be given to entering vehicles to minimise the risk of any queuing or waiting traffic impacting Grenfell Street footpath and roadway." Details of the proposed management systems are required to ascertain whether a safe operating system can be achieved.
3. The traffic report estimates 40 vehicles on a peak waste day accessing the loading dock for waste and loading. It is recommended that a loading dock booking system to be used to coordinate safe and efficient delivery access and assist with provisions surrounding maximum truck sizes. This would also reduce unwanted truck access, allow records of truck access to be maintained and unlock the possibility of permitting adjacent businesses to hire time within the loading dock for smaller deliveries in the future, should this be considered desirable for the operators.
4. The car parks must be reserved for staff parking. The traffic report's design review and traffic generation are based on use for staff only.
5. Any proposal for new bicycle rails within the public realm will need to be negotiated separately with council and paid for by the applicant. The closest proposed bicycle parking rail to the mail box would not meet clearance requirements.
6. Swept path modelling for the loading docks only includes vehicles up to the size of an 8.8m rigid vehicle. The waste report confirms that waste vehicles conforming to this size constraint can be used. All other users of the loading dock must be restricted to a maximum vehicle size of 8.8m.
7. Swept paths for the access ramp do not include the minimum clearance envelopes and appear to strike walls. Amendments to the basement level entrance appear to be required.
8. The bus stop on King William Street must remain at its current location.

## **WASTE**

1. Council is satisfied with the waste management plan provided.
2. The following condition needs to be included in the approval:

The building will not be eligible for City of Adelaide waste collection services. Building management shall hire and fund the services of waste management contractors for all their waste collection and disposal/recycling needs, in accordance with the waste management plan submitted with the application.



## PLANNING RELATED COMMENTS

Council Administration has not undertaken a thorough planning assessment of the proposal but makes the following comments in relation to the proposed development:

<b>PLANNING</b>	<ol style="list-style-type: none"><li>1. The proposal includes an increase in car parking from the current 16-20 spaces to 40 spaces (an effective doubling), which does not satisfy Council Wide Principle of Development Control 245 below:  <i>"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."</i>  The increase in traffic movements through Imperial Place will increase pedestrian conflict on Grenfell Street and potentially impact on traffic movements.</li></ol>
<b>ACTIVE STREET FRONTAGES</b>	<ol style="list-style-type: none"><li>1. Windows to Clarence Place (at ground and first floor levels) and James Place to remain clear to provide surveillance into the public realm.</li><li>2. Separate consent will be required for future under canopy signs and for high level building name signs.</li></ol>
<b>ENCROACHMENTS</b>	<ol style="list-style-type: none"><li>1. New canopies over King William Street satisfy Council's Encroachment Policy, being 4.7m above footpath level and setback from the kerb.</li><li>2. The fire booster doors to Clarence Place encroach approximately 15 centimetres. This is minor as the extent of encroachment is small, opening will be highly infrequent and Clarence Place has extremely low vehicle and pedestrian movements. The delegate accepts the minor variation from the Encroachment Policy.</li></ol>
<b>HERITAGE</b>	<ol style="list-style-type: none"><li>1. The retained heritage façade is not integrated into the office foyer space. This is a significant missed opportunity.</li><li>2. Planning Report section 7.3 refers to "replacement of windows" but detail is not provided. The windows are a significant component of the retained facade and it is recommended that the windows be repaired not replaced.</li><li>3. Further information regarding the proposed structural stabilisation for the facade is needed in order to assess the impact upon the significant building fabric.</li></ol>
<b>SAFER CITY</b>	<ol style="list-style-type: none"><li>1. Seek that the developer makes an agreement with the Rundle Mall businesses that adjoin Clarence Place to ensure that they have a plan in place to jointly manage waste both during the build and once completed.</li><li>2. Ensure that the lighting for Clarence Place, James Place and King William Streets at street level are included in the redevelopment providing under veranda lighting in each area.</li></ol>

## SUGGESTED CONDITIONS

**The finished floor level of the ground floor level at the entry point to the development shall match the existing footpath unless otherwise agreed to by the Council in writing.**

**Reason:** *To ensure public footpaths remain level and as such pedestrian safety and amenity is not compromised.*

**The connection of any storm water discharge from the Land to any part of the Council's underground drainage system shall be undertaken in accordance with the City of Adelaide City Works Guide # 2: 'Works Impacting Council Assets' which can be located on Council's website <https://www.cityofadelaide.com.au/> and shall be to the reasonable satisfaction of the Council.**

**Reason:** *To ensure that adequate provision is made for the collection and dispersal of stormwater.*

**The applicant or the person having the benefit of this consent shall ensure that all storm water run off from the development herein approved is collected and then discharged to the storm water discharge system. All down pipes affixed to the Development which are required to discharge the storm water run off shall be installed within the property boundaries of the Land to the reasonable satisfaction of the Council.**

**Reason:** *To ensure that stormwater runoff does not have an adverse impact upon the public realm.*

**All outdoor lighting on the Land shall be in accordance with Australian Standard AS 4282 - 2019. The applicant or the person(s) having the benefit of this consent shall submit to the Council a detailed outdoor lighting plan prior to the granting of development approval to the Development. Such lighting plan shall be to the reasonable satisfaction of the Council.**

**Reason:** *To ensure a safe level of lighting is provided on the Land.*

**The building will not be eligible for City of Adelaide waste collection services. Building management shall hire and fund the services of waste management contractors for all their waste collection and disposal/recycling needs, in accordance with the waste management plan submitted with the application.**

**Reason:** *To ensure that waste generated by the Development is efficiently removed from the land.*

**Ancillary activities such as deliveries, collection, movement of private waste bins, goods, empty bottles and the like shall occur before 10.00 pm and after 7.00 am Monday to Saturday or after 9.00 am on a Sunday or Public Holiday.**

**Reason:** *To ensure that the Development does not unduly diminish the enjoyment of other land in the locality.*

## SUGGESTED ADVICES

### External Signs

This consent does not include signage for which a separate application must be submitted.

### Building Site Management Plan

A Building Site Management Plan is required prior to construction work beginning on site. The Building Site Management Plan should include details of such items as:

- Work in the Public Realm
- Street Occupation
- Hoarding
- Site Amenities
- Traffic Requirements
- Servicing Site
- Adjoining Buildings
- Reinstatement of Infrastructure

### Site Theft

Unsecured building sites have been identified as a soft target for vandalism and theft of general building materials. The Eastern District Police and the City of Adelaide are working together to help improve security at building sites. Items most commonly stolen or damaged are tools, water heaters, copper piping and white goods. To minimise the risk of theft and damage, consider co-ordinating the delivery and installation of the goods on the same day. Work with your builder to secure the site with a fence and lockable gate. Securing the site is essential to prevent unauthorised access and establishes clear ownership.

### Works Adjacent Existing Street Trees

In relation to street trees, the proposal shall meet the following requirements:

- The proposed verandah shall be designed to ensure that a minimum clearance of 600mm is maintained between the structure and the nearest significant limb of the street tree.
- Site works shall be affected in such a manner so as not to damage the existing street tree.
- The sewerage serving the development shall be laid out and designed in such a manner which ensures retention of the existing street tree notwithstanding the requirements of the Regulations under the Sewerage Act, 1929.
- The street tree(s) will not be removed. Any pruning of the tree(s), necessary to maintain the clearance between the tree(s) and the verandah/development, shall only be carried out by Council.

### Damage to Council's Footpath / Kerbing / Road Pavement / Verge

Section 779 of the Local Government Act provides that where damage to Council footpath / kerbing / road pavement / verge occurs as a result of the development, the owner / applicant shall be responsible for the cost of Council repairing the damage.

### City Works Permit

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.

The City Works Guidelines detailing the requirements for various activities, a complete list of fees and charges and an application form can all be found on Council's website at [www.cityofadelaide.com.au](http://www.cityofadelaide.com.au)

When applying for a City Works Permit you will be required to supply the following information with the completed application form:

- A Traffic Management Plan (a map which details the location of the works, street, property line, hoarding/mesh, lighting, pedestrian signs, spotters, distances etc.);
- Description of equipment to be used;
- A copy of your Public Liability Insurance Certificate (minimum cover of \$20 Million required);
- Copies of consultation with any affected stakeholders including businesses or residents.

**Please note:** Upfront payment is required for all city works applications.

Applications can be lodged via the following:

Email: [cityworks@cityofadelaide.com.au](mailto:cityworks@cityofadelaide.com.au)  
In Person: 25 Pirie Street, Adelaide

If you have any enquiries, please contact Edouard Pool on the contact details above.

Yours faithfully

A handwritten signature in black ink, appearing to read 'E. Pool', with a stylized flourish at the end.

For Rebecca Rutschack  
**MANAGER - PLANNING ASSESSMENT**

## **APPENDIX A: Technical Comments**

### **Infrastructure Assets**

#### Roads/Footpaths - Engineering Related Comments

There are no roads/footpath/bridges related objections to this development.

#### General Notes

1. Any damage caused to CoA's road, footpath and kerbing infrastructure during development will be the responsibility of the developer to rectify to a standard that equals or improves the pre development condition.
2. Extent of make-good works to be agreed on site between City of Adelaide and contractor, then formally submit via email for CoA to accept, prior to works commencing.
3. CoA will inspect the works after completion for standards and specification compliance. Any non-compliance will need to be rectified at the developers costs to Councils' satisfaction.
4. Existing boundary (back of path) levels must not be modified. Finished floor levels and entry point levels must be based around retaining the existing back of path levels.
5. Footpath reinstatements associated with works will need to match surrounding materials and pavement composition.

If crossovers are proposed or impacted :

1. All new or alterations to existing crossovers firstly require CoA approval outside of the DA process. These need to be to CoA's standards and specifications via the City Works Guidelines.

Public Realm Modifications/Upgrades :

1. No works in the public realm can be undertaken, without landlord approval from CoA. This will require the developer to submit a detailed design, in accordance with CoA electronic drafting guidelines, by a suitably qualified civil engineering consultancy to ensure the proposed works satisfy CoA design and engineering standards (i.e. cross-fall, longitudinal grade, surface material, pavement details and specification, storm water). Landlord approval will be provided via formal written approval from City of Adelaide. The developer/designer must engage CoA upfront and have a start up meeting prior to commencing detailed design.

#### Torrens & Storm Water Related Comments

There are no storm water related objections to this development, subject to the following matter/s being addressed:

3. Stormwater runoff from the proposed development must be contained within the property boundaries, collected and discharged to King William Street using a single underground stormwater property connection into the existing CoA 1,050mm diameter stormwater pipe within the eastern footpath of King William Street.
4. Final stormwater management plan to be approved in writing by CoA's Technical Services Team
5. All checker plate discharge points made redundant by the development are to be removed and reinstated with footpath (refer requirements above for footpath reinstatement/make good requirements).
6. The levels of any proposed grated inlet pits or stormwater openings within the building must be designed with an adequate freeboard to the 1% AEP flood level assumed to be top of kerb level adjacent to the stormwater discharge point in the adjacent street.
7. Design of the any proposed Public Road stormwater management arrangements must meet Council service level standards for 5% AEP surface flows and 1% AEP flood level protection to the roadway boundaries ensuring minimum 1% AEP flood level freeboard of 50 mm.
8. Councils stormwater management systems (minor and major rainfall events) have been designed to manage gravitational flows only. Any proposed siphonic roof drainage systems must be designed to

attenuate discharge flows to Councils stormwater management systems to equivalent gravitational flows.

9. Property boundary levels of the proposed basement carpark driveway ramp must provide an adequate freeboard to the 1% AEP flood level, assumed to be equivalent to either:
  - a. the top of kerb level adjacent to the driveway ramp or;
  - b. 100mm above spoon drain invert
  - c. in the adjacent street, to ensure adequate flooding protection to the basement.
10. Any collected irrigation seepage water from landscape areas, green walls, planter boxes or rooftop gardens must be either discharged to sewer or an irrigation recycled water reuse system. Collected seepage water should not be discharged to the building stormwater system. "Seepage" water does not include stormwater runoff from landscaped areas which can be discharged to the property stormwater system.
11. Council supports the capture, storage and reuse of stormwater runoff for irrigation of landscaped elements and toilet flushing throughout the building.
12. All new developments must maintain existing property boundary levels and utilise the existing boundary levels when determining stormwater performance. Modifications (raising or lowering) of the back of footpath levels (existing property boundary levels) will increase the risk that stormwater will flood properties. Special written permission must be obtained from CoA to alter back of footpath levels, prior to changing levels.
13. Water from testing or flushing from fire system is to be directed into CoA's underground stormwater system. Discharge onto the road surface is not permitted. The water to be discharged is to comply with EPA water quality requirements for discharge into the stormwater system. Fire systems are to be designed and constructed to enable tested or flushed outside of storm events, as this will negatively impact the ability for the stormwater system to adequately manage flooding.
14. Management of groundwater dewatering to be in accordance with EPA Waste Management Hierarchy and EPA's guidelines.

#### Lighting / Electrical/CCTV Related Comments

There are no lighting related objections to this development, subject to the following matter/s being addressed:

1. The proposed development works may impact on the public lighting within the proximity of the development site. The existing street lighting on KWS is owned and maintained by COA, there is a street light in front of the building and may impact the construction of the site. The lighting in James Place is also owned and maintained by CoA and is wall mounted but installed on the western side of the street.
2. All works to be undertaken to be fit for purpose in the public realm.
3. All modifications requiring temporary removal/relocation/provision of temporary lighting/reinstatement of existing Council and/or SA Power Network's public lighting (including associated infrastructure such as cabling etc) shall meet Councils' requirements. The works shall be carried out to meet Councils' requirements and all costs borne directly by the developer.
4. If temporary hoarding or site works require modification of existing Council and/or SA Power Network's public lighting (including associated infrastructure such as cabling etc.) shall meet Councils' requirements. The works shall be carried out to meet Councils' requirements and all costs borne directly by the developer.
5. Obtrusive Lighting – Lighting design and installation to be fully compliant with Australian Standard - AS 4282 – 1997 Control of the obtrusive effects of outdoor lighting. Sign off by consultant required to confirm compliance. In addition, provide relevant lighting calculation grid detailing property boundary lines for Councils review and records.
6. If new canopies are to be constructed as part of these works, then lighting to meet CoA's under veranda/awning lighting requirements shall be installed.



7. Existing underground services shall be identified and marked in the locality prior to undertaking any excavation works.
8. All damage to CoA's infrastructure, including damage to public lighting and u/g ducting etc caused by projects works or loading of site crane onto pathways will be repaired to meet Councils requirements and the cost of the developer.
9. If building mounted lit signage is to be installed onto the building, further review and approvals will be required by City of Adelaide.
10. CCTV camera owned and maintained by City of Adelaide, for any modifications to this asset contact City of Adelaide for further advice on process. SAPOL monitor this camera and will also be required to be consulted with for their approval.
11. All assets to be handed over to CoA to own and maintain shall be constructed to Councils' requirements and applicable legislative standards and requirements. All equipment gifted shall be Councils standards and applicable requirements.

#### Traffic/ Transport

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

1. Swept paths for the access ramp do not include the minimum clearance envelopes and appear to strike walls. Amendments to the basement level entrance appear to be required.
2. The car parks must be reserved for staff parking. The traffic report's design review and traffic generation are based on use for staff only.
3. Any proposal for new bicycle rails within the public realm will need to be negotiated separately with council and paid for by the applicant. The closest proposed bicycle parking rail to the mail box would not meet clearance requirements.
4. Swept path modelling for the loading docks only includes vehicles up to the size of an 8.8m rigid vehicle. The waste report confirms that waste vehicles conforming to this size constraint can be used. All other users of the loading dock must to be restricted to a maximum vehicle size of 8.8m.
5. The bus stop on King William Street must remain at its current location.
6. The traffic report does not provide a total volume for Imperial Place post development, but states that the proposed car parking would operate similarly to the existing in terms of vehicle trip generation. Based on this the current car park (if we assume the maximum stated number of 20 spaces are in use) generates a total of 55 vehicle movements per day. A survey recorded a 12-hour traffic volume of 180 vehicle movements per day. This indicates that 125 vehicle movements per day are currently generated from adjacent sites using Imperial Place. The report estimates that the proposed development will generate 185 vehicle movements per day. This will result in a total traffic volume of 310 vehicles per day on Imperial Place, which represents a 70% increase on current volumes.
7. The traffic report estimates 40 vehicles on a peak waste day accessing the loading dock for waste and loading. It is recommended that a loading dock booking system to be used to coordinate safe and efficient delivery access and assist with provisions surrounding maximum truck sizes. This would also reduce unwanted truck access, allow records of truck access to be maintained and unlock the possibility of permitting adjacent businesses to hire time within the loading dock for smaller deliveries in the future, should this be considered desirable for the operators.
8. Traffic control measures are recommended to appropriately control traffic on Imperial Place but are not described in the report. *"In order to manage the additional movements within the site, traffic control measures will be implemented to avoid the risk of conflicting movements within the single lane section of Imperial Place. Where practical, priority will be given to entering vehicles to minimise the risk of any queuing or waiting traffic impacting Grenfell Street footpath and roadway."* Details of the proposed management systems are required to ascertain whether a safe operating system can be achieved.
9. Concern is raised in terms of the clearance between the King William Street pedestrian-level awning and the roadway. A minimum of 600mm clear from the kerb face of King William Street is required so that the canopy is clear of manoeuvring buses.



## CAPITAL CITY ZONE

### Introduction

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

### DESIRED CHARACTER

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

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

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

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

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

New development will achieve high design quality by being:

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

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

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

### **Adelaide's pattern of streets and squares**

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

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

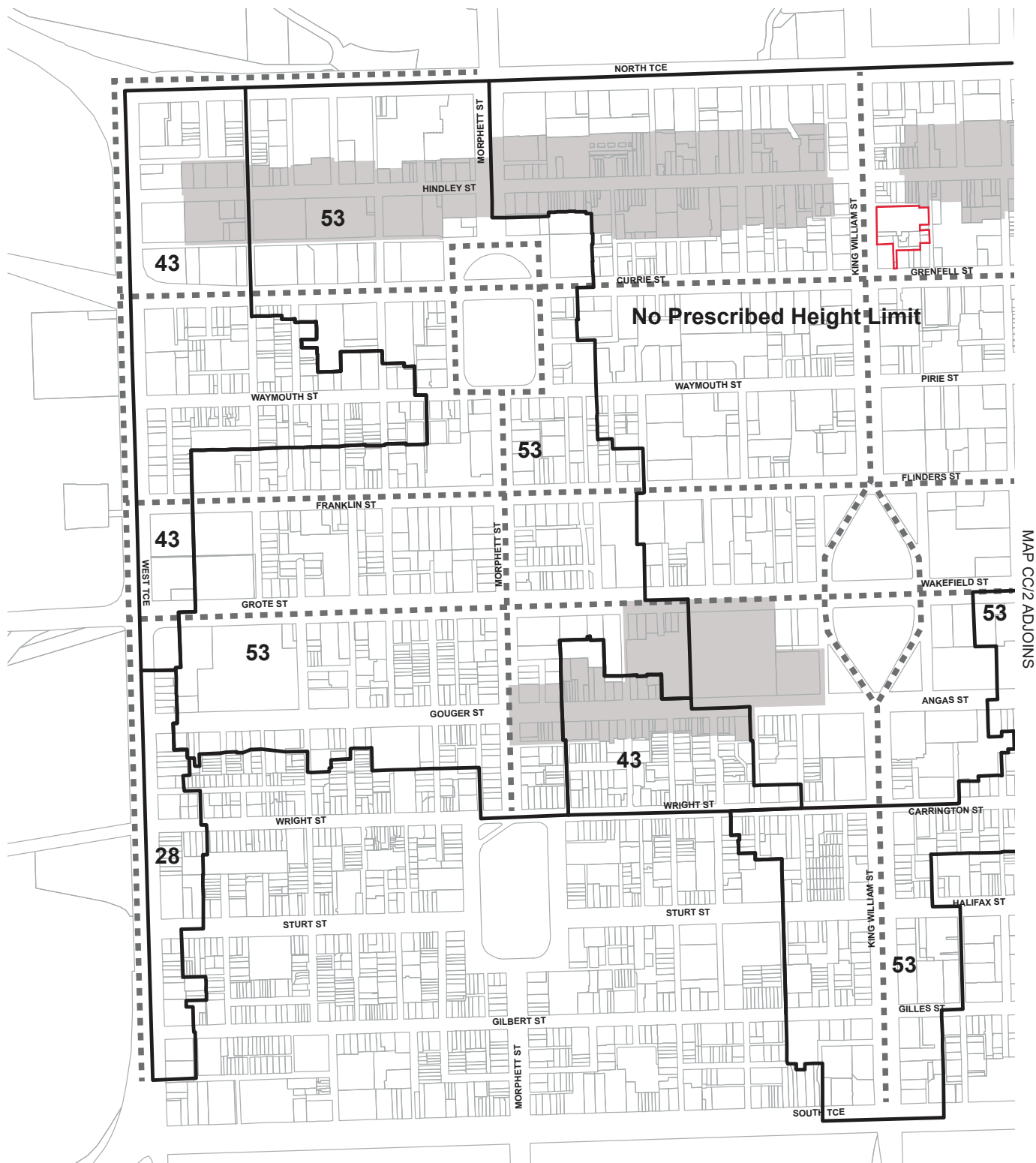
The City's boulevards, terraces and Squares will be developed as follows:

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


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

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


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

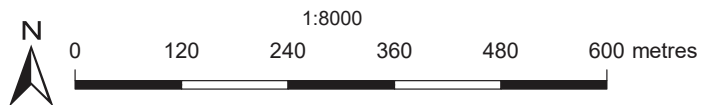


MAP CC/2 ADJOINS

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

 City Boulevards and Terraces

 Policy Areas of a 'Main Street' type



# **ADELAIDE (CITY)** **BUILDING HEIGHTS** **Concept Plan Figure CC/1**

Consolidated - 30 April 2020

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

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

## OBJECTIVES

### General

- Objective 1:** The principal focus for the economic, social and political life of metropolitan Adelaide and the State.
- Objective 2:** A vibrant mix of commercial, retail, professional services, hospitality, entertainment, educational facilities, and medium and high density living.
- Objective 3:** Design and management of City living to ensure the compatibility of residential amenity with the essential commercial and leisure functions of the Zone.
- Objective 4:** City streets that provide a comfortable pedestrian environment.
- Objective 5:** Innovative design approaches and contemporary architecture that respond to a building's context.
- Objective 6:** Buildings that reinforce the gridded layout of Adelaide's streets and respond to the underlying built-form framework of the City.
- Objective 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 through articulation, avoiding any large blank facades, and incorporating design features within blank walls on side boundaries which have the potential to be built out;
  - (c) ensuring lower levels are well integrated with, and contribute to a vibrant public realm; and
  - (d) ensuring any ground and first floor level car parking elements are sleeved by residential or non-residential land uses (such as shops, offices and consulting rooms) to ensure an activated street frontage.
- 8 Buildings should present an attractive pedestrian-oriented frontage that adds interest and vitality to City streets and laneways.
- 9 The finished ground floor level of buildings should be at grade and/or level with the footpath to provide direct pedestrian access and street level activation.
- 10 Providing footpath widths and street tree growth permit, development should contribute to the comfort of pedestrians through the incorporation of verandahs, balconies, awnings and/or canopies that provide pedestrian shelter.
- 11 Buildings should be positioned regularly on the site and built to the street frontage, except where a setback is required to accommodate outdoor dining or provide a contextual response to a heritage place.
- 12 Buildings should be designed to include a podium/street wall height and upper level setback (in the order of 3-6 metres) that:
  - (a) relates to the scale and context of adjoining built form;
  - (b) provides a human scale at street level;
  - (c) creates a well-defined and continuity of frontage;

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

other than (h) or (i):

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

- 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 notwithstanding its height, it positively responds to the context that forms the desired future character of the locality, achieves the desired outcomes of the Zone or Policy Area and the envisaged city form expressed in Concept Plan [Figures CC/1 and 2](#); and
- (a) if the development incorporates the retention, conservation and reuse of a building which is a listed heritage place such that it maintains its heritage values or an existing built form and fabric that contributes positively to the desired character of the local area; or
  - (b) only if:
    - (i) at least four of the following are provided:
      - (1) the development provides an orderly transition up to an existing taller building or prescribed maximum building height in an adjacent Zone, or Policy Area or building height area on Concept Plan [Figures CC/1 and 2](#);
      - (2) high quality open space that is universally accessible and is directly connected to, and well integrated with, public realm areas of the street;
      - (3) high quality, safe and secure, universally accessible pedestrian linkages that connect through the development site to the surrounding pedestrian network
      - (4) higher amenity through provision of private open space in excess of minimum requirements by 25 percent for at least 50 percent of dwellings
      - (5) no on-site carparking;
      - (6) active frontages are located on at least 75 percent of the ground floor street fronts of the building
      - (7) the building has frontage to a public road that abuts the Adelaide Park Lands;
      - (8) at least 15 percent of dwellings are affordable housing;
      - (9) the impact on adjacent properties is no greater than a building of the maximum height on Concept Plan [Figures CC/1 and 2](#) in relation to sunlight access and overlooking; and
    - (ii) the building is designed to provide measures that provides for a substantial additional gain in sustainability.
- 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) or the 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.*



## 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.

## Main Street Policy Area 14

### Introduction

The Objectives and Principles of Development Control that follow apply to the Policy Area as shown on [Maps Adel/48, 49, 50, 51 and 55](#). 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

Main streets provide an important shopping, hospitality and gathering place that are a vital part of the City's identity and image.

- (a) studio: 6 cubic metres
- (b) 1 bedroom dwelling/apartment: 8 cubic metres
- (c) 2 bedroom dwelling/apartment: 10 cubic metres
- (d) 3+ bedroom dwelling/apartment: 12 cubic metres

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

## Environmental

### Crime Prevention Through Urban Design

#### 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.

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

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

- 84** 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.

## **Operating Hours and Associated Activities of Licensed Premises**

### **OBJECTIVE**

**Objective 25:** Operating hours of licensed premises or licensed entertainment premises, together with associated activities of such premises, established and operated so as to reinforce the desired character of the locality and appropriate behavioural activities.

### **PRINCIPLES OF DEVELOPMENT CONTROL**

- 87** Licensed premises and licensed entertainment premises or similar should:
- (a) be located, designed and operated in order to reinforce the desired character of a locality, as expressed in the relevant Zone or Policy Area;
  - (b) be located, designed and operated so as to not negatively impact on peoples orderly use and enjoyment of a locality, such as through disorderly behavioural activities and/or disorderly behavioural movement to and from such land uses; and
  - (c) incorporate best practice measures to effectively manage the behaviour of users moving to and from such land uses.
- 88** Licensed premises and licensed entertainment premises or similar should operate with operating hours to reinforce the desired character of the locality.

## 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.
- 90** Development of licensed premises or licensed entertainment premises or similar in or adjacent to a City Living Zone, the Adelaide Historic (Conservation) Zone or the North Adelaide Historic (Conservation) Zone should include noise attenuation measures to achieve the following when assessed at the nearest existing or envisaged future noise sensitive development:
- (a) the music noise ( $L_{10, 15 \text{ min}}$ ) is:
    - (i) less than 8 dB above the level of background noise<sub>2</sub> ( $L_{90, 15 \text{ min}}$ ) in any octave band of the sound spectrum; and
    - (ii) less than 5 dB(A) above the level of background noise ( $L_{A 90, 15 \text{ min}}$ ) for the overall (sum of all octave bands) A-weighted level.
- 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 ( $L_{10, 15 \text{ min}}$ ) less than 8 dB above the level of background noise ( $L_{90, 15 \text{ min}}$ ) in any octave band of the sound spectrum; and
    - (ii) music noise ( $L_{A 10, 15 \text{ min}}$ ) less than 5 dB(A) above the level of background noise ( $L_{A 90, 15 \text{ min}}$ ) 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 ( $L_{10, 15 \text{ min}}$ ) less than 8dB above the level of background noise ( $L_{90, 15 \text{ min}}$ ) in any octave band of the sound spectrum and music noise ( $L_{10, 15 \text{ min}}$ ) less than 5dB(A) above the level of background noise ( $L_{A 90, 15 \text{ min}}$ ) for the overall (sum of all octave bands) A-weighted levels; or
    - (ii) music noise ( $L_{10, 15 \text{ min}}$ ) less than 60dB(Lin) in any octave band of the sound spectrum and the overall ( $L_{A 10, 15 \text{ min}}$ ) 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'; and
- (c) noise level in any bedroom, when exposed to music noise ( $L_{10}$ ) from existing entertainment premises, being:
  - (i) less than 8 dB above the level of background noise ( $L_{90,15 \text{ min}}$ ) in any octave band of the sound spectrum; and
  - (ii) less than 5 dB(A) above the level of background noise ( $L_{A90,15 \text{ min}}$ ) for the overall (sum of all octave bands) A-weighted levels.

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

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

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

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

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

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

- 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.*

- 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.*

- 100** Development on land affected by aircraft noise exceeding 20 ANEF, as shown on [Map/1 \(Overlay 6\)](#), should be designed, constructed and insulated to minimise the impact of aircraft noise by being built in accordance with the Australian Standard AS2021-2000: 'Acoustics - Aircraft Noise Intrusion - Building Siting and Construction'.

## **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

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\* 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.

- (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.

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

**104.1** *Ventilation equipment built in accordance with Australian Standard 1668.2-2002: 'The Use of Ventilation and Airconditioning in Buildings - Ventilation Design for Indoor Air Contaminant Control'.*

## Contaminated Sites

### OBJECTIVE

**Objective 29:** A safe and healthy living and working environment.

### PRINCIPLES OF DEVELOPMENT CONTROL

**105** Where there is evidence of, or reasonable suspicion that land, buildings and/or water, including underground water, may have been contaminated, or there is evidence of past potentially contaminating activity/ies, development should only occur where it is demonstrated that the land, buildings and/or water can be made suitable for its intended use prior to commencement of that use.

*Note: Information of the suitability of land for the proposed land use should be provided as part of the development application and should include:*

- (a) *the provision of a report of the land use history and condition of the site;*
- (b) *where the report reveals that contamination is suspected or identified, a detailed site assessment report that determines whether site contamination poses an actual or potential risk to human health and the environment, either on or off the site, of sufficient magnitude to warrant remediation appropriate to the proposed land use;*
- (c) *where remediation is warranted, a remediation and/or management strategy prepared in consultation with an independent Environmental Auditor, Contaminated Land, endorsed by the EPA;*
- (d) *a site audit report, prepared by an independent Environmental Auditor, Contaminated Land, endorsed by the EPA, that states that in the opinion of the Auditor, the site is suitable for the intended uses(s), or for certain stated uses(s) and also states any conditions pertaining to the use(s).*

## 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
- (h) use of landscaping.

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

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

**106.2** In relation to Principle 106(b):

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

**106.3** In relation to Principle 106(c):

- (a) dwellings and additions (other than minor additions) having a total window area (including glass doors) of less than 30 percent of the total wall area of the dwelling;
- (b) dwellings and additions (other than minor additions) having a total window area facing east and west not exceeding 50 percent of the total window area of the dwelling to avoid heat gain during the summer months and reduce heat loss during the winter months;

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

- (c) *shading of north facing windows to allow winter sun access but providing complete shading during summer, such as by eaves overhang, awnings, adjustable louvres, pergola's, shutters or planting of deciduous trees and vines;*
- (d) *external shading is provided to west facing windows; and*
- (e) *designing skylights and high level windows with adjustable louvres, double glazing and shading to minimise heat gain or loss.*

**106.4** *In relation to Principle 106(d):*

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

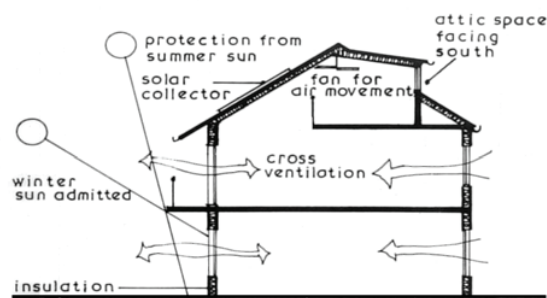


Figure 106.1 - appropriate orientation and design for residential development

**106.5** *In relation to Principle 106(h):*

- (a) *using appropriate landscaping to assist in microclimatic management of a site by:*
  - (i) *planting of evergreen trees along the eastern and western boundaries to protect from eastern and western sun providing it poses no undue risk of damage to footings; or*
  - (ii) *incorporating low shrubs, lawns, ponds and pools to cool summer breezes.*

**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.

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

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

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

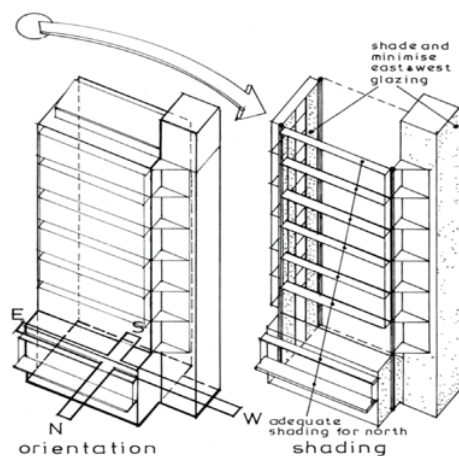


Figure 108.1 - appropriate orientation and shading for commercial buildings.

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

**108.2** In relation to Principle 108(c):

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



**108.3** *In relation to Principle 108(f):*

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

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

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

**Design Techniques** *(these are ONE WAY of meeting the above Principle)***109.1** *A roof incorporating an area of at least 10 square metres which:*

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

- 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.

**Design Techniques** *(these are ONE WAY of meeting part of the above Principle)***111.1** *Design solutions may include:*

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

- 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.

**Design Techniques** *(these are ONE WAY of meeting part of the above Principle)***112.1** *The use of:*

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

## Residential Development

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

## 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.

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

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

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

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

- (a) *lighting management systems that employ both motion and lighting level sensors that can be updated;*
- (b) *mixed mode or hybrid comfort control systems (natural and mechanical ventilation systems) which comprise both manually operable openings and automatically controlled openings, utilising temperature sensors and zoned heating areas;*
- (c) *energy efficient fittings;*

- (d) *closed or open loop geoexchange systems providing space cooling, space heating and domestic hot water.*

## 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.

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

**122.1** *Design solutions may include:*

- (a) *reducing the quantity of glass used by having a higher proportion of masonry or other non-reflective materials in the building exterior;*
- (b) *recessing glass into the building;*
- (c) *shading or angling the glass;*
- (d) *selecting glass that has a low level of reflection; and/or*
- (e) *avoiding the use of large expanses of highly reflective materials.*

- 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.

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

**125.1** *Methods to reduce the potential for a wind tunnel effect may include:*

- (a) *a podium built at the base of a tall tower and aligned with the street to deflect wind away from the street;*
- (b) *substantial verandahs around a building to deflect downward travelling wind flows; and/or*
- (c) *placing one building windward of another building.*

## 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.

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

**126.1** *The integrated use of open space for appropriate recreation and stormwater management through the installation of water treatment devices such as wetlands, aquifer storage and recovery, detention and retention basins, gross pollutant traps, trash racks; or*

**126.2** *The reservation, through land division, of drainage channels, drainage easements, watercourses and land within the 1 in 100 year flood event.*

- 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.

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

**127.1** *The retention of natural watercourses through:*

- (a) *the control of development and activities within the 1 in 100 year flood event, including the placement of fill, excavation, building work, the placement of structures and fences, the storage of materials, the keeping of animals, the piping of watercourses; and*
- (b) *the planting of local native flora along watercourses and the replacement of exotic plants.*

**127.2** *The restoration of lined watercourses.*

**127.3** *The maximisation of road frontage onto open space areas in subdivision design.*

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

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

**128.1** *For residential and non-residential development, rainfall run-off should be retained and used as much as possible through the application of an appropriate range of the following techniques:*

- (a) *collection and use of roof run-off in rain saver gutters and rainwater tanks for irrigation (a 500 litre rainwater tank to irrigate 25 square metres of garden), and internal purposes (drinking when considered safe to do so, flushing toilets, washing, and bathing);*
- (b) *use of on-site detention tank/s with an appropriately sized orifice;*
- (c) *directing rainfall run-off onto landscaped areas;*
- (d) *installing appropriate soakage devices (soakage trenches or wells) having regard to the availability of unbuilt upon or unsealed areas, the ability of soils to absorb and drain water, the potential impact on building foundations and footings on or adjacent to the site, and the ability to safely direct surplus flows to a public street without causing nuisance to adjoining properties; and*
- (e) *use of permeable forms of paving for public and private parking areas, open storage, display, work areas, driveways, vehicle and pedestrian carriageways.*

- 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.

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

**129.1** *For residential and non-residential development:*

- (a) *rainfall run-off from the roof of any building, where not retained on site, discharged directly to the street water table or to the council stormwater system and not mixed with rainfall run-off originating from surfaces such as car parks, outdoor storage areas and display areas; and*
- (b) *rainfall run-off from ground surfaces directed to a stormwater treatment system capable of removing litter, sediment, grease, oil and other substances capable of contaminating stormwater. Also, a high flow bypass provided to enable water from extreme rainfall events to discharge direct to stormwater swales or to council stormwater systems. The stormwater treatment system is to discharge on site to storage; grassed swales; stone filled trenches; small infiltration basins; a constructed water feature; bores approved for aquifer recharge; or off site to the council stormwater system.*

**129.2** *Wastewater from air conditioning units, cooling towers and compressors prevented from discharging into any stormwater drainage system.*

**129.3** *Housing and other building layouts which minimise sewage and water piping with potential for leakage.*

- 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.

**139** Development of Local Heritage Places (Townscape) should occur behind retention depths (as established from the street facade of the heritage place) of 6 metres in non-residential Zones and Policy Areas, and 4 metres in the City Living Zone or the Adelaide Historic (Conservation) Zone or as otherwise indicated in the heritage Tables in respect of frontages and side wall returns.

**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.

**141** Development in the City Living Zone or the Adelaide Historic (Conservation) Zone on land adjacent to a heritage place should incorporate design elements that complement the heritage place with regard to the following:

- (a) the wall height and silhouette of the heritage place as well as the scale of elements comprising the principal facades;
- (b) the frontage of land containing the heritage place, boundary setbacks to the sides and street face(s) of the place and the nature of vehicular and pedestrian egress;
- (c) the nature of fencing, walling and gates to boundaries;
- (d) the materials and finishes; and
- (e) location of alterations (other than the conservation of heritage fabric) and additional construction behind the street face(s) of the heritage place, without necessarily replicating historical detailing.

**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.

**143** The division of land adjacent to, or containing, a heritage place should only occur where it would:

- (a) create allotments of a size, dimension and pattern that can accommodate new development likely to maintain the built form and setting of the heritage place, and not result in forms of development likely to impair views of the place from a public street, while also achieving the the Desired Character expressed in the relevant Zone and Policy Area provisions;
- (b) retain options for the use, access to, or servicing of the land, structures and buildings that comprise a heritage place; and
- (c) result in development compatible with the interiors of a State heritage place, Local heritage place (City significance) or Local heritage place as identified in the relevant Tables.

#### **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.

#### **Fencing and Site Features**

**145** Fencing to the street boundary, and returning along the side boundaries to the alignment of the building front of a heritage place, should be compatible with the heritage value of the heritage place and any existing fencing.

**146** Development should seek to protect architectural and natural site features that are valued for the contribution they make to the character and amenity of the area.

#### **Aboriginal Heritage**

**147** Development should recognise historical and cultural relationships associated with the past, prior and current use of a place which is of significance to Aboriginal people.

**148** Development of, adjacent to, or in close proximity to a place which is of significance to Aboriginal people should respect the historical significance of the area or time and reflect the significance of the item within the locality.

### **Heritage and Conservation – North Adelaide**

*Note: The principles under the heading “Heritage and Conservation – North Adelaide” are additional to the Council Wide Heritage and Conservation Objectives and Principles of Development Control and in cases of apparent conflict, take precedence over the Council Wide Heritage and Conservation Objectives and Principles of Development Control.*

#### **General**

**149** Development of a Heritage Place, identified in the relevant Zone or Policy Area, should:

- (a) retain and conserve those elements contributing to its heritage value;
- (b) have regard to the heritage value, physical material and setting of the Heritage Place;
- (c) provide for the retention of views and vistas to the Heritage Place from public roads as well as between any elements of identified heritage value;
- (d) where possible, provide for the reinstatement of views and vistas to the Heritage Place from public roads by removing unsympathetic fencing, building additions or alterations; and

- (a) scale, bulk and setbacks;
- (b) proportion and composition of design elements;
- (c) form and visual interest (as determined by play of light and shade, treatments of openings and depths of reveals, roofline and silhouette, colour and texture of materials and details, landscaping and fencing);
- (d) width of frontage and boundary set-back patterns; and
- (e) vehicle access and carparking arrangements.

**163** Development on land adjacent to a Heritage Place and sited in prominent locations, such as corners or at the termination of vistas where a strong presence is desirable, should have a scale and detail equal to that of the Heritage Place.

**164** In a locality where single-storey Heritage Places prevail at or close to the primary street frontage, single storey development and a consistent building set-back should be maintained. Sympathetically designed second storey components that utilise or extend roof space to the rear of a building may be appropriate subject to scale, views from the street, overshadowing and privacy considerations.

**165** Development that is visible from the street should match the building levels and storey heights of adjacent Heritage Places.

**166** The division of land adjacent to a Heritage Place should:

- (a) create allotment(s) of a size and dimensions to accommodate new development that will complement adjacent Heritage Place(s) and reinforce the desired character of the streetscape;
- (b) be of a size and dimensions that will provide for the siting and setback of new buildings from property boundaries so that new development does not overshadow, dominate, encroach on or otherwise impact on the setting of adjacent Heritage Place(s); and
- (c) provide areas for landscaping of a size and dimensions that complement the landscape setting of adjacent Heritage Place(s) and is consistent with the desired character of the Zone or Policy Area.

## 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

**167** Where development significantly exceeds quantitative policy provisions, it should demonstrate a significantly higher standard of design outcome in relation to qualitative policy provisions including pedestrian and cyclist amenity, activation, sustainability and public realm and streetscape contribution.

### Height, Bulk and Scale

## PRINCIPLES OF DEVELOPMENT CONTROL

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

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

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

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

- (a) the desired character, built form, public environment and scale of the streetscape as contemplated within the Zone and Policy Area, and have regard to:
  - (i) maintaining consistent parapet lines, floor levels, height and massing with existing buildings consistent with the areas desired character;
  - (ii) reflecting the prevailing pattern of visual sub-division of neighbouring building frontages where frontages display a character pattern of vertical and horizontal sub-divisions; and
  - (iii) avoiding massive unbroken facades.
- (b) a comfortable proportion of human scale at street level by:
  - (i) building ground level to the street frontage where zero set-backs prevail;
  - (ii) breaking up the building facade into distinct elements;
  - (iii) incorporating art work and wall and window detailing; and
  - (iv) including attractive planting, seating and pedestrian shelter.

**171** Where possible, large sites should incorporate pedestrian links and combine them with publicly accessible open space.

- 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.
- 173** Development in a non-residential Zone that abuts land in a City Living Zone, the Adelaide Historic (Conservation) Zone or the North Adelaide Historic (Conservation) Zone, should provide a transition between high intensity development and the lower intensity development in the adjacent Zone by focussing taller elements away from the common Zone boundary.
- 174** Development in a non-residential Zone that is adjacent to land in the City Living Zone, Adelaide Historic (Conservation) Zone or North Adelaide Historic (Conservation) Zone should minimise overshadowing on sensitive uses by ensuring:
- (a) north-facing windows to habitable rooms of existing dwellings in the City Living Zone, Adelaide Historic (Conservation) Zone or North Adelaide Historic (Conservation) Zone receive at least 3 hours of direct sunlight over a portion of their surface between 9.00am and 3.00pm on 21 June;
  - (b) ground level open space of existing residential buildings in the City Living Zone, Adelaide Historic (Conservation) Zone or North Adelaide Historic (Conservation) Zone receive direct sunlight for a minimum of 2 hours between 9.00am and 3.00pm on 21 June to at least the smaller of the following:
    - (i) half of the existing ground level open space;
    - (ii) 35 square metres of the existing ground level open space (with at least one of the area's dimensions measuring 2.5 metres).

### Plot Ratio

- 175** Plot ratios have been established for the City Living Zone, Adelaide Historic (Conservation) Zone and North Adelaide Historic (Conservation) Zone for the purpose of ensuring that intensity of development on land is consistent with the desired character. The amount of building floor area that may be permitted on the allotment(s) on which any development is situated should not exceed the area calculated by multiplying the area of the allotment(s) on which the development is situated by the plot ratio applicable to the allotment(s).

### Maximum Dwelling Density and Floor Space

- 176** In the City Living Zone (other than in relation to sites greater than 1500 square metres in area), the Adelaide Historic (Conservation) Zone and the North Adelaide Historic (Conservation) Zone, the number of dwellings which will be appropriate on a site should not exceed the site area divided by the dwelling unit factor as set out in relevant Zone, and any fractions of the number so calculated should be disregarded.

### Landscaped Open Space

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

### Building Set-backs

- 178** In the City Living Zone, the Adelaide Historic (Conservation) Zone and the North Adelaide Historic (Conservation) Zone, buildings should maintain the prevailing set-back established by adjoining buildings, provided the resultant character reinforces the desired character for the locality.



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

**178.1** Design solutions may include:

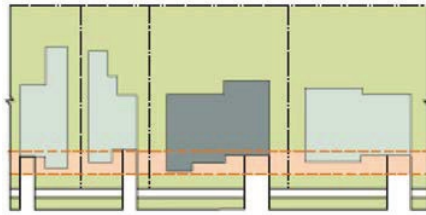


Figure 178.1 - street setbacks located within a range defined by existing building setbacks.



Figure 178.2 - street setbacks consistent with the existing established building alignments.



Figure 178.3 - street setbacks modulated to break up long building facades.

**179** 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

**180** Development should respect the composition and proportion of architectural elements of building facades that form an important pattern which contributes to the streetscape's distinctive character in a manner consistent with the desired character of a locality by:

- (a) establishing visual links with neighbouring buildings by reflecting and reinforcing the prevailing pattern of visual sub-division in building facades where a pattern of vertical and/or horizontal sub-divisions is evident and desirable, for example, there may be strong horizontal lines of verandahs, masonry courses, podia or openings, or there may be vertical proportions in the divisions of facades or windows; and
- (b) clearly defining ground, middle and roof top levels.

**181** 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

- 182** Building facades fronting street frontages, access ways, driveways or public spaces should be composed with an appropriate scale, rhythm and proportion which responds to the use of the building, the desired character of the locality and the modelling and proportions of adjacent buildings.

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

**182.1** Design solutions may include:

- (a) defining a base, middle and top related to the overall proportion of the building;
- (b) expressing key horizontal lines within the townscape by using cornices, a change in materials or building setback;
- (c) expressing the internal layout of the building by using for example, vertical bays or its structure, such as party wall divisions;
- (d) expressing the variation in floor to floor height, particularly at the lower levels;
- (e) articulating building entries with awnings, porticos, recesses, blade walls and projecting bays;
- (f) using a variety of window types to create a rhythm or express the use of the building;
- (g) incorporating architectural features which give human scale to the design of the building at street level such as entrance porches, awnings and colonnades;
- (h) designing facades to reflect the orientation of the site using elements such as sun shading, light shelves and bay windows as environmental controls;
- (i) expressing important corners by giving visual prominence to parts of the facade, for example, a change of building articulation, material or colour, roof expression or increased height;
- (j) using a variation of contrasting surface finishes, textures, colours or patterns; or
- (k) avoiding unbroken building elevations of more than 15 metres on a vertical plan;
- (l) using recessed balconies and deep windows to create articulation and define shadows thereby adding visual depth to the facade;

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

**184** Balconies should:

- (a) respond to the street context and building orientation; and
- (b) incorporate balustrade detailing to reflect the balcony type and location and the materials and detail of the building facade.

- 185** No part of any fully enclosed building should extend over property boundaries, including streets and public spaces, whether above a balcony at a lower level or not.

- 186** Building services such as drainage pipes together with security grills/screens, ventilation louvres and car park entry doors, should be coordinated and integrated with the overall facade design.

## 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).

## Corner Sites

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

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

**191.1** In relation to Principle 191(a):

- (a) corporation of corner elements such as pediments, turrets, verandahs, balconies and other articulation and modelling into the design of the building;
- (b) incorporation of prominent entrances and/or windows at the apex;
- (c) increasing roof expression or building height at the corner to emphasise the importance of the street corner;
- (d) rotating the building line to create a chamfered edge;
- (e) projecting corner elements forward; and/or
- (f) in a change of building articulation, material or colour.

## 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

- 192** 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.

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

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

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

**193.1** Design solutions may include:

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

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

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

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

- (a) rainwater tanks for water conservation;
- (b) roof surfaces orientated, angled and of suitable material for photovoltaic applications; and/or

- (c) “green” roofs (ie roof top gardens structurally capable of supporting vegetation) or water features.

### 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

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

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

**196.1** Design solutions may include:

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

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

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

**197.1** Design solutions may include:

- (a) Providing views into and out of buildings.
- (b) Providing interesting and active window displays.
- (c) Providing external light fittings, particularly where street lighting is blocked eg under verandahs.
- (d) Using transparent glass, open mesh or transparent security shutters that allow views into and out of the building.

- (e) *Illuminating shop windows until 12.00pm.*
- (f) *Incorporating detailed architectural facade treatment.*

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

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

**198.1** *Design solutions may include:*

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

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

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

**199.1** *Design solutions may include:*

- (a) *Using transparent glass along street frontages.*
- (b) *Maximising the number of windows and doors.*
- (c) *Enlivening building edges with balconies, bays, porches, awnings or other projections.*
- (d) *Designing interesting and innovative fencing and walls.*
- (e) *Incorporating transparent fencing and walls that enable presentation of the building to the street eg use of mesh fencing rather than blank solid walls.*
- (f) *Avoiding blank high walls and elevations unbroken by architectural detail which prevents community interaction and resident surveillance of the street.*
- (g) *Avoiding car parking in front of buildings.*
- (h) *Addressing housing on corner sites to both street frontages by establishing prominent entrances and/or windows at the apex of buildings.*
- (i) *Incorporating compatible non-residential uses such as home offices, art/craft workshops and galleries at ground floor level.*

## **Outdoor Dining**

### **OBJECTIVE**

**Objective 52:** Development that contributes to the vibrancy, activity and desired character of a locality.



## PRINCIPLES OF DEVELOPMENT CONTROL

### 200 Outdoor dining should:

- (a) be located outside the associated premises;
- (b) provide sufficient set-backs, such as from kerbs and property boundaries, and clearances, such as from buildings;
- (c) be located in an area safe for patrons where the security of the building is not compromised;
- (d) ensure the dining area is set back from the building line at street intersections;
- (e) ensure unimpeded pedestrian flow through free and uninterrupted pedestrian paths; and
- (f) ensure wheelchair access to pedestrian ramps is not compromised.

### 201 Structures should:

- (a) be of high quality design and form an integral part of the streetscape;
- (b) not restrict public access;
- (c) not detract or restrict views of significant sightlines, buildings and landmarks;

### 202 Signage that identifies the business name or logo, or advertises goods sold on the premises is only appropriate on glass and canvas screens and umbrellas and should meet the following:

- (a) signage and advertisements should be designed to improve and complement the amenity of the premises, be of an appropriate design and consistent with the desired character of the locality;
- (b) advertisements on outdoor dining items such as umbrellas and canvas screens should not exceed a portion that covers 10 percent of the total available space on each outdoor dining item, up to half of which may be commercial advertisements in the form of product logos used or sold by the premises;
- (c) advertisements should not be illuminated or animated; and
- (d) third party advertising on outdoor dining items is inappropriate.

## Demolition

### OBJECTIVE

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

## PRINCIPLES OF DEVELOPMENT CONTROL

### 203 The demolition of any building should not occur unless Development Approval for a replacement development has been granted. Exceptions may only be granted:

- (a) for documented reasons of public health or safety agreed by the planning authority or alternatively agreed by a statutory order; or
- (b) where located within the Park Lands Zone.

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

## Vacant Sites and Buildings

### OBJECTIVE

**Objective 54:** The temporary use of vacant or underdeveloped land which is not likely to be the subject of long term development in the short term.

### PRINCIPLES OF DEVELOPMENT CONTROL

- 204** Vacant and underdeveloped land and buildings should be brought into use as soon as possible.
- 205** Where there is no immediate prospect of a long term use, a temporary use for up to 24 months (excluding temporary car parks) is encouraged. Temporary uses of vacant or underdeveloped land should be landscaped, screened and/or treated so that negative impacts to the public realm are minimised.
- 206** Temporary storage of Council equipment may be appropriate provided measures are incorporated for:
- (a) dust control;
  - (b) appropriate screening including landscaping;
  - (c) containment of litter and waste; and
  - (d) appropriate securing of the site.

## 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

- 207** 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.
- 208** 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.
- 209** Landscaping should be provided to all areas of communal space, driveways and shared car parking areas.
- 210** Landscaping between the road and dwellings should be provided to screen and protect the dwellings from dust and visual impacts of the road.

- (d) maintaining the existing pattern and structure of streets and laneways;
- (e) restricting building over minor streets and laneways to avoid over-shadowing and preserve the built-form pattern established by traditional land sub-division in the City; and
- (f) allowing for ease of pedestrian circulation and through access where possible.

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

**220.1** *In relation to Principle 220(a), minimising set-back distances from the perimeter of the space to increase the ability of the building to interact with the public realm.*

**220.2** *In relation to Principle 220(b), incorporating uses such as home offices, artist studios, galleries, cafés and restaurants where encouraged by the Policy Areas provisions.*

**221** Development on, over, encroaching upon, or opening on to public spaces should not endanger public safety or cause undue inconvenience to either pedestrians, including persons with disabilities, or users of vehicles, and should ensure adequate alignment of building levels to surface levels.

**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.

**223** Public spaces should allow good visibility into and across the space to promote security and safety and should provide opportunities for citizens to meet and socialise.

## 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.
- 227** 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.

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

**237.1** *In relation to Principle 237(a):*

- (a) *avoid unnecessary vehicular crossing points, particularly with potential reversing movements from motor vehicles; and*
- (b) *utilise the shortest, most direct route for cycles to reach the destination bicycle parking*

*237.2 In relation to Principle 237(c), a minimum clearance of 2 metres for new, permanent structures.*

- 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.

- 240** 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.

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

**242.1** Commercial vehicle facilities in compliance with the requirements recommended in Australian Standard AS 2890:2: Off-Street Parking - Part 2: Commercial Vehicle Facilities.

- 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).
- 249** Access roads within residential development should:
- (a) provide convenient access for emergency vehicles, visitors and residents;
  - (b) enable vehicles to enter and leave a site in a forward direction;
  - (c) provide a comfortable and safe pedestrian environment; and
  - (d) be well lit.
- 250** Access roads within residential development for older people and people with disabilities should:
- (a) include platforms across roadways at pedestrian crossing points;
  - (b) not have steep gradients; and
  - (c) have level surface passenger loading areas.

## 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.

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

**251.1** Car parking in compliance with the requirements recommended in Australian Standard AS 2890.1: 'Parking Facilities - Off-street Car Parking' and Australian Standard AS 2890.2: Off-Street Parking - Part 2: Commercial Vehicle Facilities.

**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'.

**253** Within the City Living Zone, Adelaide Historic (Conservation) Zone, North Adelaide Historic (Conservation) Zone, Main Street, Mixed Use and Institutional Zones:

- (a) adequate car parking should be provided within the site area of the development to meet the demand generated by the development;
- (b) car parking should be provided in accordance with [Table Adel/7](#); and
- (c) car parking rates lower than the minimum in Table Adel/7 may be appropriate where there is readily accessible and frequent public transport in the locality or it can be demonstrated that a lower provision is warranted, such as for the following reasons:
  - (i) the nature of development;
  - (ii) existing heritage places on or adjacent to the development site which dictates the development of the site in a manner which hampers the provision of on-site parking;
  - (iii) the opportunity to exploit shared car parking areas between uses based upon compatible hours of peak operation;

- (iv) use of a car share scheme; or
- (v) suitable arrangements for any parking shortfall to be met elsewhere or by other means.

**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.

**255** Garaging and parking structures (including the width of any support structure) provided on a public street frontage or on a laneway that functions as the dwellings primary frontage should be of a width less than 50 percent of the allotment width on that frontage.

**256** Undercroft parking is not appropriate within the City Living Zone, Adelaide Historic (Conservation) Zone, North Adelaide Historic (Conservation) Zone, Mixed Use Zones or Main Street Zones.

**257** Undercroft parking should project no higher than 1 metre above ground level and should be screened from public view and designed to add interest and creativity to the street frontage.

**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](#).

**262** The hours and methods of operation of multi-level and non-ancillary car parks should ensure overall traffic efficiency, minimum adverse impact on the environment, and levels of parking supply adequate to meet the economic and social needs of the City.**263** In areas outside the Core and Primary Pedestrian Areas identified in [Map Adel/1 \(Overlays 2, 2A and 3\)](#), car parking may be provided to serve a development within the site of the development or elsewhere. Where car parking is provided, it should be:

- (a) provided with vehicle access points that do not cross major walking routes identified in [Map Adel/1 \(Overlay 2\)](#); and
- (b) located away from frontages to major streets wherever possible.

**264** On-site parking should be provided for development in those localities close to the City Living Zone, the Adelaide Historic (Conservation) Zone or the North Adelaide Historic (Conservation) Zone, unless suitable parking facilities exist within the vicinity of the development, the use of which does not adversely impact on amenity in the City Living Zone, Adelaide Historic (Conservation) Zone or the North Adelaide Historic (Conservation) Zone.**265** Car parking associated with development for older people and people with disabilities should:

- (a) be conveniently located on site within easy walking distance to resident units;
- (b) be adequate for residents, staff, service providers and visitors in accordance with the requirements set out in [Table Adel/7](#);
- (c) include separate and appropriately marked places for people with disabilities and spaces for small electrically powered vehicles;
- (d) have slip-resistant surfaces with low gradients;
- (e) allow ease of vehicle manoeuvrability;

- (f) be designed to allow the full opening of all vehicle doors; and
- (g) minimise the impact of car parking on adjacent residences due to visual intrusion, noise and emission of fumes.

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

**265.1** *In relation to Principle 264(d), the gradient of the car parking space not steeper than 1:20.*

## 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.

**267** The Institutional Zones should develop:

- (a) with a function and quality in providing leisure, transport, cultural, government, educational and health facilities in an “Institutional” setting on land in public ownership;
- (b) by being characterised by a transition of fine public buildings in a landscaped setting between the intense built form marking the edge of the Capital City Zone on the southern side of North Terrace to the Torrens Valley in the Park Lands Zone;
- (c) with commercial activities being ancillary to the cultural and institutional functions of the Zones; and
- (d) with improved pedestrian movement and integration across North Terrace.

**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.

## Centres and Main Streets

### OBJECTIVES

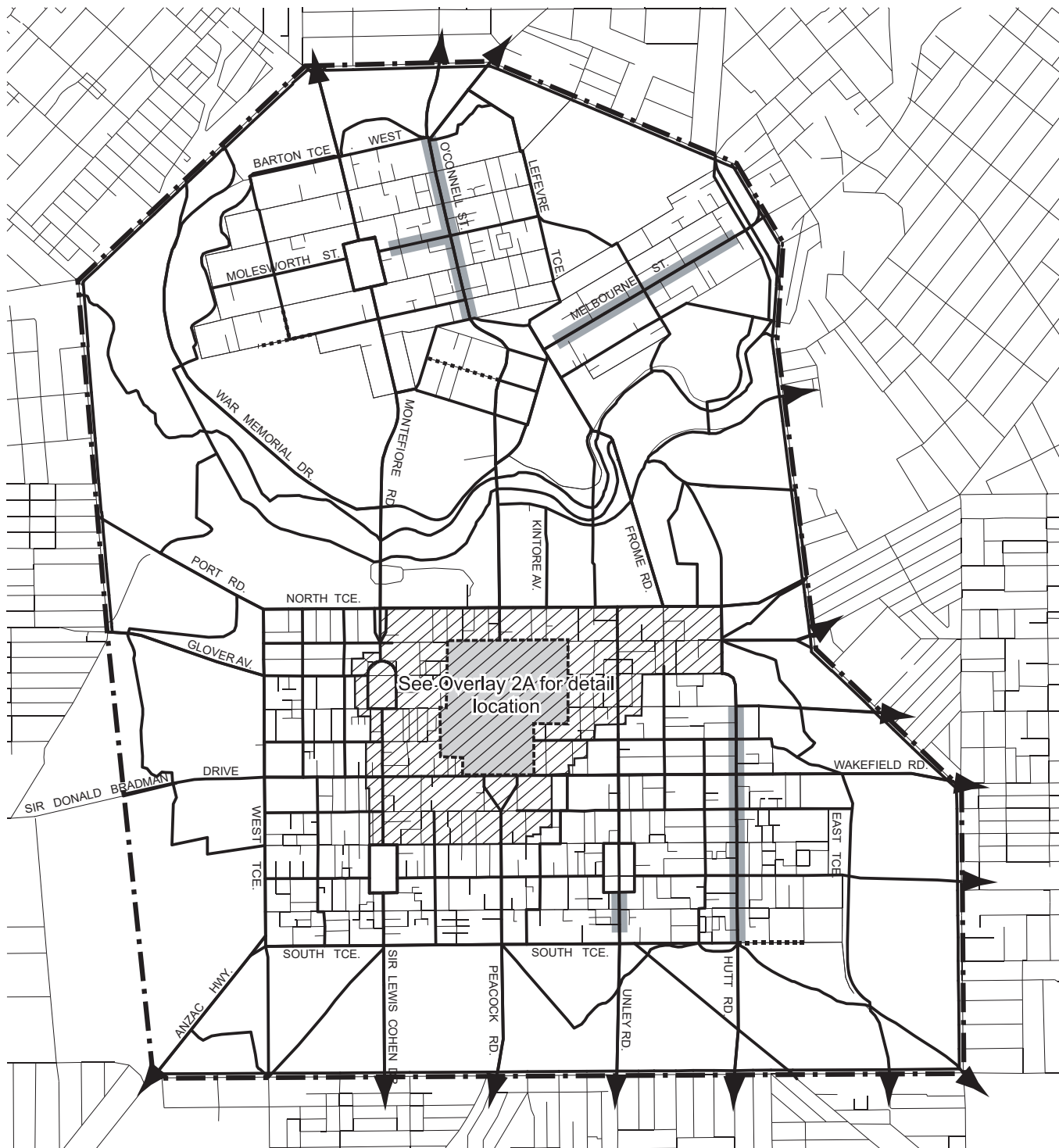
**Objective 77:** A Capital City that provides the highest order and greatest range of goods and facilities and serves as the principal focus for the economic, social and political life of metropolitan Adelaide, and the State.

**Objective 78:** Main Street Zones along O’Connell, Melbourne, Hutt, Halifax and Sturt Streets:

- (a) developed with a retail, community and commercial function, providing local services for surrounding residential communities, and accommodating a range of visitor facilities and commercial activity, arising from their centrality and high accessibility by walking, public transport, cycling and car.
- (b) developed with an increased component of residential accommodation and with enhanced vitality and character while effectively managing their impact in order to protect the amenity of adjacent residential areas.
- (c) with restricted potential for further expansion or intensification of commercial activity due to car parking demands and the need to protect the amenity of neighbouring residential areas.

**Objective 79:** Local community facilities that provide shopping and local facilities to serve day to day needs of the local community.





Primary Pedestrian Area [See Map Adel /1 (Overlay 2A) for detail]



Core Pedestrian Area (non-ancillary car park non-complying)



Secondary Pedestrian Area



Localised Walking Route



Major Walking Route



Development Plan Boundary



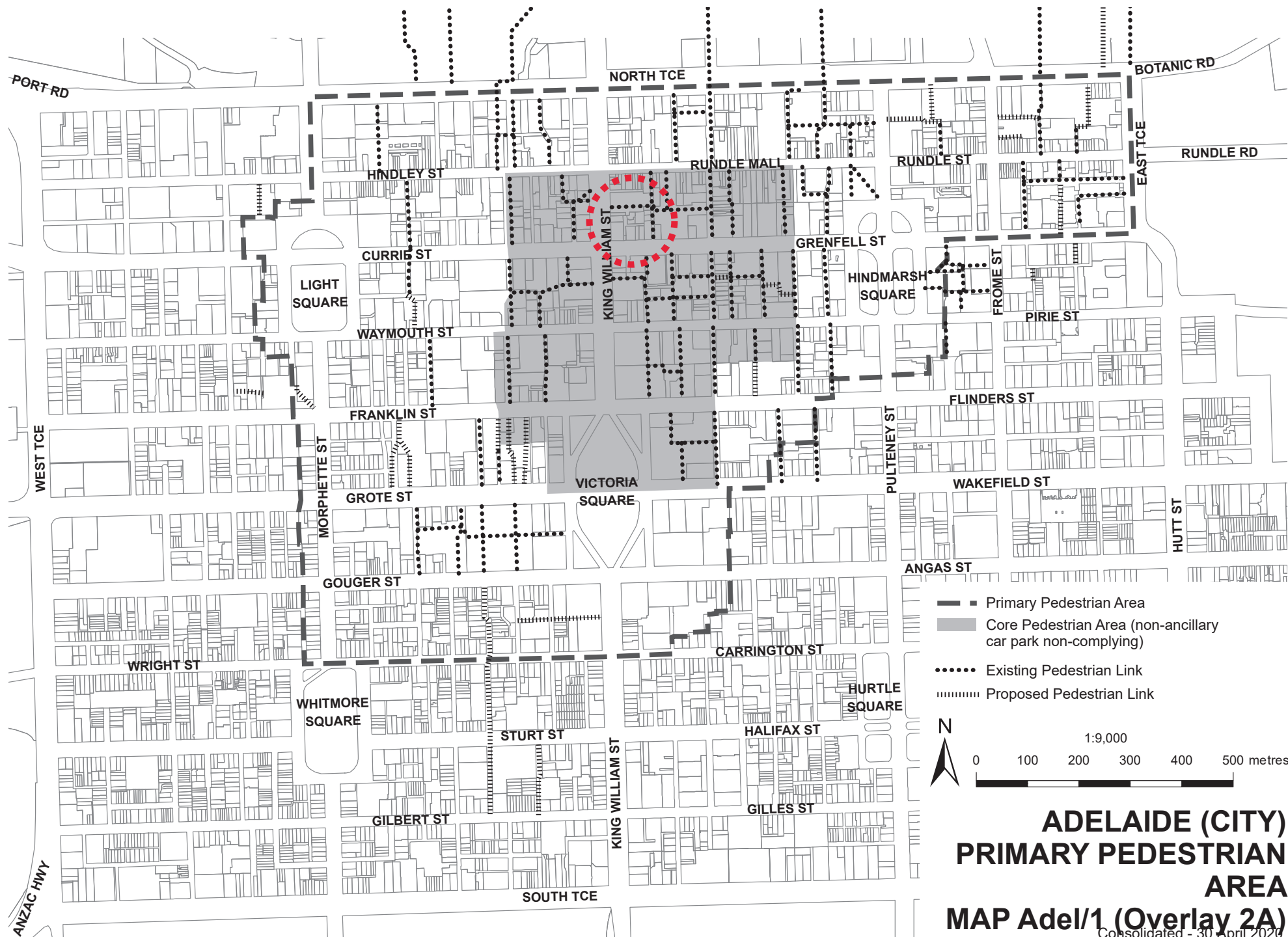
Scale 1:26,000

0metres 500 1000



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

Consolidated - 30 April 2020



# **ADELAIDE (CITY) PRIMARY PEDESTRIAN AREA MAP Adel/1 (Overlay 2A)**

Consolidated - 30 April 2020



- Primary Bicycle Network
- Important Secondary Road
- Important Secondary Route
- Recreational Route
- Primary Pedestrian Area [See Map Adel /1 (Overlay 2A) for detail]
- Core Pedestrian Area (non-ancillary car park non-complying)
- Development Plan Boundary



Scale 1:26,000  
0metres 500 1000

## ADELAIDE (CITY) BICYCLE NETWORK MAP Adel/1 (Overlay 3)

Consolidated - 30 April 2020