

# Perth Local Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 28 September 2023; 9:30am

Meeting Number: DAP/23/02428
Meeting Venue: City of Perth

Committee Room 1, Council House 27 St Georges Terrace, Perth

# 1 Table of Contents

1.	Opening of Meeting, Welcome and Acknowledgement	2
2.	Apologies	2
3.	Members on Leave of Absence	2
4.	Noting of Minutes	2
5.	Declarations of Due Consideration	3
6.	Disclosure of Interests	3
7.	Deputations and Presentations	3
8.	Form 1 – Responsible Authority Reports – DAP Applications	3
	8.1 Wellington Street, 301-311 (Lot: 19), Perth	3
9.	Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval	3
	Nil	3
10.	State Administrative Tribunal Applications and Supreme Court Appeals	<b>3</b> 3
	Nil	3
11.	General Business	3
12.	Meeting Closure	3

#### **Attendance**

#### **DAP Members**

Ray Haeren (Presiding Member)
Jarrod Ross (Deputy Presiding Member)
Cr Catherine Lezer (Local Government Member, City of Perth)
Cr Viktor Ko (Local Government Member, City of Perth)

#### Officers in attendance

Amie Groom (City of Perth)

#### **Minute Secretary**

Anne-Marie Bartlett (City of Perth)

#### **Applicants and Submitters**

Daniel Lees (element Advisory Pty Ltd)

#### Members of the Public / Media

Nil.

# 1. Opening of Meeting, Welcome and Acknowledgement

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being conducted by electronic means (Zoom) open to the public. Members are reminded to announce their name and title prior to speaking.

#### 2. Apologies

Diana Goldswain (Third Specialist Member)
John Syme (Third Specialist Member)
John Taylor (Third Specialist Member)
Justin Page (Third Specialist Member)
Peter Lee (Third Specialist Member)
Jason Hick (Third Specialist Member)
Shelley Shephard (Third Specialist Member)
Neema Premji (Third Specialist Member)
Leigh Penney (Third Specialist Member)

#### 3. Members on Leave of Absence

Nil.

## 4. Noting of Minutes

Signed minutes of previous meetings are available on the DAP website.

Version: 1
This document was produced on Whadjuk Noongar Boodjar



#### 5. **Declarations of Due Consideration**

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

#### 6. **Disclosure of Interests**

Nil.

#### 7. **Deputations and Presentations**

The City of Perth may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.

#### 8. Form 1 – Responsible Authority Reports – DAP Applications

#### 8.1 Wellington Street, 301-311 (Lot: 19), Perth

Development Description: Proposed Adaptive Reuse of the Existing Multi

> Storey Carpark including the Construction of 51 Multiple Dwellings, a 12 Level Office Tower and

> > Page 3

a New Public Plaza

Applicant: Daniel Lees (element Advisory Pty Ltd) Perpetual Corporate Trust Limited Owner:

Responsible Authority: City of Perth DAP File No: DAP/23/02428

#### 9. Form 2 – Responsible Authority Reports – DAP Amendment or **Cancellation of Approval**

Nil.

#### **State Administrative Tribunal Applications and Supreme Court Appeals** 10.

Nil.

#### 11. **General Business**

In accordance with Section 7.3 of the DAP Standing Orders 2020 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.

#### 12. **Meeting Closure**

Version: 1 This document was produced on Whadjuk Noongar Boodjar WELLINGTON STREET, 301-311 (LOT: 19), PERTH – PROPOSED ADAPTIVE REUSE OF THE EXISTING MULTI STOREY CAR PARK INCLUDING THE CONSTRUCTION OF 51 MULTIPLE DWELLINGS, A 12 LEVEL OFFICE TOWER AND A NEW PUBLIC PLAZA

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	City of Perth LDAP		
Local Government Area:	City of Perth		
Applicant:	Element Advisory Pty Ltd		
Owner:	Perpetual Corporate Trust Limited		
Value of Development:	\$150 million		
_			
	☐ Opt In (Regulation 6)		
Responsible Authority:	City of Perth		
Authorising Officer:	Dale Page, General Manager Planning and		
	Economic Development		
LG Reference:	DAP-2023/5021		
DAP File No:	DAP/23/02428		
Application Received Date:	1 February 2023		
Report Due Date:	8 September 2023		
<b>Application Statutory Process</b>	90 Days with an additional 68 days agreed		
Timeframe:			
Attachment(s):	Location Plan		
	2. Development Plans (31 July 2023)		
	3. Perspectives (31 July 2023)		
	4. Landscape Concept Plans		
	5. CPTED Report		
	6. Lighting Report		
	7. Wind Report		
	8. Applicant's address of State Planning		
	Policy 7.0 Design of the Built		
	Environment		
	Neighbour submission		
Is the Responsible Authority			
Recommendation the same as the	⋈ N/A Recommendation section		
Officer Recommendation?			
	<ul> <li>□ No Complete Responsible Authority and Officer Recommendation sections</li> </ul>		

#### **Responsible Authority Recommendation**

That the City of Perth Local Development Panel resolves to:

1. **Approve** DAP Application reference DAP/23/02428 and accompanying development plans (Attachment 2) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Perth City Planning Scheme No. 2, subject to the following conditions:

#### **Conditions**

- 1. pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme;
- 2. the public being granted permanent, unrestricted access through the public facility (public space) area, but not including those areas required to be closed to the public in order to secure the building(s) on the site, for 364 days out of every year, with the written consent of the City being first obtained if it becomes necessary for public access to these areas to be restricted for more than one day per year;
- 3. any subsequent change of use of the 'Residential' portion of the development being prohibited within 10 years from the date of lawful occupation of those portions of the development pursuant to Clause 35 of City Planning Scheme No. 2;
- 4. the development being constructed with high quality and durable materials and finishes and to a level of detailing that is consistent with the elevations and perspectives received on 31 July 2023, with final details of the design including a sample board of the proposed materials, colours and finishes being submitted for approval by the City prior to applying for a building permit;
- 5. the building facades being designed to mitigate potential high levels of glare or excessive solar reflection to the surrounding public realm and nearby properties to the satisfaction of the City, with final details of the façade design and a reflection assessment/report prepared by a suitably qualified consultant being submitted for approval by the City prior to applying for a building permit;
- 6. final details of the design, treatment of and access to the public space, including provision of universal access, furniture, art, lighting, security, maintenance and litter control, together with the proposed management and maintenance of these areas being submitted for approval by the City prior to applying for a building permit, with the public space being completed prior to occupation of the development and thereafter maintained to a high standard to the City's satisfaction;
- 7. a final landscaping and reticulation plan, being submitted for approval by the City prior to applying for a building permit. The approved landscaping is to be installed prior to occupation of development and thereafter maintained to a high standard to the City's satisfaction;

- 8. a section 70A notification pursuant to the Transfer of Land Act 1893 prepared to the City's satisfaction at the cost of the subject owner/s, being placed on the relevant title of each multiple dwelling prior to any transfer of ownership, advising prospective purchasers of:-
  - "The land is situated in the vicinity of a transport corridor and is currently affected, or may in the future be affected, by transport noise and vibration."
- 9. the ground floor commercial tenancies being limited to, 'Dining', 'Retail (General)' and 'Retail (Local)' uses, with any other uses requiring a separate application for approval;
- 10. a final Acoustic Report addressing the requirements outlined in the preliminary Acoustic Report prepared by Arup dated 17 January 2023 regarding the noise amelioration construction specifications and other noise management measures and requirements of State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning, being implemented in full to the satisfaction of the City, with final plans being certified by a qualified acoustic consultant confirming the development incorporates the recommendations and can achieve compliance with the relevant noise legislation, prior to applying for a building permit;
- 11. a final Wind Impact Statement, including wind tunnel model measurements, being undertaken to quantify and compare the wind conditions against acceptable pedestrian wind comfort criteria and, if necessary, including mitigation strategies to achieve compliance with the criteria, with details being submitted by the applicant for approval by the City prior to applying for a building permit, with any significant design changes resulting from the amended wind impact analysis being the subject of a separate application for approval;
- 12. the approved Waste Management Plan prepared by Encycle Consulting Pty Ltd dated 25 January 2023, being implemented by the building manager/operator on an ongoing basis to the satisfaction of the City;
- 13. the dimensions of any new and/or modified car parking bays, loading bays, vehicle entrances, aisle widths and circulation areas complying with the Australian Standard AS2890.1, with a certificate of compliance by an architect or engineer being submitted for approval by the City prior to applying for a building permit;
- 14. a minimum of one car bay being allocated to each multiple dwelling within the development and with all on-site residential car bays being for the exclusive use of the residents of the development and their visitors;
- 15. a maximum of 73 commercial tenant car parking bays being provided on site, being for the exclusive use of occupants of the commercial tenancies within the development and not being leased or otherwise reserved for the use of the tenants or occupants of other buildings or sites to the satisfaction of the City;
- 16. the proposed floor levels of the pedestrian and vehicle entrances to the building being designed to match the current levels of the immediately adjacent footpath, to the satisfaction of the City;

- 17. all redundant crossovers being removed and the verge and footpaths being reinstated in accordance with the City's specifications and satisfaction and at the expense of the developer/landowner and all new proposed crossovers being located and constructed to the City's specification and satisfaction prior to occupation of the development, with any additional works (with the exception of awnings) external to the property boundaries of the site not being approved as part of this development and being subject to a separate application(s) for approval;
- on-site stormwater disposal/management being to the City's specifications with details being submitted for approval by the City prior to applying for a building permit;
- 19. any proposed building plant and services including air-conditioning condensers, lift overruns, piping, ducting, water tanks, transformers, fire boosters and fire control rooms being located or screened so that they cannot be viewed from any location external to the building (including from above) and to minimise any visual and noise impact. This includes any such plant or services located within the vehicle entrance of the development, with details of the location and screening of such plant and services being submitted for approval by the City prior to applying for a building permit;
- 20. any signage for the development being integrated into the design of the building in accordance with the City's Signs Policy 4.6 and subject to a separate application for approval where required;
- 21. the existing street trees located in the road verge on Pier Street being retained and protected from damage throughout any demolition and/or construction works with tree protection zones being established and maintained during the demolition and/or construction periods in accordance with the Australian Standard S4970-2009 Protection of Trees on Development Sites, to the satisfaction of the City, with the owner/applicant being liable for any damage or removal of the trees; and
- 22. demolition and construction management plans for the proposal prepared in accordance with the City's pro-forma and requirements being submitted for approval by the City in consultation with the Department of Planning, Lands and Heritage, prior to applying for a demolition permit and/or a building permit.

#### **Advice Notes**

- 1. This decision constitutes planning approval only and is valid for a period of four (4) years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
- 2. The development is approved with a maximum plot ratio of 7:1 (25,389m² of plot ratio floor area) inclusive of 40% bonus plot ratio (7,254m² plot ratio floor area) for the provision of a public facilities (new public space) and residential use in the development in accordance with Clause 28 of City Planning Scheme No. 2 and the requirements of the Bonus Plot Ratio Policy 4.5.1.
- 3. The City advises that the existing street trees will not be permitted to be pruned, relocated or removed to accommodate demolition and/or construction works at

- the site, with the amenity value of the trees to be included in any works bond associated with any building permit issued by the City.
- 4. The final plans and details submitted to the City of Perth to satisfy the conditions of this approval will be verified by the City Architect and Alliance Manager Development Approvals. Any substantive changes to the approved plans will need to be made via a Form 2 process.
- Any future demolition and/or construction management plans will be required to demonstrate how potential impacts on the adjacent state and local heritage listed building (70-74 Murray Street) will be minimised during the demolition and construction periods.
- 6. The applicant is advised that any non-residential/tenant car parking bays provided as part of the development will need to be licensed by the Department of Transport in accordance with the requirements of the Perth Parking Management Act. Development approval facilitating the construction and use of bays under relevant planning legislation should not be construed as implied approval from the Department of Transport for the future licensing and use of any car parking bays.
- 7. The applicant/developer is encouraged to ensure that, should the building be strata titled in the future, the City strongly encourages the developer to ensure that the future owners of the permanent residential dwellings do not contribute to any levy or other payment associated with the commercial tenant car parking bays.
- 8. The owner/developer is encouraged to register the development for a formally recognised sustainability rating certification which is holistic in nature and covers a range of sustainability issues.

#### **Details: outline of development application**

Region Scheme	Metropolitan Region Scheme
Region Scheme -	Central City Area
Zone/Reserve	
Local Planning Scheme	City Planning Scheme No. 2
Local Planning Scheme - Zone/Reserve	City Centre
Structure Plan/Precinct Plan	Victoria P4
Structure Plan/Precinct Plan	N/A
- Land Use Designation	
Use Class and	Residential – Contemplated 'C'
permissibility:	Office – Contemplated 'C'
	Dining – Contemplated 'C'
	Mixed Commercial – Contemplated 'C'
	Retail (Local) - Contemplated 'C'
Lot Size:	3,627m <sup>2</sup>
Existing Land Use:	Public Car Park
State Heritage Register	No
Local Heritage	⊠ N/A
	□ Heritage List

		☐ Heritage Area	
Design Review		N/A	
	$\boxtimes$	Local Design Review Panel	
		State Design Review Panel	
		Other	
Bushfire Prone Area	No		
Swan River Trust Area	No		

# Proposal:

Proposed Land Use	Residential, Office, Dining, Mixed Commercial,		
	Retail (Local)		
Proposed Plot Ratio Area	25,389m <sup>2</sup>		
Proposed No. Storeys	19 storeys		
Proposed No. Dwellings	51 dwellings		

The application seeks approval for the adaptive reuse of the existing multi storey car park including the construction of 51 multiple dwellings, a 12-level office tower and a new public plaza.

Specific details of the proposed development are as follows:

Ground (Level 1 on Plans)	This level contains a residential lobby, weather protected landscaped public space (approximately 1,543m²), end-of-trip facilities, retail tenancy area and storage, and vehicle access off Wellington Street including loading dock, bin store and services.
Level 1 (Level 2 on Plans)	This level contains 10 residential apartments including eight 1-bedroom/1-bathroom apartments (59m² to 77m²) with balconies (18m² to 24m²) and two 2-bedroom/2-bathroom apartments (101m² to 132m²) with balconies (30m² to 32m²), 29 commercial tenant car parking bays, 10 motorbike bays and residential storage.
Level 2 (Level 3 on Plans)	This level contains 11 residential apartments including eight 1-bedroom/1-bathroom apartments (59m² to 77m²) with balconies (18m² to 24m²) and three 2-bedroom/2-bathroom (80m² to 132m²) apartments with balconies (30m²), 40 commercial tenant car parking bays, 10 motorbike bays and residential storage.
Level 3 (Level 4 on Plans)	This level contains 11 residential apartments including eight 1-bedroom/1-bathroom apartments (59m² to 77m²) with balconies (18m² to 24m²) and three 2-bedroom/2-bathroom apartments (80m² to 132m²) with balconies (30m²), 36 residential car bays, 4 commercial bays, 10 motorbike bays and residential storage.
Level 4 (Level 5 on Plans)	This level contains 12 residential apartments including 9 1-bedroom/1-bathroom apartments (59m² to 77m²) with balconies (18m² to 24m²) and three 2-bedroom/2-bathroom apartments (80m² to 132m²) with balconies (30m²), 21 residential car bays, 6 motorbike bays and residential storage.
Level 5 (Level 6 on Plans)	This level contains seven residential apartments including one 1-bedroom/1 bathroom apartment (71m²) with a balcony (40m²) and six 2-bedroom/2-bathroom apartments (92m² to 132m²) with balconies (50m² to 58m²), residential communal open space, sky lobby and residential storage.

Level 6	This level contains the plant mezzanine.
(Level 6 Plant	
Mezzanine)	
Levels 7-18	These levels each contain 1,779m <sup>2</sup> of office floor space and
	associated amenities including toilets and a lift core.
Level 19	This level contains the plant room.

In support of the proposal, the applicant advises that:

- "The adaptive reuse proposal aims to create a vibrant and sustainable mixeduse development that is both functional and aesthetically pleasing. The building's compact form and efficient layout will help to minimise its environmental footprint, while its mix of residential and commercial uses will contribute to the vibrancy and diversity of the surrounding neighbourhood".
- The apartments have been uniquely designed within the constraints of the existing structural system of the car park building, with existing columns and roofbeams incorporated into the internal layout and fitout of each. The facade of the carpark structure is proposed to be largely retained, with architectural inserts proposed that complement its robust aesthetic and are reflective of its new use. This includes greening the façade through the re-use of existing planting structure and addition additional vertical planting structures where appropriate.
- The design of the public space seeks to deliver a diverse yet practical space that is adaptable, functional and provided with high quality landscaping throughout, to create an inviting space for city centre residents, workers and visitors. It will also strengthen the pedestrian connections through the site and locality, offering an active local meeting point focused on pedestrian permeability that will complement the existing pedestrian path network in the immediate locality. The removal of the existing crossover to Pier Street, and the proposed public space, provide the foundations for a future east-west mid-block pedestrian link, commencing at Pier Street and extending along the southern lot boundary of the subject site.
- The 12 floor office accommodation above are centre around a central core that is informed by the existing structural system of the car park. This provides for a high level of adaptability and amenity for future tenants, with flexible floorplates that can accommodate a range of tenancy sizes".

#### **Background:**

The subject site is situated on the south-east corner of the intersection of Wellington Street and Pier Street, and has a total land area of 3,627m². It is bounded by Wellington Street to the north, existing commercial development to the east, the Pier Street Telephone Exchange and the former Perth Government Stores building to the south, and Pier Street to the west.

The site contains an existing multi-storey public car parking structure that provides 595 fee paying bays, along with an office tenancy at the ground floor level. The existing structure is proposed to be retained and adaptively reused as a key component of the proposed redevelopment.

## **Legislation and Policy:**

#### Legislation

Planning and Development Act 2005 s.162

City Planning Scheme No. 2 (CPS2) Clauses 6, 26, 27, 28, 33, 35 and 36 and the Victoria Precinct (P4) requirements

Planning and Development (Local Planning Scheme) Regulations 2015 – Deemed Provisions for Local Planning Schemes Clauses 60, 64, 67 and 68 Metropolitan Region Scheme

#### **State Government Policies**

Perth Parking Policy 2014 (PPP)

State Planning Policy 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning

State Planning Policy 7.0 – Design of the Built Environment

#### Local Policies

Public Notification/Advertising Procedure (2.2)

Design of Residential Development (3.1)

Mixed Residential/Commercial Development (3.7)

City Development Design Guidelines (4.1)

Building Heights and Setbacks (4.4)

Plot Ratio (4.5)

Bonus Plot Ratio (4.5.1)

Residential Design Policy (4.9)

Parking (5.1)

Loading and Unloading (5.2)

Bicycle Parking and End of Journey Facilities (5.3)

#### Consultation:

#### **Public Consultation**

The proposed development includes variations to the plot ratio, street building height and setback requirements of the City Planning Scheme No. 2(CPS2). As such, the application was advertised to the owners of the surrounding properties for a period of 14 days, closing on 24 March 2023.

The properties notified included those adjacent at 299 and 297 Wellington Street, 70-74 Murray Street and 98 Pier Street and those in the immediate vicinity at 50-56 Murray Street, 78 Murray Street, 103 Pier Street, 319-323 Wellington Street, 290 Wellington Street, 298-300 Wellington Street and 306 Wellington Street.

One (1) submission was received during the advertising period which was generally supportive of the proposal with some minor concerns relating to the adjacent site at 70-74 Murray Street. The comments received are included below:

Issue Raised	Officer comments	
Overshadowing	Noted.	

'overshadowing will have an adverse impact on the amenity of staff, patients and visitors who utilise the garden areas of our site for rest and respite' Within this inner-city location and there being no prescribed height limit, it is expected that there will be some degree of overshadowing to the adjoining properties. As outlined in the 'Building Height and Setbacks' section of this report the proposal is generally compliant with the prescribed height and setback requirements along the southern (common) boundary of the site.

The applicant submitted a Heritage Impact Statement as part of their development application which concludes that some overshadowing of the Perth Government Stores (fmr) site will occur during the mid-day to early afternoon period, being at its most significant during the winter months, with no overshadowing occurring during the summer months.

The overshadowing is a transient impact however, rather than a permanent blocking of sun penetration and therefore is not considered to have an undue impact on the adjoining properties.

#### **Construction Impacts**

'concerns regarding the impact on the Government Stores building given its proximity to the construction site'

'although the heritage report provided indicates that there is likely to be no likely damage during the construction of the development, it must be assumed that there will be significant ground disturbance at the boundary resulting in vibration and dust emissions whilst works are being undertaken'

#### Noted.

A condition is recommended to be imposed which requires the submission of a demolition and construction management plan. With a supporting advice note requiring the submission of specific details and measures to protect the adjoining heritage building - Perth Government Stores (fmr).

# Construction Management and Access

'concerns regarding proposed access arrangements to the development site and the necessary accommodation of the builder's equipment and staff'

#### Noted.

A condition is recommended to be imposed which requires the submission of a construction management plan. The plan will include details regarding traffic and pedestrian movements, construction laydown and contractor parking arrangements etc. and will be required to

comply	with	the	City's	Construction
Manage	ment	Plan	Pro For	ma.

#### Design Review Panel Advice

The proposed development was considered by the City of Perth Design Review Panel (DRP) on three (3) occasions being 3 March 2023, 11 May 2023 and 10 August 2023.

At the 9 March 2023 meeting, the DRP resolved to advise that the panel:

- 1. <u>SUPPORTS</u> the awarding of a 20% plot ratio bonus for the provision of a new residential use.
- 2. <u>DOES NOT SUPPORT</u> the awarding of a 20% plot ratio bonus for the provision of a new public space (public facility) as proposed in its current form, and requests the applicant provide further detail to demonstrate that:
  - a. the space provides a high level of amenity, including adequate access to sun and a pedestrian sitting environment (wind), to demonstrate it will provide a successful space for pedestrian respite.
  - b. the space is designed to ensure safety of users at all times of the day and night including users of the space after office hours and future occupants of the residential dwellings.
  - c. the space provides a balance of active (including commercial) and passive spaces to achieve a level of activity that attracts pedestrians to the space and encourages them to linger within the space.

The applicant is advised that a detailed wind analysis, a CPTED analysis and detailed and large scale sectional studies through the public space illustrating landscape, seating and levels, may assist in describing the proposed qualities of the new public space.

- 3. Generally <u>SUPPORTS</u> the proposal noting the following strengths of the proposed design:
  - a. A valuable benchmark example for the adaptive reuse within the City and an exemplar for repurposing the existing car park to minimize embodied carbon in construction.
  - b. The strong sustainability narrative, including adaptive reuse and use of renewable energy sources.
  - c. The proposed residential uses, in lieu of car parking to inject vitality and life into a podium streetscape that is currently inactive and unoccupied and successfully sleeve the retained car parking.
  - d. The retention of the existing car park vertical transport as the residential entry at Pier Street provides safe and visible access for residents and good streetscape activation.
  - e. The apartments are generally functional and well arranged with wide and generous private outdoor living spaces.
  - f. The provision of the podium terrace will provide good communal amenity to future occupants of the residential dwellings.

- g. The incorporation of a double height pocket plaza at the street intersection will provide a welcome addition to the public realm and the opportunity for pedestrian refuge.
- h. Generous floor to floor heights and a central core arrangement for the office plates provides for a functional and efficient use that will provide significant flexibility for single or multiple tenancies.
- i. A comprehensive and well considered landscape design proposal including on-grade and on-structure vertical planting.

## 4. <u>REQUEST</u> the proponent:

- a. Consider how an improved soffit and lighting treatment to the undercroft public space may signal a space that is designed for pedestrian occupation and distinguish the space from the footpath thoroughfare.
- b. Consider opportunities to reduce the inactive facades and wall at ground level (include façade to Wellington Street, office lobby and end of trip facilities) by introducing new active spaces or rearrange existing spaces to better activate the street and/or new public space.
- c. Consider introducing window openings to the level 1 flank walls of the adjacent apartments within the double height plaza space to create the sense of passive surveillance over the double height public space.
- d. Consider introducing e-scooter parking and charging within the new public space.
- e. Consider opportunities to mitigate the constrained floor to floor heights of the apartments, to maximise light penetration into the apartments given the depth of the spaces.
- f. Consider reconfiguring the layout of some of the apartments to eliminate access to bathroom facilities off dining/living areas and the potential for spaces to be enclosed and used as bedrooms without direct access to natural light and ventilation.
- g. Review the depth of the office space (window to core) noting the proposed depth may affect the indoor environmental quality of the space, noting the proposed sustainability targets.
- h. Review the proposed setbacks of the development, noting the development potential of the adjoining sites to the east and south and the potential for future development on these sites to reduce the level of amenity proposed as part of this development."

In response to the DRP's comments above, the applicant amended the proposal. The revised development was considered by the DRP on 11 May 2023, where it resolved to advise that the panel:

- 1. <u>SUPPORTS</u> the design modifications made in response to the DRP's comments on the design of the proposal, specifically the:
  - improved allocation of active and engaged uses within the undercroft public space providing the potential for enhanced passive surveillance over the public realm.

- b. improved apartment layouts and arrangements including enhanced privacy for the WC bathroom area from the living spaces.
- c. windows introduced to one flank wall adjacent to the double height north facing space.
- d. large scale sliding walls introduced to the units between bedroom and living space thereby amplifying access to natural light, view and vista.
- e. flexible, logical and serviceable office floor plates with adequate façade to core depths providing natural light, view and vista.
- f. strategically located security gates to manage dead end areas after hours.
- 2. <u>DOES NOT SUPPORT</u> the awarding of a 20% plot ratio bonus for the provision of a new public space (public facility) as proposed in the revised form. At this stage the Panel is not convinced that the proposed space satisfies the essential criteria of the Policy requiring it to be of 'an outstanding design quality and attractive and inviting to the public' for the following reasons:
  - a. the design, specifically the sunken nature of some of the space amplifies the challenges associated with the visual and physical connectivity to the public realm.
  - b. the absence of a double height volume to a greater proportion of the space visually constrains the attractiveness of the space and restricts access to direct sunlight.
  - c. the proposal does not adequately address the capacity for anti-social behaviour and occupation particularly outside of normal business hours.
  - d. the proposal does not adequately demonstrate a high level of amenity (comfort) for users of the space (suitable microclimate, suitable noise levels, access to sunlight, direct and perceived safety).
- 3. <u>ADVISES</u> that the panel may consider a plot ratio bonus for the proposed public space where:
  - a. the proposal demonstrates the qualitative and functional characteristics of the proposed public space and eliminates the concerns raised above.
  - b. one bay of units either side of and adjacent to the double height north facing space is removed to provide a more generous public offering commensurate with the plot ratio bonus being sought.
  - c. the soffit being used as an opportunity to represent a substantial component of 'how' the space will be perceived.
  - d. further detailed photo-realistic 3D studies are submitted of the internal undercroft space are submitted to illustrate the spatial quality during the day and night including access to sight lines, natural and artificial light.

Noting the above, the applicant undertook further revisions and refinement of the proposed development. The latest iteration of the proposal was considered by the DRP at its meeting on 10 August 2023, where the panel resolved to advise that it:

1. <u>SUPPORTS</u> the awarding of a 20% plot ratio bonus for the provision of a new public space (public facility) for the following reasons:

- a. The site is located in an area where there is an identified need for additional public amenity and the proposal provides a dedicated public space which will provide a refuge from the busy street traffic and amenity to the general public and future occupants of the site and immediate area.
- b. The design provides a generous double height space at the intersection of Pier and Wellington Street that incorporates an engaging artwork in the form of an attractive tree structure.
- c. The space includes high quality landscape including hard finishes, materiality and soft landscape and an enhanced soffit lighting solution contributing to an attractive and inviting space for the public.
- d. The design incorporates active, engaged and legible building entries, an appropriate proportion of active tenancies and 24-hour on-site security to promote safe use of the space 24 hours a day.

#### 2. ACKNOWLEDGES that:

- a. This proposal remains an extremely important regeneration project for the City with the capacity to re-activate an inert and under-utilised area of the City with a permanent residential and worker community.
- b. The capacity for this project to support an 'undercroft' public space is contingent on the unique locational characteristics including an inactive and poorly surveilled public domain footpath, adjacency to a busy traffic dominated street and the ability for the space to be successfully activated by the proposed resident and worker community.
- c. The Proponent has made significant efforts to simplify and activate the proposed public space and provide adequate levels of access, passive surveillance and amenity.
- d. The use of an instructive benchmark, being Caixa Forum in Madrid, provides an exemplar which assists in describing and understanding the potential for an undercroft public space to make a successful public offering.
- e. The 3D images illustrate a space that has the capacity to be welcoming, safe and amenable for both occupants of the building and the general public.

#### 3. ENCOURAGES the proponent to:

- a. Continue to refine the design of the public space to resolve some of areas for review identified in the Wind Report and CPTED Report.
- b. Consider the use of an environmentally sustainable design measurement tool to verify and advertise the ambitious approach to reducing carbon.

The following sections include details of the extent to which the development plans respond to the design matters raised by the DRP.

## **Planning Assessment:**

#### Land Use

The subject site is located in the City Centre Use Area of the Victoria Precinct 4 (P4) of CPS2. While the predominant uses in the precinct will be medical and allied uses,

commercial uses such as showrooms, banks, buildings societies, travel agencies, consulting rooms, restaurants, cafes and serviced apartments, which will contribute to the amenity of nearby community facilities and business uses, may be permitted, mainly south of Murray Street.

The application proposes to adapt the existing car park building to accommodate a range of uses including 'Residential', 'Office', 'Retail (General)'. The application also seeks flexibility with regards to the ground level commercial tenancy to accommodate 'Dining', 'Mixed Commercial' and 'Retail (Local)' uses. 'Office', 'Dining', 'Mixed Commercial' and 'Retail (Local)' are all contemplated ('C') uses in the City Centre Area of the Victoria Precinct 4 under CPS2. 'Residential' is also contemplated ('C') use within the Precinct however it is prohibited where it fronts the street at pedestrian level. It is noted that all of the residential apartments are accommodated above ground floor level, with no apartments being located on the ground floor adjacent to the Wellington Street or Pier Street frontages.

The proposed mix of uses are considered to be consistent with the precinct statement of intent in contributing to the local day and night-time economy in support of the aforementioned commercial uses and enhancing the vibrancy of the area. However, it is recommended that the ground floor tenancies not include 'Mixed Commercial' uses as being automatically accommodated. This is based on the range of uses within the land use category being too diverse (e.g. car wash, funeral parlour, veterinary centre etc.) and not appropriate to the subject site, development or surrounding context.

#### Local Planning Strategy

The site is located within the future 'Central Perth Neighbourhood' under the City's Local Planning Strategy endorsed by the Western Australian Planning Commission in May 2023.

This future 'Central Perth Neighbourhood' will continue to support the capital city commercial, retail, entertainment, cultural and civic functions of Central Perth and increase the residential population to encourage a stronger weekend and night-time economy.

The site is located within the McIver and Claisebrook Station Precinct Renewal area identified under the Local Planning Strategy. Within this precinct, the Strategy identifies growth opportunities including optimising development opportunities on underutilised land to accommodate resident population, business and employment growth. The strategy also identifies enhancement of the public realm within this area.

The proposed development is consistent with the intent of the Station Precinct Renewal identified in the Local Planning Strategy.

## **Development Requirements**

New buildings are to contribute to the existing streetscapes, heritage character and integrity of the Precinct, and should have regard to the scale, character and pattern of existing streetscapes and provide interesting facade detail. Development will have a nil street setback and be of a low scale along the street frontage. Any additional building height will be setback from all lot boundaries. Views of landmark buildings such as St Mary's Cathedral and the Government Printing Office will be protected. Public spaces will continue to be improved and footpaths are to be widened and made

more attractive with tree planting, public seating, street lighting and the floodlighting of buildings.

The proposal's compliance with the relevant development standards of CPS2 is summarised below (Note figures and description in **bold** signify non-compliance with the development standards).

Provision	Requirement	Proposal	Assessment
Maximum Plot	Base Plot Ratio: 5:1	7:1 (25,389m²)	Variation
Ratio:	(18,135m <sup>2</sup> )	inclusive of a plot	Sought
		ratio bonus of	
	Maximum Bonus	40% (7,254m²) on	
	Plot Ratio of 50%	the basis of:	
	consisting of a	- a 20% (3,627m²)	
	combination of any of the below:	bonus for including a new	
	Special Residential	residential use;	
	Development (20%	and	
	maximum)	- 20% (3,627m²)	
	,	bonus for	
	Residential	provision of	
	Development (20%	public facilities –	
	maximum)	public space	
	11. 2		
	Heritage		
	Conservation/Public Facilities/Transfer		
	Plot Ratio (20%		
	maximum)		
	maximam)		
Maximum Street (Podium) Building Height:			
Wellington Street	21 metres	21 metres	Complies
Pier Street			
	14 metres	21 metres	Variation
			Sought
Massimassi			
Maximum Building Height:	No prescribed	78.5 metres	Complies
Building Height:	height limit	70.5 11161165	Complies
	noight mint		
Setbacks			
Wallington Street			
Wellington Street (north)			
Lower Building	Nil	Nil	Complies
Level	1.411	1 411	Joniphos
Upper Building	5 metre setback up	3.7 metre setback	Variation sought
Levels	to a height of 65	up to a height of	

	metres and a 10 metre setback thereafter	73.6 metres and a 10.1 metre setback to plant above	
Pier Street (west) Lower Building Level	Nil	Nil	Complies
Upper Building Levels	5 metre setback up to a height of 65 metres and a 10 metre setback thereafter	0.9 metre (minimum) to 6.5 metre (maximum) setback up to a height of 73.6 metres and an 8.1 metre setback (minimum) to 12.4 metre (maximum) setback to plant above	Variation sought
Side Setback – (East) Lower Building	Nil (no openings), 4	Nil (no openings)	Complies
Level Residential uses	metres (with openings)	Tim (ne openinge)	Compiled
Upper Building Levels Commercial uses	3 metres (up to 65 metres in height); 6 metres (over 65 metres in height)	3 metres to 3.7 metres (above 65 metres)	Variation sought
Rear Setback (South)			
Lower Building Level Residential uses	Nil (no openings), 4 metres (with openings)	Nil (no openings) to 3.5 metres (with openings)	Variation sought
Upper Building Levels Commercial uses	3 metres (up to 65 metres in height); 6 metres (over 65 metres in height)	6.8 metres	Complies
Car Parking:			
Commercial Tenant	73 bays (maximum)	73 bays	Complies
Residential	77 bays (maximum)	57 bays	Complies

Bicycle Parking & End of Trip Facilities:			
Commercial Tenant	61 bays (minimum)	190 bays	Complies
End of Trip facilities	5 male, 5 female showers (minimum)	9 male, 9 female showers	Complies

Bonus Plot Ratio for the development can be granted in accordance with Clause 28 of the CPS2 under the City's Bonus Plot Ratio Policy 4.5.1.

Variations to the maximum street building height and setback provisions applicable to the development can be granted in accordance with Clause 36 of the City Planning Scheme and provided the decision maker is satisfied that:

#### "36(3)(c)

- (i) if approval were to be granted, the development would be consistent with:
  - (A) the orderly and proper planning of the locality;
  - (B) the conservation of the amenities of the locality; and
  - (C) the statement of intent set out in the relevant precinct plan; and
- (ii) the non-compliance would not have any undue adverse effect on:
  - (A) the occupiers or users of the development;
  - (B) the property in, or the inhabitants of, the locality; or
  - (C) the likely future development of the locality."

#### **Bonus Plot Ratio**

In accordance with the provisions of CPS2, the site is eligible for 50% maximum bonus plot ratio which may be comprised of:

- Public Facilities and Heritage: Maximum 20% bonus (includes public spaces, pedestrian links, provision of specific facilities on private land and conservation of heritage places).
- Residential Use: Maximum 20% bonus.
- Special Residential Use: Maximum 20% bonus.

Any application seeking a plot ratio bonus under clause 28 of CPS is to be referred to the City's DRP. As detailed above, the application was referred to the City's DRP on 3 March 2023, 11 May 2023 and 10 August 2023, therefore satisfying this requirement.

The application is seeking a total of 40% bonus plot ratio for a new residential use and a new public facility (public space). This is based on the application complying with the requirements specified under clause 28 of CPS2 and the City's Bonus Plot Ratio Policy 4.5.1 as follows.

#### Bonus Plot Ratio for a Residential Use

Developments which incorporate a 'Residential' use may be awarded bonus plot ratio of up to 20% where it is located within the area indicated on the Residential Bonus Plot Ratio Plan contained within CPS2. Whilst there is no requirement for the residential use in a mixed-use development to form part of the base plot ratio, the bonus plot ratio floor area must be used for the residential use.

The application is seeking the maximum award of 20% bonus plot ratio for the provision of a new 'Residential' use. The applicant has provided a detailed report indicating general compliance with the City's Residential Design Policy 4.9, which the applicant summarises as follows:

"The City's Plot Ratio Policy states that any new residential use seeking the award of bonus plot ratio must be designed in accordance with the City's Policy 4.9 – Residential Design Policy and, in the case of a mixed-use development, the design of the development must ensure that conflict between the uses is minimised. Having due regard to the above, the proposed new residential land use warrants the award of bonus plot ratio, on the basis that:

- The subject site is identified on the Residential Bonus Plot Ratio Plan as being eligible for the award of a maximum 20% residential plot ratio bonus, and the proposed development will not exceed the maximum 50% plot ratio bonus available under the City's Maximum Bonus Plot Ratio Plan;
- The proposed residential apartments have been designed to achieve consistency with the principles under City's Residential Design Policy, as discussed in detail in Section 5.6.2 of this report;
- The proposed residential apartments are provided with a separate lobby and lift core, accessed directly off Pier Street;
- The proposed residential apartments are contained on separate floors to the proposed commercial land uses, to minimise potential land use conflict;
- The proposed new residential land use will assist in consolidating Perth as a 'living' city, in accordance with the aims and objectives of the City's draft LPS; and
- The relevant bonus plot ratio floor area is used entirely for residential dwellings, and not for shared ancillary facilities or amenities, in accordance with the provisions of the Policy."

In addition to the City's Policy 4.9, the City's Local Planning Strategy seeks a residential population target of 12,375 and dwelling target of 6,219 by 2036 within the Central Perth neighbourhood, an increase of 6,703 persons or 3,623 dwellings since the 2016 census. The proposed dwellings, enabled by the provision of bonus plot ratio, will increase the number of residents within the Central Perth neighbourhood to align with the City's Local Planning Strategy and bring additional life to the City.

A large proportion of the Central Perth's growth forecasts are anticipated to occur within DevelopmentWA's Perth City Link and Elizabeth Quay redevelopment precincts. The distribution of residential development further across the city, outside of these key areas, will ensure sufficient population for services and facilities outside office hours and will provide greater economic support for local businesses especially at night and on weekends and help the city become more self-sustaining and resilient.

The City's Strategic Community Plan aspires to promote world-class architecture within the city. New developments must contribute positively to the Capital City environment and demonstrate leadership and creativity in design quality. The adaptive reuse of the existing car park is a valuable benchmark example demonstrating

leadership in the reuse of an ageing structure. The proposed residential uses, in lieu of car parking, will inject vitality and life into a podium streetscape that is currently inactive and unoccupied. The creativity in the design of the apartments ensures the internal amenity for future occupants is not compromised by the existing building structure.

Noting the above, the proposal generally satisfies the Policy requirements to be awarded bonus plot ratio of 20% for the provision of a Residential use. As outlined previously, the City's DRP advised that in relation to the above, the development satisfies the criteria under the City's Bonus Plot Ratio Policy 4.5.1 for the awarding of 20% bonus plot ratio for a new 'Residential' use, therefore the proposed bonus plot ratio can be supported in accordance with clause 28 of CPS2.

#### Bonus Plot Ratio for a Public Facility (Public Space)

Developments which incorporate public facilities may be awarded bonus plot ratio of up to 20% where it is located within the area indicated on Public Facilities Bonus Plot Ratio Plan contained within CPS2. The facilities and/or amenities provided must result in the provision of a "public good" which will benefit the population of the city and the community as a whole, enhance enjoyment of the city, and contribute positively to the overall physical environment and ambience of the city. The nature of the facility must be such that it would be unlikely to be included as an integral part of a development in the event that bonus plot ratio was not on offer and that it is fulfilling an identified or demonstrated strategic need.

The application is seeking the maximum award of 20% bonus plot ratio for the provision of a public facility being the provision of a public space at pedestrian level, interfacing with both Wellington Street and Pier Street.

The applicant has provided the following information and justification for the public facilities to satisfy the applicable requirements of the City's Bonus Plot Ratio 4.5.1:

"The proposed 1,543m² public space is located on the western portion of the subject site and is achieved via a complete redesign of the lower floors of the existing parking structure, to introduce a fully covered public space that provides extensive deep soil landscaping opportunities and tiered seating throughout.

With respect to the provisions of the City's Plot Ratio Policy, the proposed public space is entirely consistent with the applicable Essential Criteria for the award of bonus plot ratio. on the basis that:

- The proposed public space offering is strategically located abutting key pedestrian routes that connect the Perth Railway Station with the eastern portion of the Perth CBD, where suitably designed public spaces are undersupplied and in high demand.
- The covered and carefully curated nature of the proposed public space provides a key point of difference to other open public space areas in the area, with the proposal contributing to the provision of diverse and attractive space for the city centre workforce, and complementing the existing public space in the vicinity of the subject site;
- The proposed public space is of a high quality of design and includes extensive landscaping and seating opportunities, complemented by high levels of weather protection, suitable lighting and active edge land uses. This will ensure the delivery of an outstanding public realm that will be both attractive and inviting to the public; and

• The proposed public spaces will be freely available and accessible to the public throughout the year, with year-round useability significantly enhanced via the covered, weather-protected nature of the proposed public space."

The City's Local Planning Strategy identifies a large portion of the Central Perth neighbourhood as being within an 'open space gap'. Combined with the City's ambitious population forecast, the demand for quality open space will become even greater, with additional spaces unlikely to be delivered without integration into development sites. The proposed modifications to the existing car park structure, combined with the inclusion of both a residential and worker population, provides a unique opportunity for an inert and underutilised area of the city to be provided with public space.

The unique locational characteristics of this site, adjacent to a busy traffic dominated street, combined with the reuse of the existing car park structure and the ability for the space to be activated by the proposed resident and worker population were key considerations in determining the level of support for the public space.

The proponent made significant efforts to simplify and activate the proposed undercroft public space and provide adequate levels of access, passive surveillance and amenity. The configuration of the space, combined with the levels and retail offerings ensures the space is inviting to the public, with the retail and commercial lobbies providing passive surveillance, whilst being a background feature to the public space.

The double height space at the intersection of Pier and Wellington Street inclusive of an attractive tree sculpture, high quality landscaping including hard finishes, materiality and soft landscaping and an enhanced soffit lighting solution contributes to delivering an attractive and inviting space for the public. A list of conditions is recommended to be imposed which will ensure the intricate detailing shown in the perspectives is carried through to building permit.

Based on the above it is considered that the awarding of 20% bonus plot ratio, as recommended by the City's DRP, is consistent with the City's Bonus Plot Ratio Policy 4.5.1 in terms of the provision of a public space and can be supported. As outlined previously, the applicant has sufficiently addressed the design matters raised by the DRP in relation to the public space.

#### Building Design and Presentation to Street

State Planning Policy 7.0 - Design of the Built Environment (SPP 7.0) addresses design quality and built form outcomes seeking to deliver the broad economic, environmental, social and cultural benefits that derive from good design outcomes. SPP 7.0 sets out the objectives, measures, principles and processes which apply to the design and assessment of built environment proposals through the planning system. It is considered that the applicant has provided sufficient justification to demonstrate the proposed development satisfies the ten design principles of SPP 7.0 (refer to Attachment 8 – Address of State Planning Policy 7.0 Design Principles).

The City's DRP commended the applicant for its reuse of an existing multi storey car park within the city centre. The DRP also acknowledged the strengths of the design response and the importance of the regeneration project for the City with the projects capacity to re-activate an inert and underutilised area of the City with a permanent residential and worker community.

The City's DRP requested that the applicant continue to refine the design of the public space to resolve some areas for review identified in the Wind and CPTED reports. The DRP also requested the applicant consider the use of an environmentally sustainable design measurement tool to verify and advertise the ambitious approach to reducing carbon.

In relation to the sustainable design measurement tool, the applicant has reiterated the adaptive reuse of the building which will result in significant savings of embodied carbon when compared to the construction of a new building. As there are currently no specific energy rating requirements under CPS2 an advice note has been included in the recommendation to the encourage the owner/developer to register the development for a formally recognised sustainability rating certification.

With regards to the areas for review identified in the Wind and CPTED reports, two conditions have been recommended to be imposed which requires final details and any modifications to these spaces to be resolved prior to the submission of a building permit.

Overall, it is considered that the development is contemporary in design with a variety of materials, finishes and colours being used to accentuate features and emphasise the sustainable elements and functions of the project. However, it is recommended any approval be conditioned to require the applicant to submit final details refining the remaining matters outlined above for the City's approval at the building permit stage.

#### **Building Height and Setbacks**

The development proposes variations to the podium height and setback requirements of CPS2 and has therefore been assessed against local planning policy 4.4 – Building Heights and Setbacks (LPP 4.4).

The overall height of the building complies with the requirements of CPS2 and local planning policy 4.4 – Buildings Heights and Setbacks (LPP 4.4) whereby there is no prescribed maximum height limit. Although it is noted that the proposed development will be taller than the existing development in the immediate area, the development is in keeping with the future development of this area, with the site opposite at 319-335 Wellington Street being approved with a maximum height of 30 storeys.

The development proposes a variation to the street building height along Pier Street, which specifies a 14m maximum, noting a 21m maximum is permitted along Wellington Street. In this instance, the proposal involves the retention of the existing car park structure at the subject site, which will serve as the podium base for the proposed office tower. The height of the existing car park structure is considered compatible with the existing street heights in the immediate vicinity, noting there are no podium and tower developments in the general area.

Variations are proposed to the street setback requirements at the upper building levels along Wellington Street and Pier Street. The applicant has advised that the variations are partially due to the irregular shaped lot which results in varying setbacks along the boundary. The variations are also minor and will still allow a clear podium and tower built form at the street frontage and provide an appropriate corner statement at the intersection to Wellington and Pier Streets.

The proposed development is further seeking variations to the side and rear setback requirements under LPP 4.4. Under section 6.2.1 of LPP 4.4 the side and rear setbacks of buildings should ensure there is adequate natural daylight access, ventilation and privacy from within, and outlook from the buildings, appropriate to their use and location within the city centre environment.

In addition, section 6.2.1 of LPP 4.4. encourages separation of upper building levels to provide an attractive city skyline and outlook from the public realm by enabling daylight access and opening up views of the sky.

The proposed development includes a minor setback variation to the rear lower level setback, whereby a setback of 4 metres is required where there are openings and a 3.5 metre setback is proposed. The southern boundary is shared with a right of way and 70-74 Murray Street. 98 Pier Street is located to the south of the right of way, which is used as an exchange tower. Both existing developments at 70-74 Murray Street and 98 Pier Street, have no major openings along the elevation facing the existing car park. Due to this, the variation will have no adverse amenity impact in terms of natural daylight access, ventilation, privacy from within or outlook from buildings, and the variation can be supported in accordance with section 6.2.1 of LPP 4.4 and clause 36(3) of CPS2. In addition, the development retains the existing rear setback of the building to the right-of-way.

The reduced setbacks to the southern dwellings are dictated by the form of the existing car park structure. Of the 51 dwellings proposed, 14 dwellings are located on the southern side of the building. The applicant has minimised the number of dwellings on the southern side of the building with only two units being proposed on floors 2, 3 and 4; three units on floor 5; and five dwellings on floor 6. All five dwellings on the 6<sup>th</sup> floor will have access to natural light to their balconies due to the commercial component of the development being setback further from the lower floors. The remaining dwellings have been designed with extensive glazing in the exterior façade and shallow apartment layouts to maximise natural light into habitable rooms.

A variation is also proposed to the upper level side setback requirement (east) of LPP 4.4, whereby a 6 metre setback is required above a building height of 65 metres and a 3.7 metre setback is proposed. The applicant has advised that this enables the side setbacks to be maintained for the full height of the tower up to approximately 78.5 metres in height.

The DRP requested the applicant to review the proposed setbacks of the development, noting the development potential of the adjoining sites to the east and south and the potential for future development on these sites to reduce the level of amenity proposed as part of this development. The applicant in their response advised that the setbacks to the southern and eastern lot boundaries are fully compliant with the City of Perth's requirements up to 65 metres height, with the only variation to side and rear lot boundaries being the maintenance of a setback of 3.8 metre setback (in lieu of the required 6 metres) for the full height of the office tower (approximately 73.5 metres). This variation is considered minor and will not unduly impact the level of amenity proposed as part of the development in the event of redevelopment of the adjacent site to the east.

50-56 Murray Street and 212-214 Wellington Street form part of the Royal Perth Hospital and campus and are located south-east to the subject site. 212-214 Wellington Street includes a small garden area to the north of the existing Ainslie House building. During the consultation period, concern was raised regarding

overshadowing to the garden areas of the Royal Perth Hospital campus. The overshadowing plans show shadow falling on the rear garden between 1pm and 3pm on 21 June, with the garden area being completely unshadowed between 9am and 12pm on 21 June and all hours on 21 December. Based on the lot size and corresponding building shape and orientation, a development which achieves the lot boundary setbacks would not result in any less overshadowing to this property.

The street setback and lot boundary setback variations are not considered to adversely impact on the amenity of the adjoining sites, by way of bulk, overshadowing, loss of light or ventilation or any unreasonable impact on views/outlook.

Given the above, the street building height and setback variations are supported in accordance with the objectives and principles of the Building Heights and Setbacks Policy and the relevant provisions of Clause 36 of CPS2. In particular, the form of the building and site location/orientation means the additional height above the podium will have minimal impact on the provision of sunlight to surrounding streets, public places and buildings in the middle of the day as recommended by the Policy.

#### Noise and Amenity

The site is located within 60 metres of a 'passenger railway' (Thornlie line) as identified within the Western Australian Planning Commission's State Planning Policy 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning (SPP5.4).

In relation to noise mitigation, the applicant submitted an Acoustic Report demonstrating the proposed development can be designed and managed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997*. Whilst City officers are generally supportive of the report contents and findings, it is recommended that that any approval include a condition requiring a final detailed acoustic report to be submitted at the building permit stage. The report shall address detailed design matters such as mechanical equipment, communal facilities and the requirements of SPP5.4.

#### Wind

The applicant submitted a preliminary Wind Impact Statement in support of the proposed development which considered the form and exposure of the proposed development, nominated criteria for various public areas according to their function and impact on likely wind conditions.

The assessment found that based on the design of the development and the wind conditions around the site with the wind climate, the wind conditions would be classified as suitable for pedestrian walking along Wellington Street, and pedestrian standing along Pier Street. The wind conditions in the undercroft area to the west of the site are governed by pressure-driven flow, with expected classification as suitable for pedestrian standing with pockets of calmer flow in the building articulations and landscaped areas. Through the undercroft, local amelioration would be expected to be required for any outdoor café areas, or areas for more sedentary activities.

The Wind Impact Statement concludes that the design of local amelioration to improve the wind conditions for the intended use of the space is to be developed during detailed design. It is also noted that the DRP recommended that further investigation of the wind impact of the proposed development be undertaken noting the potential impact on the public space area.

Based on the above, it is recommended that these matters be further investigated and mitigated (where necessary) as part of the submission of a final Wind Impact Statement at the building permit stage.

#### Conclusion:

The proposal presents an opportunity to develop a benchmark example for the adaptive reuse of an existing multi storey car park within the city centre. The proposed reuse of the existing building will inject vitality and life into a podium streetscape that is currently inactive and unoccupied. The revisions to the public space area including the submission of an instructive benchmark and 3D images to illustrate a space that has the capacity to be welcoming, safe and amenable for both occupants of the building and the general public, adequately addressed the concerns and recommendations of the DRP in the initial reviews.

While the proposed development incorporates variations to the plot ratio, street building height and setback development standards for the site, for the reasons outlined in the report, it is considered that if approval were to be granted, the development would be consistent with the orderly and proper planning of the locality, the Statement of Intent for the Victoria Precinct and the Local Planning Strategy. Furthermore, it has been assessed that the non-compliances would not have any undue adverse effect on the properties in the locality or the likely future development of the locality and can therefore be supported within clause 36 of CPS2.

In response to the concerns of the City's DRP, the applicant provided revised plans and elevations which have addressed the public space form, external appearance and landscaping matters. It is noted that some specific design matters, as outlined in this report, will require further consideration and resolution at the detailed design stage and are recommended to be conditions as part of any approval.

Based on the above, it is considered that the proposed development for the adaptive reuse of the existing multi storey car parking including the construction of 51 multiple dwellings, a 12 level office tower and new public plaza should be supported in accordance with the objectives, requirements and principles of CPS2 and its associated local planning policy framework.

# Attachment 1:

Location Plan

# Attachment 1 – Location Plan

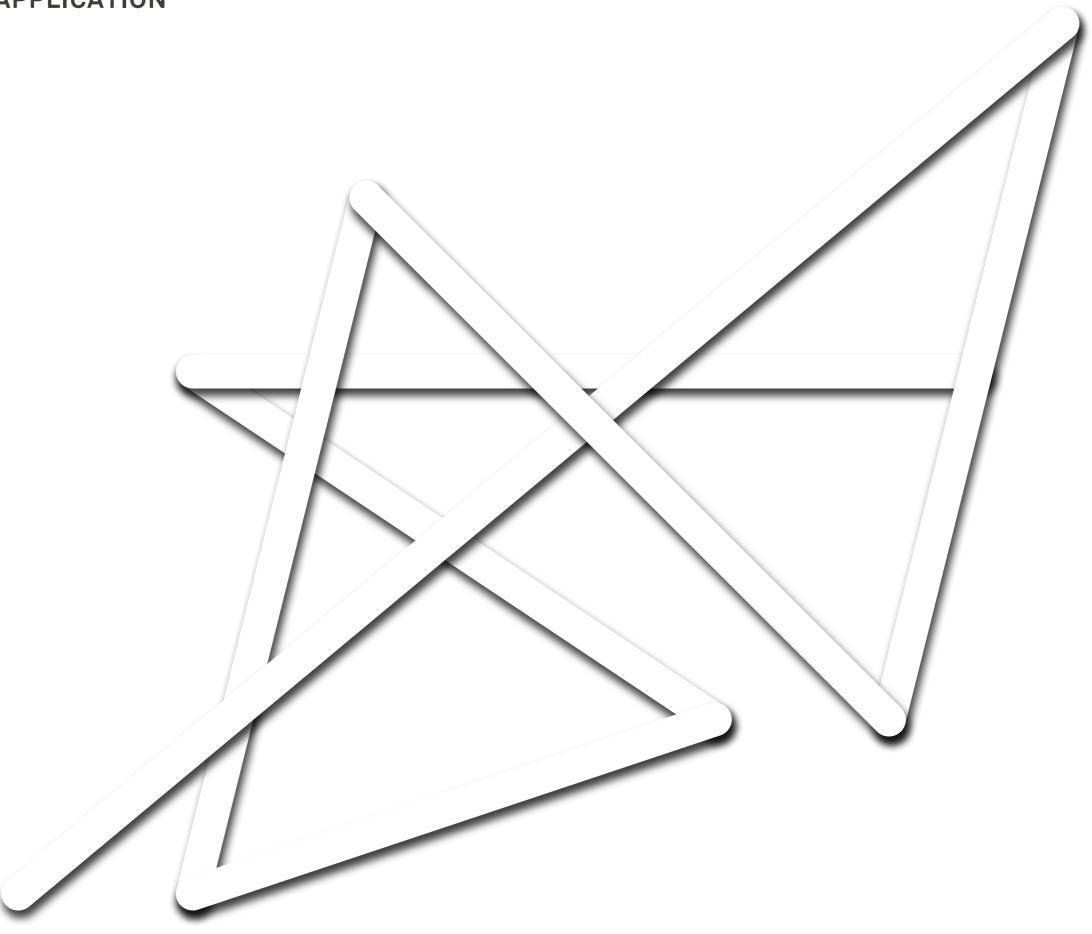
No. 301-311 Wellington Street, Perth



# Attachment 2:

**Development Plans** 

# 102 Pier St PERTH DEVELOPMENT APPLICATION

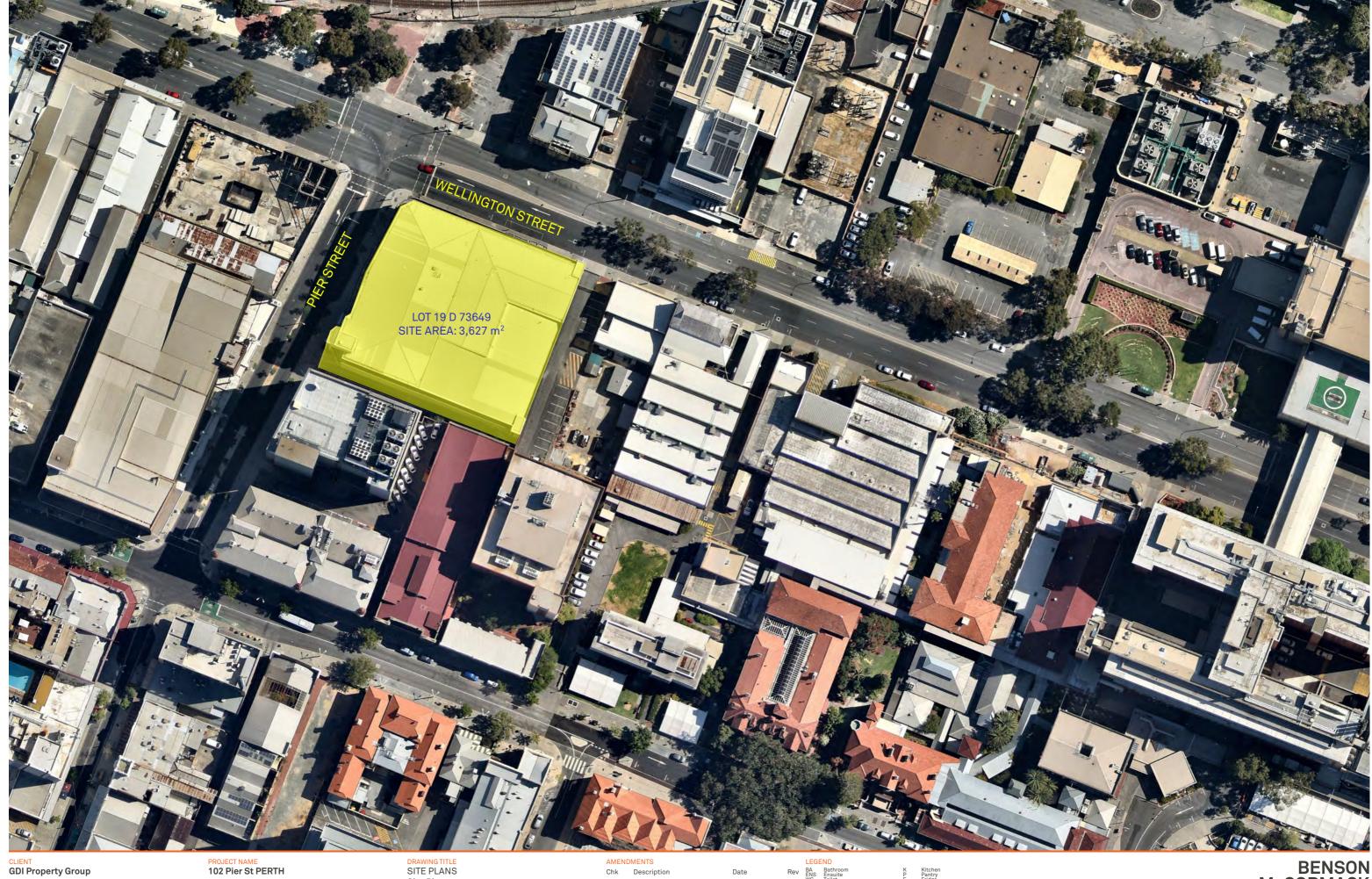


**BENSON** McCORMACK **ARCHITECTURE** 

	No.	Rev	Name	Scale
GENERAL				
	001-001	02	Title Sheet	
	001-002	02	Index	
SITE PLANS				
	100-001	02	Site Plan	
	100-002	01	Site Analysis	1:2000
	100-003	01	Site Photographs	
	100-004	01	Site Photographs	
GA PLANS			2130 1 1120 8 116112	
G/11 2/110	110-010	06	LEVEL 1 [GROUND]	1:250
	110-020	05	LEVEL 2	1:250
	110-030	04	LEVEL 3	1:250
	110-040	04	LEVEL 4	1:250
	110-050	05	LEVEL 5	1:250
	110-060	05	LEVEL 6 (SKY LOBBY)	1:250
		04		1:250
	110-070		LEVEL 10 PLANT DOOM	
	110-190	02	LEVEL 19 - PLANT ROOM	1:250
OA ELEVATIONO	110-200	01	LEVEL 20 - ROOF PLAN	1:250
GA ELEVATIONS				
	210-001	04	North Elevation	1:500
	210-002	03	East Elevation	1:500
	210-003	04	South Elevation	1:500
	210-004	04	West Elevation	1:500
GA SECTIONS				
	310-001	02	Section AA	1:500
	310-002	02	Section BB	1:500
	310-003	02	Section CC	1:500
	310-004	02	Section DD	1:500
GA DETAIL SECTIONS				
	311-001	01	Section DA-DD	1:100
	311-002	01	Section DE	1:100
SCHEDULES				
	600-001	04	Area Schedule	
PLOT RATIO DIAGRAMS				
	710-001	03	PLOT RATIO Measurement	1:400
	710-002	03	PLOT RATIO Measurement	1:400
	710-003	03	PLOT RATIO Measurement	1:400
	710-004	03	PLOT RATIO Measurement	1:400
SHADOW DIAGRAMS				
	720-001	01	Shadow Plan Diagrams Winter	
	720-002	01	Shadow Plan Diagrams Summer	
	720-003	01	Shadow 3D Diagrams Winter	
	720-004	02	Shadow 3D Diagrams Summer	
	720-005	01	GF Solar Access	
SUPPLEMENTARY DRAWINGS				
	810-001	02	Bin Room Layout	1:50
	810-002	02	Bin Room Layout	1:100
FINISHES BOARD		-		
	860-001	01	Finishes Board	
3D VIEWS	300 001			
	900-001	02	North West	
	900-001	01	Landscape	
	300 002	<b>3</b> 1	24.1400440	







ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT No 2201A PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE SITE PLANS Site Plan DA-100-001

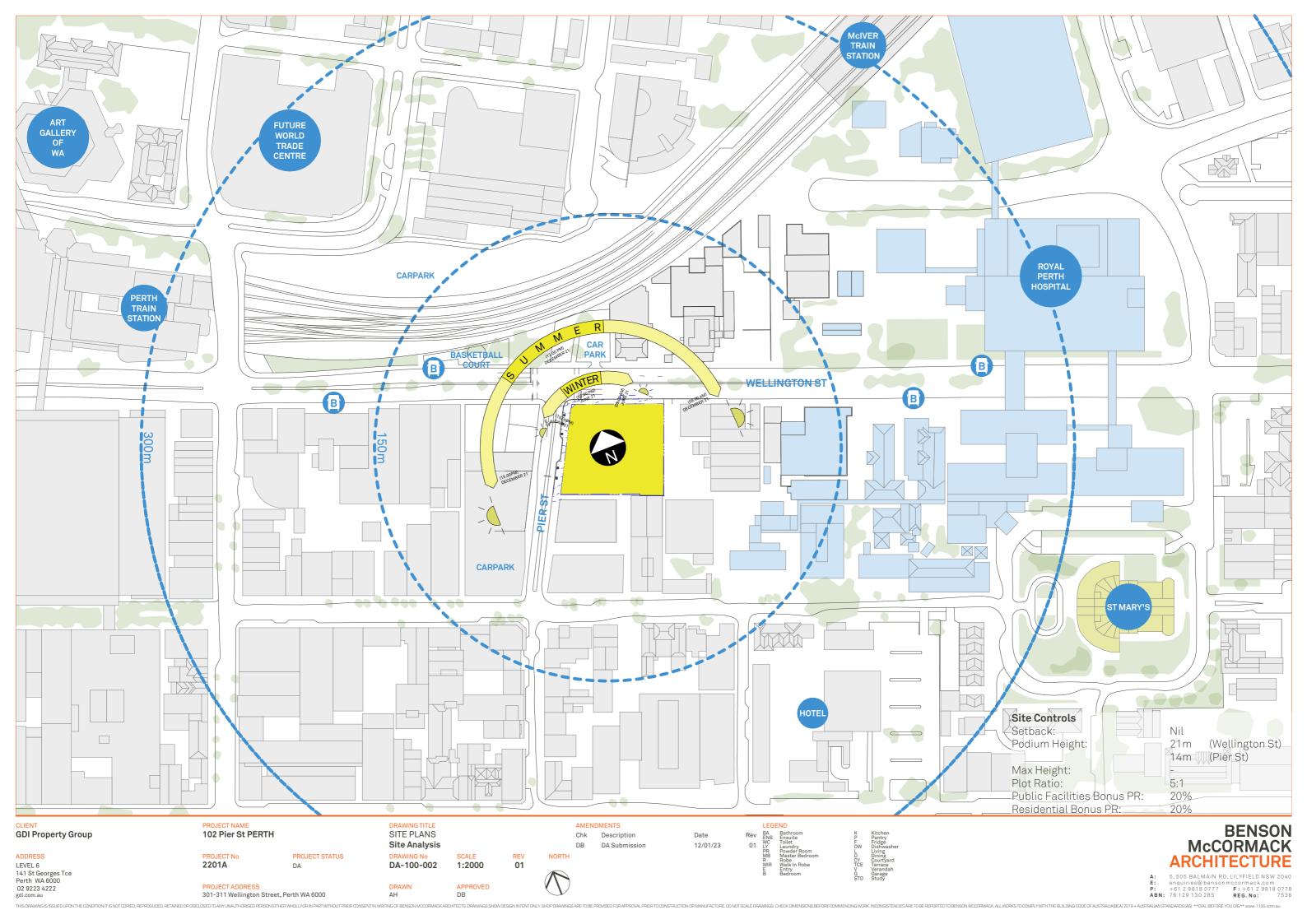
DB

Chk Description DA Submission

12/01/23

BENSON McCORMACK ARCHITECTURE

A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@bensonmccormack.com
P: +61 2 9818 0777 F: +61 2 9818 0778
ABN: 76 129 130 285 REG.No: 7536





CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH PROJECT No 2201A

DRAWING TITLE SITE PLANS Site Photographs DRAWING No DA-100-003

REV 01

Chk Description DB DA Submission

12/01/23

BENSON McCORMACK ARCHITECTURE

A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@bensonmccormack.com
P: +61 2 9818 0777 F: +61 2 9818 0778
ABN: 76 129 130 285 REG.No: 7536

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000







**CORNER PIER & WELLINGTON STREET** PIER STREET ELEVATION PIER TOWARDS WELLINGTON STREET









EXISTING STRUCTURE LEVEL 6 VIEW OVER PIER STREET LEVEL 5 VIEW OVER WELLINGTON STREET

CLIENT
GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE SITE PLANS

Site Photographs DA-100-004

APPROVED DB

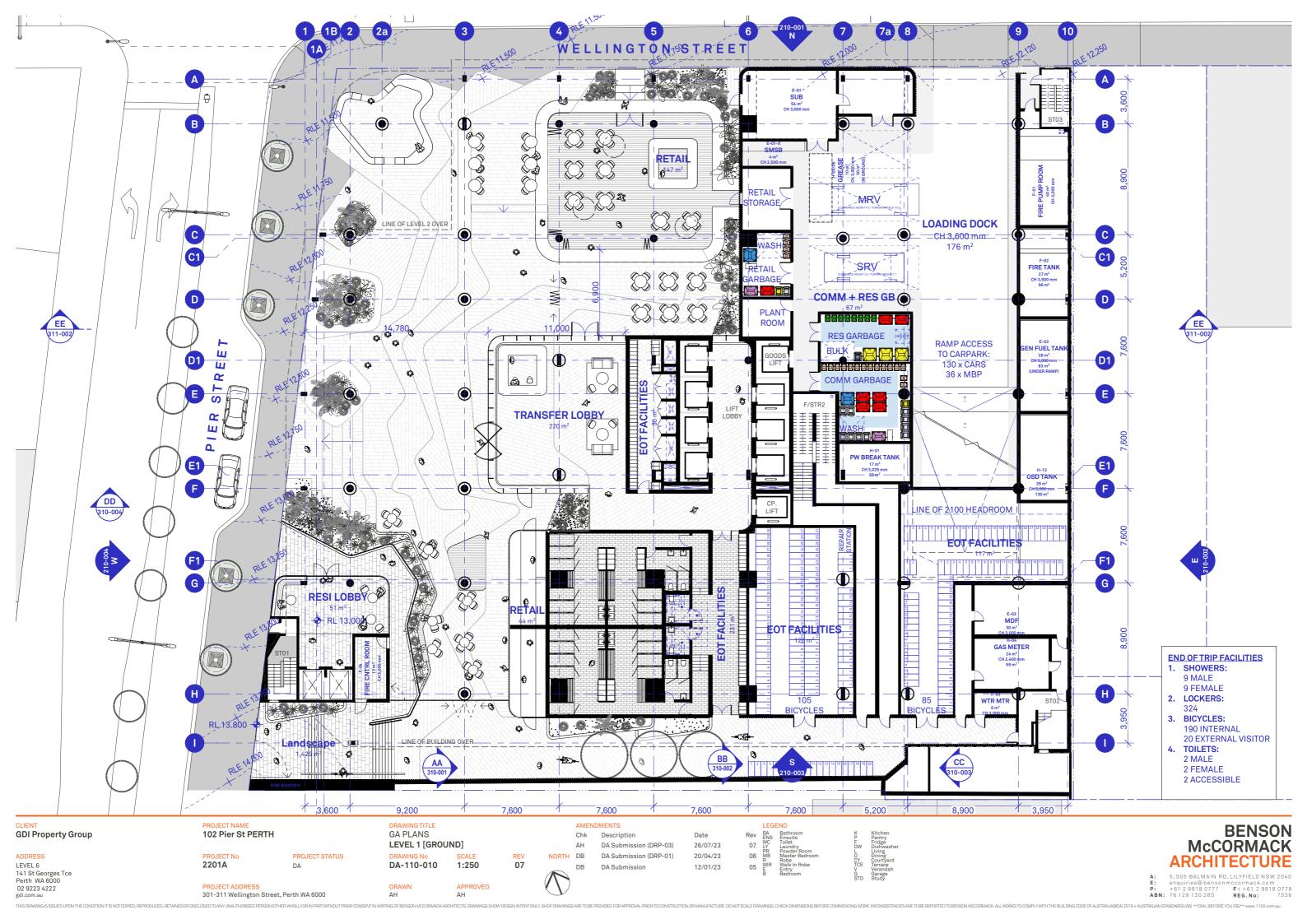
REV 01

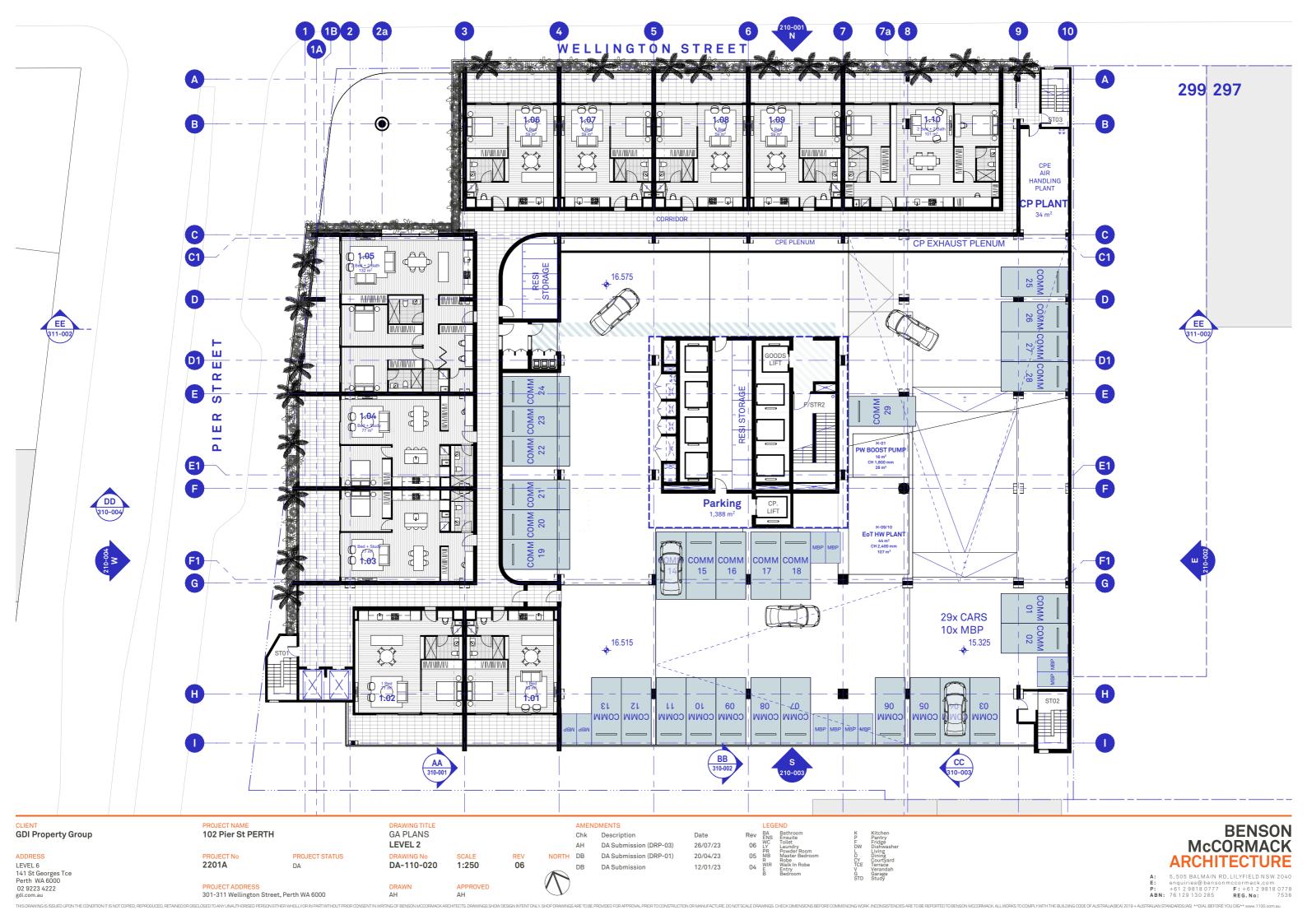
DB

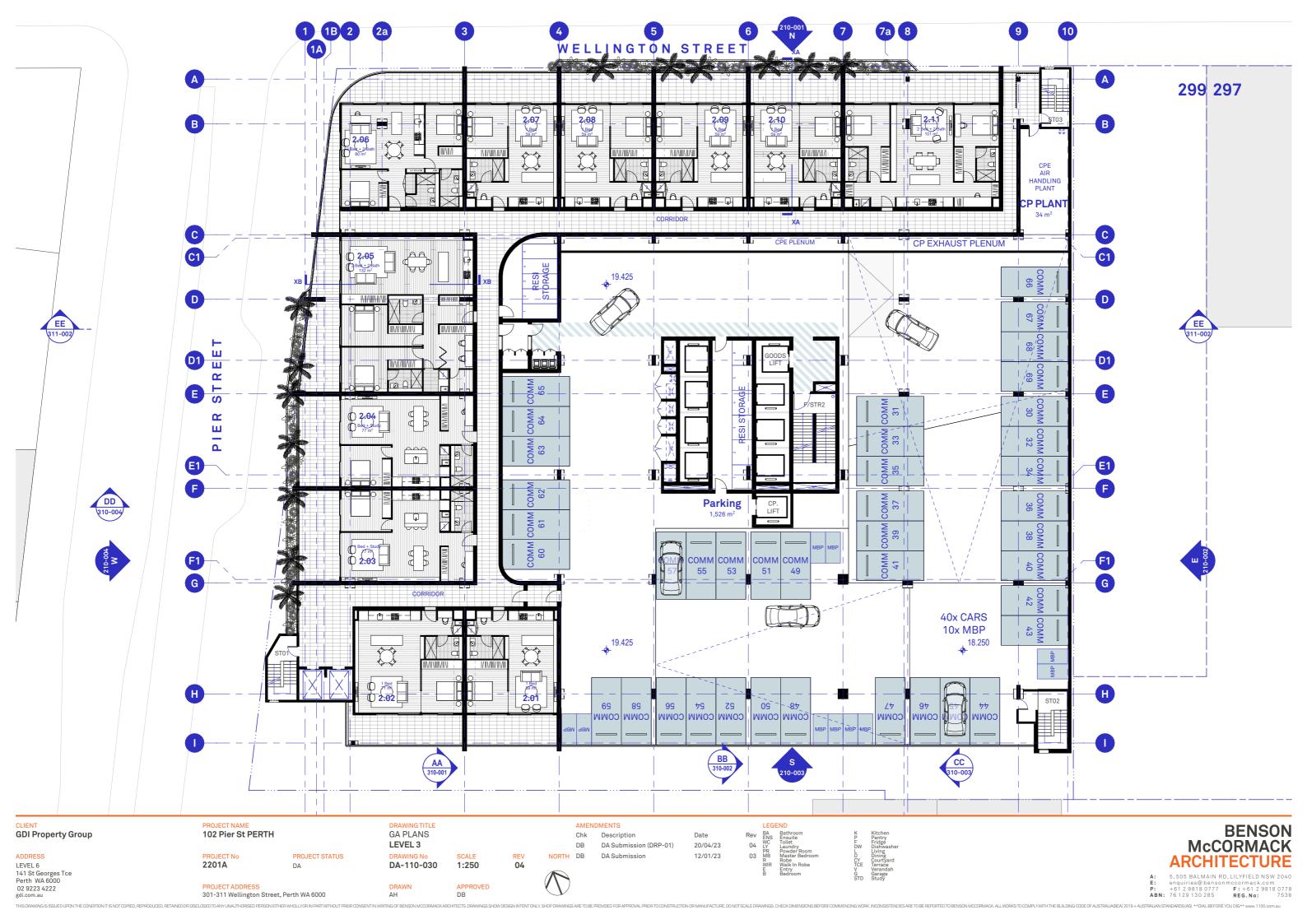
Chk Description DA Submission 12/01/23

BENSON McCORMACK

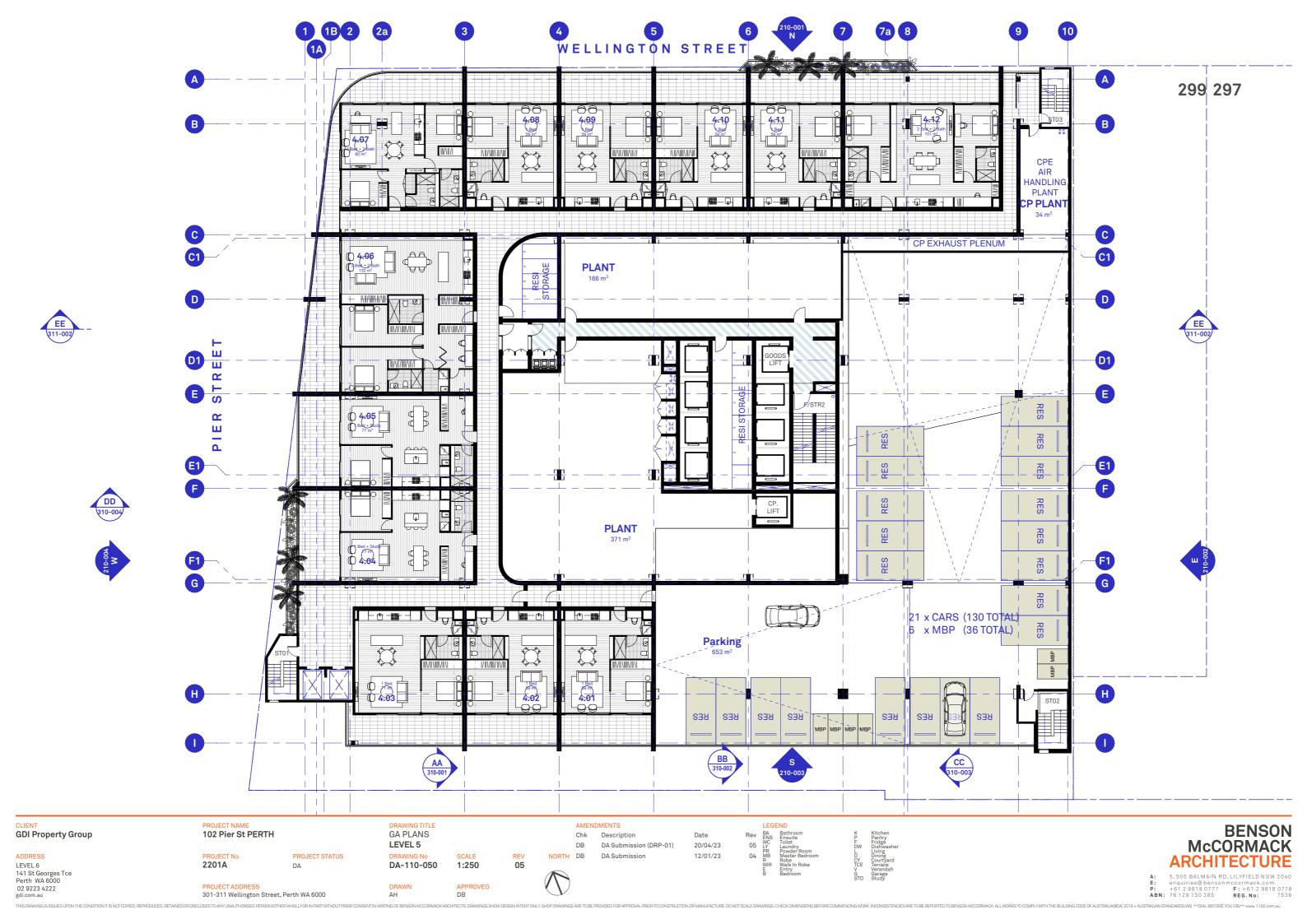
A: 5.505 BALMAIN RD, LILYFIELD NSW 2040 E: enquiries@bensonmccormack.com P: +612 9818 0777 F: +612 9818 0778 ABN: 76129130 285 REG.No: 7536

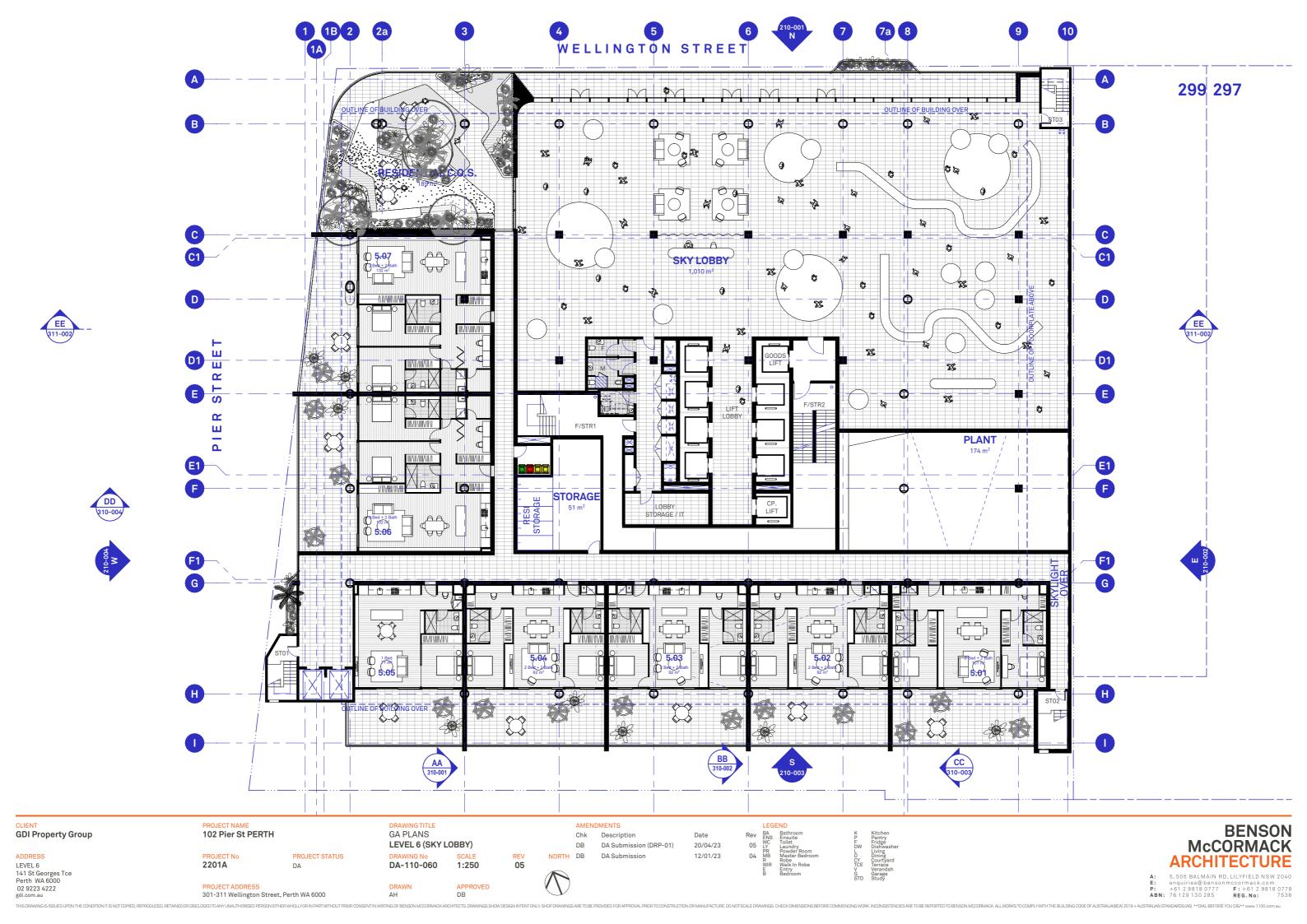


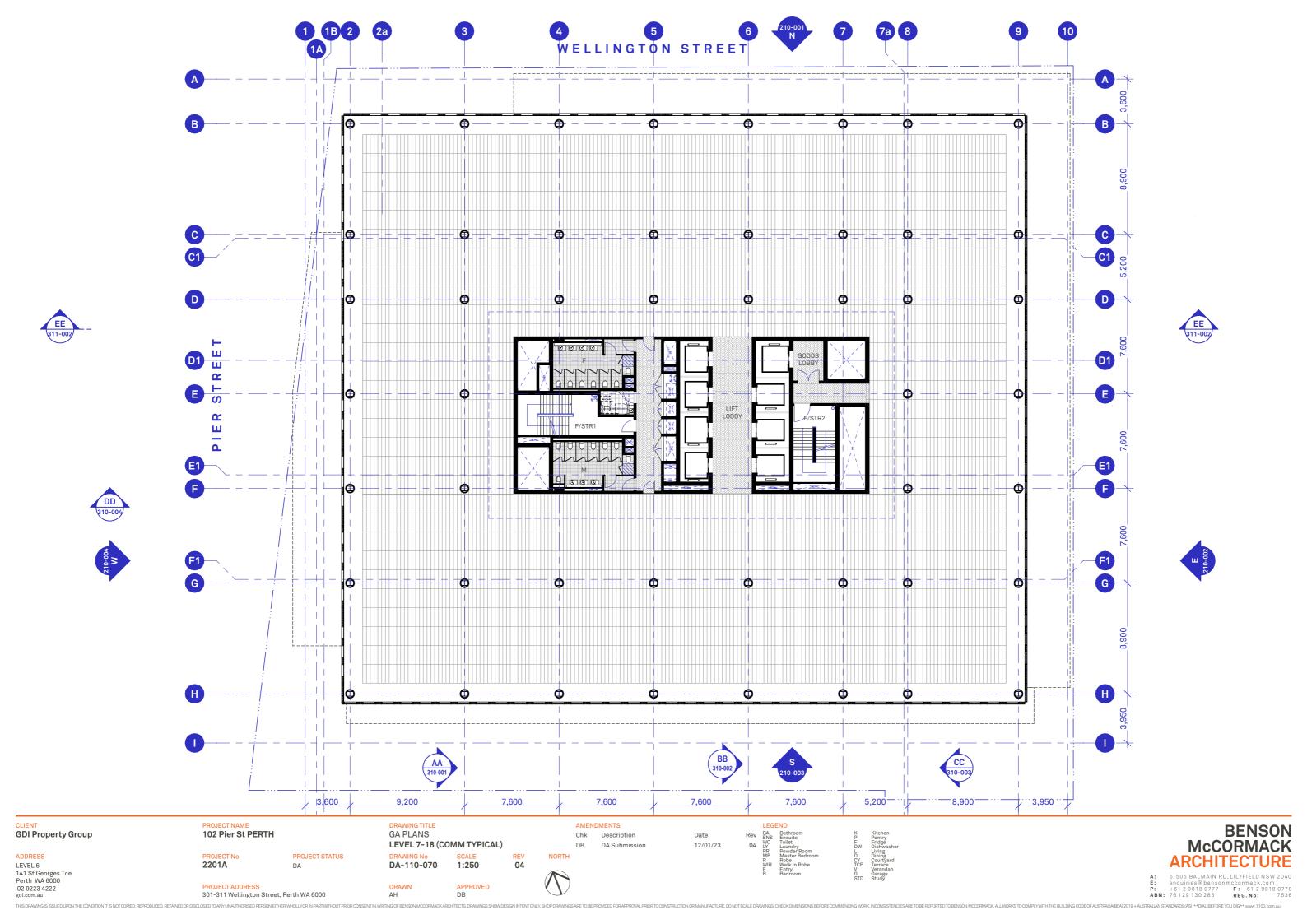


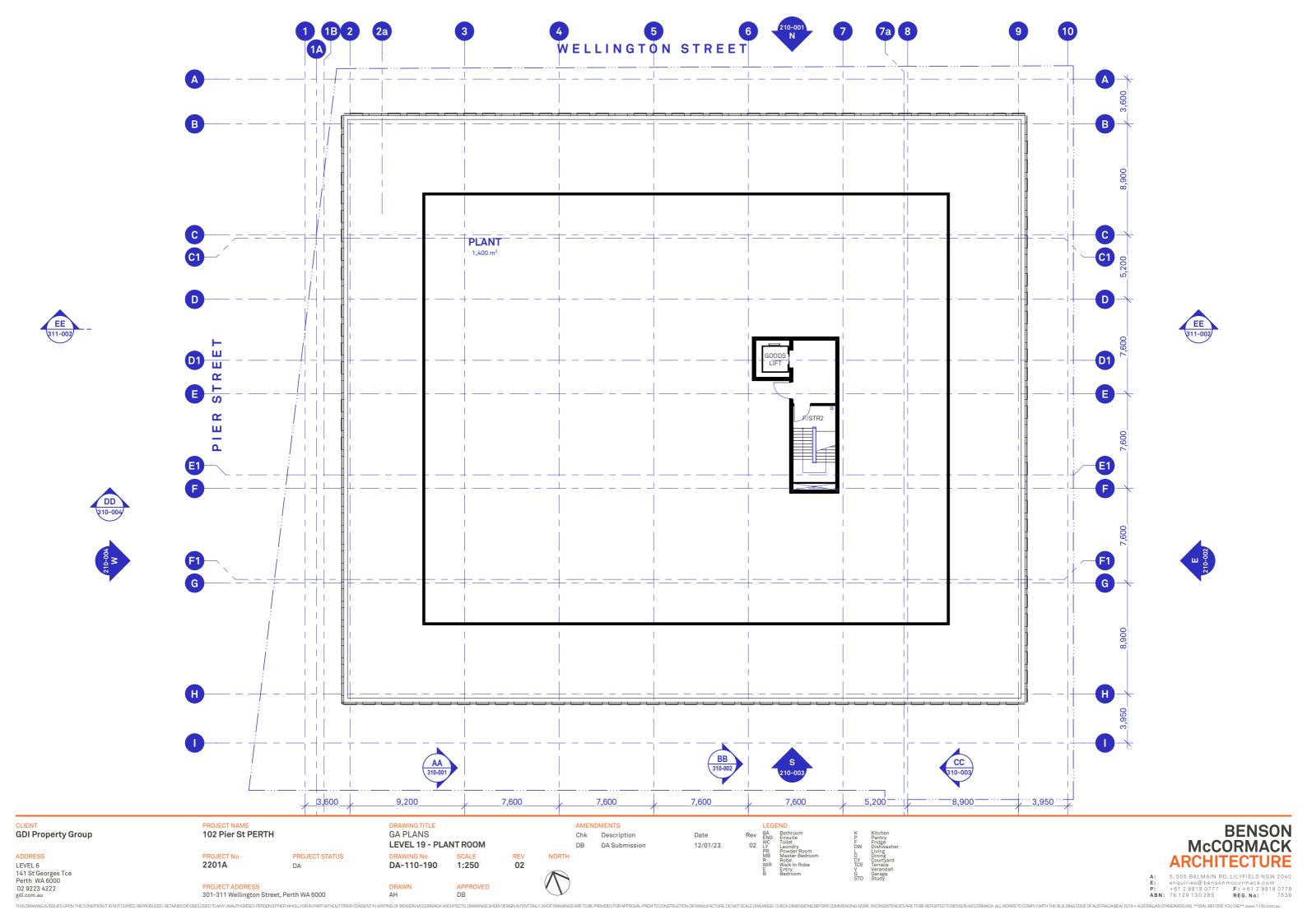


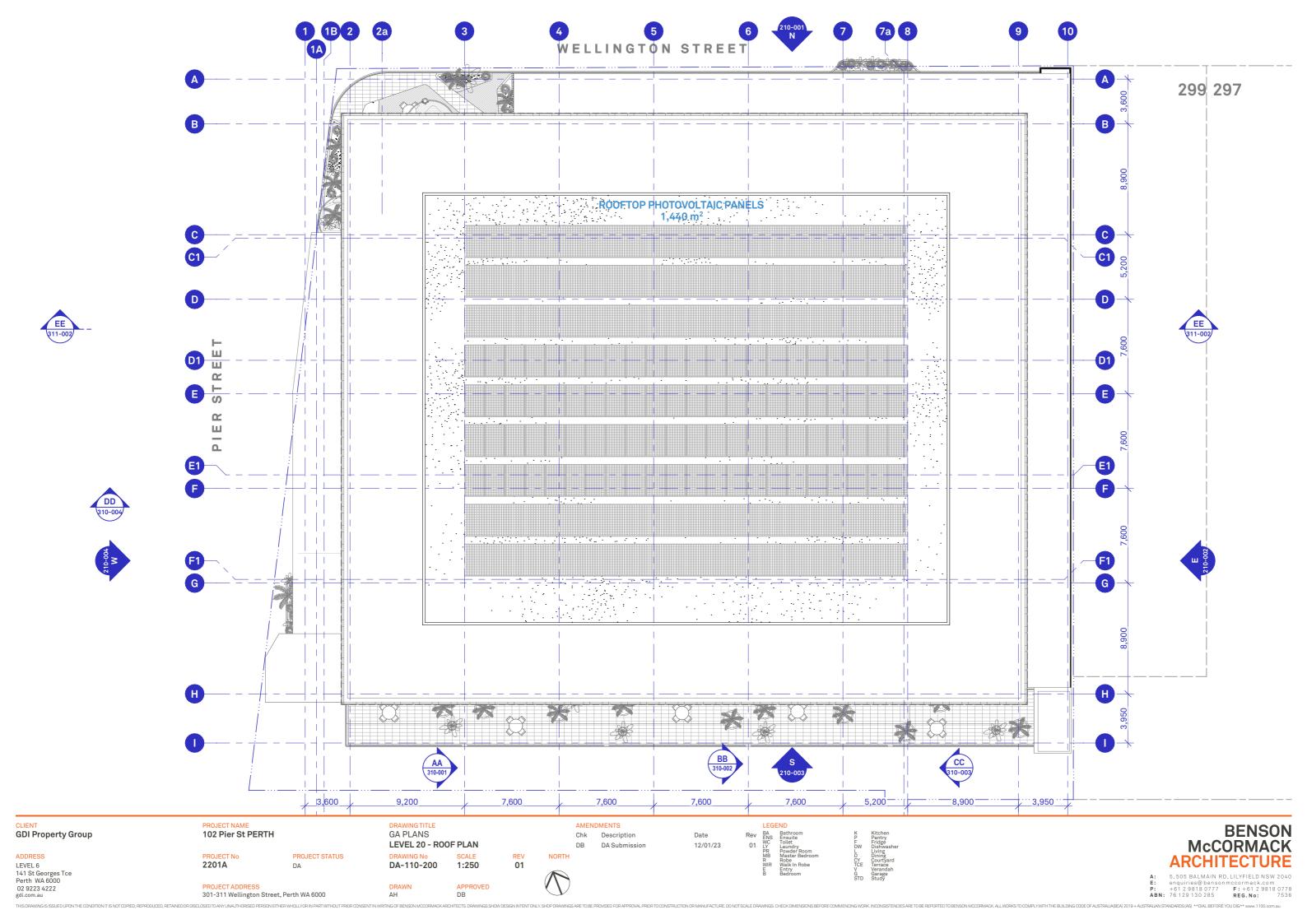


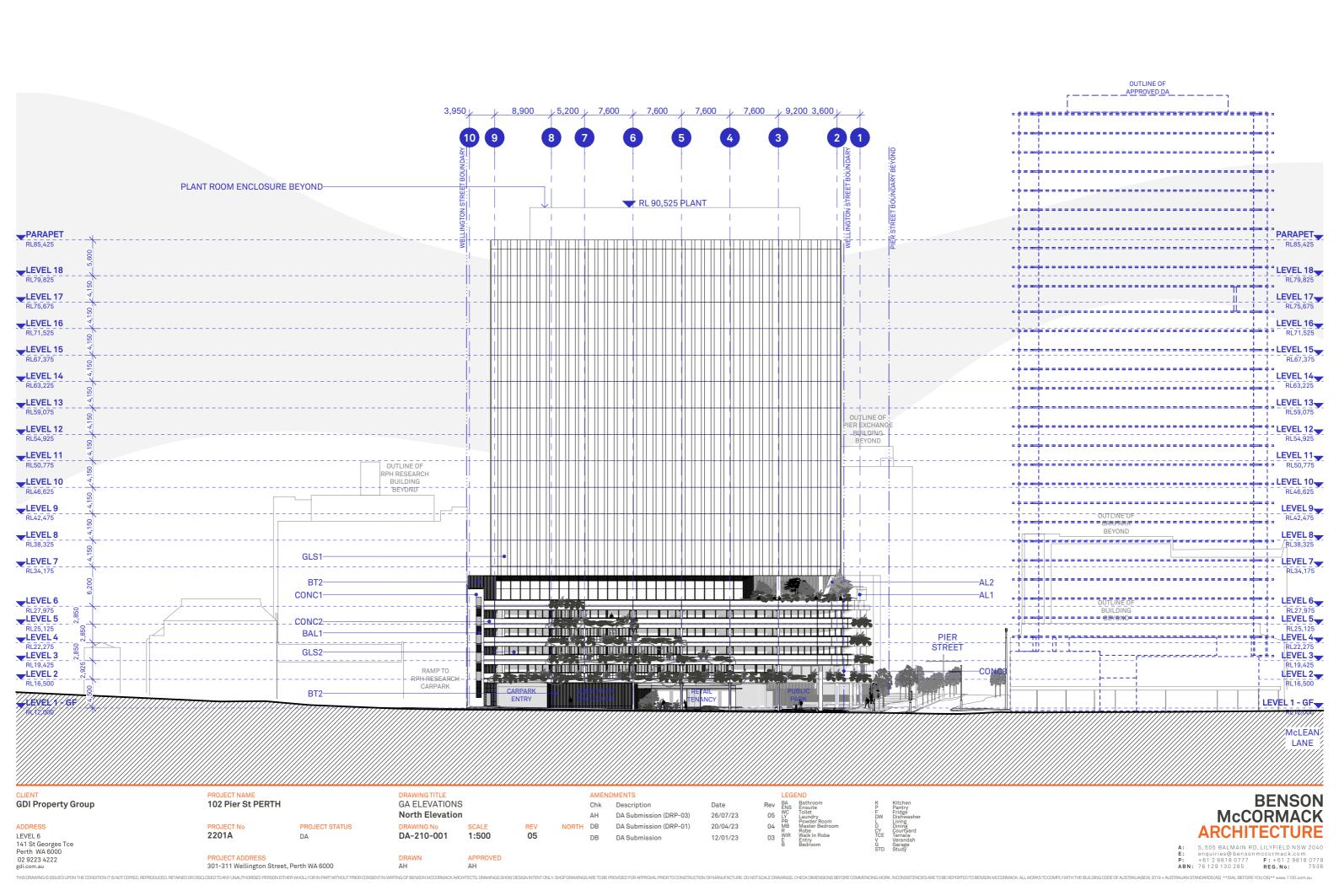


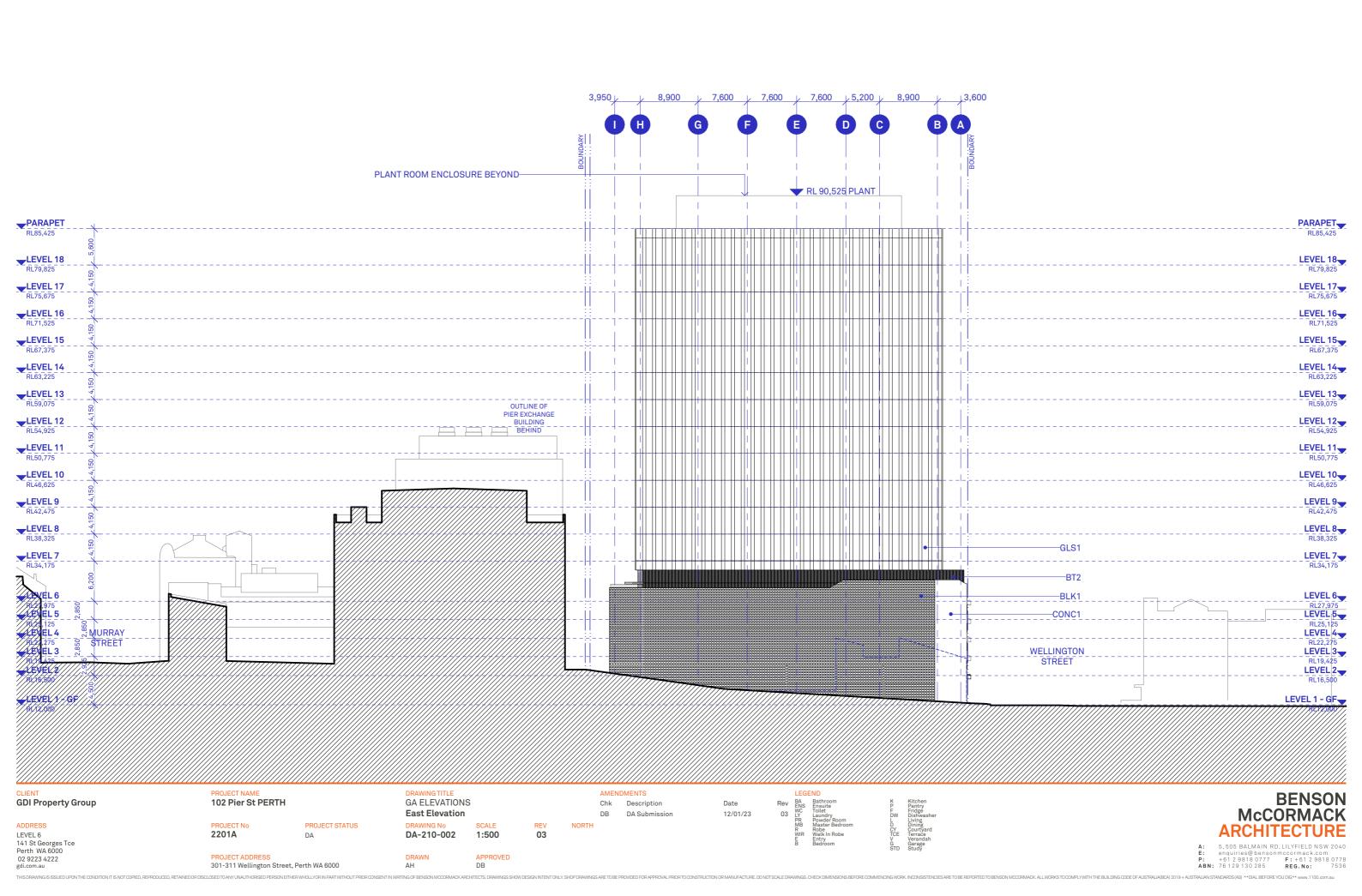


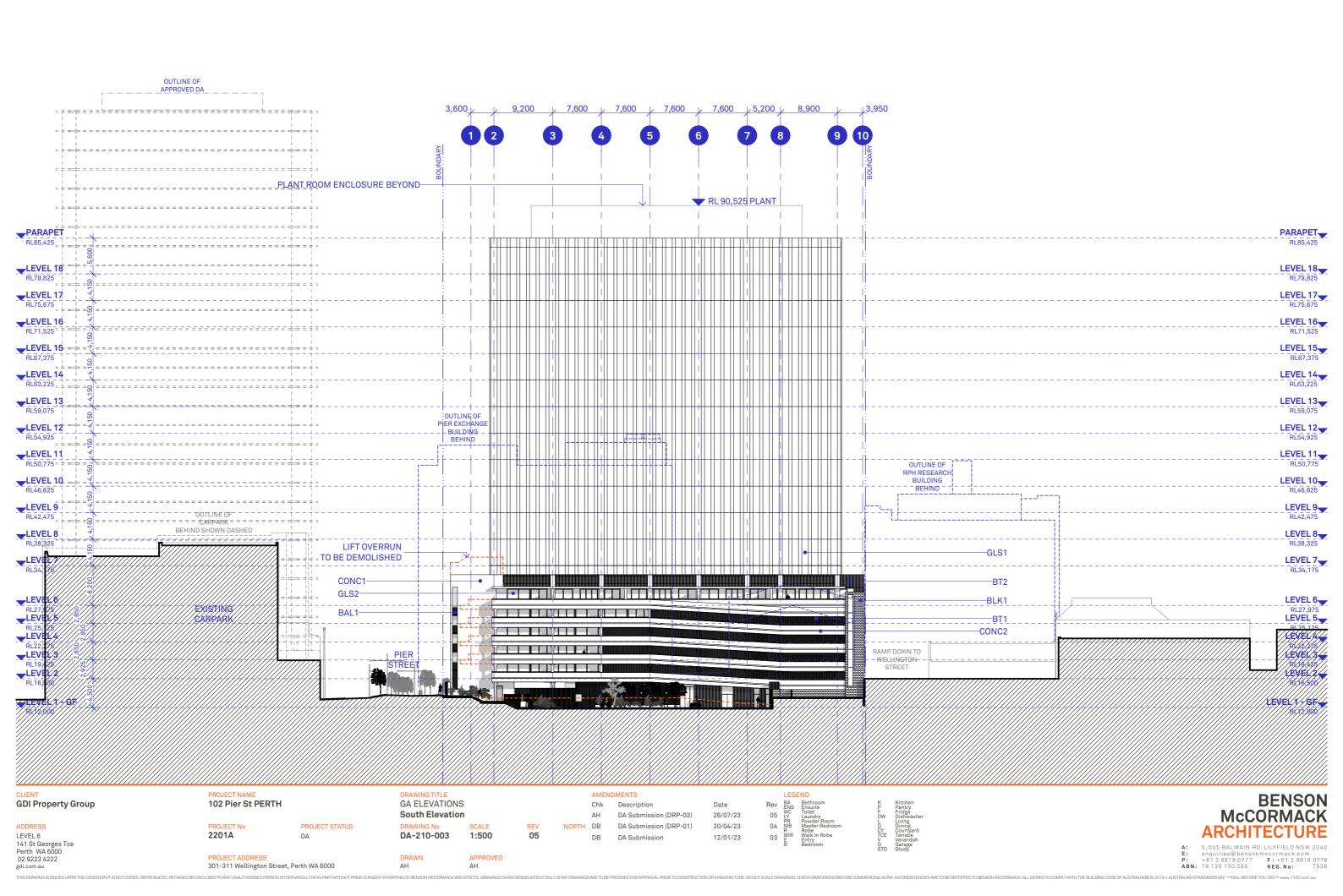


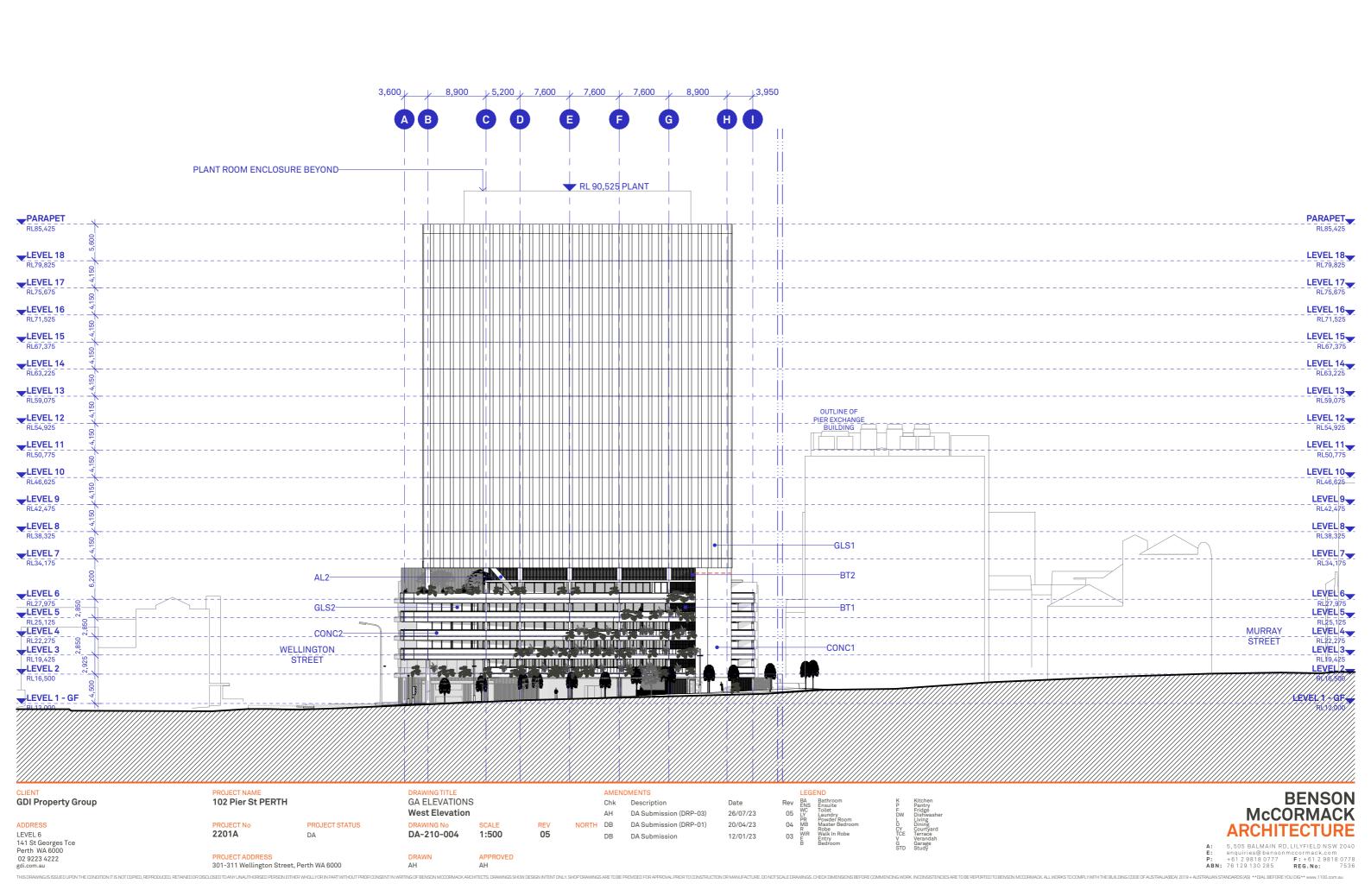


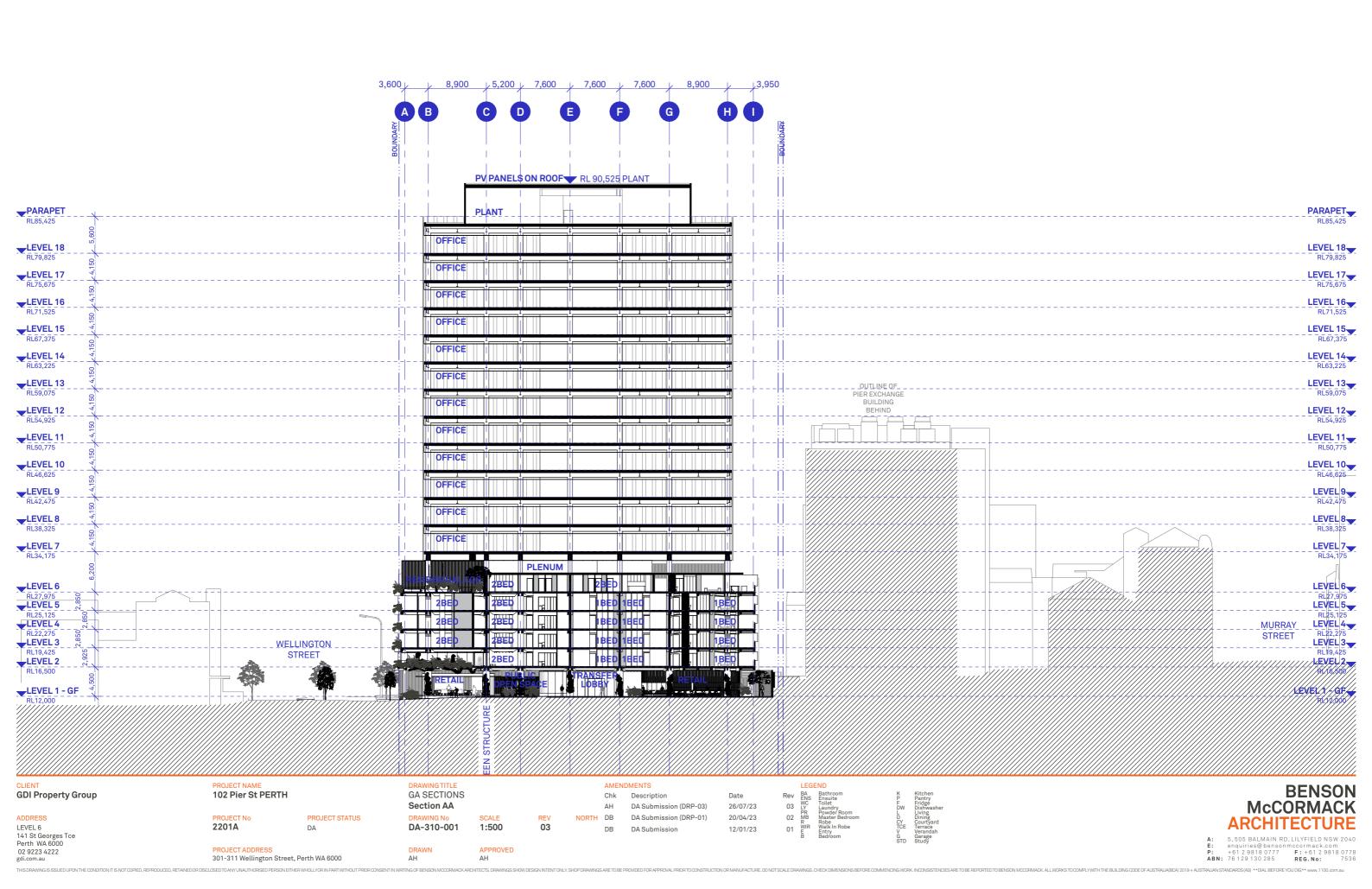


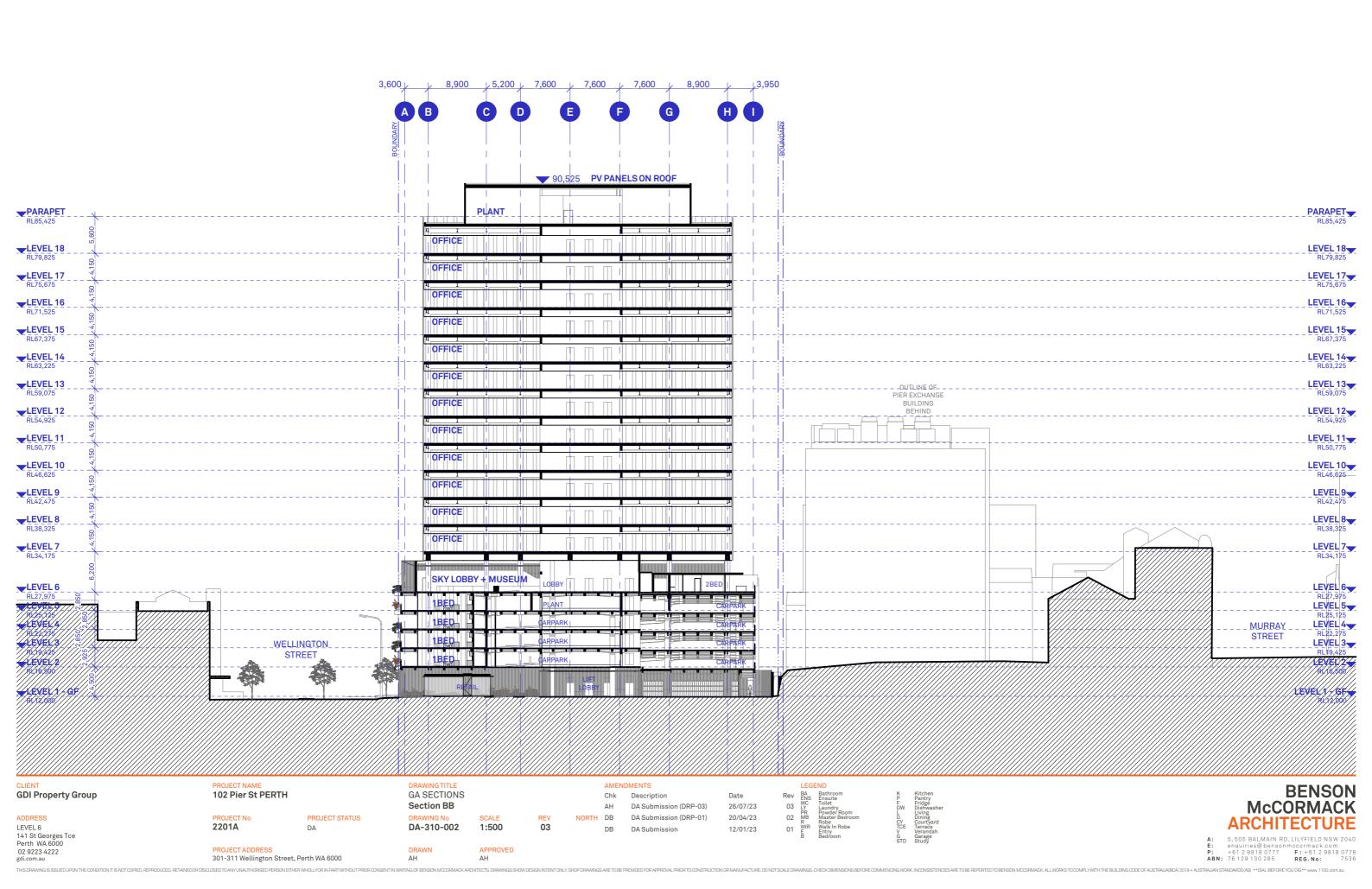


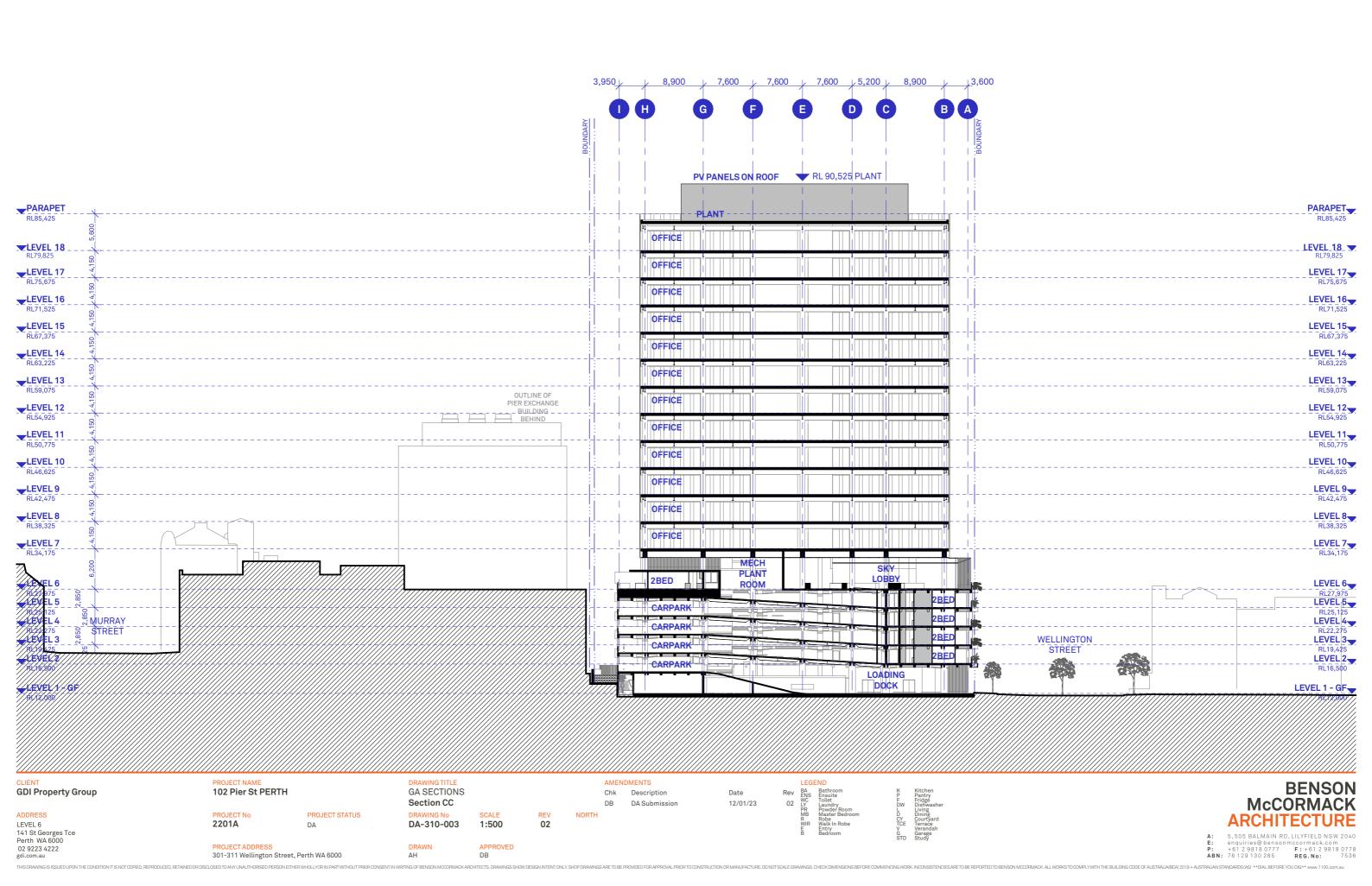


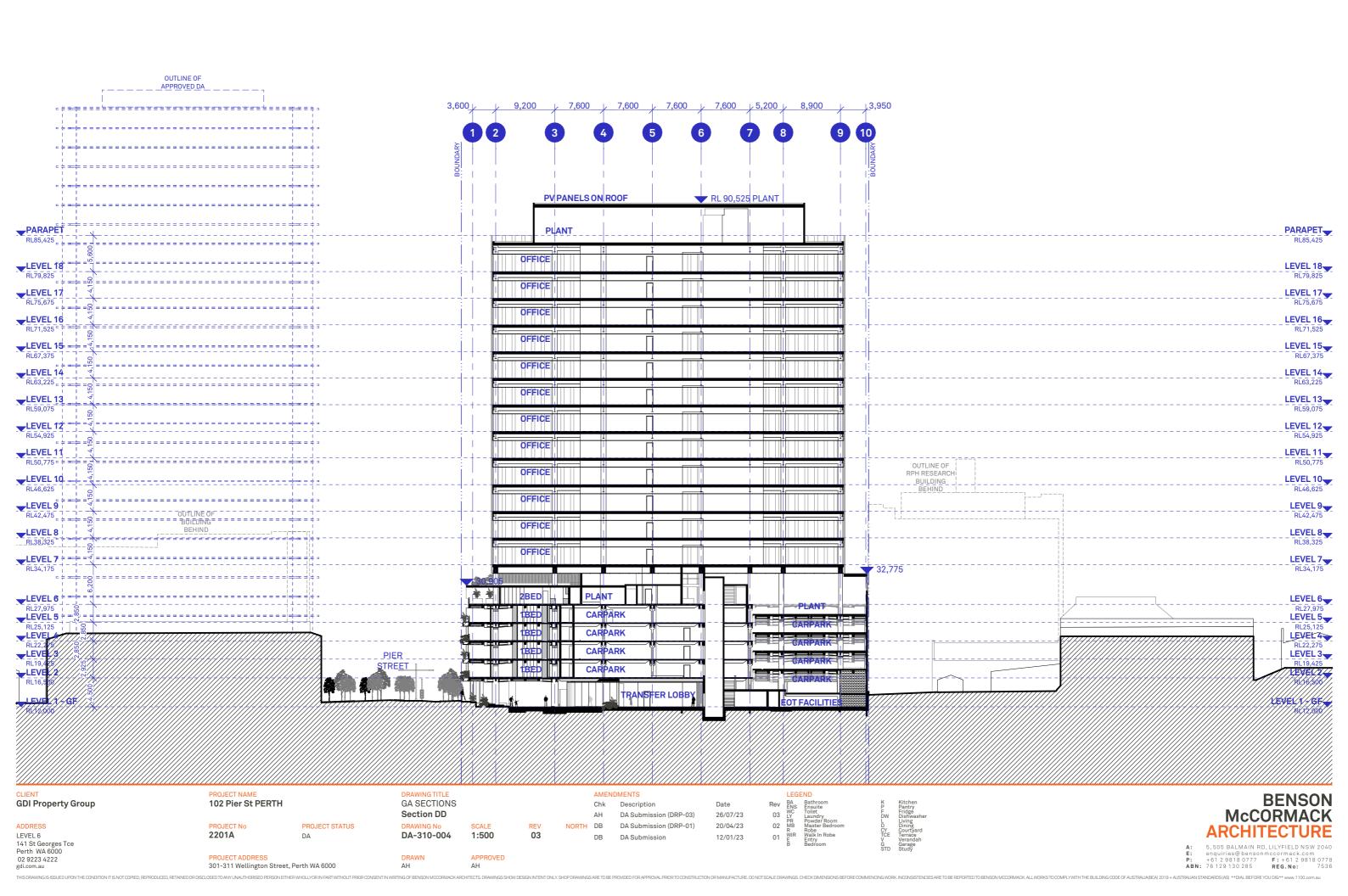


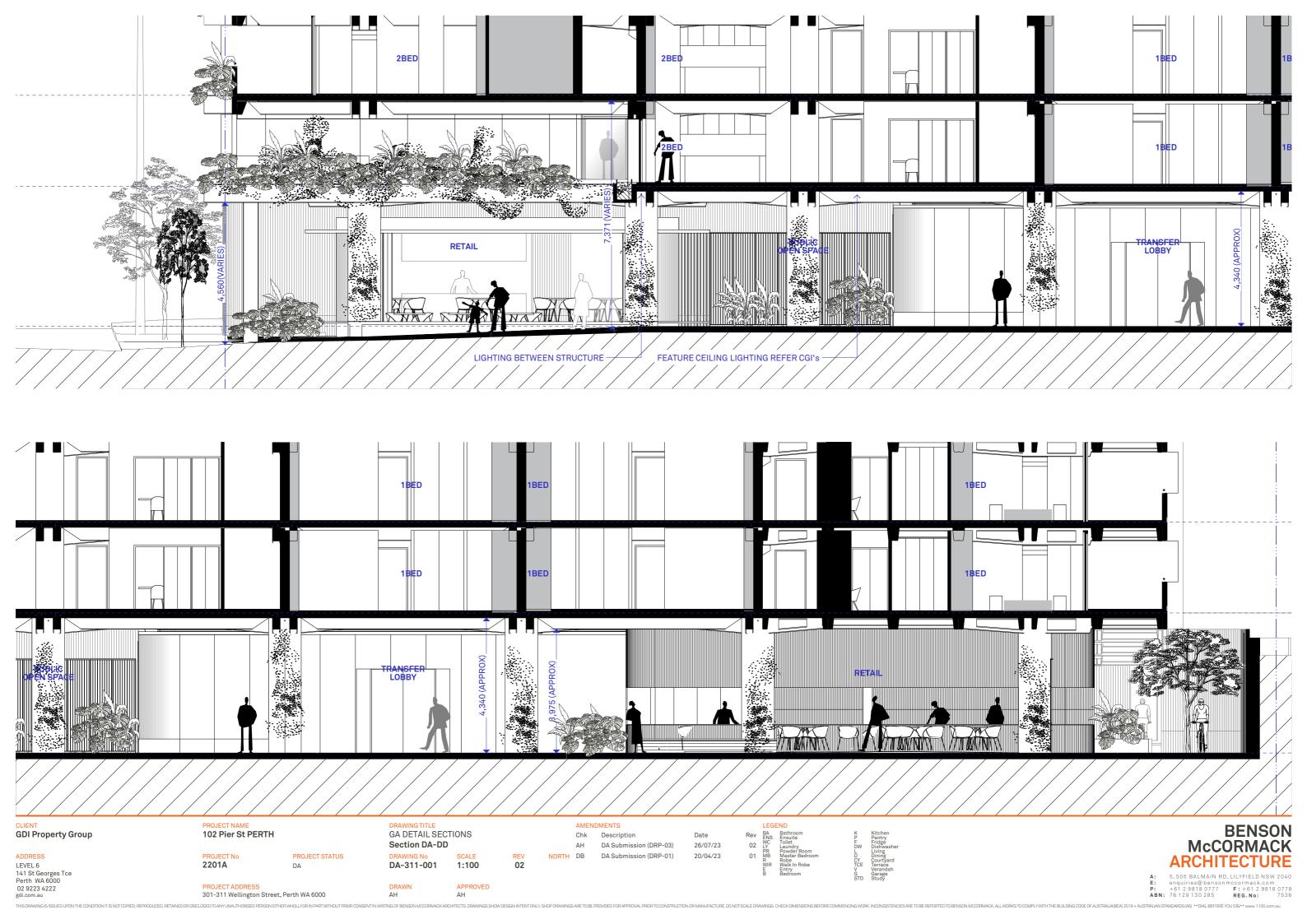


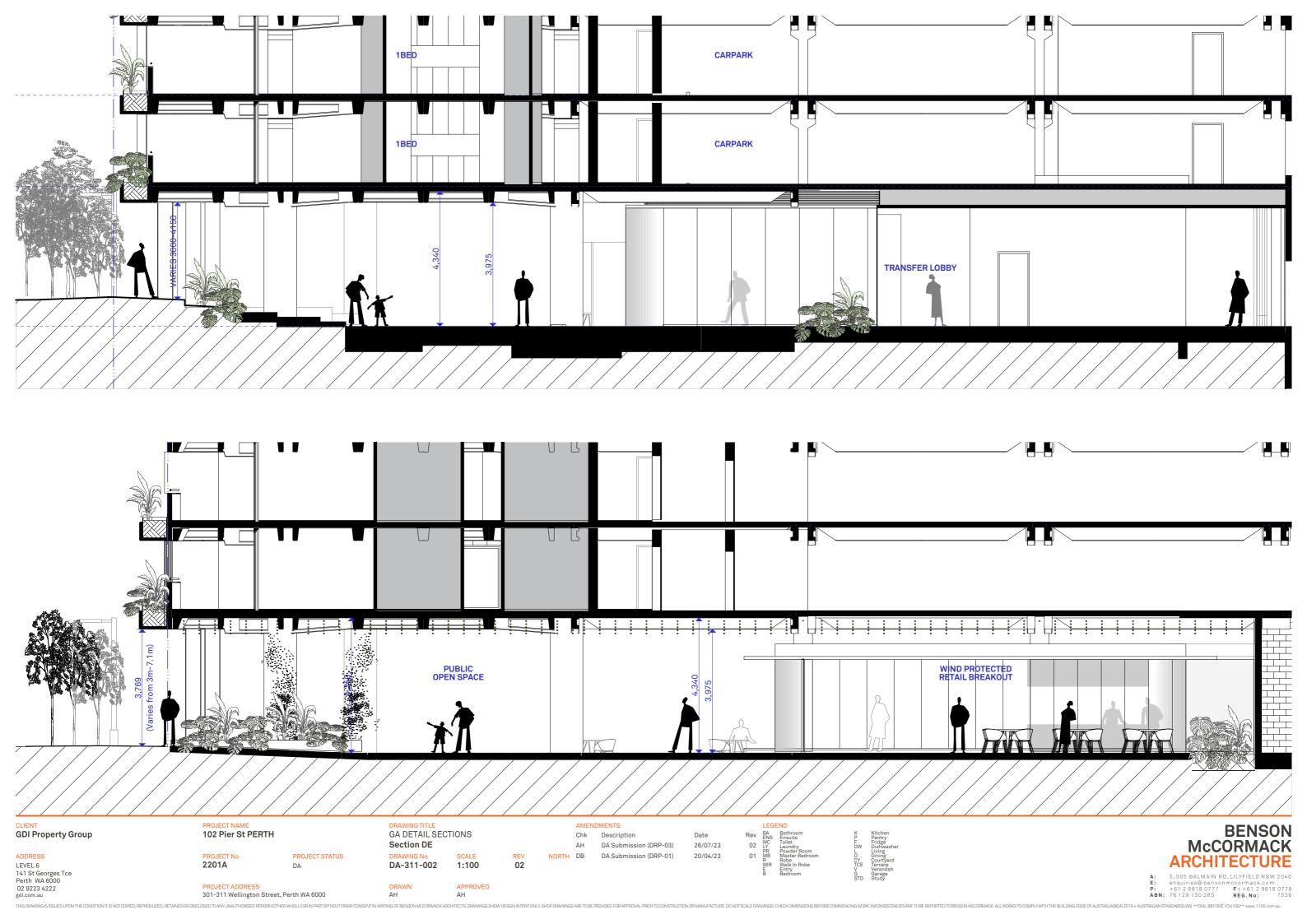












DATE: 18.04.2023

REV: G

	SITE DETAILS								
SITE AREA PLOT RATIO	3627.0 M <sup>2</sup> 5.0 :1 18135.0 M <sup>2</sup>								
MAX. PLOT RATIO	6.0 :1	21762.0 M <sup>2</sup>		NB: +1.0:1 (COMMERCIAL PLOT RATIO BONUS					
HEIGHT OF BUILDING COMMUNAL OPEN SPAC	RDC		N/A 300M²						
PARKING	COMMERCIAL/OFFICE		73.0						
	RETAIL STUDIO/1B 2B 3B	1 SPACE/DWELLING 1 SPACE/DWELLING 1 SPACE/DWELLING							
	VISITOR		NA						
	BICYCLES (RESIDENTS) BICYCLES (VISITOR) MOTORCYCLES CAR WASH	1/10 [	DWELLINGS DWELLINGS O CAR BAYS						
_	DEVELOPMENT AREA DETAILS	PLOT RATIO (M²)					RESIDENTIAL ACCOMMODATION		
EVEL	USE	RESI	OFFICE		STD	1B	2B	3B	Т
LEVEL 01 (GROUND)	COMM LOBBY EOT FACILITIES		191.0						
	RETAIL BOH / LOADING RESI LOBBY PUBLIC SPACE		19.0						
LEVEL 02	RESIDENTIAL PARKING	685.0			0	8	2	0	10
LEVEL 03	RESIDENTIAL PARKING	754.0			0	8	3	0	11
LEVEL 04	RESIDENTIAL PARKING	754.0			0	8	3	0	11
LEVEL 05	RESIDENTIAL PLANT	809.0			0	9	3	0	12
LEVEL 06	PARKING RESIDENTIAL	625.0	204.0		0	1	6	0	7
LEVEL 06	MUSEUM + FOYER RESIDENTIAL OPEN SPACE RESIDENTIAL COMMUNAL SPACE PLANT								
LEVEL 07	OFFICE		1779.0						
LEVEL 08 LEVEL 09	OFFICE OFFICE		1779.0 1779.0						
LEVEL 10	OFFICE		1779.0						
LEVEL 11 LEVEL 12	OFFICE OFFICE		1779.0 1779.0						
LEVEL 13	OFFICE		1779.0						
LEVEL 14 LEVEL 15	OFFICE OFFICE		1779.0 1779.0						
LEVEL 15 LEVEL 16	OFFICE		1779.0						
LEVEL 17	OFFICE		1779.0						
LEVEL 18 LEVEL 19	OFFICE ROOF PLANT + PVS		1779.0						
TOTAL	_	3627.0	21762.0		0	34	17	0	51 APTS
PLOT RATIO		1.00			0.0%	66.7%	33.3%	0.0%	MIX
FLOT RATIO	Remaining Plot Ratio Area:	0.0	6.00 0.0		0.0%	34	33.3%	0.0%	68 BEDS
						RESIDENTIAL PARKING REQUIRED			QUIRED
	COMMERCIAL PARKING				1 0	1 34	1 17	1 0	
	73					34	17	U	51
						ВІ	KE (RESI) E 0.5 DW <b>0.0</b>	0.1 DW 0.0	CYCLES 0.1 CARS 0.0

\*Tea prep allowance of 10% of commercial office area excluded.

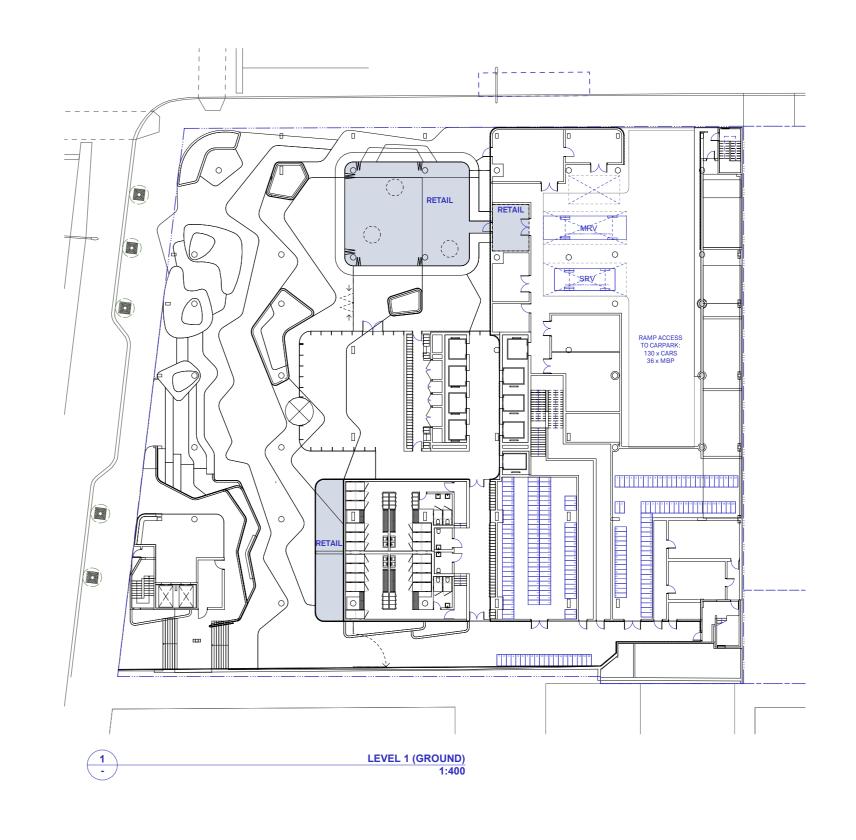
CLIENT GDI Property Group PROJECT NAME
102 Pier St PERTH DRAWING TITLE SCHEDULES AMENDMENTS Rev BA Bathroom
ENS Ensuite

O4 LY Laundry
PR Powder Room
03 MB Master Bedroc
R Robe
02 WIR Walk In Robe
E Entry
B Bedroom Chk Description Area Schedule DB DA Submission (DRP-01) 20/04/23 ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au PROJECT No 2201A PROJECT STATUS REV 04 NORTH DB DA Submission (PR Update) 02/03/23 DA-600-001 12/01/23 DB DA Submission PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

APPROVED DB

BENSON McCORMACK **ARCHITECTURE** A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@ bensonmccormack.com
P: +61 2 9818 0778
ABN: 76129130 285 REG.No: 7536

124 TOTAL REQ'd



CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

PROJECT STATUS

DRAWN JSN APPROVED DB

DA-710-001

DRAWING TITLE
PLOT RATIO DIAGRAMS

PLOT RATIO Measurement

1:400

REV 03

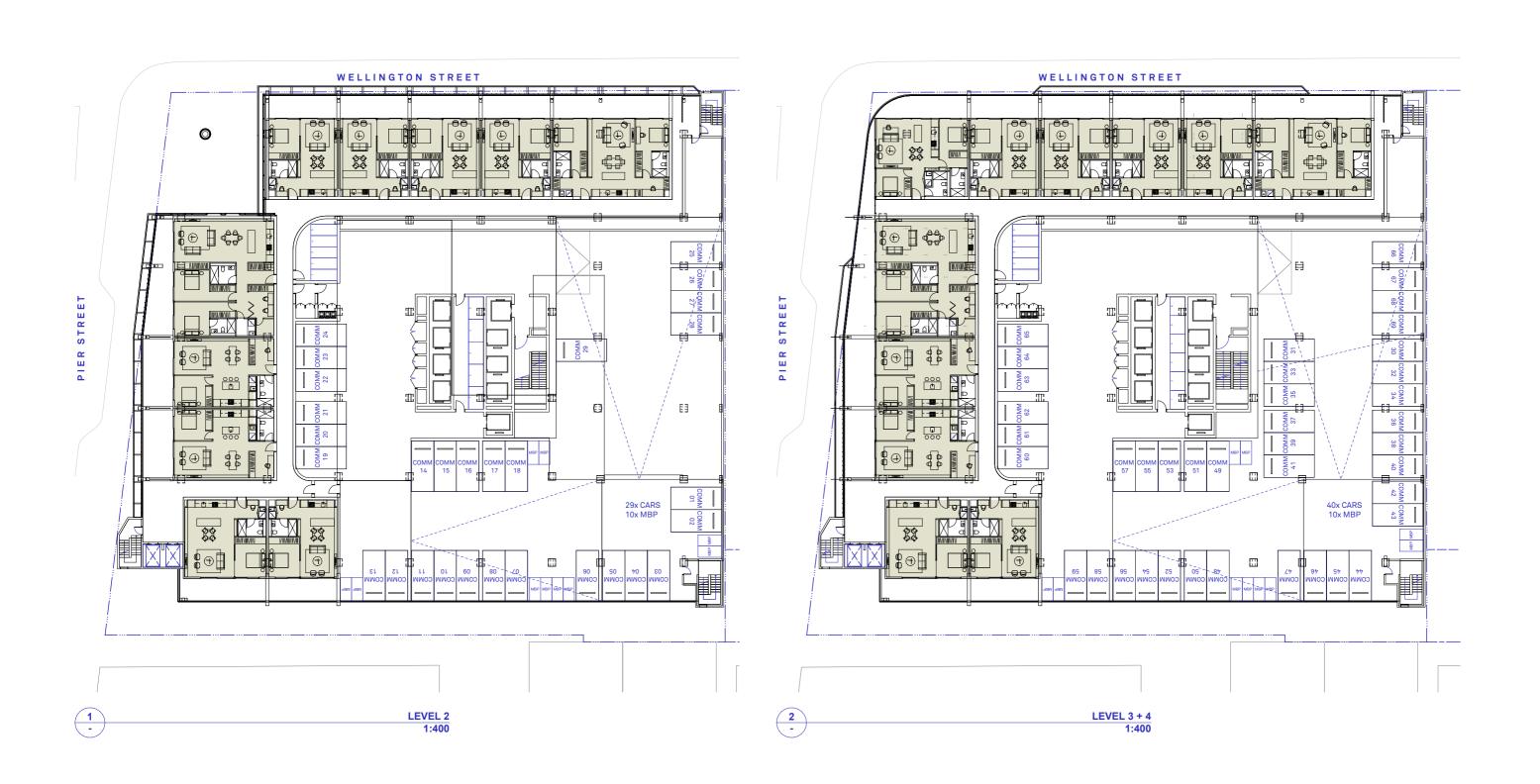
DB DB

Chk Description DB DA Submission (DRP-01) DA Submission (PR Update) DA Submission

20/04/23 02/03/23 12/01/23 Rev BA Bathroom
ENS Ensuite

O3 LY Laundry
PR Powder Room
Master Bedroo
R Robe
O1 WIR Walk In Robe
E Entry
B Bedroom





**GDI Property Group** 

102 Pier St PERTH

LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 2201A

301-311 Wellington Street, Perth WA 6000

PLOT RATIO DIAGRAMS PLOT RATIO Measurement DA-710-002 1:400

APPROVED DB

DRAWN JSN

03

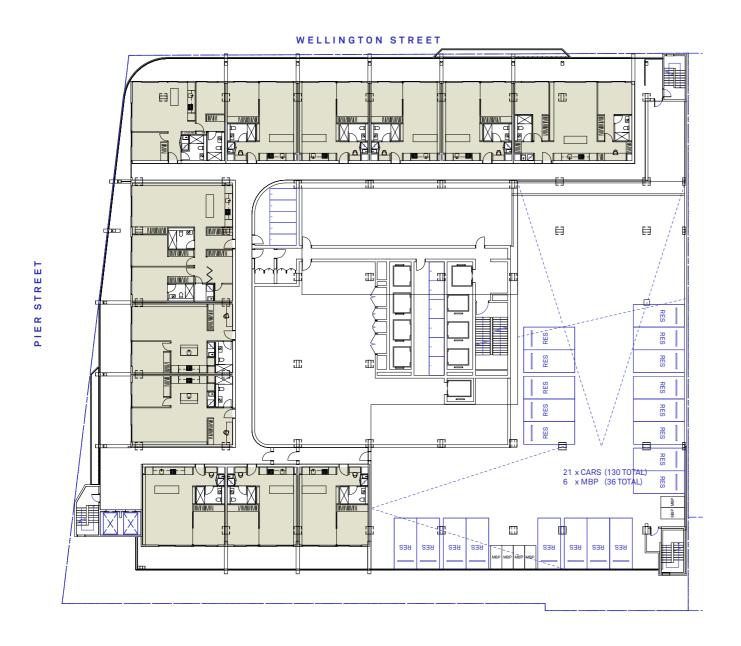
DB DB DB

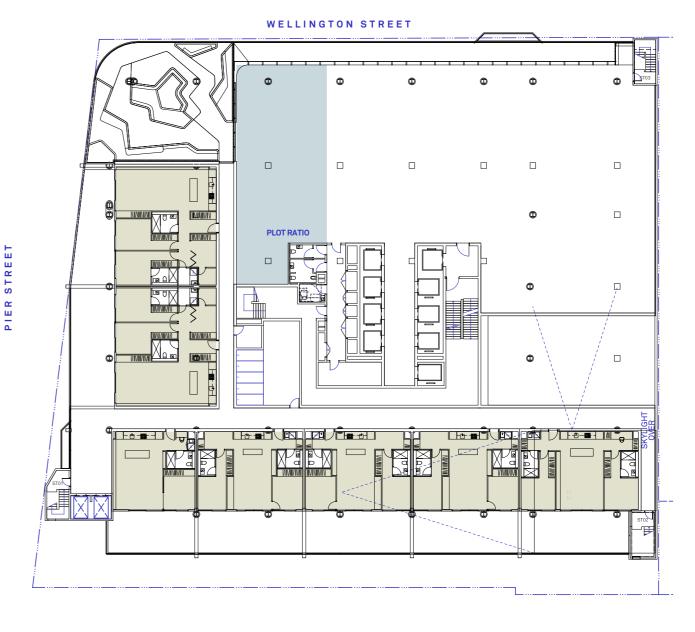
Chk Description DA Submission (DRP-01) DA Submission (PR Update) DA Submission

20/04/23 02/03/23 12/01/23 Rev BA Bathroom
ENS Ensuite

O3 LY Laundry
PR Powder Room
Master Bedroc
R Robe
O1 WIR Walk In Robe
E Entry
B Bedroom







LEVEL 5

LEVEL 6 1:400

**GDI Property Group** 

LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222

gdi.com.au

102 Pier St PERTH

2201A

PROJECT STATUS PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

PLOT RATIO DIAGRAMS PLOT RATIO Measurement DA-710-003 1:400

APPROVED DB

DRAWN JSN

REV 03

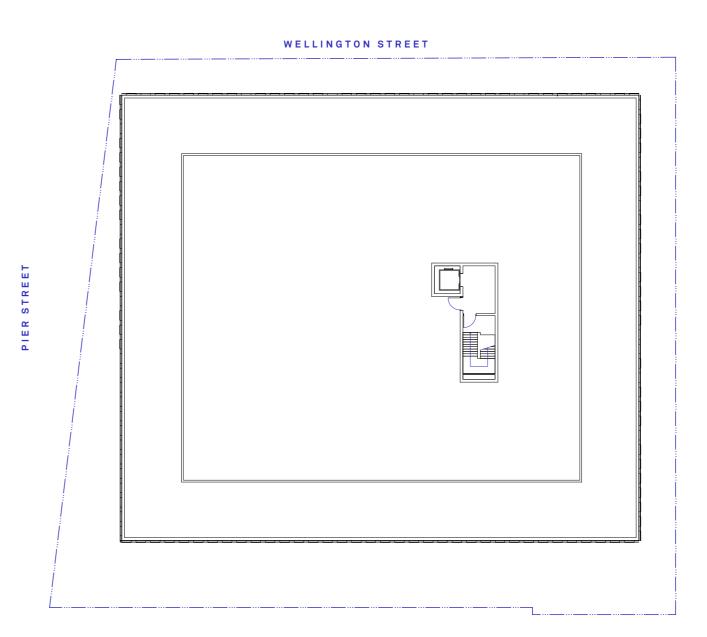
Chk Description DB DA Submission (DRP-01) DB DA Submission (PR Update) DB DA Submission

20/04/23 02/03/23 12/01/23 Rev BA Bathroom
ENS Ensuite

O3 LY Laundry
PR Powder Room
02 MB Master Bedroc
R Robe
01 WIR Walk in Robe
E Entry
B Bedroom



WELLINGTON STREET PLOT RATIO 0 0 0 STREET 0 0 STAIR VOID 60 m<sup>2</sup>



**LEVEL 7 - 18** 1:400 LEVEL 19 - ROOF PLANT / PVS

CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE
PLOT RATIO DIAGRAMS PLOT RATIO Measurement DA-710-004 1:400

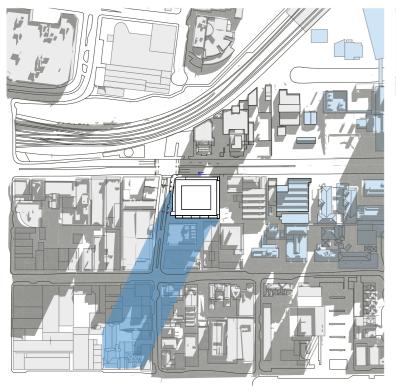
REV 03

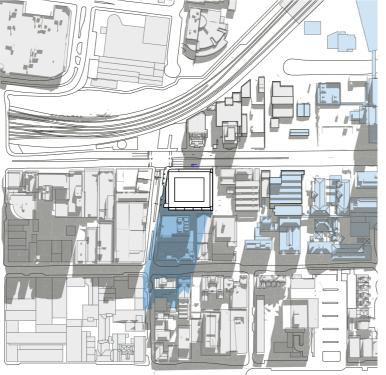
Chk Description DB NORTH DB DA Submission DB

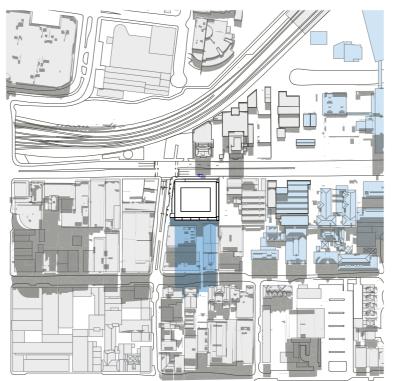
DA Submission (DRP-01) DA Submission (PR Update) 02/03/23

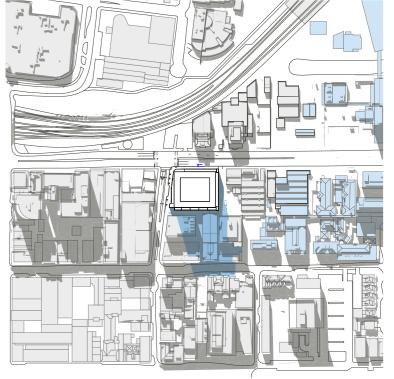
Rev BA Bathroom
ENS Ensuite
Color Indiet
Col 20/04/23 12/01/23









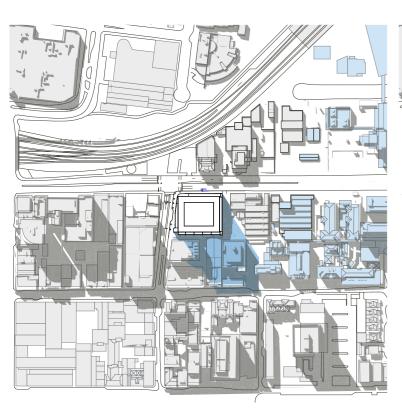


JUN 21 0900 Shadow Diagram

JUN 21 1000 Shadow Diagram

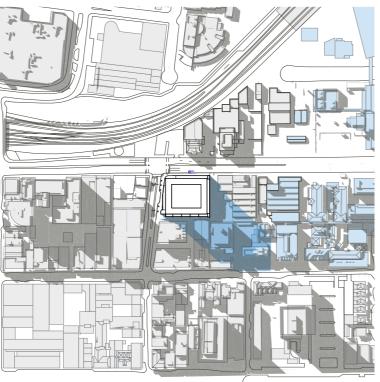
JUN 21 1100 Shadow Diagram

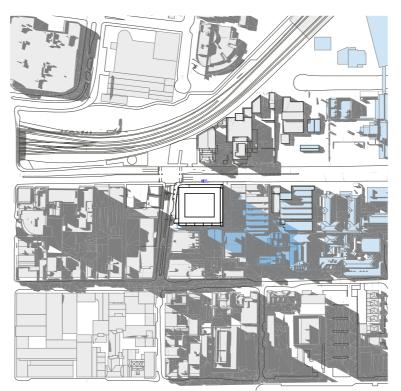
JUN 21 1200 Shadow Diagram



CLIENT
GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au





## JUN 21 1300 Shadow Diagram

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A

PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE SHADOW DIAGRAMS Shadow Plan Diagrams Winter

REV 01 DA-720-001

## JUN 21 1400 Shadow Diagram

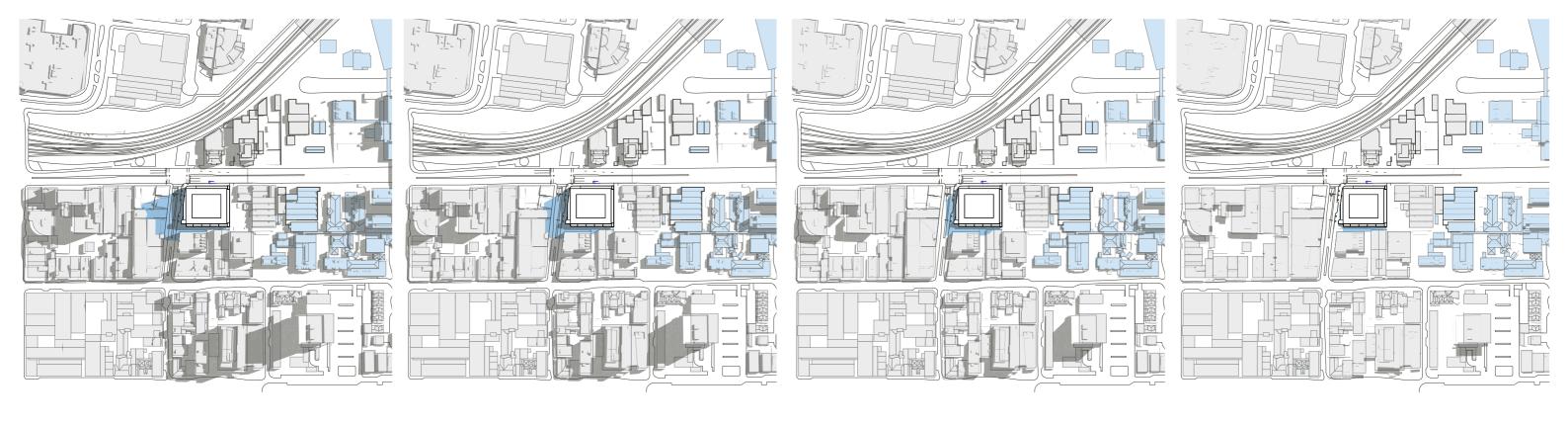
Chk Description DB DA Submission

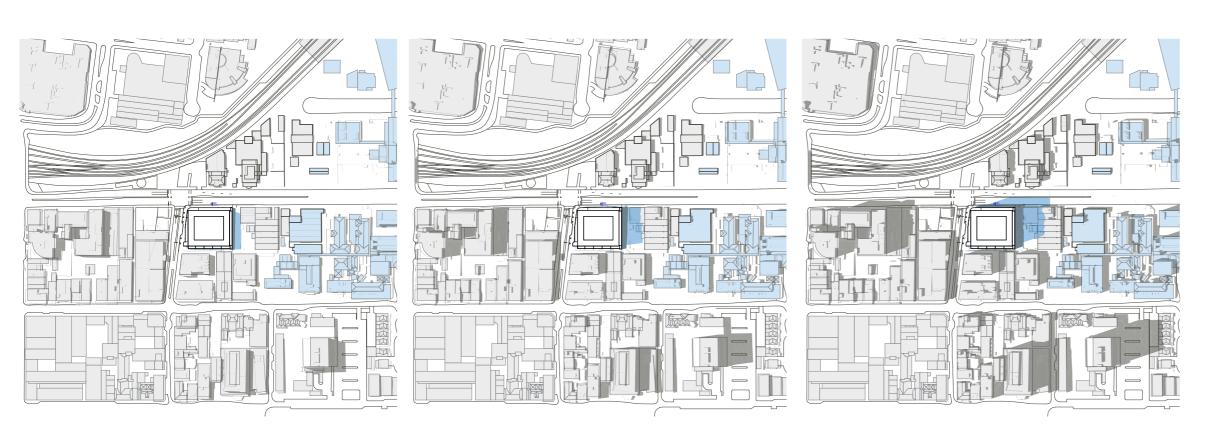
12/01/23

JUN 21 1500 Shadow Diagram

## BENSON McCORMACK **ARCHITECTURE**

A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@bensonmccormack.com
P: +61 2 9818 0777 F: +61 2 9818 0778
ABN: 76129 130 285 REG.No: 7536





DEC 21 1300 Shadow Diagram DEC 21 1400 Shadow Diagram DEC 21 1500 Shadow Diagram

DEC 21 1000 Shadow Diagram

CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

DEC 21 0900 Shadow Diagram

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE SHADOW DIAGRAMS Shadow Plan Diagrams Summer

DA-720-002

APPROVED DB

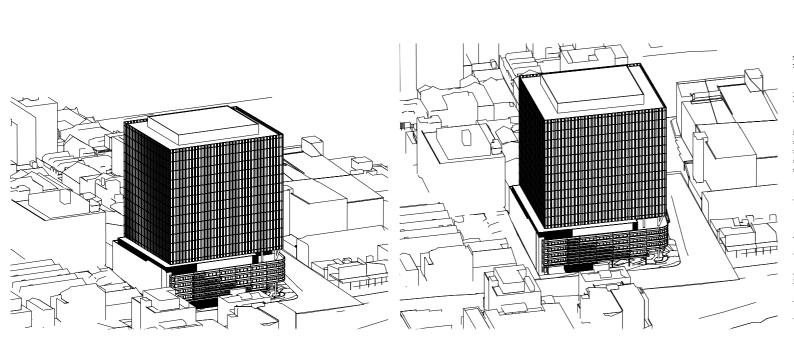
REV 01

Chk Description DB DA Submission 12/01/23

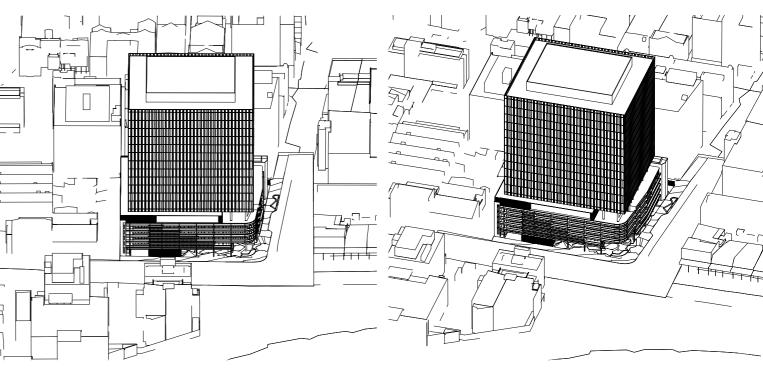
DEC 21 1100 Shadow Diagram



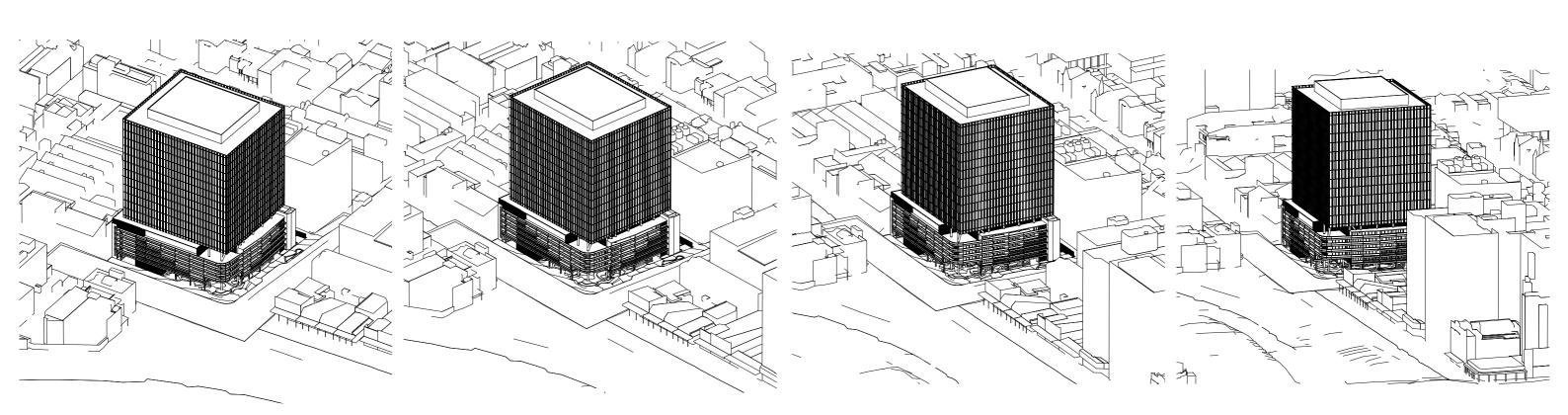
DEC 21 1200 Shadow Diagram



0900 june 21



1100 june 21



1000 june 21

DRAWING TITLE SHADOW DIAGRAMS CLIENT
GDI Property Group PROJECT NAME
102 Pier St PERTH Chk Description 12/01/23

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT No 2201A

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

1300 june 21

PROJECT STATUS

Shadow 3D Diagrams Winter DA-720-003

REV 01

DB

DA Submission

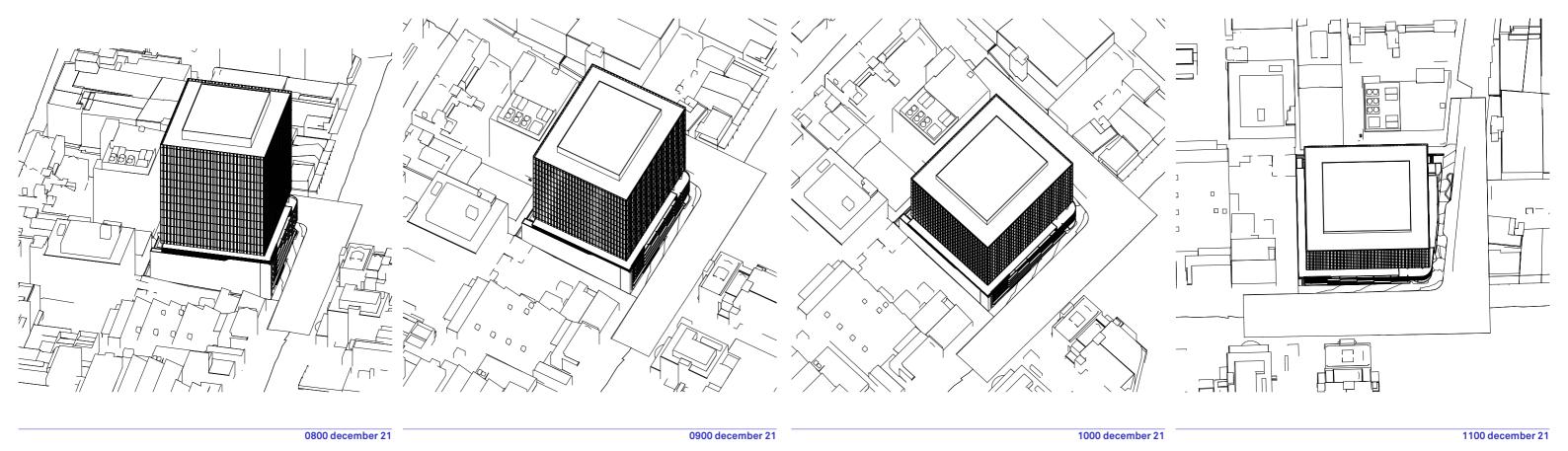
1400 june 21

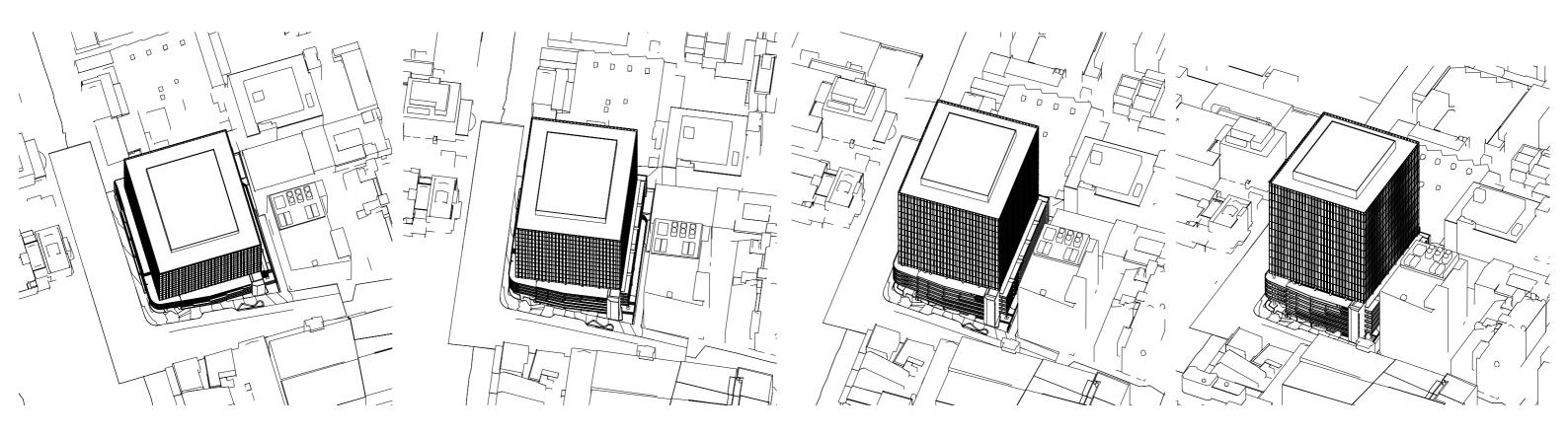
1500 june 21

BENSON McCORMACK **ARCHITECTURE** A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@bensonmccormack.com
P: +612 9818 0777 F:+612 9818 0778
ABN: 76129130 285 REG. No: 7536

1600 june 21

1200 june 21





## 1200 december 21 1300 december 21 1400 december 21 1500 december 21

CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au PROJECT NAME
102 Pier St PERTH

PROJECT No PROJECT STATUS 2201A DA

DA DA

STATUS DRAWING DA-720

DRAWING TITLE
SHADOW DIAGRAMS
Shadow 3D Diagrams Summer
DRAWING No SCALE R
DA-720-004

er REV NO 02

Chk Description
DB DA Submission
IORTH

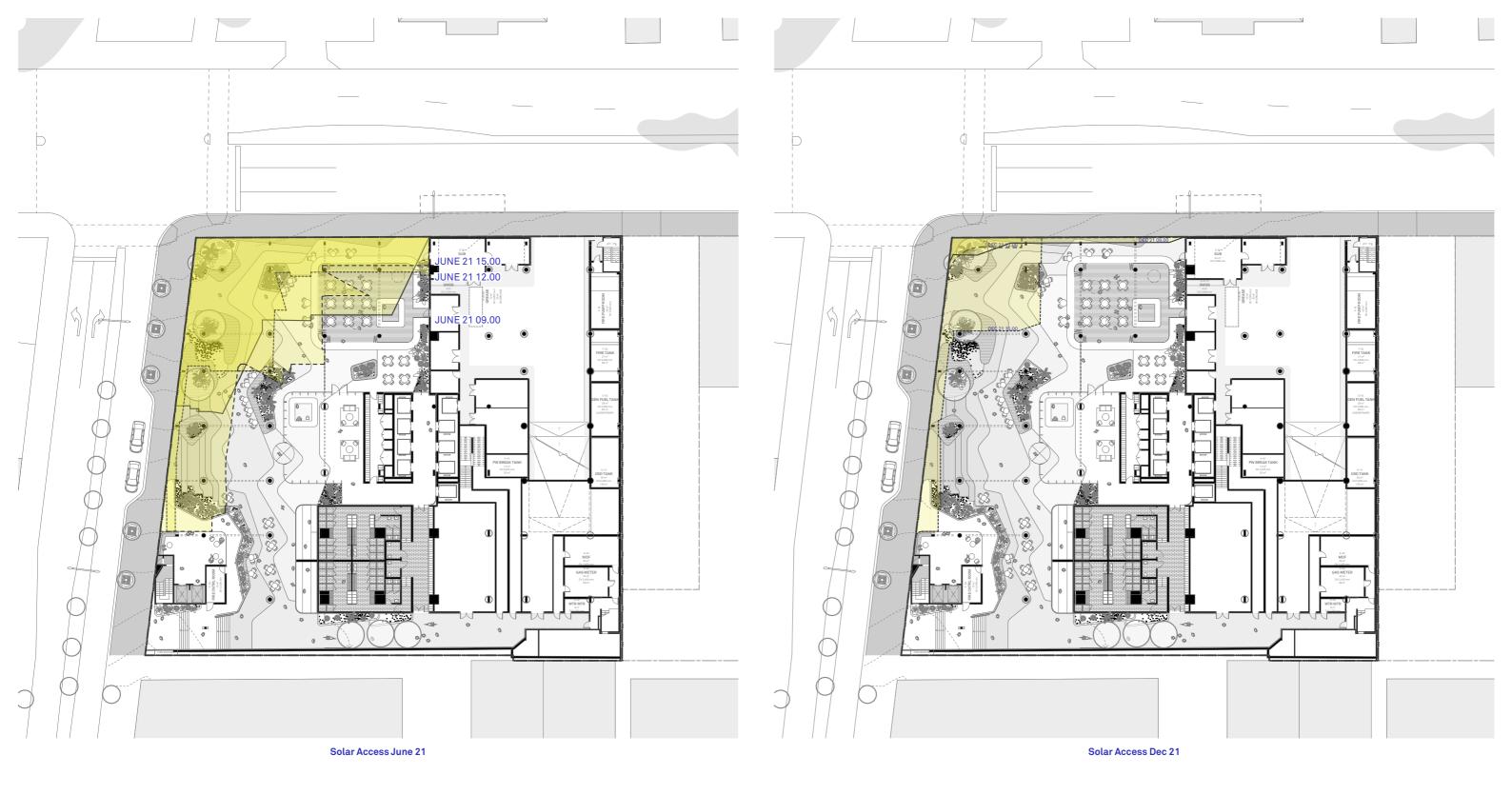
Date 12/01/23 BA Bathroom
ENS Ensuite
WC Toilet
LY Laundry
PR Powder Room
MB Master Bedroom
R Robe
WIR Walk In Robe
E Entry
B Bedroom

K Kitchen
Pantry
Fridge
DW Dishwasher
Living
Dining
CY Courtyard
CCE Terrace
Verandah
Garage
STD Study

BENSON MCCORMACK ARCHITECTURE

A: 5,505 BALMAIN RD, LILYFIELD NSW 2040
E: enquiries@ benson mccormack.com
P: +612 9818 0777 F:+612 9818 0778
ABN: 76 129 130 285 REG.No: 7536

FE: enquiries@bensonmcorracle
2223 4222 PROJECT ADDRESS
bm.au
301-311 Wellington Street, Perth WA 6000 AH
DB
56 1 2 19 10 20 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 25
76 1 2 19 10 2



CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE SHADOW DIAGRAMS **GF Solar Access** DA-720-005

APPROVED DB

REV 01

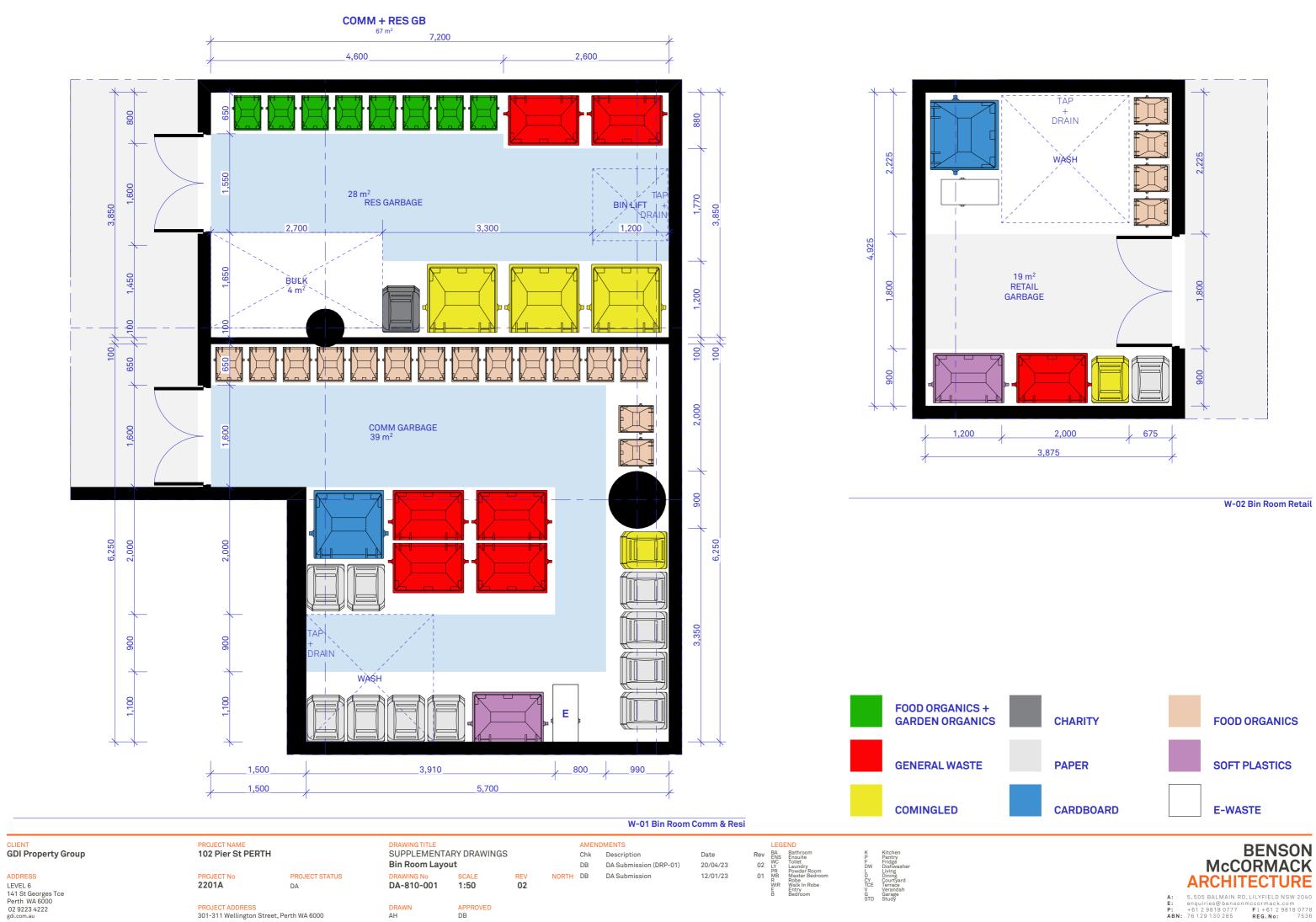
Chk Description DB DA Submission (DRP-01)

AMENDMENTS

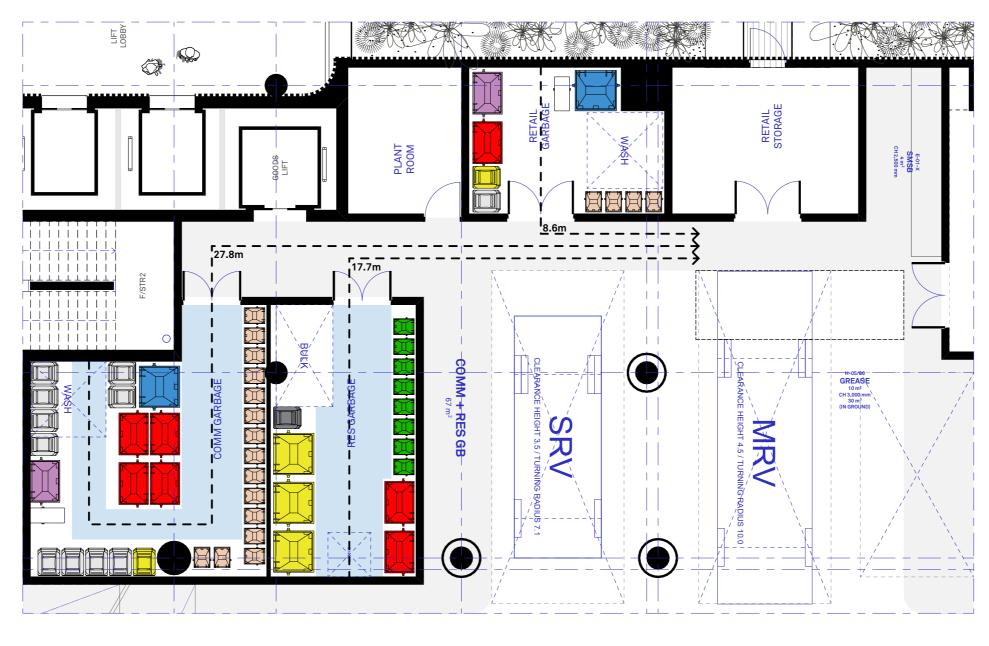
20/04/23



A: 5.505 BALMAIN RD, LILYFIELD NSW 2040 E: enquiries@bensonmccormack.com P: +612 9818 0777 F: +612 9818 0778 ABN: 76129130 285 REG.No: 7536



W-02 Bin Room Retail



W-03 Bin Room Distances

CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

DRAWING TITLE
SUPPLEMENTARY DRAWINGS Bin Room Layout 1:100 DA-810-002

REV 02

Chk Description DB DA Submission (DRP-01) NORTH DB DA Submission

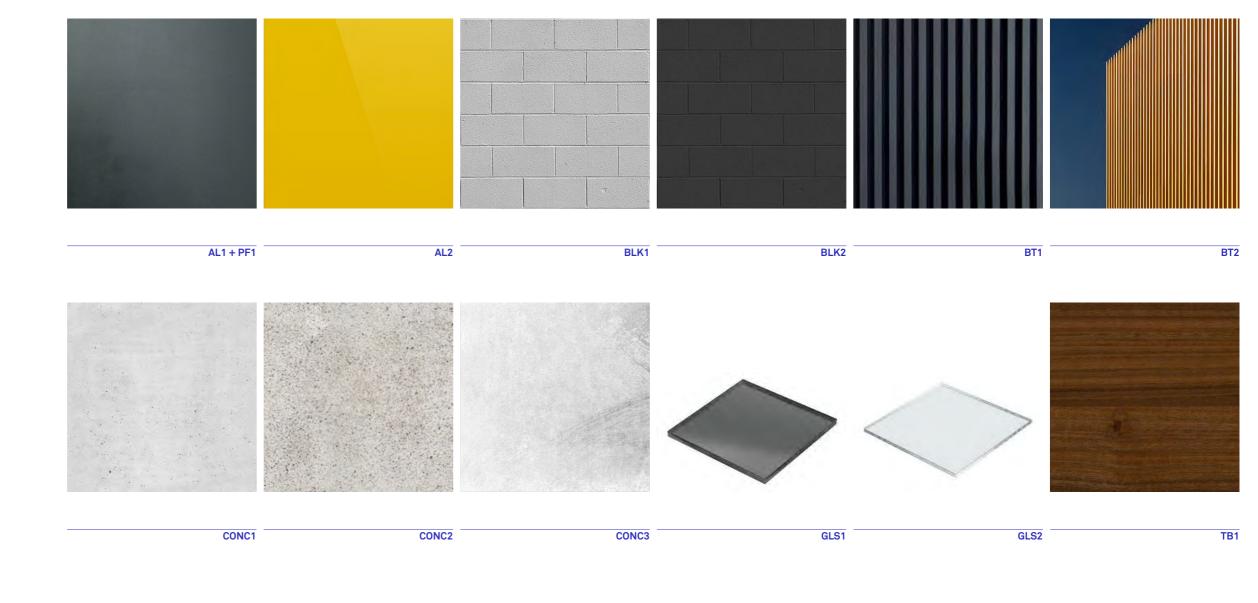
Rev BA Bathroom
ENS Ensuite
Coz LY Laundry
R Powder Room
Master Bedroo
R Robe
Wilk In Robe
E Entry
B Bedroom 20/04/23 12/01/23





AL1 ALUMINIUM **POWDERCOAT** ANTHRACITE GREY AL2 ALUMINIUM **POWDERCOAT** YELLOW BLK1 CONCRETE BLOCK NATURAL FINISH **CLEANED & RESTORED** BLK2 CONCRETE BLOCK PAINT FINISH ANTHRACITE GREY ALUMINIUM BATTEN BT1 POWDERCOAT ANTHRACITE GREY BT2 ALUMINIUM BATTEN POWDERCOAT **BROWN** CONC1 CONCRETE **EXISTING CLEANED & RESTORED** CONC2 CONCRETE **EXISTING PRE-CAST** EXPOSED AGGREGATE **CLEANED & RESTORED** CONC3 CONCRETE FINISH NATURAL GLS1 GLASS DARK GREY GLS2 GLASS CLEAR PF1 PAINT FINISH ANTHRACITE GREY TB1 TIMBER

NATURAL



CLIENT
GDI Property Group

LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au 2201A

PROJECT NAME
102 Pier St PERTH

PROJECT STATUS

DRAWING TITLE FINISHES BOARD Finishes Board DA-860-001

REV 01

APPROVED DB

AMENDMENTS Chk Description DB DA Submission

12/01/23





CLIENT GDI Property Group

ADDRESS LEVEL 6 141 St Georges Tce Perth WA 6000 02 9223 4222 gdi.com.au

PROJECT NAME
102 Pier St PERTH

PROJECT No 2201A PROJECT STATUS

PROJECT ADDRESS 301-311 Wellington Street, Perth WA 6000

DRAWING TITLE 3D VIEWS

Landscape DA-900-002

APPROVED DB

REV 01

Chk Description

DB DA Submission

12/01/23



A: 5,505 BALMAIN RD, LILYFIELD NSW 2040 E: enquiries@ bensonmccormack.com P: +61 2 9818 0778 ABN: 76 129 130 285 REG.No: 7536

Attachment 3:

Perspectives



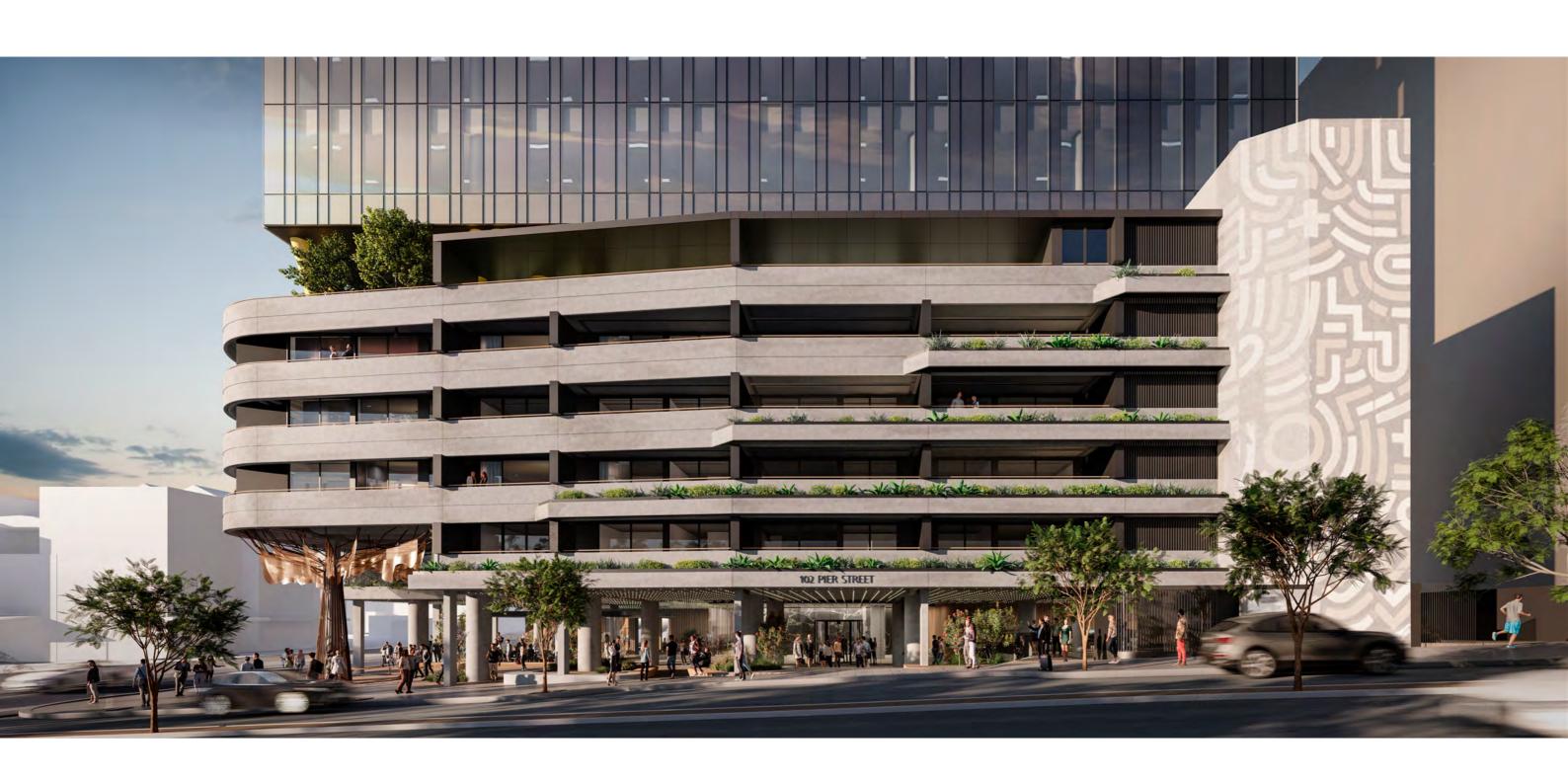








05 : Pier Street Elevation





Attachment 4:

Landscape Concept

# 301 wellington street

landscape concept I jul 2023 [U]



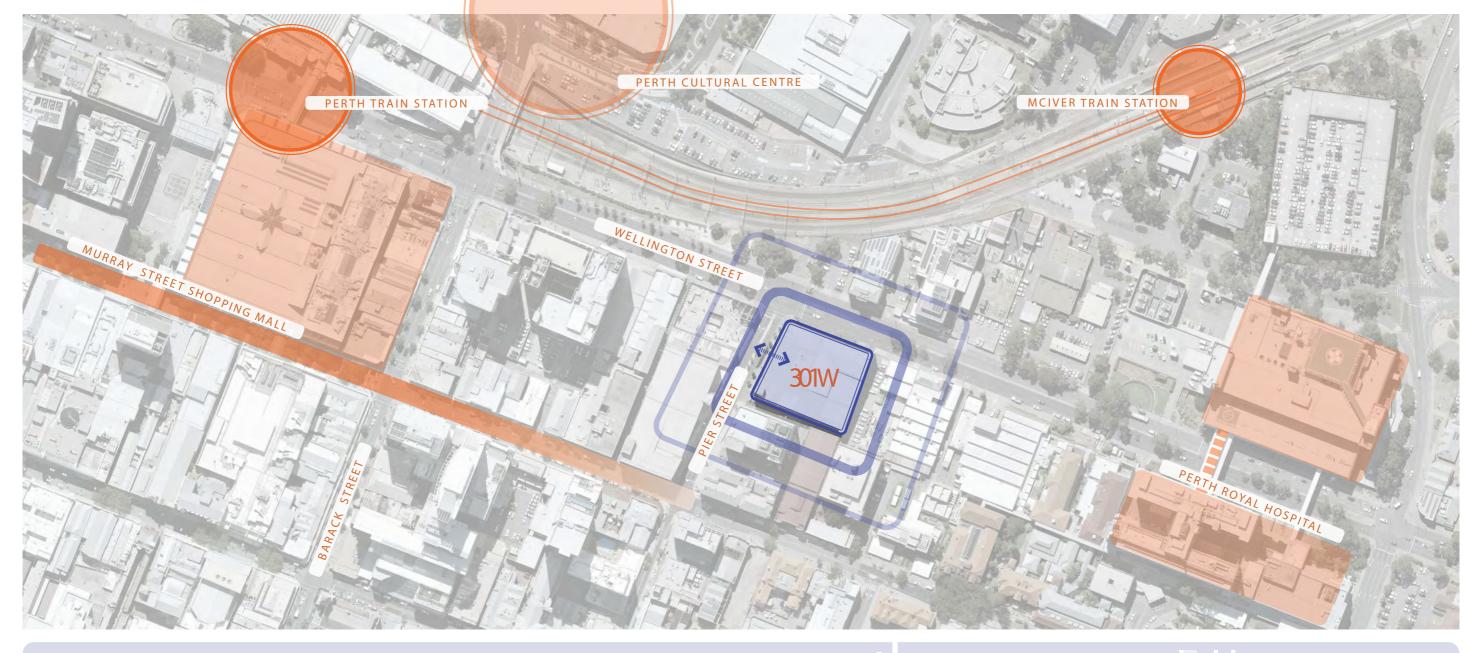
#### LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007 T: (08) 9388 9566 E: mail@plane.com.au

301 WELLINGTON STREET / LANDSCAPE CONCEPT
PREPARED FOR BENSON MCCORMACK ARCHITECTURE
IUI Y 2023

SITE CONTEXT / ANALYSIS

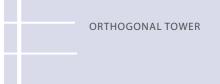
# site context & analysis



#### 301 WELLINGTON STREET / LANDSCAPE NARRATIVE

The landscape design language is proposed to compliment the architectural built form, materials & colours. Natural WA materials and warm earthy tones are proposed to achieve a welcoming cosy atmosphere with lush green planting.









LANDSCAPE ZONING & USES

# zoning & uses - ground floor



LEGEND

CAFE / ALFRESCO

PASSIVE URBAN PARK

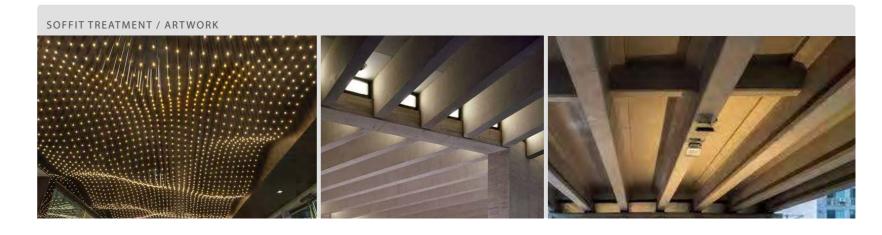
MAIN LOBBY

FLEXIBLE USE SPACE / ALFRESCO / ACTIVATED LANEWAY

RETAIL / POP -UP CAFE









T: (08) 9388 9566 E: mail@plane.com.au

### zoning & uses - ground floor



LEGEND

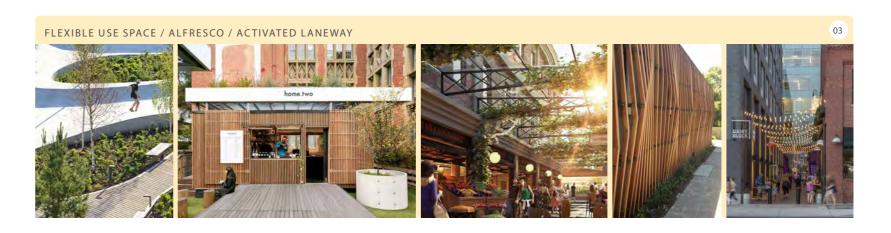
CAFE / ALFRESCO

PASSIVE URBAN PARK

MAIN LOBBY

FLEXIBLE USE SPACE / ALFRESCO / ACTIVATED LANEWAY

RETAIL / POP -UP CAFE

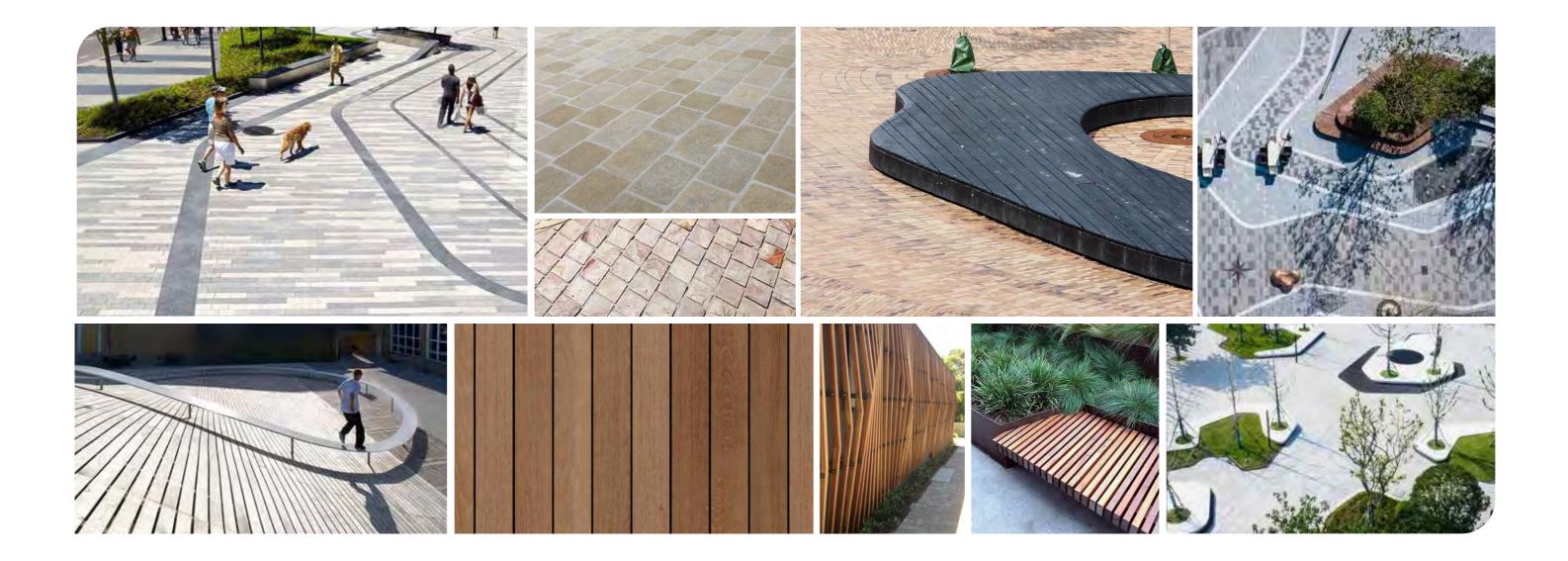








# materials palette



T: (08) 9388 9566 E: mail@plane.com.au



CONCEPT

### site issues + opportunities

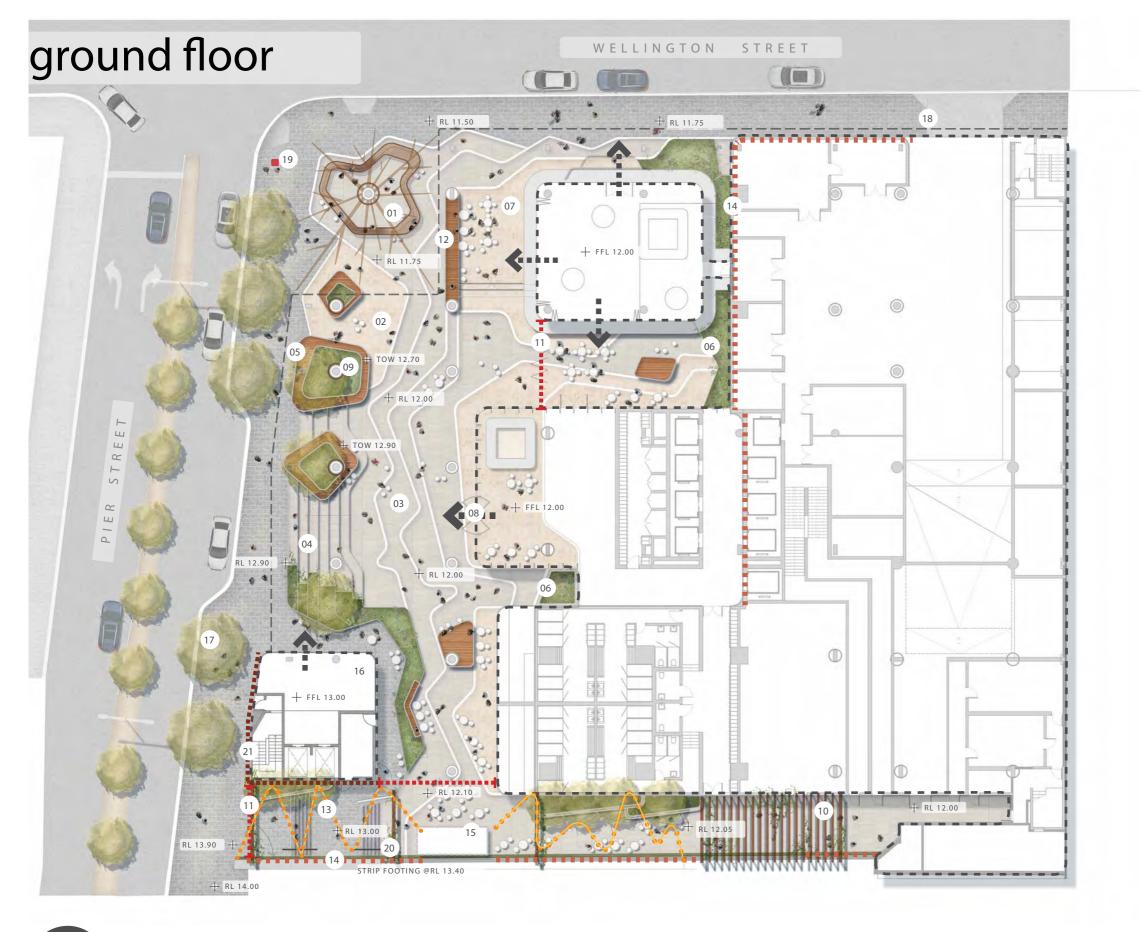




T: (08) 9388 9566 E: mail@plane.com.au

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007

NTS



#### LEGEND

- ACTIVATED CORNER WITH FEATURE ARTWORK SEATING AND CENTRAL SCULPTURAL TREE ELEMENT. THE "TREE" ACTS AS A LANDMARK WITH IT'S DISTINCTIVE CHARACTER AND USES RECYCLED MATERIALS REFERENCING THE ETHOS OF THE PROJECT
- COBBLE PAVING WITH INTEGRATED SEATING AND GARDEN BED PLANTING TO CREATE A COMFORTABLE HUMAN SCALE TO DESTINATIONS
- STONE UNIT PAVERS IN WARM LIGHT GREY COLOUR WITH FEATURE CONTRASTING CONCRETE BANDING TO CREATE A DYNAMIC, OPEN AND WELCOMING SPACE THAT ALLOWS PEDESTRIAN FLOW
- INTEGRATED TERRACED SEATING AREA
- TIMBER DECK ISLAND WITH RAISED 05
- GARDEN BED WITH SHADE TOLERANT 06
- CAFE ALFRESCO WITH BUILT-IN TIMBER BENCH 07 SEATING AND FEATURE PAVING TO ACTIVATE
- MAIN ENTY TO LOBBY AREA
- "GREEN COLUMNS" WITH ARTISTIC STEEL 09 MESH CLIMBING STRUCTURE FOR CREEPERS
- PAVILION WITH CREEPER PLANTING. THE PAVILION CREATES AN INTIMATE SCALE AND PROVIDES WIND MITIGATION TO LANEWAY AND EOT
- RESIDENT GATE ACCESS TO SECURE SPACES
- LARGE SCULPTURAL TIMBER BENCH 12 SEATING FRAMES ALFRESCO SPACE
- CATENARY LIGHTS TO CREATE A WARM 13 WELCOMING ATHMOSPHERE IN THE LANEWAY
- FEATURE SCREEN ELEMENT WITH CREEPER
- PROPOSED LOCATION FOR POP-UP CAFE/ RETAIL/FUNCTION AMENITY
- RESIDENTIAL LOBBY
- EXISTING STREET TREES ON PIER STREET
- CROSSOVER FOR LOADING BAY ACCESS
- COP INFORMATION SIGN
- INTEGRATED STEEL BICYCLE ACCESS RAMP
- FEATURE ART WALL. ARTWORK TO MATCH DETAILS OF SCULTURAL TREE ON WELLINGTON



#### LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007 T: (08) 9388 9566 E: mail@plane.com.au

301 WELLINGTON STREET / LANDSCAPE CONCEPT PREPARED FOR BENSON MCCORMACK ARCHITECTURE JULY 2023

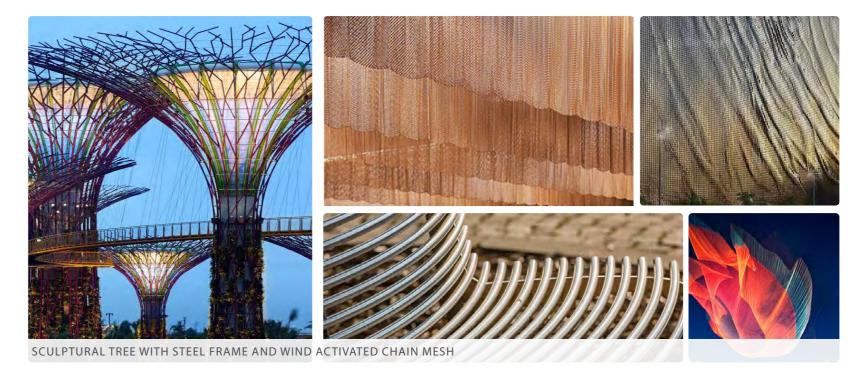
C1.1010 REV U

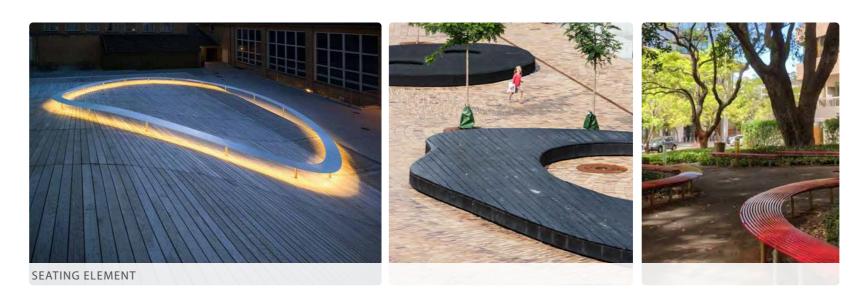




### ground floor - sculptural tree element







ZOOM PLAN / WELLINGTON & PIER STREET CORNER



# ground floor - sculptural tree element







BASIC TREE STRUCTURE

WOVEN MESH INTEGRATED TO LEVEL 1 SLAB

ORGANIC WOVEN MESH





### sketch views - cafe alfresco, street activation







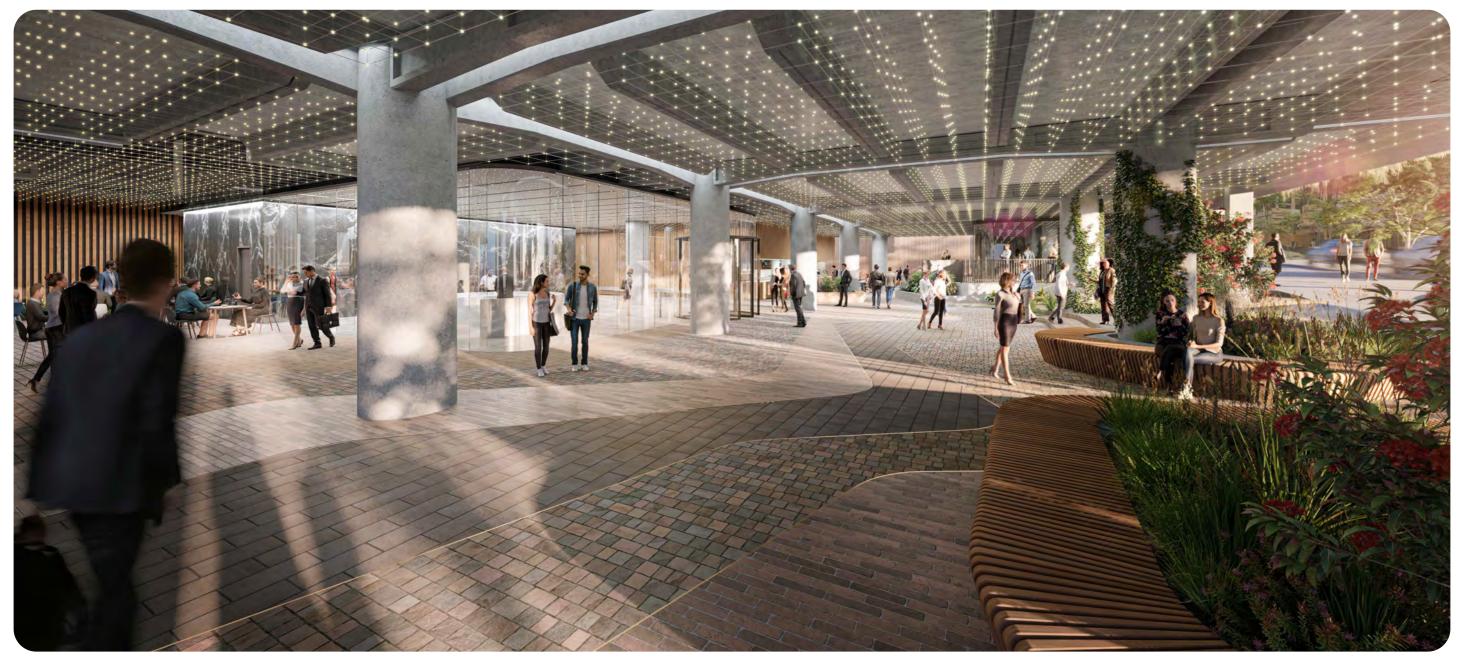


STREET ACTIVATION ON BOTH WELLINGTON AND PIER STREET IS PROPOSED THROUGH INTEGRATED TERRACED LANDSCAPE, FEATURE SCULPTURAL TREE INSTALLATION AND CAFE/ALFRESCO AMENITIES.



NTS

# sketch views - flexible-use space, planting









SHADE TOLERANT PLANTING AND GROW LIGHTS IN SUITABLE AREAS ARE PROPOSED TO ACHIEVE A GREEN WELCOMING SPACE.



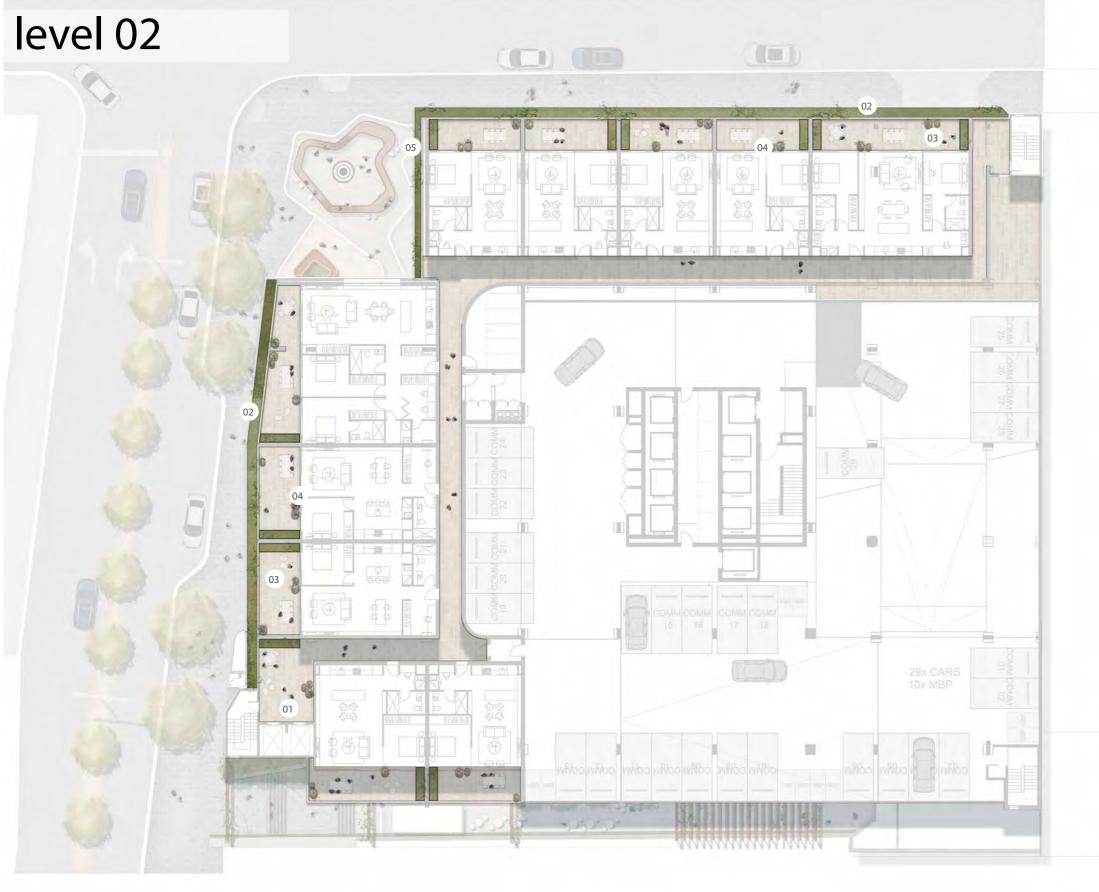














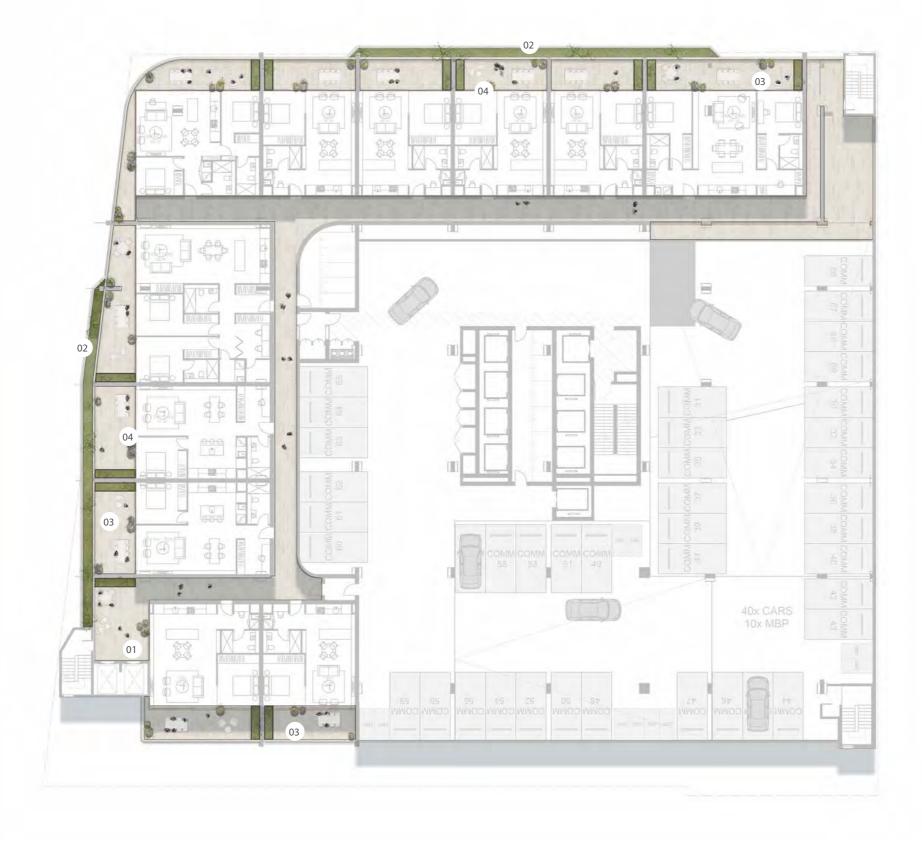
#### LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007 T: (08) 9388 9566 E: mail@plane.com.au 301 WELLINGTON STREET / LANDSCAPE CONCEPT
PREPARED FOR BENSON MCCORMACK ARCHITECTURE
JULY 2023



#### LEGEND

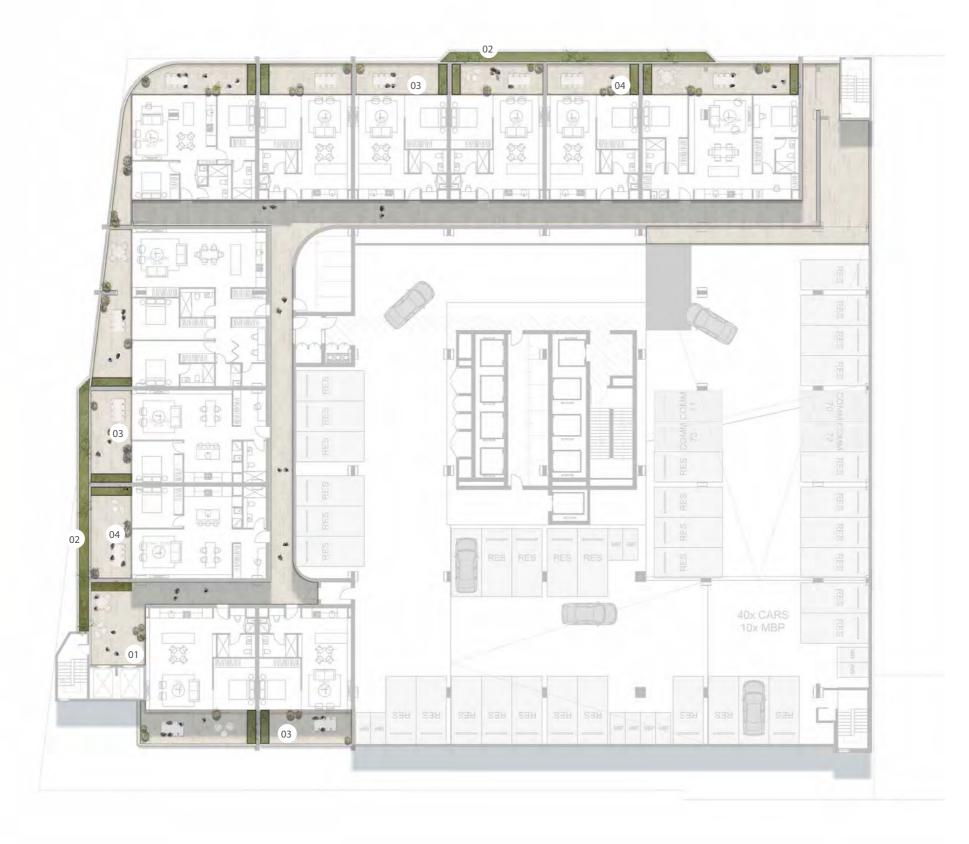
- RESIDENTIAL ELEVATORS BREAK-OUT SPACE
  01 WITH RAISED PLANTER TO SOFTEN SPACE
  AND LOOSE FURNITURE
- REFURBISH EXISTING PLANTERS WITH
  CASCADING SUN TOLERANT PLANTING AND
  NEW TENSILE CREEPER WIRES TO SOFTEN
  BUILDING FACADE
- PRIVATE BALCONIES WITH TILE PAVING,
  LOOSE FURNITURE, RAISED STEEL PLANTERS
  WITH GARDEN BED PLANTING TO PROVIDE A
  COMFORTABLE OUTDOOR SPACE
- 04 FEATURE POTS
- 05 EXISTING FACADE PLANTER IS EXTENDED TO WRAP THE CORNER OF THE BUILDING, CREATING A DOUBLE HEIGHT VOLUME GREEN INTERFACE WITH WELLINGTON STREET



#### LEGEND

- RESIDENTIAL ELEVATORS BREAK-OUT SPACE
  OF WITH RAISED PLANTER TO SOFTEN SPACE AND LOOSE FURNITURE
- REFURBISH EXISTING PLANTERS WITH
  CASCADING SUN TOLERANT PLANTING AND NEW
  TENSILE CREEPER WIRES TO SOFTEN BUILDING
  FACADE
- PRIVATE BALCONIES WITH TILE PAVING,
  LOOSE FURNITURE, RAISED STEEL PLANTERS
  WITH GARDEN BED PLANTING TO PROVIDE A
  COMFORTABLE OUTDOOR SPACE
- 04 FEATURE POTS





#### LEGEND

- RESIDENTIAL ELEVATORS BREAK-OUT SPACE WITH RAISED PLANTER TO SOFTEN SPACE AND LOOSE FURNITURE
- REFURBISH EXISTING PLANTERS WITH CASCADING SUN TOLERANT PLANTING AND NEW TENSILE CREEPER WIRES TO SOFTEN BUILDING FACADE
- PRIVATE BALCONIES WITH TILE PAVING, LOOSE FURNITURE, RAISED STEEL PLANTERS WITH GARDEN BED PLANTING TO PROVIDE A COMFORTABLE OUTDOOR SPACE
- 04 FEATURE POTS



#### LEGEND

- RESIDENTIAL ELEVATORS BREAK-OUT SPACE
  01 WITH RAISED PLANTER TO SOFTEN SPACE
  AND LOOSE FURNITURE
- REFURBISH EXISTING PLANTERS WITH
  CASCADING SUN TOLERANT PLANTING AND
  NEW TENSILE CREEPER WIRES TO SOFTEN
  BUILDING FACADE
- PRIVATE BALCONIES WITH TILE PAVING,
  LOOSE FURNITURE, RAISED STEEL PLANTERS
  WITH GARDEN BED PLANTING TO PROVIDE A
  COMFORTABLE OUTDOOR SPACE
- 04 FEATURE POTS





#### LEGEND

- RESIDENTIAL ELEVATORS BREAK-OUT SPACE
  WITH RAISED PLANTERS, INTEGRATED
  SEATING OPPORTUNITIES & LOOSE
  FURNITURE
- PRIVATE BALCONIES WITH TILE PAVING,
  LOOSE FURNITURE, RAISED PLANTERS
  WITH GARDEN BED AND TREE PLANTING TO
  PROVIDE A COMFORTABLE OUTDOOR SPACE
- 03 RAISED PLANTERS WITH INTEGRATED SEATING
- MAIN COMMUNITY GATHERING SPACE WITH
  STONE PAVING, BBQ AMENITIES, INTEGRATED
  AND LOOSE FURNITURE
- TIMBER DECK ISLAND WITH LOOSE
  5 FURNITURE AND CITY VIEWS FOR SMALL
  GROUP GATHERINGS
- 6 TERRACED TIMBER DECK SEATING
- 07 FUNCTION AREA BREAK-OUT SPACE WITH TILE PAVING AND VIEWS TO THE CITY
- SUN AND WIND TOLERANT GARDENBED

  AND TREE PLANTING TO PROVIDE A GREEN BUFFER
- REFURBISH EXISTING PLANTERS WITH
  CASCADING SUN TOLERANT PLANTING AND
  NEW TENSILE CREEPER WIRES TO SOFTEN
  BUILDING FACADE



COMMUNAL SPACE



PRIVATE FUNCTION AREA



LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007 T: (08) 9388 9566 E: mail@plane.com.au 301 WELLINGTON STREET / LANDSCAPE CONCEPT
PREPARED FOR BENSON MCCORMACK ARCHITECTURE
JULY 2023

C1.1019

REV U 0 3 6 9
1:300 @ A3



PLANTING PALETTE

### planting palette - trees



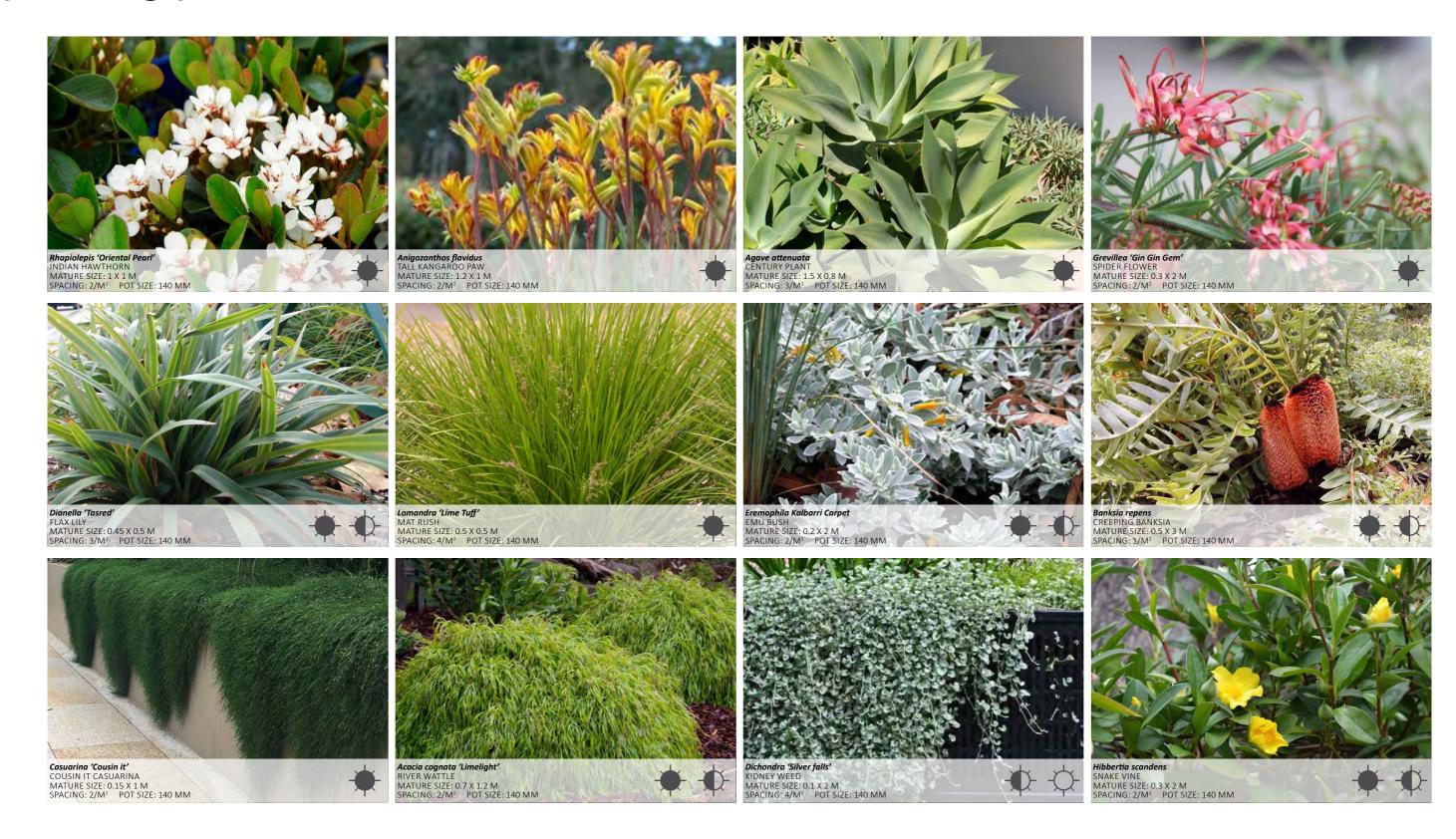
Cupaniopsis anacardiodes TUCKEROO MATURE SIZE: 6 X 3 M POT SIZE: 200L

T: (08) 9388 9566 E: mail@plane.com.au

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007

Caesalpinia ferrea LEOPARD TREE MATURE SIZE: 8 X 4 M POT SIZE: 200L Hakea laurina PIN-CUSHION HAKEA MATURE SIZE: 4 X 3 M POT SIZE: 200L

# planting palette - shrubs





LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007

T: (08) 9388 9566 E: mail@plane.com.au

### planting palette - shade tolerant planting





LANDSCAPE ARCHITECTS

T: (08) 9388 9566 E: mail@plane.com.au





Attachment 5:

**CPTED Report** 



#### **GDI**

### Wellington Street Car Park

### Crime Prevention Through Environmental Design Assessment

Reference: 289028-13

Issue 01 | 27 July 2023



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 289028-13

Arup Australia Pty Ltd | ABN 76 625 912 665

Arup Australia Pty Ltd Level 14 Exchange Tower 2 The Esplanade Perth WA 6000 Australia arup.com



### **Document Verification**

Project Title Wellington Street Car Park

**Document Title** Crime Prevention Through Environmental Design Assessment

**Job Number** 289028-13

Document Reference 289028-13-SEC-RPT-01

File Reference

Revision	Date	Filename				
A.1	09/06/2023	Description	Draft issue for client review			
			Prepared by	Checked by	Approved by	
		Name	Kate Hampson	Gemma Pollard	Jon Farley	
		Signature	Kate Hampson	Millad		
A.2	21/06/2023	Filename		· · · · · · · · · · · · · · · · · · ·		
		Description	Reissue for clien	Reissue for client review		
			Prepared by	Checked by	Approved by	
		Name	Kate Hampson	Gemma Pollard	Jon Farley	
		Signature	Kate Hampson			
I.1	27/07/2023	Filename				
		Description	Final issue			
			Prepared by	Checked by	Approved by	
		Name	Kate Hampson	Gemma Pollard	Jon Farley	
		Signature	Kate Hampson			

Issue Document Verification with Document

**✓** 

#### **Contents**

1.	Introduction	1	
2.	References	1	
3.	Location	1	
4.	Demographic and Crime Profile	2	
5.	Crime Prevention Through Environmental Design Principles	4	
6.	Level One [Ground]	6	
6.1	Natural Surveillance	7	
6.2	Access Control	7	
6.3	Territorial Reinforcement	7	
6.4	Space Management	8	
7.	Recommendations	10	
Tables			
Table 1	3		
Table 2 Perth Crime Statistics			
<b>-</b> :			
Figures		2	
Figure 1 Wellington Car Park			
Figure 2: CPTED Principles			
Figure 3 Public Open Space			
Figure 4 Level One Floor Plan			
Figure 5	8		
Figure 6 Wellington Car Park Graffiti			
Figure 7 107 Pier Street Graffiti			
Figure 8 107 Pier Street Vacancy			
Figure 9 337-9 Wellington Street Graffiti			

### 1. Introduction

Arup has been engaged by GDI Property Group to undertake a Crime Prevention Through Environmental Design (CPTED) assessment of the proposed Wellington Car Park Development. The objectives of the report are to assess the design features of the proposed development and identify potential vulnerabilities and proportionate mitigations.

The following activities have been undertaken to date:

- A review of the design package;
- A demographic and crime review of the location;
- An assessment of the site based on CPTED principles; and
- Providing CPTED recommendations.

Drawing pack from 2201A - 26/07/23 was used to support the CPTED review conducted in this report.

### 2. References

The assessment was undertaken with reference to the following standards and guidelines:

- ISO 22341: 2021 Security and Resilience Protective Security Guidelines for Crime Prevention Through Environmental Design; and
- Department of Planning, Lands and Heritage: 2023 Safer Places by Design Crime Prevention Through Environmental Design Planning Guidelines.

### 3. Location

The site is located on the corner of Wellington Street and Pier Street in Perth, Western Australia. It is adjacent to the Midland/Airport Rail Line and is within the Central Business District (CBD) of Perth. See Figure 1 below.

Figure 1 Wellington Car Park



The surrounding area is made up of business and residential properties, shopping centres, hotels, and other forms of accommodation. There is also a hospital located close by and two train stations within walking distance.

Based on this, the following users have been identified:

- Employees;
- Residents;
- · Pedestrians; and
- Contractors/visitors.

The site itself is proposed to be converted from a car park into a high-rise building for mixed use.

On level one (ground floor), there will be an open space accessible to the public, providing seating, a pop-up café and retail stores.

On levels two to five, there will be apartments which will only be accessible to residents.

On levels seven and above, there will be commercial offices, which again will be restricted access. The site will also feature a plant room, security desk and offer end of trip facilities.

### 4. Demographic and Crime Profile

Arup has reviewed census data from the Australian Bureau of Statistics to generate a suburban profile for Perth. See Table 1 below. This outlines the population, land area, the median age and total income, excluding government pensions and allowances, as well as the unemployment rate. However, as of April 2023, this rate is closer to 3.7%.

Table 1 Perth Suburb Profile<sup>1</sup>

Suburb Profile Category	Data Identified
Population	29,667
Land Area	1 373.4
Median Age	33
Median Total Income (Excluding Government Pensions and Allowances)	\$54, 342
Unemployment Rate	4.6%
Primary Industries of Employment	Hospitals
	Iron Ore Mining
	Primary Education
	Cafes and Restaurants
	Supermarkets and Grocery Stores

Arup has reviewed crime statistics from the Western Australian Police Force to generate a crime profile of Perth. See Table 2 below. The open-source database publishes statistics per metropolitan region each financial year, outlining not only the number of offences but type. For this assessment, offences relating to opportunistic crime were analysed as these relate to CPTED principles. In total, 10, 204 offences were recorded from 2021 to 2022, and 8,789 from 2022 to March 2023.

Table 2 Perth Crime Statistics<sup>2</sup>

Type of Offence	2020-2021	2021-22	2022-23
Sexual Offences	323	276	176
Assault (Non-Family)	851	918	746
Threatening Behaviour (Non-Family)	143	143	188
Stealing	2,983	3,114	2,747
Property Damage	531	567	453
Drug Offences	1,209	982	1,070
Graffiti	162	251	154

Crime data for the CBD was not available. As a result, data for the suburb of Perth was analysed. This area had one of the highest crime rates across Western Australia, followed by Cannington and Fremantle. It recorded a significant number of violent offences as compared to other suburbs, such as Joondalup.

<sup>&</sup>lt;sup>1</sup> https://dbr.abs.gov.au/region.html?lyr=lga&rgn=57080

<sup>&</sup>lt;sup>2</sup> https://www.police.wa.gov.au/crime/crimestatistics#/

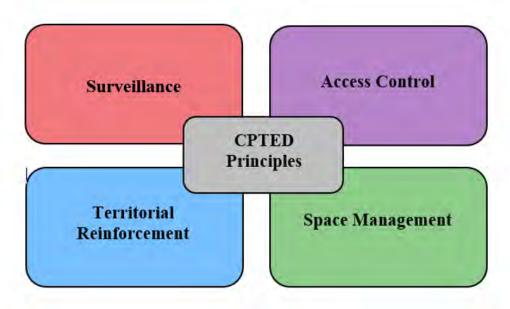
## 5. CPTED Principles

CPTED is a multi-disciplinary approach that uses design features and management of the built environment to influence decision making of an offender. The goal is to increase the effort and reward of crime, as well as increase the perceived or actual level of risk.<sup>3</sup>

CPTED offers numerous benefits. It enhances community safety by designing spaces that deter criminal activity. CPTED promotes natural surveillance, making it easier for residents to observe and report suspicious behaviour. Additionally, it improves territoriality and access control, increasing the sense of ownership and reducing opportunities for crime.

There are four principles used to achieve this. These are Surveillance, Access Control, Territorial Reinforcement, and Space Management. See Figure 2 below.

Figure 2: CPTED Principles



#### Surveillance

The environment should maximise the number of pedestrians using the space. This facilitates surveillance, making the site less attractive for crime. Lighting also supports surveillance through raising perceptions of safety. Good natural surveillance plays a crucial role in reducing crime. When public spaces are designed to maximise visibility, potential offenders are deterred due to the increased risk of detection. The presence of people who can easily observe and report suspicious activities creates a sense of accountability, making criminals think twice before committing illegal acts. For high-risk environments, where natural surveillance is not sufficient alone, formal measures can be used within the design, including CCTV and security patrols. This deters offenders from engaging in criminal activity due to the risk of detection by formal authorities.

#### Access Control

Access control is an essential security measure due to its ability to regulate entry and limit unauthorised access. By implementing effective access control systems, organisations can prevent unauthorised individuals from entering sensitive areas, protecting assets and information. It enhances overall safety, reduces the risk of theft or vandalism, and ensures that only authorised personnel can access restricted spaces. The design of an environment should inform users of which spaces are open to the public, and which areas are restricted. This can be achieved through physical or symbolic barriers. For high-risk environments, where natural access control is not sufficient alone, physical and electronic measures can be used within the

<sup>3</sup> https://www.cpted.net/

design. This may include locks, gates, barriers, and doors. These measures target harden an area, providing a visual deterrent for offenders.

#### Territorial Reinforcement

Territorial reinforcement is a vital consideration in security as it establishes clear boundaries and ownership of spaces. By defining and reinforcing territories, it enhances the perception of control and discourages potential criminals. It promotes a sense of ownership, increases vigilance, and fosters a cohesive community, thereby deterring unauthorised activities and reducing crime rates. The environment should have clear boundaries that indicate ownership of the space. The area is to be legible and support activity such as recreation.

#### Space Management

Good space management plays a significant role in achieving favourable security outcomes. Effective organisation and design of spaces ensure efficient surveillance, clear access control, and optimised use of resources. It minimises blind spots, enhances natural surveillance, and enables swift response to security incidents, ultimately improving overall safety and security within a given environment. A space should appear to be managed and well cared for. This discourages vandalism and criminal activity as this indicates ownership.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> https://www.wa.gov.au/system/files/2023-06/safer-places-by-design-cpted-guidelines.pdf

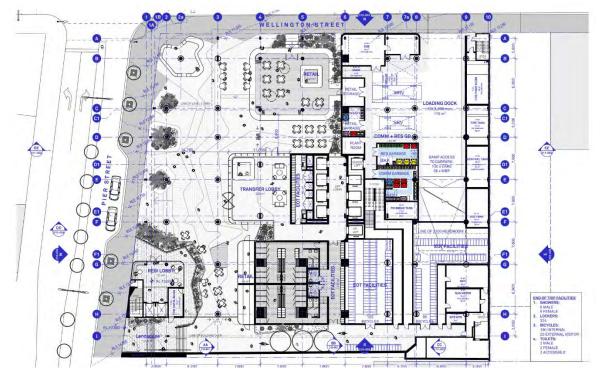
## 6. Level One [Ground]

A review of level one, ground floor has been conducted. As noted in Section 3 of this report, the remaining levels are not accessible to the public and therefore no areas are considered a key risk to CPTED. See Figure Figure 3 Public Open Space and 4 below for an overview of the floor plan. The design has been reviewed in accordance with outlined CPTED principles.

Figure 3 Public Open Space



Figure 4 Level One Floor Plan



### 6.1 Natural Surveillance

- The location of the site facilitates natural surveillance as it within a populated area, neighbouring a road. This indicates that it is likely there be pedestrian and vehicle traffic throughout the day and night.
- The café and retail store on the ground floor will further support in activating the space, providing surveillance.
- Sightlines into the outdoor area and floor are mostly clear. There are limited design features that will hinder views from the road. Pathways are unobstructed.
- However, sightlines into the pedestrian laneway and end of trip facilities are unclear. These may provide opportunities for concealment.
- Furthermore, the roof which extends over the open space may create shadows, resulting in inadequate lighting. This could lead to areas of concealment, decreasing perceptions of safety and facilitate crime. Arup has undertaken a lighting assessment; this will be further discussed in the recommendations.
- Formal surveillance is provided as there is a security desk at reception and a twenty-four-hour security guard on site. It is assumed that there will be monitoring technology, including cameras. This will assist in achieving surveillance.

### 6.2 Access Control

- Design features on level one direct pedestrians into publicly accessible areas, away from restricted zones.
- The open space out the front of the building uses paving and landscaping to mark it as a place to be used by pedestrians.
- Whereas residential and commercial floors are private areas that require a purpose to enter. This is created by having two separate lobbies located west and north on the ground floor.
- Timber deck islands with raised planters located along the entrance at Pier Street demarcates the space, providing a natural barrier to the ground floor.
- In addition to natural access control, there will be formal measures in place, including a security desk and twenty-four-hour security guard.
- A gate will be installed between the café and residential lobby to restrict access afterhours to the end of trip lane. Another gate will be installed to restrict access afterhours to the top of the stairs located on Pier Street.
- No formal hostile vehicle mitigation controls were identified in the existing or proposed design plan.
- Whilst the timber decks along Pier Street are intended to provide access control, the ground floor still is vulnerable to vehicle as a weapon threats. Particularly, along Wellington Street as the entrance to the floor space is open with no physical barriers.

#### 6.3 Territorial Reinforcement

- There is a clear definition between public and private space on level one. There is a natural progression from publicly accessible areas to restricted, e.g., street to forecourt, residential to commercial. Landscaping and the physical design of the space facilitates this.
- Seating outside the building encourages pedestrians to linger, supporting social interaction amongst users.
- The featured art wall and sculpture tree outlined in the landscaping plan will also promote a sense of community and reinforce ownership of the space. See Figure 5: Sculpture Tree below.
- The City of Perth will have signage outside the space. This will support legibility and wayfinding, communicating the intended use of the space.

Figure 5: Sculpture Tree



## 6.4 Space Management

- The pop-up café and retail stores located on level one will activate the space, discouraging vandalism and crime due to perceived ownership.
- However, it is evident in Figures Figure 6 Wellington Car Park Graffiti to Figure 9 337-9 Wellington Street Graffitithat the current physical environment is not maintained or cared for. There is graffiti on the existing car park and adjacent building.
- The adjacent building is also vacant, along with numerous others in the area. This indicates a lack of ownership and management.
- The site is located directly next to a road, the footpath provides limited separation from traffic. Vegetation, including planter boxes assist in demarcating the space.

Figure 6 Wellington Car Park Graffiti





Figure 7 107 Pier Street Graffiti



Figure 8 107 Pier Street Vacancy

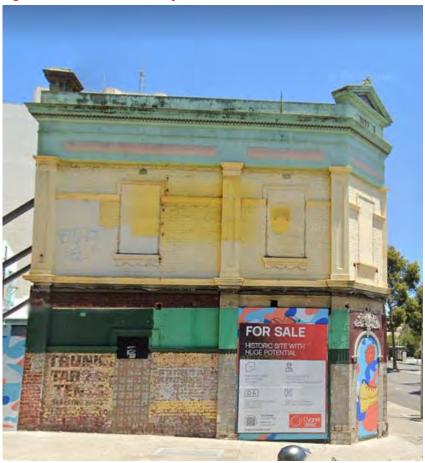


Figure 9 337-9 Wellington Street Graffiti



All images have been sourced from Google Maps. These were captured in January 2023.

## 7. Recommendations

Based on the potential vulnerabilities identified, the following recommendations can be made:

- Whilst the design incorporates raised planters along the boundary of Pier Street, a vehicle as a weapon
  threat assessment should be considered. The design plan appears to have potential vulnerabilities for
  vehicles being used as a weapon, including along Wellington Street to target the public space.
   Consultation with a suitably qualified security consultant should be considered to establish the potential
  threat and need for additional mitigations.
- Arup has undertaken a lighting assessment. The design criteria outlined should be applied throughout the ground floor. Lighting is to be uniform and overlapping, with sufficient lux levels to avoid creating shadows or blind spots. This will ensure that fixtures provide adequate illumination to facilitate identification of hazards, surveillance of surroundings and deter criminal activity.
- Sightlines into the pedestrian laneway and entrance to end of trip facilities are unclear, creating the potential for loitering and areas of concealment. It is recommended that this space is to be well lit and formal surveillance control measures are implemented, including cameras.
- Landscapers are to ensure that vegetation in the timber deck islands with raised planters do not create potential obstructions to sightlines. These are to be low in height and density. This will ensure sightlines are clear and reduce areas of concealment for offenders.
- A maintenance plan is to be implemented as part of the building. This will ensure that the site remains presentable and is well cared for.

Attachment 6:

Lighting Report



## **GDI Property Group**

# 301 Wellington Street

Lighting Report

Reference: LI01

Rev. 01 | 16 June 2023

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 289028-00

Arup Australia Pty. Ltd. | ABN 76 625 912 665

Arup Australia Pty. Ltd. Level 5, 151 Clarence Street Sydney NSW 2000 Australia arup.com



## **Document Verification**

Project title 301 Wellington Street, Perth

Lighting Report **Document title** 289028-00 Job number LI01

**Document ref** 

File reference

Revision	Date	Filename	301 Wellingt	on St_Arup lightin	ng_V0
00	16 June 2023	Description	n Lighting report		
			Prepared by	Checked by	Approved by
		Name	Scott Gilbert	Rhiannon West	James Flattery

Issue Document Verification with Document

## **Executive Summary**

Arup have been engaged to prepare a lighting report for the proposed development at 301 Wellington Street, Perth to address feedback received on the DA application regarding the undercroft.

Undercrofts are unique areas that require careful lighting design to enhance functionality, aesthetics, and user experience. The lighting design presented in the development application showed a vast array of lighting nodes suspended from the soffit to accentuate the height of the space.

Compliance with external lighting standards and regulations is crucial for meeting legal requirements and ensuring the well-being of individuals in the surrounding environment.

Lighting compliance targets have been assessed against the following:

- AS/NZS 1158.3.1:2020 Lighting for roads and public spaces
- AS/NZS 4282:2019 Control of Obtrusive Light
- City of Perth (COP): Public Lighting Framework AS/NZS 1158.3.1:2005 (as this is referenced in the COP: Public Lighting Framework)
- AS/NZS 4806.2:2006 Closed Circuit Television (CCTV) Part 2: Application guide



### **Table of Contents**

1.	Introduction	4
2.	Site Location	4
3.	Lighting scheme	5
3.1	Lighting Compliance Criteria	6
3.2	Illuminance Map	10
4.	Conclusion	10
Figur	res	
Figure	e 1: Site Location	4
Figure	e 2: Site Location: COP – Public Lighting Framework	4
Figure	e 3: AS/NZS 1158.3.1:2020 Table 3.5	6
Figure	e 4: AS/NZS 1158.3.1:2020 Table 3.4	6
Figure	e 5: COP – Public Lighting Framework	7
Figure	e 6: AS/NZS 4282:2019 Table 3.1	7
Figure	e 7: AS/NZS 4282:2019 Table 3.2	8
Figure	e 8: AS/NZS 4282:2019 Table 3.3	8
Figure	e 9: AS/NZS 4282:2019 Site Boundaries	9
Figure	e 10: AS/NZS 4282:2019 Table of Parameters	9
Figure	e 11: Illuminance Map	10

### **Disclaimer**

This assessment is presented based on engineering judgement. No detailed simulation, physical or computational study has been made to develop the recommendations presented in this report.

## 1. Introduction

Arup have been engaged to provide a lighting report for the proposed development at 301 Wellington Street, Perth. This report outlines the assessment and subsequent recommendations for the lighting design related to pedestrian lighting at ground level of the undercroft.

## 2. Site Location



Figure 1: Site Location

The proposed site is located on the north-west corner of the block bounded by Victoria Square, and Wellington, Lord, Murray, and Pier Streets. The surrounding area has low- to medium-rise buildings in all directions with taller buildings to the south-west.

Roadway and pedestrian pathway lighting adjoins site boundary.

Located within an area defined as 'Central Perth' as per the COP: Public Lighting Framework



Figure 2: Site Location: COP - Public Lighting Framework

## 3. Lighting scheme

The lighting scheme presented within the DA application will be developed against the relevant Australian Standards, local building codes and local lighting guidelines.

The suspended decorative ceiling lighting treatment may need to be supplemented by discrete functional luminaires which will assist with the overall compliance, promote safety, and connect with the night-time economy.

Opportunities exist to further enhance the decorative lighting element by incorporating an interactive lighting approach with various scenes to create an immersive atmosphere, along with opportunities to layer the lighting through the use of tree uplighting and integrated bench lighting.

Perth, being a vibrant city with a growing population and diverse infrastructure, requires careful attention to external lighting design and implementation.

The following points highlight the key aspects of external lighting compliance in Perth:

#### a. Regulatory Framework:

Compliance with Australian standards, local building codes and local lighting guidelines is essential. Understanding and adhering to these guidelines ensures legal compliance and promotes best practices.

#### b. Light Pollution:

Properly shielding fixtures, selecting appropriate lamp types, and utilising lighting control systems are recommended to reduce light pollution and preserve the region's environmental quality.

### c. Energy Efficiency:

Opting for energy-efficient lamps, optimising lighting levels based on specific requirements, and implementing lighting control systems can significantly reduce energy consumption and environmental impact.

#### d. Uniformity and Visibility:

Achieving uniform illumination levels across external areas is crucial for ensuring visual clarity, safety, and security. Illuminance levels and uniformity ratios must be carefully considered and tailored to meet the requirements of specific applications such as walkways, parking lots, or roadways.

### e. Safety and Security:

Adequate lighting in external spaces is vital for enhancing safety and security in Perth. Designing illumination levels that facilitate easy identification of potential hazards, surveillance of surroundings, and deterrence of criminal activities contributes to a safer environment.

To achieve external lighting compliance in Perth, the following recommendations are provided:

- a. Select lighting fixtures that adhere to efficiency, CCT, colour rendering, light distribution, glare control, and durability standards, while also considering IP ratings for protection against dust and moisture (minimum IP54 as per 2.6.3 COP-Public Lighting Framework).
- b. Implement smart lighting control systems such as occupancy sensors, daylight sensors, and programmable timers to optimise energy usage and offer greater flexibility.

By carefully considering the above points, we aim to create a space which not only complies with relevant regulations but also create a visually appealing, safe, and user-friendly undercroft environment.

## 3.1 Lighting Compliance Criteria

The proposed lighting design will be evaluated in accordance with:

- AS/NZS 1158.3.1:2020
- AS/NZS 4282:2019
- City of Perth (COP): Public Lighting Framework AS/NZS 1158.3.1:2005 (as this is referenced in the COP: Public Lighting Framework)

TABLE 3.5

VALUES OF LIGHT TECHNICAL PARAMETERS
FOR PUBLIC ACTIVITY AREAS (EXCLUDING CAR PARKS)

1	2	3	4	5			
		Light technical parameters (LTP)					
Lighting subcategory	Average horizontal illuminance $(\overline{E}_h)$	Point horizontal illuminance <sup>a,b</sup> (E <sub>Ph</sub> )	Illuminance (horizontal) uniformity <sup>c</sup> Cat. P	Point vertical illuminance <sup>a,b,d</sup> (E <sub>Pv</sub> )			
	lx	lx	$(U_{E2})$	lx			
PA1	21	7	8	7			
PA2	14	4	8	4			
PA3	7	2	8	2			

a These values are maintained.

Figure 3: AS/NZS 1158.3.1:2020 Table 3.5

TABLE 3.4

VALUES OF LIGHT TECHNICAL PARAMETERS
FOR PATHWAYS AND CYCLIST PATHS

1	2	3	4	5			
	Light technical parameters (LTP)						
Lighting subcategory	Average horizontal illuminance $(\overline{E}_h)$ lx	Point horizontal illuminance <sup>a,b,d</sup> (Eph) lx	Illuminance (horizontal) uniformity <sup>c</sup> Cat. P (UE2)	Point vertical illuminance <sup>a,b</sup> (E <sub>Pv</sub> )			
PP1	10	2	5	1			
PP2	7	1	5	0.3			
PP3	3	0.5	5	0.1			
PP4	1.5	0.25	5	0.05e			
PP5	0.85	0.14	5	0.02e			

Figure 4: AS/NZS 1158.3.1:2020 Table 3.4

b Conformance is achieved by being greater than or equal to the applicable table value.

<sup>&</sup>lt;sup>c</sup> Conformance is achieved by being less than or equal to the applicable value.

		ASNZS 1158.3.1:2005				
Area-wide treatments	Road/pathway Category	Operating characteristics Category	Vehicle/ pedestrian lighting subcategory	Operating characteristics Category P	Correlated Colour Temperature	Colour Rendering Index (min.)
Minor and residential streets	Local roads used primarily for access to abutting properties	Low traffic volume Low to moderate pedestrian volume	P1-P4	Mixed vehicle and pedestrian / cycle traffic dependent on specific street	3000K-3500K	RA70 RA75 for pedestrian area
Laneways	Access road to abutting properties	Low traffic volume  Low to moderate pedestrian volume	Pl-P4	Mixed vehicle and pedestrian / cycle traffic dependent on specific street	2700-3500K	
Gateways  Major transit nodes	Arterial or main roads in central activity areas of capital city	High traffic volume Moderate to low pedestrian volume	PI-P3	Intensely urban High traffic volume Pedestrian and cyclist shared path Moderate to high pedestrian volume		
Malls, plazas, forecourts - Forrest Place - Hay Street Mall - King Square Mall - Murray Street Mall - Northbridge Piazza - Yaqan Square	Pedestrian zone with loading access to some properties	High pedestrian volume Low traffic volume	P6-P8	Primarily pedestrian activity zone Primarily pedestrian destination Service, emergency vehicle road only	3000K	RA75

Figure 5: COP – Public Lighting Framework

TABLE 3.1 ENVIRONMENTAL ZONES

Zones	Description	Examples
A0	Intrinsically dark	UNESCO Starlight Reserve. IDA Dark Sky Parks. Major optical observatories No road lighting -unless specifically required by the road controlling authority
A1	Dark	Relatively uninhabited rural areas No road lighting - unless specifically required by the road controlling authority
A2	Low district brightness	Sparsely inhabited rural and semi-rural areas
A3	Medium district brightness	Suburban areas in towns and cities
A4	High district brightness	Town and city centres and other commercial areas Residential areas abutting commercial areas
TV	High district brightness	Vicinity of major sports stadium during TV broadcasts
V	Residences near traffic routes	Refer AS/NZS1158.1.1
R1	Residences near local roads with significant setback	Refer AS/NZS 1158.3.1
R2	Residences near local roads	Refer AS/NZS 1158.3.1
R3	Residences near a roundabout or local area traffic management device	Refer AS/NZS 1158.3.1
RX	Residences near a pedestrian crossing	Refer AS/NZS 1158.4

NOTE: Recreational areas are not considered commercial.

Figure 6: AS/NZS 4282:2019 Table 3.1

TABLE 3.2

MAXIMUM VALUES OF LIGHT TECHNICAL PARAMETERS

	Vertical illuminance levels (E <sub>v</sub> ) lx		Thresho	ld increment (TI)	Sky glow	
Zones	Non-curfew	Curfew	%	Default adaptation level $(L_{ad})$	Upward light ratio	
A0	See Note 1	0	N/A	N/A	0	
A1	2	0.1	N/A	N/A	0	
A2	5	1	20%	0.2	0.01	
A3	10	2	20%	1	0.02	
A4	25	5	20%	5	0.03	
TV	See Table 3.4	N/A	20%	10	0.08	
V	N/A	4	Note 2	Note 2	Note 2	
R1	N/A	1	20%	0.1	Note 3	
R2	N/A	2	20%	0.1	Note 3	
R3	N/A	4	20%	0.1	Note 3	
RX	N/A	4	20%	5	Note 4	

#### NOTES:

- 1 For A0,  $E_v$  shall be as close to zero as practicable without impacting safety considerations.
- 2 Refer to AS/NZS 1158.1.1.
- 3 Refer to AS/NZS 1158.3.1.
- 4 Refer to AS/NZS 1158.4.
- 5 N/A means 'Not Applicable'.
- 6 For an internally illuminated sign in an A2 zone,  $L_{ad} \le 0.25$  cd/m<sup>2</sup>.

Figure 7: AS/NZS 4282:2019 Table 3.2

TABLE 3.3

MAXIMUM LUMINOUS INTENSITIES PER LUMINAIRE

Zone	Luminous intensity (I), cd					
Zone	Non-curfew L1	Non-curfew L2	Curfew			
A0	See Note	See Note	0			
A1	2 500	5 000	500			
A2	7 500	12 500	1 000			
A3	12 500	25 000	2 500			
A4	25 000	50 000	2 500			
TV	100 000	150 000	0			

NOTE: For A0,  $\it I$  shall be as close to zero as practicable without impacting safety considerations.

Figure 8: AS/NZS 4282:2019 Table 3.3

### 3.1.1 Associated AS/NZS 4282:2019 Site boundaries.



Figure 9: AS/NZS 4282:2019 Site Boundaries

	Light Technical Parameter	Time	Recommended Maximum Value	Reference
	Spill; A measurement B4) around the site b		plane only required for Re	sidential Buildings
ī	Illuminance in vertical plane (Ey)	Pre-Curfew (6am – 11pm)	25lx	AS/NZS 4282- 2019, Table 3.2
l		Curfew (11pm - 6am)	5lx	AS/NZS 4282- 2019, Table 3.2
Direct bounda		minous Intensity em	itted by each luminaire loca	ated within the site
:	Luminous Intensity emitted by	Pre-Curfew (6am - 11pm)	25,000ed	AS/NZS 4282- 2019, Table 3.3
i	luminaires (I)	Curfew (11pm - 6am)	2,500 cd	12016 515
	old Increment (TI); , pedestrians around		lisability glare for road use	rs <u>e.g.</u> motorists,
1	Threshold Increment (TI)	20% (ad	aption level 5 cd)	AS/NZS 4282- 2019, Table 3.2

Figure 10: AS/NZS 4282:2019 Table of Parameters

Potential lighting impacts are to be considered for sensitive receivers (known as light spill receptors) surrounding the subject site. These are properties in which people could be sleeping (e.g. residential, hotel properties) and road users with direct views of the proposed lighting.

There closest potentially affected properties around the prosed building are located on Wellington Street, however there is no façade lighting proposed.

Road users travelling on Wellington Street and Pier Street are to be considered regarding lighting impacts on their nighttime visibility (Threshold Increment).

The subject site, in its immediate context, and the identified sensitive receivers are illustrated in the above diagram. The considered road user paths are also shown.

## 3.2 Illuminance Map

The proposed illuminance map provides a visual reference to the lighting compliance criteria targets.



Figure 11: Illuminance Map

## 4. Conclusion

In conclusion, the lighting design showcases great potential of creating a captivating and visually appealing environment in an otherwise utilitarian space.

The undercroft, along with thoughtful selection of luminaires, will assist in mitigating upward spill light and shall be purposefully placed to minimise spill light onto the footpaths and roadways located at the site boundary of Wellington and Pier Street.

Through strategic placement of fixtures and the use of efficient lighting technologies, the space can be transformed into a vibrant space to create a functional and visually interesting experience to encourage activation.

Attachment 7:

Wind Report



## **GDI Property Group**

## 301 Wellington Street

Environmental Wind Assessment Report

Reference: WI01

Rev. 03 | 03 May 2023

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relical upon by any third party and no responsibility is undertaken to any third party.

Job number 289028-00

Arup Australia Pty. Ltd. | ABN 76 625 912 665

Arup Australia Pty. Ltd. Level 5, 151 Clarence Street Sydney NSW 2000 Australia arup.com



## **Document Verification**

Project title 301 Wellington Street, Perth

Document title Environmental Wind Assessment Report

Job number 289028-00 Document ref WI01

File reference

Revision	Date	Filename	301 Wellington St_Arup wind REP_20221108_V0			
00	08 Nov 2022	Description	Environmental	wind report		
			Prepared by	Checked by	Approved by	
		Name	Graeme Wood	Amir Jafari	Graeme Wood	
01	11 Nov 2022	Filename	301 Wellington St_Arup wind REP_20221111_V Environmental wind report			
		Description				
			Prepared by	Prepared by	Prepared by	
		Name	Graeme Wood	Amir Jafari	Graeme Wood	
02	13 Jan 2023	Filename	301 Wellington	301 Wellington St_Arup wind REP_20230113_V2		
		Description	Updated drawin	gs and analysis		
			Prepared by	Checked by	Approved by	
		Name	Graeme Wood	Amir Jafari	Graeme Wood	
03	03 May 2023	Filename	301 Wellington St_Arup wind REP_20230503_V3			
		Description	Updated drawin	Updated drawings and analysis		
			Prepared by	Checked by	Approved by	
		Name	Graeme Wood	Amir Jafari	Graeme Wood	

Issue Document Verification with Document



## **Executive Summary**

Arup have been commissioned to prepare an environmental wind impact assessment report for the proposed development at 301 Wellington Street, Perth on the pedestrian level wind conditions for comfort and safety in and around the site.

Being taller than the surrounding buildings, it is considered that the proposed development will have an impact on the wind conditions in and around the site in particular along Wellington Street, and to a lessor extent along Pier Street.

Qualitatively, integrating the expected directional wind conditions around the site with the wind climate, it is considered that the wind comfort conditions at the majority of locations around the site would be classified as suitable for pedestrian standing, with stronger winds along Wellington Street where the flow would be classified as suitable for pedestrian walking.

Improvements in the wind conditions include increasing the tower setback from the podium edge, particularly in the north-west corner, moving the pedestrian access from Wellington Street to the west by making the area next to the sub-station inaccessible.

It is expected that all locations around the site would meet safety criterion, with some areas on Wellington Street approaching the criterion.

The comfort and safety conditions in and around the site are considered suitable for the intended use of the space. For more sedentary activities, additional local amelioration such as screening would be required.

To quantify the qualitative advice provided in this report, numerical or physical modelling of the development would be required, which is best conducted during detailed design. In line with the City of Perth major DA planning guidelines for buildings over 10-storey in height, it would be recommended to quantify the wind conditions in and around the site.

### **Table of Contents**

1.	Introduction	1
2.	Wind assessment	1
2.1	Local wind climate	1
2.2	Specific wind controls	2
Site de	escription	3
2.3	Predicted wind conditions on ground plane	5
Table	S	
Table	1 Pedestrian comfort criteria for various activities	3
Table	2: Summary of wind effects on pedestrians	14
Figur	es	
Figure	e 1: Wind rose showing probability of time of wind direction and speed	1
Figure speed	e 2: Temporal wind roses for Perth Airport showing probability of time of wind direction and	2
	e 3. Site location (source: Google Maps 2019)	3
Figure	e 4: East (L) and north (R) elevations	4
Figure	e 5: Various floor plans	4
-	e 6: Wind flow pattern for winds from the east, viewed from the north	5
	e 7: Wind flow pattern for winds from the south-west	5
Figure	e 8 Predicted wind conditions around the site	6
Figure	e 9: Ground floor landscape plan	7
Figure	e 10: Schematic wind flow around tall isolated building	9
Figure	e 11: Schematic flow pattern around building with podium	10
Figure	e 12: Schematic flow pattern around building with podium	10
Figure	e 13: Schematic of flow patterns around isolated building with undercroft	11
Figure	e 14: Schematic of flow patterns around isolated building with ground articulation	11
Figure	e 15: Schematic of flow pattern interference from surrounding buildings	11
Figure	e 16 Schematic of flow patterns through a grid and random street layout	12
Figure	e 17: General flow pattern around multiple buildings	12
Figure	e 18: Sketch of the flow pattern over an isolated structure	13
Figure	e 19: Probabilistic comparison between wind criteria based on mean wind speed	15
Figure	e 20: Probabilistic comparison between wind criteria based on 3 s gust wind speed	16
Appei	ndices	
A.1	Wind flow mechanisms	9
A.2	Wind speed criteria	14
A.3	Reference documents	17

#### Disclaimer

This assessment of the site environmental wind conditions is presented based on engineering judgement. In addition, experience from more detailed simulations have been used to refine recommendations. No detailed simulation, physical or computational study has been made to develop the recommendations presented in this report.

## 1. Introduction

Arup have been engaged to provide an experienced-based wind impact assessment report for the proposed development at 301 Wellington Street, Perth. This report outlines the assessment and subsequent recommendations for wind engineering services related to pedestrian wind comfort and safety on the ground level.

## 2. Wind assessment

#### 2.1 Local wind climate

Weather data recorded at a standard height of 10 m at Perth Airport have been used in this analysis, Figure 1. The arms of the wind rose point in the direction from where the wind is coming from. The anemometer is located about 11 km to the east of the site. The directional wind speeds measured here are considered representative of the incident wind conditions at the site.

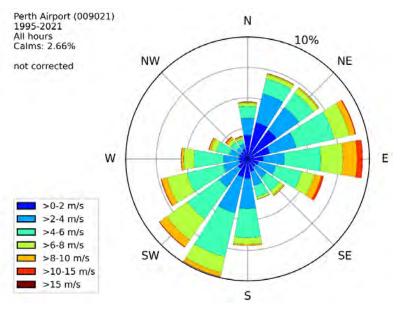


Figure 1: Wind rose showing probability of time of wind direction and speed

It is evident from Figure 1 that strong prevailing winds are organised into two main groups centred around the east and south-west quadrants. Temporal wind roses for Perth are presented in Figure 2, illustrating morning winds from the east, turning to the south-west in the afternoon and evening.

A general description of flow patterns around buildings is given in Appendix A.1

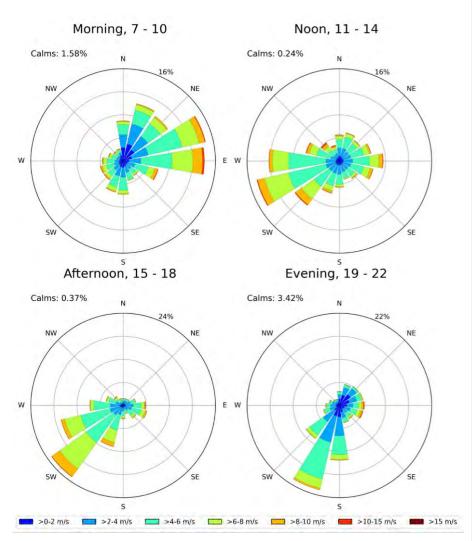


Figure 2: Temporal wind roses for Perth Airport showing probability of time of wind direction and speed

### 2.2 Specific wind controls

Wind comfort is generally measured in terms of wind speed and rate of change of wind speed, where higher wind speeds and gradients are considered less comfortable. Air speed has a large impact on thermal comfort and are generally welcome during hot summer conditions. This assessment is focused on wind speed in terms of mechanical comfort.

There have been many wind comfort criteria proposed, and a general discussion is presented in Appendix A.2.

The current City of Perth Planning scheme documentation states that adverse wind effects should be minimised, but does not include any specific wind controls. The wind controls used in this report are

based on the work of Lawson (1990), described in Figure 19 and Table 1. The comfort and safety criteria are based on the greatest of a mean or gust equivalent mean wind speed exceeding specific wind speeds for 5% and 0.022% of the time respectively. The gust equivalent mean wind speed is defined in Appendix A.2, and relates the maximum 3 s gust wind speed in an hour to the same annoyance level as the consistent mean wind speed.

These criteria have been found to be reliable in defining the wind environment and have been adopted by many jurisdictions around the world.

Table 1 Pedestrian comfort criteria for various activities

(	Comfort	(max.	of mean o	r GEM wi	nd speed	l exceede	d 5% of th	e time)
-	•	,	,					

<2 m/s	Dining				
2-4  m/s	Sitting				
4-6 m/s	Standing				
6-8 m/s	Walking				
8-10 m/s	8-10 m/s Objective walking or cycling				
>10 m/s	Uncomfortable				
Safety (max. of mean or GEM wind speed exceeded 0.022% of the time)					
<15 m/s	General access				
<20 m/s	Able-bodied people (less mobile or cyclists not expected)				
>20 m/s	Unacceptable				

#### Site description

The proposed site is located on the north-west corner of the block bounded by Victoria Square, and Wellington, Lord, Murray, and Pier Streets, Figure 3. The surrounding area has low- to medium-rise buildings in all directions with taller buildings to the south-west. Topography surrounding the site is essentially flat from a wind perspective, rising slightly to the south.





Figure 3. Site location (source: Google Maps 2019)

The proposed development rises to a maximum height of approximately 78 m above ground level, Figure 4. The podium is essentially prismatic of irregular shape, with a large undercroft on the ground plane, and an open notch on Level 2 on the corner of Wellington and Pier Streets, Figure 5. Level 6 has communal outdoor space to the north. There is a small set back from the podium edge to the tower levels above.

Commented [GW1]: FOR LARGER BUILDINGS ENSURE THAT DISTANCES UP TO THE MINIMUM OF (Height/2, max (D/2, B/2)) ARE CONSIDERED IN THE ASSESSMENT AS THIS IS WHERE THE DOWNWASH IMPINGES

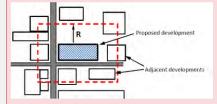






Figure 5: Various floor plans

Levels 7-18°

Level 20 Roof

#### 2.3 Predicted wind conditions on ground plane

This section of the report outlines the predicted wind conditions in and around the site based on the local wind climate, topography, and changes to the building form. The wind conditions in this part of city are known to be relatively windy for the exposed morning winds from the east, becoming calmer in the afternoon as this area is shielded by the taller buildings to the south-west.

The massing of the proposed development is significant compared with the massing of the surrounding buildings to the north and east, and of more similar height to the buildings to the south and west, and will therefore have an impact on the local wind conditions for winds from the exposed directions.

#### Winds from the east

The site is exposed to winds from the east. The building presents a large obstruction to the flow with the wind normal to the east façade. As the first large obstruction, the tower would induce downwash, directing the flow along Wellington Street and the laneway to the south, Figure 6. The open ground floor undercroft and Level 6 terrace on the north-west corner of the development would draw flow across the open spaces creating relatively windy conditions in these areas.

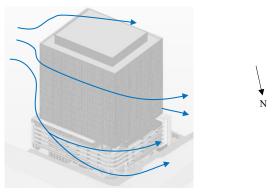


Figure 6: Wind flow pattern for winds from the east, viewed from the north

#### Winds from the south-west

The site is shielded by the taller buildings of Perth CBD and Elizabeth Quay for winds from the south-west. These winds would impinge on the corner of the slightly exposed sections of the tower extending above the immediately adjacent buildings. The orientation of the building would direct flow to the east along the south façade, Figure 7. There would be pressure driven flow through the open ground floor undercroft.

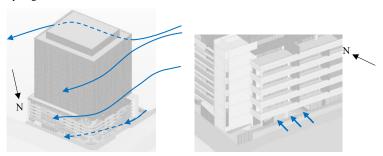


Figure 7: Wind flow pattern for winds from the south-west

**Commented [GW2]:** If the assessment criteria are integrated around all directions, then in these directional sections do not mention the usage of the space.

Keep comments relative to publically accessible spaces for the approvals process.

#### Discussion

The height and massing of the proposed development is greater than the surrounding buildings, and therefore the development will have a measurable impact on the local wind conditions. Qualitatively, integrating the expected directional wind conditions around the site with the wind climate, it is considered that wind conditions would be classified as suitable for pedestrian walking along Wellington Street, and pedestrian standing along Pier Street. The wind conditions in the undercroft area to the west of the site are governed by pressure-driven flow, with expected classification as suitable for pedestrian standing with pockets of calmer flow in the building articulations and landscaped areas, Figure 8.

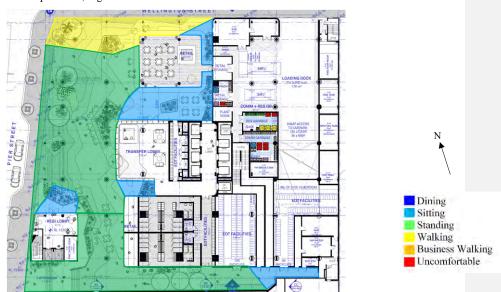


Figure 8 Predicted wind conditions around the site

The wind climate classification is based on a 95 percentile event. The wind conditions in the undercroft area would be expected to meet the mean wind speed associated with the lower and upper limits of the sitting classification level for about 50 and 80% of the time respectively. Through the undercroft, local amelioration would be expected to be required for any outdoor café areas, or areas for more sedentary activities. Local amelioration would typically take the form of permanent or temporary vertical porous walls, screens, or landscaping, or more enclosed booths to create localised calm areas. With the current design and landscape plan, the most appropriate areas for amelioration are noted in Figure 9 along with the local wind directions requiring amelioration. As the flow is pressure driven, these flow patterns would dominate regardless of incident wind direction. The design of local amelioration to improve the wind conditions for the intended use of the space would be developed during detailed design.

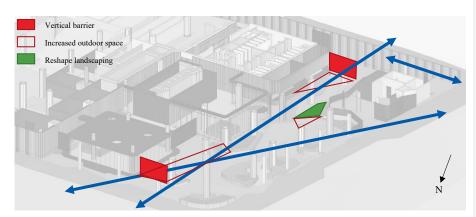


Figure 9: Ground floor

## References

City of Auckland, (2016), Auckland Unitary Plan Operative.

City of Melbourne (2017), Melbourne Planning Scheme.

City of Perth (2016), City Planning Scheme No.2.

City of Sydney (2016), Central Sydney Planning Strategy 2016-2036.

Hunt, J.C.R., Poulton, E.C., and Mumford, J.C., (1976), The effects of wind on people; new criteria based on wind tunnel experiments, Building and Environment, Vol.11.

Isyumov, N. and Davenport, A.G., (1975), The ground level wind environment in built-up areas, Proc. 4th Int. Conf. on Wind Effects on Buildings, Cambridge University Press, U.K.

Lawson, T.V., and Penwarden, A.D., (1975), The effects of wind on people in the vicinity of buildings, Proc. 4th Int. Conf. on Wind Effects on Buildings, Cambridge University Press, U.K.

Lawson, T.V., (1990), The Determination of the wind environment of a building complex before construction, Department of Aerospace Engineering, University of Bristol, Report Number TVL 9025.

Melbourne, W.H., (1978), Criteria for environmental wind conditions, J. Wind Engineering and Industrial Aerodynamics, Vol.3, No.2-3, pp.241-249.

Netherlands Standardization Institute, NEN, (2006). Wind comfort and wind danger in the built environment, NEN 8100 (in Dutch) Dutch Standard.

Penwarden, A.D. and Wise, A.F.E. (1975), Wind environment around buildings, Building Research Establishment Report, HMSO.

San Francisco Planning Department, (2015) San Francisco Planning Code Section 148.

**Commented [GW3]:** Include relevant DCP or planning regs

### A.1 Wind flow mechanisms

An urban environment generates a complex wind flow pattern around closely spaced structures, hence it is exceptionally difficult to generalise the flow mechanisms and impact of specific buildings as the flow is generated by the entire surrounds. However, it is best to start with an understanding of the basic flow mechanisms around an isolated structure.

#### **Isolated building**

When the wind hits an isolated building, the wind is decelerated on the windward face generating an area of high pressure, Figure 10, with the highest pressure at the stagnation point at about two thirds of the height of the building. The higher pressure bubble extends a distance from the building face of about half the building height or width, whichever is lower. The flow is then accelerated down and around the windward corners to areas of lower pressure, Figure 10. This flow mechanism is called **downwash** and causes the windiest conditions at ground level on the windward corners and along the sides of the building.

Rounding the building corners or chamfering the edges reduces downwash by encouraging the flow to go around the building at higher levels. However, concave curving of the windward face can increase the amount of downwash. Depending on the orientation and isolation of the building, uncomfortable downwash can be experienced on buildings of greater than about 6 storeys.

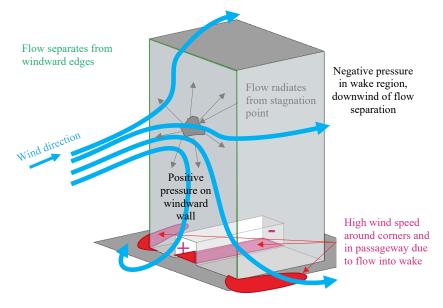


Figure 10: Schematic wind flow around tall isolated building

Techniques to mitigate the effects of downwash winds at ground level include the provision of horizontal elements, the most effective being a podium to divert the downward flow away from pavements and building entrances, but this will generate windy conditions on the podium roof, Figure 11. Generally, the lower the podium roof and deeper the setback from the podium edge to the tower improves the ground level wind conditions. The provision of an 8 m setback on an isolated building is generally sufficient to improve ground level conditions, but is highly dependent on the

building isolation, orientation to prevailing wind directions, shape and width of the building, and any plan form changes at higher level.

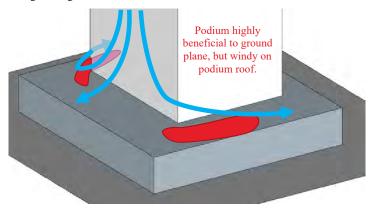


Figure 11: Schematic flow pattern around building with podium

Awnings along street frontages perform a similar function as a podium, and generally the larger the horizontal projection from the façade, the more effective it will be in diverting downwash flow, Figure 12. Awnings become less effective if they are not continuous along the entire façade, or on wide buildings as the positive pressure bubble extends beyond the awning resulting in horizontal flow under the awning.

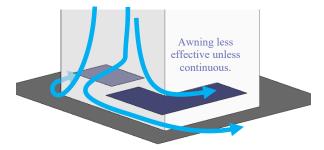


Figure 12: Schematic flow pattern around building with podium

It should be noted that colonnades at the base of a building with no podium generally create augmented windy conditions at the corners due to an increase in the pressure differential, Figure 13. Similarly, open through-site links through a building cause wind issues as the pressure tries to equilibrate between the entrances to the link causing strong flow, Figure 10. If the link is blocked, wind conditions will be relatively calm, Figure 14. This area is in a region of high pressure and therefore there is the potential for internal flow issues. A ground level recessed corner has a similar effect as an undercroft, resulting in windier conditions, Figure 14.

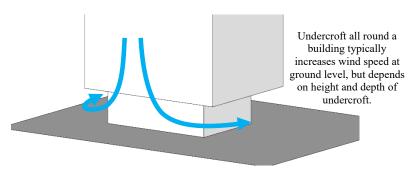


Figure 13: Schematic of flow patterns around isolated building with undercroft

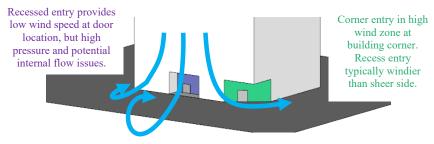
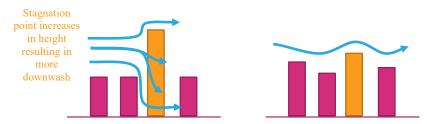


Figure 14: Schematic of flow patterns around isolated building with ground articulation

## Multiple building

When a building is located in a city environment, depending on upwind buildings, the interference effects may be positive or negative, Figure 15. If the building is taller, more of the wind impacting on the exposed section of the building is likely to be drawn to ground level by the increase in height of the stagnation point, and the additional negative pressure induced at the base. If the upwind buildings are of similar height then the pressure around the building will be more uniform hence downwash is typically reduced with the flow passing over the buildings.



Figure~15: Schematic~of~flow~pattern~interference~from~surrounding~buildings

The above discussion becomes more complex when three-dimensional effects are considered, both with orientation and staggering of buildings, and incident wind direction, Figure 16.

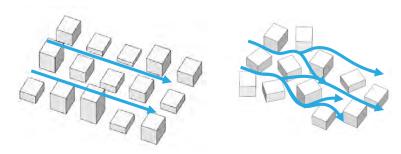


Figure 16 Schematic of flow patterns through a grid and random street layout

On the fringe of a city, the compound shape of neighbouring buildings instigates the flow pattern through the city. The overall massing causes an obstruction to the flow causing a slowing of the incident flow and increasing the windward pressure. Pressure driven flow is produced between the buildings, Figure 17. The vertical component in pressure driven flow is lower than downwash flow.

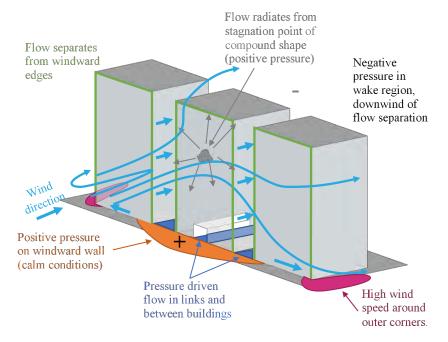


Figure 17: General flow pattern around multiple buildings

Channelling is instigated when pressure driven flow accelerates between two buildings, and continues along straight streets with buildings on either side, Figure 16(L). This occurs on the edge of large built-up areas where the approaching flow is diverted around the overall massing and channelled along the fringe by a relatively continuous wall of building facades. This is generally the primary mechanism producing strong wind conditions on the perimeter of a built-up area, particularly on corners, which can be exposed to multiple prevailing wind directions. The perimeter edge zone in a built-up area is typically about two blocks deep. Downwash is more important flow mechanism for the edge zone of a built-up area with buildings of similar height.

As the city expands, the central section of the city typically becomes calmer, particularly if the grid pattern of the streets is discontinued, Figure 16(R). When buildings are located on the corner of a central city block, the geometry becomes slightly more important with respect to the local wind environment.

## Single barriers and screens

The wind flow pattern over a vertical barrier is illustrated in Figure 18, showing there will be recirculation zones near the windward wall and in the immediate lee of the barrier. The typical extent of these recirculation zones relative to the height of the barrier, h, is illustrated in Figure 18. These regions are not fixed but fluctuate in time. The mean wind speed in the wake areas drops significantly compared with the incident flow. With increasing distance from the barrier the flow pattern will resort to the undisturbed state. Typically the mean velocity and turbulence intensity at barrier height would be expected to be within 10% of the free stream conditions at 10 times the height of the structure downwind from the barrier.

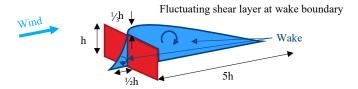


Figure 18: Sketch of the flow pattern over an isolated structure

## A.2 Wind speed criteria

### **General discussion**

Primary controls that are used in the assessment of how wind affects pedestrians are the wind speed, and rate of change of wind speed. A description of the effect of a specific wind speed on pedestrians is provided in Table 2. It should be noted that the turbulence, or rate of change of wind speed, will affect human response to wind and the descriptions are more associated with response to mean wind speed.

Table 2: Summary of wind effects on pedestrians

Description	Speed (m/s)	Effects
Calm, light air	0–2	Human perception to wind speed at about 0.2 m/s. Napkins blown away and newspapers flutter at about 1 m/s.
Light breeze	2–3	Wind felt on face. Light clothing disturbed. Cappuccino froth blown off at about 2.5 m/s.
Gentle breeze	3-5	Wind extends light flag. Hair is disturbed. Clothing flaps.
Moderate breeze	5–8	Raises dust, dry soil. Hair disarranged. Sand on beach saltates at about 5 m/s. Full paper coffee cup blown over at about 5.5 m/s.
Fresh breeze	8–11	Force felt on body. Limit of agreeable wind on land. Umbrellas used with difficulty. Wind sock fully extended at about 8 m/s.
Strong breeze	11–14	Hair blown straight. Difficult to walk steadily. Wind noise on ears unpleasant. Windborne snow above head height (blizzard).
Near gale	14–17	Inconvenience felt when walking.
Gale	17–21	Generally impedes progress. Difficulty with balance in gusts.
Strong gale	21–24	People blown over by gusts.

Local wind effects can be assessed with respect to a number of environmental wind speed criteria established by various researchers. These have all generally been developed around a 3 s gust, or 1 hour mean wind speed. During strong events, a pedestrian would react to a significantly shorter duration gust than a 3 s, and historic weather data is normally presented as a 10 minute mean.

Despite the apparent differences in numerical values and assumptions made in their development, it has been found that when these are compared on a probabilistic basis, there is some agreement between the various criteria. However, a number of studies have shown that over a wider range of flow conditions, such as smooth flow across water bodies, to turbulent flow in city centres, there is less general agreement among. The downside of these criteria is that they have seldom been benchmarked, or confirmed through long-term measurements in the field, particularly for comfort conditions. The wind criteria were all developed in temperate climates and are unfortunately not the only environmental factor that affects pedestrian comfort.

For assessing the effects of wind on pedestrians, neither the random peak gust wind speed (3 s or otherwise), nor the mean wind speed in isolation are adequate. The gust wind speed gives a measure of the extreme nature of the wind, but the mean wind speed indicates the longer duration impact on pedestrians. The extreme gust wind speed is considered to be suitable for safety considerations, but not necessarily for serviceability comfort issues such as outdoor dining. This is because the

instantaneous gust velocity does not always correlate well with mean wind speed, and is not necessarily representative of the parent distribution. Hence, the perceived 'windiness' of a location can either be dictated by strong steady flows, or gusty turbulent flow with a smaller mean wind speed.

To measure the effect of turbulent wind conditions on pedestrians, a statistical procedure is required to combine the effects of both mean and gust. This has been conducted by various researchers to develop an equivalent mean wind speed to represent the perceived effect of a gust event. This is called the 'gust equivalent mean' or 'effective wind speed' and the relationship between the mean and 3 s gust wind speed is defined within the criteria, but two typical conversions are:

$$U_{GEM} = \frac{(U_{1\,hour\,mean} + 3\cdot\sigma_u)}{_{1.85}} \ and \ U_{GEM} = \frac{_{1.3\cdot(U_{1\,hour\,mean} + 2\cdot\sigma_u)}}{_{1.85}}$$

It is evident that a standard description of the relationship between the mean and impact of the gust would vary considerably depending on the approach turbulence, and use of the space.

A comparison between the mean and 3 s gust wind speed criteria from a probabilistic basis are presented in Figure 19 and Figure 20. The grey lines are typical results from modelling and show how the various criteria would classify a single location. City of Auckland has control mechanisms for accessing usability of spaces from a wind perspective as illustrated in Figure 19 with definitions of the intended use of the space categories included in this Figure.

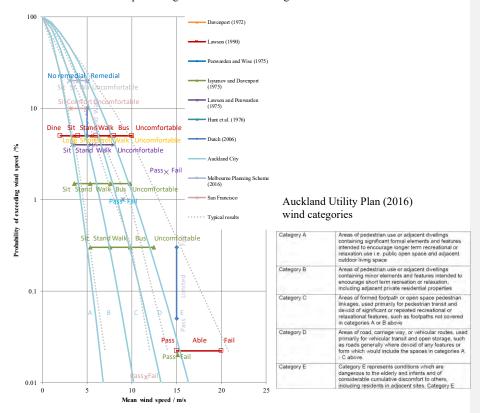


Figure 19: Probabilistic comparison between wind criteria based on mean wind speed

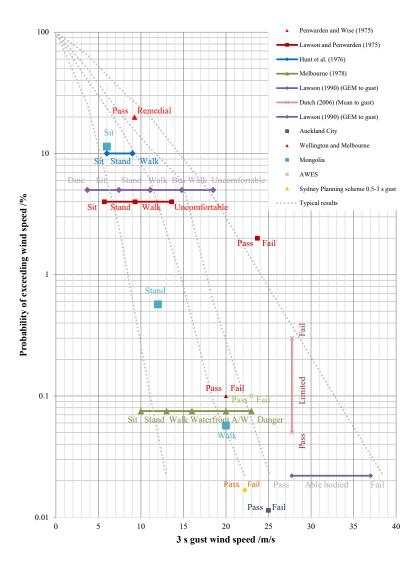


Figure 20: Probabilistic comparison between wind criteria based on 3 s gust wind speed

### Reference documents A.3

In preparing the assessment, the following documents have been referenced to understand the building massing and features.

230424\_2201A\_102 Pier St PERTH-DA Submission DRP Update-s.pdf
230424\_2201A\_301 Wellington St PERTH\_DA.ifc

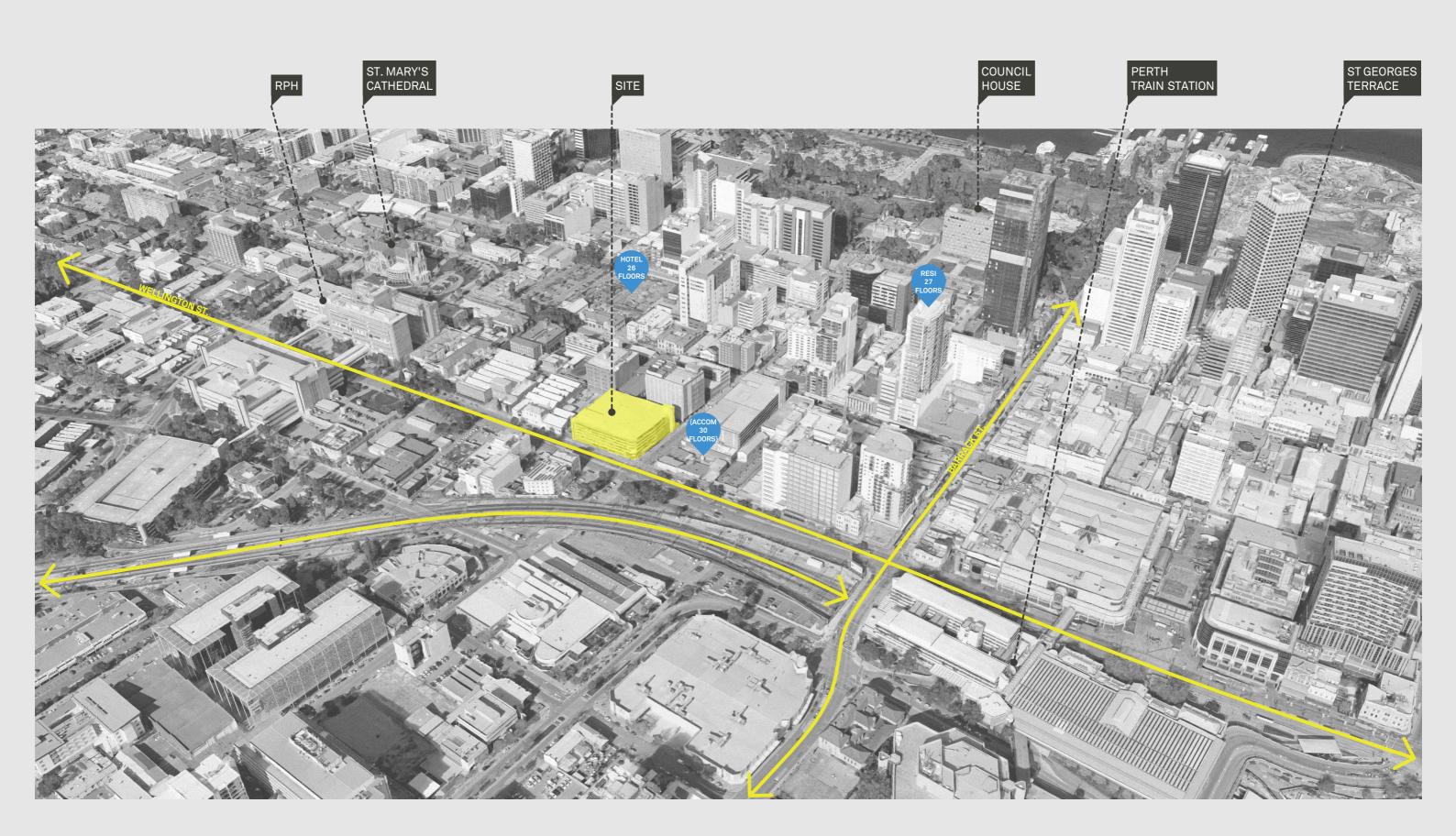
## Attachment 8:

State Planning Policy 7.0 Assessment

Benson McCormack Architecture Studio 5, 505 Balmain Rd, Lilyfield NSW 2040 Sydney, Australia

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

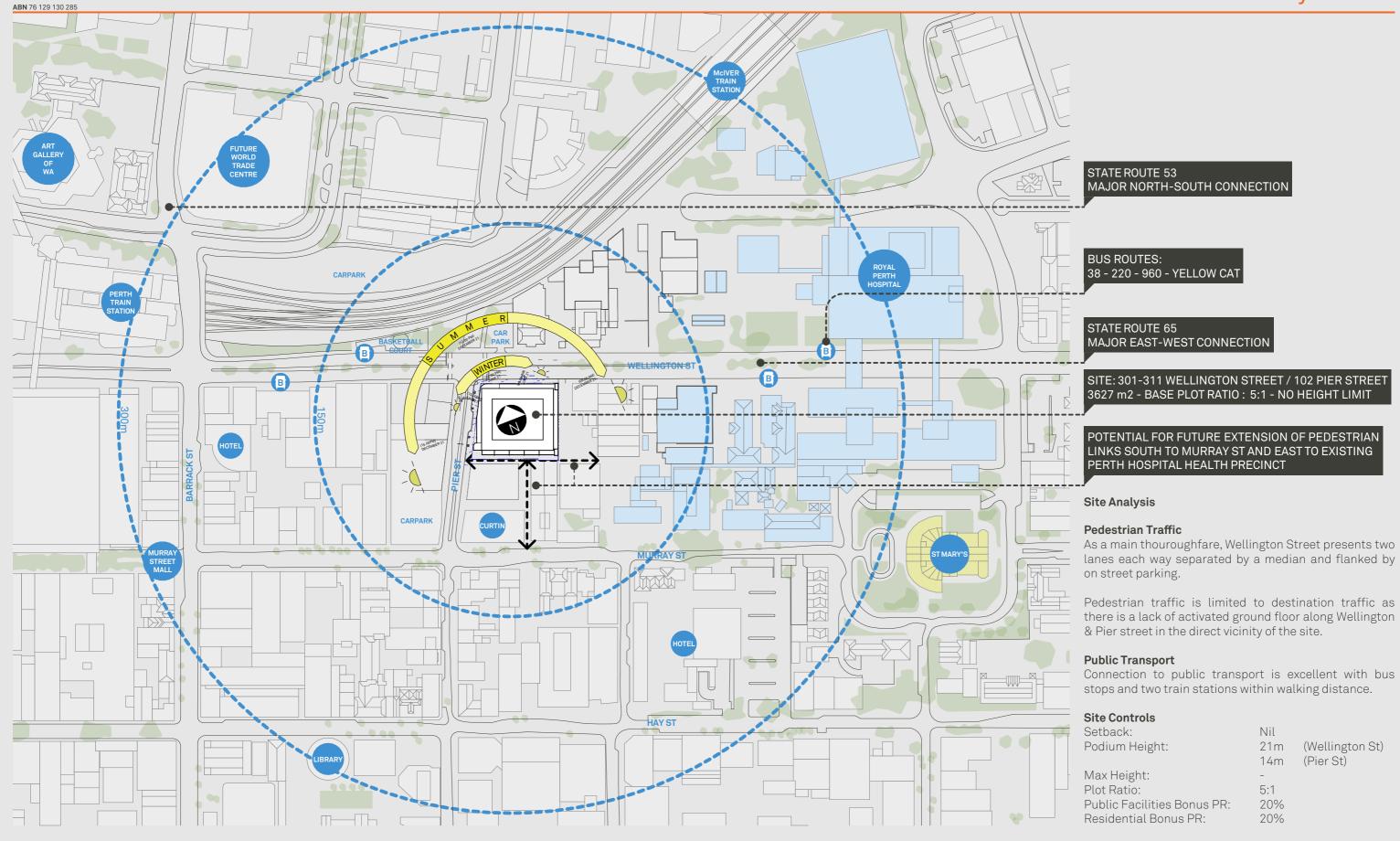
ABN 76 129 130 285



## **CONTEXT AND CHARACTER** Site Analysis Plan

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301

G. McCORMACK ARB NSW 7635 VIC 20415



Benson McCormack Architecture

Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285

**CONTEXT AND CHARACTER Built & Future Context** 

"Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place."









## **Context & Character**

Located on the corner of Pier & Wellington Street the site is occupied by a precast concrete carpark above a ground floor commercial tenancy.

The immediate site context is a mix of predominantly industrial & commercial buildings. To the south west of the site, the large Pier Street Exchange presents blank facades to its surrounds (1).

Opposite the site a vacant lot with an approved development application for a 30-storey tower (4) with student accommodation fronting Pier and Wellington Street.

A number of more intricate historic buildings<sup>(2)</sup> can be found in the vicinity, with the 1939 Art Deco St John Ambulance building (3) directly across the

Surrounding building heights vary greatly from two storey low-rise to thirty storey towers within a one block radius of the site.

Wellington Square (650m), Council House Gardens (500m) and Langley Park (1km) are the closest parks.

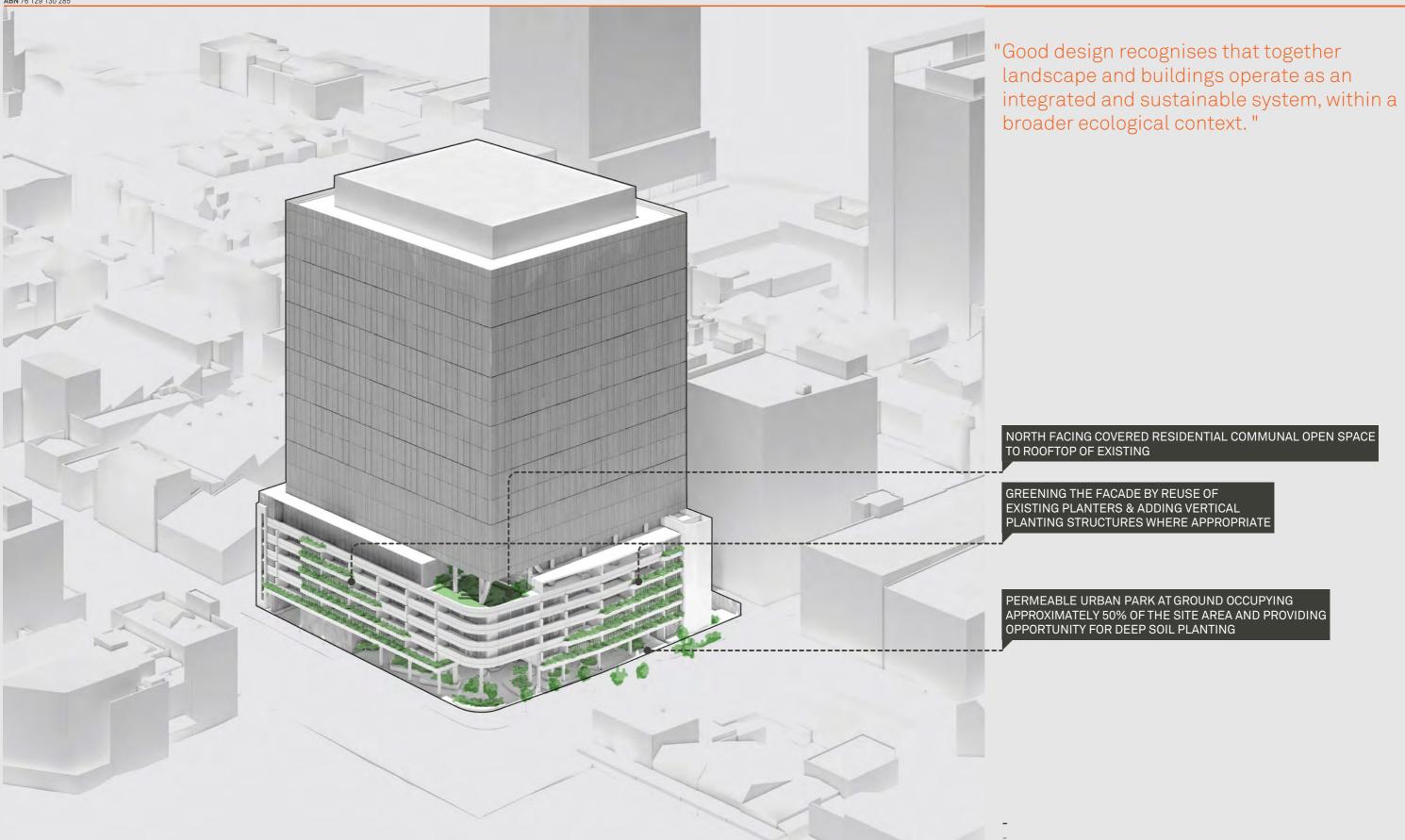
## **Design Response**

The adaptive reuse of the existing carpark structure to accomodate residential accommodation, liberation of the ground floor plane as a pubically accessible urban park and the additional commercial use proposed above the retained carpark podium structure, transforms the site into an active, vibrant and contributive addition to the established health precinct.

The adative reuse of the carpark structure to residential accomodation, provides the precinct with a new and much needed active use. The facade of the carpark structure is proposed to be largely retained, with architectural inserts proposed, that compliment its robust aesthetic and reflective of its new use. A modification is proposed to the corner of Wellington and Peir streets, as a visual cue to the proposed urban park at ground.

The proposed urban park provides a unique interface between public and private uses within the site and is a natural extension to the linear park immediately the north. A permeable public space providing both passive and active uses in a covered and secure environment, with capacity to expand over time with future links into the immediate and greater health precinct.

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415



G. McCORMACK ARB NSW 7635 VIC 20415

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301

ABN 76 129 130 285

**POTENTIAL FUTURE LINKS** TO ST GEORGES TERRACE TO ROYAL PERTH HOSPITAL B.O.H. TO TRAIN STATION

## Context

Immediately to the north of the site, there is a linear park sitting between Wellington street and the train line, providing pedestrian access to the nearby Weelington Street train station.

Wellington Square (650m), Council House Gardens (500m) and Langley Park (1km) are the closest parks.

The site currently provides little in terms of landscaping, with a number of at grade planters along the Peir Street frontage to negotiate footpath level changes and access to site uses.

In addtion to these at grade planters, the outer edge of the carpark structure above, along both the Wellington and Peir Street frontages, incorporate planters at each level.

No depsoil planting is currently provided on site, with the existing structure & footings (refer Addendum 3: Existing Construction Drawings), limiting future possibilities.

## **Design Response**

The ground plane is to be liberated by the proposed Urban Park, providing a permeable, covered green space addition to the City of Perth.

The Urban Park shall soften the interface betwen public and private uses, with well crafted hard a soft landscaping elements, being responsive to local conditons and contributive to a sense of place.

The existing precast planters shall be repurposed to provide greater opportunity for planting. These planters with additional climbing structures, shall soften the existing carpark structure and provide a visual green link between the Urban Park at ground and the proposed rooftop comunal garden space.

The landscape design is presented in further detail in the design package prepared by Plan E Landscape Architects.

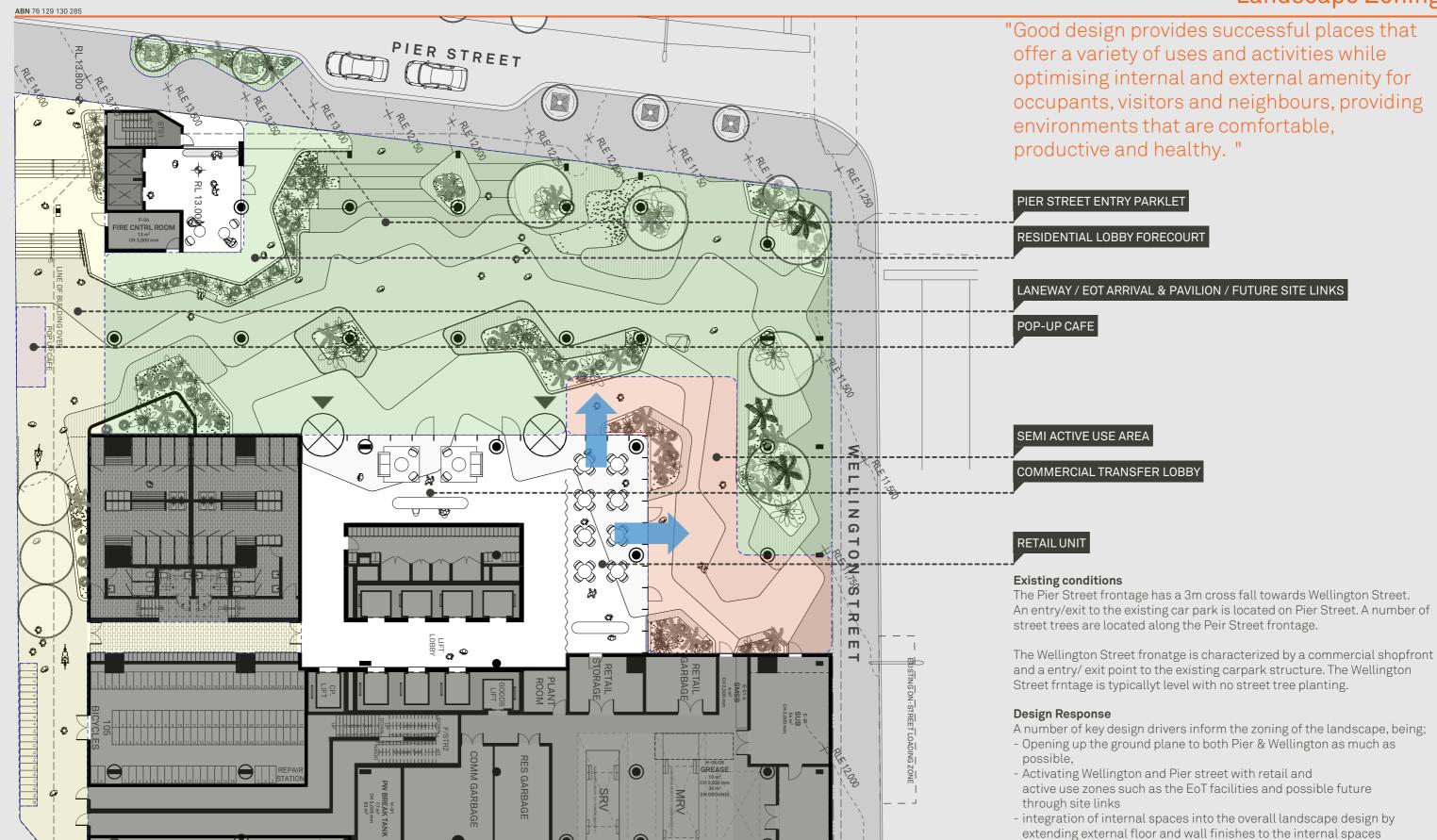
### Benson McCormack Architecture

Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G McCORMACK ARB NSW 7635 VIC 20415

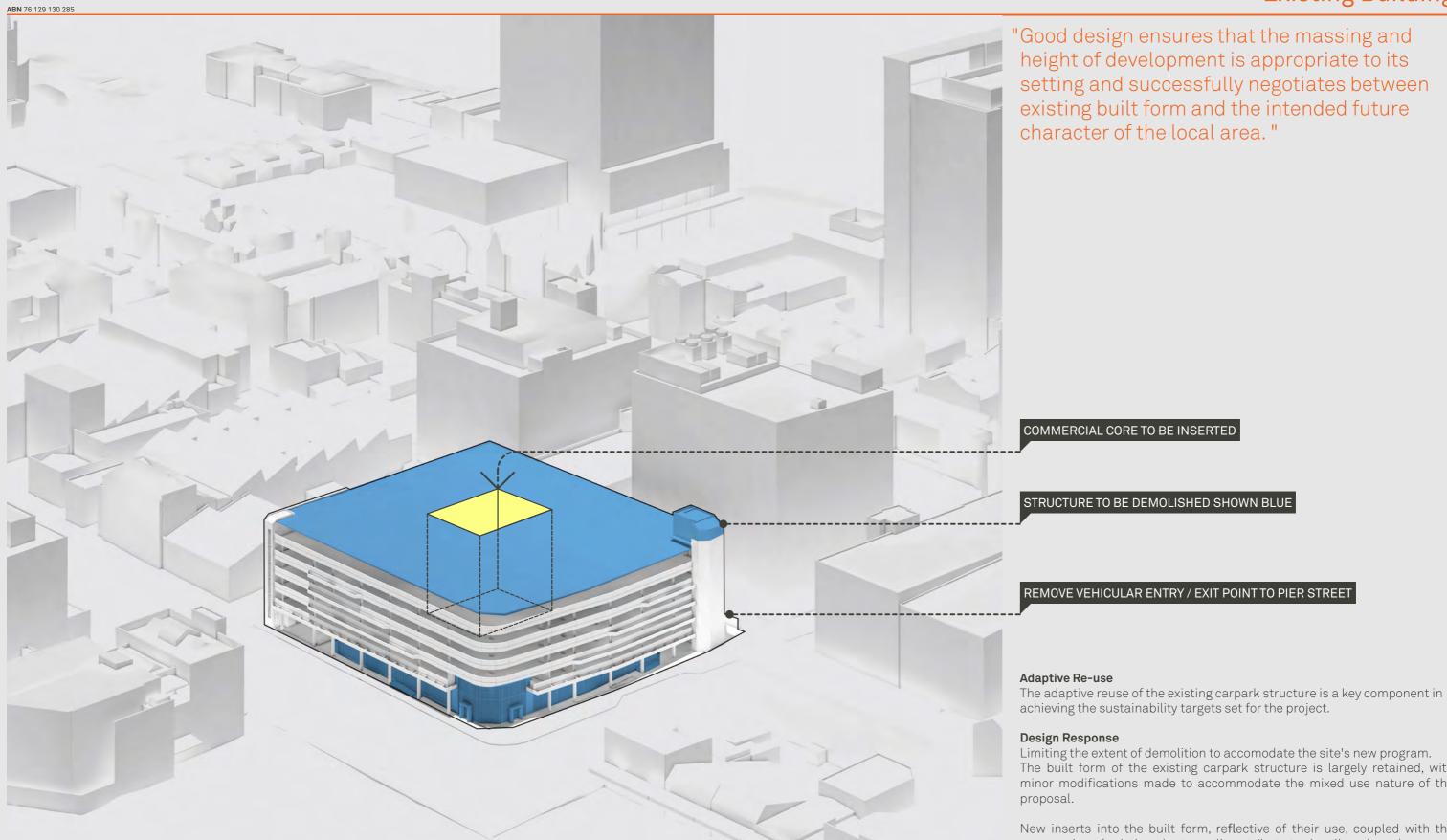
## LANDSCAPE QUALITY Landscape Zoning

- ensuring high level of visibility within the Urban Park



## **BUILT FORM AND SCALE Existing Building**

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

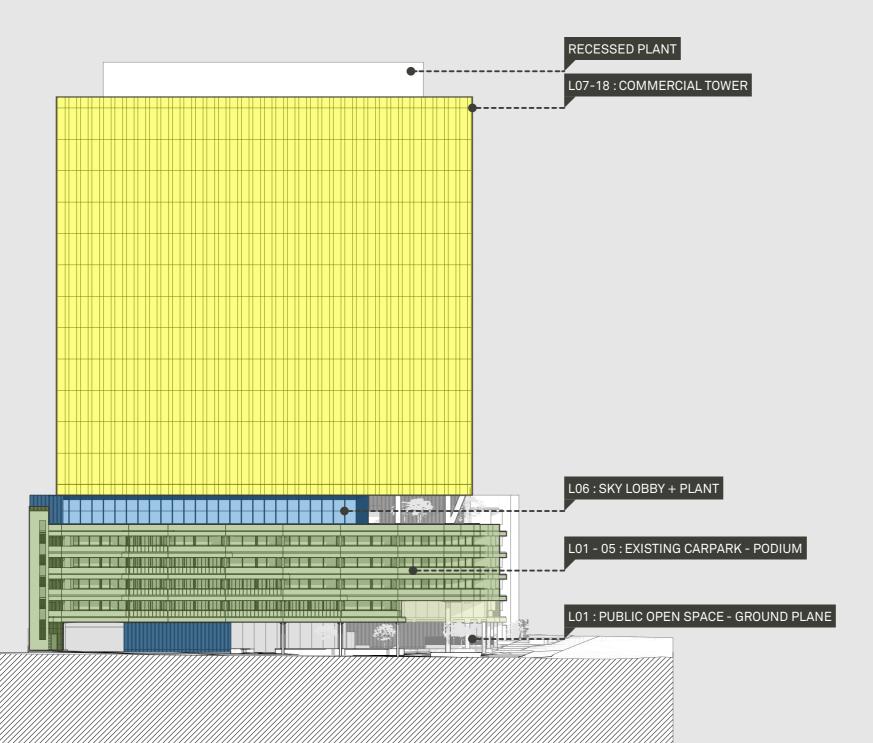


achieving the sustainability targets set for the project.

Limiting the extent of demolition to accomodate the site's new program. The built form of the existing carpark structure is largely retained, with minor modifications made to accommodate the mixed use nature of the

New inserts into the built form, reflective of their use, coupled with the repurposing of existing planters, all contribute to visually reduce the overall scale of the podium structure.

ABN 76 129 130 285



## Massing

A number of key design drivers, define the overall massing of the proposal, being;

## 1. Existing structure

Any addition to the car park structure will need to accomodate the existing structural grid.

## 2. Environment

The architecture is a direct response to the projects sustainability targets. High levels of building efficiency are achieved by working with rather than against the retained carpark structure, limiting demolition and maximising adaptive reuse opportunities.

## 3. Program & Plot Ratio

## **Design Response**

The ground floor is opened up as much as possible to maximise the area available for the proposed Urban Park, whilst essential services and site servicing are consolidated away from street frontages. A two storey high space at the corner of Pier & Wellington opens the ground plane to its surrounds and lets sunlight penetrate deeper into the site.

The existing car park structure is adaptively reused for residential accommodation.

Located between the adapted car park structure below and the commercial tower over, is an intermediate level with a generous height providing the perfect canvas for a sky lobby to service the commercial component and a rooftop communal open space for the residents, located on the prominent Pier & Wellington Street corner.

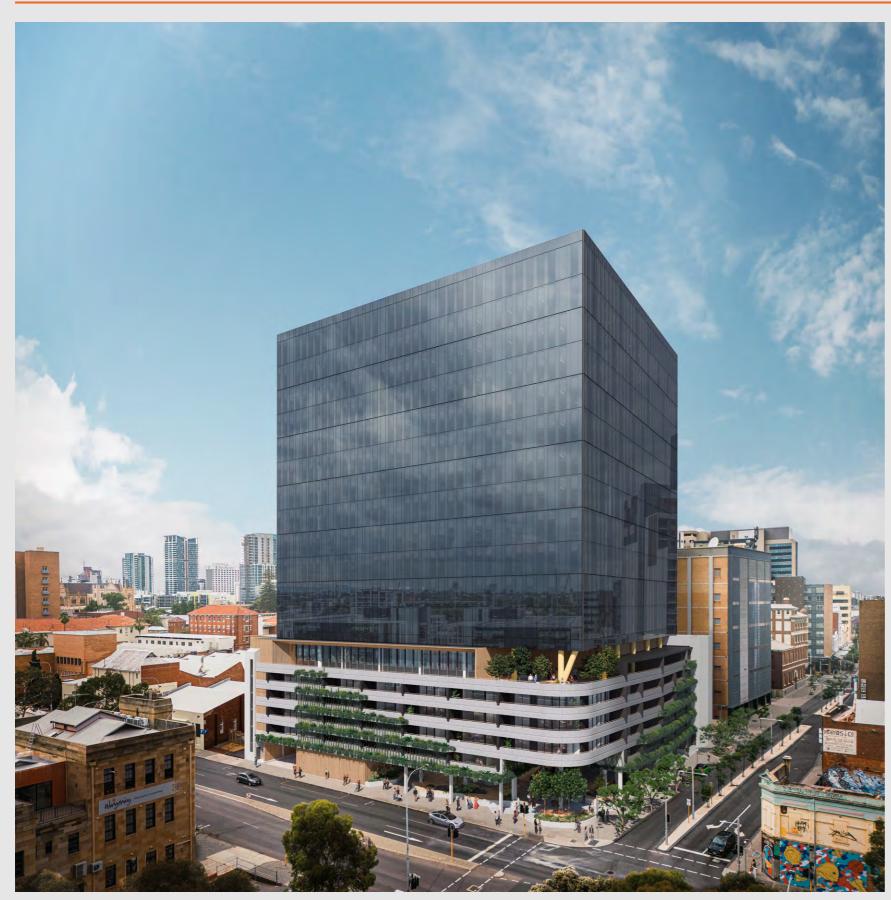
The commercial tower itself presents as a near perfect cube, sitting above the residential podium. Detailing of the commercial facade is subtle and refined in contrast to the robust podium and the contrast in material use for each component, visually assists the overall architectural massing and composition.

Benson McCormack Architecture Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G. McCORMACK ARB NSW 7635 VIC 20415

**ABN** 76 129 130 285







## Materiality

Being an adaptive re-use building its materiality needs to be in harmony with the base canvas of pre-cast & off form concrete that gives the existing structure its character.

Rather than to obscure and cover up its illustruous past as a car park the design & materiality celebrates its kit of parts construction.

The ground floor is characterised by a fine filligree batten cladding that ads a human scale & identity to the civil structure. Tonally also they ad warmth to the space. Various shades of paving flow from the boundary towards the transfer lobby with fluid lines that contrast of the rigidity the car park structure.

The residential levels ad lightness and a shine through the use of metal cladding, contrasting the concrete with a darker colour to break the strong horizontality of precast balustrades.

Level 6, as the secondary "public" space repeats the materiality of the ground floor to heighten the legibility of its relation to ground floor. A splash of playfulness & colour is given to the exposed structure here as well as adding a layer of interest and contrast to the concrete, batten and dark glazing.

The commercial tower component is a deliberate abstraction and departure from the building below, allowing it to separate itself visually and break down the overall perceived mass of the entire project. Its facade also gives a nod to the Westin Hotel located only a few blocks away.

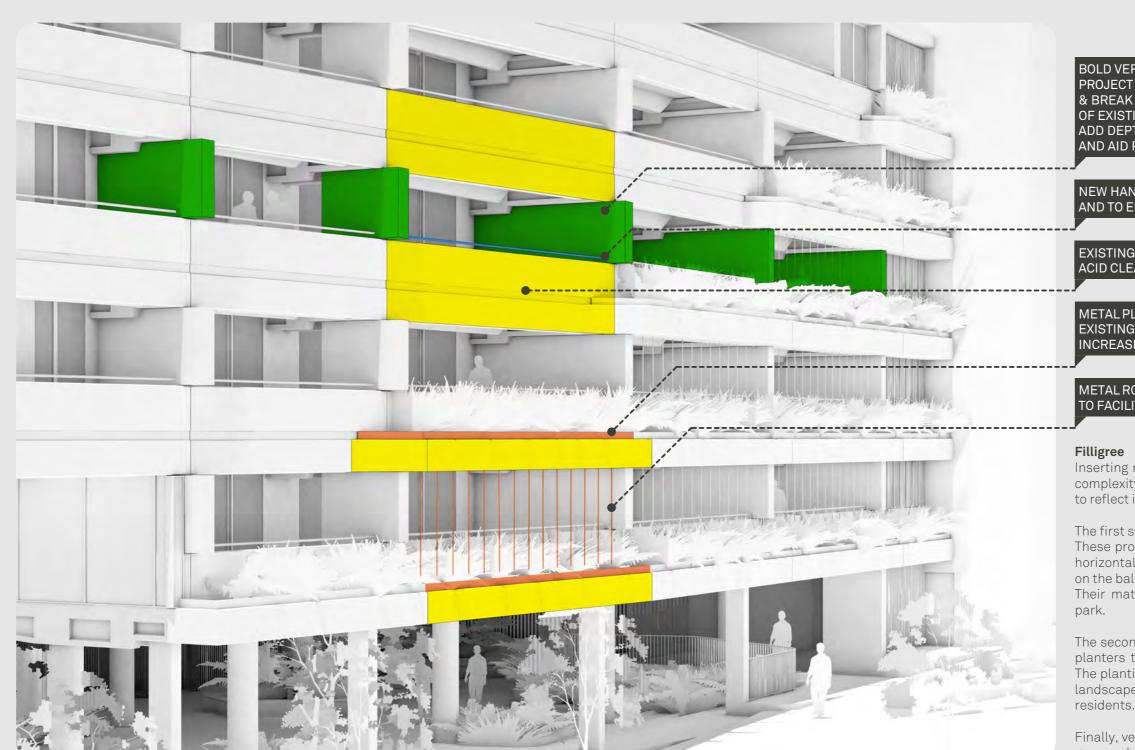
Throughout the building a subdivision of the existing car park's grid provides a constant module that brings consistency to the building facades overall.

Benson McCormack Architecture Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285

**BUILT FORM AND SCALE** Filligree



BOLD VERTICAL INSERTS PROJECT BEYOND THE BALUSTRADE & BREAK DOWN THE SCALE OF EXISTING THE BUILDING, ADD DEPTH TO THE FACADE AND AID PRIVACY BETWEEN APARTMENTS

NEW HANDRAIL BEHIND THE PRECAST UPTURNS AND TO EDGE OF PRIVATE OPEN SPACE

EXISTING PRECAST BALUSTRADES ACID CLEANED & RENOVATED

METAL PLANTER INSERTED IN EXISTING PRECAST PLANTER TO INCREASE AVAILABLE SOIL DEPTH

METAL RODS BETWEEN PLANTERS TO FACILITATE PLANT GROWTH

Inserting residential accommodation within a civic structure ads a layer of complexity and requires additional architectural elements of varying scale to reflect its program.

The first step was to insert bold separators between apartments.

These project beyond the existing balustrades and thus not only break the horizontality of the existing structure but also ad depth by casting shadows on the balustrades.

Their materiality contrasts and balances the concrete nature of the car

The second step was to re-use the existing planters by inserted new metal planters to maximise soil depth and therefore increase planting options. The planting softens the overall presentation of the building and provides a landscaped filter between the public domain and the private open space of residents.

Finally, vertical metal rods between levels provide a structure for plants to grow and visually connects the Urban Park to the rooftop gardens.

# **FUNCTIONALITY AND BUILD QUALITY**

"Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle."

## Arrival

A two way vehicular entry/exit point is maintained on Wellington Street, whilst the existing vehicular entry/exit on Pier Street is removed in favour of the proposed Urban Park and future city links.

The loading dock is situated on grade and accessed directly from the Wellington Street entry/exit point.

Passenger vehicles for both commercial and residential uses, access the retained parking spaces via Wellington St and the existing carpark ramps. Commercial parking is provided at the lower levels and physically separated from residential parking on higher levels.

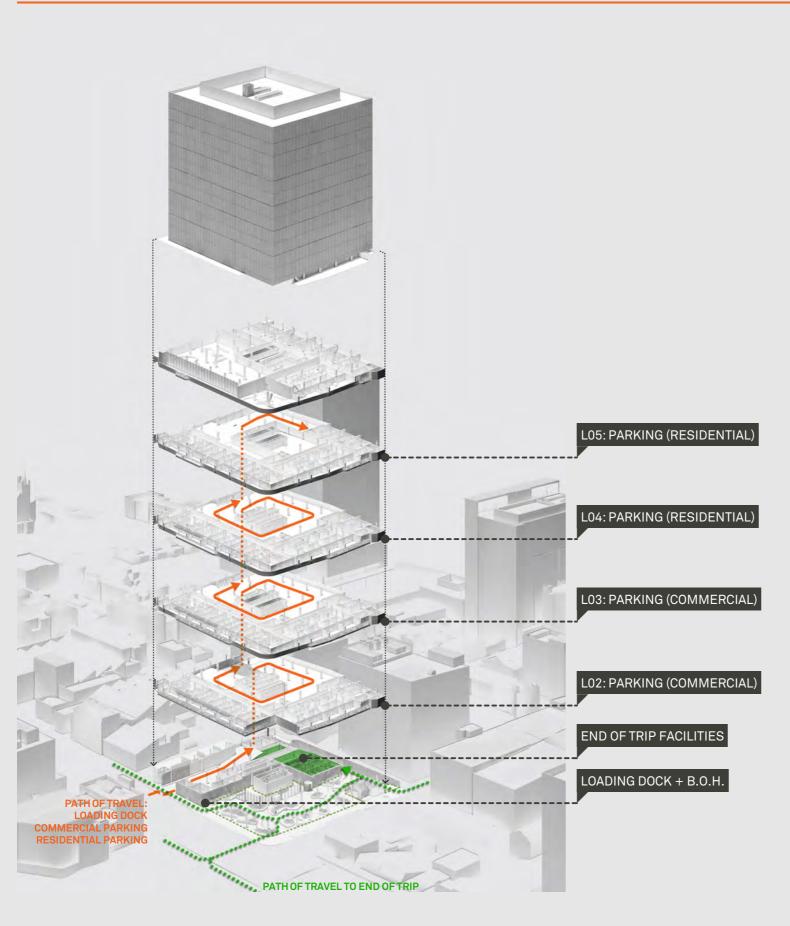
No passenger vehicle parking is visible from Pier or Wellington street.

## End of Trip

Part of the drive for sustainability is the encouragement for the building's occupants to use other modes of transport such as public transport and bicycles. For the latter end of trip facilities are provided at the rear of the site with ample bicycle parking, showers, toilets and secure lockers.

Access to the end of trip facilities is gained via the Urban Park at ground or via the stair located in the south western corner of the Urban Park along Peir Street.

Designed into the overal landscape is a pre-End of Trip outdoor arrival zone where people can meet or cool down, before entering the facilities.



Benson McCormack Architecture Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

ABN 76 129 130 285

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

L06: 7 APARTMENTS + COMMUNAL OPEN SPACE L05: 12 APARTMENTS + PARKING L04: 11 APARTMENTS + PARKING L03: 11 APARTMENTS L02: 10 APARTMENTS RESIDENTIAL LOBBY

## RESIDENTIAL ACCOMMODATION

TYPE	STD	1B	2B	3B	Т	
LEVEL 02	0	8	2	0	10	
LEVEL 03	0	8	3	0	11	
LEVEL 04	0	8	3	0	11	
LEVEL 05	0	9	3	0	12	
LEVEL 06	0	1	6	0		
	0	34	17	0	51	APTS
	0.0%	66.7% 34	33.3% 34	0.0% 0	68	MIX BEDS

## Residential program

The existing lift core on the south west corner is repurposed for residential use only. The residential lobby on ground opens up to the Urban Park, providing an elevated arrival experience.

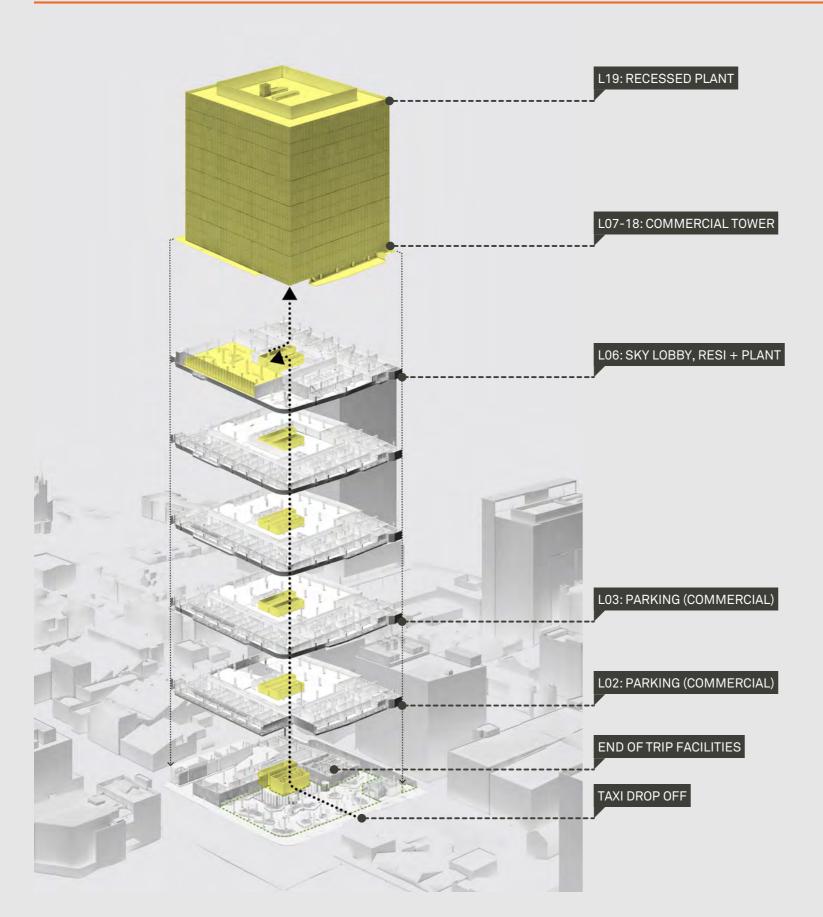
A mix of one and two bedroom apartments is inserted within the existing carpark strucure with the large majority facing north east or north west.

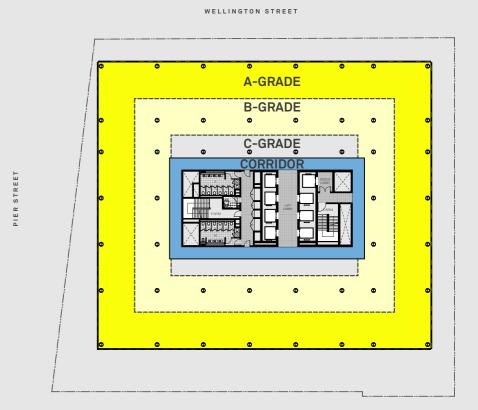
All residential corridors have access to daylight at various points along their

At level 6 on the north western corner of the podium roof, a generous communal open space is provided for residents and their visitors use.

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285





TYPICAL OFFICE FLOOR

## Commercial program

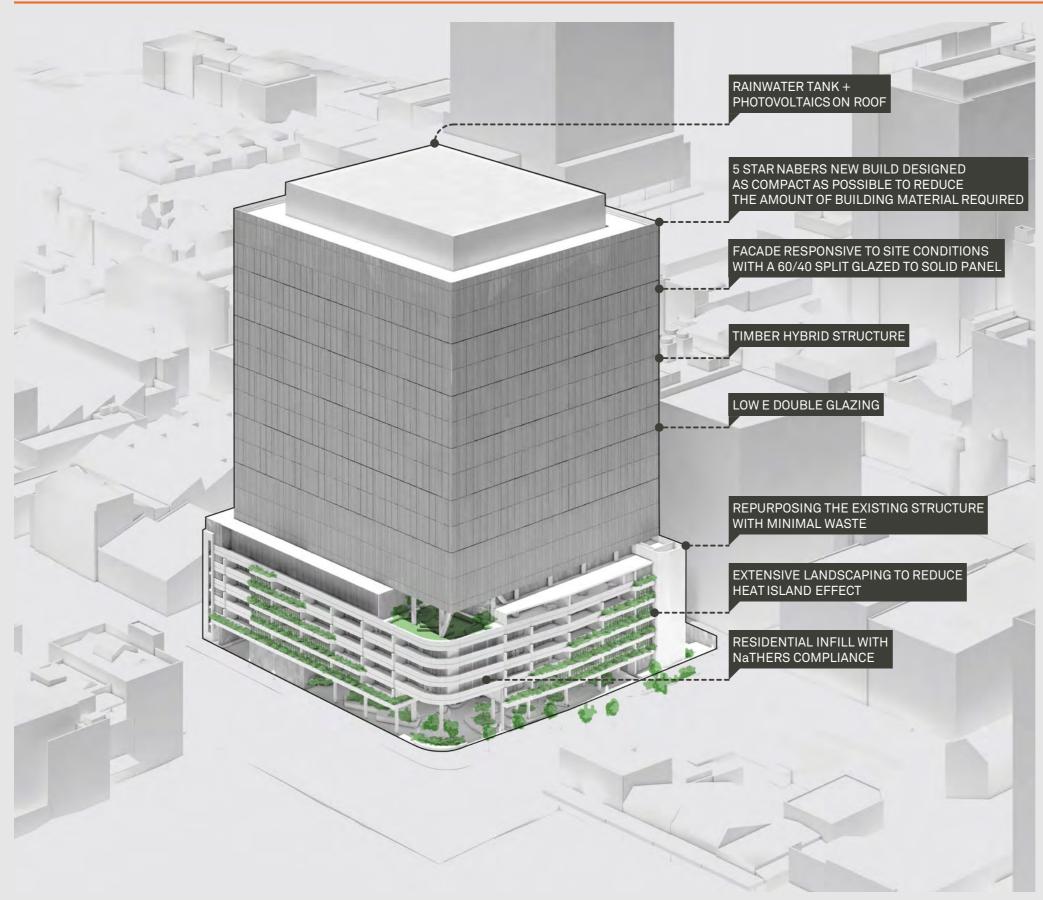
Accessed via the Urban Park at ground, a transfer lobby provides an arrvial point for users who are then transported via lift to the sky lobby on level 6. From the sky lobby, individual floors within the commercial tower are accessed via lifts.

The commercial floors have a highly efficient and flexible layout around a central core. A and B grade office space combine to 84% of the total NLA on any given level.

## **SUSTAINABILITY** Sustainability

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285



"Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes."

## **ESD Strategy**

The minimum ESD planning requirements for the project is to achieve:

- Residential: Compliance with the R- Codes (SPP 7.3) with all dwellings achieving the required NatHERS rating.
- Commercial: Compliance with the 2022 NCC Section J requirements.

The DA submission has a number of sustainability strategies integrated into the design that are in excess of the minimum compliance requirements, including a considerable reduction in embodied carbon with the hybrid timber structure and the reuse of the existing structure. We have approached the development of the sustainability strategy as a precinct rather than separated mixed uses in order to develop a consistent ESD strategy.

### **OPERATIONAL CARBON**

Commercial to achieve a 5-star NABERS rating.

Residential apartments to achieve the latest NCC requirements for

PV panels are provided on the roof.

Low e double glazing for commercial and low e laminate glass for

100% electrification for heating demand via heat pumps.

## **EMBODIED CARBON**

Overall, an 86% reduction in embodied carbon when compared to a conventional concrete structure, by utilising the existing structure and a timber hybrid system to construct the new commercial levels.

### WATER

A 50m3 rainwater tank has been provided to recycle rainwater from the

which will be used for all irrigation requirements.

The selection of water-efficient toilets taps and showers.

BMS monitoring of water pressures/leaks.

Low energy HVAC systems to reduce cooling tower water usage.

Reuse of the existing car park building will provide a significant 80% reduction of waste compared to a new build.

End of life waste to have minimum compliance requirements in the commercial offices.

Only FSC timber products to be used in the base building design. All paints, adhesives, sealants, carpets, and engineered wood products used in the building must meet the minimum Green Star requirements for total VOC.

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285



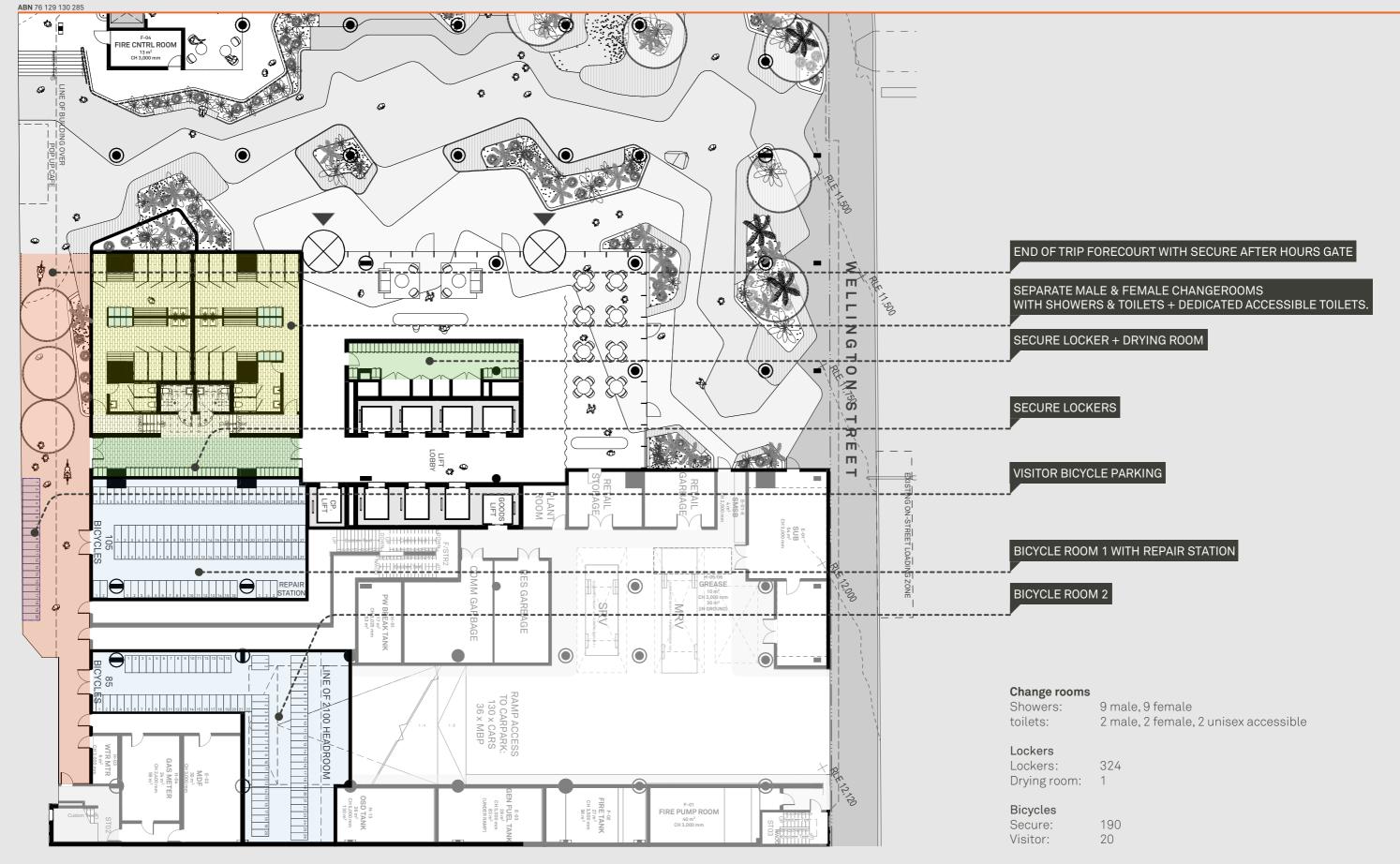
and provides residents a unique arrival experience.

A glazed residential lobby becomes part of the public open space visually

Sydney, Australia

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

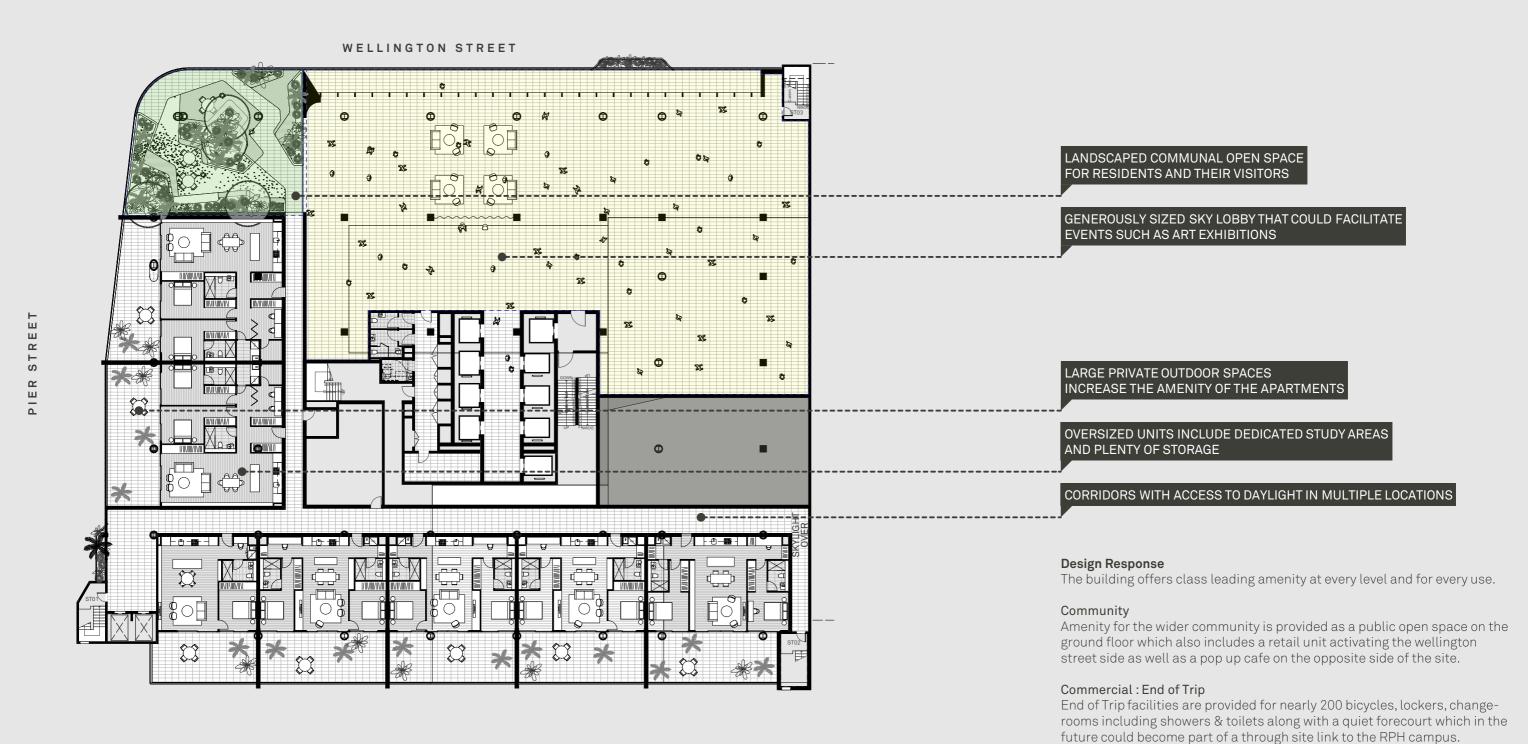
**AMENITY End of Trip** 



Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285

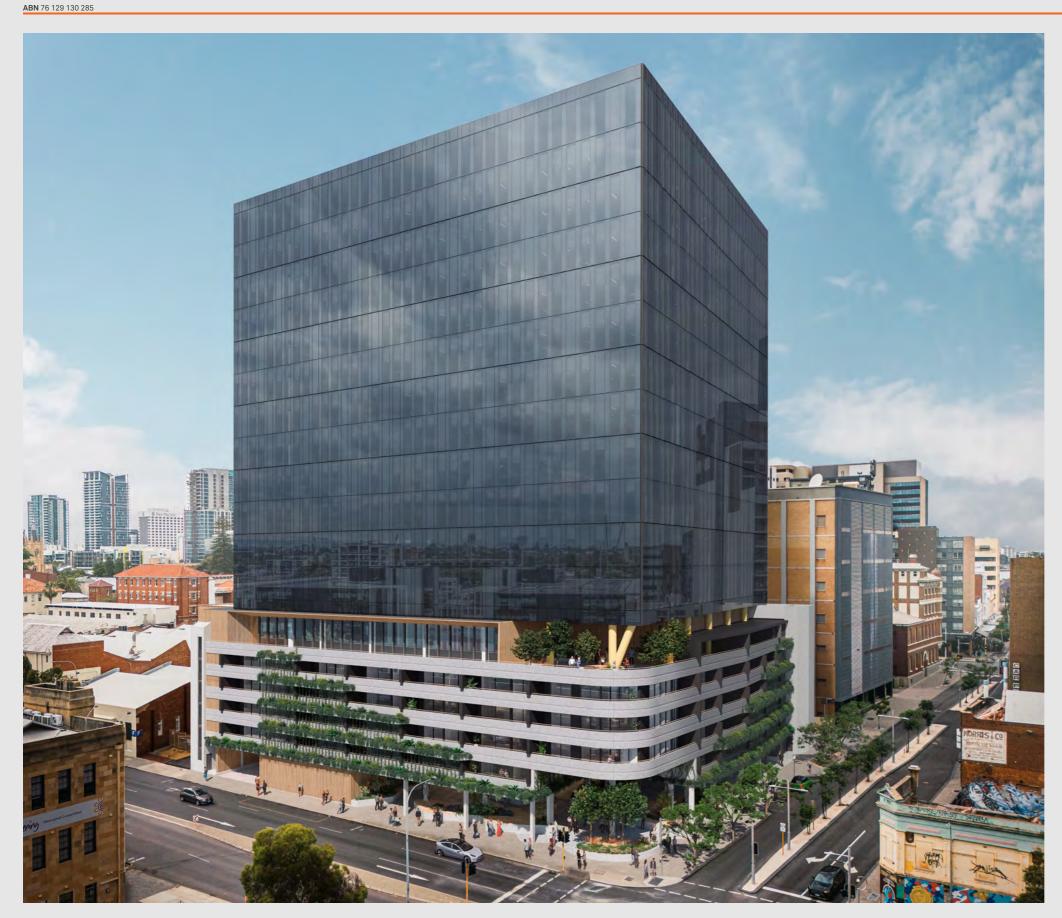




A glazed residential lobby becomes part of the Urban Park space visually

and provides residents a unique arrival experience.

Residential



"Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around. "

The design clearly identifies not only what is existing and what is new but also the newly inserted program.

The Urban Park opens up to its surrounds via a double heighted space that feels open and inviting.

Loading and parking entry is clearly separated from the urban park by the incorporate substation enclosure.

The playfull level 06 which accomodates apartments, residential communal open space and the commercial skylobby visually reflects the public ground floor.

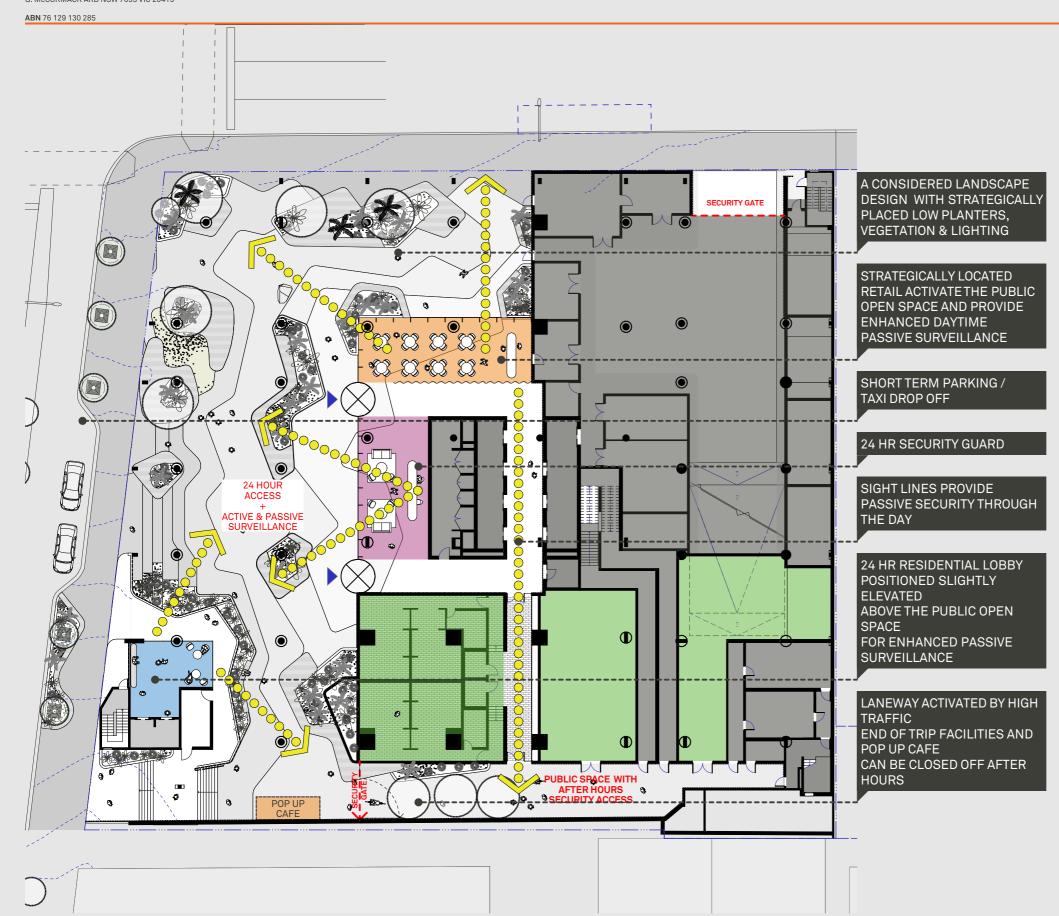
The commercial component sit as an abstract cube with its own distinct identity on top.

In terms of facade treatment each element again is treated as its program allows: public spaces are tactile, residential levels are horizontal and of a residential scale and finally, the commercial levels are unified through a finely detailed curtain wall facade that had added interest through randomised clear glazed and solid backed panels.

G McCORMACK ARB NSW 7635 VIC 20415

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301





"Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use."

## Safety In Design

The principles of Crime Prevention Through Environmental Design (CPTED) have been embedded into the design of the development, including both the tower and the public realm elements. Specifically, the design proposal has been informed by the WAPC 'Design out Crime Planning Guidelines" published in June 2006 and the City of Perth's "Creating Safer Spaces: Design Guidelines to Reduce Crime and Antisocial Behaviour."

These guidelines highlight how good design can enhance actual and perceived safety, and reduce the opportunity for crime, graffiti and vandalism, as well as other anti-social behaviour.

### Natural Surveillance

Natural surveillance is facilitated through the strategic placement of active uses, avoidance of blind corners where possible and landscaping that allows for continuous vistas through the site. The public open space will be well lit at night to further enhance safety.

Residential balconies on the levels over provide street surveilance throughout the day.

## **Urban Structure**

A highly permeable and free flowing landscape design provides multiple paths through the site yet clearly defines through placement of planters and changing of paving where the site's boundaries lie. The End of Trip forecourt as the only "dead end" in lieue of a future through site link has a secure gate that can be closed after hours.

## Land Use Mix + Activity Generators

Daytime uses such as cafes and end of trip are combined with a 24 hr glazed residential lobby and 24 hr security from the commercial transfer lobby. As part of the landscape design, various other active uses are provided in the public open space.

## **Building Design & Boundary Definition**

With the ground floor main facade line set back from the street the building's edge is defined by the structure over, boundary columns as well as the landscape design. The majority of facade has been design as glazed or highly textured and thus discouraging grafitti. Planters adjacent to walls also provide a barrier to vandalism.

### Lighting

Spillover lighting from foyers as well as an integrated lighting design will provide an enhanced level of security.

Benson McCormack Architecture Studio 5, 505 Balmain Rd, Lilyfield NSW 2040

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415





"Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction."

Located on an outer edge of the Perth city centre, the site presents an opportunity to be the incubator of transformation for the wider precinct. The site also provides the opportunity for future links between the RPH & the train station and bringing a much needed mixed use program to the area.

Both sides of Wellington street shall benefit from the activation the design brings, with the provision of the Urban Park, that shelters its occupants from sun, wind & rain.

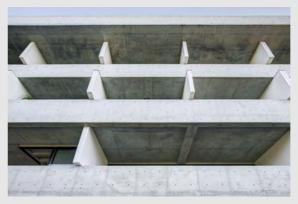
A communal open space for the residents is featured on level 6 of the building's prominent street corner.

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285







"Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses."









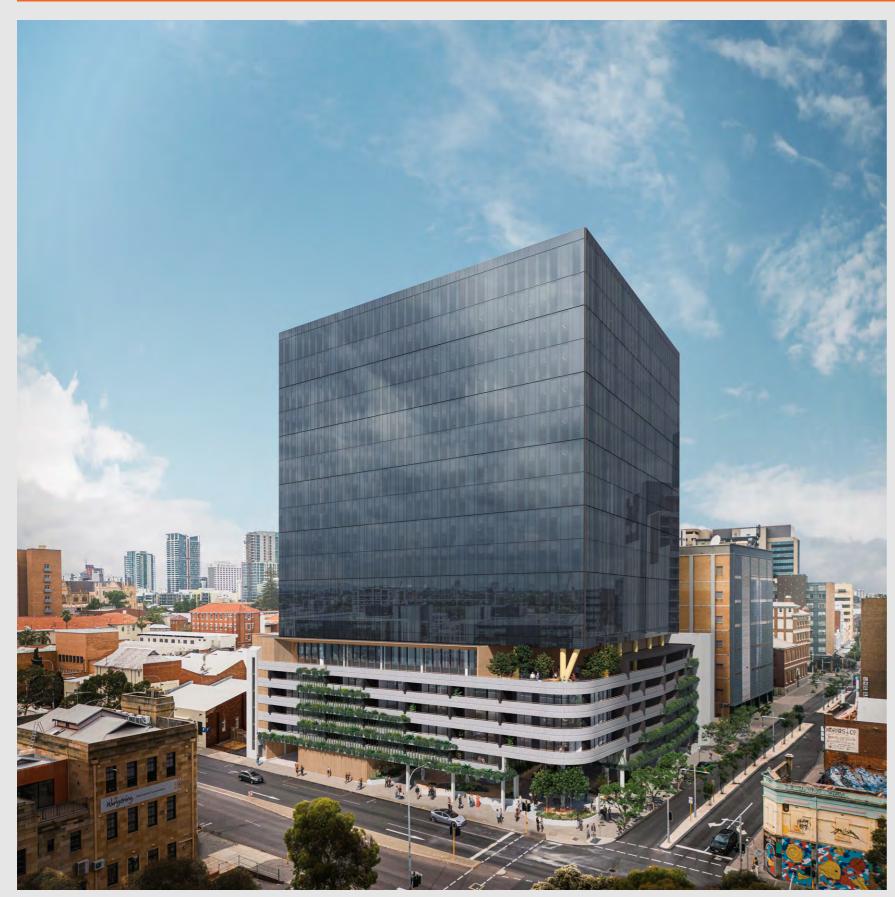


Legend

- Edificio RDR TAA
   Birmingham Street SJB
- 3. Westin Hotel Hassell
- 4. SHA The Ring Aspect Studios5. Ballast Point Park McGregor Coxall

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301 G. McCORMACK ARB NSW 7635 VIC 20415

**ABN** 76 129 130 285





## Materiality

Being an adaptive re-use building its materiality needs to be in harmony with the base canvas of pre-cast & off form concrete that gives the existing structure its character.

Rather than to obscure and cover up its illustruous past as a car park the design & materiality celebrates its kit of parts construction.

The ground floor is characterised by a fine filligree batten cladding that ads a human scale & identity to the civil structure. Tonally also they ad warmth to the space. Various shades of paving flow from the boundary towards the transfer lobby with fluid lines that contrast the rigidity the car park structure.

The residential level ad lightness and a shine through the use of metal cladding, contrasting the concrete with a darker colour to break the strong horizontality of precast balustrades.

Level 6, as the secondary "public" space repeats the materiality of the ground floor to heighten the legibility of its relation to ground floor. A splash of playfulness & colour is given to the exposed structure here as well adding a layer of interest and contrast to the concrete, batten and dark glazing.

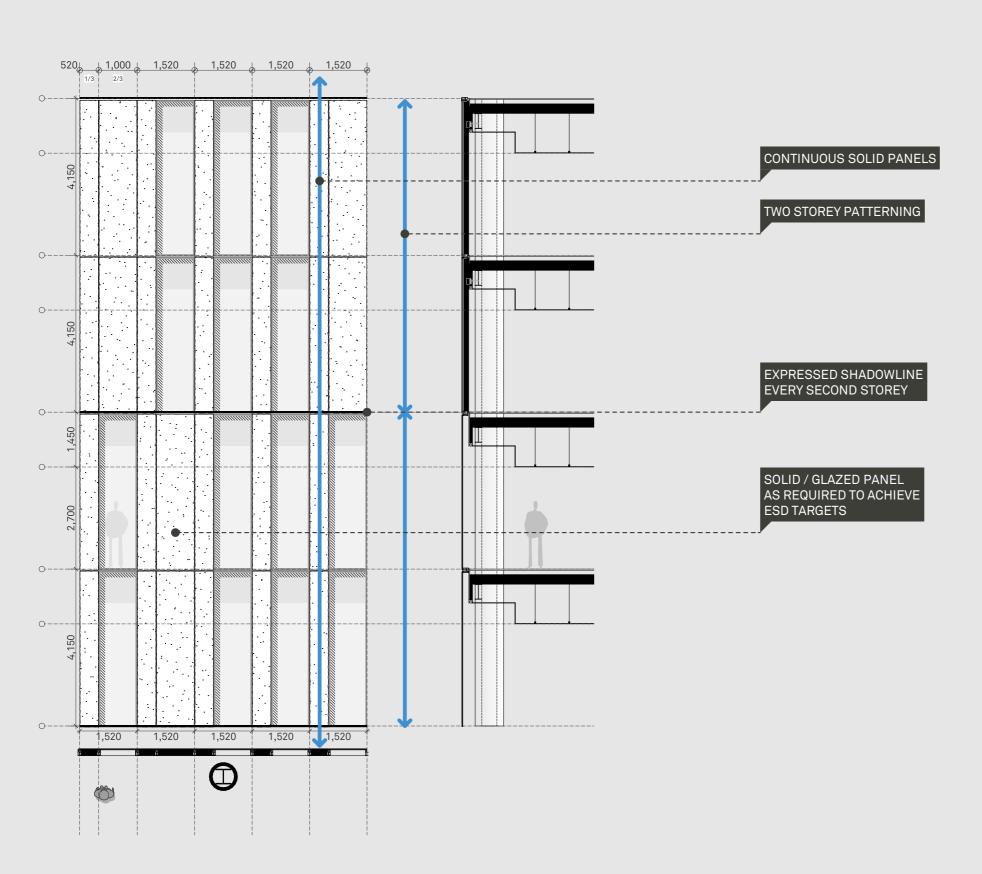
The commercial tower component is a deliberate abstraction and departure from the building below, allowing it to separate itself visually and break down the overall perceived mass of the entire project. It's facade also gives a nod to the Westin Hotel located only a few blocks away.

Throughout the building a subdivision of the existing car park's grid provides a constant module that brings consistency to the building facades overall.

Sydney, Australia

Nominated Architects
D. BENSON ARB NSW 7285 WA 3301
G. McCORMACK ARB NSW 7635 VIC 20415

ABN 76 129 130 285



## Facades

Throughout the building a subdivision of the existing car park's varying grid dimensions provides a constant module that brings consistency to the building facades overall.

Presenting as a uniform & abstract glass box, much like the Westin hotel a few blocks away, the facade provides a subtle two storey pattern with a 1/3- 2/3 module subdivision. Blinds behind the glazed parts of the facade animate the facade further as internal lighting requirements change throughout the day.

## Attachment 9:

Neighbour's Submission

, 28	March	2023	3:33	PΝ	1
1	/, 28	/, 28 March	<sub>/</sub> , 28 March 2023	<sub>/</sub> , 28 March 2023 3:33	,, 28 March 2023 3:33 PN

Subject: [EXTERNAL] Submission - 301-311 Wellington Street, Perth - Ref: DAP-2023/5021

## RE: 301-311 Wellington Street, Perth - Ref: DAP-2023/5021

Dear ,

Thank you for your correspondence dated 10 March 2023 and received by my office 17 March 2023 regarding the development application for 301-311 (Lot 19) Wellington Street, Perth.

The East Metropolitan Health Service (EMHS), as custodian of the property located at 70-74 Murray Street Perth, and also the Royal Perth Hospital (RPH) site to the east of the subject site, wish to express some concerns in respect of the proposed development.

Unfortunately the on-line documents were not available for perusal for a sufficient length of time for EMHS to respond by the suggested 24 March 2023. Please accept this email as an official submission.

Whilst EMHS is generally supportive of the proposed development the plans indicate significant overshadowing of 70-74 Murray St "Government Stores" and areas of the RPH campus. EMHS is concerned that this overshadowing will have an adverse impact on the amenity of staff, patients and visitors who utilise the garden areas of the site for rest and respite. The established gardens within the Heritage Precinct appear to be completely shaded during the afternoons in winter. The hospital's engineering workshops and Heritage Precinct buildings will also be affected by this reduction in available natural light.

EMHS has concerns regarding the impact on the Government Stores building given its proximity to the construction site. Although the heritage report provided indicates that there is likely to be no likely damage during the construction of the development, it must be assumed that there will be significant ground disturbance at the boundary resulting in vibration and dust emissions whilst works are being undertaken. This will no doubt have some impact on the fabric of the building and is likely to result in additional maintenance to ensure it is preserved under the requirements of the Heritage Act. This is also applicable to other older (non-Heritage listed) buildings in various states of repair on the RPH campus – particularly the No.1 Electricity Substation (1915) situated immediately to the east of the proposed development. EMHS would like to receive more detail on any mitigation/make good requirements that may be imposed on the developer should the development be approved and proceed.

As it is a proposed renovation/expansion of an existing structure, EMHS also wishes to express its concerns regarding proposed access arrangements to the development site and the necessary accommodation of the builder's equipment and staff. Whilst the traffic impact report details the ingress and egress to the site it makes little mention of the potential impact on traffic and access to neighbouring properties during the works. Lot 2 (1012/220) abutting the proposed development to the east is a right-of-way servicing the RPH Engineering workshops, and the MRF building fronting Murray Street. Access to this driveway will need to be maintained at all times and at all hours for the duration of the works. It is highly likely that traffic flow on Wellington Street will also be impacted and

possibly impede the movement of hospital vehicles between the portions of the campus located to the north and south of Wellington Street.

It is hoped the City of Perth will consider this submission when assessing the development application.

Regards

## **East Metropolitan Health Service**

196 Goderich Street, Royal Perth Hospital, Perth WA 6000