



PLANNING REPORT
MIXED-USE BUILDING CONSISTING OF 24 DWELLINGS AND
A SHOP

17 HUTT STREET, ADELAIDE

Prepared for:
YWCA Australia

Date:
16.02.2022

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1. OVERVIEW

Location	17 Hutt Street, Adelaide	
Certificate of Title Reference	Volume 5281 Folio 759	
Zone	Capital City Zone	
Subzone	Not Applicable	
Overlays	Airport Building Heights (Regulated) – All structures over 153.5 metres AHD Affordable Housing Design Hazards (Flooding – Evidence Required) Noise and Air Emissions Prescribed Wells Area Regulated and Significant Tree	
Technical Numeric Variations (TNVs)	Maximum Building Height (Metres) – 22 metres Minimum Building Height (Metres) – 11 metres	
Development	Construction of an eight-level, mixed-use building consisting of 24 dwellings and a shop	
Elements	Dwelling Shop	
Assessment Pathway	<i>Elements</i>	<i>Assessment Pathway</i>
	Dwelling	Performance assessed
	Shop	Performance assessed
Public Notification	<i>Elements</i>	<i>Assessment Pathway</i>
	Dwelling	Public notification required
	Shop	Public notification required
Referrals	Government Architect SA Housing Authority	
Planning and Design Code Version and Date	V2022.2 – February 3, 2022	
Relevant Authority	State Commission Assessment Panel	

2. INTRODUCTION

This report has been prepared to accompany an application by YWCA Australia ('Applicant') for planning consent to construct an eight-level, mixed-use building consisting of 24 dwellings and a shop at 17 Hutt Street, Adelaide ('site').

In preparing this report, we have:

- inspected the site and its immediate surroundings ('locality');
- identified, and subsequently reviewed, what we consider to be the most pertinent policies of the Planning and Design Code ('Code');
- had regard to the *Planning, Development and Infrastructure Act 2016* ('Act') and to the *Planning, Development and Infrastructure (General) Regulations 2017* ('Regulations');
- participated in one pre-lodgement panel meeting and one design review session;
- examined the certificate of title at **Appendix 1**, the compendium of architectural drawings at **Appendix 2**, the landscaping plan at **Appendix 3** and the civil documents at **Appendix 4**;
- reviewed, and summarised the key findings of, the waste management plan at **Appendix 5** and the ESD principles report at **Appendix 6**.

This report contains our description of the site, its locality and the proposal, and our assessment of the proposal against what we consider to be the most pertinent policies of the Code. It also contains a summary of the amendments that were made following receipt of the Government Architect's feedback by letter dated July 28, 2021.

3. THE SITE

The site is located on the north-western corner of the T – junction of Hutt and Tucker Streets, and is more formally described as Allotment 4 on Filed Plan 12656.

The site is rectangular in shape. It has a primary frontage of 13.46 metres to Hutt Street, a secondary frontage of 26.21 metres to Tucker Street and an area of 352.8 square metres or thereabouts.

The site presently accommodates a part one, part two-level building that is neither heritage listed nor classed as a representative building.

The site is accessible via both Hutt and Tucker Streets, however vehicular access is restricted to the latter because of the configuration of the verge on the western side of the former.

Whilst there are no regulated or significant trees on, or near, the site, it is clear from the Certificate of Title at **Appendix 1** that free and unrestricted rights of way have been registered parallel with the western (rear) boundary of the site. The proposed building has been sited and designed to ensure that these rights are maintained.

4. THE LOCALITY

Whilst inspecting the site and its locality we noticed that:

- the latter accommodates a range of complementary uses, including but not necessarily limited to, consulting rooms, offices, shops and dwellings;
- the Adelaide Parklands are located around 150 metres to the north-east of the site;
- there is a 16-level, mixed-use building less than 50 metres to the west of the site (this building is located at 293 – 297 Pirie Street, Adelaide, occupies a site that has frontage to Tucker Street and has an overall height of 56 metres or thereabouts);
- the verges on the western side of Hutt Street are rather large and lined with mature trees – they have also been configured to accommodate on-street car parking spaces;
- the section of Hutt Street that abuts the eastern (primary) boundary of the site accommodates two north and two south-bound lanes, with dedicated bicycle lanes on both sides of the Street;
- Tucker Street is a narrow, one-way street;
- vehicles are not currently permitted to access Tucker Street via Hutt Street; and
- vehicles are not currently permitted to park parallel with the site’s secondary frontage to Tucker Street either.

The site and its locality are captured in Figure 4.1 below.

Figure 4.1 *Locality plan*



5. BACKGROUND

5.1 YWCA

YWCA Australia is an evolving intersectional feminist organisation that is working towards a future where gender equality is a reality for young women, women and people of marginalised genders. Their primary objective with respect to this site is to deliver an affordable housing project that provides long-term housing solutions for women and women-led families.

5.2 Design Review

The proposal was presented to, and critiqued by, the Design Review Panel on July 15, 2021.

The recommendations stemming from that presentation were furnished by letter dated July 28, 2021 and have since resulted in the Applicant instructing their Architect to:

- update the visualisations of the proposed building to accurately reflect the tonal finish of the metal cladding;
- reduce the extent of solid walling along the northern side of the balconies belonging to Dwellings 3, 7, 11, 15 and 19 in order to maximise their exposure to natural light;
- confirm that the eastern (primary) façade of the proposed building complies with Section J of the National Construction Code, which it does;
- increase the safety of the communal/outdoor space on Level 6 by installing a lockable door; and
- investigate whether or not it is feasible to install a secondary or goods lift.

These investigations identified that:

- the installation of a secondary or goods lift would have resulted in the loss of one dwelling per level or seven dwellings in total, thereby jeopardising the Applicant's ability to deliver affordable housing on this site; and
- a secondary or goods lift is not required by the National Construction Code.

Notwithstanding, the Applicant has since confirmed that:

- the prospective residents of the proposed building will, for the purposes of minimising disruption, be notified in advance of any scheduled maintenance works;
- a reputable maintenance company will be engaged to undertake preventative maintenance works at set intervals;
- the preventative maintenance works are expected to take place every three to six months, and up to two hours to complete; and
- an evacuation chair is likely to be installed within the confines of the stairwell to assist people with a disability in the unlikely event that the lift is not operational during an emergency.

Lastly and whilst the Government Architect supported the height of the proposed building at 30.8 metres, it should be noted that the height of the proposed building has recently been lowered by 2.3 metres to 28.5 metres as a result of the deletion of the mezzanine floor above Level 7.

6. PROPOSED DEVELOPMENT

The Applicant seeks planning consent to construct an eight-level, mixed-use building on the site.

The proposal is depicted across the architectural drawings and landscaping plan at **Appendix 2** and **3** respectively. It is also summarised below.

6.1 Demolition

The existing building on the site will need to be demolished, however this activity does not require planning consent, as it is captured by Clause 10, Subordinate Clause (1) of Schedule 4 of the *Regulations*.

6.2 Land Use

6.2.1 Shop

A commercial tenancy ('shop') will be created on the ground floor level of the proposed building.

The shop will have a gross leasable floor area of 95.7 square metres. It will also be oriented to, and accessible from, Hutt and Tucker Streets.

6.2.2 Dwellings

The proposed building will also consist of 24 above-ground dwellings.

Levels 1, 2, 3, 4 and 5 will each contain four dwellings, and Levels 6 and 7 will each contain two dwellings.

In total, there will be 15, one-bedroom dwellings (two of which will be DDA compliant), seven, two-bedroom dwellings and two, three-bedroom dwellings.

6.2.3 Affordable Housing

A land management agreement between the Minister for Planning and Local Government and the Applicant has been drafted but not yet executed. The purpose of this agreement, which will be executed prior to the hearing at which this matter will be determined, is to ensure that at least four (15 percent) of the dwellings will meet the criteria that has been prescribed for affordable housing.

6.3 Built Form and Design

6.3.1 Siting

The proposed building will, for the most part, adjoin the eastern (primary), southern (secondary) and northern (side) boundaries of the site, as well as the perimeter of the existing free and unrestricted rights of way. Levels 6 and 7 will, however, be recessed to accommodate a communal/outdoor garden and to further articulate those levels that sit above the maximum height prescribed for the site.

6.3.2 External Materials

A handful of materials have been carefully chosen to complement the dominant materials and colours of Hutt Street, including precast concrete (with an applied finish), 'shadowline' cladding, aluminium frames and louvres, and bronze tinted glass. These materials are expected to create a high-quality, long-lasting and relatively maintenance-free building that contributes positively to the aesthetic appeal of Hutt Street.

6.4 Height

6.4.1 Floor to Floor Heights

The proposed floor to floor heights are listed in Table 6.1 below.

Table 6.1 *Floor to ceiling heights*

Building Level	Floor to Ceiling Height
Ground Floor Level	4.2 metres
Levels 1, 2, 3 and 4	3.2 metres
Level 5	3.6 metres
Level 6	3.2 metres
Level 7	4.4 metres

6.4.2 Building Height

The proposed building will have an overall height of 28.5 metres.

6.5 Building Composition

6.5.1 Ground Floor

The ground floor level will contain:

- a shop, which, as previously mentioned, will have a gross leasable floor area of 95.7 square metres;
- a separate and secure entrance to the residential component of the proposed building;
- a storage facility for up to 24 bicycles (this facility will be supplemented by the three additional parking spaces between the ramp leading to the aforementioned entrance and Tucker Street;
- two waste enclosures (one for the shop and one for the dwellings);
- a transformer (the transformer has been integrated into the design of the proposed building and will be suitably concealed from the public realm); and
- stormwater tanks.

6.5.2 Level 1

Level 1 will contain four dwellings, the particulars of which are set out in Table 6.2 below.

Table 6.2 Dwelling composition on Level 1

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
1	1	50	6.0	9.35
2	1	56	5.7	9.0
3	1	56	6.0	9.34
4	2	65	6.0	13.17

6.5.3 Level 2

Level 2 will contain four dwellings, the particulars of which are set out in Table 6.3 below.

Table 6.3 Dwelling composition on Level 2

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
5	1	50	6.0	9.35
6	1	56	5.7	9.0
7	1	56	6.0	9.34
8	2	65	6.0	13.17

6.5.4 Level 3

Level 3 will contain four dwellings, the particulars of which are set out in Table 6.4 below.

Table 6.4 Dwelling composition on Level 3

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
9	1	50	6.0	9.35
10	1	56	5.7	9.0
11	1	56	6.0	9.34
12	2	65	6.0	13.17

6.5.5 Level 4

Level 4 will contain four dwellings, the particulars of which are set out in Table 6.5 below.

Table 6.5 Dwelling composition on Level 4

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
13	1	50	6.0	9.35
14	1	56	5.7	9.0
15	1	56	6.0	9.34
16	2	65	6.0	13.17

6.5.6 Level 5

Level 5 will contain four dwellings, the particulars of which are set out in Table 6.6 below.

Table 6.6 Dwelling composition on Level 5

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
17	1	50	6.0	9.35
18	1	56	5.7	9.0
19	1	56	6.0	9.34
20	2	65	6.0	13.17

6.5.7 Level 6

Level 6 will contain two dwellings, the particulars of which are set out in Table 6.7 below.

Table 6.7 Dwelling composition on Level 6

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
21	2	68	13.5	13.46
22	2	65	7.2	8.69

Level 6 will also feature communal outdoor area. This space will:

- be oriented to, and overlook, Hutt Street;
- have an area of 63 square metres;
- accommodate a landscaped planter box and a kitchen, as well as formal and informal seating areas; and
- be accessible to all residents of the proposed building and their guests between 8:00 am and 6:00 pm on weekdays (outside of these times, bookings will be essential).

6.5.8 Level 7

Level 7 will contain two dwellings, the particulars of which are set out in Table 6.8 below.

Table 6.8 *Dwelling composition on Level 7*

Dwelling Number	Bedrooms	Internal Floor Area (sqm)	Private Open Space (sqm)	Domestic Storage (cubic metres)
23	3	90	13.8	12
24	3	96	13	12

6.6 Access and Parking

The residential lobby and shop will both be accessible via Hutt Street, however the latter will also be accessible via the ramp leading to the residential lobby.

With respect to the residential lobby, it is important to note that:

- the provision of a secondary or goods lift was investigated by the Applicant’s Architect, however this arrangement would have resulted in the loss of one dwelling per level or seven dwellings in total, thereby jeopardising the Applicant’s ability to deliver affordable housing on this site; and
- a secondary or goods lift is not required by the National Construction Code.

No on-site car parking is required or proposed either, however provision will be made for up to 27 bicycles to be stored within the confines of the site, including 24 spaces for the prospective residents of the proposed building and three spaces for visitors.

6.7 Stormwater

The Stormwater Management Report prepared by Drew Rudd Engineers at **Appendix 4** confirms that:

- the post-development flow rates will not exceed the pre-development flow rates and are not, therefore, expected to overload the Council’s existing stormwater drainage network;
- stormwater will be discharged via a piped system to the Hutt Street kerb;
- no on-site detention is required as the proposed development will not alter the current discharge rates; and
- no basements, or pumped groundwater discharge systems are proposed.

6.8 Waste Management

It is clear from the waste management plan at **Appendix 5** that:

- one, 1,100 litre skip for putrescibles, one, 1,100 litre skip for recyclables and three, 240 litre bins for organics will be required for the residential component of the proposed building;
- one, 660 litre skip for putrescibles, one, 240 litre skip for recyclables, one, 660 litre skip for organics, one, 240 litre bin for container deposits and one, 250 litre bale for cardboard will be required for the commercial component of the proposed building;
- the requisite type and number of bins can be stored within the confines of the site;
- waste chutes for putrescibles and recyclables will, for convenience and to minimise odours within the lift shaft and stairwell, be installed on Levels 1 to 7;
- putrescibles and recyclables will be collected weekly, whereas organics will be collected fortnightly;
- there will be up to a total of 10 collections per week;
- all three forms of waste associated with the residential component of the proposed building will be collected via Tucker Street and as part of the Council's existing kerbside collection service;
- all forms of waste associated with the commercial component of the proposed building, except for cardboard bales, will be collected by a private contractor and via Tucker Street; and
- the cardboard bales generated by the shop will be collected via Tucker Street and as part of the Council's existing kerbside collection service.

6.9 Landscaping

As can be seen from the landscaping plan at **Appendix 3**, landscaping is proposed on both sides of the ramp leading to the residential lobby, and at the southern end of each corridor on Levels 1 to 7. A large portion of the space between the communal/outdoor area on Level 6 and Dwelling 22 will also be landscaped.

6.10 Environmental Sustainability

The statement from BESTEC at **Appendix 6** lists those ESD initiatives which either have been, or will be, factored into the design of the proposed building.

In addition, it should be noted that each dwelling has also been designed in accordance with the requirements of the Liveable Housing Design Guidelines and to achieve Silver Level Accreditation.

7. PROCEDURAL MATTERS

At the time of preparing this report, the relevant version of the Code was gazetted and subsequently consolidated on February 3, 2022 (V2022.2). Due to the frequency of amendments, the version of the Code used to prepare this report may not be the relevant version at the time of lodgement of the application. To the extent of any inconsistency, the version of the Code at the time of lodgement will be relevant for the processing and assessment of the application.

7.1 Assessment Pathway

Shop and dwelling are listed within *Table 3 – Applicable Policies for Performance Assessed Development*, therefore resulting in both being performance assessed against the prescribed policies.

7.2 Public Notification

As the proposed building exceeds the maximum building height prescribed under Designated Performance Feature ('DPF') 4.1 of the Zone, the application will require public notification.

7.3 Relevant Authority

The State Commission Assessment Panel is the relevant authority for this application, as the proposed building will cost more than \$10 million to complete.

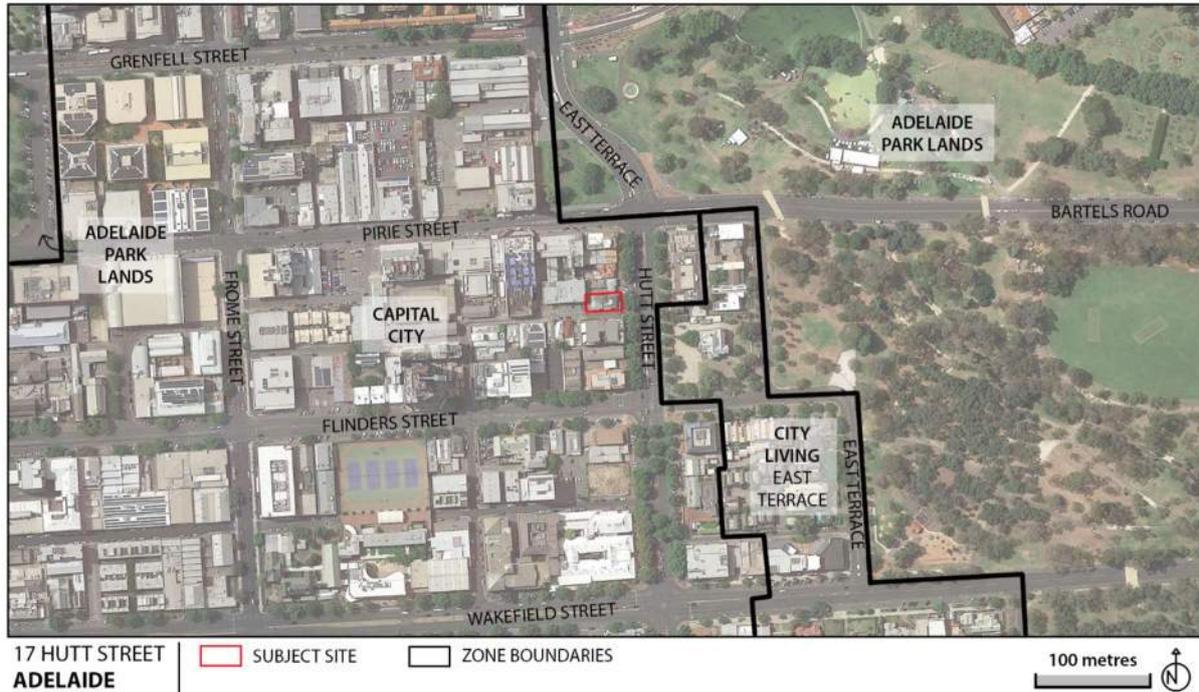
7.4 Referrals

Pursuant to Schedule 9 of the *Regulations*, the application must be referred to the Government Architect and the SA Housing Authority.

8. ASSESSMENT

The site is situated within the Capital City Zone ('Zone'), as shown in Figure 8.1 below.

Figure 8.1 Zoning



The site is captured by the following Overlays:

- Airport Building Heights (Regulated) – All structures over 153.5 metres AHD;
- Affordable Housing;
- Design;
- Hazards (Flooding – Evidence Required);
- Noise and Air Emissions;
- Prescribed Wells Area;
- Regulated and Significant Tree.

It is also subject to the following TNVs:

- Maximum Building Height (Metres) – 22 metres;
- Minimum Building Height (Metres) – 11 metres.

Table 3 of the Zone lists the applicable policies for a shop and dwelling. These policies can be found at **Appendix 7**.

8.1 Land Use

Performance Outcome ('PO') 1.1 of the Zone provides guidance with respect to the use of land within the Zone. It states:

PO 1.1 *A vibrant mix of residential, retail, community, commercial and professional services, civic and cultural, health, educational, recreational, tourism and entertainment facilities.*

(Emphasis added)

Given that the proposal involves both residential and retail development, and the proposed dwellings and shop are, according to DPF 1.1 of the Zone, envisaged, the proposal is considered to be appropriate from a land use perspective.

The spatial arrangement of the proposed uses is also consistent with PO 2.1 of the Zone, as it calls for "non-residential land uses at ground floor level such as shops and restaurants (that) support and maximise pedestrian activity to provide visual interest and positively contribute to public safety, walkability and vibrancy."

8.2 Residential Component

8.2.1 Affordable Housing

Given that the site is captured by the Affordable Housing Overlay, Desired Outcome ('DO') 1 and PO 1.1 of this Overlay are relevant to our assessment of the proposal. They state:

DO 1 *Affordable housing is integrated with residential and mixed use development.*

PO 1.1 *Development comprising 20 or more dwellings / allotments incorporates affordable housing.*

As previously mentioned, a land management agreement between the Minister for Planning and Local Government and the Applicant has been drafted but not yet executed. The purpose of this agreement, which will be executed prior to the hearing at which this matter will be determined, is to ensure that at least four (15 percent) of the dwellings will meet the criteria that has been prescribed for affordable housing.

The proposal is, therefore, consistent with the desired outcome of this Overlay, in that it will culminate in the provision of affordable housing that is integrated with residential and retail development.

8.2.2 Dwelling Composition

As sought by PO 29.1 of the Design in Urban Areas Section of the Code, the proposed building will accommodate a variety of dwellings, including 15, one-bedroom dwellings (two of which will be DDA compliant), seven, two-bedroom dwellings and two, three-bedroom dwellings. Further, and as sought by the accompanying DPF, namely DPF 29.1 of the Design in Urban Areas Section of the Code, all of the one, two and three-bedroom dwellings will have an internal floor area of not less than 50, 65 and 80 square metres respectively.

8.2.3 Internal Configuration

The dwellings have been configured to afford the prospective residents a high degree of amenity. More particularly, we note that:

- each dwelling will come equipped with openable windows (see PO 28.1 of the Design in Urban Areas Section of the Code);
- each living room will have a satisfactory short-range outlook, whether that be towards the surrounding road network or a balcony, or across the pseudo laneway on the western side of the site (see PO 18.1 of the Design in Urban Areas Section of the Code);
- the balconies have been designed, positioned and integrated into the overall form of the proposed building (see PO 28.2 of the Design in Urban Areas Section of the Code); and
- the vast majority of those dwellings within the proposed building will be oriented to the surrounding road network (see PO 31.3 of the Design in Urban Areas Section of the Code).

8.2.4 Open Space

Each dwelling will come equipped with private open space in the form of a balcony. Whilst most of the balconies do not strictly comply with Table 1 of the Design in Urban Areas Section of the Code, we do not consider this departure to be insurmountable, as the balconies will still be functional and are expected to meet the needs of the prospective residents, as sought by PO 27.1 of the Design in Urban Areas Section of the Code. The site is also within walking distance of Rymill Park, the Adelaide Park Lands Golf Course and the East Terrace Glover Playground.

In addition to this, we note that PO 32.1 of the Design in Urban Areas Section of the Code advises that *“private open space provision may be substituted for communal open space which is designed and sited to meet the recreation and amenity needs of residents”*.

As previously mentioned, Level 6 will feature a communal/outdoor space which will:

- be large enough to cater for group recreation (see PO 32.2);
- be conveniently accessible via the lift servicing the residential lobby and those corridors on Levels 1 to 7 (see (PO 32.3(a)); and
- provide both functional and attractive areas for the prospective residents of the proposed building, with the inclusion of an outdoor kitchen, seating and landscaping (see PO 32.4).

8.2.5 Site Facilities and Storage

According to DPF 28.4 of the Design in Urban Areas Section of the Code, one-bedroom dwellings, two-bedroom dwellings and three-bedroom dwellings should come equipped with not less than 8.0, 10 and 12 cubic metres of domestic storage respectively.

As can be seen from the ‘domestic storage compliance matrix’ accompanying the architectural drawings at **Appendix 2**, each dwelling will come equipped with not less than the recommended volume of domestic storage. Further, and as sought by PO 35.1 of the Design in Urban Areas Section of the Code, the communal letterbox will be located alongside the entrance to the residential lobby.

8.3 Architectural Composition

DO 1 of the Design Overlay calls for “*development (that) positively contributes to the liveability, durability and sustainability of the built environment through high-quality design.*”

The proposed building is of a high architectural standard and positively responds to the key features of the local environment and its built form. It is considered to do so for the following reasons:

- the shop on the ground floor level contributes to the vibrancy and interest at street level (see PO 3.2 (ii) and (v) of the Zone);
- the openness of the corner entrance to both street frontages ensures appropriate sightlines are provided while maintaining definition at the apex (see PO 3.2(iv) of the Zone);
- the roof design conceals all mechanical equipment within it so it cannot be seen from the public realm or even from above (see POs 1.4 and 12.8 of the Design in Urban Areas Section of the Code);
- the external materials and colours chosen are durable and will minimise ongoing maintenance requirements, which in turn makes the proposed building more affordable for its residents (see PO 12.5 of the Design in Urban Areas Section of the Code);
- the materials chosen also interpret the dominant colour evident in the street, maintaining a cohesive streetscape and contributing positively to the character of the locality (see PO 12.1 of the Design in Urban Areas Section of the Code);
- storage and waste areas are designed to be integrated within the building, to ensure there is no negative visual impact on the public realm (see PO 1.5 of the Design in Urban Areas Section of the Code); and
- above the maximum height, the building is designed with angled walls, setbacks and a variety of roof forms and heights to help break up the visual mass of the built form.

8.4 Public Realm and Streetscape

PO 2.2 of the Zone states:

PO 2.2 *Development:*

- (a) *contributes to the activation of the public realm by presenting an attractive human scaled pedestrian-oriented frontage at ground level that adds interest and vibrancy;*
- (b) *maintains a sense of openness to the sky for pedestrians and allow sunlight access to the public realm;*
- (c) *provides a clear sense of address to each building.*

The proposed building has been strategically sited and designed to activate the public realm whilst maintaining a sense of openness to the sky and providing a clear sense of address. In support of this statement, we note that:

- the shop will be located on the ground floor level and its façades will be principally glazed (see POs 2.1 and 2.2 of the Zone);
- the shop is also likely to be open during the evening and at night (see PO 2.3 of the Zone);
- boundary-to-boundary development, such as that proposed, is encouraged for the purposes of maintaining streetscape continuity (see PO 3.6 of the Zone);

- the floor to floor height of the ground floor level will ensure that the commercial tenancy can be readily adapted to accommodate other non-residential uses that are envisaged in the Zone (see PO 3.13 of the Zone);
- the primary (eastern) and secondary (southern) façades of the proposed building will be visually interesting (see PO 12.4 of the Design in Urban Areas Section of the Code);
- the corner entrance to the residential lobby offers a safe, attractive, welcoming and functional space for the prospective residents and their guests that is clearly identifiable and within close proximity to the lift (see PO 12.7 of the Design in Urban Areas Section of the Code); and
- Levels 6 and 7, being the levels that extend above the 22 metre mark, have been intentionally recessed to maintain a sense of openness to the sky (see PO 2.2 of the Zone).

Notwithstanding the above, we also note that an ideal opportunity exists to accommodate outdoor dining within the confines of the verge on the eastern side of the site. Whilst not proposed as part of this application, this would significantly enhance the human-scaled and pedestrian-oriented frontage of the site, and further activate this section of Hutt Street.

8.5 Passive Surveillance

In accordance with the Design in Urban Areas Section of the Code, the proposal maximises opportunities for passive surveillance through the use of motion sensor lighting, and visually permeable façades and windows that face, and overlook, the surrounding road network (see POs 2.1 and 17.1). The entrances to the shop and residential lobby will also be safe, perceptible and directly accessible via Hutt Street (see PO 2.3).

8.6 Building Height

The proposed building, at 28.5 metres in height, will exceed the maximum building height that has been prescribed for the site (22 metres). With that said, we note that PO 4.2 of the Zone contemplates the construction of buildings that are taller than 22 metres in this location. It states, in part, that:

PO 4.2 *Development exceeding the building height specified in the Maximum Building Height (Levels) Technical and Numeric Variation layer and the Maximum Building Height (Metres) Technical and Numeric Variation layer is generally not contemplated unless:*

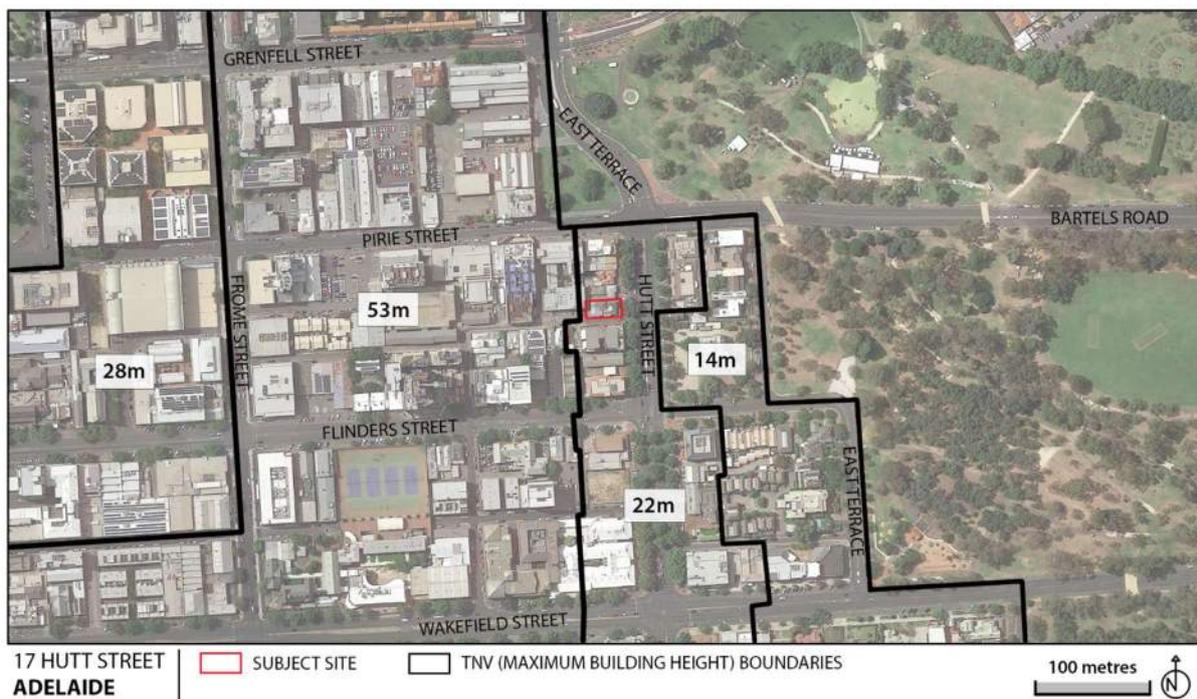
...(b) the building incorporates measures that provide for a substantial additional gain in sustainability and it demonstrates at least four of the following are met:

- (i) the development provides an orderly transition up to an existing taller building or prescribed maximum height in an adjacent Zone or building height area on the Maximum Building Height (Levels) Technical and Numeric Variation layer and Maximum Building Height (Metres) Technical and Numeric Variation layer...*
- (v) no on site car parking is provided*
- (vi) at least 75% of the ground floor street fronts of the building are active frontages...*
- (viii) where the development includes housing, at least 15% of the dwellings are affordable housing.*

Having carefully considered PO 4.2 of the Zone, it is our view that the proposed building is, in this instance, permitted to exceed 22 metres in height on the basis that:

- it provides, as can be seen from Figure 8.2 below, an orderly transition up to a taller building which, as we understand it, consists of 16 levels and is approximately 56 metres in height (indeed, it is only separated from an area where buildings of up to 53 metres in height are anticipated by the existing free and unrestricted rights of way at the western end of the site);
- no on-site car parking is proposed;
- at least 75 percent of the site's primary frontage to Hutt Street will be active/transparent; and
- the land management agreement, once executed, will ensure that four (15 percent) of the dwellings within the proposed building meet the criteria that has been prescribed for affordable housing.

Figure 8.2 Maximum building height (metres) TNV within locality



As an aside, we note that the Government Architect supported the height of the proposed building that was presented at the first design review session (30.8 metres) and that the height of the proposed building has since been lowered by 2.3 metres.

We also note that the height of the proposed building will not pose a hazard to the operation of certified or registered aerodromes, thereby satisfying PO 1.1 of the Airport Building Heights (Regulated) Overlay.

8.7 Interface between Land Uses

As demonstrated in the following sub-sections of this report, the proposed building has been designed to manage the interface with, and minimise the impacts on, existing residential uses, as sought by PO 5.1 of the Zone.

8.7.1 Overlooking

PO 10.2 of the Design in Urban Areas Section of the Code calls for development that “*mitigates direct overlooking from balconies to habitable rooms and private open space of adjoining residential uses in neighbourhood-type zones.*”

The site is bounded to the east and south by public roads and to the west by a pseudo laneway, whilst the adjoining property to the north of the site is situated in the Capital City Zone, not a ‘neighbourhood-type zone’. There is no need, therefore, for any of the windows to be obscured, particularly not when passive surveillance of the surrounding road network is encouraged and satisfactory short-range outlooks are an expectation of the Code (see PO 18.1 of the Design in Urban Areas Section of the Code).

Notwithstanding, it remains important to note that the northern façade of the proposed building will be devoid of openings and that the adjoining property to the north is not used for residential purposes.

8.7.2 Overshadowing

DPFs 3.1 and 3.2 of the Interface between Land Uses Section of the Code provide guidance with respect to overshadowing. They state:

DPF 3.1 *North-facing windows of habitable rooms of adjacent residential land uses in a neighbourhood-type zone receive at least 3 hours of direct sunlight between 9:00am and 3:00pm*

DPF 3.2 *Development maintains 2 hours of direct sunlight between 9:00am and 3:00pm on 21 June to adjacent residential land uses in a neighbourhood-type zone in accordance with the following:*

- (a) *for ground level private open space, the smaller of the following:*
 - i. *half the existing ground level open space*
 - or*
 - ii. *35m² of the existing ground level open space (with at least one of the area’s dimensions measuring 2.5m)*
- (b) *for ground level communal open space, at least half of the existing ground level open space.*

Firstly, neither of these policies apply to those properties to the north, south or west of the site, as they are all located within the Capital City Zone, not a ‘neighbourhood-type’ zone.

Secondly, and more importantly, it is clear from the shadow diagrams at **Appendix 2** that the proposed building will not overshadow any of the adjacent properties within the City Living Zone to the south-east of the site until well after midday on the winter solstice.

8.7.3 Operating Hours

A tenant has not been identified or secured for the shop on the ground floor level, however the Applicant would not object to the imposition of a condition which requires the shop to operate within the hours specified by DPF 2.1 of the Interface between Land Uses Section of the Code, namely from 7:00 am to 9:00 pm on weeknights and from 8:00 am to 5:00 pm on weekends. A condition of this nature will ensure that the shop does not unreasonably impact upon the amenity of any sensitive receivers within the immediate vicinity of the site, as sought by PO 2.1.

8.8 Parking

The proposed development does not provide any on-site carparking in line with PO 4.2 of the Zone and PO 5.1 of the Transport, Access and Parking Section of the Code.

It is noted that the Affordable Housing Overlay indicates, via PO 4.1, that “*sufficient car parking is provided to meet the needs of occupants of affordable housing*”, however, given the site’s location within the city centre and its proximity to high frequency transport routes and a variety of shops, and the provision of 27 bicycle parking spaces, it is not necessary for any on-site car parking to be provided.

It is also interesting to note, as far as the provision of bicycle parking is concerned, that the prescribed policies for a dwelling within the Zone do not refer to PO 9.1 of the Transport, Access and Parking Section of the Code. Anyhow, the proposal has incorporated space for 24 secured bicycle parks (one per dwelling) and three in the entrance for use by visitors of the dwellings or the shop.

8.9 Landscaping

In a Zone that permits and, in fact, encourages zero setbacks to allotment boundaries to enable a unified streetscape, it is exceptionally difficult to provide deep soil zones, as requested by the Design in Urban Areas Section of the Code. With that said, the proposal does include self-draining planter beds throughout the built form at each level and a garden area within the communal/outdoor space on Level 6 which is considered to satisfy the overall intent of the deep soil policies. Further, the landscaped protuberance in front of the site, which contains a smattering of roses and a mature London Plane, will remain untouched and help to soften the appearance of the proposed building, as sought by PO 13.1 of the Design in Urban Areas Section of the Code.

8.10 Waste

The waste enclosures on the ground floor level of the proposed building have been designed to accommodate the requisite type and number of bins, as sought by PO 11.1 of the Design in Urban Areas Section of the Code. They will also be concealed from the surrounding road network, as sought by PO 11.2 of the Design in Urban Areas Section of the Code, and located nowhere near the above-ground dwellings, as sought by PO 11.3 of the Design in Urban Areas Section of the Code.

Whilst provision has not been made for on-site collection, we note that the proposed collection arrangements are no different to those presently occurring within the confines of Tucker Street, and that there will be minimal disturbance to the adjacent carriageway given that collections will be limited to around 10 per week and are expected to take only a couple of minutes to complete.

8.11 Stormwater and Flooding

The proposed development incorporates the following measures to appropriately manage stormwater:

- stormwater systems designed such that historic peak stormwater outflows will not be exceeded (Design in Urban Areas module PO 42.3);
- stormwater is appropriately treated before discharge to Council's system (Design in Urban Areas module PO 42.2); and
- the proposed finished floor level is 300 millimetres above kerb height; therefore, the development has been designed to ensure the risk of flood waters entering is minimal, in line with PO 1.1 of the Hazards (Flooding – Evidence Required) Overlay.

8.12 Wind

PO 14.3 of the Design in Urban Areas Section of the Code provides guidance with respect to wind. It states:

PO 14.3 *Development of 5 or more building levels, or 21m or more in height (as measured from natural ground level and excluding roof-mounted mechanical plant and equipment) is designed to minimise the impacts of wind through measures such as:*

- (a) *a podium at the base of a tall tower and aligned with the street to deflect wind away from the street*
- (b) *substantial verandahs around a building to deflect downward travelling wind flows over pedestrian areas*
- (c) *the placement of buildings and use of setbacks to deflect the wind at ground level*
- (d) *avoiding tall shear elevations that create windy conditions at street level.*

The proposed building is not expected to significantly worsen the existing wind conditions at ground level given that:

- those levels above the 21-metre mark (Levels 6 and 7 to be exact) will be recessed from both Hutt and Tucker Streets;
- recesses have been incorporated along the eastern and southern sides of the ground floor level; and
- the eastern and western façades of the proposed building will feature recessed balconies, and are not, therefore, sheer walls.

9. CONCLUSION

As a result of the high-quality design, the specialist inputs, our site and locality inspection and our assessment of the proposal against the relevant policies of the Code, we have formed the opinion that the proposal warrants planning consent.

In support of our conclusion, we wish to reiterate that:

- the proposed land uses are envisaged within the Zone – so too for that matter is their spatial arrangement;
- at least four (15 percent) of the dwellings within the proposed building will meet the criteria that has been prescribed for affordable housing;
- the proposed building will contain a range of dwellings that differ in terms of their size and accommodation;
- the setbacks, angled walls, variety of roof forms and heights, and the intentional change in materiality help to mitigate the overall bulk and scale of the proposed building;
- the proposed building is, in this instance, permitted to exceed 22 metres in height;
- the overall height of the proposed building is supported by the Government Architect;
- the overall design assists in creating a safe, secure and crime resistant environment;
- all dwellings will have access to natural light and ventilation, domestic storage, and private and communal open space;
- stormwater and waste will be dealt with in an environmentally sound manner; and
- the proposed building will be energy efficient for years to come.

APPENDIX 1. CERTIFICATE OF TITLE

REAL PROPERTY ACT, 1886



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



Certificate of Title - Volume 5281 Folio 759

Parent Title(s) CT 4188/167
Creating Dealing(s) CONVERTED TITLE
Title Issued 27/07/1995 Edition 4 Edition Issued 08/10/2018

Estate Type

FEE SIMPLE

Registered Proprietor

YOUNG WOMEN'S CHRISTIAN ASSOCIATION OF AUSTRALIA
OF L 1 210 KINGS WAY SOUTH MELBOURNE VIC 3205

Description of Land

ALLOTMENT 4 FILED PLAN 12656
IN THE AREA NAMED ADELAIDE
HUNDRED OF ADELAIDE

Easements

SUBJECT TO FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED H
TOGETHER WITH FREE AND UNRESTRICTED RIGHT(S) OF WAY OVER THE LAND MARKED G

Schedule of Dealings

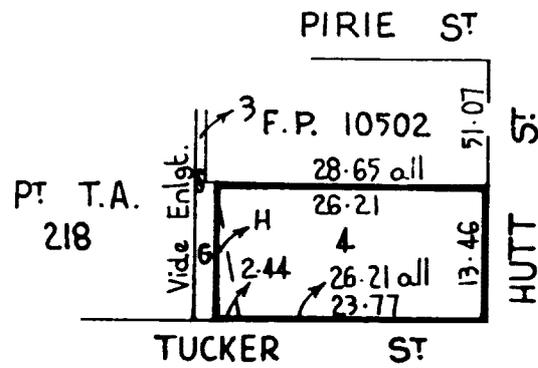
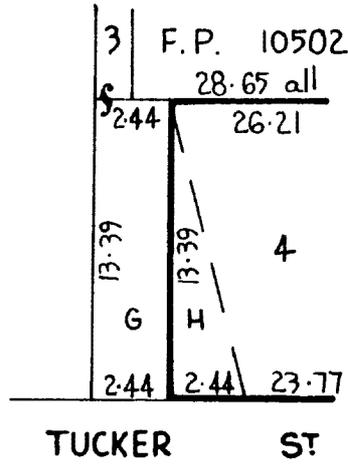
NIL

Notations

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



Enlargement
(not to scale)



APPENDIX 2. ARCHITECTURAL DRAWINGS



PLOTED: 26/03/2021 FILE: 20A0186 Detail(0)_MGA20P.dwg

REV	DATE	DESCRIPTION	CALC	FIELD
ADDITIONS, AMENDMENTS AND APPROVALS				

LEGEND	
47.51TK TOP KERB	48.12TT TOP OF TREE LEVEL
47.36WT WATER TABLE	48.12RR RIDGE LEVEL
45.16FL FLOOR LEVEL	48.12TG TOP OF GUTTER
48.12L INVERT LEVEL	TEL COMM. PILLAR / PIT
TAP	TRAFFIC LIGHT
WATER METER	SIGN / BUS SIGN
SPRINKLER / IRRIG VALVE	LITTER BIN
HYDRANT	MAIL BOX / SIGNAL BOX
DOMESTIC OUTLET	TICKET MACHINE
DOWNPIPE	ROAD / ELEC. SERVICE
DOMESTIC SUMP	WATER SV / FP
STORMWATER WHOLE	ELEC. / GAS METER
SEP / GRATING	GAS SERVICE
PSM	PEG / TBM
SURVEY MARKS	BOREHOLE
POWER LIGHT POLE	CABLE MARKER
STONE / WOODEN POLE	POST / BOLLARD
WATER MH / IO / SIP	UNKNOWN POINT / SERVICE
Tree / Shrub	Possible REGULATED / SIGNIFICANT Tree by measurement only (trunk greater than 2.0m circumference). Professional advice from council / arborist required.
EASEMENT LINE	BOUNDARY LINE
EDGE OF VEGETATION	ROAD SIGN / HOARD
CHANGE OF GRADE	DRAIN
SEWER PIPE UG	TEL. COMM. UG
WATER PIPE UG	BUILDING
WALL	GI BUILDING
CONCRETE	FENCE
GATE	

COORDINATE SYSTEM	
VERTICAL:	AHD
HORIZONTAL:	GROUND PLANE ORIENTED TO: MGA 2020 ZONE 54
SCALE: GROUND (CSF = 1.000178261)	
ADOPTED STATION & AUTHORITY	
PSM 6628/22692	RL: 45.624
PSM 6628/22692	E: 281835.034
	N: 6132642.627

0 1 2 4 6 8 10 m

1:100 ORIGINAL SHEET SIZE A1

© ALEXANDER & SYMONDS PTY. LTD.

CONTOUR INTERVAL: 0.1m

SURVEY: BEP MARCH 2021

DRAWN: MRE 26/03/2021

CHECKED: JH 26/03/2021

Aerial photography supplied by MetroMap, date 07/01/2021

Alexander & Symonds Pty Ltd
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 South Australia 5067
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 W www.alexander.com.au
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+ Property + Land Development +
 + Construction + Mining +
 + Spatial Information Management +



DETAIL SURVEY 17 HUTT STREET ADELAIDE	
DRAWING No. 20A0186 Detail(0)_MGA20P	SHEET 1 OF 1
REVISION 0	



Existing Site Aerial

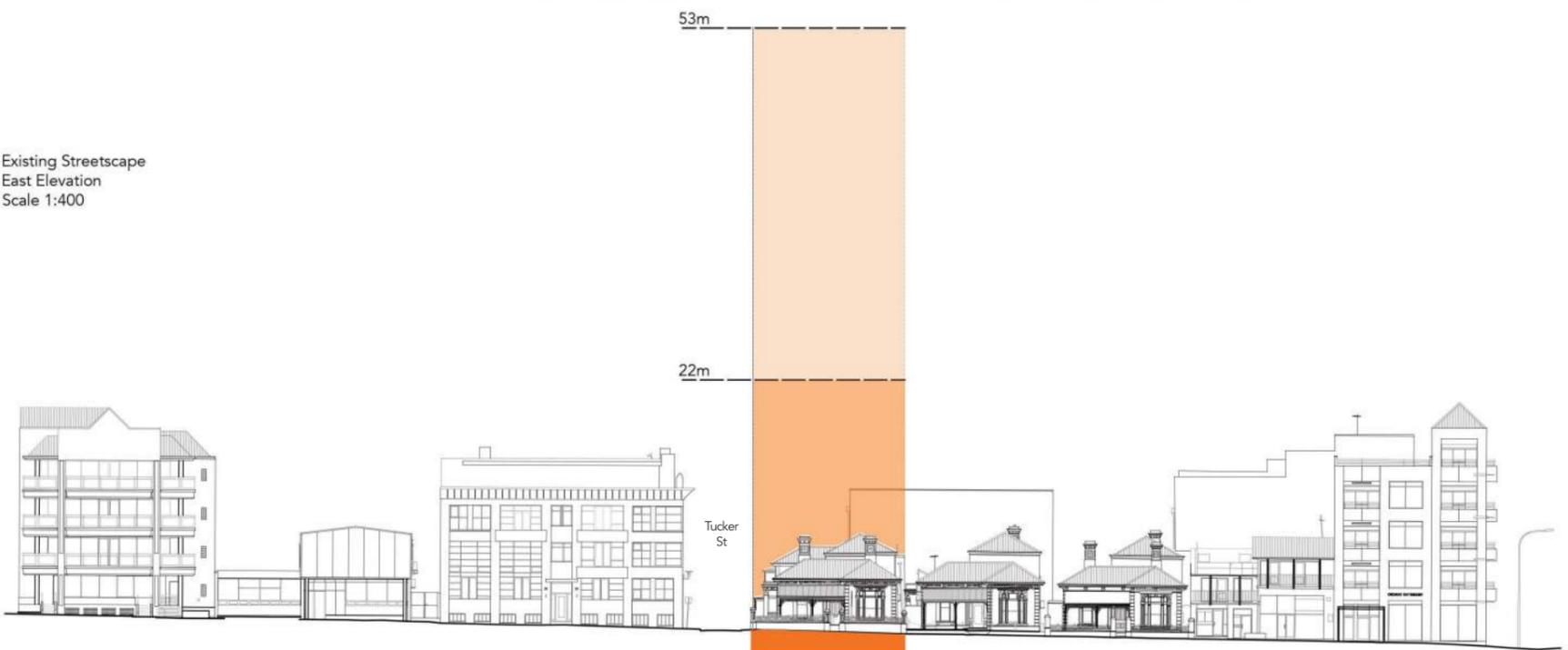
Address: 17 Hutt Street
Volume: 5281
Folio: 759



Existing Site Images



Existing Streetscape East Elevation
Scale 1:400





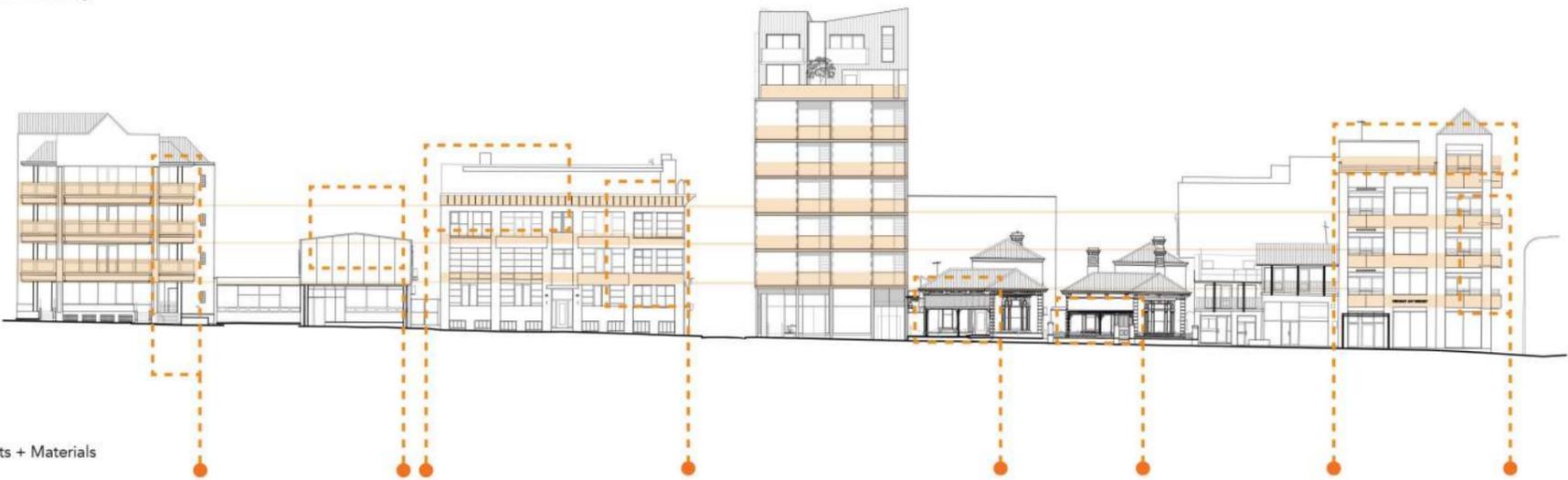
Contextual Cues
Development Height Study



Contextual Cues
Roof Form Context



Contextual Cues
East Elevation Study

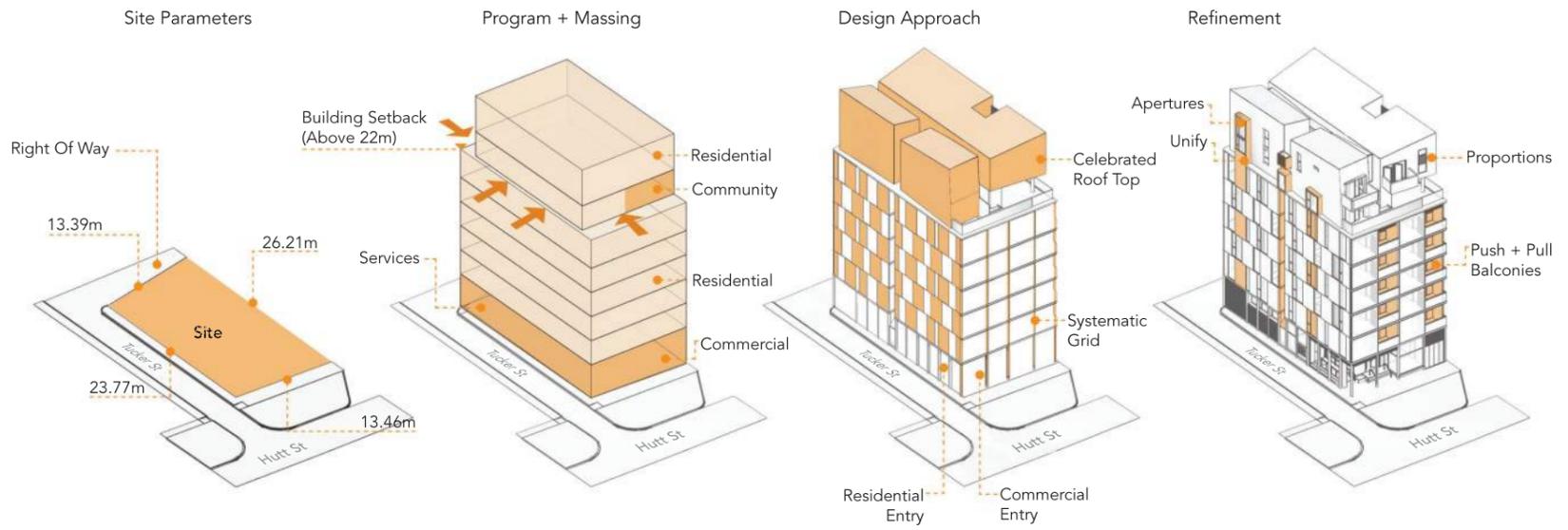


Elements + Materials





Design Approach



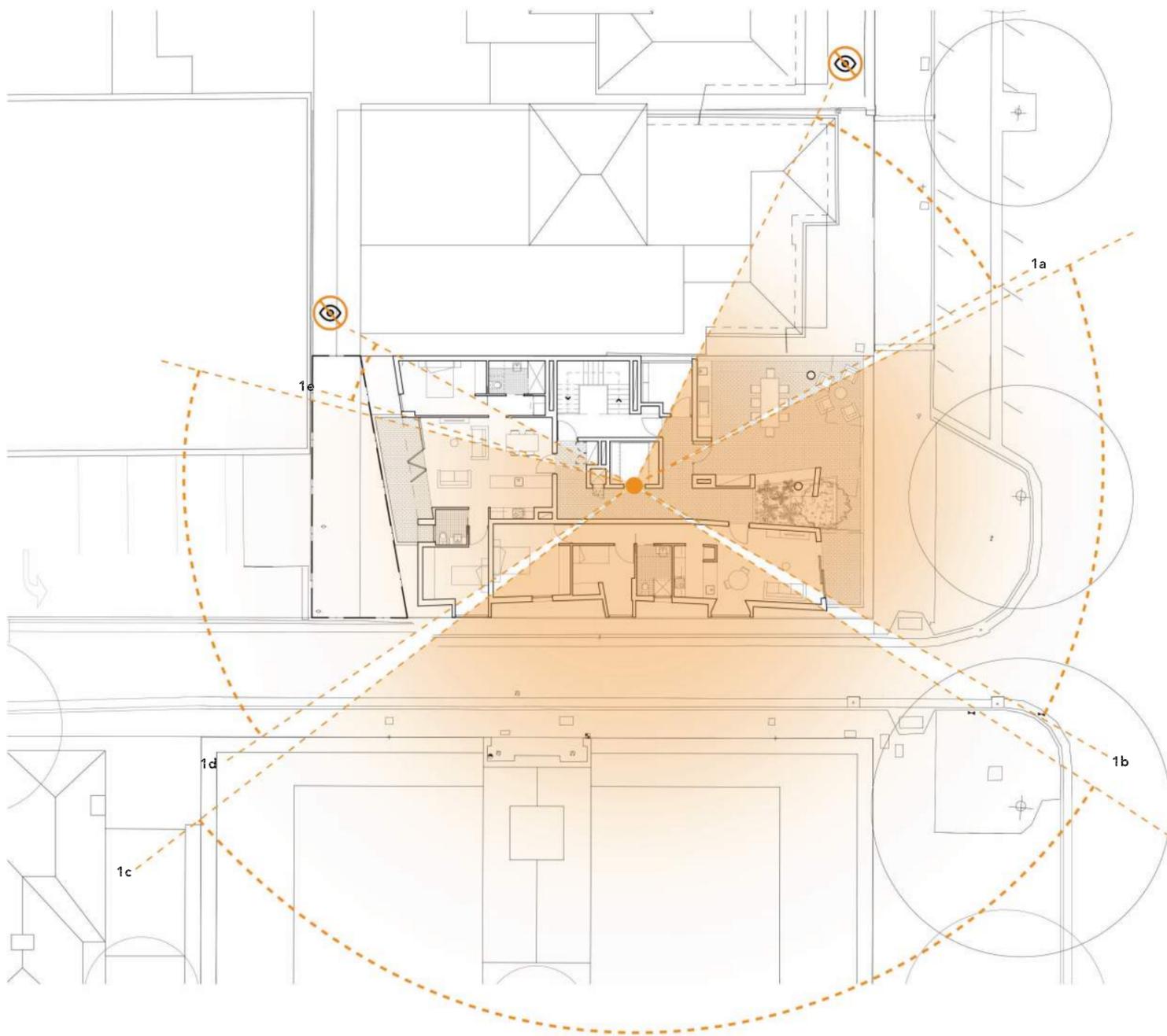
Sight Line Diagram



1e North West View



1a North East View



1d West View



1c South View

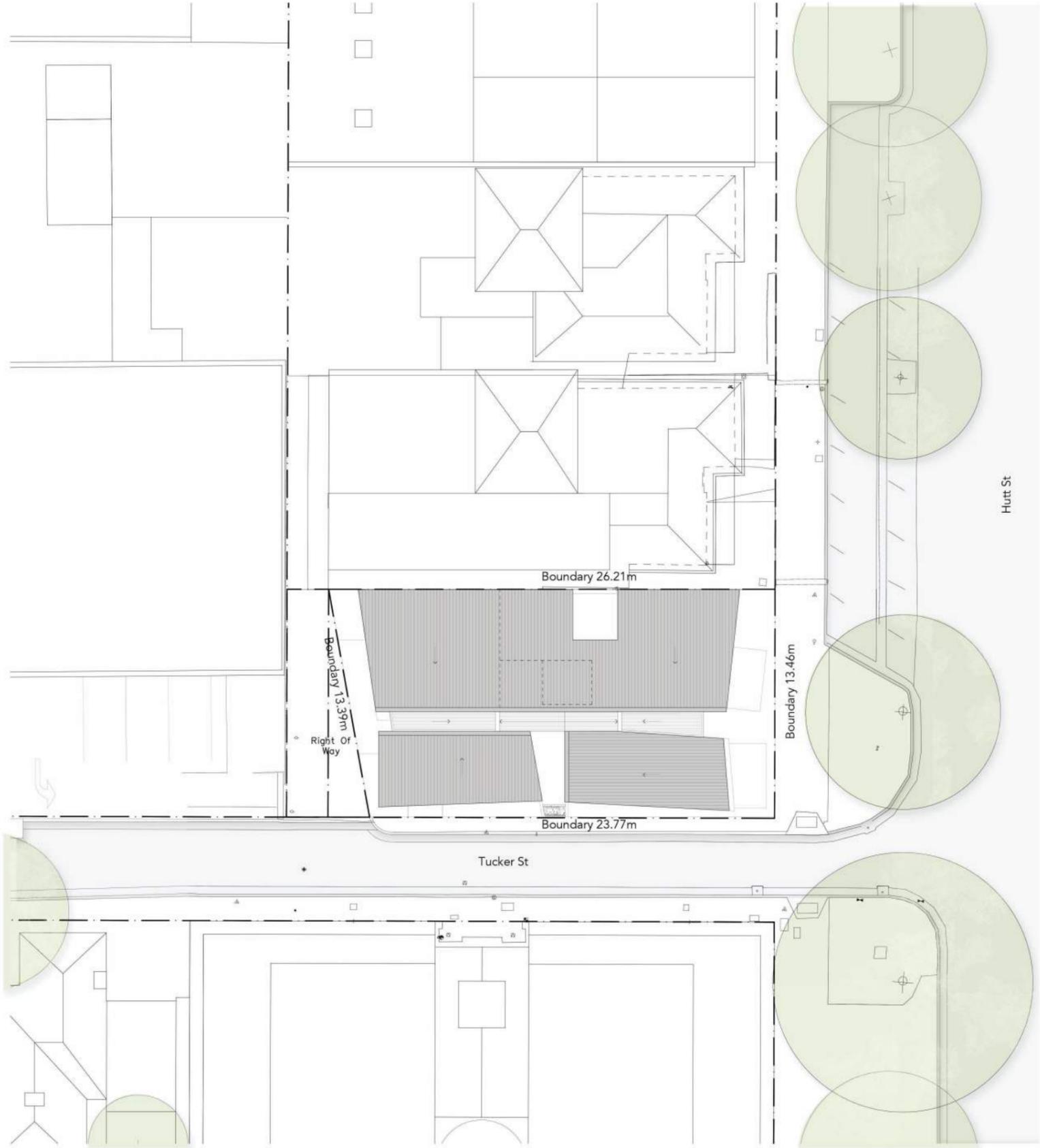


1b East View

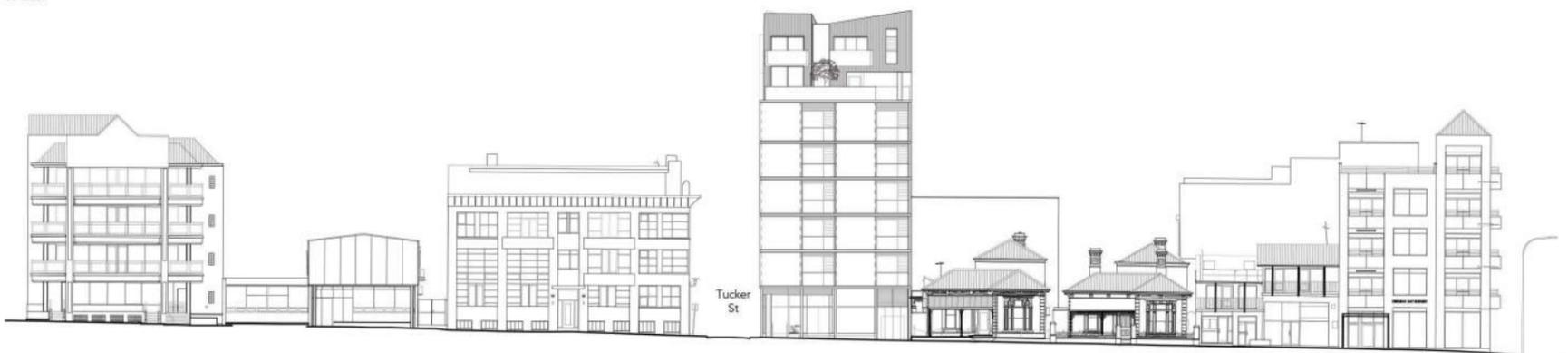


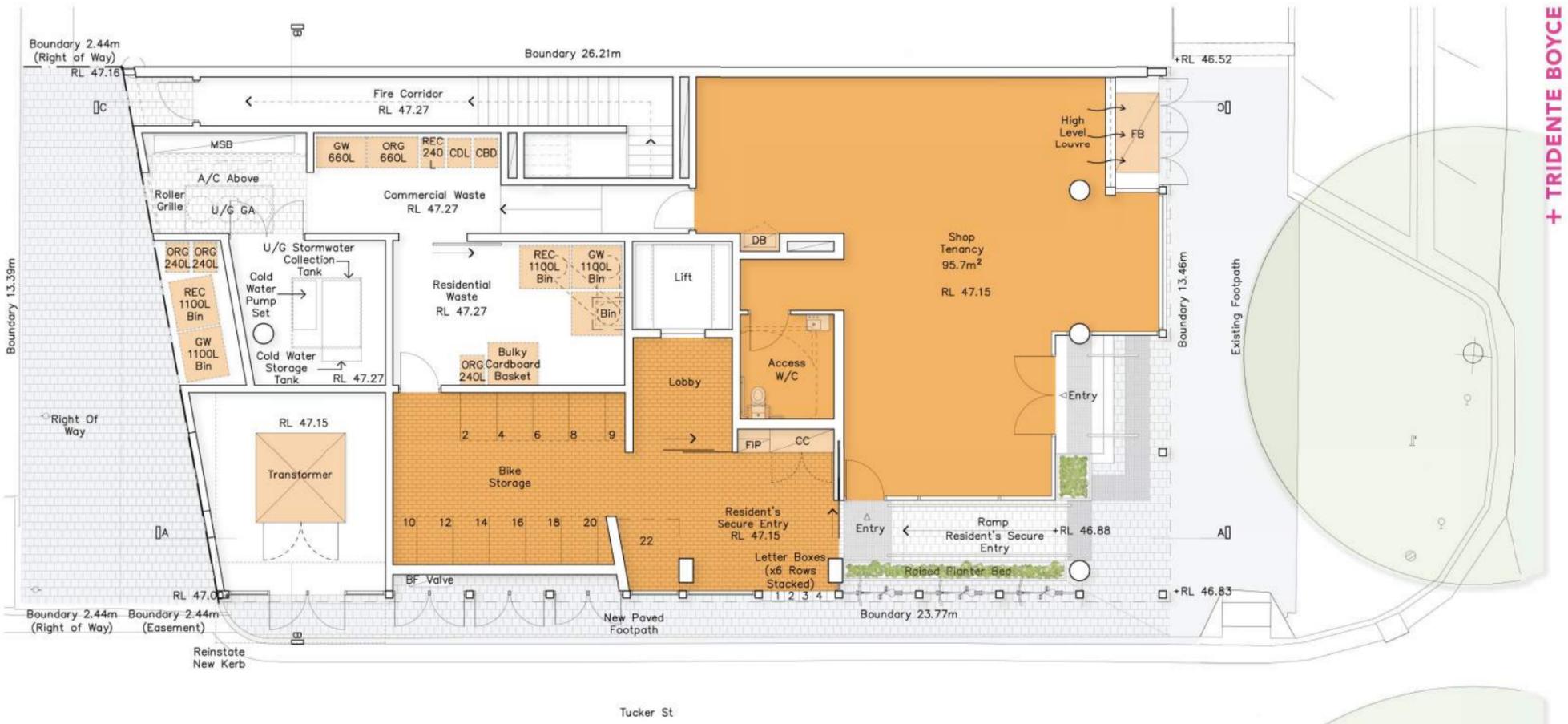


Site Plan
Scale 1:200



Street Elevation
Scale 1:400





Ground Floor Plan



Level 1 Floor Plan



Level 2 Floor Plan



Levels 3 Floor Plan



Levels 4 Floor Plan



Levels 5 Floor Plan

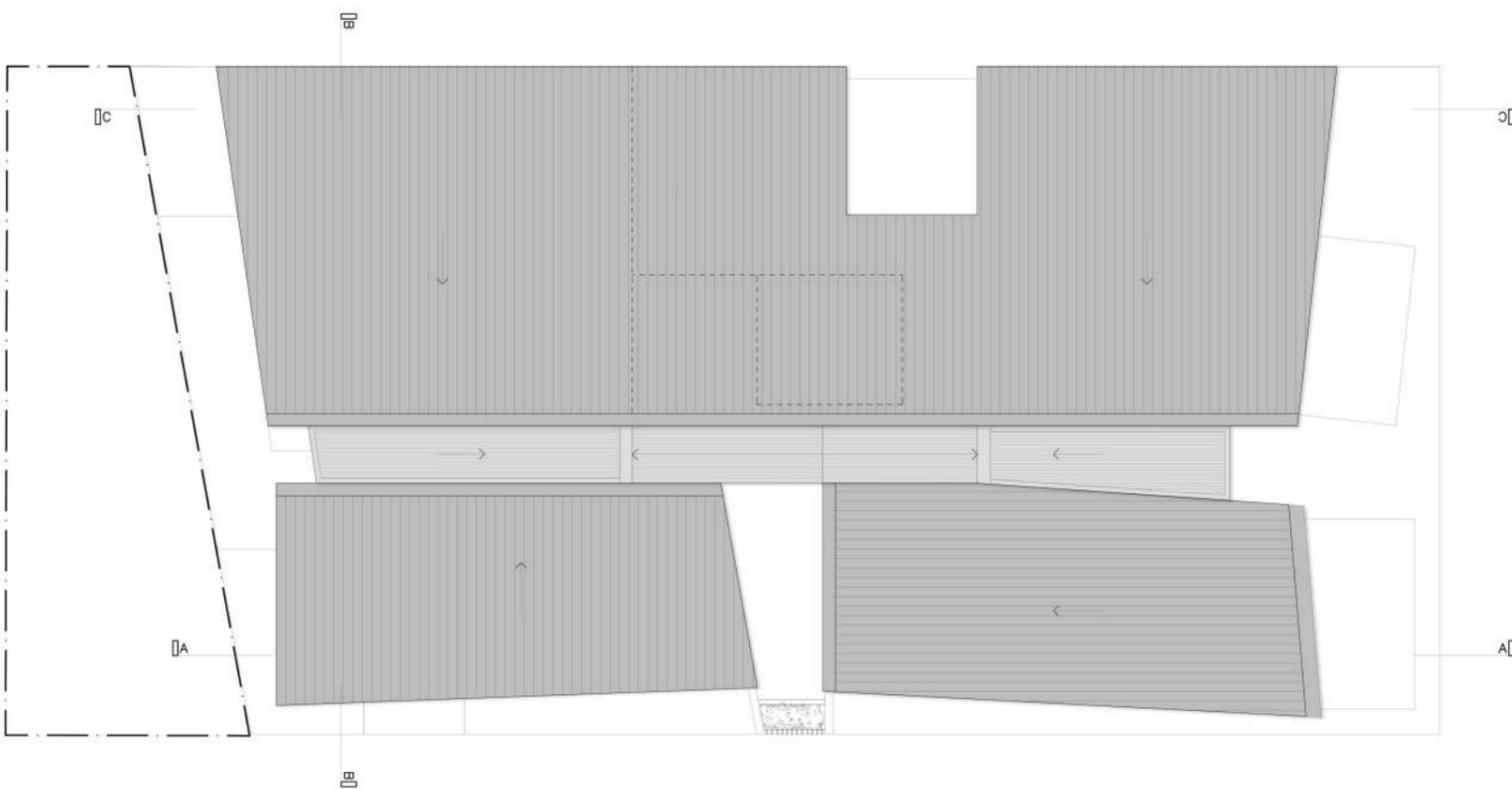




Level 6 Floor Plan



Level 7 Floor Plan



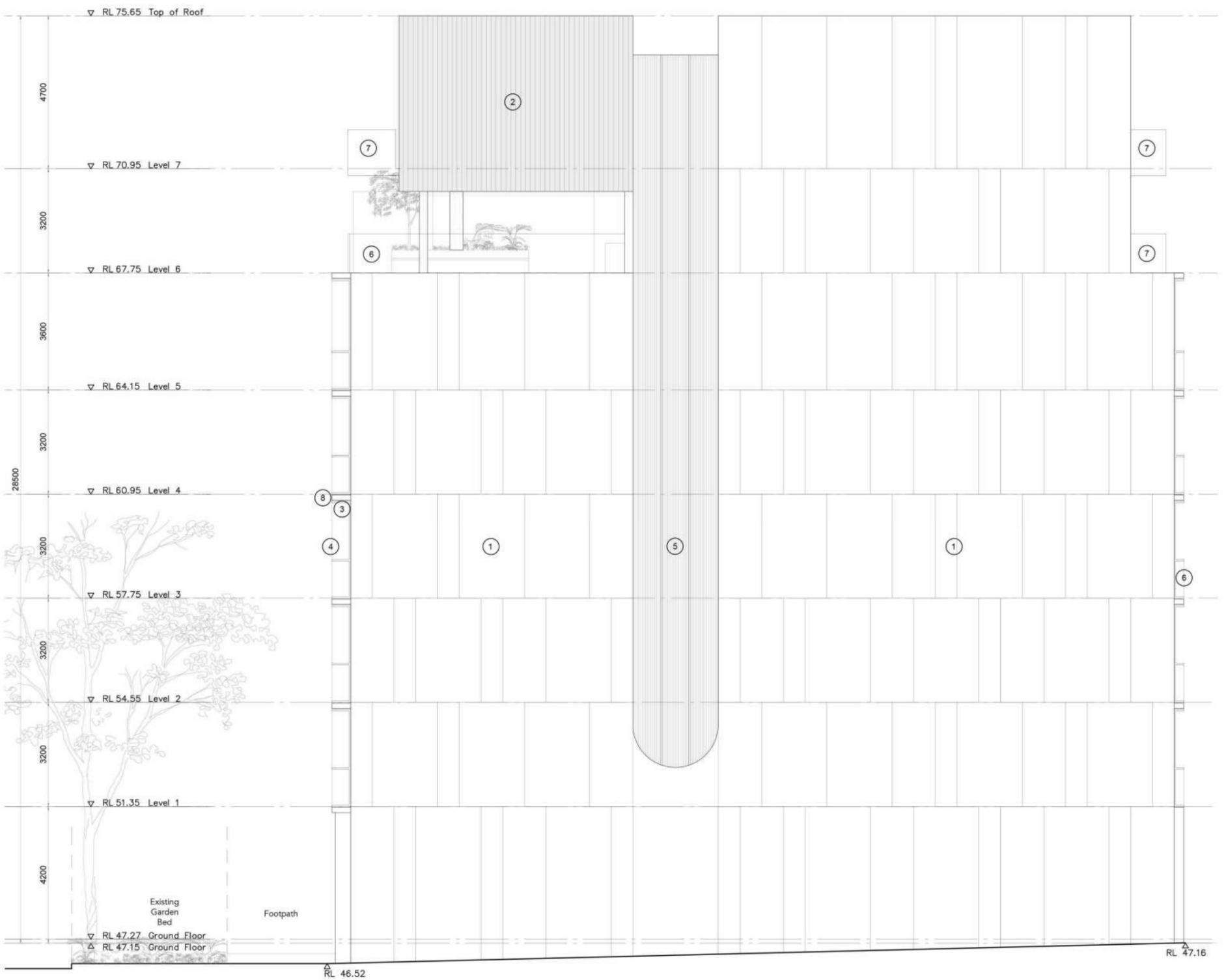
Roof Plan





- ① Precast Concrete: Nawkaw
- ② Roofing: Jasper Fielders Shadowline 305
- ③ External Window Frames: Bronze Anodised Aluminium
- ④ Door + Window Glazing: Bronze Tinted High Performance Double Glazed
- ⑤ Aluminium Louvres: Bronze
- ⑥ Glazed Balustrade
- ⑦ Precast Concrete Balustrade: Nawkaw
- ⑧ Horizontal Slab Edge: Nawkaw

North Elevation





- ① Precast Concrete: Nawkaw
- ② Roofing: Jasper Fielders Shadowline 305
- ③ External Window Frames: Bronze Anodised Aluminium
- ④ Door + Window Glazing: Bronze Tinted High Performance Double Glazed
- ⑤ Aluminium Louvres: Bronze
- ⑥ Glazed Balustrade
- ⑦ Precast Concrete Balustrade: Nawkaw
- ⑧ Horizontal Slab Edge + Southern Facade Detail: Nawkaw
- ⑨ Green Edge Planter: Russelia equisetiformis Dwarf Variety
- ⑩ Letterboxes

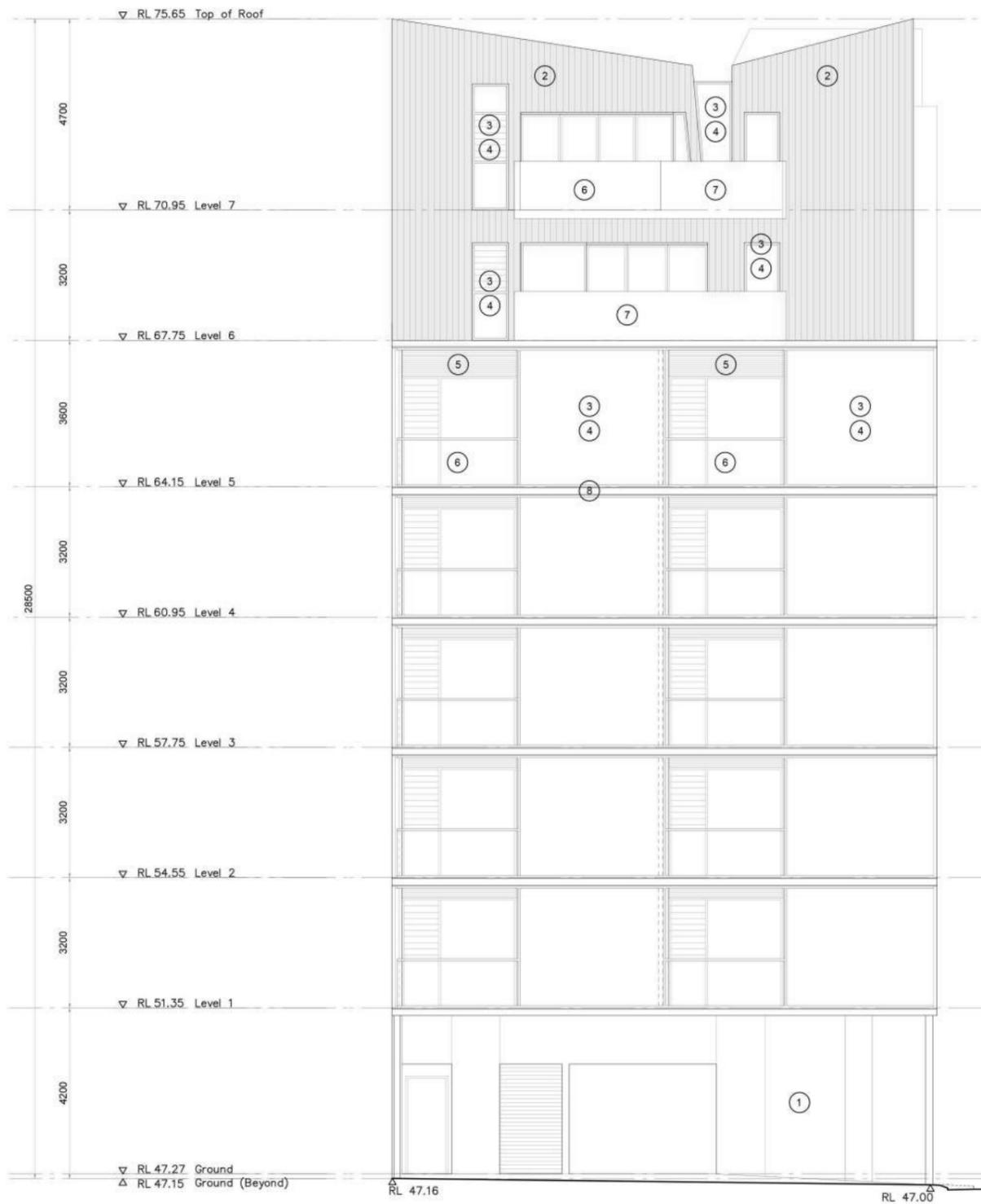
South Elevation





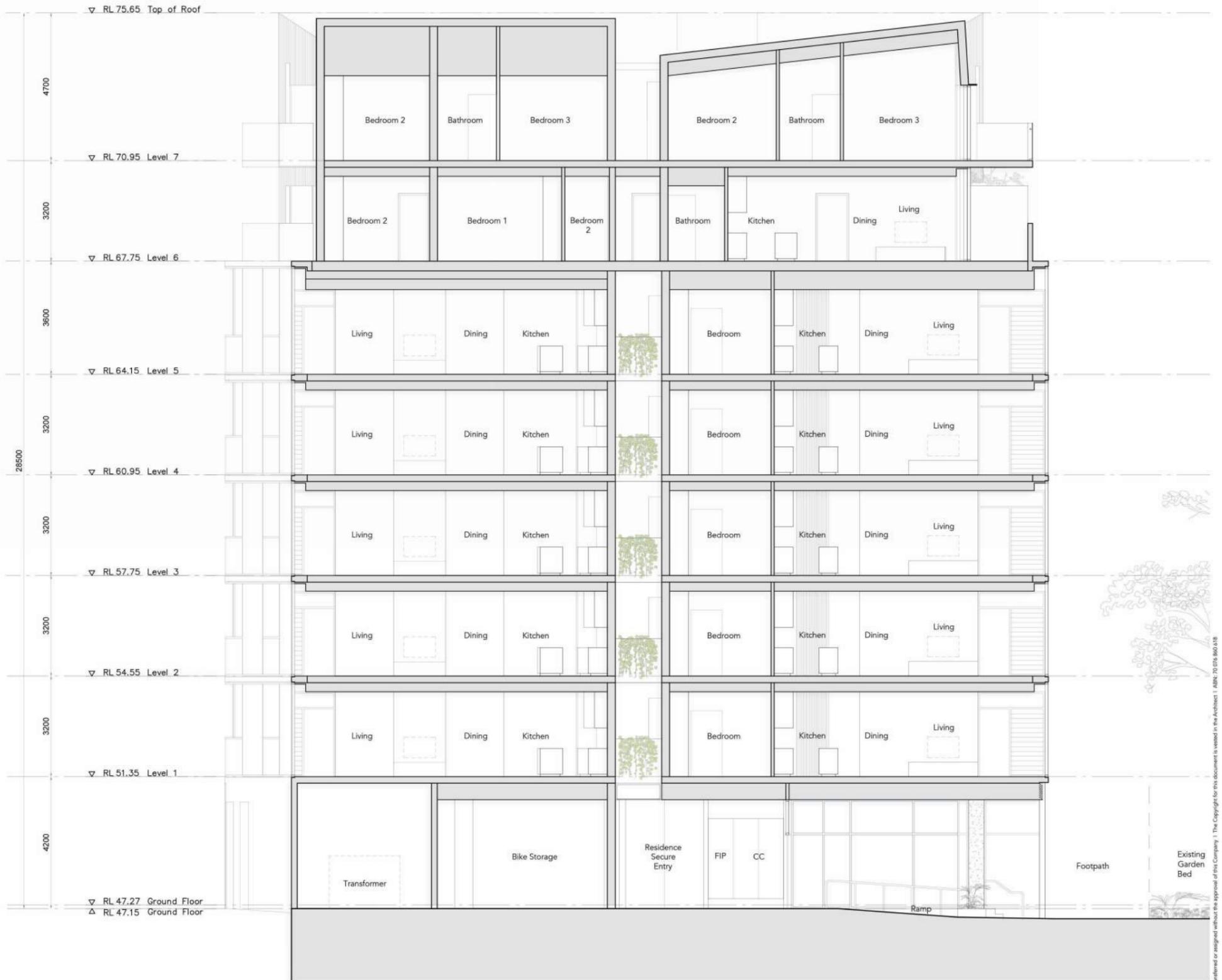
- ① Precast Concrete: Nawkaw
- ② Roofing: Jasper Fielders Shadowline 305
- ③ External Window Frames: Bronze Anodised Aluminium
- ④ Door + Window Glazing: Bronze Tinted High Performance Double Glazed
- ⑤ Aluminium Louvres: Bronze
- ⑥ Glazed Balustrade
- ⑦ Precast Concrete Balustrade: Nawkaw
- ⑧ Horizontal Slab Edge: Nawkaw

West Elevation





Section A



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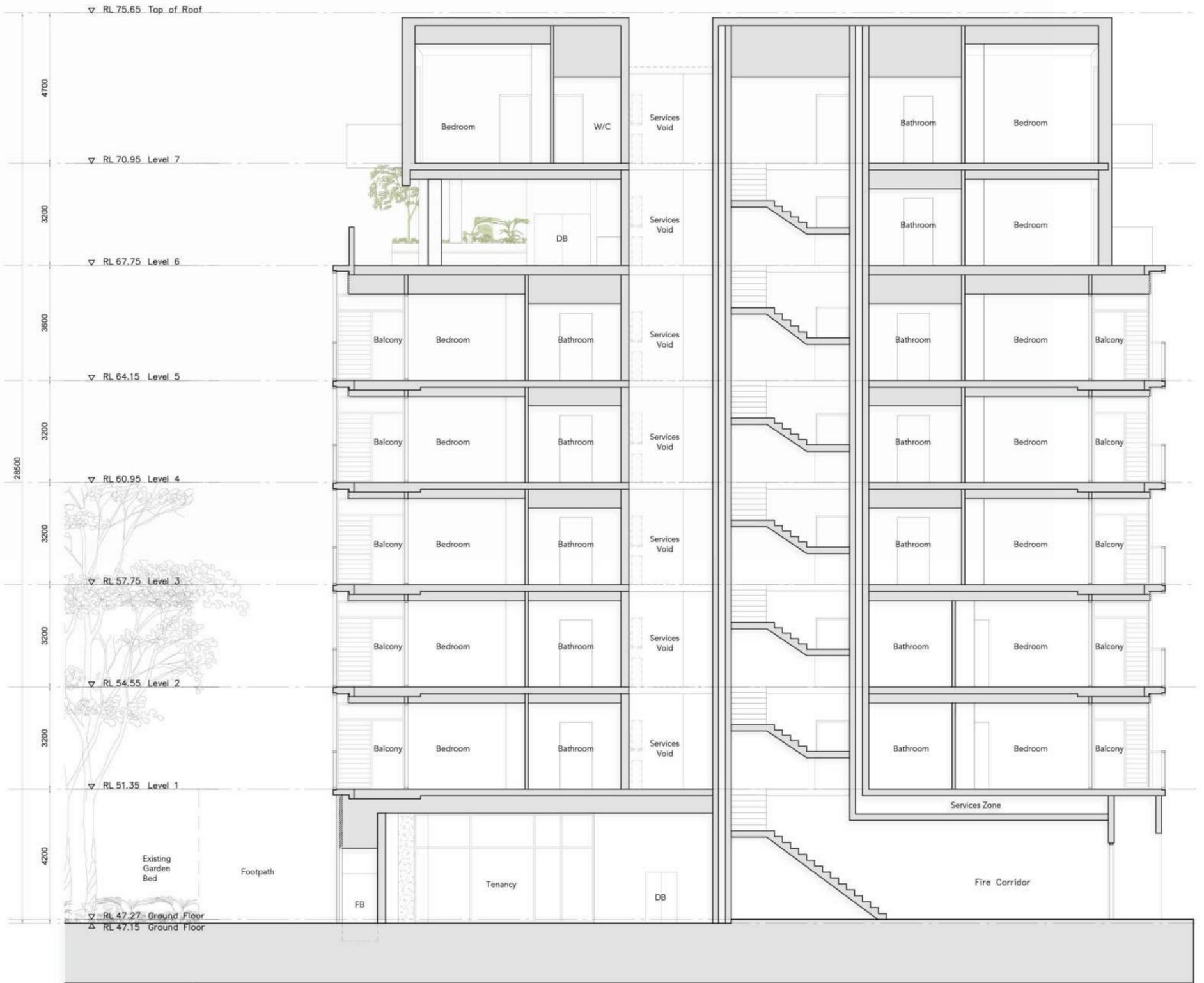


Section B



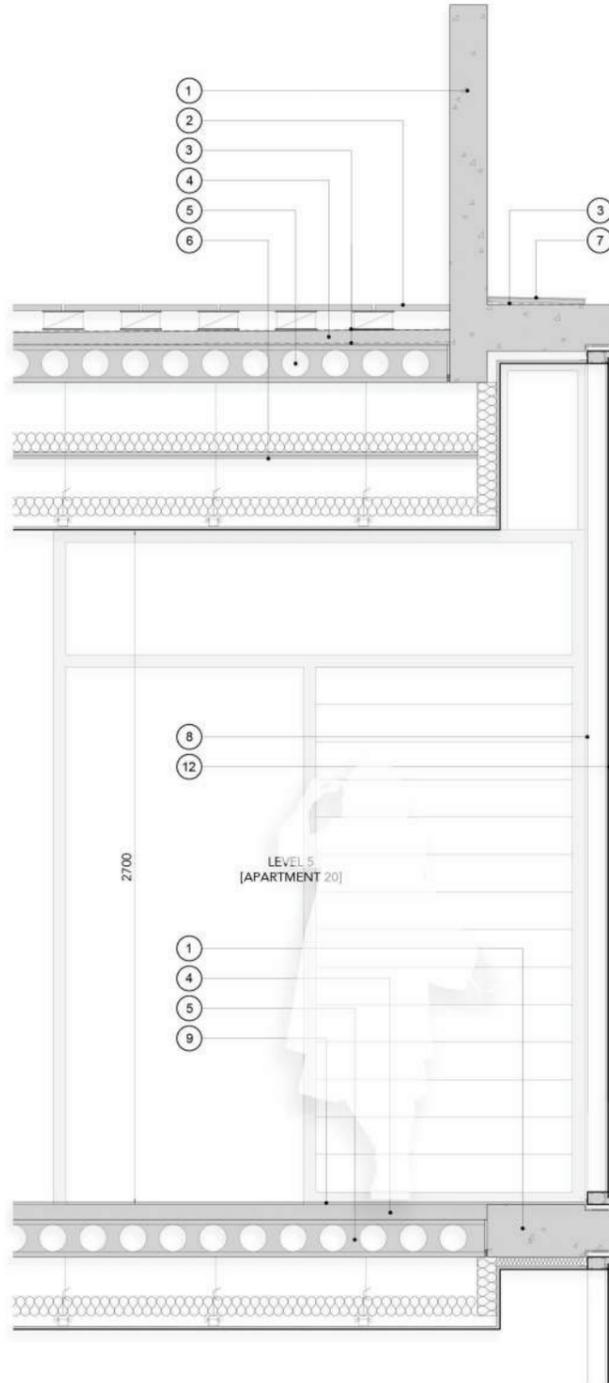


Section C

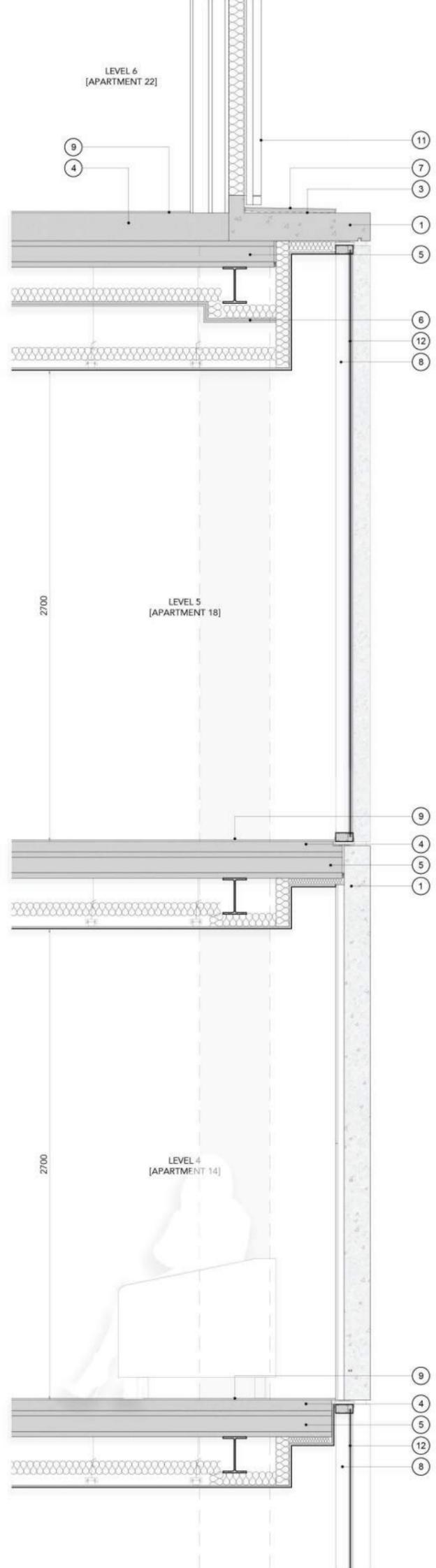




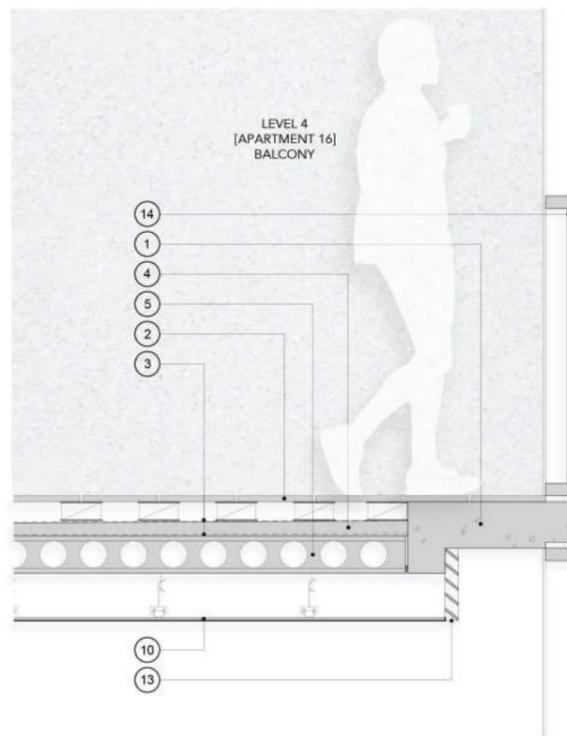
Section Detail: East Elevation



Section Detail: South Elevation



- ① Precast Concrete (Nawkaw)
- ② Ceramic Decking Tile
- ③ Waterproof Membrane
- ④ Topping
- ⑤ Hollow Core Concrete Plank
- ⑥ Soundchek Lining
- ⑦ Metal Lining Bonded to Compressed Fibre Cement Sheet
- ⑧ Bronze Anodised Aluminium
- ⑨ Floor Covering
- ⑩ Express Jointed Fibre Cement Sheet
- ⑪ Shadowline 305 Metal Cladding
- ⑫ Bronze Tinted Double Glazing
- ⑬ Bronze Aluminium Louvres
- ⑭ Glazed Balustrade





Shadowline 305 Cladding - Jasper



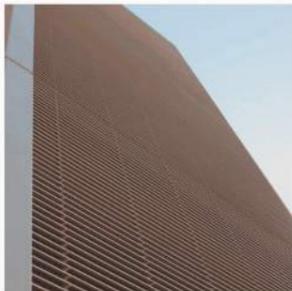
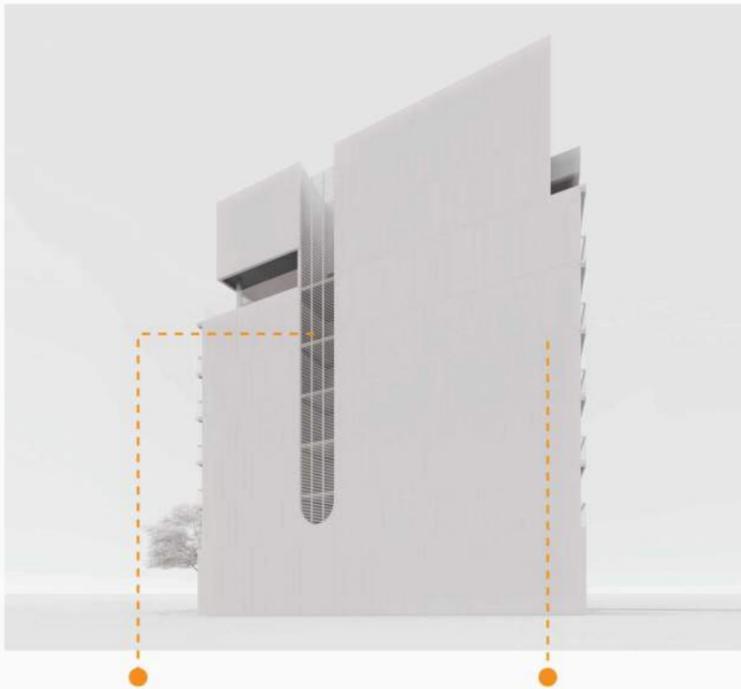
Bronze Anodised Aluminium



Bronze Hand Rail



Precast Concrete - 'Nawkaw'



Bronze Aluminium Louvres



Precast Concrete - 'Nawkaw'



Bronze Tinted Glazing



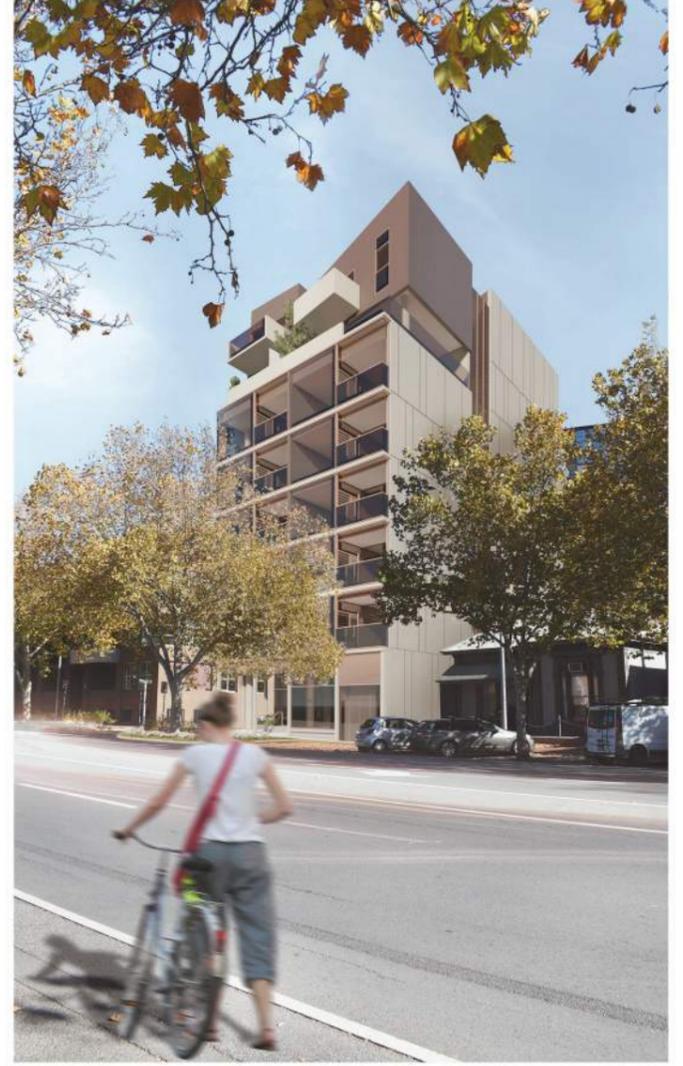
Green Edge Planter



Hutt Street View



Hutt Street View



Tucker Street View

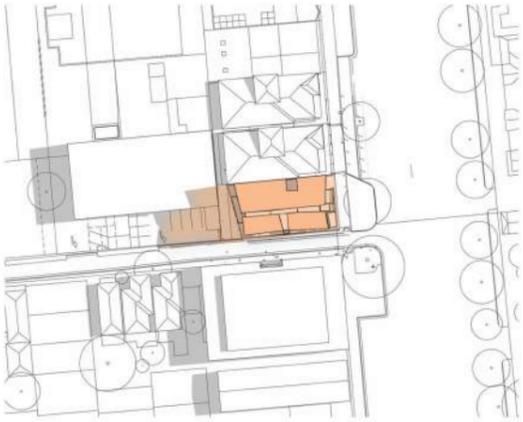




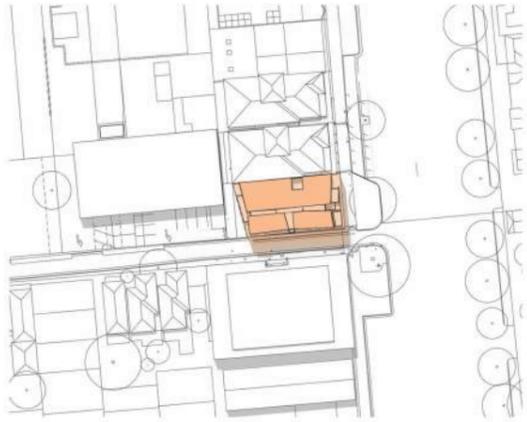
Shadow Diagrams

Summer - December 22nd

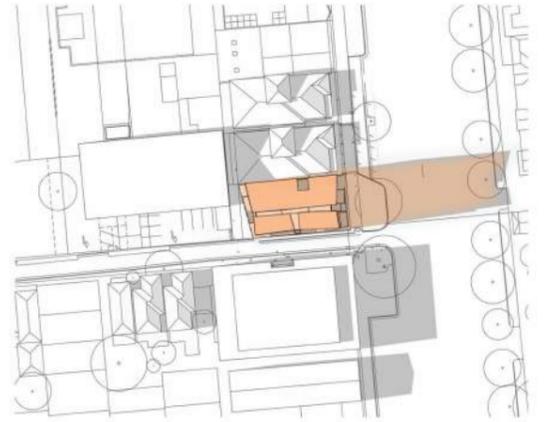
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12pm

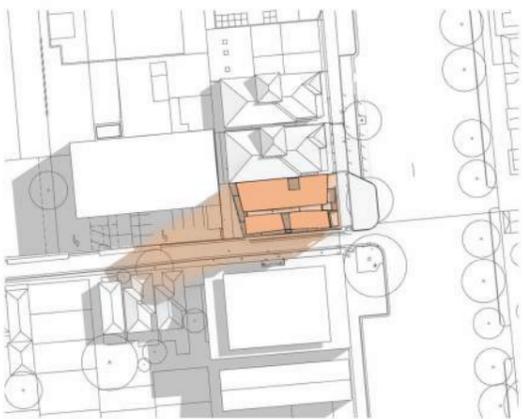


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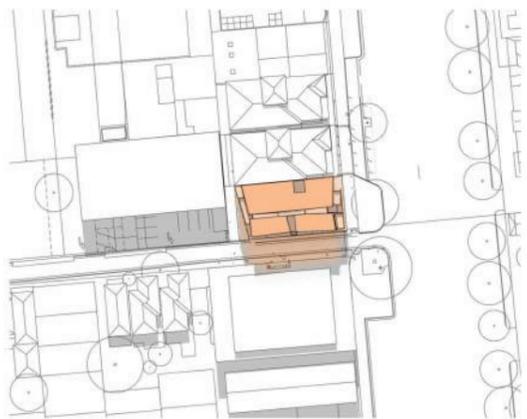


Autumn - March 21st

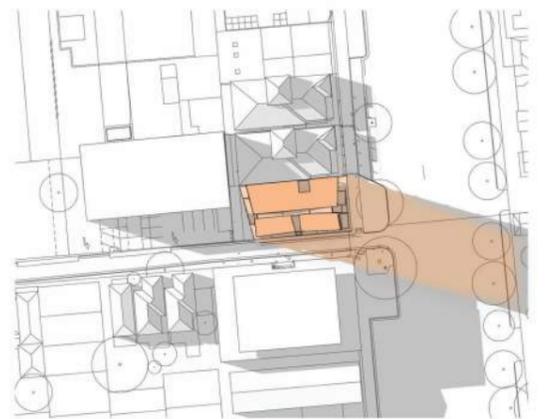
9am



12pm



4pm

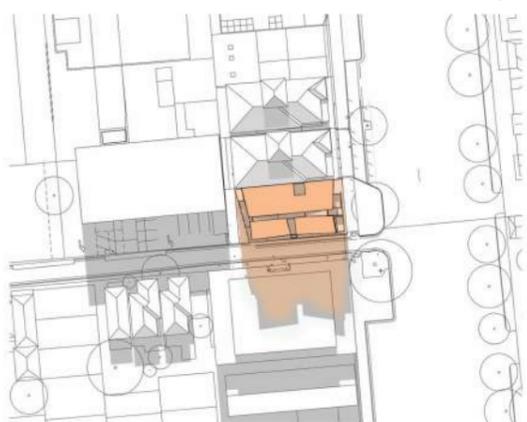


Winter - June 21st

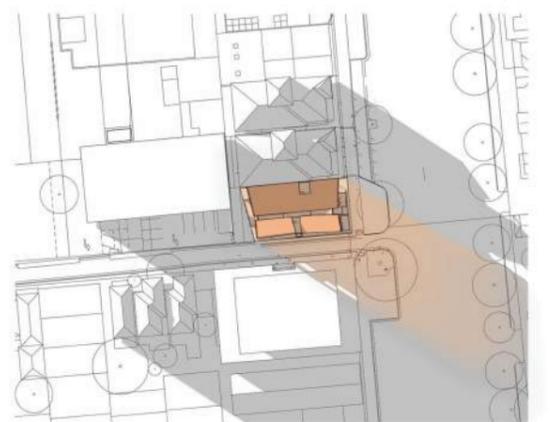
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12pm

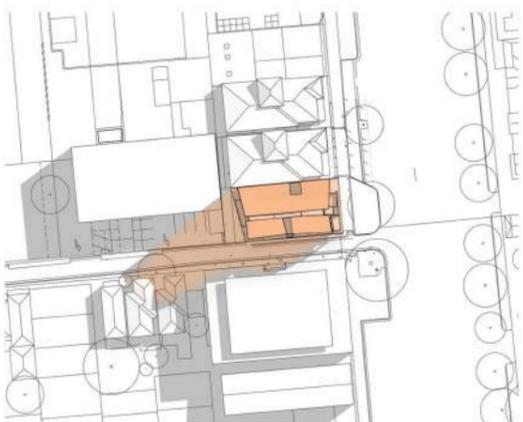


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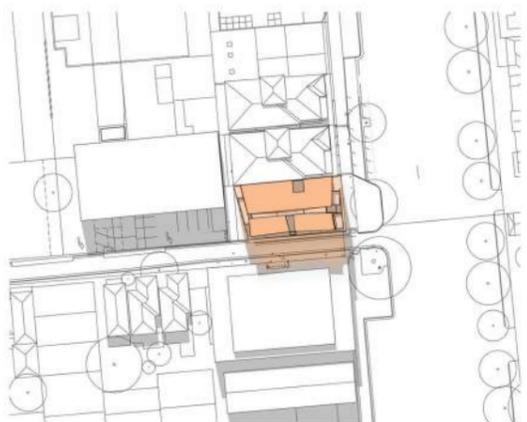


Spring - September 23rd

9am



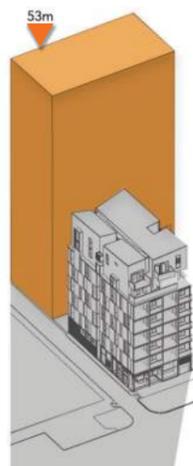
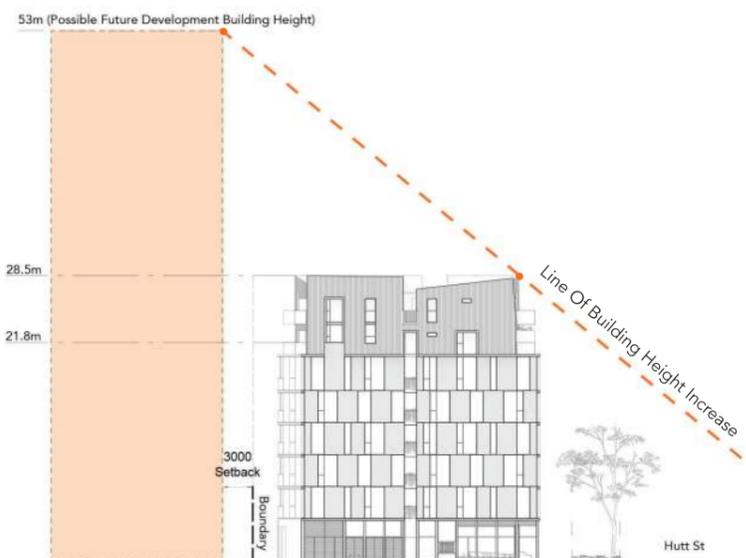
12pm



4pm

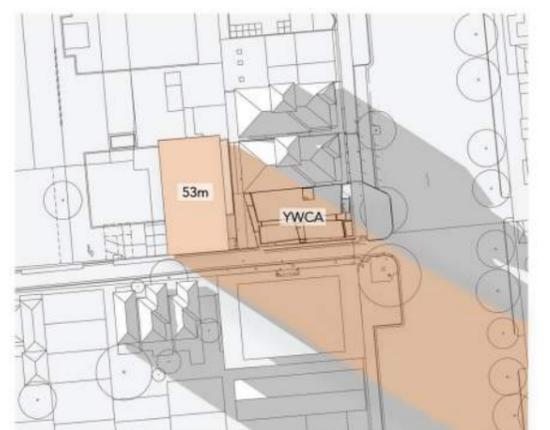


Impact Diagram
Scale 1:500



Winter - June 21st

4pm





APPENDIX 3. LANDSCAPING PLAN

oxigen[®]

PUBLIC REALM AND INTERNAL SITE PLANTING: PROPOSED YWCA, HUTT STREET, ADELAIDE



Prepared for:
Tridente Boyce Architects

June 2021

VERSION	AUTHOR	DATE	APPROVED
V_01	JH	19/06/2021	JH

Registered Company Name	Oxigen Pty Ltd
Australian Company Number (ACN)	107 472 284
Australian Business Number (ABN)	22 107 472 284
Registered Office Address	c- HLB Mann Judd, 169 Fullarton Road, Dulwich, SA 5065
Office Address: Adelaide	98-100 Halifax Street, Adelaide SA 5000
Contact Name	James Hayter
Telephone	+61 8 7324 9600
Email	design@oxigen.net.au
Public Liability Insurance	\$20,000,000 (WR Berkley insurance/Focus Underwriting)
Professional Indemnity Insurance	\$5,000,000 (Vero Insurance)

PUBLIC REALM AND INTERNAL SITE PLANTING: PROPOSED YWCA, HUTT STREET, ADELAIDE

Contents

- INTRODUCTION
- CONTEXT
- CBD LOCATION
- LANDSCAPE
- PROPOSED PUBLIC REALM TREATMENT
- PROPOSED INTERNAL SITE PLANTING

Introduction

This report is intended to accompany a Development Application for a proposed apartment building at 17 Hutt Street, Adelaide.

In preparation of this report, we referred to the following drawings:

1. Detail Survey 17 Hutt Street, Adelaide prepared by Alexander Symonds Dwg No 20AO186 (Detail(O)_MGA20P)
2. Floor Plans prepared by Tridente Boyce Dwg No 1913.B01.CD0501 (Ground Floor to Level 2) and No 1913.B01.CD0502 (Levels 3 to 7)
3. Various photomontage images prepared by Tridente Boyce

A request to Dial Before You Dig has been made in relation to the Hutt Street and Tucker Street verges but this information is not available at the time of preparation of this report.

Context

1. The site is located at the intersection of Hutt Street and Tucker Street in the Adelaide CBD.
2. Tucker Street is a minor east-west street intersecting with Hutt Street. At its western end, Tucker Street turns north-south to intersect with Flinders Street.
3. This street is an important pedestrian link although its footpaths are narrow. At the western end a pedestrian lane provides pedestrians access to Pirie Street.
4. Hutt Street is one of the CBD's major retail streets with a defined character that identifies it from other retail streets in Adelaide. It is also an important pedestrian route from the south-east quadrant of the city to the East End and, further, North Terrace cultural boulevard, universities and botanic garden.
5. The existing character of Hutt Street derives from:
 - a. Its width which is similar to King William Street and wider than other north-south streets like Pulteney and Morphett Streets.
 - b. Street tree planting within the street verges and central median.
 - c. On-street carparking servicing businesses.
 - d. Red-brick paving on the footpaths and median cross-overs.
 - e. Groundcover planting characteristically groundcover roses within the footpath protuberances and median.
 - f. 'Heritage' lighting within sections of Hutt Street supplemented by street lighting.

PUBLIC REALM

1. Tridente Boyce's Ground Floor Plan Dwg No 1913.B01.CD0501 nominates a commercial tenancy along the entire Hutt Street frontage extending part way onto Tucker Street. A commercial tenancy is consistent with the requirements of the City of Adelaide Development Plan encouraging ground floor activation of the CBD's major retail streets.
2. In support of activation of Hutt Street and consistent with other commercial tenancies an outdoor dining (café) area is proposed to replace the existing traffic protuberance, subject to City of Adelaide approval.
3. It is intended that the existing plane tree is retained and a narrow garden installed to improve the growing conditions of the street tree and provide physical separation of this space from the road carriageway.
4. We note the kerb defining the protuberance abuts the street tree's trunk. As part of the works a greater separation between kerb and tree could be achieved.
5. We have also considered the loss of one carpark to extend the outdoor dining area to the north. Whilst we are conscious of the need to preserve on-street carparking in the CBD, we consider the benefits from activation of this section of Hutt Street may outweigh the loss of one carpark. We have included the extended area in our plans for consideration by the City of Adelaide.
6. We note that traffic safety bollards will be required to provide protection to the outdoor dining area. These can be located within the proposed garden bed.
7. An existing fire hydrant can be retained in its current location.
8. Paving and planting are subject to the requirements of the City of Adelaide Design Manual. Subject to City of Adelaide review, these might consist of:
 - a. Planting:
 - i. Lilypilly hedge (*Acmena smithii* Tiny Trev)
 - ii. Underplanting with star jasmine (*Trachelospermum jasminoides*) and prostrate rosemary (*Rosmarinus officinalis* Prostrate)
 - b. Paving:
 - i. Footpath paving to be retained as existing
 - ii. Outdoor dining area paved with Littlehampton clay bricks

INTERNAL SITE PLANTING

1. Tridente Boyce's Ground Floor Plan Dwg Nos 1913.B01.CD0501 and 1913.B01.CD0502 identify small planting boxes facing south on levels 1, 2, 3, 4, 5 and 7, and planting associated with a larger communal outdoor terrace on level 6.
2. A 'drooping' plant species – *Russelia equisetiformis* Dwarf Variety – is proposed for the small planters. It is anticipated that this species will hang down and be visible on the southern building façade.
3. A small tree – *Plumeria* 'Fiji Fire' – is proposed for the terrace on level 6. Other plantings adjacent and beneath building structure include:
 - a. *Monstera deliciosa*
 - b. *Philodendron erubescens*
 - c. *Philodendron* Xanadu
 - d. *Philodendron hederaceum micans*
 - e. with an underplanting of *Trachelospermum jasminoides*
4. The plantings above are proposed within self-contained pre-fabricated planters with drainage and irrigation.

APPENDIX 4. CIVIL DOCUMENTS

To:	Nick Tridente	Tridente Boyce
Cc:		
From:	Jon Rudd	Page 1 of 1
	Project memorandum	Inspection Report
	Fee memorandum	Meeting Record
Project:	17 Hutt St Adelaide	Date: 1 st Feb 2022
Subject:	Stormwater Management	



Structural • Civil
56-58 Jerningham St
North Adelaide SA 5006

This report discusses the existing site conditions, the proposed development and the Planning and design code requirements for handling and treatment of stormwater flows resulting from the development of the site.

Existing site details:

- Site Area 336 sqm
- Total Impervious
 - Roofed 251 sqm
 - Paved 76 sqm
- Landscaped areas 9 sqm

The site falls to the north east at up approximately 1 in 40 average, toward Hutt street. There is an existing piped system to discharge stormwater to the Hutt street kerb, and Tucker St Kerb via a spoon drain.

Proposed development:

The proposed development consists of an apartment building.

- Site Area 336 sqm
- Total Impervious
 - Roofed 336 sqm
 - Paving 0 sqm
- Landscaped area 0 sqm

Stormwater System:

The method of discharge of stormwater will be roof water via a piped systems to the Hutt St kerb. An indicative layout of proposed major stormwater pipe system elements and overland flow paths is attached (SK1). Stormwater discharge from the building will be directed to the council system in accordance with the ACC standard details.

This proposal is consistent with the natural grade on the site, refer attached survey.

There are currently no overland flow paths through the site from upstream. The site is currently fully developed/roofed apart from the right of way which remains as per current levels.

We confirm that the floor level is >300mm above existing top of kerb level.

The site is almost completely impervious at present, therefore the proposed development will not alter the current discharge rates. We believe no on site detention is required.

It follows that as this development is not increasing outflow rates from the site, therefore council's stormwater system has no additional input due to this development and will not require any upgrade.

We expect that the proposed retention/reuse tank covers the WSUD requirement.

There are no basements, or pumped groundwater discharge systems proposed.

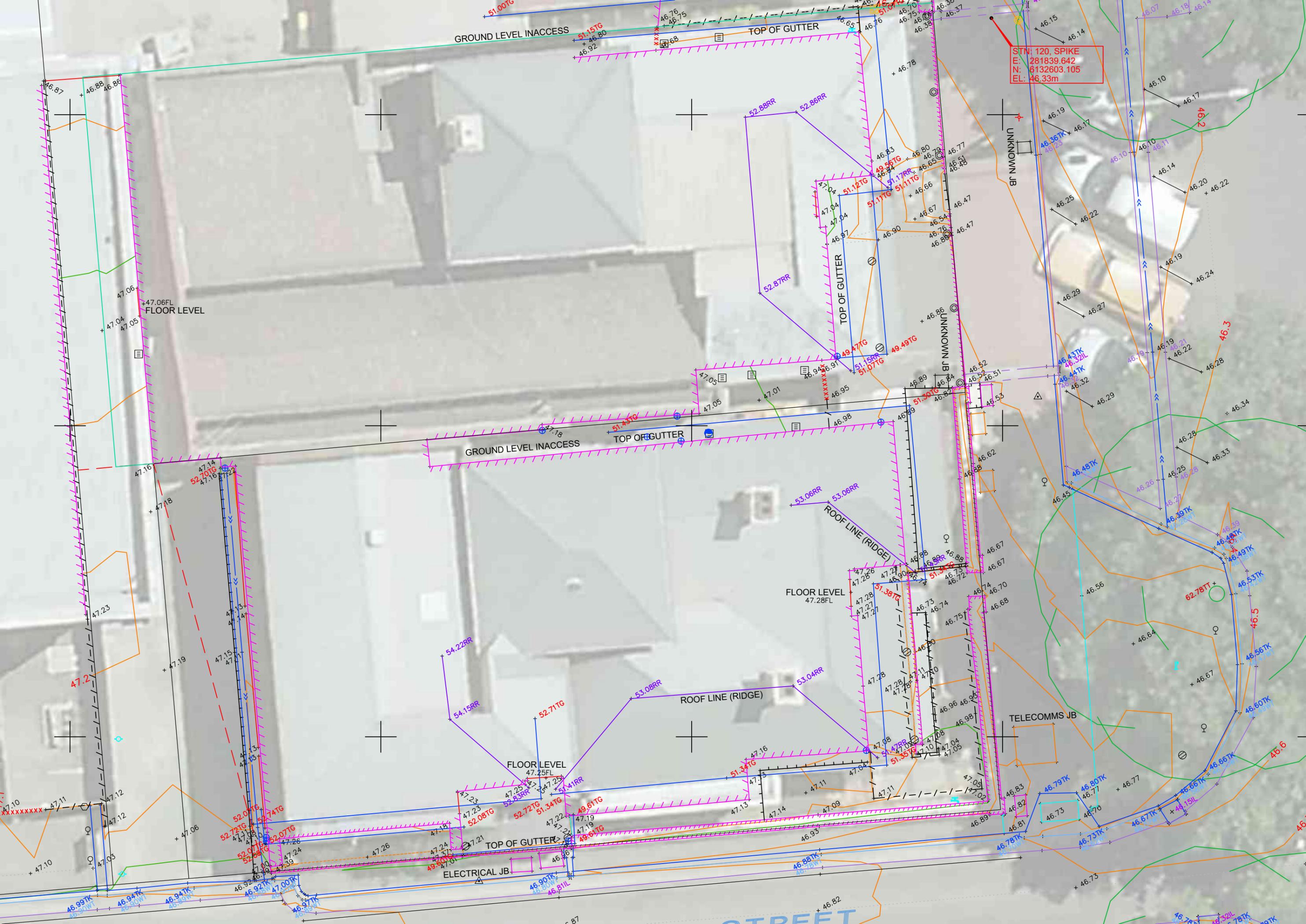
Regards,

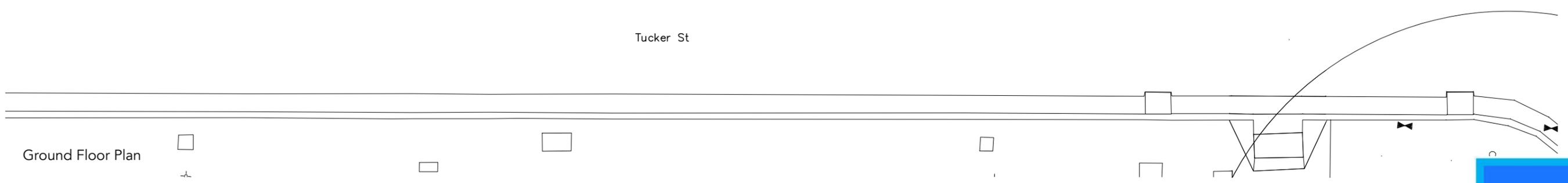
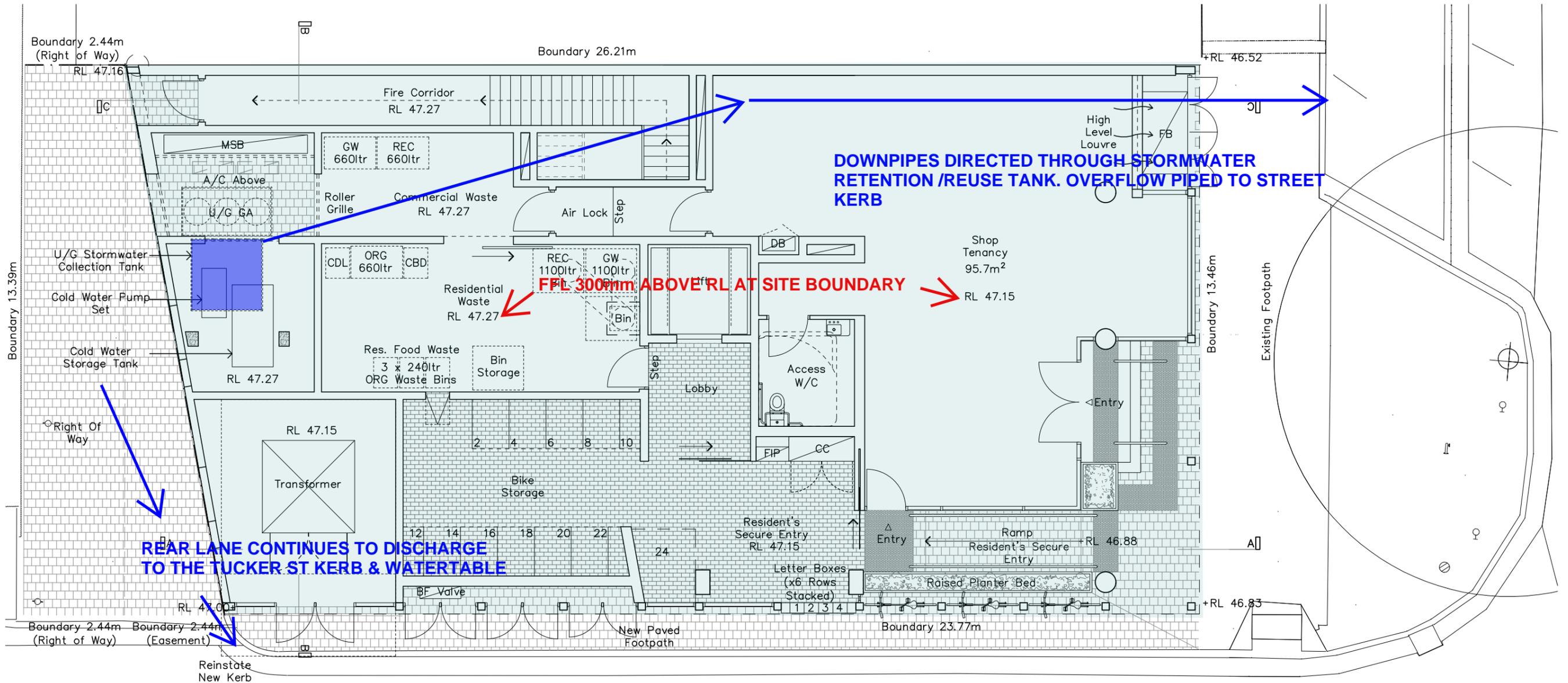


Jon Rudd
Partner

ATTACHMENTS:

1. SITE LEVEL AND FEATURE SURVEY + EXISTING CONDITIONS
2. PROPOSED STORMWATER SCHEMATIC





Ground Floor Plan

APPENDIX 5. WASTE MANAGEMENT PLAN



17 Hutt Street

Waste Management Plan

Date: 21 January 2022

Prepared for:

YWCA

Colby Phillips Advisory Pty Ltd

Level 1, 60 Hindmarsh Square

Adelaide, SA 5000

+61 438 800 264

Rev.	Date	Description	Doc No./Name	Originator	Approved
0	18June21	For submission	WMP	JPH	Client
1	18June21	Minor correction	WMP	JPH	Client
2	14Jul21	Collection change	WMP	JPH	Client
3	21Jan22	Revised site layout	WMP	JPH	Client

Distribution List

Nick Tridente Tridente Boyce

Fabian Barone Future Urban

Belinda Goglia YWCA

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1 INTRODUCTION

This document presents a waste management plan (WMP) for the 17 Hutt Street Mixed Use Development (the “Development”). The Development is a mixed use building comprising Commercial (Shop) tenancy and High-Density Residential dwellings. The Project Proponent is YWCA and the architect is Tridente Boyce.

The WMP explains how the Development can manage waste effectively to achieve regulatory requirements and desired design and operating objectives, including those recommended by the South Australian Better Practice Guide (State Guidelines) (Zero Waste SA, 2014), the South Australia Planning and Design Code (Plan SA, 2021), and Adelaide Council’s Resource Recovery Strategy (City of Adelaide, 2020). The WMP should be read in conjunction with other planning approval documentation for the Development referenced herein.

2 DEVELOPMENT DESCRIPTION

The Development is at 17 Hutt Street, in the City of Adelaide (Council) – see Figure 2.1 which shows an overview of the site. Per plans provided (Drawings-1913.B01.CD0501, dated 20 January 2022), the Development is a mixed use, multi-storey building with frontage onto Hutt Street and Tucker Street.

The design of the waste management system at the development is in line with The City of Adelaide (Council) key actions for multi-unit developments, as outlined in their Resource Recovery Strategy document:

Key Action	Response
1.2: Provide multi-unit dwelling building owners, managers and residents with tailored waste management solutions that targets elimination of food from the waste stream.	All residents will be provided with a bench-top food waste kitchen caddy as well and will have convenient access to an organic waste disposal location to encourage diversion of food waste from the general waste bins.
2.2: Provide a multilingual waste management education toolkit for building managers and residents.	Building management will provide multilingual signage and a building manual for the use of the waste management system onsite, in particular for the use of the waste chute system.
4.2: Centralise best practice waste management decisions at development phase, during build and in occupancy phases.	The design of the waste management system at this site has been completed in line with the South Australian Better Practice Guidelines.

The property is zoned as Capital City Zone. The applicable General Development Policies relating to Waste are:

Design:

<p>PO 20.1</p> <p>Provision is made for the adequate and convenient storage of <u>waste</u> bins in a location screened from public view.</p>	<p>DTS/DPF 20.1</p> <p>None are applicable.</p>
<p>PO 30.4</p> <p>Provision is made for suitable household <u>waste</u> and recyclable material storage facilities conveniently located and screened from public view.</p>	<p>DTS/DPF 30.4</p> <p>None are applicable.</p>
<p>PO 30.5</p> <p><u>Waste</u> and recyclable material storage areas are located away from dwellings.</p>	<p>DTS/DPF 30.5</p> <p>Dedicated <u>waste</u> and recyclable material storage areas are located at least 3m from any <u>habitable room</u> window.</p>
<p>PO 30.6</p> <p>Provision is made for on-site <u>waste</u> collection where 10 or more bins are to be collected at any one time.</p>	<p>DTS/DPF 30.6</p> <p>None are applicable.</p>

Design in Urban Areas:

<p>PO 11.1</p> <p>Development provides a dedicated area for on-site collection and sorting of recyclable materials and refuse, green organic <u>waste</u> and wash bay facilities for the ongoing maintenance of bins that is adequate in size considering the number and nature of the activities they will serve and the frequency of collection.</p>	<p>DTS/DPF 11.1</p> <p>None are applicable.</p>
<p>PO 11.2</p> <p>Communal <u>waste</u> storage and collection areas are located, enclosed and designed to be screened from view from the public domain, open space and dwellings.</p>	<p>DTS/DPF 11.2</p> <p>None are applicable.</p>
<p>PO 11.3</p> <p>Communal <u>waste</u> storage and collection areas are designed to be well ventilated and located away from habitable rooms.</p>	<p>DTS/DPF 11.3</p> <p>None are applicable.</p>
<p>PO 11.4</p> <p>Communal <u>waste</u> storage and collection areas are designed to allow <u>waste</u> and recycling collection vehicles to enter and leave the <u>site</u> without reversing.</p>	<p>DTS/DPF 11.4</p> <p>None are applicable.</p>
<p>PO 11.5</p> <p>For mixed use developments, non-residential <u>waste</u> and recycling storage areas and access provide opportunities for on-site management of food <u>waste</u> through composting or other <u>waste</u> recovery as appropriate.</p>	<p>DTS/DPF 11.5</p> <p>None are applicable.</p>

<p>PO 35.3</p> <p>Provision is made for suitable household <u>waste</u> and recyclable material storage facilities which are:</p> <p>(a) located away, or screened, from public view, and</p> <p>(b) conveniently located in proximity to dwellings and the <u>waste</u> collection point.</p>	<p>DTS/DPF 35.3</p> <p>None are applicable.</p>
<p>PO 35.4</p> <p><u>Waste</u> and recyclable material storage areas are located away from dwellings.</p>	<p>DTS/DPF 35.4</p> <p>Dedicated <u>waste</u> and recyclable material storage areas are located at least 3m from any <u>habitable room</u> window.</p>
<p>PO 35.5</p> <p>Where <u>waste</u> bins cannot be conveniently collected from the street, provision is made for on-site <u>waste</u> collection, designed to accommodate the safe and convenient access, egress and movement of <u>waste</u> collection vehicles.</p>	<p>DTS/DPF 35.5</p> <p>None are applicable.</p>

2.1 Development Metrics

Table 2-1 gives the proposed Development Metrics. In summary, the Development would comprise:

- Residential Apartments (Levels 1 – 7)
 - 15 x 1-bedroom apartments
 - 7 x 2-bedroom apartments
 - 2 x 3-bedroom apartments
- Retail tenancies (Located at Ground Level)
 - 1 x Shop (96 m²)

The type of shop tenancy will be decided when the building is close to completion and becoming operational. Café is assumed for waste generation volumes, which is considered a worst-case scenario for waste generation.

Table 2-1 below includes the recommended Waste Resource Generation Rate (WRGR) classification (for each land use) based on the State Guideline (Zero Waste SA, 2014), which are used to estimate waste and recycling volumes to assess waste storage required for the site.

Table 2-1: Summary of land uses for the Development, their WRGR Description(s) and relevant Development Metric(s). Shop tenancy is the preliminary assumed use.

Land Use	Description	Site Location	Land Use Type	Dev. Metric(s)
Residential	Apartments	Level 1-7	High Density Residential Dwelling	35 bedrooms
Shop	Café*	Ground Level	Café **	96 m2 GFA

* For the purpose of waste management design, Café tenancy has been assumed as a worse case scenario.

* Derated Café WRGRs from State Guideline: General waste = -50%, Recycling = -50%, Food Waste = - 50%, 75% active area

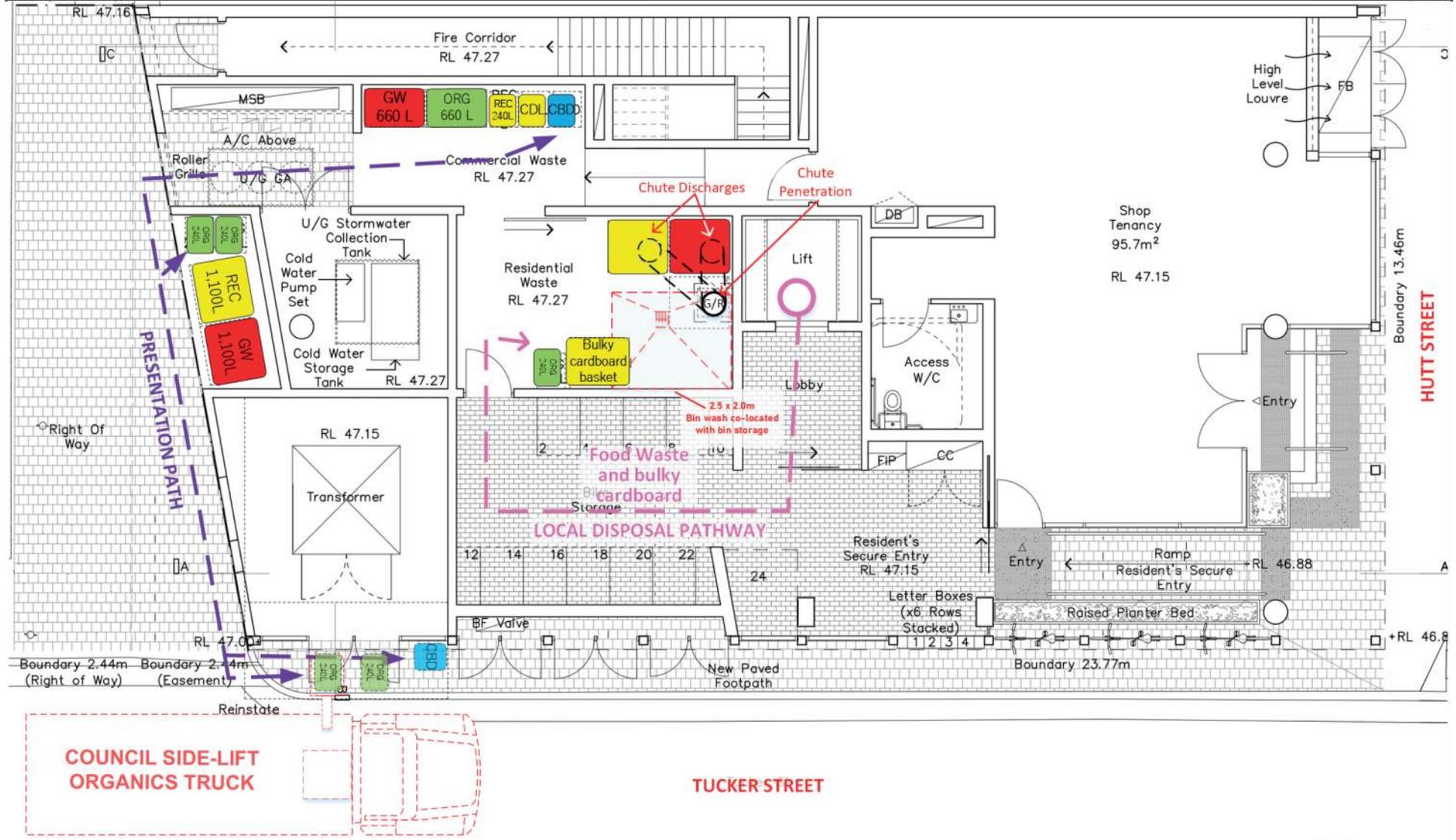


Figure 2.1: Site Overview GW = General Waste, REC = Recycling, ORG = Food Waste (Organics), CDL = 10c Drink Containers, CBD = Cardboard.

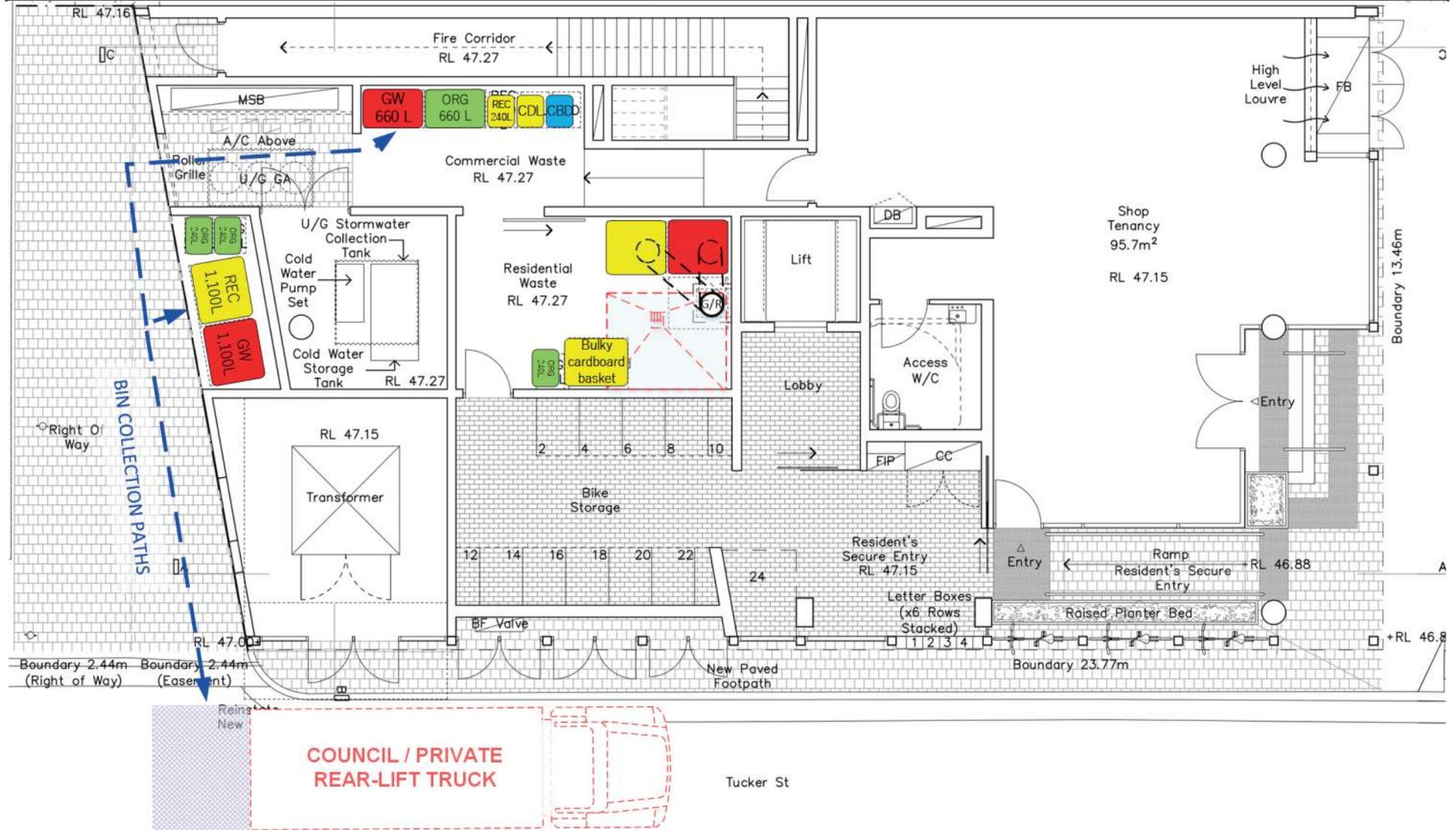


Figure 2.2: Collection of residential and commercial skip bins.

3 DESIGN ASSUMPTIONS

3.1 Waste & Recycling Service Provision

Table 3-1 outlines the recommended waste services by land use per Table 2-1. The different waste service classifications listed in Table 3-1 are explained below.

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

All residential components of this development can be serviced by the City of Adelaide (Council).

All other services for the retail tenancy will be provided by a mix of private contractors (for general waste, recycling, organics, and Container Deposits) and Council contractors (for collection of cardboard bales).

3.2 Waste & Recycling Volumes

Table 3-2 estimates expected waste and recycling volumes for the Development (in Litres/week).

- WRGRs (in the State Guidelines) do not exist for sanitary, lighting, printer cartridge or battery waste.
 - Volumes of these waste items, however, are relatively small, and thus, have not been estimated.
- The Light Café tenancy WRGRs are derated Café / Restaurant WRGRs (to reflect the fact a Café is not a full-service restaurant, which the WRGRs in the State Guidelines are based on – refer to Table note).

Table 3-1 Expected or recommended waste & recycling services for the Development

Service Type	Residential	Shop
	Dwellings	Café
Routine (regularly scheduled)	<ul style="list-style-type: none"> · General Waste · Recycling · Food Organics 	<ul style="list-style-type: none"> · General Waste · Recycling · Cardboard · Food Organics · Recycled deposit containers (OPTION) · Cooking Oil (OPTION)
At-call (as needed)	<ul style="list-style-type: none"> · Hard/E-waste · Printer Cartridges · Batteries 	
Maintenance (waste removed by contractor)	<ul style="list-style-type: none"> · Sanitary (in-room or public toilets) · Lighting (where applicable) 	
External (by tenant off-site)	Not applicable	

Table 3-2 Estimated waste & recycling volumes (Litres/week) for Development. Greyed out, N/A – Not Applicable; NE – Not estimated

Waste/Recycling Service	Residential	Shop
	Apartments L/week	Café L/week
General Waste	1,050	756
Dry Comingled Recycling	875	239
Recycled Deposit Container		209
Cardboard		247
Food / Garden Organics	350	907
Hard waste	147	13
E-waste	18	1
Lighting waste	Not Estimated	
Printer Cartridges/Batteries	Not Estimated	
Sanitary	Not Estimated	
TOTAL	2,440	2,372

Modified Café / Restaurant WRGR to reflect Light Café tenant: General waste WRGR derated by 50%, recycling/cardboard by 50%, and food waste by 50%.

4 WASTE MANAGEMENT SYSTEM

4.1 Waste Storage Area(s)

Residential waste storage at the development will utilise shared skip bins for all the apartments. An overview of the waste storage area is shown in Figure 2.1 (page 6). All residents will have access to waste chutes to dispose of General Waste and Recycling (see Figure 4.1 for A typical apartment floor). A single chute will include an electronic diverter to allow both landfill and recycling to be disposed to the same chute. Access to a food and organic waste bin is provided at Ground Level. Waste would temporarily be stored under the disposal chutes and management would be responsible for moving the (full) bins from underneath and replacing with an empty set of bins.

The commercial waste storage areas divide into 2 categories:

- In-tenancy bins, which are accessed by occupants of the tenancy on a frequent basis (multiple times per day).
- Aggregation storages (Waste Disposal area), which are accessed for disposal of waste from local disposal point either by occupants or commercial cleaners on an approximately daily basis.

The various bin storage areas are as described further below. Table 4-1 (page 11) gives a schedule of recommended bin storages in each of these waste storage areas for routine Services (based on estimated waste volumes in Table 3-2 on page 9) and includes for each land use and service:

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

Table 4-1 Waste storage and bin schedule for Routine Services, including collection frequency and collection service provider. *The type and size of bins for some commercial services may be refined in consultation with the commercial waste contractor when the building becomes operational*

Use	Local Disposal Location	Routine Service	Estimated Waste/Recycling Volumes (L/wk)	Collection Frequency (Events/wk)	Provider	Max. Bins/Items Stored & Collected (per Event)		
						No.	Size (L)	Type
Residential	Ground Level Residential Waste Room	General Waste	1,050	1	Council Rear Lift	1	1,100	Skip
		Dry Comingled Recycling	875	1		1	1,100	Skip
		Food / Garden Organics	350	0.5	Council kerbside	3	240	MGB
Shop (Café)	Ground Level Commercial Waste Room	General Waste	756	2	Private Collection	1	660	Skip
		Dry Comingled Recycling	239	1		1	240	Skip
		Food / Garden Organics	907	2		1	660	Skip
		Container Deposits	209	1		1	240	MGB
		Cardboard	247	1	Council Kerbside Collection	1	250	Bale

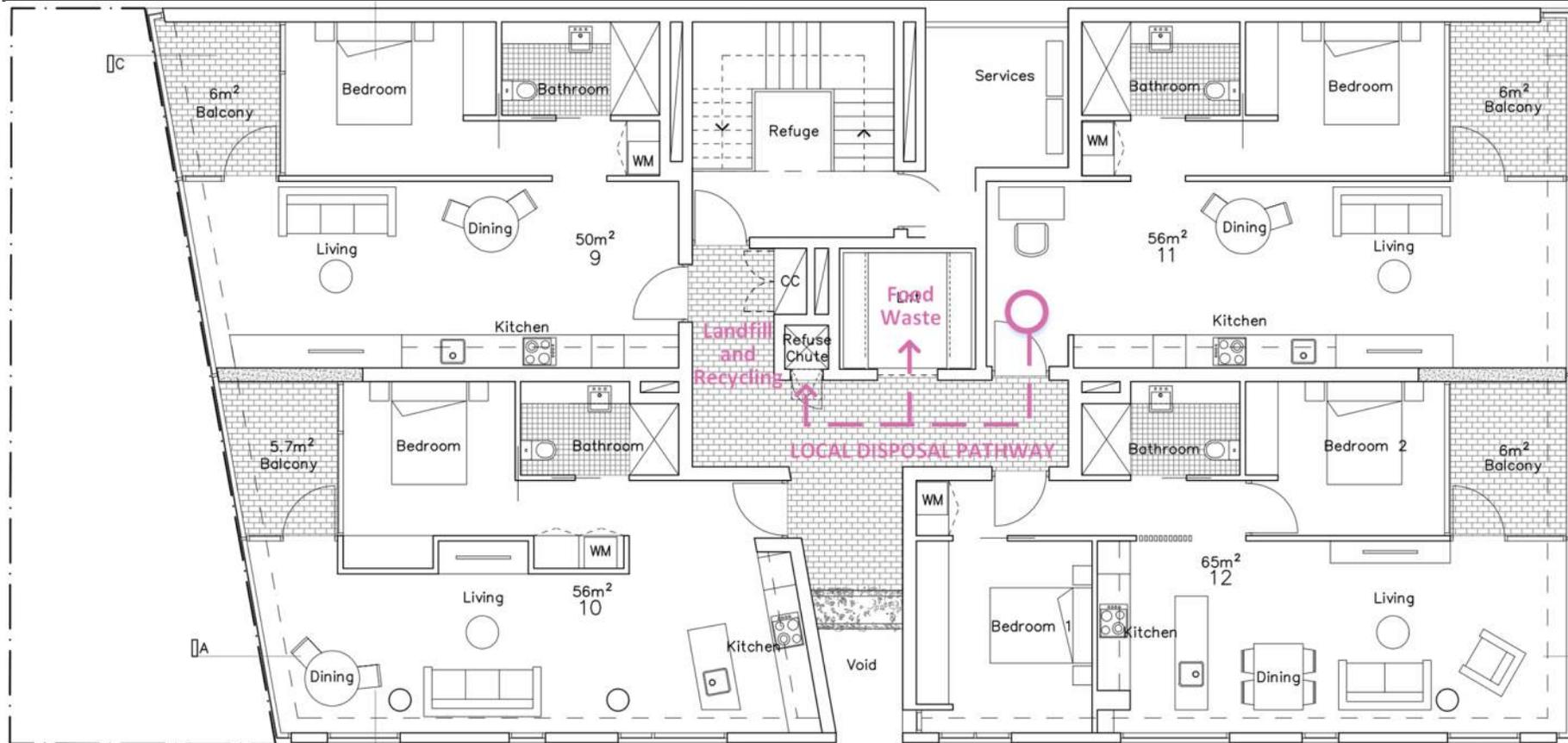


Figure 4.1: Typical Apartment Level.

4.2 Residential

4.2.1 Waste Storage Areas

- Residents will dispose of general waste and recycling via a waste chute accessible from each level (see Figure 4.1).
- Bins will be stored within a designated room at ground level (See Figure 2.1 (page 6)).
- Residents will dispose of organic / food waste and bulky cardboard items at Ground Level. Residents will carry waste down lifts and through the bike storage area into the bin room.
- Space in the Ground Level Residential Waste Disposal Rooms is provided for:
 - 1 x 1,100L General Waste Skip Bins.
 - 1 x 1,100L Recycling Skip Bins.
 - 1 x 240L Organics Skip. Bins.
- The rooms should have mechanical ventilation to remove odours. The ventilation shall extract to atmosphere, with location selected to avoid impact on tenants, customers, and residents.

The bin sizes are in line with Council's collection services. Bins would be supplied by Council. Once the bins are full, building management will change out these bins and replace them with an empty set.

4.2.2 User Storage

Residents would be provided with suitable kitchen bins with handles to enable easy carriage from their dwellings to their Local Disposal Area, e.g. Figure 4.2 below:

- a) General waste bin – at least 20L in size (bag lined)*
- b) Co-mingled recycling waste bin - at least 20L in size*
- c) Food organics bin (compostable bag lined)*



BIN
2 x 20 Litre Bucket – Drawer pull to
cupboard

(a)



(b)

Figure 4.2 Examples of suitable waste and recycling kitchen bins: (a) General waste & recycling - 2x20L Buckets with carry-handles in pull-out drawer; and (b): Bench-top food waste kitchen caddy.

4.2.3 Local Disposal and Waste Storage

Residents would dispose of General Waste and Recycling via a waste chute (with an E-diverter) which is accessible at each level. A separate Bulky Cardboard bin would be provided at each level for items like pizza boxes that could block chutes and e-diverters. Heavy glass such as wine bottles may also be disposed in this bin. The bin contents would be transferred to skip bins in the ground floor bin room by building staff.

Residents would take their organic waste down to the ground floor via the elevator and through bike storage. Food waste (inside compostable bags) would be disposed through a wall-hatch into 240L MGBs (wheelie bins). The hatch should be mounted as low as possible on the wall for easy tenant use.

The maximum disposal path distance from any apartment is approximately 10 m. This distance is less than the 30 m recommended by the South Australian Guidelines and therefore considered suitable.

The Waste Areas at Ground Level are internal to the building which ensures that bins are screened from public view. Transfer pathways should be free of steps, grades $\leq 1:10$, with appropriate hard /even surfaces, and wide enough to accommodate the types of bins being transferred.

4.2.4 Waste Chute Design

Installation of a waste chute in the Apartment Building will conform to Building Code of Australia (BCA) requirements, including consideration for acoustic insulation to minimise noise impacts during operation, and provide for access by water and electrical services required for operation and maintenance (including cleaning) of the chute.

The waste chute should include an extraction fan, so the system can operate under negative pressure. It should also include an in-situ cleaning system to keep tube surfaces clean. Consider if fans are sufficient for the Ground Floor bin room, or if additional ventilation is required.

Design should consider including level monitoring / alarms for bins in service.

Easy access should be provided to chute lockout mechanisms.

Angles of deflection should be selected to minimise risk of blockages and minimise noise from waste hitting the chute deflection. Some deflection at ground level is recommend to reduce noise from waste hitting the bottom of empty bins.

The General Waste / Recycling chute would have an E-diverter installed. This mechanism allows residents on higher levels to select what type of waste they are disposing of so that the waste can be directed into the correct bin. See Figure 4.3 below for an example of a chute access point.

The chute discharge area (at Ground Level) will require suitable hard surfaces and installation of drains (to sewer) and grading of floors to capture wash water at the chute discharge points (from periodic chute cleaning). Floor treatments should wrap up the walls so liquid spills can be contained and easily cleaned.

The waste chute should be subject to a regular inspection and maintenance schedule to ensure reliable operation.



Figure 4.3 Example chute disposal access point with E-diverter

4.2.5 Presentation Transfer

- Building management would be responsible for moving General Waste and Recycling skips from the residential Waste Disposal Room to the Bin Presentation Area adjacent the Right of Way, ready for collection. Refer to Figure 2.1 (page 6) showing the transfer path and presentation location. Organics bins are moved to the storage area adjacent the Right of Way, and presented at the kerb on Tucker Street by building management for fortnightly collection.

4.2.6 Collection

- Collection of the General Waste and Recycling would be via Council's rear-lift service.
- The Organic Waste would be presented kerbside (by management) for collection by Council's side-lift service. If preferred, collection of organics could be by Private Contractor to coincide with Café food waste collection. This would require a separate commercial arrangement / agreement with the café.
- Collections would be:
 - Weekly for General Waste
 - Weekly for Recycling
 - Fortnightly for Organics.
- The rear-lift truck would stop on Tucker Street and temporarily park to collect the waste as shown in Figure 2.2 (page7).
 - Council's collection contractor will retrieve skip bins from the bin storage area adjacent the Right of Way (approx. 10m from Tucker Street).
 - Once emptied, Council's collection contractor would return the bins to the storage area.
 - Collections should take around 2 minutes, and always less than 5 minutes per collection.
- The Organics bin would be presented by Building Management along Tucker Street for collection as per Figure 2.1 (page 6).
 - The waste will be collected via Council's side lift truck.

- Collections would be 10 – 20 seconds per collection event.
- Once empty, bins would be returned to the storage area by Building Management.

4.2.7 Hard/E-waste

- Management (on residents' behalf) should inquire with Council regarding whether these residents can access the Council's hard waste collection service when the building becomes operational, including establishing suitable arrangements and a presentation location (kerbside or on-site i.e., in the bin Presentation Area).
- Given the nature of the proposed accommodation use, it is likely that hard waste would be arranged by the building manager and collected by contractors directly from the dwellings.
- The waste contractor would park on site to deliver the hard waste collection services.
- The Building User Manual(s) for residents at the Development would advise on availability and/or organizing the Hard /E-waste collection services.

4.3 Shop Tenancy

4.3.1 Waste Disposal Area

- A separate waste disposal area is provided for the disposal of all wastes generated in the retail tenancy (see Figure 2.1 on page 6)
- This area would serve the waste requirements of the tenancy, where cleaners or staff would move waste and recycling from the tenancy and dispose of it in the bins provided in this area.
- Space is provided for:
 - 1 x 660L General Waste Skip Bin.
 - 1 x 240L Mixed Recycling MGB.
 - 1 x 250L Cardboard bale / basket.
 - 1 x 240 L Container Deposit Bin.
 - 1 x 660L Food Waste Skip Bin.

4.3.2 User Storage

- The Shop tenancy would have bins located in-tenancy for disposal of their waste and recycling.
- The types and sizes of the bins would be decided during tenancy fit out as they depend on type of commercial activity and services elected by the tenant.

4.3.3 Local Disposal and Waste Storage area

- Table 4-1 (page 11) gives a list of bin types and numbers to service the assumed tenancy configuration in Table 3-1.
- Tenancy staff would transfer waste & recycling and/or bins to the ground level commercial Waste Disposal Area as needed.

4.3.4 Presentation Transfer

- Presentation of the skip bins is not required as the private contractor would provide a pull in/pull out service to collect the bins directly from the commercial waste storage area.

- Tenancy staff will move the 250L cardboard bale to kerbside on designated collection days to access Council's cardboard pick-up service as shown in Figure 2.1 (page 6). The preferred location for cardboard bale presentation should be agreed with Council. Refer to Council's website for information on the cardboard collection service.
 - <https://www.cityofadelaide.com.au/business/support-resources/bins-rubbish-collection-hard-waste/waste-recycling-for-business/>

4.3.5 Collection

- Except for cardboard, collection of all Commercial waste would be carried out by Private contractors. For general waste, mixed recycling, and organics, a rear-lift service would be used. For other wastes (container deposit, etc), specialist contractors will determine the lift method (typically side lift or rear tailgate lift).
- Collection would be directly from the Commercial Waste Storage Area at ground level.
- The rear-lift truck would stop on Tucker Street and temporarily park to collect the waste as shown in Figure 2.2 (page7).
 - Private collection contractor will retrieve skip bins from the Commercial Waste Storage Area (approx. 20m from Tucker Street).
 - Once emptied, the collection contractor would return the bins to the storage area.
 - Collections should take around 2 minutes, and always less than 5 minutes per collection.
- Collections would be weekly for Mixed Recycling, Cardboard, and Container Deposit (CDL) bins.
- Collections of Organic Waste and General Waste could be up to twice per week.

4.3.6 Hard/E-waste

- Tenants would organise for private hard/e-waste collection direct from the tenancy as needed.
- The waste contractor delivering the services would temporarily park within the site adjacent to the waste storage area. They would then collect the waste directly from the tenancy.
- The Building User Manual(s) for commercial tenants at the Development would advise on availability and/or organizing Hard /E-waste collection services.

4.4 Maintenance Services

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

4.5 External

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

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

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

A dedicated on-site bin cleaning area should be provided and multi-purposed with the Waste Storage Area– see Figure 2.1 (page 6).

- This bin wash area would require grading to a sewer drain with basket screen to remove gross solids, with water proof / washable surface treatment on floor and adjacent walls, standard cold-water supply faucet and commercial-grade electrical power supply (if pressure washer system is to be used), plus bunds and screens for use during bin wash events.
- Bin washing activity would be managed by the Site Manager.
- Bin washing would be timed to occur immediately after bins are emptied.

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

- These external contractors generally have self-contained bin washing systems on back of ute or truck that enable them to clean bins on site – e.g. Figure 4.4 below.
- Some service providers will remove bins from site, replacing them with an empty spare, clean the bins, then return them to site.



Figure 4.4 On-site bin wash system for rear-lift trucks on back of ute. *Source:* <http://binforce.com.au/>

4.7 Transfer pathways

There are several transfer pathways for the waste systems at the Development, which were described in earlier in Section 4. The following is provided as a guide for sizing and designing these transfer pathways.

- *Transfer pathways –*
 - *User disposal – prefer less than 50m each way and free of steps, no grades greater than 1:15, and cater for mobility impaired users.*
 - *Local disposal points to central storage – enough width to accommodate relevant bins or waste loads being transferred, free of steps, no grades greater than 1:12*
 - *Collection – less than 30m with no steps or grades greater than 1:10*
- *Corridor widths –*
 - *240L MGBs or smaller bins / loads – min. 1,000 mm (1,200mm preferred)*
 - *660L skip bins – min. 1,200mm (1,400mm preferred)*
 - *1,100L skip skips and/or other waste loads – min. 1,500mm (1,600mm preferred)*
- *Doors –*
 - *Local disposal access – 800mm*
 - *Transfer pathways– Appropriate to the size of bin to be transported, e.g.*
 - *240L MGB (or smaller) – min. 800mm*
 - *660L skip – min. 1,200mm*
 - *1,100L skip – min 1,400mm*
- *Floors – Hard surfaces where bins and skips are to be carted*
- *Lifts – All lifts should be sized to a minimum of 1400mm to allow transfer of 1100L skip bins.*

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

4.8 Collection & Traffic Issues

4.8.1 Collection Point & Events

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

- All collections are made from Tucker St as per Figure 2.2 (page 7).
- Collection should normally be completed within around 2 minutes per service.
- The collections should be scheduled to
 - Minimise impacts on traffic accessing the building.
 - Comply with noise requirements, meaning that collections should be restricted to 7am – 7pm Monday to Saturday and 9am to 7pm Sundays and Public Holidays.

4.9 Management & Communication

4.9.1 Responsibilities

Table 4-2 summarises the responsibilities of different parties / stakeholders for proposed waste management and operational activities at the Development. In summary:

- **Residents** – The Building / Facilities Manager would be responsible for managing the waste system, but residents would play an important role in managing their local disposal activities and accessing the Council hard waste service, and Council (at its discretion) may support the Building / Facilities Manager with resident engagement and education to help drive good waste management outcomes.
- **Commercial tenancies** – The Building / Facilities Manager would manage the waste system, including ensuring that good waste management outcomes by tenants were achieved.

Table 4-2 Management & operational responsibilities for the waste systems at the Development

Waste System	Activity	Responsible party
Residential	<i>Local Disposal & External Disposal</i>	Residents
	<i>Waste Storage Areas, Hygiene, Odour Management & Cleaning</i>	Building Manager & their property management staff
	<i>Collection services – Standard Waste & Recycling</i>	Council Contractor
	<i>Collection services – Hard Waste by private contractor</i>	Building Manager booking it with private contractor on tenants' behalf
	<i>Management</i>	Building Manager
	<i>Education, Training & Engagement (Residents)</i>	Building Manager
Shop tenancy	<i>Local Disposal, Hard Waste & External Disposal</i>	Tenants
	<i>Waste Storage Areas, Hygiene, Odour Management & Cleaning</i>	Tenants, Building Manager
	<i>Collection services – Waste & Recycling</i>	Commercial / Private Contractor(s)
	<i>Management</i>	Building Manager
	<i>Education, Training & Engagement (tenants)</i>	Building Manager

4.9.2 Implementation & Communication

4.9.2.1 Residential

To successfully implement this WMP, the following should be put in place.

- **Mandated responsibilities for apartment residents** – Obligations for residents to properly access, operate and use the waste systems provided should be written into any tenancy residency agreement and/or incorporated into the Community/Strata plan lodged with the Lands Titles Office.
- **Resident Induction** – Should include first-day guidance on how to correctly use the waste systems.
- **Building User Manual** – Multi-lingual advice and instructions on waste management and using the waste systems should be included in the Building User Manual(s) developed for residents, including contact information for further information, questions and issues.
 - *This may include advice to residents on how to operate the chute system as well as how to properly dispose of other waste / recycling items including lighting, batteries and hazardous household waste*
- **Emergency Response &/or Property Management Plan(s)** – Should include response measures (or contingencies) for:
 - *Collection services suspended or not available;*
 - *Incorrect use by residents of the waste systems; and*
 - *Illegal dumping on-site.*

4.9.2.2 Shop tenants

Like the residential system above, the following should be put in place for the commercial system:

- **Community/Strata title arrangements for commercial property owners** – Obligations for the commercial tenants and/or property owners to properly access, operate and use the waste systems would be written into any tenancy agreement and the Community/Strata plan lodged with the Lands Titles Office.
- **Site Management System / Manual** – Advice and instructions on waste management and using the waste systems should be provided for tenants, including contact information for further information, questions and issues.
- **Tenant Induction** – Should include guidance on how to correctly use waste /recycling bins as well as the site approach to waste and recycling.
- **Emergency Response or Site Management Plan(s)** – Should include response measures (or contingencies) for:
 - *Waste collection services suspended or not available;*
 - *Incorrect use by tenants of the waste systems;*
 - *Illegal dumping on-site; and*
 - *Poor waste management outcomes (including cleanliness, odour and/or low diversion).*

4.10 Other Waste System Design or Management Issues

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

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

- *The extraction vent discharge location would be selected to avoid impact on residents, tenants and/or neighbours.*
- *It should be a requirement for food waste bins in Waste Storage areas that lids are closed after use.*

4) Access & security –

- All Waste Storage Areas (residential and commercial) in the Building should be secure and only accessible by key or fob or access code.
 - *This key or fob or access codes would be provided to residents, tenants, property management staff and/or waste contractor(s) collecting from these areas.*
 - *CCTV is recommended to monitor waste disposal practices in all Waste Storage Areas.*

5 REFERENCES

City of Adelaide . (2020). *Resource Recovery Strategy*.

Plan SA. (2021). *South Australia Planning and Design Code*.

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

APPENDIX 6. ESD PRINCIPLES

NAR:HAC
56875/0/1
21 June 2021

Tridente Boyce Pty Ltd
203 Melbourne Street
NORTH ADELAIDE SA 5006

Attention: Mr N Tridente

Dear Sir

**YWCA – 17 HUTT STREET, ADELAIDE
ECOLOGICALLY SUSTAINABLE DEVELOPMENT**

As requested we present the following schedule of ESD initiatives which can be introduced to the project upon further evaluation as the project evolves through the detailed design / design development phase:-

- Solar PV cells reducing carbon emissions and providing reduced reliance on power infrastructure.
- Heat pump for domestic hot water very green solution reducing carbon emissions and providing reduced reliance on power infrastructure.
- Variable speed compressors for cooling/heating efficient means of conditioning reducing carbon emissions.
- Day/night zone controlled air conditioning effective and efficient light control.
- LED lights with movement sensor control, efficient light source.
- Rainwater storage for irrigation/toilets.
- Efficient facade/minimised glazing. Passive means of reducing overall energy consumption and carbon footprint in conjunction with associated reductions in running costs.

We trust the above is satisfactory and would be pleased to further advise as required.

Yours faithfully
BESTEC PTY LTD


**NICHOLAS ROSSHIRT
DIRECTOR**