PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2022/1337

Date: 22 December 2023

Queensland Government

Traffic Engineering Report

15 Anderson Street, Fortitude Valley

Proposed Build to Rent Scheme

About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

We have over 50 staff, with an unrivalled depth of experience. Our industry knowledge, technical expertise and commercial insight allow us to deliver an exceptional and reliable service.

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Acoustics Data Traffic Waste

Revision Record

No.	Author	Reviewed/Approved		Description	Date
1.	J Benzie	J Benzie		Draft DA Report	12.07.2022
2.	J Benzie	J Benzie RPEQ 24616		For Submission	09.09.2022
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6.	J Benzie	J Benzie RPEQ 24616		Updated Submission – EDQ Comment	19.12.2023

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1 Introduction

1.1. Background

TTM Consulting has been engaged to prepare a traffic engineering report investigating a proposed mixed use development at 15 Anderson Street, Fortitude Valley. This report forms a revised submission to EDQ, with the development scheme updated based on comments received to date.

The site is located within the Bowen Hills Priority Development Area (Bowen Hills PDA). As such, the application has been assessed against the requirements of the Bowen Hills PDA Development Scheme, with reference to BCC's TAPS Policy as required.

Based on the feedback received, changes to the scheme include:

- Increase in yield and change to unit mix
- Changes to the ground floor layout and basement layouts
- Revised access and service vehicle arrangements
- Inclusion of car share bays
- Revised allocation of resident and visitor spaces.

The report also addresses queries raised by EDQ via email. Table 1.1 summarises EDQ's comments, with TTM's response and/ or response location noted in the final column.

Table 1.1: EDQ Comment Summary

EDQ Comment	TTM Response
Car Parking Supply – Option A • 198 resident spaces • 22 visitor spaces • 0 car share spaces	The amended plans generally align with Option B provided by EDQ. The location of the security lines is based on the pedestrian access to the lift core. PWD parking is located behind the security line, however this is considered suitable given the expected demands for these bays. Refer to **Section 4** for further information on car parking supply and layout. In response to further comment from EDQ, TTM recommends a small intercom be installed at the Costin Street entry and clearly labelled to allow PWD drivers to contact residents for access or, alternatively, it be conditioned that a PWD space is allocated to car space 11 on the Ground Floor.
Car Parking Supply – Option B • 193 resident spaces • 34 visitor spaces • 5 car share spaces	

The design drawings do not indicate the ramp grade in all instances. DWG TP098 shows that the gradient for the ramp to the second base -ment level car park is 1 in 5 which is not compliant. Applicant to label grades on all ramps and ensure all ramps are compliant. Further, it is unclear what turn radius has been adopted along the curved ramp. Plans and drawings are to demonstrate that the ramps will comply wi th AS/NZS 2590.1:2004 Parking Facilities Part 1: Off- street car parking, where minimum roadway widths on curved road-ways and ramps are as per Table 2.2. For a turn radius of 15.0 to 19.9 the width required for a two- way ramp is 6.7m without a separator.	Refer to **Section 4.4.1** and **4.4.2** for further information regarding ramp design and gradient's.
Bicycle parking is located on all three basement levels and ramp gra dients steeper than 1:12 have been adopted which is not in accorda nce with the desirable ramp access requirements in AS2890.3. Submit amended plans showing ramp grades can meet the required standard.	Ramp grades cannot be revised. Alternate path of travel is via the lifts. All aisles meet the 1.5m requirement per AS2890.3. A pinch point occurs at the lift doors. This is not expected to significantly impact useability of the basement bicycle parking areas.
The plans do not clearly show that height clearances for the basem ent and in particular PWD spaces will meet those required in TAPS. In particular it is not clear from the drawings what the slab thickness will be and what fittings/piping may be attached to the underside of the floor slab. Provide amended plans which clearly demonstrate th at the minimum height clearances for basement levels will be met. Alternatively, provide a statement in the TIA confirming compliance of the height clearance.	Section included in **Appendix A.** Clear height clearance above PWD bay is 2.5m.
Provide amended plans which dimension the road widening and cor ner truncation at the corner of Anderson Street / Water Street to ind icate compliance with the verge widths (it is acknowledged that me-asurements shown in DAWG TP100 would appear to indicate that the required verge widths have been provided).	Plans updated – refer to **Appendix A**
Submit a concept road layout plan/ signs and lines plan for any chan ges to on-street parking, including removal of on- street loading zone and relocation of any existing signage. The plan shall include sign and line markings for both Anderson and Costin Str eets, kerb buildout for indented parking etc and be certified by an RPEQ. It is not clear from the TIA and drawings submitted if there are any changes propo sed to onstreet carparking arrangements, including the removal of a ny onstreet loading zones and/or if the relocation of existing signage is required. It also appears that the LRV turning template will impact the western side of the Anderson Street on-street parking.	Concept plan included in **Appendix B** Further information included in **Section 3.**
The Anderson St driveway appears to protrude across the projected property boundary. Amend the plan to comply with BCC TAPS Section 4.2 to ensure the splay does not protrude cross the property	Driveway splay has been modified. Refer to **Section 5** for further information.

boundary.	
Carparking spaces that have a width of 2.3m and 2.4m are to be desi gnated as "Small Car spaces" on the plans. In accordance with TAPS, up to 20% of spaces may be small car spaces provided they are no smaller than 5m long by 2.3m wide and are appropriately signed. In addition to this, submit amended plans to show that vehicles using visitor spaces 3, 4, 5, 6 can safely enter and exit these bays when an RCV is present in the servicing area.	All 2.3m wide bays are to be nominated as 'small car bays'. Bays at 2.4m are standard bays. Refer to **Section 4.4.3** for further information. Visitor bays 3 – 6 have been removed.
It needs to be demonstrated that the carparking spaces that contain wall mounted bicycle storage racks in front of the car parks will have sufficient room and that the racks and bicycles will not intrude into t he parking envelope, thus reducing the length of the actual space for the car/van to park.	The proposed parking supply includes bicycle parking above bonnet within the resident parking area. A reduced height clearance above bonnet is typical as this space would be otherwise wasted. The height clearance would reduce, but still allow for the functional use of the space. Note that these spaces can be removed from the total parking supply, with the number of standard bicycle spaces meeting the minimum requirements of Austroads Guidelines.
It is recommended that additional visitor bicycle parking be provide d on site to meet the requirements of TAPS. This could be done by re allocating a portion of the residential bike spaces (at least 23). Dema rcation of visitor and residential bike parking spaces to be provided.	The proposed bicycle parking supply exceeds the minimum requirements of Austroads, but is less than the requirements of the TAPS Policy. Refer to **Section 8** for further information.
The width of the entry access ramp on Anderson St is 1.12m which d oes not comply with TAPS.	Path has been increased to 1.2m.
A kerb ramp on Anderson Street, opposite the existing kerb ramp on the western side of Anderson St, should be investigated	Plans have been updated to show a kerb ramp on the opposing side of Anderson Street (i.e. at the site frontage).

1.2. Scope

The scope of the transport aspects investigated includes:

- Reviewing the prevailing traffic and transport conditions surrounding the site.
- Identifying parking supply required to cater for development demands.
- Assessing the parking layout to provide efficient and safe internal circulation and manoeuvring.
- Assessing the access configuration to provide efficient and safe manoeuvring between the site and the public road network for cars, service vehicles, cyclists and pedestrians.
- Identifying the service vehicle needs for the site and assessing the internal layouts to provide efficiency and safety for on-site service vehicle operation
- Reviewing access to a suitable level of public and active transport provisions.
- Identification of likely traffic volumes and traffic distribution from the development and the expected traffic impacts of development on the surrounding road network.

The development plans have been assessed against the following guidelines and planning documents:

- Bowen Hills PDA Development Scheme (June 2019)
  - Schedule 3 – Transport, access, parking and servicing
- Brisbane City Plan (2014) Planning Scheme, specifically:
  - Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS Policy)
  - Transport, Access, Parking and Servicing Code (TAPS Code)
  - Refuse Planning Scheme Policy
- Australian Standards for Parking Facilities (AS2890 series)
- Road Traffic Authority (RTA) Guide to Traffic Generating Developments

1.3. Site Location

The site is located at 15 Anderson Street, Fortitude Valley, as shown in Figure 1.1. The property description is Lot 10 on SP208752. The site has road frontages to Anderson Street, Costin Street and Water Street. The site is currently occupied by assorted commercial properties.

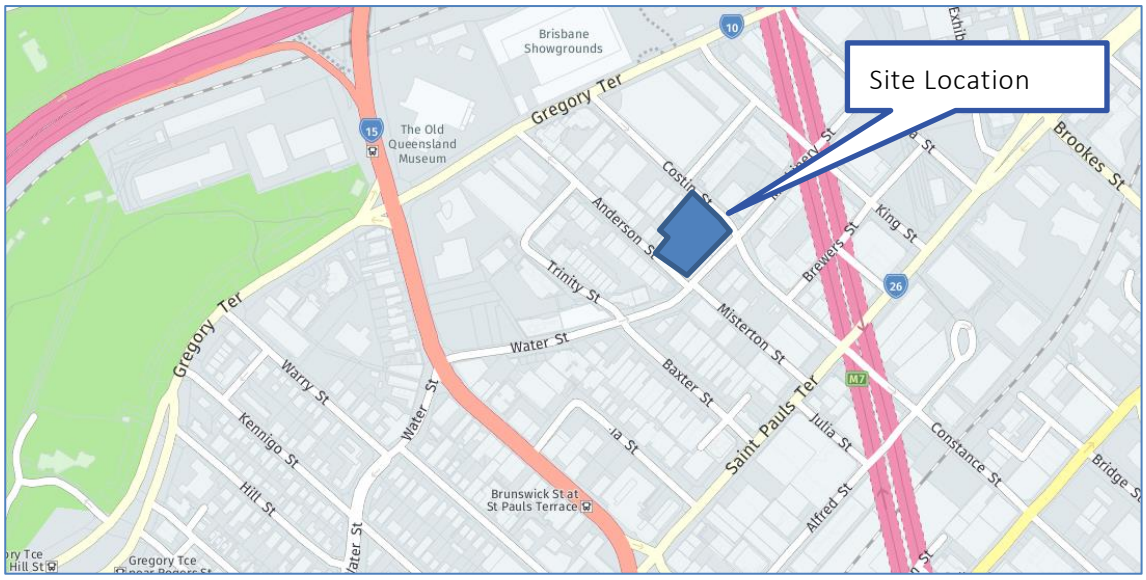

Figure 1.1: Site Location

2 The Proposed Development

2.1 Development Profile

The development scheme includes a total of 385 built to rent (BTR) dwellings and ground floor retail. The number of one bedroom units has increased, with a reduction in two and three bedroom dwellings. There is no change in the retail GFA.

A detailed breakdown of the unit mix is provided in Table 2.1. For reference, a copy of the development plans, is included in **Appendix A.**

Table 2.1: Proposed Development Scheme

Land Use	Qty / GFA
BTR Dwelling: • 1 bedroom • 2 bedroom • 3 bedroom Total – dwellings	 296 61 8 385 dwellings
Retail	210m^2 GFA

2.2 Parking

The development proposal includes the following car parking supply:

- 33 visitor spaces (including 2 PWD spaces), which are located across Ground Floor and Basement level 1
- 176 resident spaces (including 4 PWD spaces), which are located across the basement parking levels
- 3 car share spaces (located on the ground floor)
- 21 motorcycle spaces, located across the basement levels

Further details regarding the proposed car and bicycle parking provisions are included in **Section 4**.

2.3 Access

Access to the subject site is provided via both Costin Street and Anderson Street. Basement car access is provided via Costin Street only. Anderson Street provides access to a small percentage of visitor spaces, the car share spaces and the service bay.

A summary of the proposed access arrangements is as follows:

- Anderson Street - the characteristics of this access include:
  - 6.5m wide, modified Type B1 crossover
  - Priority controlled, limited to right in / right out only for both cars and service vehicles

- Costin Street - the characteristics of this access include:
  - 6.2m wide, modified Type B1 crossover
  - Priority controlled, movements limited to right in / right out only
  - Basement car access only
- Pedestrian access provided via all street frontages.

Further details regarding the proposed access arrangements are included in Section 5.

2.4 Servicing

Service vehicles will access the site via Anderson Street only. In terms of service vehicle bays, the development is to provide:

- 1 x MRV/RCV bay
- Loading on-site for a refuse collection vehicle
- Occasional access for LRV provided on-site.

The service bay is located across the ground floor. Further details regarding the proposed servicing arrangements are included in Section 7

3 Site Travel Environment

3.1 The Road Network

All roads in the immediate vicinity of the site are administered by Brisbane City Council (BCC). The hierarchy and characteristics of roads in the immediate vicinity of the site are shown below in Table 3.1.

Table 3.1: Local Road Hierarchy

Road	Speed Limit	Lanes	Classification
Costin Street	50kph	One lane, one way, with on-street loading and parking bays on both sides.	Neighbourbood Road
Anderson Street	50kph	One lane, one way. Parking provided on western side. Loading zone at site frontage.	Neighbourhood Road
Water Street	50kph	Two way. No standing on both sides along length of site frontage	Neighbourhood Road
Machinery Street	50kph	Two way. Indented on-street parking (2P) on southern side of carriageway. Loading zone on northern side of carriageway.	Neighbourhood Road
Constance Street	50kph	One way. Parking on eastern side of carriageway.	Neighbourhood Road
Gregory Terrace	60kph	Two way, two traffic lanes, divided. On street parking (4P) available on both sides.	Suburban Road
St Pauls Terrace	60kph	Two way, four traffic lanes plus turning lanes separated by a median.	Arterial Road

The characteristics of the frontage roads is detailed in Table 3.2.

Table 3.2: Road Characteristics

Road	Road Characteristics
Costin Street	15.5m road reserve 9.5m carriageway 2.3m verge width
Anderson Street	13m road reserve 7.5m carriageway 3.75 verge (southern side) 1.75m verge (northern side)
Water Street	10.5m road reserve 6.5m carriageway 2m verge on both sides

All intersections are priority control with the exception of Constance Street / St Pauls Terrace, which is signalised.

3.2 Road Planning

It is understood that there are no road upgrades planned within the vicinity of the site. During pre-lodgement discussion it is understood that road resumptions are required along all frontages to ensure that compliant verge widths are provided. The development plans have been updated to show the revised boundaries as required by the BCC Road Widening Plan provided at Appendix C.

Within the Bowen Hills PDA (Map 2 – Structure Plan), Costin Street is identified as an 'active transport route'. Cross block links are also identified between Anderson Street and Costin Street, near the Carriageway Street intersection.

Map 9 – Precinct 2 Plan – identifies that bicycle infrastructure is to be provided along Costin Street.

3.3 Active Transport Facilities and Services

Train Services

The Fortitude Valley train station is located approximately 350m south of the site. Services to all Brisbane train lines operate from this station, with service every 2 to 3 minutes (approximately) in peak periods and every 10 minutes in the off-peak.

Exhibition train station is located approximately 400m north of the site. This is part of the Cross River Rail network and will become accessible daily once this infrastructure project is complete.

Bus Services

Bus stops are located north and south of the site at the Gregory Terrace / Costin Street and Constance Street / St Pauls Terrace intersections. Additional bus stops are located along the length of Brunswick Street. All stops are located within a 400m walking distance of the site.

A summary of the Translink bus routes that utilise these stops are found below in Table 3.3.

Pedestrians

Formal pedestrian footpaths are located on both sides of all roads in the vicinity of the site. No formal crossings are provided at key intersections surrounding the site.

Bicycles

No dedicated on-street or off-street cycle lanes are provided within the vicinity of the site. Saint Pauls Terrace and Brunswick Street are identified as secondary cycle routes. Gregory Terrace is identified as a local cycle route.

Table 3.3 Surrounding Bus Service Summary

Bus Routes	Servicing	Operating Times	Frequency (Approx)
301	Toombul, Clayfield, Hendra, Ascot, Bowen Hills, Fortitude Valley, Brisbane City, Spring Hill, South Brisbane.	6am – 11:30pm (weekday) 7am – 11:30pm (weekend)	Half hourly (peak) Hourly (off peak, weekend)
320	Chermside, Wavell Heights, Kalinga, Clayfield, Bowen Hills, Fortitude Valley, Spring Hill, Brisbane City	5:15am – 10:15pm (weekday) 7am – 7pm (Saturday) 10am – 6pm (Sunday)	15 mins (peak) Half hourly (off-peak) 1 - 2 hours (weekends)
393 (loop)	Teneiffe, Newstead, Fortitude Valley, Bowen Hills,	6:30am – 6:30pm (weekdays)	15 mins (peak) Hourly (off peak)
379	Stafford, Grange, Lutwyche, RBWH, Valley, City	6am – 10:30pm (weekday) 7:30am – 11pm (Saturday) 8:30am – 8:30pm (Sunday)	Half hourly (peaks) Hourly (off peak, weekend)
364	Herston, Kelvin Grove, Valley, City	7pm – 9pm (weekday) 8:30am – 10pm (Saturday) 8:30am – 7pm (Sunday)	Hourly – all times
360	Everton Park, Enoggera, Alderley, Herson, Valley, City	6:30am – 7pm (weekday) 8am – 6pm (Saturday)	Half hourly (peaks) Hourly (off peak, Saturday)
375	Stafford, Lytwyche, RBWH, Valley, City, Paddington, Bardon	5:45am – 11:30pm (weekday) 7am – 11:30pm (Saturday) 8:30am – 9:30pm (Sunday)	10 – 15 mins (weekday) Half hourly (weekend)
346	Aspley, Stafford, Grange, Windosr, RBWH, Valley, City	6am – 6:30pm (weekdays)	Half hourly (peak) Hourly (off peak)
370	Chermside, Kedron, Lutwyce, Windsor, RBWH, Valley, City	5:30am – 11pm (weekday) 5:30am – 11pm (Saturday) 8am – 9pm (Sunday)	5 - 10 mins (peak) 15 means (off peak) Half hourly (Saturday, Sunday)
334	Chermside, Prince Charles, Windsor, RBWH, Valley, City	7:00am – 5pm (weekdays) 9:00am – 5pm (Saturday)	Half hourly (peaks) Hourly (off peak, saturday)
361	Mitchelton, Enoggera, Newmarket, Herston, Valley, City	10am – 3pm (weekday)	Hourly
353	Chermside, McDowall, Stafford, Wilston, RBWH, Valley, City	6:00am – 7:00pm (weekdays) 8:00am – 4:30pm (Saturday) 8:00am – 4pm (Sunday)	Half hourly (peaks) Hourly (peaks, Saturday) 2 hours (Sunday)

4 Car Parking Arrangements

4.1 Parking Supply Requirement

Schedule 3 of the Bowen Hills PDA Development Scheme specifies parking rates for multiple dwelling developments. All other parking rates are to be provided in accordance with BCC's TAPS Policy. The development is located within the City Frame, and therefore a maximum parking rate applies to all non-residential uses.

The TAPS Policy is silent with regard to 'Built to Rent' (BTR) development. As such, the parking supply is to be based on a first principles assessment of resident demands. The revised parking provisions are based on discussions with EDQ following the initial application submission. The allocation of resident vs visitor spaces on basement level 1 considers the advice provided via email (summarised in Table 1.1).

The first principles assessment of the parking aligns with PO12 of the TAPS Code, which notes:

PO12

Development in the City core and City frame provides car parking spaces at rates to discourage private car use and encourage walking, cycling and the use of public transport.

The proposed car parking rate for the BTR component is detailed in Table 4.1. Further justification regarding the proposed rates is provided in Section 4.2 – 4.3 of this report.

Table 4.1: Proposed Parking Supply Rate

Land Use		Proposed Parking Supply Rate
Build to Rent	Resident Visitor	0.52 spaces per dwelling (including motorcycle bays) 0.086 spaces per dwelling
Retail		1 space per 100m² GFA (max)

In addition to the above, an additional three car share spaces are proposed within the site. These will be for the exclusive use of residents.

4.2 First Principles Assessment – BTR

To assess the practical parking requirements for BTR development, the following needs to be considered:

- Operation of a BTR scheme
- How the development aligns with the currently defined uses within the City Plan
- Proximity to public and active transport

The following sections detail the above considerations.

4.2.1 Operation of BTR Developments

BTR developments typically have the physical build characteristics of multiple dwellings and the use and demand characteristics of rooming accommodation. The household size of a BTR dwelling is generally less than a standard MUD. Survey data indicates that the average occupancy for a MUD is 2.6 persons per dwelling as compared to a BTR dwelling which is 1.45 persons per dwelling. This indicates a lower population associated with this style of residential development.

As at 2020-2021, 33% of the population is housed within the rental market. This statistic is significantly higher within Brisbane city, and among younger Australians. Approximately 70% of persons aged 25 – 34 rent their home. Of this, 40% of all renters are considered 'long term' renter – i.e. renting for at least 10 years (PwC).

The demand for affordable permanent rental accommodation is growing significantly in the Brisbane market. In this current climate, there is a shortage of suitable supply for people such as essential workers, young professionals and the like (typically aged less than 35yrs old). As such, this results in inadequate and unsuitable accommodation with respect to quality, cost, living arrangement, location, tenure and maintenance.

The market for the BTR project is specifically targeted at a demographic that are sensitive to affordability and sustainability. That is, residents that generally do not want to pay for a parking space and / or are attracted to using alternative modes of transport from either a cost saving or sustainability perspective.

Residents also have limitations imposed on their living arrangements under an agreed operational management plan, typically annexed to the resident's lease, in relation to number of occupants, number of visitors, use of a car space being optional only.

Management

The applicant will have ongoing control over both the leasing of the apartments and the allocation of parking spaces. This provides opportunity to more effectively manage parking demands, particularly given the target market.

A key aspect of this holistic management of the apartments and the car park, is that parking spaces will be de-coupled from the apartments and leased to tenants on an as needs basis. Applicants will be advised that a maximum number of spaces are provided and will be required to apply for a space at an additional cost. It is noted that some applicants may also be offered a unit with no option for a car park.

De-coupling the spaces from the apartment ensures that all spaces are effectively utilised, unlike traditional residential developments with allocated parking. It is not uncommon in residential developments with allocated parking that a proportion of the residents do not own cars yet have an allocated parking space, which sit vacant.

This arrangement aligns with the intended target market which is aimed primarily at students and essential workers aged between 20-40. Students generally cannot afford the costs to buy a car and additional expenses such as insurance, fuel and parking (ie at university), and are more inclined to utilise car share such as uber, if public transport is not available.

Practical Parking Demands

Surveys of like uses at Kelvin Grove / Newmarket and Red Hill indicate that the practical parking demand based on car ownership is **0.33 spaces per unit** for residents.

Comparatively, a BTR scheme at 19 Campbell Street, Bowen Hills has an approved rate of:

- Resident – 0.63 spaces per dwelling
- Visitor – 0.1 spaces per dwelling

Like the proposed site, the development is located within the Bowen Hills PDA with similar access to public and active transport facilities.

It is also relevant to note that the above rates are consistent with BTR rates within New South Wales and Victoria. The key elements for the New South Wales BTR scheme are based on single ownership, single operator and located in existing low-medium density zones (importantly not limited to high rise) with a car park ratio of 0.5 spaces per unit.

Victoria has a car ratio for BTR of between 0.2-0.5 spaces per unit and found that even despite the lower car park rates, developments operate with a third of spaces actually being used by residents.

4.2.2 Comparison of Defined Uses

The City Plan does not currently define a BTR development, and as such, does not have a specific use code. In terms of operation, BTR developments typically have the design characteristics of a multiple dwelling use, with the operation of a rooming accommodation use.

The key differences with a BTR development compared with a multiple dwelling is:

- De-coupled parking arrangements
- Tailored management approach
- Sites are typically in close proximity to public / active transport and activity nodes
- Smaller household size (2.6 occupants / dwelling and 75m2 GFA for multiple dwellings, compared to 1.45 occupants / dwelling and <40m2 for BTR developments)

Based on the above, the parking demands for a BTR development vary significantly from a multiple dwelling development. As such, application of the standard multiple dwelling rate is not considered suitable. In this instance, the parking demand characteristics align with a rooming accommodation use.

Whilst not strictly applicable, TTM have undertaken a comparison of the BCC multiple dwelling and rooming accommodation rates. As the site is located within the City Frame, the rates noted within Table 13 of the TAPS Policy have been applied.

Table 4.2: Parking Supply Requirement – Multiple Dwelling Rate

Land Use	BCC Requirement	Extent	Requirement
• Resident – 1 Bedroom – 2 Bedroom – 3 bedroom • Visitor	 0.9 spaces per dwelling 1.1 spaces per dwelling 1.3 space per dwelling 0.15 spaces per dwelling	 296 dwellings 61 dwellings 28 dwellings 385 dwellings	 266 67 37 58
Total			428 spaces

Table 4.3: Parking Supply Requirement – Rooming Accommodation

Land Use	BCC Requirement	Extent	Requirement
Rooming Accommodation	0.4 spaces per room	385 dwellings	154 spaces

The provision of 0.52 spaces per dwelling for residents exceeds the rooming accommodation rate, noting that an additional supply is provided for visitors. Overall, the proposed rates are considered a suitable compromise between the MUD and rooming accommodation rates.

4.2.3 Proximity to Public and Active Transport

The site is located within the City Frame and is situated near several public transport facilities. Costin Street is defined as a 'active transport route' within the Bowen Hills PDA.

Further, as the site is within City Frame, there is acknowledgement that a high level of alternate modes of travel are available to residents and visitors. This is reflected in the reduced rates noted in Table 13 of the TAPS Policy as compared to the standard rates provided within Table 14. Whilst a BTR scheme is not a nominated use, the reduced rates within the City Frame acknowledge that the location of the site warrants a reduced parking rate.

In terms of on-site operation, the ongoing management and control of on-site parking allows for the encouragement of public transport use. By providing reduced on-site parking, private vehicle usage is discouraged, aligning with the outcomes of PO13.

The site is located within 400m walk of the pedestrian entrance to the Fortitude Valley and (future) Exhibition train stations and several on-street bus stops. The bus stops along Brunswick Street provide access to several bus routes, allowing connections to Brisbane northern suburbs. The Fortitude Valley train station provides connections to all train lines within the Brisbane region, allowing connections north, south, east and west of Brisbane.

4.2.4 Alternative Parking

A key characteristic of the strategy to reduce the resident parking supply for a BTR project is to ensure that there is limited ability for the residents to create overflow parking on the streets surrounding the site. If there are no viable 24 hour on-street parking opportunities convenient to the site, this essentially restricts potential car ownership beyond the on-site supply.

The Brisbane Central Parking Area, is shown in Figure 4.1. Within this zone all parking is limited to 2 hours between 7am and 6pm weekdays and 7am to Midday Saturdays, unless otherwise signed.

It is understood that local authorities primary concern with respect to insufficient parking is that this demand may overflow to the local street system. However, as shown, the site is located well within the Brisbane Central Parking Area and there is no opportunity for middle to long term parking on any public street within 500m of the site. This effectively restricts car ownership to potential tenants who either have no car or can lease a space on the site. There is no practical alternative to park on the street in the medium or long term as would be required by residents.

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Figure 4.2 identifies the kerbside allocation for parking in the vicinity of the site. This is the typical allocation during daytime hours. Some loading zones and metered parking areas revert to uncontrolled parking areas over night and on Sundays.

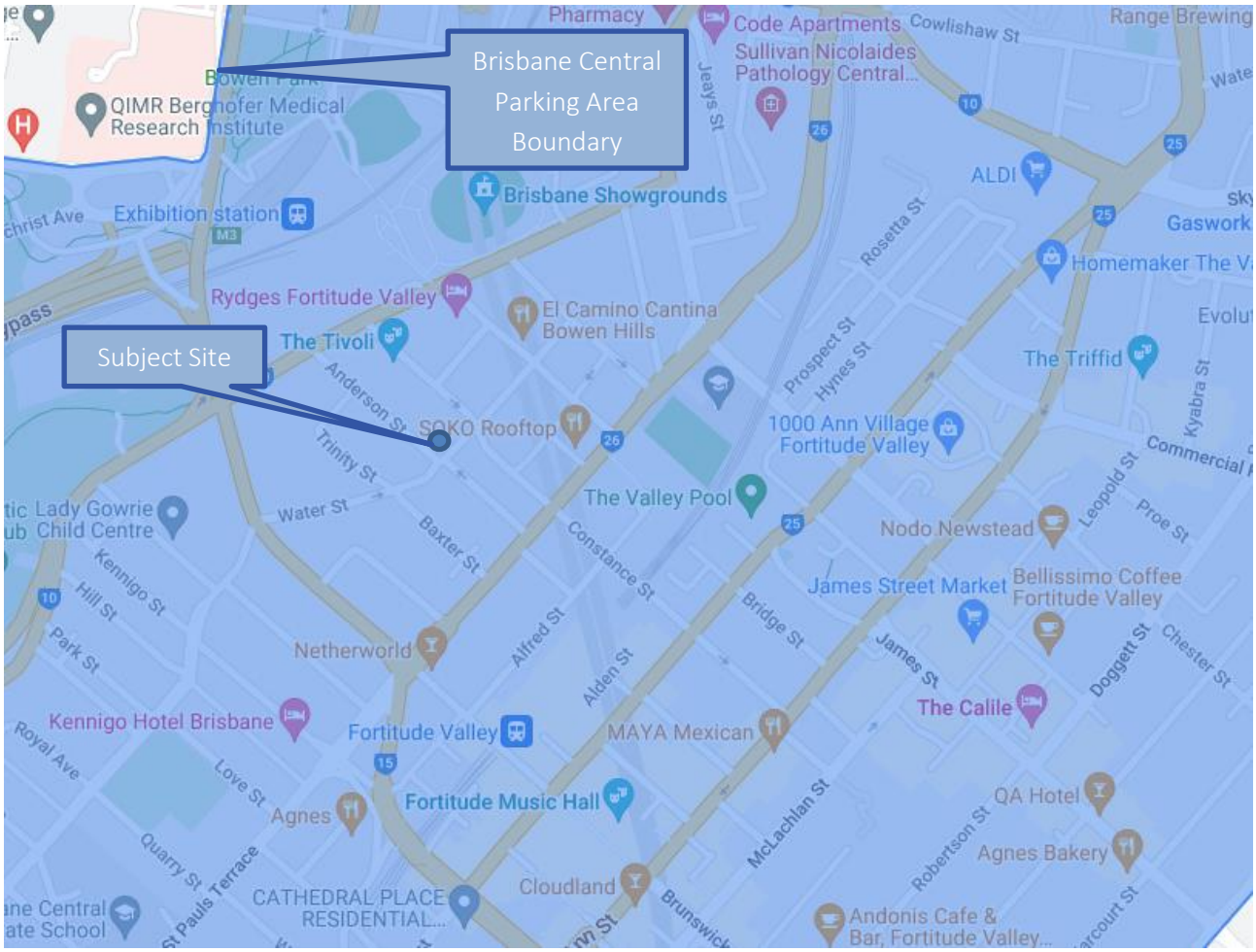


Figure 4.1: Brisbane Central Parking Area

This identifies that there are no parking spaces in the vicinity of the site that are signed as unrestricted. There are several spaces on Anderson Street and Brewers Street that are unsigned and therefore subject to the requirements of the Brisbane Central Parking Area.

Analysis of kerb lines further around the site to a distance of over 500m identifies that kerb allocations are generally consistent with substantial loading facilities and no standing zones. The are no parking spaces within 500m of the site that would allow for a private vehicle to be legally parked for extended periods.

There is also a commercial parking facility to the east of the train station, approximately 250m from the site. This is the only viable long term parking alternative in the vicinity of the site.

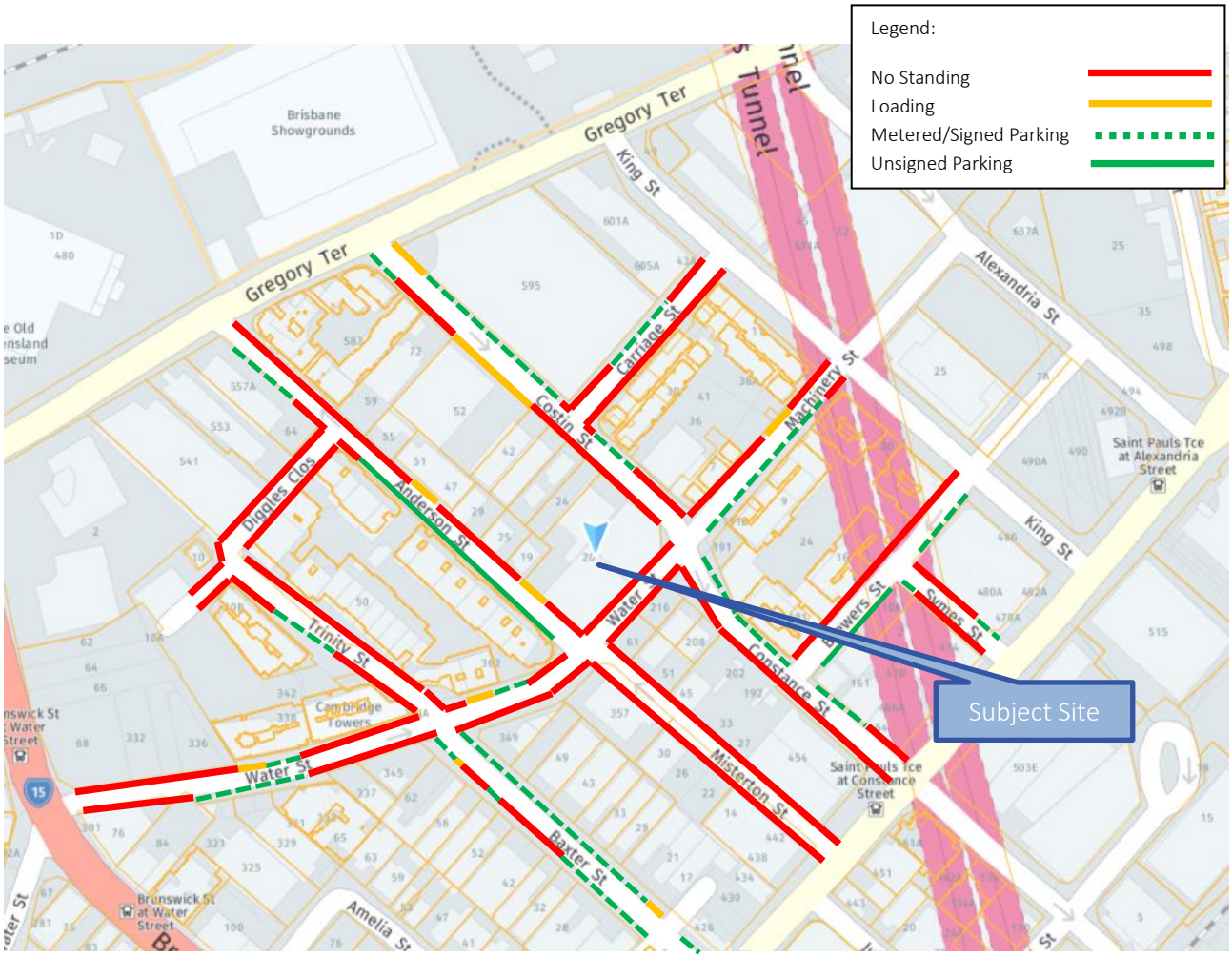


Figure 4.2: Parking Limits

4.2.5 Car Share Spaces

As noted above, the site includes three car share spaces, located on the ground floor. These spaces will be for the exclusive use of residents and managed via a booking system. The TAPS Policy does recognise the inclusion of car share spaces within the total parking supply. However, there is no equivalent effective capacity. As such,

TTM has deferred to the Gold Coast Planning Scheme which notes that car share demands are the equivalent of 5 spaces. For the proposed three bays, equates to an additional demand of up to 15 rented spaces.

4.3 Proposed Parking Supply

With respect to the BTR component, the proposed parking supply rates are:

- Resident – 0.52 spaces per dwelling
- Visitor – 0.086 spaces per dwelling
- Retail – 1 space per 100m2 GFA (max) – none supplied
- Car share – three spaces

Overall, the proposed resident and visitor parking supply is consistent with the outcomes of the first principles assessment provided in Section 4.2.

The proposed parking supply is summarised in Table 4.4.

Table 4.4: Proposed Parking Supply

Land Use	Proposed Rate	Extent	Proposed
• Resident – 1 Bedroom – 2 Bedroom – 3 bedroom • Visitor	 0.5 spaces per dwelling 0.5 spaces per dwelling 0.5 spaces per dwelling 0.086 spaces per dwelling	 296 dwellings 61 dwellings 28 dwellings 385 dwellings	 176 cars + 21 Motorcycles 33
Retail	1 space per 100m^2 GFA (Max)	210m^2 GFA	0
Total			197 cars + 21 Motorcycles

Based on the provision of 33 visitor spaces, a one PWD space is required. The development provides currently provides two PWD visitor spaces. An additional four PWD spaces are provided within the resident parking allocation.

Overall, the proposed rates are expected to suitably cater for the practical demands of the development and are consistent with approved rates within Brisbane.

4.4 Car Parking Layout

The development provides car parking across both the basement levels and ground floor.

4.4.1 Ramp Design

An item of clarification is the basement ramp design. EDQ have noted that the proposed ramping configuration does not comply with curve ramp requirements of AS2890.1. The proposed ramp is two straight sections joining at 90 degrees with a truncated corner. The outside of the ramp is shown as a curve, however this is to increase the GFA for service areas, rather than being provided as a curve ramp. No separator is required.

Swept paths (included in **Appendix B**) show that a B99 and B85 can pass on the ramp, as required. Further information regarding the ramp gradients is provided in Section 4.4.2.

4.4.2 General Car Park Layout

Table 4.5 identifies the characteristics of the proposed parking area with respect to the BCC requirements. The last column identifies the compliance of each design aspect. Where compliance is not achieved, further information is provided below.

Table 4.5: Parking Design Requirements

Design Aspect	BCC Requirement	Proposed Provision	Compliance
Parking space length: – Resident space – Visitor space – PWD space – Tandem space – Small Car	 5.4m 5.4m 5.4m 10.8m 5.0m	 5.4m (min) 5.4m 5.4m 10.8m 5.4m	 Compliant Compliant Compliant Compliant Compliant
Parking space width: • Resident space • Visitor space • PWD space • Small car	 2.6m (min) 2.6m (min) 2.4m + 2.4m Shared Area 2.3m	 2.4m – 2.6m 2.6m 2.4m + 2.4m shared area 2.3m	 Performance Outcome Compliant Compliant Compliant
Aisle Width: – Parking aisle – Circulation ramp	 6.2m (min) 6.2m (min) + clearance to walls	 6m (min) 6.2m (min) + clearances	 Compliant – see below. Compliant
Parking envelope clearance	Located as per Figure f of TAPS PSP	Located as per Figure f of TAPS PSP*	To be confirmed as part of detailed design.
Maximum Gradient: – PWD parking – Parking aisle – Ramp	 1:40 (2.5%) 1:20 (5.0%) 1:6 (16.7%)	 Flat Flat 1:5	 Compliant Compliant Performance Outcome
Maximum Gradient Transitions	1:8 (12.5%) summit	1:8	Compliant
Blind Aisle Extension	2m or 8m extension to aisle width beyond final space	1m end aisle extension	Compliant
Height Clearance: – General Minimum – Over PWD space	 2.3m 2.5m	 2.3m 2.5m	 Compliant Compliant
Motorcycle Parking			
Motorcycle space length	2.5m (min)	2.5m	Compliant
Motorcycle space width	1.35m (min)	1.35m	Compliant

* Structure is not shown on the plans. it is understood that columns will be located per Figure F of the TAPs Policy.

The proposed carpark layout generally complies with BCC requirements; however, the following items are resolved with performance outcomes

Aisle Width

Within the car parking area, the aisle widths vary between 6m and 6.4m. The provision of 6m (min) aisles aligns with Section 7.4.3 (1) of the TAPS Policy, which allows for 6m aisles in car parking areas with less than 50 spaces.

Generally, the main circulation paths within the car park are 6.4m, except for the south-east aisle, which reduces to 6m. Reducing to 6m at this location allows for standard parking bays to be provided along the south-east boundary.

Ramp Gradients and Transitions

The plans have been updated to show all ramp grades. Any change in grade is limited to the straight section of ramp. No grade is proposed along the inside edge of the curve.

BCC requires maximum ramp grades of 1:6 and that transitions at any change in grade do not exceed 1:12 8.3%. The grades and transitions provided on the circulation ramps between the parking propose a maximum grade of 1:5 and maximum transition of 1:8.

These maximum grades and transitions, which are compliant with the requirements set out in AS2890.1, have been empirically tested using Autotrack software as being adequate to prevent ground clearance issues (i.e. scraping/bottoming out) for both Australian Standard B99 and B85 sized vehicles.

Parking Aisle Extension

The BCC TAPS Policy details that end aisle extensions of 2m are required. The proposed development provides a minimum 1m wide aisle extension. The proposed 1m end aisle extension is consistent with the alternative requirements detailed in AS2890.1. Based on previous experience, TTM has found that typical vehicles are able to reverse out of a standard space in a single manoeuvre with the reduced 1m aisle extension provision of AS2890.1.

On level 1, the security line is shown directly adjacent the visitor bays. To comply with BCC's TAPS Policy, it is recommended that the storage cage be removed and the visitor bay set back from the aisle. This will allow for an 8m end aisle extension to be provided, thereby complying with BCC's TAPS requirements.

4.4.3 Small Car Bay Width

EDQ have noted that bays with a width of 2.3 – 2.4m are to be classed as small car. The intent is that only bays with a width of 2.3m are to be classed as small car. A 2.4m width complies with AS2890.1 requirements for a residential bay. It is noted that these bays are accessed via a 6m (min) wide aisle, which is wider than the standard 5.8m aisle noted in AS2890.1. On this basis, manoeuvring to/from the space is not impeded.

The AS2890.1 allowance for 2.4m wide bays also considers the functionality of the bay. That is, resident bays are typically low turnover bays, with minimal need to open beyond the first door stop point.

5 Access Arrangements

Schedule 3 of the Bowen Hills PDA specifies that all access crossovers are to be designed in accordance with the BCC TAPS Policy.

Access to the site is provided via both Costin Street and Anderson Street. A total of two crossovers are provided across the two frontages. Access to the basement car park is provided via Costin Street only. Access to the ground level parking and service area is provided via Anderson Street.

The provision of two crossovers considers the site levels, and distribution of traffic across the surrounding network.

The proposed access arrangement is considered an improvement on the existing operation, whereby vehicles can reverse from the site directly to Costin Street.

Further information regarding each of the access crossovers is provided under the respective heading below.

5.1 Costin Street Access

The Costin Street access facilitates car movement to and from the basement. No service vehicles utilise this crossover. As Costin Street is one way (southbound), the access will be limited to right in / right out movements.

The proposed driveway arrangements are summarised in Table 5.1.

Table 5.1: Costin Street (North) Access Arrangements

Design Aspect	BCC Requirement	Proposed Provision	Compliance
Design Type / Width • Cars	6m – 9m, Type B2	6.2m wide, Modified Type B1	Performance Outcome
Distance from: • minor intersection • adjacent driveway	10m (min) 3m (min)	30m 6m	Complaint Complaint
Sight Distance (50kph)	90m (desirable) 70m (minimum)	150m	Compliant
Minimum Queuing Provisions	3 vehicles /18m	30m (min)	Compliant
Maximum Driveway grade	1:20 (5%) maximum within first 6m	6m at 1:20 (max)	Compliant

The proposed access arrangements generally comply with BCC requirements and are considered suitable. Further information regarding internal queueing is provided below.

Driveway Type

Council requires that a Type B2 crossover be provided. The development scheme provides for a modified Type B1.

The provision of a modified Type B1 crossover allows for the crossover to be provided adjacent the northern boundary. Further, all movements are limited to right in / right out, and therefore, splays on this crossover are largely redundant. Reduces splays also facilitate reduced conflict zones for pedestrians.

Overall, the proposed splays are considered suitable for the operation of the site.

5.2 Anderson Street Access

The Anderson Street crossover facilitates car access to the ground parking level, and service vehicle area. As Anderson Street is one way (northbound), the access will be limited to right in / right out movements.

The proposed driveway arrangements are summarised in Table 5.2.

Table 5.2: Anderson Street Access Arrangements

Design Aspect	BCC Requirement	Proposed Provision	Compliance
Design Type / Width • Car • Service Vehicle	 6m – 9m, Type B2 7m, Type B2	 6.5m, Type B2	 Compliant Performance Outcome
Distance from: • minor intersection • adjacent driveway	 10m (min) 3m (min)	 25m (min) 15m (min)	 Compliant Compliant
Sight Distance (50kph)	90m (desirable) 70m (minimum)	Clear sight lines in all direction	Compliant
Minimum Queuing Provisions	1 vehicles / 6m	0.65 cars, 4m	Performance Outcome
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:20 max for fist 6m	Compliant

The proposed access arrangements generally comply with BCC requirements and are considered suitable. Further information regarding internal queueing is provided below.

Width For Service Vehicles

The suitability for access is demonstrated as discussed in Section 7 and identified in the attached swept paths.

Queueing Provisions

The proposed queueing arrangements are under one vehicle length. However, given the very low traffic generation expected for the eight visitor bays and three car share spaces and the low, on-way, volume operating on Anderson Street. Any minor delay to inbound vehicles is expected to be infrequent and have no significant impact on external road operation.

6 Development Transport Demands

6.1 Existing Development Traffic

The site is currently occupied by approximately 3200m^2 GFA of office / commercial space.

For commercial developments, the RPDM recommends adopting a generation rate of 2vph per 100m^2 GFA. Application of this rate to the existing site equates to an approximate peak hour generation of 64vph.

Once the existing use is removed these trips will no longer occur and have therefore been deducted from future development generation.

6.2 Proposed Development Traffic Demands

6.2.1 Generation Rates

The proposed traffic generation for both the retail and residential land uses is based on historical survey data. Further information regarding the traffic generation rates is provided below under the respective headings.

Residential

The DTMR RPDM and RTA GTGD recommends, for planning purposes, adopting a peak hour traffic generation rate of between 0.2 to 0.3 trips per unit dwelling for high density residential developments.

Surveys undertaken of residential developments within the City Frame identified a traffic generation rate between 0.21 – 0.225vph per dwelling.

Based on the above, a generation rate of 0.2vph per dwelling has been applied to the site. Application of the MUD rate to the BTR scheme is considered conservative given the difference in car ownership and parking supply rate.

Application of the above rate to the scheme results in a peak hour generation of 77 vehicles (in+ out).

Retail

As no parking is provided for the retail component, no trip generation has been allowed for within this assessment.

6.2.2 Generation – Proposed Scheme

Any estimate of the traffic impacts of the proposed development should consider the net increase in traffic as a result of the development. A summary of the expected peak hour traffic generation of the site is given in Table 6.2.

Table 6.1: Existing Site Traffic Generation (Estimated)

Generation	AM Peak Hour (vph)			PM Peak Hour (vph)		
	In	Out	Total	In	Out	Total
Existing Land Uses	32	32	64	32	32	64
Proposed Development	23	54	77	54	23	77
Net Change	**-9**	**+22**	**+13**	**+22**	**-9**	**+13**

6.3 Warrants for Further Assessment

Acceptable Solution A02 of the Road Hierarchy Overlay Code details that that the development traffic impacts be quantified and mitigated for an 'assessable development for material change of use' which meets any of the following triggers:

- is classified as a major development; or
- involves an access driveway to a major road; or
- involves an access driveway within 100m of a signalised intersection.

Note: The BCC TAPS Policy defines a 'major development' as one with a total peak hour vehicle generation rate greater than 25vph.

The net increase in traffic as a result of the proposed scheme is in the order of 13vph. As such, no detailed TIA is warranted as part of this application.

7 Service Vehicle Arrangements

To assess the required service provisions for the development, TTM has deferred to the requirements as set out in the BCC's TAPS Policy.

7.1 BCC Requirements

As noted in Section 4, the proposed use is not a defined use within the BCC Planning Scheme. As such, TTM have deferred to the requirements for a MUD as indicative requirements for the BTR component of the scheme.

The retail requirements are as per Table 1 and 3 of BCC's TAPS Policy.

BTR Dwellings (Multiple Dwelling)

- Regular access for an RCV
- Occasional access for a LRV

Retail (200m^2 - 599m^2 GFA)

- Occasional access for RCV
- Loading bay for Van and MRV

7.2 Practical Demands

For the residential component of the scheme, the primary demand for service vehicles is furniture deliveries. Given that the development comprises mostly one and two bedroom dwellings, it is expected that the majority of deliveries will occur by MRV.

For the retail tenancies, it is expected that serving demands for the retail portion of the site will typically occur by van. Larger, more infrequent stock deliveries may occur by SRV.

7.3 Proposed Service Vehicle Arrangements

The development is to provide 1 x MRV/ RCV bay within the loading area. If required, an LRV can stand within the service aisle.

The proposed service vehicle provisions are expected to suitably cater for the shared demands of the proposed land uses.

The provision of shared bays is considered suitable based on Section 3.3 of the TAPS Policy, which states that "large multi-use developments with centralised service vehicles areas may require fewer service bays than the sum of the individual component requirements". Furthermore, it is stated that "if fewer service vehicle bays are proposed, satisfactory operation of the service vehicle area is to be demonstrated and supported by a

Registered Professional Engineer Queensland". As this report has been certified by an RPEQ, the proposed service vehicle arrangements are considered suitable for the expected demands of the site.

The dimensions of the service vehicle bays satisfy the minimum requirements set out in the TAPS Policy. It is recommended that bollards be installed adjacent the bay to reduce the risk of conflict between pedestrians on the path and trucks.

The grades within the service vehicle area does not exceed 1:20. The height clearance within the aisle and loading dock is a minimum 4.5m. Refer to TP221 - Section B provided at Appendix A.

Detailed swept path analysis demonstrating on-site manoeuvring is included in Appendix B.

Overall, TTM considers that the proposed on-site servicing provisions are sufficient to cater for the expected demands generated by the development.

8 Active Transport

8.1 Public Transport

The proposed development is located suitably with a high level of accessibility to the established public transport infrastructure within the area. No additional service or facilities are necessary to accommodate the development.

8.2 Pedestrian Access

Pedestrian access to the site is suitable with several pedestrian access points available along the site frontages. The development also supports the classification of Costin Street as an active transport link.

8.3 Cyclist Requirements

BCC policy requires that bicycle parking be provided at a rate of one per unit for residents, and 1 per 4 units for visitors. Due to the proposed nature of the site, and proximity to key destinations and public transport infrastructure, the bicycle requirements are considered to be excessive.

As such, TTM have referred to the bicycle parking provisions outlined in Appendix I of the Cycling Aspects of Austroads Guides. This indicates that a rate of multiple dwelling rate of 1 bicycle space per 4 units for residents and 1 space per 16 units for visitors.

The bicycle parking requirement and proposed supply are summarised in Table 8.1.

Table 8.1: Proposed Bicycle Parking Rates

Land Use	Proposed Rate	Extent	Requirement	Proposed
Resident Visitor	1 space per 4 dwellings 1 space per 16 dwellings	385 dwellings	97 24	370 62
Total				**432 spaces**

This cyclist parking supply is generally in accordance with the Austroads requirement of 1 space per 4 units, plus 1 spaces per 16 units for visitors.

Where over bonnet or storage cage bike spaces are excluded, there are:-

- 68 visitor spaces on ground level.
- 52 resident spaces on ground level
- 114 resident spaces within the basement levels.

Therefore, even where over bonnet or storage cage bike spaces for residents excluded, the development exceeds the required supply via standard bike parking spaces.

9 Summary and Conclusions

9.1 Parking Arrangements

The development is to provide a total of 220 parking spaces + 21 motorcycle spaces will be provided across the site. The spaces will be distributed across three basement levels and ground parking level. In terms of car parking allocation, it is intended that 172 parking spaces + 21 motorcycle spaces will be allocated to resident and 48 spaces allocated to visitors.

The proposed parking supply is considered suitable given:

- The intended operation of the site, including on-site management and de-coupling of spaces.
- Target market of the site
- Location of the site in proximity to public transport infrastructure,
- Parking rates approved/currently provided for BTR schemes in Brisbane, New South Wales and Victoria.

The proposed car park layout generally complies with BCC's requirements, however, a small number of Australian Standard compliant solutions (including the provision of blind aisle extensions, ramp grades/transitions) have been proposed.

The development provides a service aisle through the site. This facilitates both temporary servicing for larger vehicles, and service vehicle movement through the site.

9.2 Access Arrangements

Access to the site is provided via both Costin Street and Anderson Street. A total of two crossovers are provided across the two frontages.

Access to the basement car park is provided via Costin Street. Access to the ground parking level and service vehicle area is provided via Anderson Street.

The design of the crossovers generally complies with the requirements of the BCC TAPS Policy. Performance outcomes are sought regarding:

- Design type / width
- Driveway internal queuing (Anderson Street)

9.3 Service Vehicle Arrangements

The development is to provide a central loading area located within on the ground floor. The loading area accommodates 1 x MRV/ RCV bay. On-site loading for an LRV can be accommodated within the ground level parking aisle.

A minimum height clearance of 4.5m is to be provided within the service area.

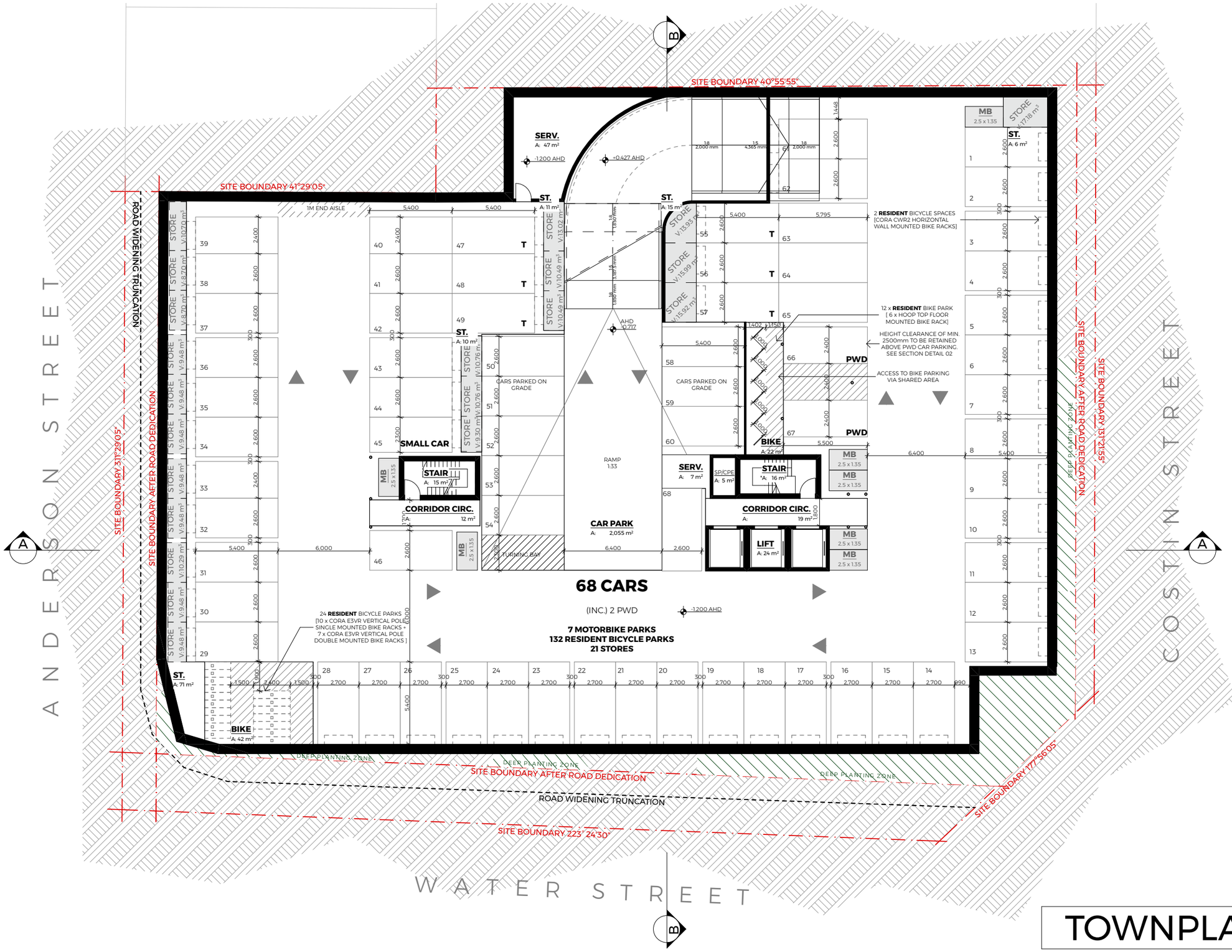
9.4 Active Transport Facilities

The current public transport infrastructure and site provisions for pedestrian/bicycle facilities is considered adequate for the development.

9.5 Conclusion

Based on the assessment contained within this report, TTM see no traffic engineering reason why the relevant approvals should not be granted.

Appendix A Development Plans



TOWNPLANNING

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10	12/7/2023	FOR TOWNPLANNING	LH	TC
11	10/11/2023	FOR TOWNPLANNING		
14	17/11/2023	FOR TOWNPLANNING	LH	TC
15	12/12/2023	FOR TOWNPLANNING	LH	TC

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PROJECT
15 ANDERSON STREET
15 ANDERSON ST FORTITUDE VALLEY QLD 4006

DRAWING TITLE
BASEMENT 03

SCALE 1:250 @A3	
DATE 13/12/2023	PLOT DATE 13/12/2023
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JOB NO. 21026	DRAWING NO. TP97
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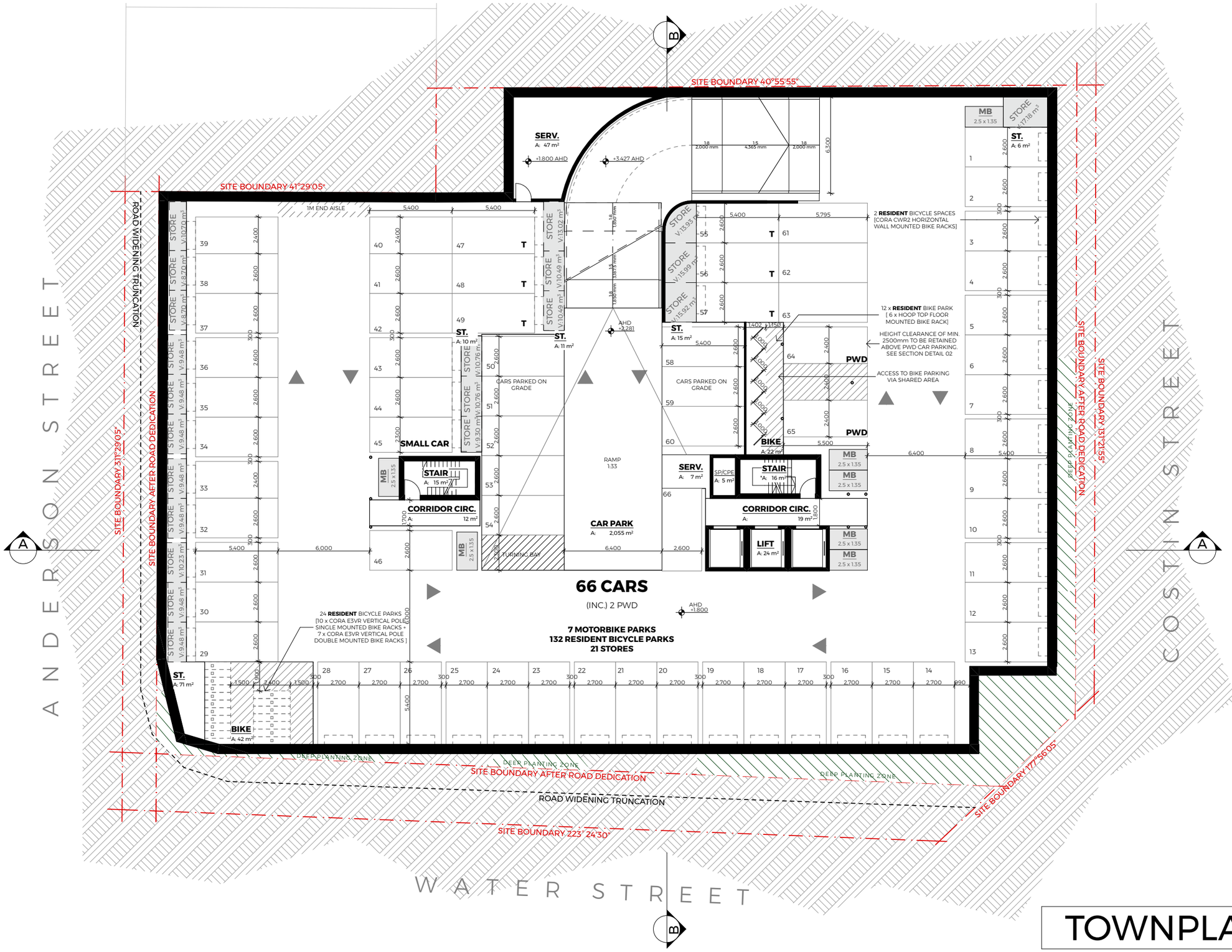

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11	10/11/2023	FOR TOWNPLANNING		
14	17/11/2023	FOR TOWNPLANNING	LH	TC
15	12/12/2023	FOR TOWNPLANNING	LH	TC

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DRAWING TITLE
BASEMENT 02

SCALE 1:250 @A3	
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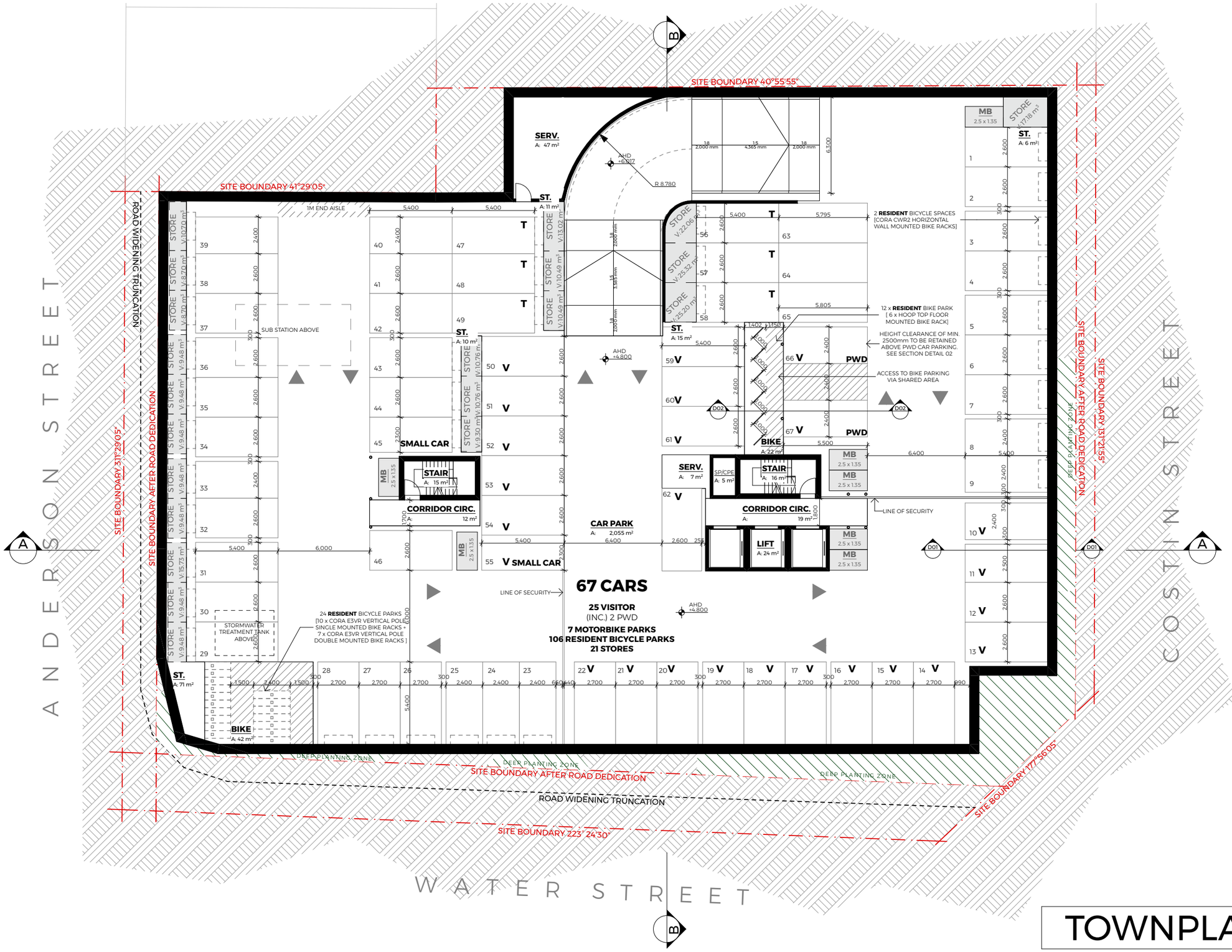

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11	10/11/2023	FOR TOWNPLANNING		
14	17/11/2023	FOR TOWNPLANNING	LH	TC
15	12/12/2023	FOR TOWNPLANNING	LH	TC

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DRAWING TITLE
BASEMENT 01

SCALE 1:250 @A3	
DATE 13/12/2023	PLOT DATE 13/12/2023
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JOB NO. 21026	DRAWING NO. TP99
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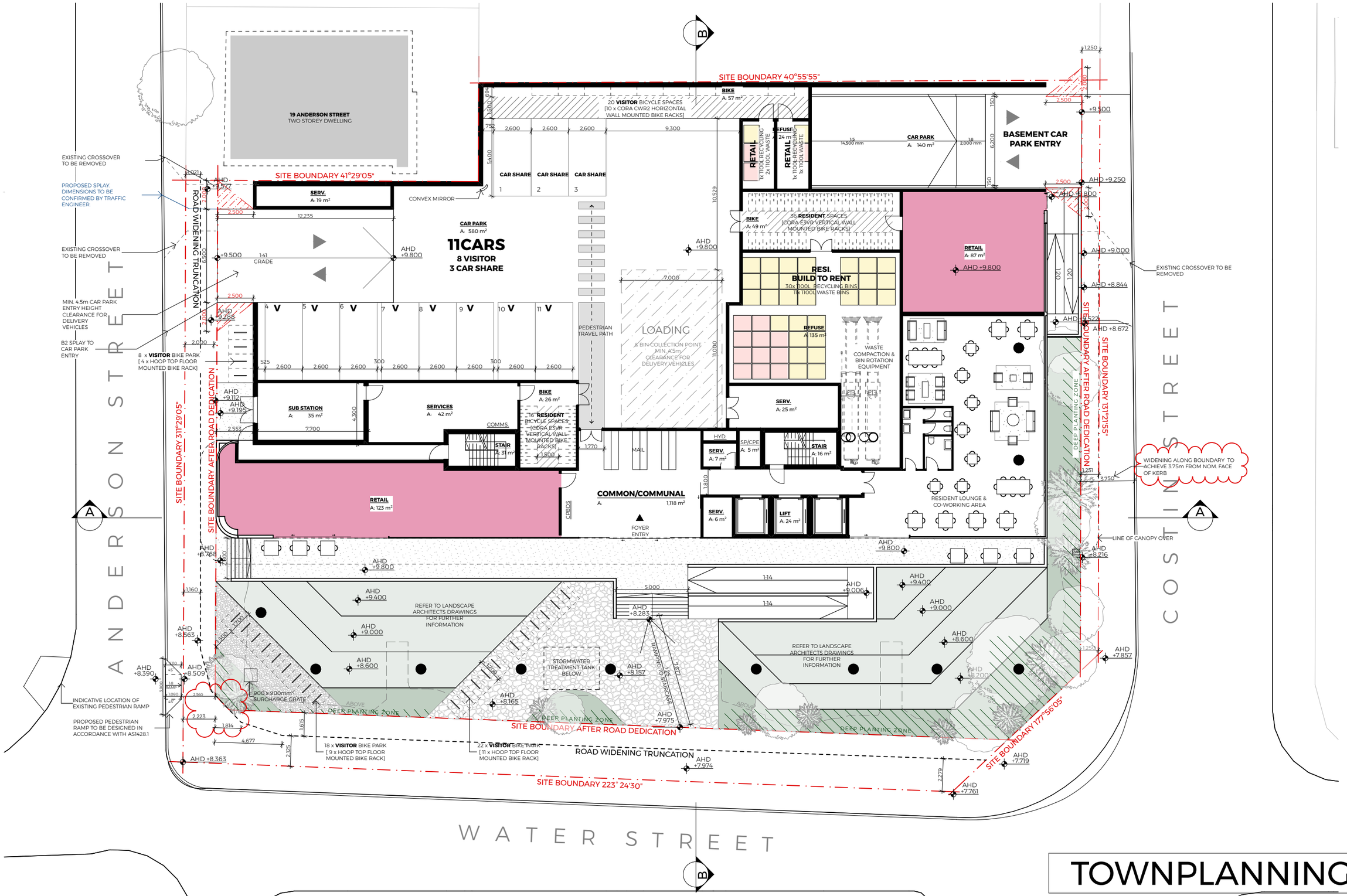

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13	10/11/2023	FOR TOWNPLANNING		
14	17/11/2023	FOR TOWNPLANNING	LH	TC
15	12/12/2023	FOR TOWNPLANNING	LH	TC

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DRAWING TITLE
GROUND FLOOR

SCALE **1:250 @A3**		
DATE **13/12/2023**	PLOT DATE **13/12/2023**	
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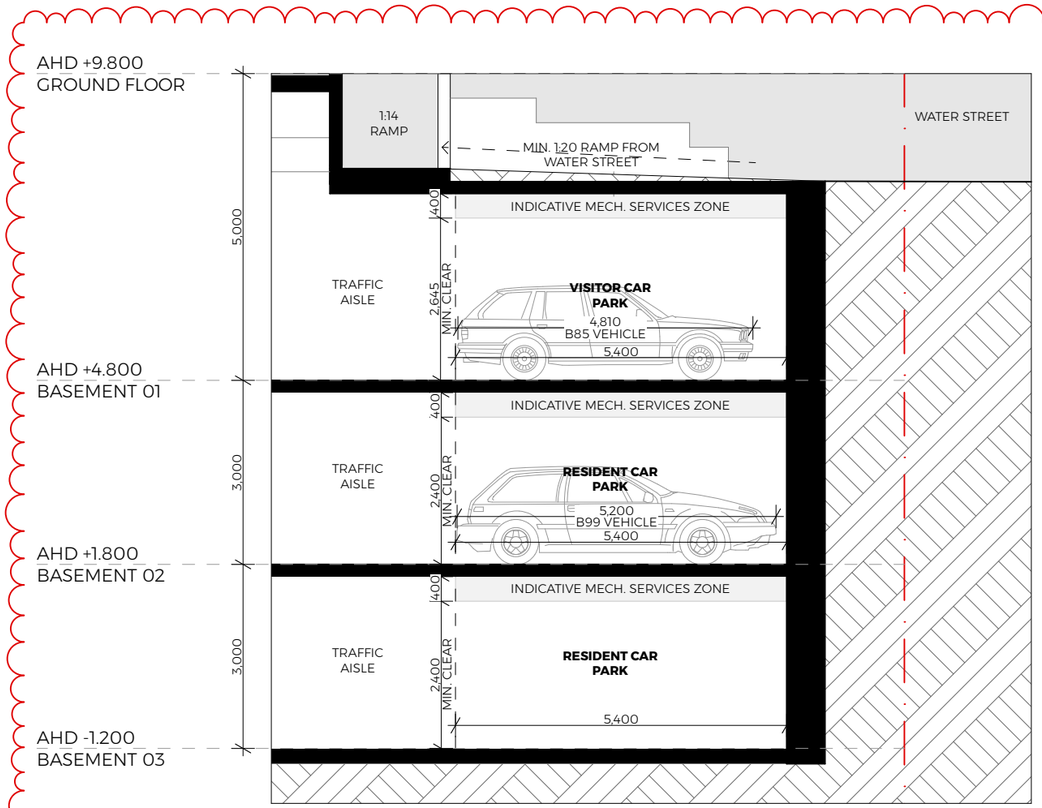

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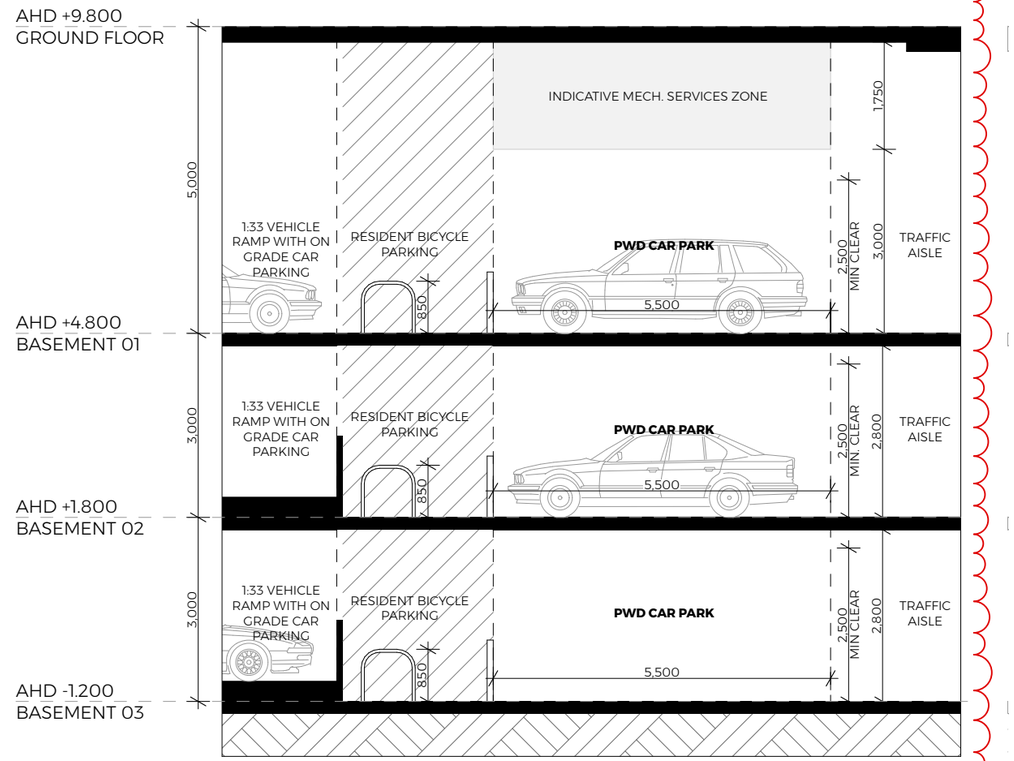

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TOWNPLANNING

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DRAWING TITLE
DETAILS

SCALE **1:100 @A3**		
DATE **17/11/2023**	PLOT DATE **17/11/2023**	
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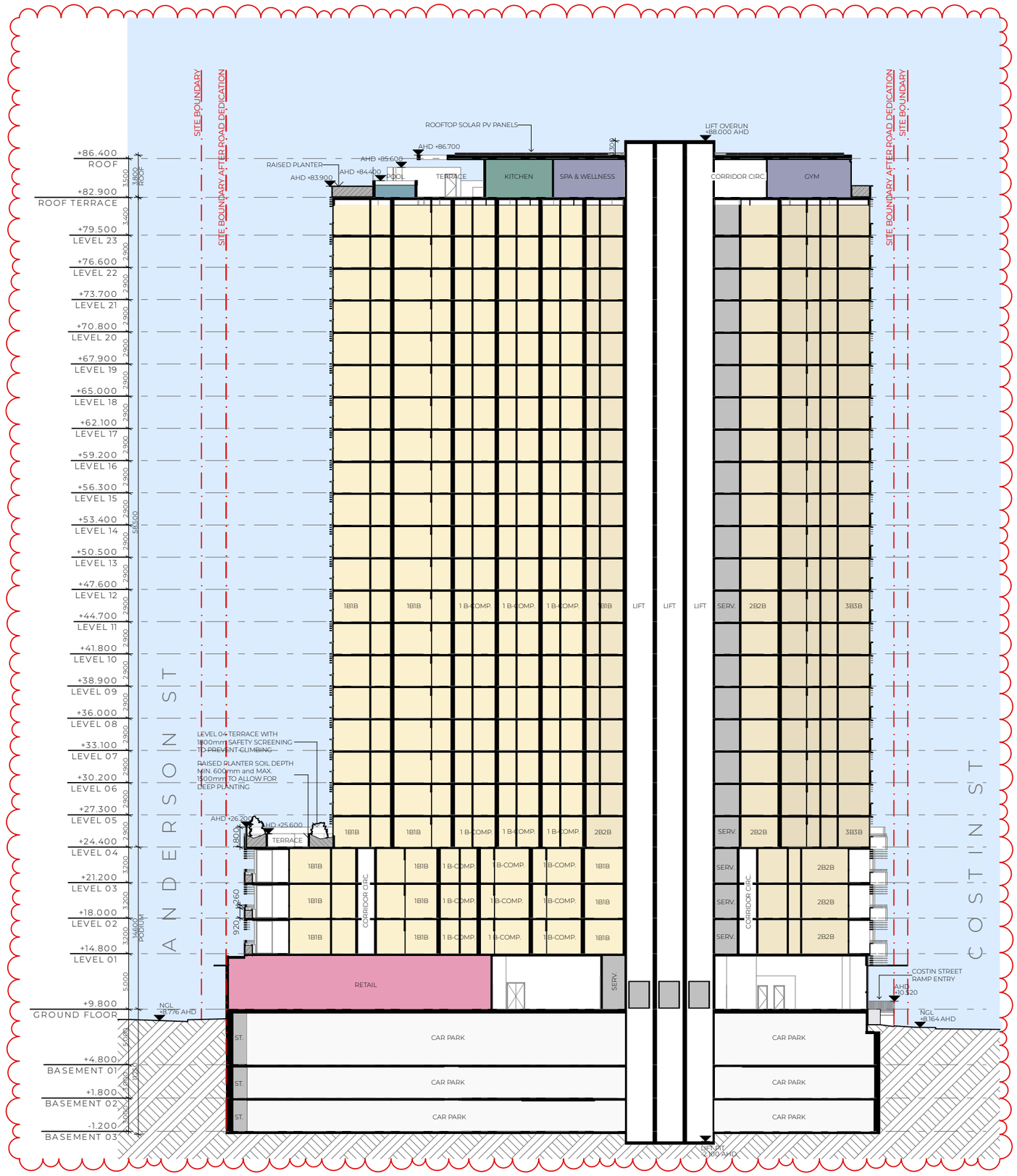

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10	12/7/2023	FOR TOWNPLANNING	LH	TC
11	10/11/2023	FOR TOWNPLANNING		
14	10/11/2023	FOR TOWNPLANNING	LH	TC

PROJECT
15 ANDERSON STREET

ADDRESS
15 ANDERSON ST
FORTITUDE VALLEY QLD
4006

DRAWING TITLE
SECTION A

DRAWING NO.
TP220

SCALE	PLOT DATE	DATE
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DRAWN **LH**	CHECKED **TC**	

JOB NO.
21026

REVISION
14

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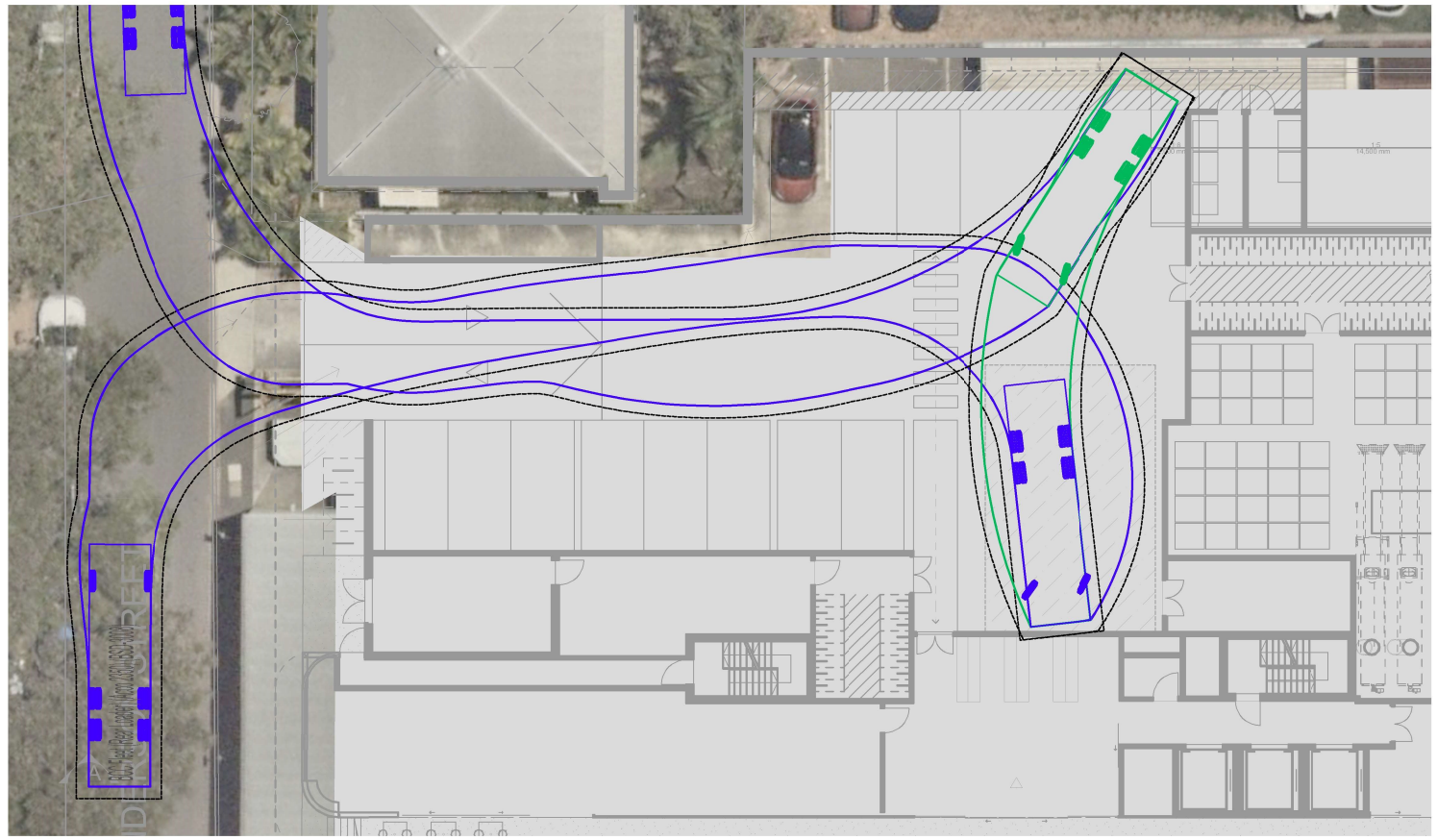
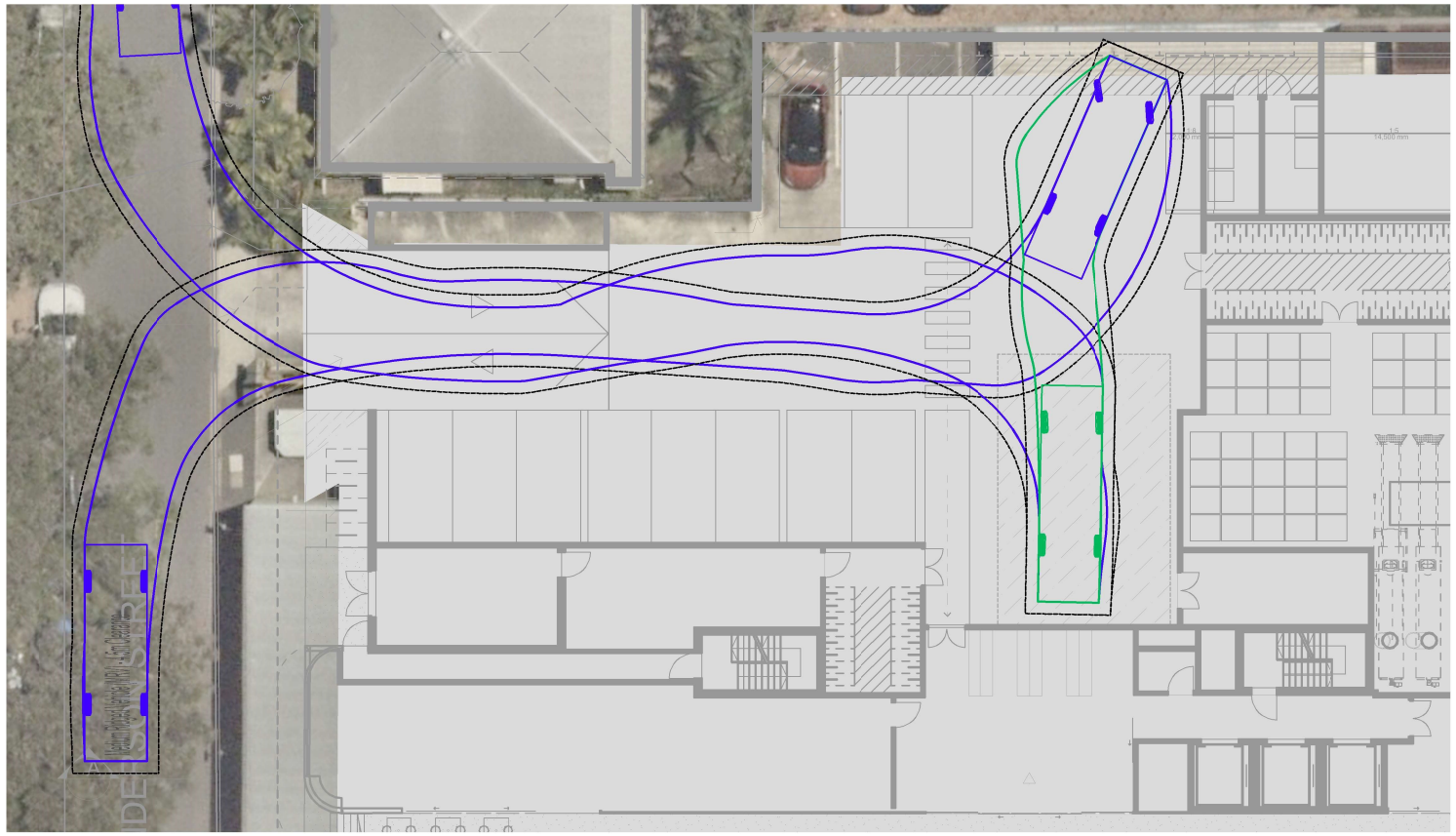
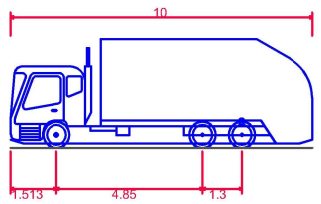
TOWNPLANNING

Appendix B TTM Swept Paths





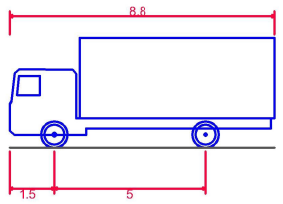
VEHICLE PROFILES



BCC Fleet (Rear Loader) (Acco 2350) (BSD-3008)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.150m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	10.147m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m

VEHICLE PROFILES



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m

PRELIMINARY ADVICE ONLY

22 November 2023

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	22-11-23	ORIGINAL ISSUE	JB	JB	JB

SCALE: NOT TO SCALE

NORTH

CLIENT: TAL GP PROJECTS NO. 2

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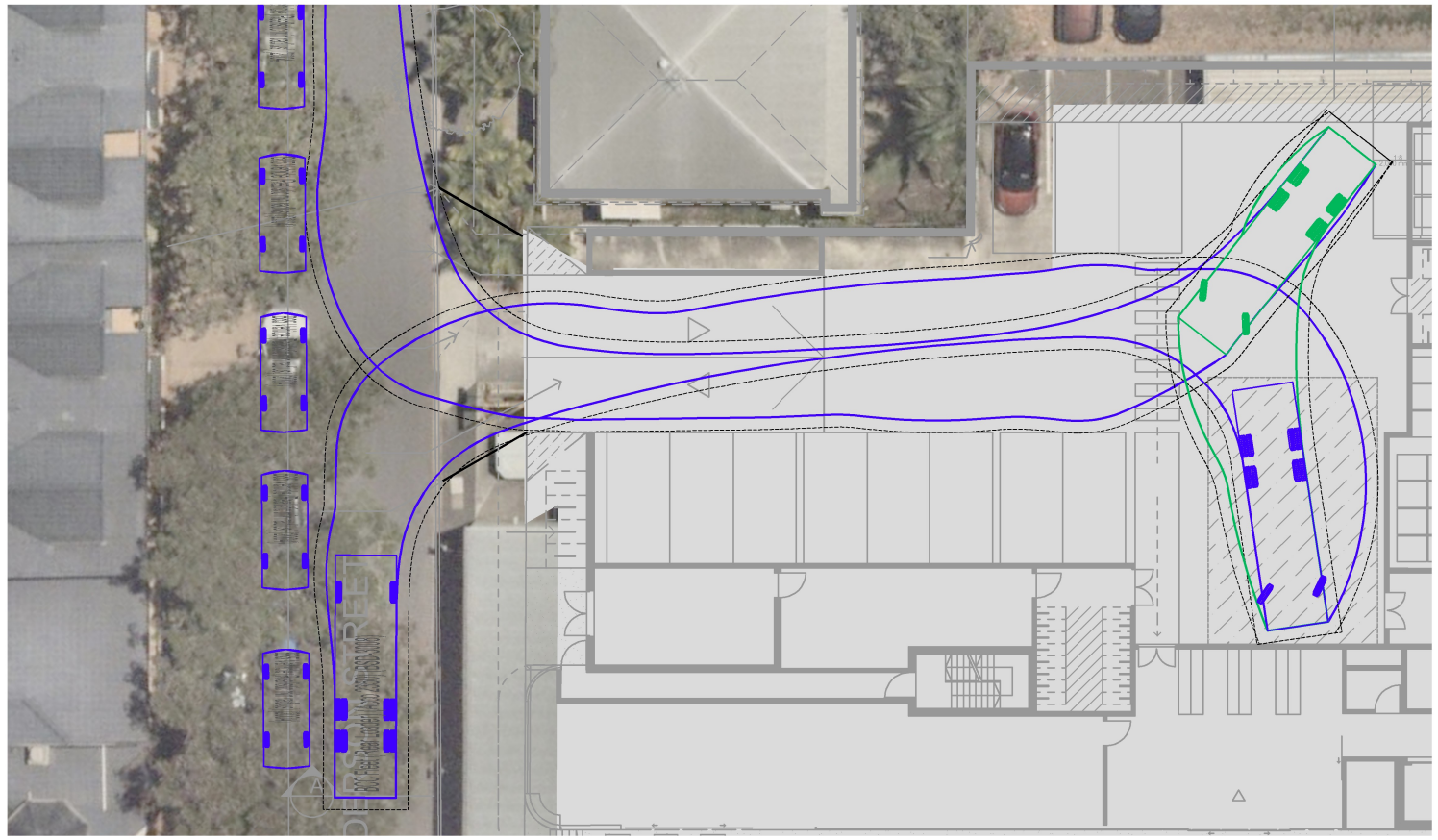
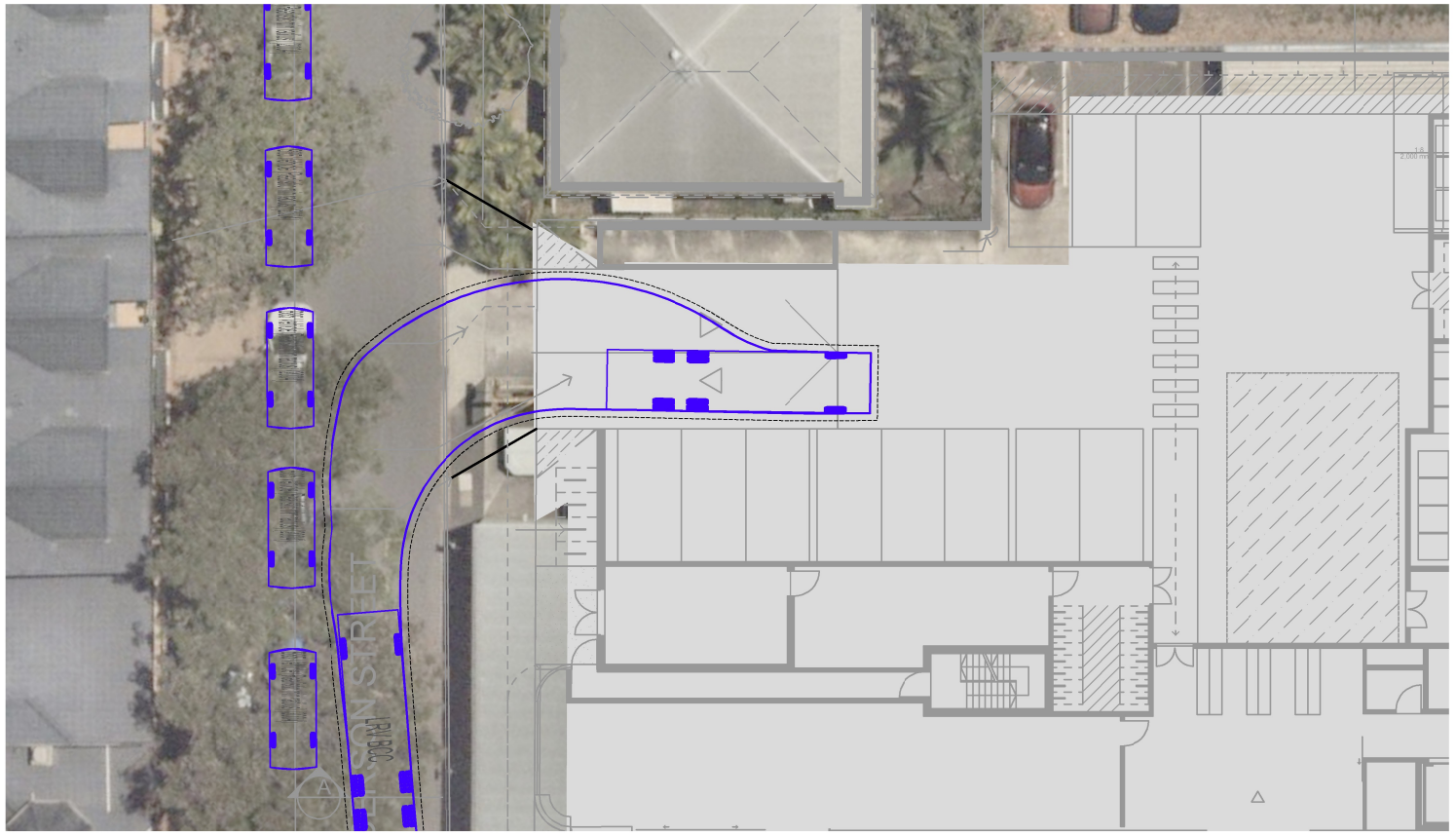
PROJECT: **15 Anderson Road, Fortitude Valley**

DRAWING TITLE: **TTM SWEPT PATH ANALYSIS**
RCV AND MRV PATHS

PROJECT NUMBER	21BRT0794
ORIGINAL SIZE	A3
DRAWING NUMBER	21BRT0794-01
REVISION	A
DATE	22 Nov 2023
SHEET	1 OF 1



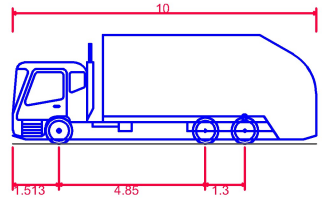


DIRECTOR

SIMON CRANK RPEQ 18360

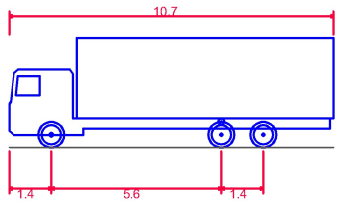
APPROVED 8 Dec 2023

VEHICLE PROFILES



BCC Fleet (Rear Loader) (Acco 2350) (BSD-3008)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.150m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	10.147m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m



LRV BCC

Overall Length	10.700m
Overall Width	2.450m
Overall Body Height	3.623m
Min Body Ground Clearance	0.419m
Track Width	2.450m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.000m
Design Speed Forward	5.0km/h
Clearance Envelope	0.5m

PRELIMINARY ADVICE ONLY

8 December 2023

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	08-12-23	COUNCIL RESPONSE	JB	SC	SC
A	22-11-23	ORIGINAL ISSUE	JB	JB	JB

0 SCALE 4 8 12 16

SCALE 1:300 AT ORIGINAL SIZE

NORTH

CLIENT

TAL GP PROJECTS NO. 2

TTM CONSULTING PTY LTD

ABN 65 010 868 621

LEVEL 8, 369 Ann Street, BRISBANE QLD 4000

P.O. BOX 12015, BRISBANE QLD 4003

T: (07) 3327 9500 F (07) 3327 9501

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PROJECT

15 Anderson Road, Fortitude Valley

DRAWING TITLE

TTM SWEPT PATH ANALYSIS

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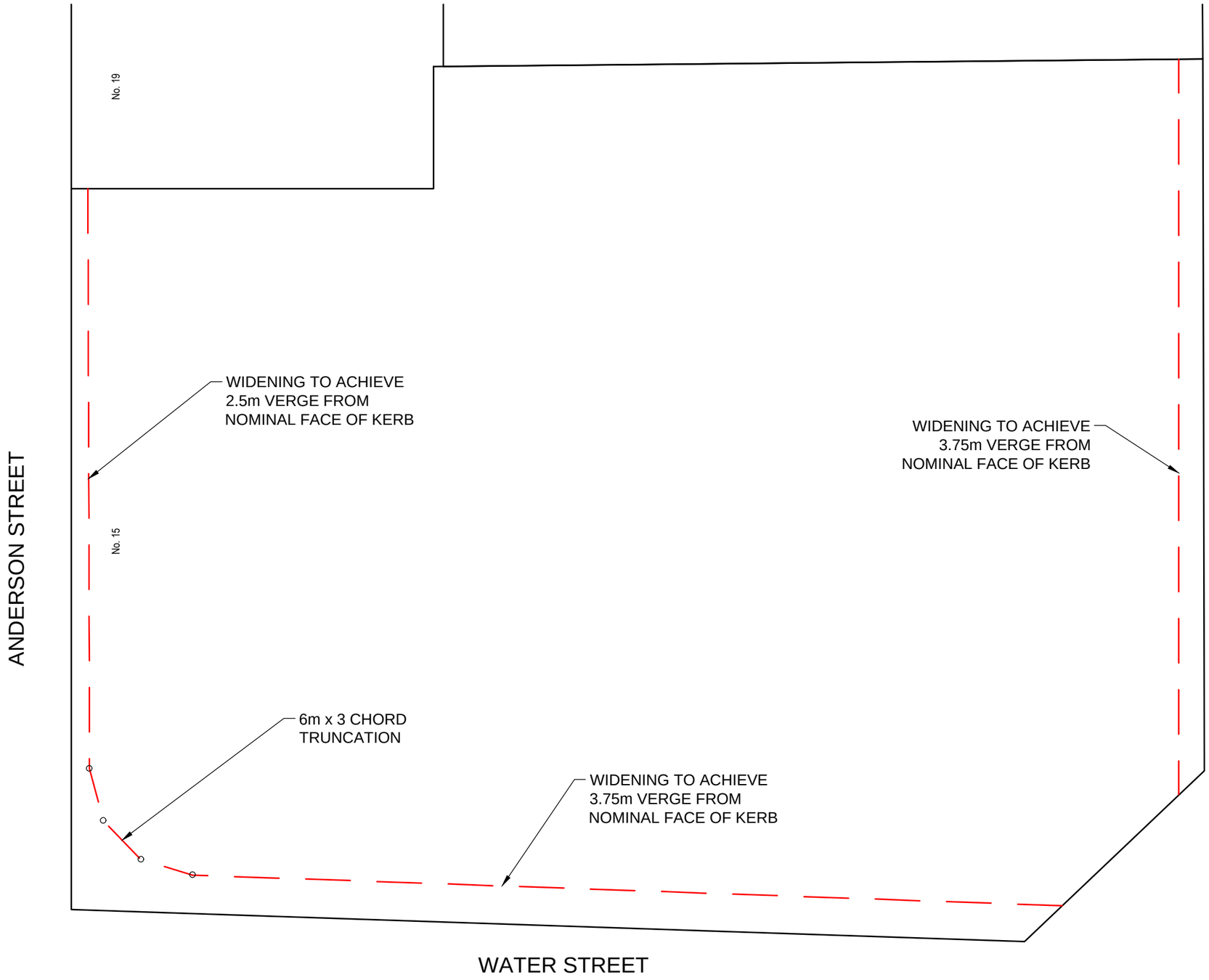
Appendix C Road Widening



GENERAL NOTES

G1 THE PROPOSED PROPERTY BOUNDARY SHOWN IS TYPICALLY FOR EDGE OF VERGE. IN SOME CASES, ADDITIONAL WIDENING MAY BE REQUIRED IF BATTERS NEED TO BE ACCOMMODATED IN ROAD RESERVE.

G2 THE CITY PLAN STREETSCAPE HIERARCHY OVERLAY MAY REQUIRE VERGES TO BE WIDER THAN THOSE PROVIDED FOR IN THIS DRAWING.

LEGEND

EXISTING PROPERTY BOUNDARY

PROPOSED PROPERTY REQUIREMENT

Transport Planning & Operations

Brisbane City Council

MAILING ADDRESS:
GPO Box 1434
Brisbane Qld 4001

Brisbane Square
266 George Street
Brisbane, Q 4000

Telephone: 07- 3403 8888

Dedicated to a better Brisbane

-2.5 0 2.5 5.0 7.5 10

ORIGINAL SCALE 1:250

EXISTING CADASTRE AND ROAD RESERVE INFORMATION:
GIS DATA / SURVEY / FIELD MEASUREMENT / AERIAL PHOTOGRAPHY / DEPARTMENT OF NATURAL RESOURCES AND MINES

ROAD CORRIDOR
ANDERSON STREET

SUBURB(S)
FORTITUDE VALLEY

TITLE
ROAD WIDENING PLAN
15 ANDERSON STREET

ROAD WIDENING PLAN AUTHORISED FOR ISSUE D.H. DATE: 17.01.22	ORIG. SIZE A3
ROAD PLANNING NOTE REFERENCE RPN704/1, 705, 6271/2, 639	**SCALE** 1:250
BRAMS CODE PN060, PN580	**SHEET NO.** 1 OF 1
CONCEPT DESIGN NUMBER RC16257	ISSUE 1

Jan 17, 2022 - 9:40am G:\BI\TPS\188 TRAFF_TRANS\590 Planning\0\Road Corridor Preservation\Projects\RC16257 - Anderson StreetDesign\TPS - Design - Anderson Street.dwg