

# Transport Engineering Report

120 Montague Road, South Brisbane

Proposed Mixed-Use Development (Residential and Centre Activities)

On behalf of Stockwell





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## Revision Record

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| 4.  |             |                           |                   |            |

## Contents

|                                                        |           |
|--------------------------------------------------------|-----------|
| <b>1. Introduction .....</b>                           | <b>6</b>  |
| 1.1. Purpose .....                                     | 6         |
| 1.2. Scope.....                                        | 6         |
| <b>2. Site Location and Environment .....</b>          | <b>8</b>  |
| 2.1. Site Context .....                                | 8         |
| 2.2. Existing Road Network .....                       | 10        |
| 2.3. Public Transport Facilities and Services.....     | 10        |
| 2.4. Active Transport Facilities .....                 | 11        |
| 2.5. Transport Planning .....                          | 12        |
| 2.6. Montague Road Improvements .....                  | 13        |
| <b>3. The Proposed Development.....</b>                | <b>18</b> |
| <b>4. Parking Arrangements .....</b>                   | <b>19</b> |
| 4.1. Car Parking Provision.....                        | 19        |
| 4.2. Car Parking Layout.....                           | 20        |
| 4.3. Internal Manoeuvring Assessment.....              | 21        |
| 4.4. External Circulation Manoeuvring Assessment ..... | 22        |
| <b>5. Access Arrangements .....</b>                    | <b>23</b> |
| 5.1. Oxford Street Access .....                        | 23        |
| 5.2. Montague Road Access .....                        | 23        |
| <b>6. Service Vehicle Arrangements.....</b>            | <b>25</b> |
| <b>7. Active Transport .....</b>                       | <b>26</b> |
| 7.1. Pedestrians.....                                  | 26        |
| 7.2. Bicycle Parking.....                              | 26        |
| <b>8. Site Travel Environment.....</b>                 | <b>28</b> |
| 8.1. Existing Traffic Volumes .....                    | 28        |
| 8.2. Assessment Year and Traffic Growth.....           | 28        |
| 8.3. 2039 Base Traffic Volumes .....                   | 29        |
| 8.4. Traffic Generations.....                          | 30        |
| 8.5. Trip Assignment.....                              | 31        |
| 8.6. Traffic Network Diagrams.....                     | 31        |

|                                                  |           |
|--------------------------------------------------|-----------|
| <b>9. Traffic Impact Assessment .....</b>        | <b>33</b> |
| 9.1. Extent of Assessment .....                  | 33        |
| 9.2. SIDRA Analysis .....                        | 33        |
| 9.3. Net Delay Assessment .....                  | 38        |
| <b>10. Summary and Conclusions .....</b>         | <b>39</b> |
| 10.1. Proposed Development.....                  | 39        |
| 10.2. Parking Arrangements.....                  | 39        |
| 10.3. Access Arrangements .....                  | 39        |
| 10.4. Service Vehicle Arrangements.....          | 39        |
| 10.5. Traffic Impact Assessment .....            | 40        |
| 10.6. Conclusion .....                           | 40        |
| <b>Appendix A Development Plans.....</b>         | <b>41</b> |
| <b>Appendix B Colliers Drawings .....</b>        | <b>42</b> |
| <b>Appendix C Traffic Network Diagrams .....</b> | <b>43</b> |
| <b>Appendix D SIDRA Output Reports.....</b>      | <b>44</b> |
| <b>Appendix E Network Delay.....</b>             | <b>45</b> |
| <b>Appendix F Code Responses .....</b>           | <b>46</b> |

## Table Index

|                                                                              |    |
|------------------------------------------------------------------------------|----|
| Table 2-1: Surrounding Road Hierarchy .....                                  | 10 |
| Table 4-1: TAPS PSP Car Parking Supply Requirement .....                     | 19 |
| Table 4-2: Parking Design Requirements .....                                 | 20 |
| Table 5-1: Access Arrangements .....                                         | 23 |
| Table 7-1: TAPS PSP Bicycle Parking Supply Requirement .....                 | 26 |
| Table 8-1: Trip Generation .....                                             | 30 |
| Table 9-1: SIDRA Network Performance Summary – Project Year 2029 .....       | 34 |
| Table 9-2: SIDRA Network Performance Summary – Design Horizon 2039 .....     | 36 |
| Table 9-3: Intersection Delay Comparison for Brereton St / Boundary St ..... | 38 |

## Figure Index

|                                                                                                          |    |
|----------------------------------------------------------------------------------------------------------|----|
| Figure 2-1: Subject site location relative to the surrounding road network (Source: Nearmap, 2026) ..... | 8  |
| Figure 2-2: Subject Site Aerial Imagery (Source: NearMap, 2026) .....                                    | 9  |
| Figure 2-3: Zoning map (Source: Brisbane City Plan 2014) .....                                           | 9  |
| Figure 2-4: BCC Bicycle Network Overlay .....                                                            | 12 |
| Figure 2-5: Plan Road Corridor project (Source: BCC LGIP) .....                                          | 13 |
| Figure 2-6: Future Proposed Montague Road Corridor .....                                                 | 14 |
| Figure 9-1: SIDRA Generated Layout of assessed sites .....                                               | 34 |

# 1. Introduction

## 1.1. Purpose

**Colliers International Engineering and Design (TTMC) Pty Ltd** has been engaged by Stockwell to prepare a Transport Engineering Report for a mixed-use development located at 120 Montague Road, South Brisbane (the subject site).

This report supports a development application to the Minister for Economic Development Queensland (MEDQ) for a mixed-use development comprising residential apartments, centre activities and associated car parking.

The purpose of this report is to assess the transport, access, parking and traffic impacts associated with the proposed development and to demonstrate that the proposal can be accommodated safely and efficiently within the surrounding transport network.

## 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.
- Identifying the service vehicle needs for the site.
- Reviewing access to a suitable level of public and active transport provisions.
- Identification of likely traffic volumes and traffic distribution from the development.
- Identification of likely traffic impacts of development on the surrounding road network.

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

- Provisional Priority Development Area (PPDA) for Precinct 3 – Montague Road
- Brisbane City Council Planning Scheme (City Plan 2014), specifically:
  - Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP)
  - Transport, Access, Parking and Servicing Code (TAPS Code)
  - Refuse Planning Scheme Policy (Refuse PSP)

- Road Hierarchy Overlay Code
- Bicycle Network Overlay Code
- Australian Standards for Parking Facilities (AS2890 series), specifically:
  - Part 1: Off-street car parking (AS2890.1:2004)
  - Part 2: Off-street commercial vehicle facilities (AS2890.2:2018)
  - Part 3: Bicycle parking facility (AS2890.3:2015)
  - Part 6: Off-street parking for PWD (AS2890.6:2022)
- Transport for NSW South Wales 'Guide to Transport Impact Assessment' (TfNSW GTIA), 2024
- Department of Transport and Main Roads 'Guide to Traffic Impact Assessment' (GTIA), 2018

**Section 10** of this report includes the summary of the findings and conclusions.

## 2. Site Location and Environment

### 2.1. Site Context

The subject site is located at 120–122 Montague Road, South Brisbane, as shown in Figure 2-1 and Figure 2-2.

The site has frontage to:

- Montague Road along the northern boundary
- Oxford Street along the southern boundary

The land comprises multiple parcels, including Lot 50 on RP885764, Lot 52 on RP10840, and Lot 1 on RP95549.

The site is one portion of a wider contiguous industrial land use between Montague Road and Boundary Street. It is expected that future development will occur across these adjacent sites. Recognising this, the proposed development provides access along the sites southern and eastern boundary to potentially allow shared accessibility in the future.

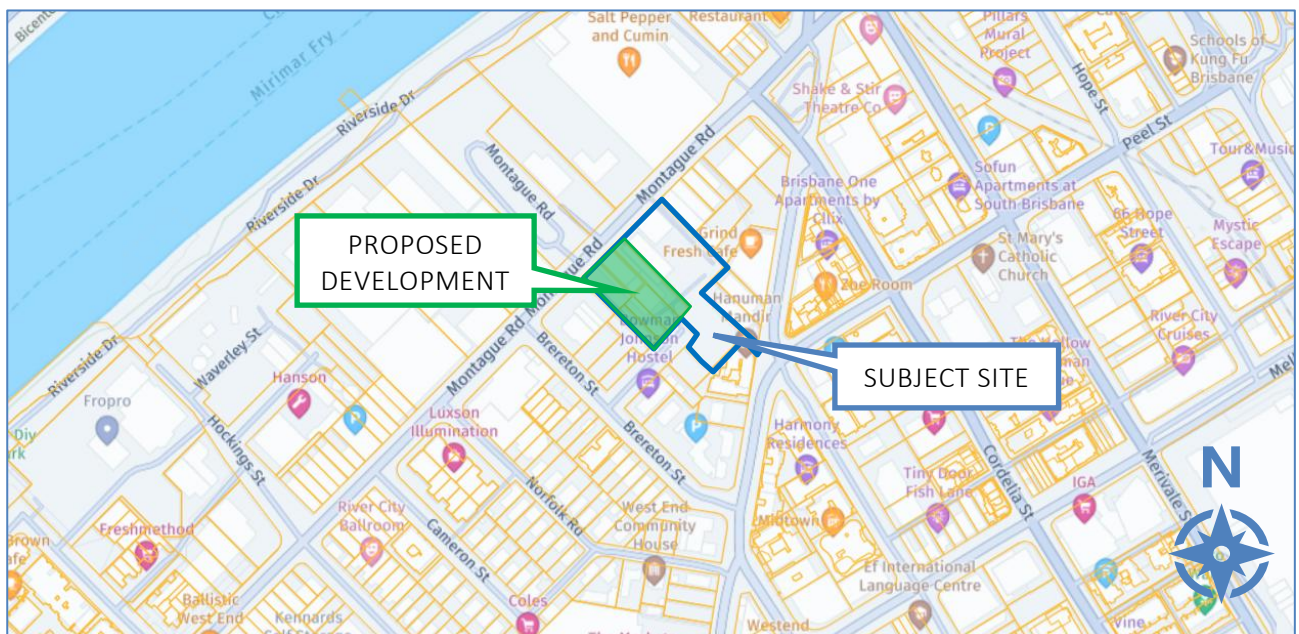


Figure 2-1: Subject site location relative to the surrounding road network (Source: Nearnap, 2026)



Figure 2-2: Subject Site Aerial Imagery (Source: NearMap, 2026)

Under *Brisbane City Plan 2014*, the site is located within the 'Principal Centre (City Centre)', as shown in Figure 2-3.

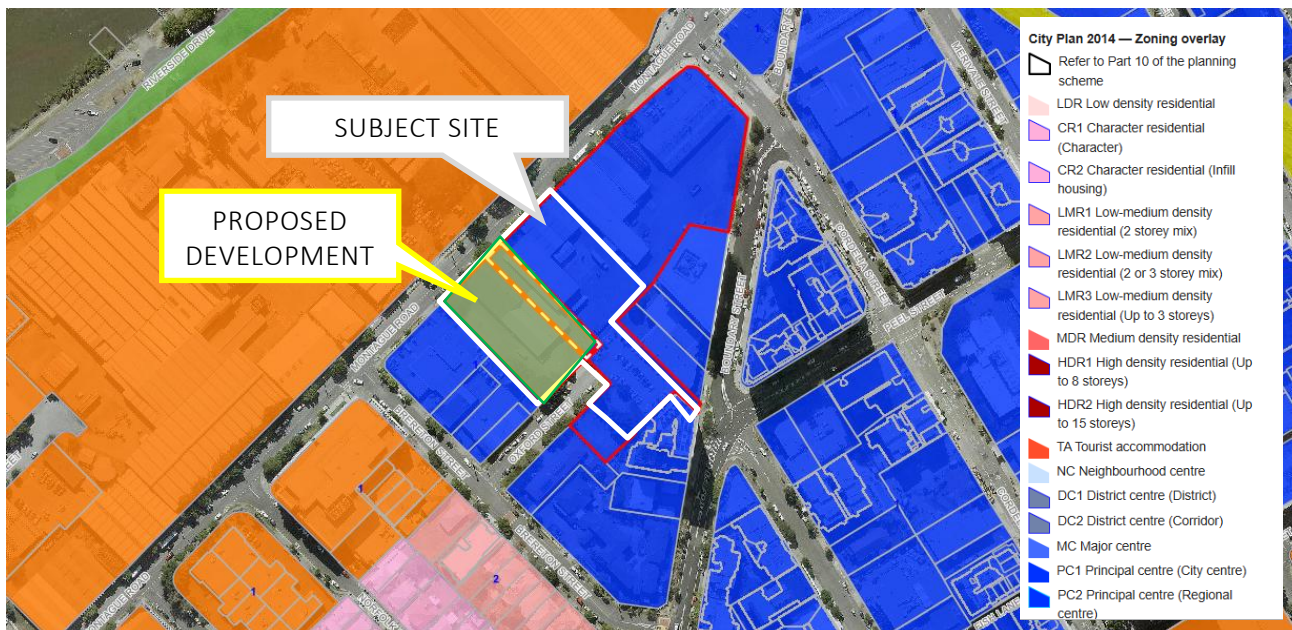


Figure 2-3: Zoning map (Source: Brisbane City Plan 2014)

## 2.2. Existing Road Network

The hierarchy and characteristics of roads in the immediate vicinity of the site are shown in Table 2-1.

Table 2-1: Surrounding Road Hierarchy

| Road            | Speed Limit | Road Configuration |                   |                                                               | Category           | Authority |
|-----------------|-------------|--------------------|-------------------|---------------------------------------------------------------|--------------------|-----------|
|                 |             | Reserve Width      | Carriageway Width | Lane Configuration                                            |                    |           |
| Cordelia Street | 60kph       | ~ 19m              | ~12m              | 2 traffic lanes, two-way with turning lanes at intersections. | Arterial           | BCC       |
| Montague Road   | 50kph       | ~ 20m              | ~13m              | 2 traffic lanes, two-way with dedicated kerbside parking.     | District Road      | BCC       |
| Brereton Street | 40kph       | ~ 20m              | ~12m              | 1 traffic lane, two-way with Kerbside parking allowed.        | Neighbourhood Road | BCC       |
| Boundary Street | 50kph*      | ~ 20m              | ~ 12m             | 2 traffic lanes, two-way with kerbside parking allowed.       | District Road      | BCC       |
| Oxford Street   | 50kph*      | ~ 20m              | ~ 8m              | 1 traffic lane, two-way with Kerbside parking allowed.        | Local Street       | BCC       |

\*Default speed limit on unsigned roads in built-up areas in Queensland.

## 2.3. Public Transport Facilities and Services

### 2.3.1. Train Services

South Brisbane Railway Station and South Bank Railway Station are located within close proximity to the subject site. South Brisbane Station is located approximately 900m north-east of the site, equating to approximately a 10 to 12 minute walking distance.

Roma Street Station is located approximately 700 m north-east of the site and represents the closest major railway station to the subject site. South Bank Station is located approximately 1.2km to the east, equating to approximately a 15-minute walking distance.

These stations form part of the Queensland Rail network and are serviced by a number of lines, including the Beenleigh, Cleveland, Gold Coast and Ferny Grove lines.

These services provide direct connections to the Brisbane CBD, surrounding suburbs and regional destinations. These rail services operate daily, with high frequency services during weekday peak periods and regular services throughout off-peak periods and weekends.

In addition, Roma Street Station and Milton Station are also within a reasonable walking distance of the site. The Brisbane CBD is also accessible on foot, further enhancing access to a broader range of transport services, including intercity and regional connections and improving the overall level of public transport accessibility and connectivity available to the development.

Overall, the proximity of these stations provides a high level of public transport accessibility and regional connectivity for the subject site.

### 2.3.2. Bus Services

The 'Montague Road near Brereton Street (Stop 5)' bus stop is located on Montague Road, approximately 150m to 200m south of the subject site. This equates to about a 2 to 3-minute walking distance.

The 'Montague Road near Brereton Street (Stop 5)' bus stop is serviced by the Route 198.

Route 198 runs between Brisbane City and West End, servicing South Brisbane and surrounding inner-city suburbs. This service operates daily, with high service frequencies during weekday peak periods and regular services throughout the day.

Additional bus stops are located along Boundary Street and Melbourne Street, approximately 300m to 600m from the subject site. This equates to about a 4 to 8-minute walking distance.

Overall, the site benefits from convenient access to bus services.

### 2.4. Active Transport Facilities

A review of Google Street View and Nearmap imagery indicates that pedestrian footpaths are provided along both sides of Montague Road, Cordelia Street and Boundary Street in the vicinity of the subject site. These footpaths provide continuous pedestrian connections to surrounding land uses, including residential developments, commercial areas and public transport facilities.

A review of Brisbane City Council's Bicycle Network Overlay indicates that Montague Road, Cordelia Street and Boundary Street are identified as 'Secondary Cycle Routes'. The primary cycle route is Riverwalk, which runs parallel to Montague Road, approximately 180m northwest of the site.

Figure 2-4 shows that dedicated bicycle lanes are not consistently provided along surrounding streets. This requires local cyclist trips on these roads to share traffic lanes with vehicle. Non-local trips typically bypass these roads, operating along the primary Riverwalk route.

The surrounding cycle and pedestrian network provide connections to the broader active transport network, including links to South Bank, West End, Milton and the Brisbane CBD. Key pedestrian connections are also facilitated via the Go Between Bridge and Kurilpa Bridge, which provide high-quality links between West End, South Bank and the Brisbane CBD.

Overall, the subject site is well served by pedestrian and cycle infrastructure. This supports safe and convenient active transport access.



Figure 2-4: BCC Bicycle Network Overlay

## 2.5. Transport Planning

A review of Brisbane City Council's Local Government Infrastructure Plan (LGIP) mapping confirms that the subject site is affected by a future road corridor upgrade along Montague Road (LGIP Item SBR-RC-001). This project seeks to upgrade the corridor between Mollison Street and Merivale Street to a four-lane arterial standard within the planning horizon of 2026–2031, to accommodate projected growth within the South Brisbane and West End precincts.

A response to this road provisions is discussed in Section 2.6 of this report.

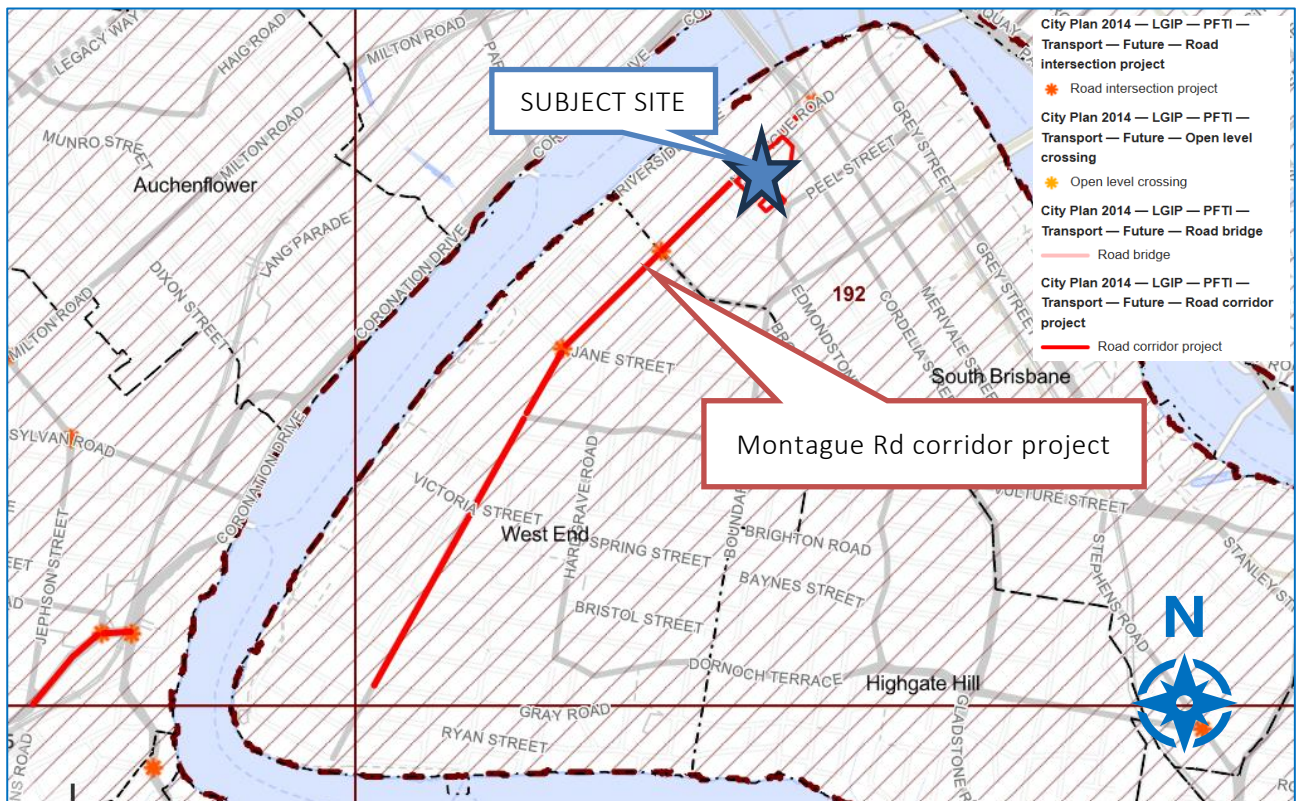


Figure 2-5: Plan Road Corridor project (Source: BCC LGIP)

## 2.6. Montague Road Improvements

The LGIP identifies the preferred planning outcome for Montague Road as a 4 lane road that services a combination of site access, movement and local activation.

### Proposed Road Corridor Outcome

The proposed development provides a 3.1 m setback along the Montague Road frontage. This will ensure the development does not prejudice a future potential road reserve width of approximately 26.4 m.

The adopted ultimate cross-section comprises:

- A 3.2 m central median, accommodating turning movements
- Two (2) traffic lanes in each direction (3.3 m each)
- 5.0 m verges on both sides, consistent with a 'Centre Street Major' streetscape outcome

This cross section is demonstrated in Figure 2-6.

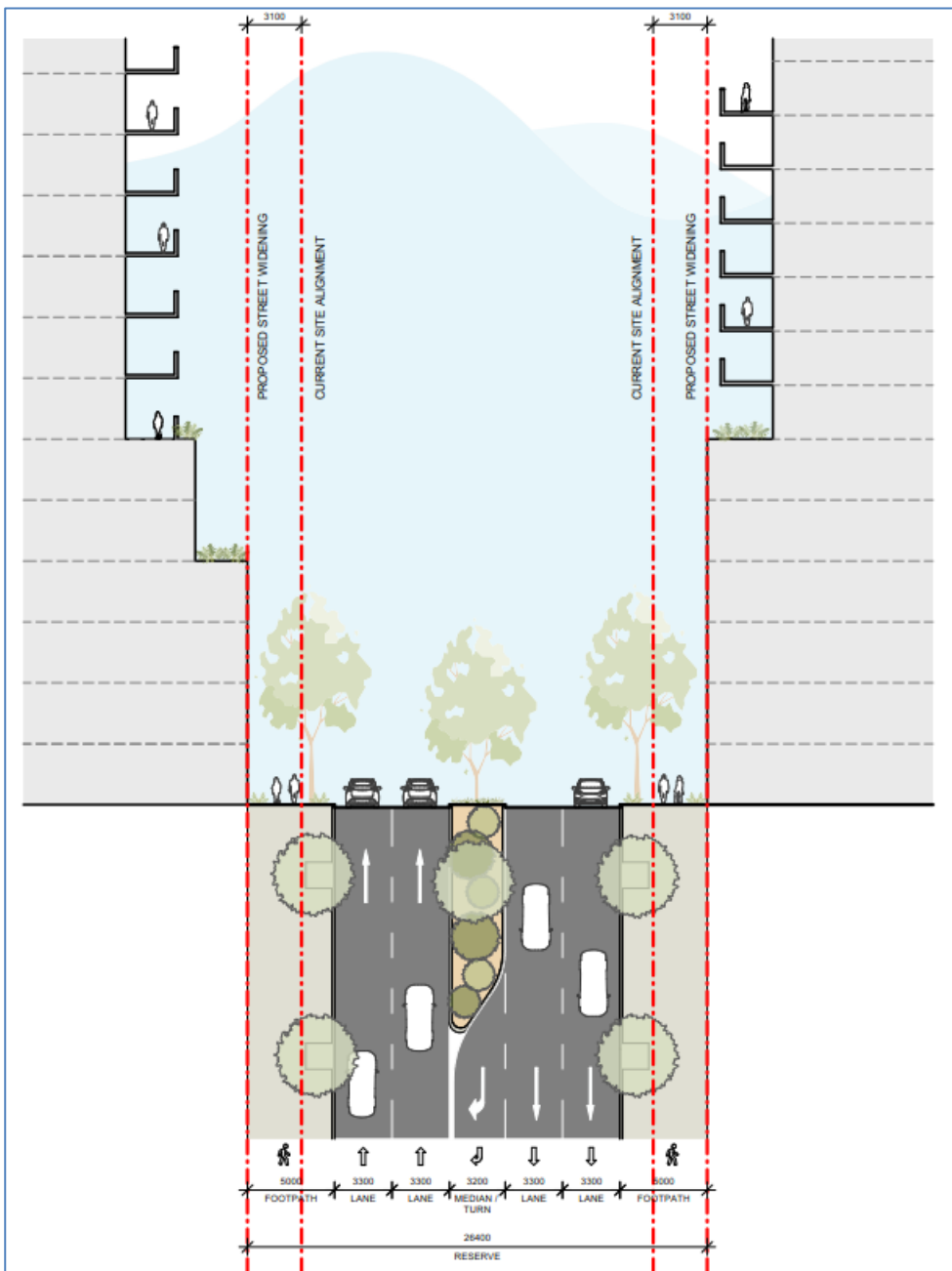


Figure 2-6: Future Proposed Montague Road Corridor

This configuration represents a balanced and context-responsive solution, achieving both transport capacity and high-quality urban design outcomes.

#### Appropriateness of the 26.4 m Corridor Width

The proposed 26.4 m corridor width is appropriate, sufficient and strategically aligned with the intended function of Montague Road, for the following reasons:

##### 1. Alignment with LGIP Intent

The LGIP identifies the corridor upgrade as a four-lane road, which is fully accommodated within the proposed cross-section.

The configuration supports necessary:

- Through traffic capacity
- Turning movements
- Active transport and verge functions

Importantly, the LGIP does not prescribe an outcome requiring a materially wider corridor to achieve its infrastructure intent.

## **2. Balanced Movement and Place Function**

Montague Road operates within a highly urbanised inner-city environment, where its role extends beyond a movement corridor to include:

- Active frontages and mixed-use development
- Significant pedestrian activity
- Public transport integration
- Cycling movement and urban streetscape functions

The proposed 26.4 m corridor achieves an appropriate balance between movement and place, by:

- Delivering required traffic capacity
- Providing generous verge space (5.0 m) for pedestrians, landscaping and services
- Avoiding excessive corridor widening that would:
  - Diminish streetscape quality
  - Increase crossing distances for pedestrians
  - Reduce development activation at the frontage

## **3. Consistency with Established Urban Outcomes**

The proposed corridor width is:

- Consistent with recent and approved developments along Montague Road, which have delivered similar frontage dedications
- Reflective of an emerging and coordinated corridor outcome, rather than a fragmented or ad hoc widening approach

- Reflective of the existing arrangement of modern developments along Montague Road (such as 144 Montague Road)

Requiring additional corridor width beyond 26.4 m would:

- Introduce inconsistency along the corridor
- Potentially sterilise developable land unnecessarily
- Impact development yields and housing delivery outcomes
- Undermine coordinated precinct planning outcomes

#### **4. Infrastructure Efficiency and Deliverability**

The 26.4 m corridor:

- Efficiently accommodates:
  - Four traffic lanes
  - Median
  - Verge and streetscape functions
- Provides sufficient flexibility for:
  - Auxiliary turning lanes (within verge/median adjustments)
  - Bus stop integration
  - Cycling facilities (on-road or within verge allocation)

A wider corridor, as suggested by reference to standard drawing BSD-1022, represents a generic maximum envelope, not a mandatory requirement. Its application should be context-sensitive, particularly in constrained inner-urban environments.

Given the proposed corridor already accommodates the LGIP road function, further widening would not deliver a commensurate public benefit.

#### **5. Flexibility for Future Design Evolution**

The proposed cross-section provides sufficient flexibility for future detailed design refinement, including:

- Adjustment of lane widths
- Allocation of cycling infrastructure
- Integration of public transport upgrades

Accordingly, the 26.4 m corridor does not constrain future infrastructure delivery and maintains adaptability within the transport network.

## Response to Potential Wider Corridor Requirement

While Council has identified the possibility of a wider corridor consistent with BSD-1022, it is important to note that:

- BSD-1022 represents a standardised cross-section, not a mandatory outcome
- Its application should be tempered by local context, particularly:
  - High-density urban conditions
  - Established development patterns
  - Place-based outcomes
  - Publicly accessible information regarding the proposed corridor widening and its intended purpose is limited.

In this case, a wider corridor would:

- Over-provision for anticipated demand
- Conflict with the desired urban street typology
- Deliver limited additional transport benefit relative to its impacts
- Be an isolated solution given existing and recent projects.

## Conclusion

The proposed 26.4 m ultimate road corridor width:

- Is fully consistent with the LGIP-identified four-lane corridor upgrade
- Achieves an appropriate balance between transport function and urban amenity
- Aligns with recent development outcomes and corridor-wide planning consistency
- Provides sufficient capacity and flexibility for future transport infrastructure upgrades
- Avoids unnecessary and disproportionate land dedication and impact on housing delivery.

On this basis, the proposed land dedication and resultant corridor width represent a sound, efficient and contextually appropriate outcome, and it is considered that no further widening beyond 26.4 m is warranted or justified.

### 3. The Proposed Development

The proposed development comprises a mixed-use development located at 120 Montague Road, South Brisbane.

This report supports a Development Application to Development Application to the Minister for Economic Development Queensland (MEDQ) for a mixed-use development comprising residential apartments, centre activities and associated parking.

The proposed development comprises:

- a residential tower development
- podium levels accommodating centre activities, car parking and building services
- basement and podium car parking levels
- communal open space and rooftop recreational areas

The development includes a total of 299 residential dwellings, comprising a mix of:

- 46 one-bedroom units
- 115 two-bedroom units
- 92 three-bedroom units
- 46 four-bedroom units

The development also includes approximately 1,080m<sup>2</sup> of centre activities floor space.

Vehicular access to the site is provided from Montague Road and Oxford Street, with the primary access to parking and servicing provided via Oxford Street. Secondary access is provided to Montague Road. A portion of the site circulation, external to the building footprint, will connect Oxford Street to Montague Road. This circulation area has been designed to accommodate traffic from the wider development area as part of the shared access to the wider site.

A total of 398 car parking spaces is provided within the development to service residents and visitors.

**Appendix A** includes a copy of the architectural plans, prepared by Archipelago.

## 4. Parking Arrangements

### 4.1. Car Parking Provision

The car parking supply for the proposed development has been assessed against *Table 13* of the Brisbane City Plan 2014 (Transport, Access, Parking and Servicing Planning Scheme Policy), as the site is located within the City Core parking area.

Table 4-1: TAPS PSP Car Parking Supply Requirement

| Land Use / Component           | TAPS PSP Requirement                        | Extent                   | Requirement       | Provision         |
|--------------------------------|---------------------------------------------|--------------------------|-------------------|-------------------|
| Multiple Dwelling (Residents): |                                             |                          |                   | 372 spaces        |
| • 1 Bedroom                    | 0.5 space/dwelling (max)                    | 46 units                 | 23 spaces         |                   |
| • 2 Bedrooms                   | 1.0 spaces/dwelling (max)                   | 115 units                | 115 spaces        |                   |
| • 3 Bedrooms                   | 1.5 spaces/ dwelling (max)                  | 92 units                 | 138 spaces        |                   |
| • 4 bedrooms                   | 2.0 spaces/ dwelling (max)                  | 46 units                 | 92 spaces         |                   |
| Multiple Dwelling (Visitors)   | 1 visitor space for every 20 dwelling units | 299 units                | 15 spaces         | 26 spaces         |
| Shop                           | 1 spaces/200m <sup>2</sup> GFA (max)        | 1,080 m <sup>2</sup> GFA | 6 spaces          |                   |
| <b>Total</b>                   |                                             |                          | <b>389 spaces</b> | <b>398 spaces</b> |

The proposed development requires 389 parking spaces. A total of 398 spaces is provided on site.

The development provides parking that generally aligns with the maximum parking requirement, exceeding the residential maximum by less than 2%. The proposed parking provision is therefore sufficient and consistent with the intended outcomes of the Brisbane City Plan.

#### Accessible Parking

PWD parking requirements relate to visitor parking under the Brisbane City Plan 2014 Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP).

The TAPS PSP identifies the following requirements for PWD parking:

- A provision rate of 1 PWD space for every 50 'ordinary' parking spaces (minimum 1 space).
- Multiple dwellings with more than 10 units must provide at least one visitor parking space designed for people with a disability.
- PWD spaces must be located as close as practicable to building entrances.

Reference has been made to the National Construction Code (NCC) 2022 Clause D4D6 – Accessible carparking to determine the accessible parking requirements for the proposed development.

The proposed development comprises Class 2 (residential apartments), Class 6 (centre activities) and Class 7a (car parking areas) building classifications under the NCC.

Under Clause D4D6, Class 6 buildings are required to provide one (1) accessible parking space for every 50 car parking spaces, or part thereof.

The proposed development includes approximately 1,080m<sup>2</sup> of centre activities floor space and provides a shared pool of visitor and commercial parking spaces as identified on the architectural plans included in Appendix A. Applying the NCC requirement results in the 1 accessible parking space demand.

Accordingly, a minimum of one (1) accessible parking space is required and designed in accordance with AS2890.6.

The PWD parking space is provided within the podium car park (Plaza level) and are located close to building access points. The spaces are designed in accordance with AS2890.6. The proposed PWD parking provision complies with the TAPS PSP.

## 4.2. Car Parking Layout

The proposed carparking layout considers the relevant requirements of the current TAP PSP. Table 4-2 identifies the characteristics of the proposed parking layouts with respect to the TAPS PSP design provisions.

Table 4-2: Parking Design Requirements

| Design Aspect                                                                                                                                            | TAPS PSP Provision                                                  | Proposed Provision                                        | Compliance                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------|
| Parking space length: <ul style="list-style-type: none"> <li>Resident space</li> <li>Visitor space</li> <li>PWD space</li> </ul>                         | 5.4m (min)<br>5.4m (min)<br>5.4m (min)                              | 5.4m<br>5.4m<br>5.4m                                      | TAPS PSP Compliant<br>TAPS PSP Compliant<br>TAPS PSP Compliant                         |
| Parking space width: <ul style="list-style-type: none"> <li>Resident space</li> <li>Visitor space</li> <li>Small car space</li> <li>PWD space</li> </ul> | 2.6m (min)<br>2.6m (min)<br>2.3m (min)<br>2.4m + 2.4m 'Shared Area' | 2.4m to 2.6m<br>2.6m<br>2.5m<br>2.4m + 2.4m 'Shared Area' | Alternative Solution<br>TAPS PSP Compliant<br>TAPS PSP Compliant<br>TAPS PSP Compliant |
| Aisle Width: <ul style="list-style-type: none"> <li>Parking aisle</li> <li>Circulation road/ramp (one-way, &lt;20m)</li> </ul>                           | 6.2m (min)<br>3.0m (min) + clearance to walls                       | 6.2m (min)<br>3.0m +0.3m clearance to walls               | TAPS PSP Compliant<br>TAPS PSP Compliant                                               |
| Parking envelope clearance                                                                                                                               | Located as per Figure F of TAPS PSP                                 | Located outside of design envelope                        | TAPS PSP Compliant                                                                     |
| Maximum Gradient: <ul style="list-style-type: none"> <li>PWD parking</li> <li>Parking aisle</li> <li>Ramp</li> </ul>                                     | 1:40 (2.5%)<br>1:20 (5.0%)<br>1:6 (16.7%)                           | Flat<br>Flat<br>1:8 (maximum)                             | TAPS PSP Compliant<br>TAPS PSP Compliant<br>TAPS PSP Compliant                         |
| Maximum Gradient Transitions                                                                                                                             | No greater than 5% (or demonstrate with ground clearance template)  | 1:8 (12.5%)<br>1:8 (12.5%)                                | TAPS PSP Compliant<br>TAPS PSP Compliant                                               |

| Design Aspect                                                                             | TAPS PSP Provision                               | Proposed Provision                                       | Compliance                               |
|-------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------|------------------------------------------|
| Blind Aisle Extension                                                                     | 2.0m extension to aisle width beyond final space | Minimum 0.9m extension beyond the last car parking space | Alternative Solution                     |
| Height Clearance:                                                                         |                                                  |                                                          |                                          |
| <ul style="list-style-type: none"> <li>General Minimum</li> <li>Over PWD space</li> </ul> | 2.3m<br>2.5m                                     | 2.3m<br>>2.5m                                            | TAPS PSP Compliant<br>TAPS PSP Compliant |

<sup>1</sup> TAPS PSP is silent with regards to this matter, so revert to AS2890.1 as per Section 1.2 of the TAPS PSP.

<sup>2</sup> TAPS PSP is silent with regards to this matter, so revert to AS2890.3 as per Section 1.2 of the TAPS PSP.

The development parking layouts are generally consistent with the provisions of the TAPS PSP and Australian Standards. The following items are identified with suitable alternative solutions to allow the site to operate appropriately.

### Parking Space Width

The plan of development typically identifies 2.4m wide spaces. However, the location and spacing of columns will typically allow the majority of parking spaces shown to be provided at 2.6m wide. This will result in a combination of parking spaces widths, between 2.4m wide and 2.6m wide. The minimum parking dimensions exceed the AS2890.1 requirements and therefore providing a small proportion of parking spaces within the site as narrower than Council requirements, but still fit for purpose, is considered a suitable outcome for the site.

### Aisle Extensions

Several aisle have an end extension between 0.9m and 1.2m. These are generally consistent with the AS2890.1 requirements for a 1m extension. Furthermore, swept path analysis of end aisle parking manoeuvres typically demonstrate the design vehicles for parking areas are typically unable to utilise more than a 750mm aisle extension when exiting a spaces. As such, the adoption of this standard is considered suitable. There are also points on the lower levels where the 2m aisle extension is replaced by an 8m wide aisle to allow for manoeuvring.

## 4.3. Internal Manoeuvring Assessment

A vehicle manoeuvring assessment of the access and parking layout has been undertaken in accordance with AS2890.1:2004. The assessment considers a B85 vehicle (4.9m length) and a 5.2m Large Car (B99).

The B85 vehicle represents a typical passenger car, while the B99 vehicle represents a larger design vehicle used to assess constrained manoeuvring areas. The assessment includes:

- Access movement checks using B85 and B99 vehicles
- Manoeuvring within the most constrained dead-end parking areas using a B99 vehicle
- Internal ramp assessment to confirm vehicle circulation between levels

**Appendix B** includes the swept path assessment drawings. The assessment confirms that:

- Vehicles can safely enter and exit the site
- The most constrained parking areas can be accessed and exited by a B99 vehicle
- Internal ramps provide safe and efficient vehicle circulation between levels

The proposed layout provides sufficient space for safe and efficient car manoeuvring and is appropriate for the development.

#### **4.4. External Circulation Manoeuvring Assessment**

The circulation road within the site to provide connection from Oxford Street to Montague Road has been tested to accommodate an MRV, RCV and fire appliance design vehicles (see Appendix B). This is to ensure that a suitable degree of circulation is provided for the largest design vehicle to operate around this development. This will allow potential future development for the wider site to operate on the internal roads.

## 5. Access Arrangements

Vehicular access to the development is provided from both Oxford Street and Montague Road. The design intends to provide the primary access to the site from Oxford Street, catering for approximately 60% of the car park access for the site. This access is also expected to cater for the majority of service vehicle movements, including all ingress to the site and the majority of egress. Service vehicle would only be expected to exit to Montague Road in the event they utilise the loading area on the external circulation road to the south of the building. This is the expected service vehicle area for emergency services and delivery vehicles to the non-residential uses. It is further noted that in the event the wider development is complete, this is expected to include an additional access to Boundary Road. Once this connection is established, there will be no requirement for service vehicles to exit to Montague Road. As such, the function of service vehicle exit is expected to be temporary.

### 5.1. Oxford Street Access

The primary access is provided from Oxford Street, which accommodates access to the basement and podium car parking as well as service vehicle and refuse collection movements. This access will be formed by a 9 m wide driveway, providing direct access from the Oxford Street carriageway into the development site. Vehicles will use this as a straight-through movement within the site; however, as the access interfaces with a public road, standard driveway design considerations such as width, sight distance and safety remain applicable. The access road grade will be consistent with Oxford Street and operate at approximately 1:20. Stockwell has a live Road Closure application currently under assessment to close the portion of Oxford street that adjoins the site boundary, which will see the road converted to a private internal road.

### 5.2. Montague Road Access

A secondary access is provided from Montague Road, which caters for passenger vehicles and supports the active frontage along this street. This access connects directly to the internal car park and private circulation areas of the development, primarily servicing residents and visitors rather than general public through traffic. It is noted that this access will be the only crossover to Montague Road for the future potential wider site. This will therefore replace several existing crossovers to Montague Road.

This access will be provided as a standard concrete driveway crossover arrangements have been assessed against the Brisbane City Plan 2014 Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP) and AS2890.1:2004. The assessment is summarised in Table 5-1. This assessment considers that the access as proposed will cater for approximately 40% of development traffic (equivalent to 160 on-site spaces) and will provide egress only for service vehicles.

Table 5-1: Access Arrangements

| Design Aspect                                                                                                                              | TAPS PSP Provision                                      | Proposed Provision                   | Compliance                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------|----------------------------------------------------------------|
| Width / Crossover Type to accommodate: <ul style="list-style-type: none"> <li>Cars</li> <li>Service vehicles</li> </ul>                    | 9.5m wide Type C1<br>12m wide Type C2                   | 6m wide Type B2                      | Alternative Solution                                           |
| Distance from: <ul style="list-style-type: none"> <li>Major intersection</li> <li>minor intersection</li> <li>adjacent driveway</li> </ul> | 30m (min)<br>20m (min)<br>15m (min)                     | 150m<br>75m<br>25m                   | TAPS PSP Compliant<br>TAPS PSP Compliant<br>TAPS PSP Compliant |
| Sight Distance                                                                                                                             | 90m (desirable)<br>70m (minimum)                        | >200m both directions                | TAPS PSP Compliant                                             |
| Driveway Pedestrian Sight Splays                                                                                                           | 2.0m wide x 5.0m deep (on each side)                    | 2.0m wide x 2.5m deep (on each side) | Alternative Solution                                           |
| Minimum Queuing Provisions <sup>1</sup>                                                                                                    | 7 plus 1% of capacity over 250 spaces (rounded upwards) | 21m                                  | Alternative Solution                                           |
| Maximum Driveway grade                                                                                                                     | 1:20 (5%) maximum within first 6m                       | 1:12                                 | Alternative Solution                                           |

The proposed access arrangements comply with the requirements of the TAPS PSP with respect to their location in the road environment. This ensures suitable sight distance and separation from external conflict points.

The design of the access is provided as an alternative solution. This is consistent with the Special design standards in the City core, as stated in Section 4.10 to The TAPS PSP. The access is provided significantly narrower than generally required under the Council requirements. This is considered suitable on the basis this access will cater for less than 50 vehicle per hour and service vehicles will only exit to this location.

The reduced width is compatible with creating a pedestrian friendly, shared road environment, by minimising the crossing width and therefore the conflict zone for pedestrians. The gradient is also consistent with the maximum allowed for a downward grade towards the road, as per BSD 2025.

The queuing of 3 cars is also sufficient, given that less than 15 inbound vehicles per hour are expected to enter the site at this location.

The access points will operate safely and efficiently and are appropriate for the scale and nature of the development.

## 6. Service Vehicle Arrangements

Servicing requirements for the proposed development have been assessed in accordance with the Brisbane City Plan 2014 Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP).

Servicing and waste collection for the development will be undertaken via the Oxford Street access.

The development is designed to accommodate the following service vehicles:

- Medium Rigid Vehicle (MRV) with an overall length of 8.8 m
- Rear loader Refuse Collection Vehicle (RCV) with an overall length of 10.2 m

A dedicated on-site loading bay is provided to accommodate servicing and refuse collection activities.

Swept path assessment confirms that the nominated vehicles can safely enter the site, manoeuvre within the loading area and exit the site in a forward direction.

A fire appliance (pumper) has also been considered as part of the design. This vehicle is classified as an emergency vehicle and is not a servicing requirement under the TAPS PSP. Emergency vehicle access will be addressed separately as part of the building and fire engineering design.

Overall, the proposed servicing arrangement is appropriate for the scale and nature of the development and complies with the intent of the TAPS PSP.

## 7. Active Transport

### 7.1. Pedestrians

Pedestrian access to the development is provided via dedicated building entrances from both Montague Road and Oxford Street frontages.

Footpaths are provided along both frontages, offering safe and convenient access to the site. Pedestrian access points are separated from vehicle access locations to minimise potential conflicts and improve safety.

To support multiple transport modes, the Montague Road frontage incorporates an active transport connection. The driveway will operate as an internal circulation road on community title. It will operate as a low-speed internal access road, allowing cyclists to utilise the access environment. This operates in parallel with a dedicated pedestrian path, providing clear separation between pedestrian and vehicle movements and enabling a continuous pedestrian connection to Montague Road from the Oxford Street side of the development.

Additional internal pathways connect the Montague Road access to Oxford Street along the southern edge of the site. These connections integrate the development with the surrounding pedestrian and cycling network and provide an active frontage consistent with a Centre Street Major streetscape. The arrangement enhances connectivity and permeability within the local area.

### 7.2. Bicycle Parking

The bicycle parking supply requirements for the proposed development land uses have been determined in line with Table 21 of the TAPS PSP.

Table 7-1 provides a summary of the bicycle parking supply requirements in line with the TAPS PSP, and the proposed provisions, for the development scheme.

Table 7-1: TAPS PSP Bicycle Parking Supply Requirement

| Land Use / Component          | TAPS PSP Requirement   | Extent               | Requirement       | Provision                 |
|-------------------------------|------------------------|----------------------|-------------------|---------------------------|
| Multiple Dwelling (Residents) | 1 space per unit       | 299 units            | 299 spaces        | Included within total     |
| Multiple Dwelling (Visitors)  | 1 space per 4 units    | 299 units            | 75 spaces         |                           |
| Centre Activities (Employees) | 1 / 200 m <sup>2</sup> | 1,080 m <sup>2</sup> | 6 spaces          |                           |
| Centre Activities (Visitors)  | 1 / 750 m <sup>2</sup> | 1,080 m <sup>2</sup> | 2 spaces          |                           |
| <b>Total</b>                  |                        |                      | <b>382 spaces</b> | <b>331 Bicycle spaces</b> |

Of the 331, 295 of these are provided in storage cages for safety and security. This will cater for 1 space per unit, plus 3 cages to be assigned to non-residential uses for staff parking. The remaining 36 spaces can then cater for visitors for the residential and retail uses. This notes that the demand for these two visitor types allows for shared operation. Residential visitors are expected to peak in the evening, while retail visitors will peak during the day.

Overall, the bicycle parking supply for the development are considered acceptable. This provision is less than the Council requirement, however significantly exceeds the rate of 1 space per 16 units identified in Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management. At this rate, the development requires 19 spaces for residential visitors.

This is considered an appropriate balance between the standards, ensuring visitors can be catered for on site. It is also noted that should the visitor demand significantly exceed this supply, there are additional opportunities to provide cycle racks adjacent to the development on the Oxford Street frontage.

## 8. Site Travel Environment

### 8.1. Existing Traffic Volumes

Traffic volume surveys were undertaken at key intersections surrounding the subject site to establish existing traffic conditions. The surveyed intersections include:

- Montague Road / Brereton Street
- Montague Road / Cordelia Street / Site Access
- Brereton Street / Boundary Street

The surveys were completed on Thursday, 14 May 2026, with supplementary AM peak data collected on Friday, 15 May 2026. Surveys were undertaken during the periods:

- 0700–0900 (AM period)
- 1600–1800 (PM period)

Based on a review of the surveyed data, the following peak periods have been adopted for assessment:

- AM Peak: 08:00–09:00
- PM Peak: 17:00–18:00

The PM peak of 17:00–18:00 has been adopted consistently across all intersections for the purposes of assessment. While some intersections exhibited slightly earlier peak periods (e.g. 16:30–17:30), the 17:00–18:00 period reflects the broader network peak and captures the highest overall traffic demand across the study area.

Adopting a consistent peak period across all intersections ensures a conservative and coordinated assessment of network performance, particularly for routes influenced by commuter traffic patterns within the South Brisbane and CBD fringe area.

The traffic surveys captured turning movement counts at 15-minute intervals to provide a detailed understanding of traffic conditions and peak demand.

**Appendix C** includes the surveyed traffic network diagrams.

### 8.2. Assessment Year and Traffic Growth

For the purpose of this assessment, the opening year of the development has been adopted as 2029.

Accordingly, the traffic impact assessment has been undertaken for the 2029 base year and 2029 project year (including development traffic) scenarios for the study intersections surrounding the subject site.

The 2029 base traffic volumes have been assumed to be the same as the 2026 surveyed traffic volumes. This approach is consistent with the Department of Transport and Main Roads (TMR) Guide to Traffic Impact Assessment (2018), which states that where traffic counts are within approximately three years of the opening year, no background traffic growth factor is required.

Given the short time period between 2026 and 2029, background traffic growth is expected to be negligible. Accordingly, no growth has been applied to derive the 2029 base traffic volumes.

A future design horizon of 2039 has also been assessed to consider the long-term operation of the surrounding road network. For this scenario, background traffic growth has been applied to the surveyed traffic volumes to estimate future year conditions.

**Appendix C** includes the existing (2026) traffic network diagrams, which also represent the 2029 base traffic conditions.

### 8.3. 2039 Base Traffic Volumes

Future (2039) base traffic volumes have been estimated by applying background traffic growth to the 2029 opening year traffic volumes.

Background traffic growth has been derived from Brisbane City Council's Local Government Infrastructure Plan (LGIP), specifically Table SC3.1.7 – *Existing and projected demand for the transport network (road network)* for Service Catchment 8, which is applicable to the subject site.

Based on this data, a compound annual growth rate of 0.90% has been adopted for the study area. This growth rate has been calculated from the projected increase in traffic demand between the LGIP base and future years and is considered appropriate for the subject site location. This rate has also been assessed against historical counts. Colliers has data for the Cordellia Street/Montague Road intersection for 2016. A comparison of the traffic volumes operating on the Montague Road approach, show that in the 10 years between surveys, AM peak hour traffic has grown at 0.8% per annum and PM peak traffic is relatively unchanged (slightly reduced). As such, 0.9% per annum is considered appropriate based on this recent growth continuing, particularly in the AM peak. This very low growth also support the 2029 being relatively consistent with 2026 surveys.

This growth rate has been applied to the 2029 opening year traffic volumes to estimate 2039 base traffic volumes using the following formula:

- $2039 \text{ Base Traffic Volumes} = 2029 \text{ Opening Volumes} \times (1 + 0.90\%)^{10}$

Where a 10 years represents the period between 2029 and 2039.

This approach provides a realistic estimate of future traffic conditions and reflects anticipated background growth within the South Brisbane area.

**Appendix C** includes the 2039 base year traffic network diagrams.

## 8.4. Traffic Generations

Traffic generation for the proposed development has been estimated using the Transport for NSW *Guide to Transport Impact Assessment (2024)* for high-density residential developments.

The guide identifies the following traffic generation rates:

- AM Peak Hour: 0.19 vehicles per dwelling
- PM Peak Hour: 0.15 vehicles per dwelling

The proposed development comprises 299 residential dwellings.

Given the subject site's inner-city location and high level of accessibility to public and active transport, the adopted traffic generation rates are considered conservative. It is expected that a proportion of trips will be undertaken via walking, cycling and public transport, reducing reliance on private vehicle travel compared to more suburban locations.

### Existing Trip Generation

The existing development on the subject site comprises an industrial land use with an estimated traffic generation of approximately 10 vehicle trips per hour (vph) during both the AM and PM peak periods.

Survey results indicate minimal traffic activity at the site access during the survey period. Accordingly, the adopted existing traffic generation represents a conservative estimate.

Based on the adopted rates, the expected traffic generation is as shown below in Table 8-1.

Table 8-1: Trip Generation

| Land Use                 | Quantity      | Trip Generation Rate |                     | Traffic Generation |        |         |         |        |         |
|--------------------------|---------------|----------------------|---------------------|--------------------|--------|---------|---------|--------|---------|
|                          |               | AM Peak              | PM Peak             | AM Peak            |        |         | PM Peak |        |         |
|                          |               |                      |                     | IN                 | OUT    | Total   | IN      | OUT    | Total   |
| Proposed Trip Generation |               |                      |                     |                    |        |         |         |        |         |
| Proposed development     | 299 Dwellings | 0.19 vph / dwelling  | 0.15 vph / dwelling | 14 vph             | 43 vph | 57 vph  | 27 vph  | 18 vph | 45 vph  |
| Existing Industry        | 2949 m²       | 0.35 vph / 100 m²    | 10 vph              | - 7 vph            | -3 vph | -10 vph | -3 vph  | -7 vph | -10 vph |
| Net trip generation      |               |                      |                     | 7 vph              | 40 vph | 47 vph  | 24 vph  | 10 vph | 35 vph  |

### Trip Distribution

The adopted directional splits reflect typical travel patterns for the relevant land uses:

- Proposed mixed use development
  - The distribution of the development generated trips will be 25% In / 75% Out for the weekday AM peak period and 61% In / 39% Out during the weekday PM peak period.
- Existing Industrial Development

- The distribution of the development generated trips will be 70% In / 30% Out for the weekday AM peak period and 30% In / 70% Out during the weekday PM peak period.

The proposed development is expected to generate moderate traffic volumes, with a net increase of approximately 47 vehicle trips per hour (vph) during the AM peak period and 35 vph during the PM peak period. In accordance with the Guide to Traffic Impact Assessment (GTIA), a detailed SIDRA assessment has been undertaken and is presented in section 9.

## 8.5. Trip Assignment

The assignment of development-generated traffic has been undertaken based on observed traffic patterns from the 2026 traffic surveys at the surrounding intersections, including:

- Montague Road / Brereton Street
- Montague Road / Cordelia Street / Site Access
- Brereton Street / Boundary Street

The assignment of development-generated traffic has been undertaken based on observed traffic patterns from the 2026 traffic surveys and detailed review of intersection turning movements across the study network.

Traffic assignment has been developed to reflect the surveyed turning patterns and network connectivity, including key directional flows at each intersection. As a result, traffic does not distribute uniformly across the network and instead follows the predominant travel paths observed in the survey data.

At a network level, the following general distribution trends have been observed and applied:

- 30% of trips to and from the north via Montague Road (CBD direction)
- 20% of trips to and from the south via the local road network
- 50% of trips via Boundary Street and the broader east–west network

This distribution reflects observed survey patterns and represents a realistic and conservative approach to assigning development traffic to the surrounding road network.

Traffic network diagrams have been prepared for the following scenarios:

- 2029 Project Year: 2029 Base Traffic + Development Traffic
- 2039 Design Horizon: 2039 Base Traffic + Development Traffic

**Appendix C** includes the development traffic assignment and project year traffic network diagrams.

## 8.6. Traffic Network Diagrams

Traffic network diagrams have been prepared to illustrate traffic movements at the key study intersections surrounding the subject site.

The diagrams represent the following scenarios:

- Traffic Network Diagram 1: Existing Year 2026 / Base Year 2029
- Traffic Network Diagram 2: Development Traffic Volumes
- Traffic Network Diagram 3: Project Year 2029 (Base Year 2029 + Development Traffic)
- Traffic Network Diagram 4: Base Year 2039
- Traffic Network Diagram 5: Design Horizon 2039 (Base Year 2039 + Development Traffic)

As part of the Stage 1 development of the broader subject site, the following intersections have been included in the assessment:

- Montague Road / Brereton Street
- Montague Road / Cordelia Street / Site Access
- Brereton Street / Boundary Street

**Appendix C** includes the traffic network diagrams for all scenarios.

## 9. Traffic Impact Assessment

### 9.1. Extent of Assessment

The operation of the surrounding road network has been assessed using SIDRA 10 for the relevant base and project year scenarios.

This operational performance analysis assists in determining the traffic impacts of the proposed development on the surrounding road network. Key performance metrics considered include traffic movement capacity (degree of saturation), average delay and queuing under both existing and future traffic conditions.

**Appendix D** contains the SIDRA Movement Output for all scenarios and peak hours analysed.

The key measures of performance used in the SIDRA analysis are summarised below:

- Average intersection and worst movement delay – the additional travel time experienced when traversing an intersection compared to free-flow conditions.
- 95<sup>th</sup> percentile queue length – the design queue length for a particular lane or movement.
- Degree of saturation (DoS) – the ratio of traffic demand to available capacity.

Default parameters within SIDRA Intersection 10 have been retained for the traffic analysis.

### 9.2. SIDRA Analysis

Based on the network diagram and the assignment of development traffic across the wider network, the additional volumes from the proposed development are less than 5% of the existing traffic at the Montague Road / Cordelia Street intersection.

As a result, no detailed SIDRA assessment is required for this intersection.

The assessment includes SIDRA analysis for the following intersections:

- Brereton Street / Boundary Street
- Oxford Street / Site Access 1
- Montague Road / Brereton Street
- Montague Road / Site Access 2

The 2026 existing traffic volumes are equivalent to the 2029 base year traffic volumes, as no background growth has been applied between these years in accordance with the TMR Guide to Traffic Impact Assessment (2018).

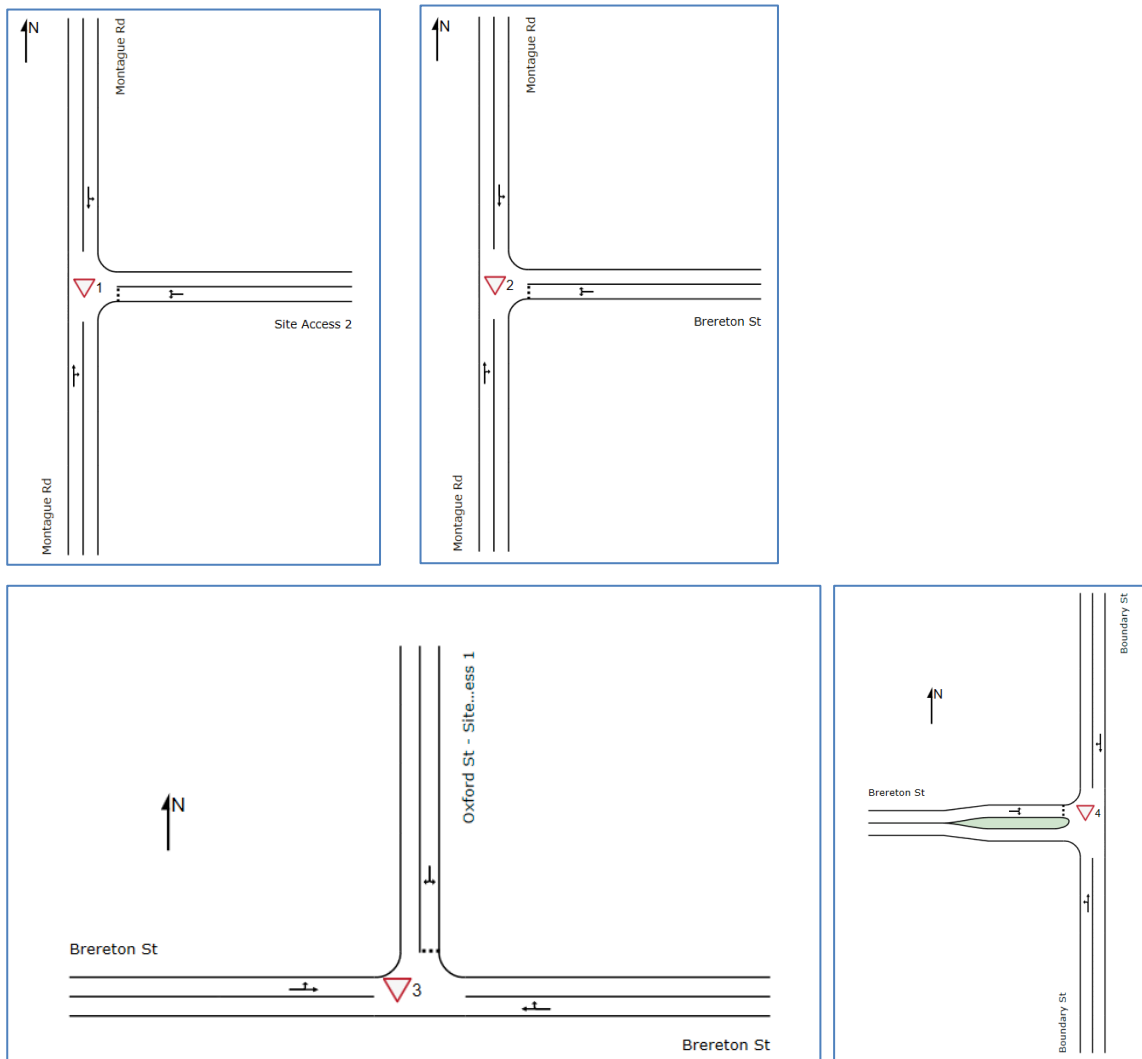


Figure 9-1: SIDRA Generated Layout of assessed sites

The results of the SIDRA assessment for the key study intersections are summarised in Table 9-1 for the project year 2029.

Table 9-1: SIDRA Network Performance Summary – Project Year 2029

| Intersection                                   | Scenario                  | DOS  | Average Delay |                | 95 <sup>th</sup> Percentile Critical Queue (m) |
|------------------------------------------------|---------------------------|------|---------------|----------------|------------------------------------------------|
|                                                |                           |      | Overall       | Worst Movement |                                                |
| AM Peak Hour                                   |                           |      |               |                |                                                |
| Brereton Street / Boundary Street              | 2026 Existing / 2029 Base | 21%  | 1 sec         | 9sec (LOS A)   | 2 m                                            |
|                                                | 2029 + Development        | 21 % | 1 sec         | 10 sec (LOS A) | 2 m                                            |
| Brereton Street /Oxford Street (Site Access 1) | 2026 Existing / 2029 Base | 3%   | 1 sec         | 6 sec (LOS A)  | 1 m                                            |
|                                                | 2029 + Development        | 4 %  | 2 sec         | 6 sec (LOS A)  | 1 m                                            |
| Montague Road / Brereton Street                | 2026 Existing / 2029 Base | 39 % | 1 sec         | 21 sec (C)     | 4 m                                            |

| Intersection                                    | Scenario                  | DOS  | Average Delay |                | 95 <sup>th</sup> Percentile Critical Queue (m) |
|-------------------------------------------------|---------------------------|------|---------------|----------------|------------------------------------------------|
|                                                 |                           |      | Overall       | Worst Movement |                                                |
|                                                 | 2029 + Development        | 39 % | 1 sec         | 22 sec (C)     | 4 m                                            |
| Montague Road / Site Access 2                   | 2026 Existing / 2029 Base | 40 % | 1 sec         | 21 sec (LOS C) | 1 m                                            |
|                                                 | 2029 + Development        | 40 % | 1 sec         | 22 sec (LOS C) | 2 m                                            |
| <b>PM Peak Hour</b>                             |                           |      |               |                |                                                |
| Brereton Street / Boundary Street               | 2026 Existing / 2029 Base | 21 % | 1 sec         | 10 sec (LOS A) | 2 m                                            |
|                                                 | 2029 + Development        | 21 % | 1 sec         | 10 sec (LOS A) | 2 m                                            |
| Brereton Street / Oxford Street (Site Access 1) | 2026 Existing / 2029 Base | 3 %  | 1 sec         | 6 sec (LOS A)  | 1 m                                            |
|                                                 | 2029 + Development        | 3 %  | 1 sec         | 6 sec (LOS A)  | 1 m                                            |
| Montague Road / Brereton Street                 | 2026 Existing / 2029 Base | 47 % | 1 sec         | 28 sec (LOS D) | 5 m                                            |
|                                                 | 2029 + Development        | 47 % | 1 sec         | 29 sec (LOS D) | 5 m                                            |
| Montague Road / Site Access 2                   | 2026 Existing / 2029 Base | 46 % | 1 sec         | 25 sec (LOS D) | 1 m                                            |
|                                                 | 2029 + Development        | 47 % | 1 sec         | 26 sec (LOS D) | 1 m                                            |

The following outlines a summary of the SIDRA analysis.

#### **Base Year (2029)**

During the AM peak period, all assessed intersections operate well within capacity. The highest degree of saturation is 40% at the Montague Road / Site Access 2 intersection, which is below the Austroads practical capacity threshold of 80% for unsignalised intersections. Average delays remain low at approximately 1–2 seconds across all intersections. The worst movement delay is 21 seconds (LOS C) at Montague Road / Site Access 2. The 95<sup>th</sup> percentile queue lengths are short, generally 1 to 2m.

The Montague Road / Brereton Street intersection operates with a degree of saturation of 39%, average delay of 1 second, and a worst movement delay of 21 seconds (LOS C), with short queue lengths of approximately 4m.

During the PM peak period, the intersections continue to operate efficiently. The highest degree of saturation increases slightly to 46% at Montague Road / Site Access 2, with average delays remaining at approximately 1 second. The worst movement delay is 25 seconds (LOS D), with queue lengths remaining short at approximately 1 to 2m.

The Montague Road / Brereton Street intersection records a degree of saturation of 47%, average delay of 1 second, and a worst movement delay of 28 seconds (LOS D), with queue lengths of approximately 5m.

Overall, the SIDRA analysis confirms that the study intersections operate within acceptable limits during both AM and PM peak periods in the 2029 base year.

#### **Project Year (2029)**

With the addition of development traffic, the intersections continue to operate satisfactorily during both peak periods.

During the AM peak period, the degree of saturation remains unchanged at key intersections, with a maximum of 40% at Montague Road / Site Access 2. Average delays remain low at approximately 1–2 seconds and the worst movement delay increases marginally to 22 seconds (LOS C). Queue lengths remain short at approximately 1 to 2m.

At the Montague Road / Brereton Street intersection, performance remains consistent with a degree of saturation of 39%, average delay of 1 second, and a worst movement delay of 22 seconds (LOS C), with queue lengths of approximately 4 m.

During the PM peak period, the degree of saturation increases slightly to 47% at Montague Road / Site Access 2, which remains well below the practical capacity threshold. Average delays remain at approximately 1 second, with the worst movement delay increasing slightly to 26 seconds (LOS D). Queue lengths remain minimal.

The Montague Road / Brereton Street intersection operates with a degree of saturation of 47%, average delay of 1 second, and a worst movement delay of 29 seconds (LOS D), with queue lengths of approximately 5m.

Overall, the SIDRA results indicate that the addition of development traffic results in negligible changes to intersection performance, and all intersections continue to operate within acceptable limits.

The results of the SIDRA assessment for the key study intersections are summarised in Table 9-2 for the design horizon year 2039.

Table 9-2: SIDRA Network Performance Summary – Design Horizon 2039

| Intersection                                   | Scenario                | DOS  | Average Delay |                | 95 <sup>th</sup> Percentile Critical Queue (m) |
|------------------------------------------------|-------------------------|------|---------------|----------------|------------------------------------------------|
|                                                |                         |      | Overall       | Worst Movement |                                                |
| AM Peak Hour                                   |                         |      |               |                |                                                |
| Brereton Street / Boundary Street              | 2039 Base               | 23 % | 1 sec         | 10 sec (LOS B) | 2 m                                            |
|                                                | 2039 Base + Development | 23 % | 1 sec         | 10 sec (LOS B) | 3 m                                            |
| Brereton Street /Oxford Street (Site Access 1) | 2039 Base               | 4 %  | 1 sec         | 6 sec (LOS A)  | 0 m                                            |
|                                                | 2039 Base + Development | 4 %  | 1 sec         | 6 sec (LOS A)  | 1 m                                            |
| Montague Road / Brereton Street                | 2039 Base               | 43 % | 1 sec         | 27 sec (LOS D) | 5 m                                            |
|                                                | 2039 Base + Development | 43 % | 1 sec         | 27 sec (LOS D) | 6 m                                            |
| Montague Road / Site Access 2                  | 2039 Base               | 44 % | 1 sec         | 26 sec (LOS D) | 1 m                                            |
|                                                | 2039 Base + Development | 44 % | 1 sec         | 27 sec (LOS D) | 2 m                                            |
| PM Peak Hour                                   |                         |      |               |                |                                                |
| Brereton Street / Boundary Street              | 2039 Base               | 23 % | 1 sec         | 10 sec (LOS B) | 2 m                                            |
|                                                | 2039 Base + Development | 23 % | 2 sec         | 11 sec (LOS B) | 3 m                                            |
| Brereton Street /Oxford Street (Site Access 1) | 2039 Base               | 4 %  | 1 sec         | 6 sec (LOS A)  | 0 m                                            |
|                                                | 2039 Base + Development | 4 %  | 1 sec         | 6 sec (LOS A)  | 1 m                                            |
| Montague Road / Brereton Street                | 2039 Base               | 52 % | 2 sec         | 39 sec (LOS E) | 8 m                                            |
|                                                | 2039 Base + Development | 52 % | 2 sec         | 39 sec (LOS E) | 9 m                                            |

| Intersection                  | Scenario                | DOS  | Average Delay |                | 95 <sup>th</sup> Percentile Critical Queue (m) |
|-------------------------------|-------------------------|------|---------------|----------------|------------------------------------------------|
|                               |                         |      | Overall       | Worst Movement |                                                |
| Montague Road / Site Access 2 | 2039 Base               | 51 % | 1 sec         | 34 sec (LOS D) | 1 m                                            |
|                               | 2039 Base + Development | 51 % | 1 sec         | 35 sec (LOS D) | 1 m                                            |

The following outlines a summary of the SIDRA analysis.

### **Base Year (2039)**

During the AM peak period, all assessed intersections operate within acceptable limits. The highest degree of saturation is 44% at Montague Road / Site Access 2, which is well below the Austroads practical capacity threshold of 80% for unsignalised intersections. Average delays remain low at approximately 1 second across all intersections. The worst movement delay is 26 seconds (LOS D) at Montague Road / Site Access 2. The 95<sup>th</sup> percentile queue lengths are short, generally 0 to 2m.

The Montague Road / Brereton Street intersection operates with a degree of saturation of 43%, average delay of 1 second, and a worst movement delay of 27 seconds (LOS D), with queue lengths of approximately 5 to 6 m.

During the PM peak period, the intersections continue to operate within acceptable limits. The highest degree of saturation increases to 51% at Montague Road / Site Access 2, which remains below the practical capacity threshold. Average delays remain at approximately 1–2 seconds, with the worst movement delay reaching 34 seconds (LOS D). Queue lengths remain short at approximately 0 to 2m.

The Montague Road / Brereton Street intersection records a degree of saturation of 52%, average delay of 2 seconds, and a worst movement delay of 39 seconds (LOS E), with queue lengths of approximately 8 to 9m.

Overall, the SIDRA analysis confirms that the study intersections operate within acceptable limits during both peak periods in the 2039 base year.

### **Design Horizon Year (2039)**

With the addition of development traffic, the intersections continue to operate satisfactorily during both peak periods.

During the AM peak period, the degree of saturation remains unchanged, with a maximum of 44% at Montague Road / Site Access 2. Average delays remain low at approximately 1 second, and the worst movement delay increases slightly to 27 seconds (LOS D). Queue lengths remain short at approximately 1 to 3m.

At the Montague Road / Brereton Street intersection, performance remains consistent with a degree of saturation of 43%, average delay of 1 second, and a worst movement delay of 27 seconds (LOS D), with queue lengths of approximately 6m.

During the PM peak period, the degree of saturation remains at 51% at Montague Road / Site Access 2, which is still well below the Austroads capacity threshold. Average delays remain at approximately 1–2 seconds, and the worst movement delay increases slightly to 35 seconds (LOS D). Queue lengths remain minimal.

The Montague Road / Brereton Street intersection operates with a degree of saturation of 52%, average delay of 2 seconds, and a worst movement delay of 39 seconds (LOS E), with queue lengths of approximately 9 m.

Overall, the SIDRA results indicate that the development traffic results in minor changes to intersection performance, and all intersections continue to operate within acceptable limits in the design horizon year.

**Appendix D** includes a copy of the SIDRA movement summaries.

### 9.3. Net Delay Assessment

In accordance with the requirements of DTMR's GTIA, the net impact of the development traffic in terms of delay has been quantified. Based on the SIDRA analysis results a comparison of the intersection delay without and with the proposed development is summarised in Table 9-3 for Brereton Street / Boundary Street intersection for the design horizon year 2039.

Table 9-3: Intersection Delay Comparison for Brereton St / Boundary St

| Base Case 2039        | Design Horizon 2039   | % Change |
|-----------------------|-----------------------|----------|
| 33.57 vehicle-minutes | 34.15 vehicle-minutes | 1.7%     |

The intersection delay assessment indicates the overall average increase in intersection delay across both periods (AM and PM peak) is 1.7%, which remains below the 5.0% threshold specified by GTIA.

Therefore, no further works are required on the surrounding road network as part of the proposed development.

**Appendix E** includes the detailed delay assessment.

## 10. Summary and Conclusions

### 10.1. Proposed Development

The proposed development comprises a mixed-use development located at 120 Montague Road, South Brisbane.

The development includes a residential tower comprising 299 dwellings, podium levels accommodating centre activities, car parking and building services, basement and podium car parking level and communal open space and rooftop recreational areas

Vehicular access is provided from Oxford Street (primary access) and Montague Road (secondary access), with internal circulation linking through the site, via Little Manning Lane.

### 10.2. Parking Arrangements

The proposed development provides 398 car parking spaces, compared to a maximum requirement of 389 spaces under the Brisbane City Plan 2014 TAPS PSP.

The development therefore represents a minor exceedance of the maximum parking requirement and the proposed parking provision is considered appropriate.

The proposed parking provision is considered appropriate given the mixed-use nature of the development and its inner-city location. It accommodates operational, resident and visitor parking demand and benefits from frontage to Montague Road and Oxford Street, with future connectivity to Boundary Street proposed as part of the broader site masterplan, supporting dispersed access arrangements.

Accessible parking has been provided in accordance with the TAPS PSP and AS2890.6 requirements. Bicycle parking is provided in accordance with the TAPS PSP, with 331 bicycle spaces and 295 storage cages for resident safety and security, satisfying the intent of the Planning Scheme.

### 10.3. Access Arrangements

Vehicle access is provided via Oxford Street and Montague Road.

The access points have been designed in accordance with the TAPS PSP and AS2890.1:2004. Adequate access width, sight distance, pedestrian visibility and internal queuing have been provided.

The access arrangements will operate safely and efficiently and are appropriate for the scale and nature of the development.

### 10.4. Service Vehicle Arrangements

Servicing and waste collection are accommodated via the Oxford Street access.

The development is designed to accommodate a Medium Rigid Vehicle (MRV) and a Refuse Collection Vehicle (RCV) within a dedicated on-site loading bay.

Swept path assessment confirms that service vehicles can safely enter, manoeuvre within and exit the site. The proposed servicing arrangements comply with the requirements of the TAPS PSP and are considered appropriate.

## 10.5. Traffic Impact Assessment

The proposed development is expected to generate moderate traffic volumes suitable for the surrounding network.

The SIDRA assessment confirms that all intersections operate within acceptable limits, with low delays and short queue lengths. The degree of saturation remains well below capacity across all scenarios. The net delay assessment indicates an overall increase in delay of approximately 1.7%, which is below the 5% threshold.

Overall, the surrounding road network can accommodate the development traffic without the need for upgrades.

## 10.6. Conclusion

Based on the assessments contained within this report, Colliers see no traffic engineering reasons why the relevant approvals should not be granted.

## Appendix A    Development Plans



# 108 MONTAGUE

## DEVELOPMENT APPLICATION

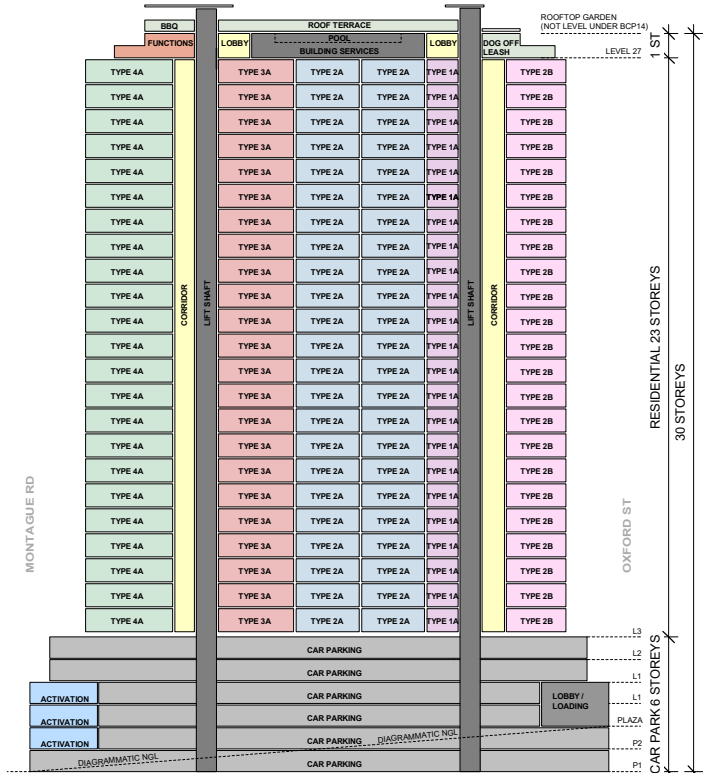
114, 120 - 122 MONTAGUE ROAD  
8-12 OXFORD STREET  
39A BOUNDARY STREET

SOUTH BRISBANE QLD 4101

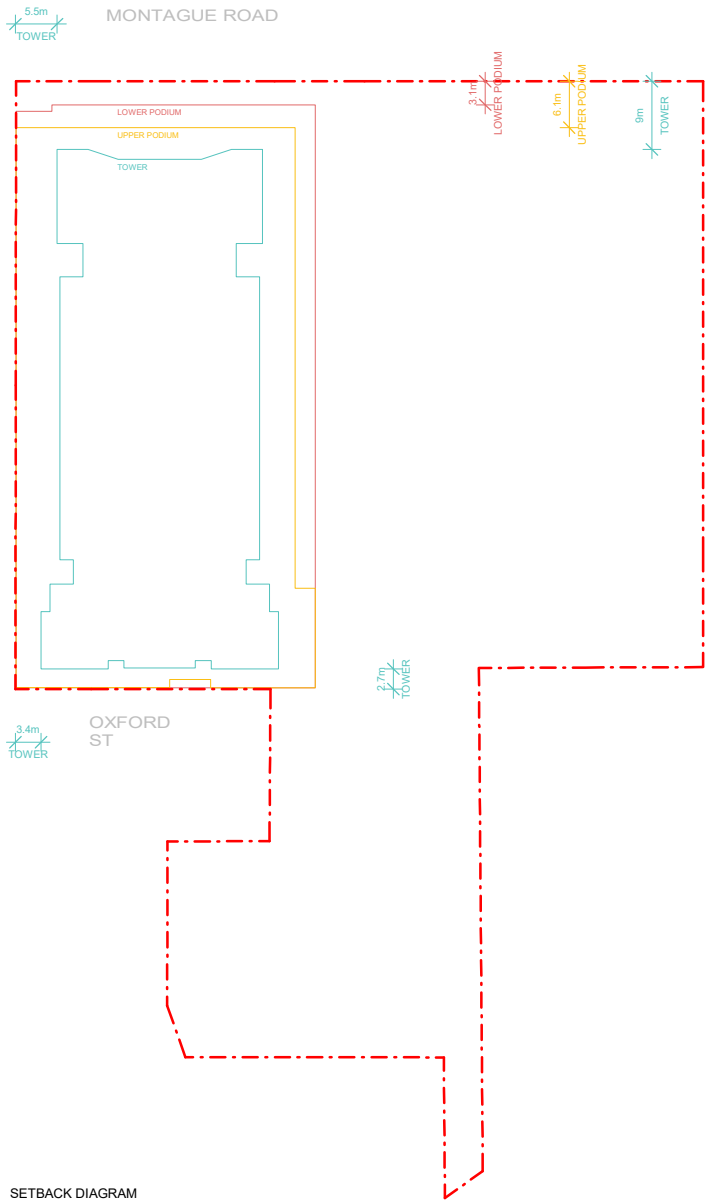
| SITE PARTICULARS                        |                                                                      |       |       |    |       |    |       |       |
|-----------------------------------------|----------------------------------------------------------------------|-------|-------|----|-------|----|-------|-------|
| RPD (120 - 122 MONTAGUE RD)             | LOT 50 ON RP885764, LOT 52 ON RP10840, LOT 1 ON RP95549              |       |       |    |       |    |       |       |
| RPD (8-12 OXFORD ST)                    | LOTS 37,38,39 ON RP10840                                             |       |       |    |       |    |       |       |
| RPD (39A BOUNDARY ST & 114 MONTAGUE ST) | LOT 2 ON RP95549                                                     |       |       |    |       |    |       |       |
| STREET ADDRESS                          | 114, 120-122 MONTAGUE ROAD, 8-12 OXFORD STREET & 39A BOUNDARY STREET |       |       |    |       |    |       |       |
| SUBURB                                  | SOUTH BRISBANE                                                       |       |       |    |       |    |       |       |
| TOTAL SITE AREA                         | 9044m²                                                               |       |       |    |       |    |       |       |
| PROPOSED DEVELOPMENT                    |                                                                      |       |       |    |       |    |       |       |
| PLANTING:                               | 1096m²                                                               |       |       |    |       |    |       |       |
| PODIUM SITE COVER:                      | 3550m² OR 39.2%                                                      |       |       |    |       |    |       |       |
| TOWER FOOTPRINT:                        | 1825m²                                                               |       |       |    |       |    |       |       |
| RESIDENTIAL COMMUNAL SPACE:             | 1195m² (INCLUDES INTERNAL COMMUNAL)                                  |       |       |    |       |    |       |       |
| PUBLIC ACCESSIBLE:                      | 1253m²                                                               |       |       |    |       |    |       |       |
| RESIDENTIAL GFA:                        | 33305m²                                                              |       |       |    |       |    |       |       |
| CENTRE ACTIVITIES GFA:                  | 1080m²                                                               |       |       |    |       |    |       |       |
| DWELLING SUMMARY                        |                                                                      |       |       |    |       |    |       |       |
| UNIT TYPE                               | FLOORS                                                               | 1A    | 2A    | 2B | 3A    | 3B | 4A    | TOTAL |
| PODIUM TOP                              | 1                                                                    | 2     | 4     | 1  | 2     | 2  | 2     |       |
| PODIUM TOTAL                            |                                                                      | 2     | 4     | 1  | 2     | 2  | 2     | 13    |
| TYPICAL FLOORS                          | 22                                                                   | 2     | 4     | 1  | 2     | 2  | 2     |       |
| TYPICAL FLOORS TOTAL                    |                                                                      | 44    | 88    | 22 | 44    | 44 | 44    | 286   |
| TOP FLOOR                               | 0                                                                    | 0     | 0     | 0  | 0     | 0  |       |       |
| TOP SUBFLOOR TOTAL                      |                                                                      | 0     | 0     | 0  | 0     | 0  | 0     | 0     |
| NUMBER                                  | 23                                                                   | 46    | 92    | 23 | 46    | 46 | 46    | 299   |
| UNITS/BED                               |                                                                      | 46    | 115   |    | 92    |    | 46    | 299   |
|                                         |                                                                      | 15.4% | 38.4% |    | 30.8% |    | 15.4% | 100%  |
| TOTAL UNITS                             |                                                                      | 299   |       |    |       |    |       |       |

| PROPOSED CAR PARKING (AS DESIGNED) |      |               |              |            |       |          |           |
|------------------------------------|------|---------------|--------------|------------|-------|----------|-----------|
|                                    | RESI | TANDEM (COMM) | VISITOR/COMM | TOTAL CARS | BIKES | ST. CAGE | MOTORBIKE |
| PARKING P1                         | 80   | 0             | 0            | 80         | 75    | 75       | 1         |
| PARKING P2                         | 46   | 3             | 15           | 64         | 52    | 52       |           |
| PLAZA                              | 32   | 0             | 8            | 40         | 31    | 23       | 1         |
| LEVEL 1                            | 54   | 0             | 0            | 54         | 42    | 42       |           |
| LEVEL 2                            | 78   | 0             | 0            | 78         | 60    | 60       |           |
| LEVEL 3                            | 82   | 0             | 0            | 82         | 71    | 43       |           |
| TOTAL PROVIDED                     | 372  | 3             | 23           | 398        | 331   | 295      | 2         |

| PROPOSED AREA SCHEDULE (AS DESIGNED) |                       |                      |  |
|--------------------------------------|-----------------------|----------------------|--|
|                                      | GFA CENTRE ACTIVITIES | GFA RESIDENTIAL USES |  |
| PARKING P1                           | 26m²                  | —                    |  |
| PARKING P2                           | 356m²                 | —                    |  |
| PLAZA                                | 420m²                 | —                    |  |
| LEVEL 1                              | 278m²                 | —                    |  |
| LEVEL 2                              | —                     | —                    |  |
| LEVEL 3                              | —                     | —                    |  |
| LEVEL 4                              | —                     | —                    |  |
| TYPICAL TOWER                        | —                     | PER FLOOR 1455m²     |  |
| NO. TYPICAL FLOORS                   | 22                    | SUBTOTAL 33465m²     |  |
| ROOF TCE LOWER                       | —                     | 210m²                |  |
| ROOF TCE UPPER                       | —                     | 90m²                 |  |
| TOTAL PROVIDED                       | 1080m²                | 33765m²              |  |



SECTION DIAGRAM



SETBACK DIAGRAM

| SHEET LIST |                                                            |     |
|------------|------------------------------------------------------------|-----|
|            | SHEET NAME                                                 | REV |
| AR DA 001  | COVER SHEET AND DEVELOPMENT SUMMARY                        | A   |
| AR DA 010  | DEVELOPMENT DIAGRAMS                                       | A   |
| AR DA 101  | SITE CONTEXT PLAN - PROPOSED                               | A   |
| AR DA 200  | GENERAL ARRANGEMENT PLAN - PODIUM - LEVEL P1               | A   |
| AR DA 201  | GENERAL ARRANGEMENT PLAN - PODIUM - LEVEL P2               | A   |
| AR DA 202  | GENERAL ARRANGEMENT PLAN - PODIUM - PLAZA                  | A   |
| AR DA 203  | GENERAL ARRANGEMENT PLAN - PODIUM - LEVEL 1                | A   |
| AR DA 204  | GENERAL ARRANGEMENT PLAN - PODIUM - LEVEL 2                | A   |
| AR DA 205  | GENERAL ARRANGEMENT PLAN - PODIUM - LEVEL 3                | A   |
| AR DA 206  | GENERAL ARRANGEMENT PLAN - TOWER - LEVEL 4                 | A   |
| AR DA 207  | GENERAL ARRANGEMENT PLAN - TOWER - LEVEL 5-26              | A   |
| AR DA 208  | GENERAL ARRANGEMENT PLAN - TOWER - LEVEL 27 ROOF TERRACE   | A   |
| AR DA 209  | GENERAL ARRANGEMENT PLAN - TOWER - ROOFTOP GARDEN          | A   |
| AR DA 300  | OVERALL ELEVATIONS - NORTH WEST & SOUTH WEST               | A   |
| AR DA 301  | OVERALL ELEVATIONS - NORTH EAST & SOUTH EAST (BRERETON ST) | A   |
| AR DA 400  | OVERALL SECTIONS - LONGITUDINAL SECTION A-A                | A   |
| AR DA 401  | OVERALL SECTIONS - CROSS SECTION B-B                       | A   |
| AR DA 410  | OVERALL SITE SECTION - LONGITUDINAL                        | A   |
| AR DA 901  | FACADE DETAILS - OXFORD STREET AND LITTLE MANNING          | A   |
| AR DA 902  | FACADE DETAILS - MONTAGUE ROAD - SHEET 1                   | A   |
| AR DA 903  | FACADE DETAILS - MONTAGUE ROAD - SHEET 2                   | A   |
| AR DA 904  | FACADE DETAILS - ROOFTOP                                   | A   |
| AR DA 950  | SUN DIAGRAMS                                               | A   |

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**STOCKWELL**

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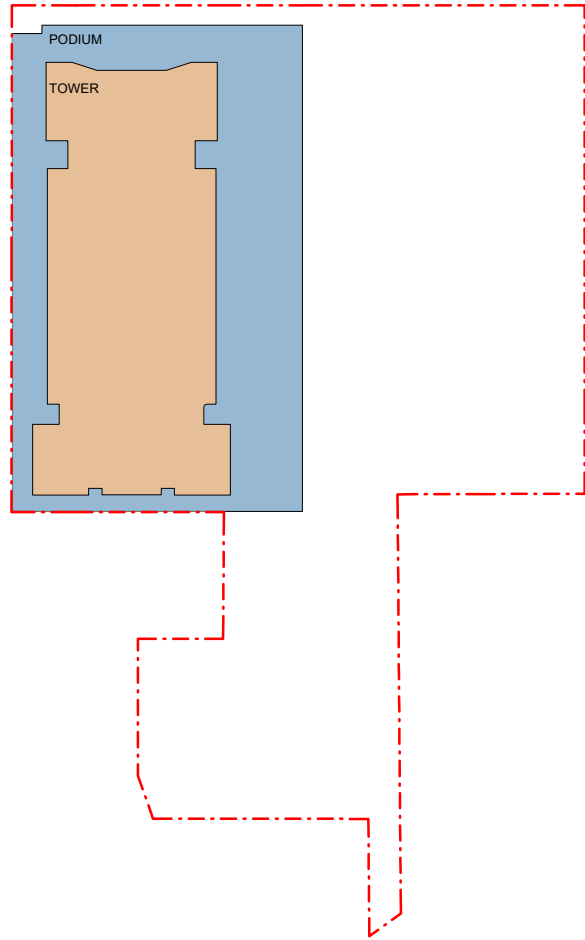
Project  
**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
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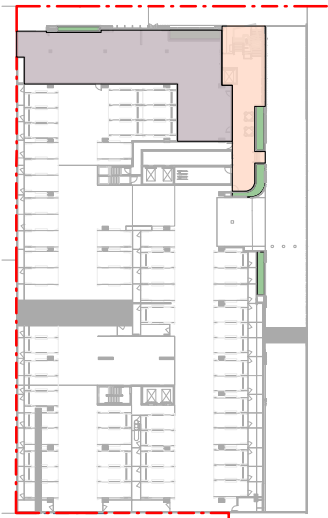
SITE COVER & TOWER FOOTPRINT

SITE AREA: 9044m²  
PODIUM SITE COVER: 3550m² OR 39.2%  
TOWER FOOTPRINT: 1825m²



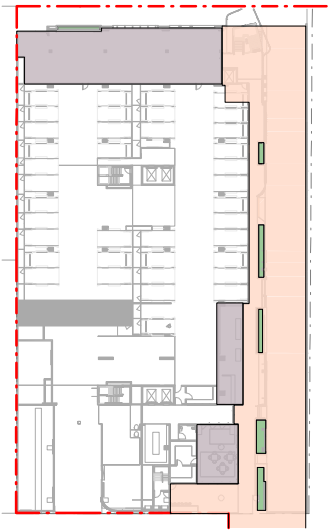
P1

CENTRE USES GFA: 26m²  
PLANTING: 72m²  
PUBLIC: 121m²



P2

CENTRE USES GFA: 356m²  
PLANTING: 40m²  
PUBLIC: 132m²



PLAZA

CENTRE USES GFA: 420m²  
PLANTING: 30m²  
PUBLIC: 1000m²



LEVEL 01

CENTRE USES GFA: 278m²  
PLANTING: 20m²



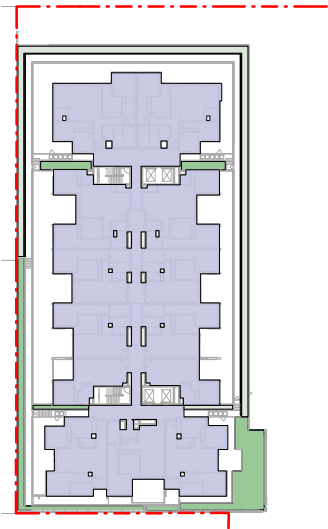
LEVEL 02

PLANTING: 70m²



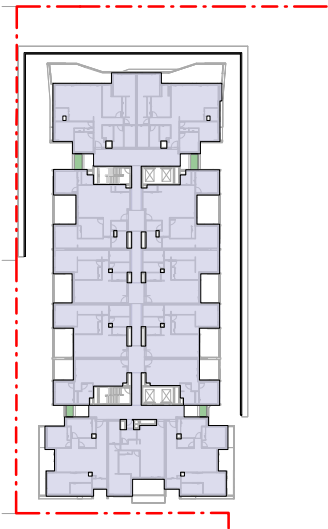
LEVEL 03

PLANTING: 50m²



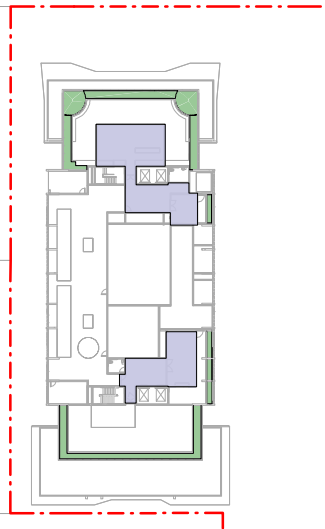
LEVEL 04

RESIDENTIAL GFA: 1455m²  
PLANTING: 293m²

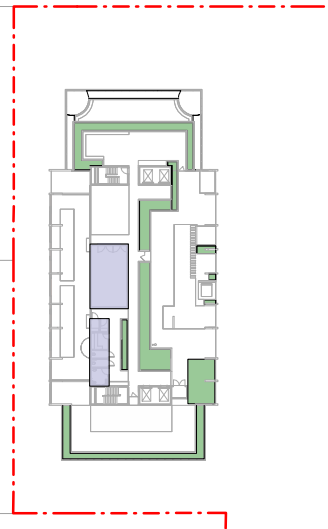


TYP FL 5-26

RESIDENTIAL GFA: 1455 m² / FL (31,570m² TOTAL)  
PLANTING: 11m² EVERY FL (253m² TOTAL)  
COMMUNAL USES RESIDENTIAL GFA: 210m²  
COMMUNAL USES (INT + EXT): 445m²  
PLANTING: 118m²



ROOF TCE LOWER



ROOF TCE UPPER

COMMUNAL USES RESIDENTIAL GFA: 90m²  
COMMUNAL USES (INT + EXT): 750m²  
PLANTING: 190m²

LEGEND

GFA

- CENTRE USES GFA  
TOTAL: 1080m²
- RESIDENTIAL GFA  
TOTAL: 33,765m²

TOTAL GFA: 34,385m²

PLANTING

- PLANTING  
TOTAL: 1136m²

SITE COVER

3550m² OR 39.2%

GFA DEFINITION

GROSS FLOOR AREA, FOR A BUILDING, MEANS THE TOTAL FLOOR AREA OF ALL STOREYS OF THE BUILDING, MEASURED FROM THE OUTSIDE OF THE EXTERNAL WALLS AND THE CENTRE OF ANY COMMON WALLS OF THE BUILDING, OTHER THAN AREAS USED FOR—  
• BUILDING SERVICES, PLANT OR EQUIPMENT, OR  
• ACCESS BETWEEN LEVELS; OR  
• A GROUND FLOOR PUBLIC LOBBY; OR  
• A MALL; OR  
• PARKING, LOADING OR MANOEUVRING VEHICLES; OR  
• UNENCLOSED PRIVATE BALCONIES, WHETHER ROOFED OR NOT.

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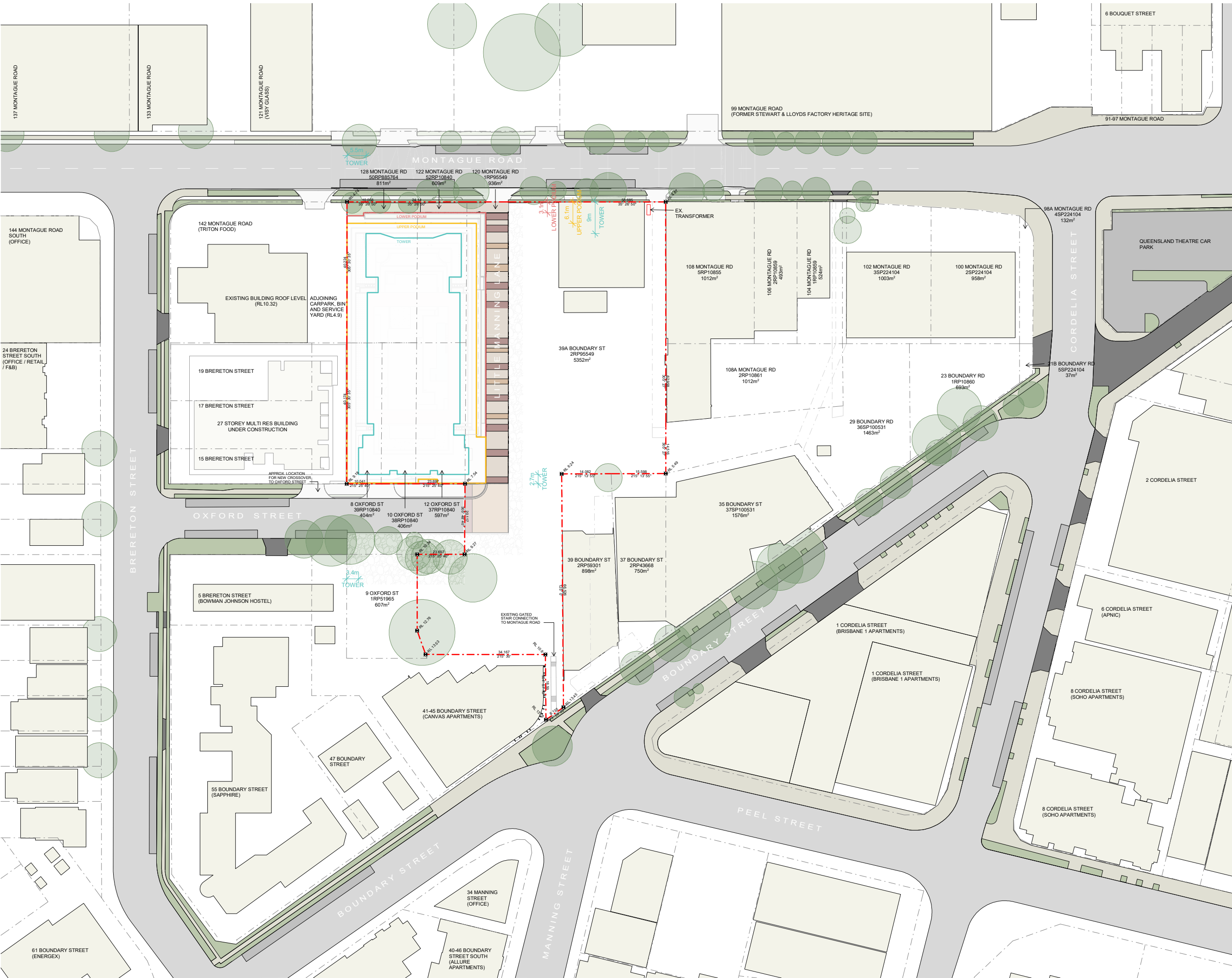
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DRAWING TITLE  
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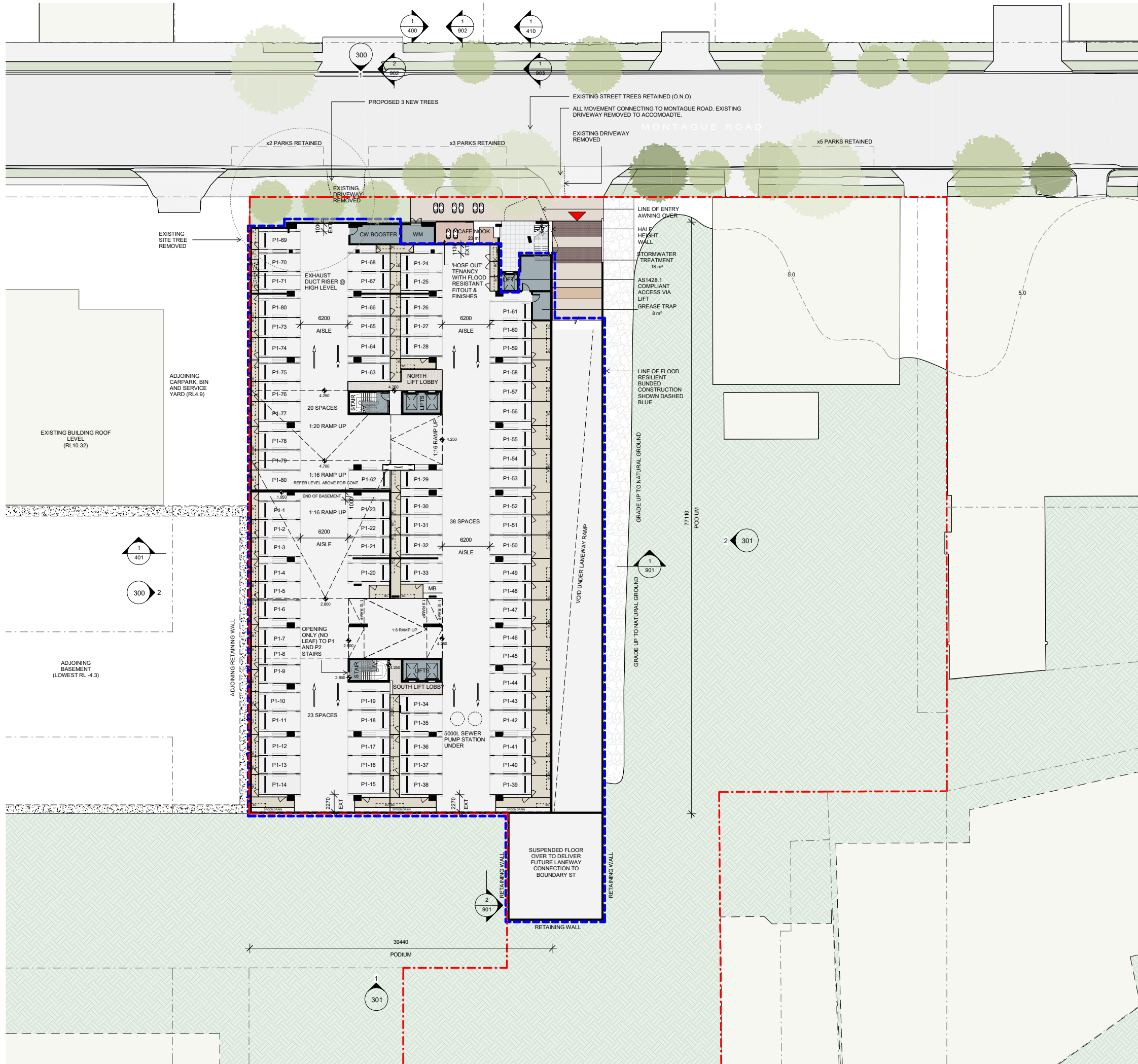
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1:1000





- LEGEND**
- BC** BICYCLE PARK
  - CW** COLD WATER
  - WM** WATER METER
  - BUNDED CONSTRUCTION

- CAR PARK**
- 80 RESIDENT STANDARD CAR BAYS
  - 1 RESIDENT MOTORBIKE BAY
  - 75 RESIDENT STORAGE CAGES
  - 75 RESIDENT BICYCLE SPACES (BC)

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PODIUM - LEVEL P1**

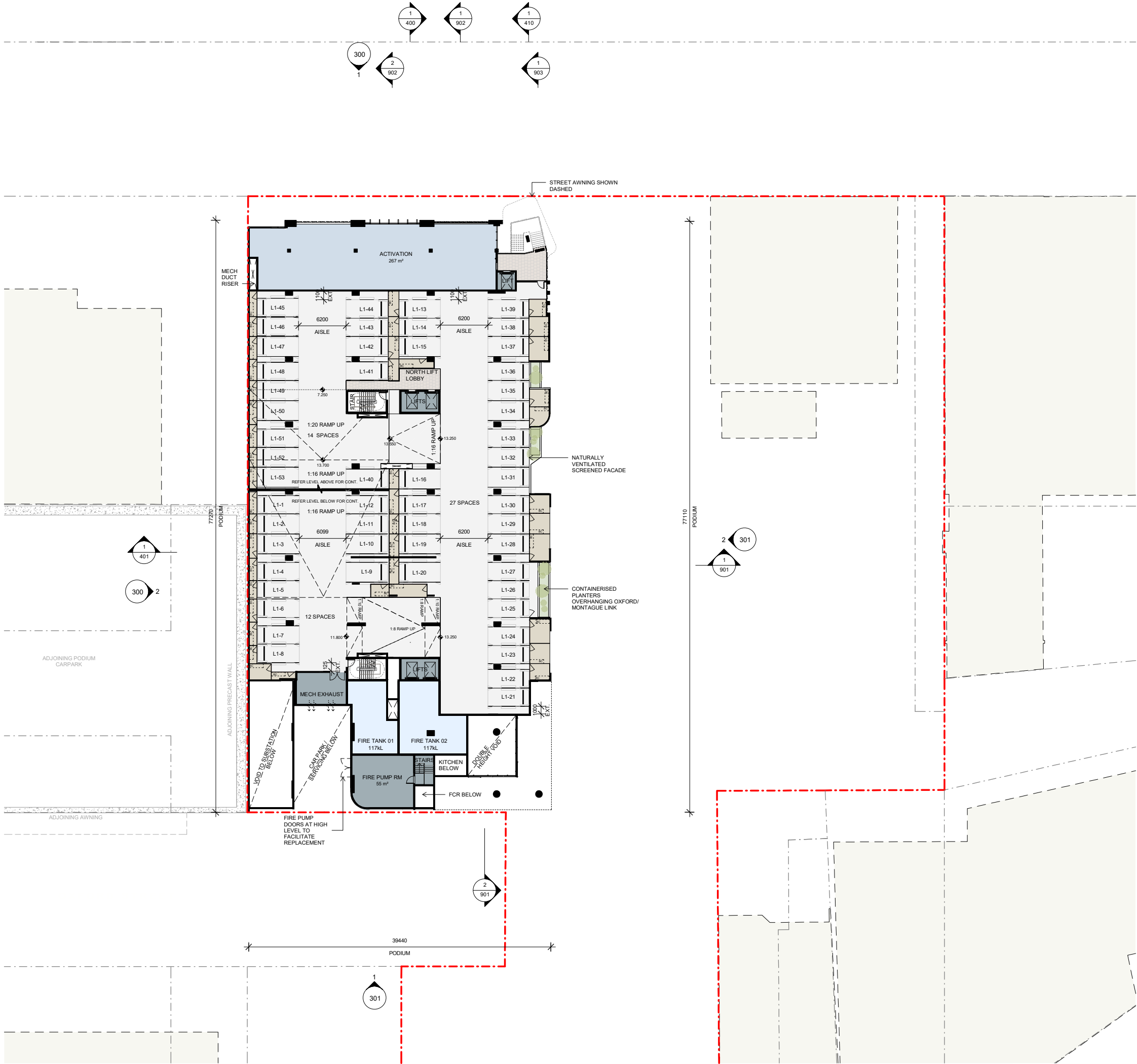
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1:500  
0 5 10 15 20 25 50







LEGEND

BC BICYCLE PARK

CAR PARK

- 54 RESIDENT STANDARD CAR BAYS
- 42 RESIDENT STORAGE CAGES
- 42 RESIDENT BICYCLE SPACES (BC)

|     |         |                  |          |
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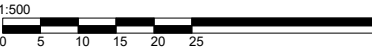
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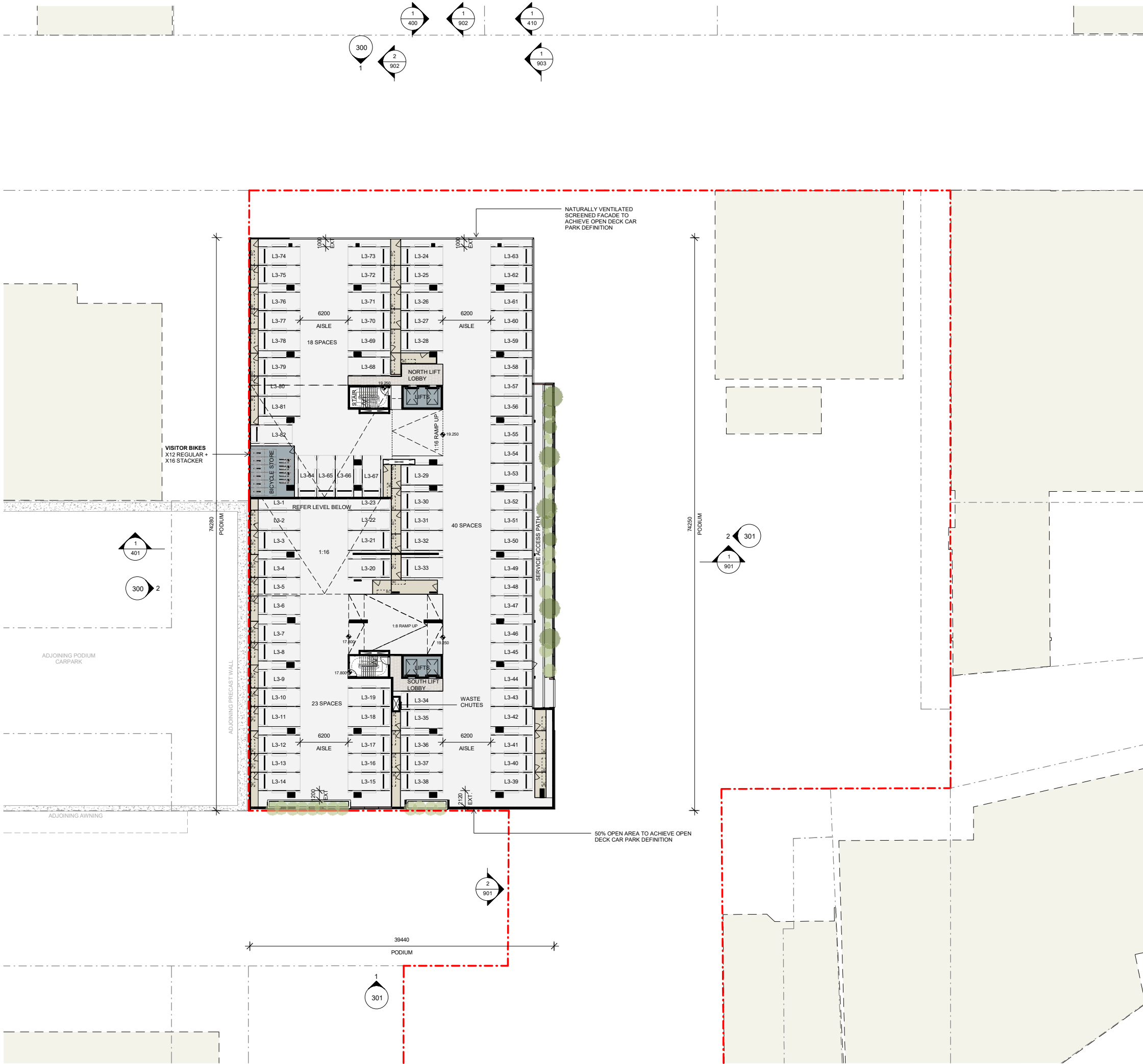
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LEGEND

BC BICYCLE PARK

CAR PARK

- 82 RESIDENT STANDARD CAR BAYS
- 43 RESIDENT STORAGE CAGES
- 43 RESIDENT BICYCLE PARKING (BC)
- 28 VISITOR BICYCLE PARKING

|     |         |                  |          |
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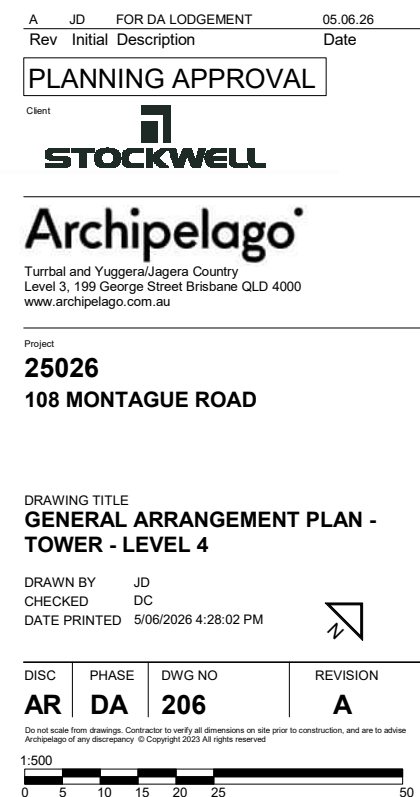
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PODIUM - LEVEL 3

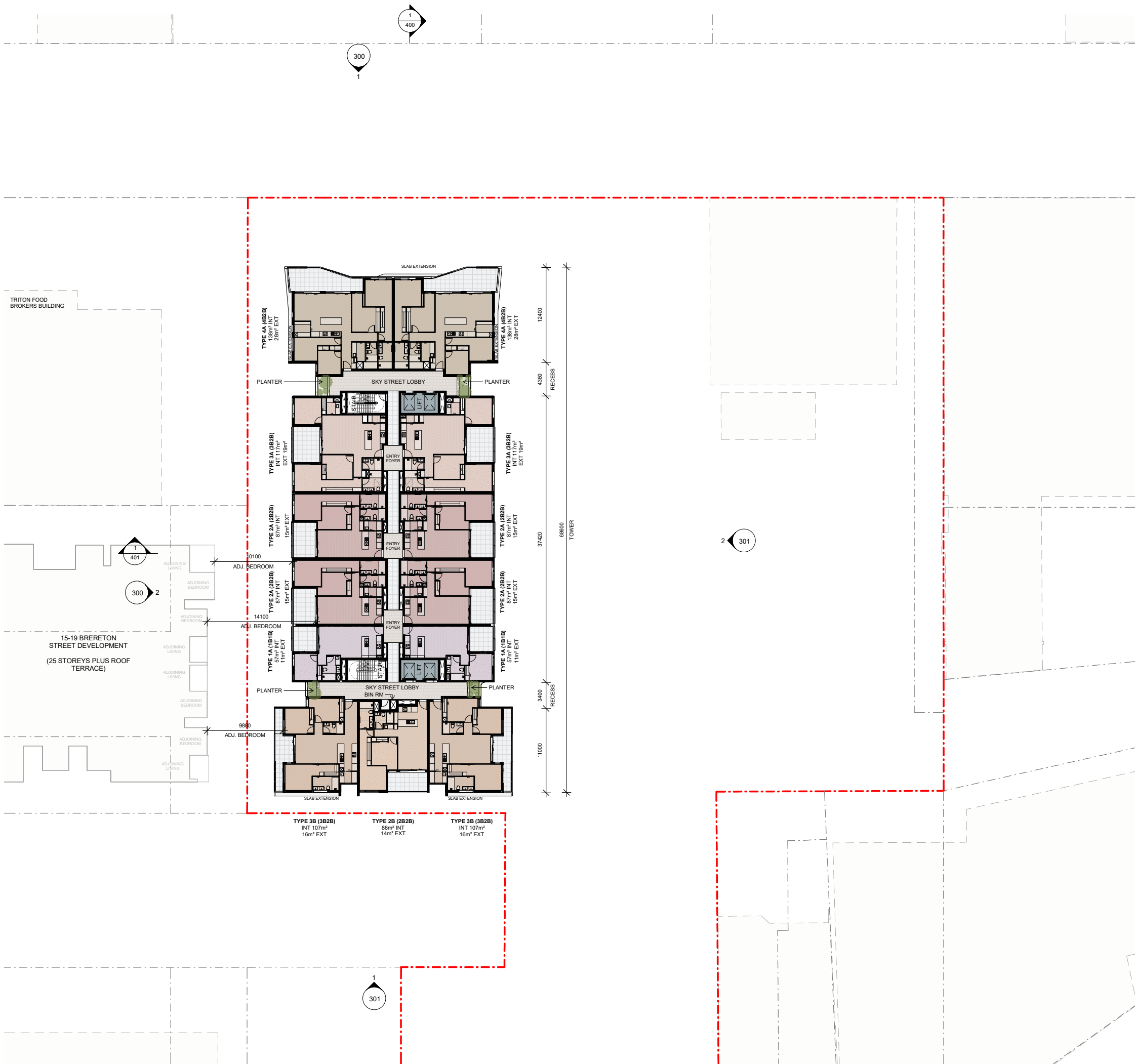
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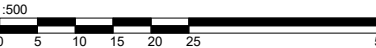
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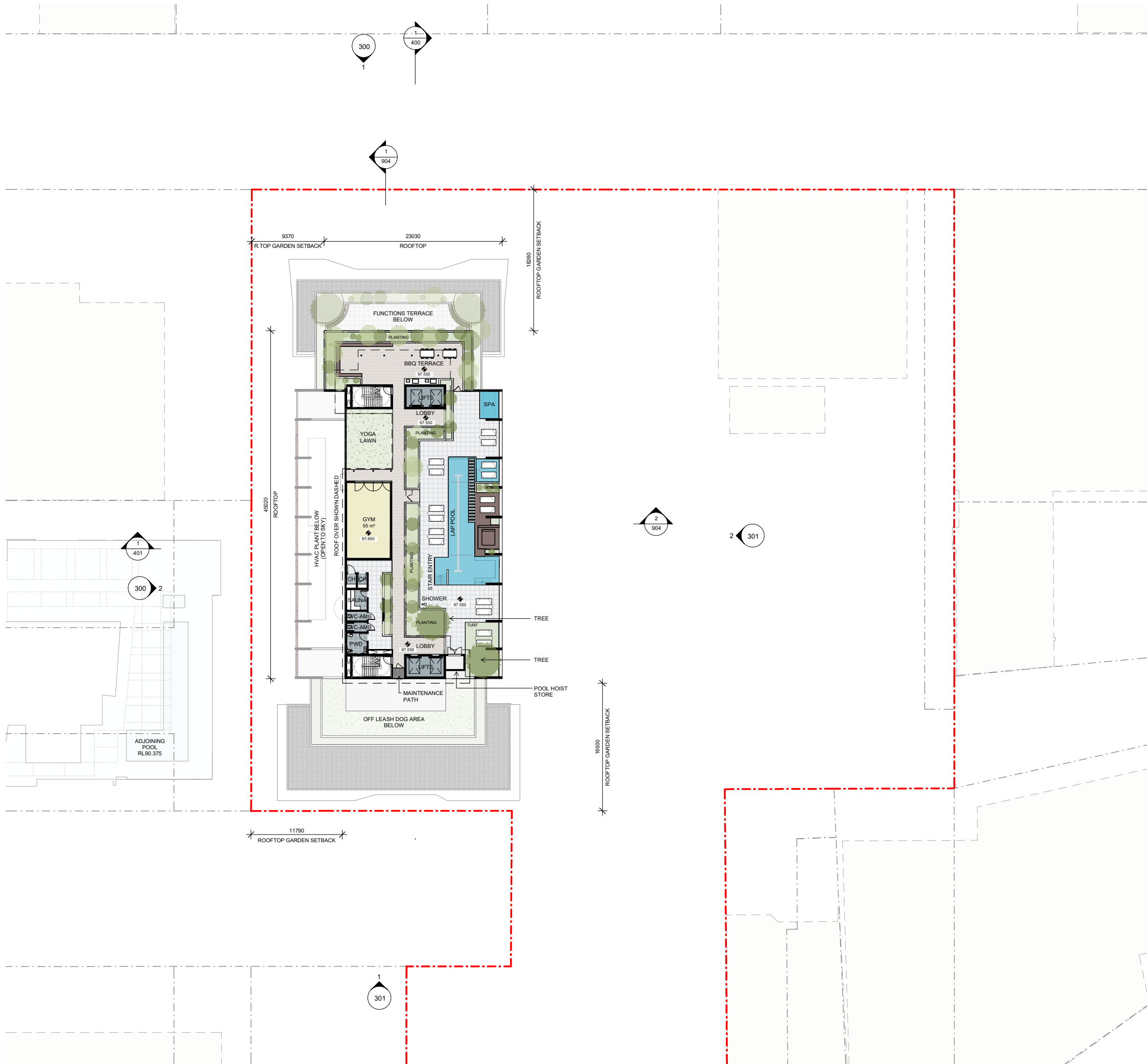


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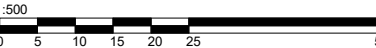
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108 MONTAGUE ROAD

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TOWER - ROOFTOP GARDEN

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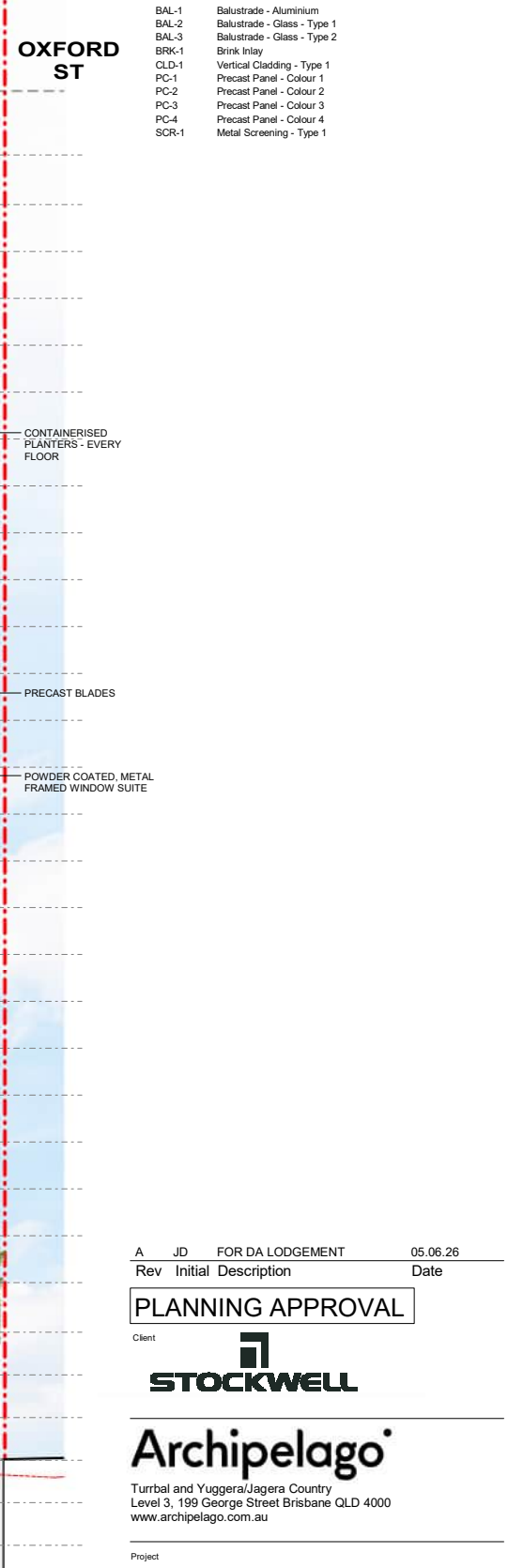
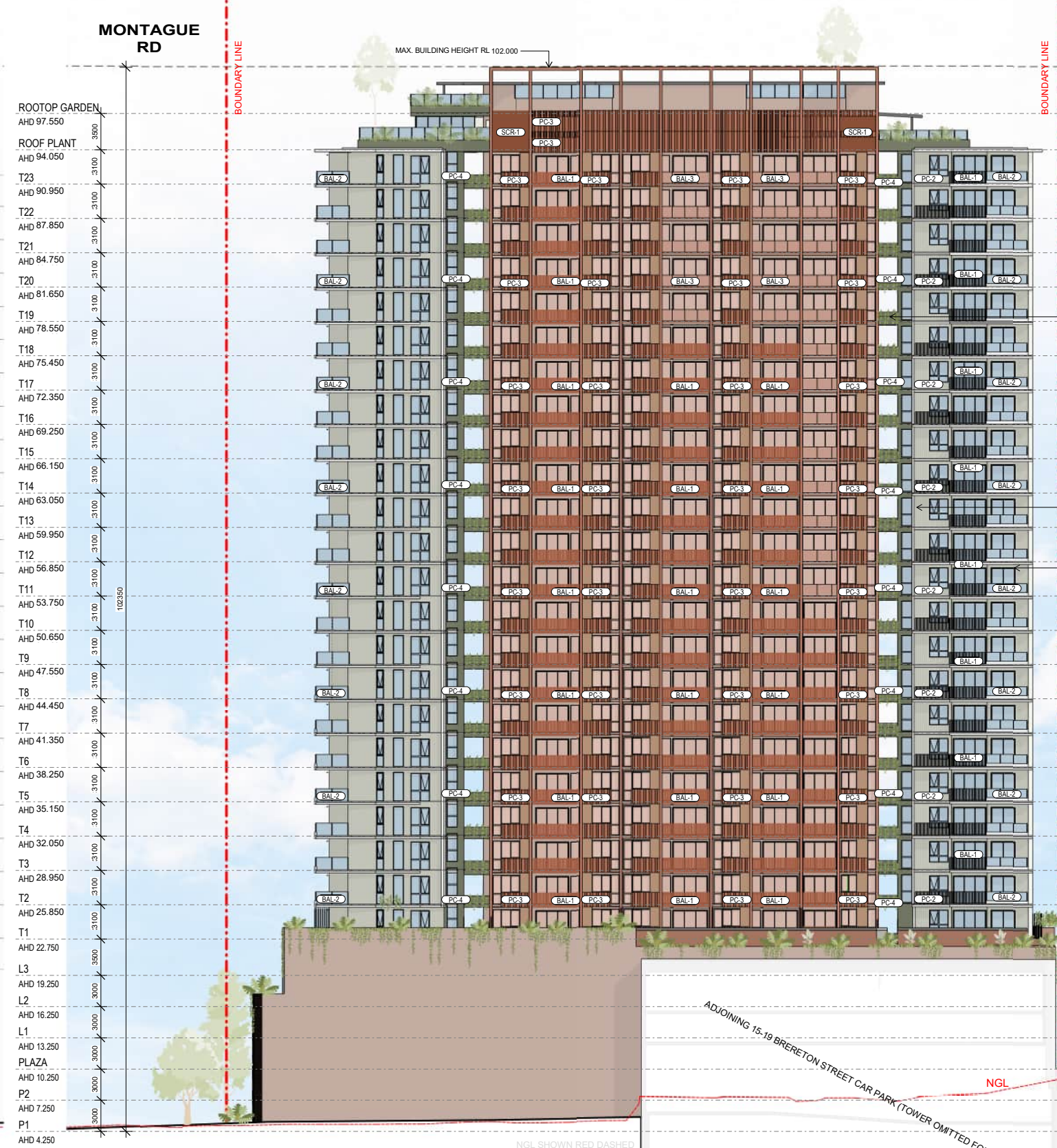
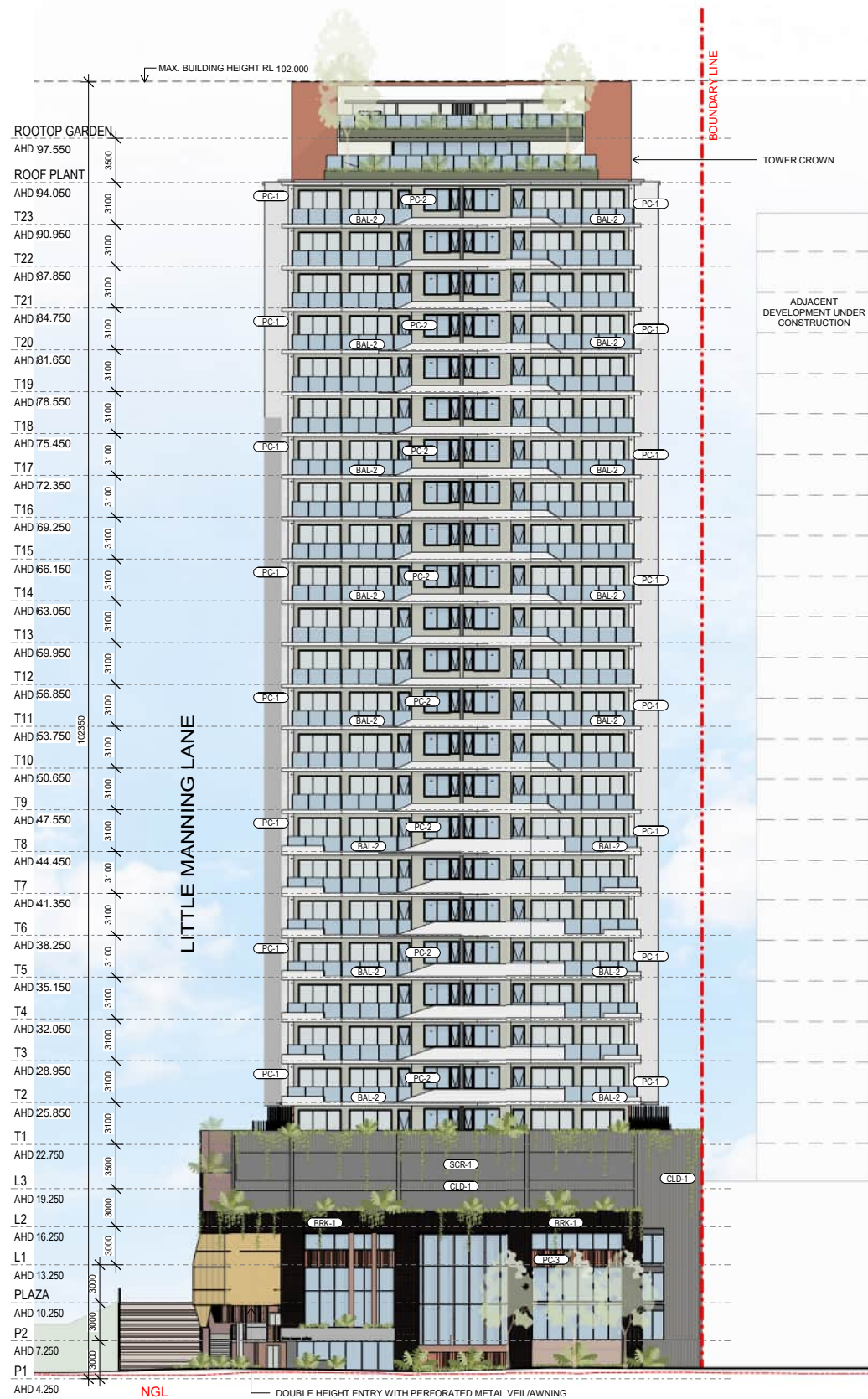
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NOTES

CODE DESCRIPTION

|       |                             |
|-------|-----------------------------|
| BAL-1 | Balustrade - Aluminium      |
| BAL-2 | Balustrade - Glass - Type 1 |
| BAL-3 | Balustrade - Glass - Type 2 |
| BRK-1 | Brink Inlay                 |
| CLD-1 | Vertical Cladding - Type 1  |
| PC-1  | Precast Panel - Colour 1    |
| PC-2  | Precast Panel - Colour 2    |
| PC-3  | Precast Panel - Colour 3    |
| PC-4  | Precast Panel - Colour 4    |
| SCR-1 | Metal Screening - Type 1    |



A JD FOR DA LODGEMENT 05.06.26  
Rev Initial Description Date

PLANNING APPROVAL

Client

**STOCKWELL**

**Archipelago**

Turrbal and Yuggera/Jagera Country  
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www.archipelago.com.au

Project

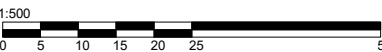
**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
**OVERALL ELEVATIONS - NORTH  
WEST & SOUTH WEST**

DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:29:34 PM

| DISC | PHASE | DWG NO | REVISION |
|------|-------|--------|----------|
| AR   | DA    | 300    | A        |

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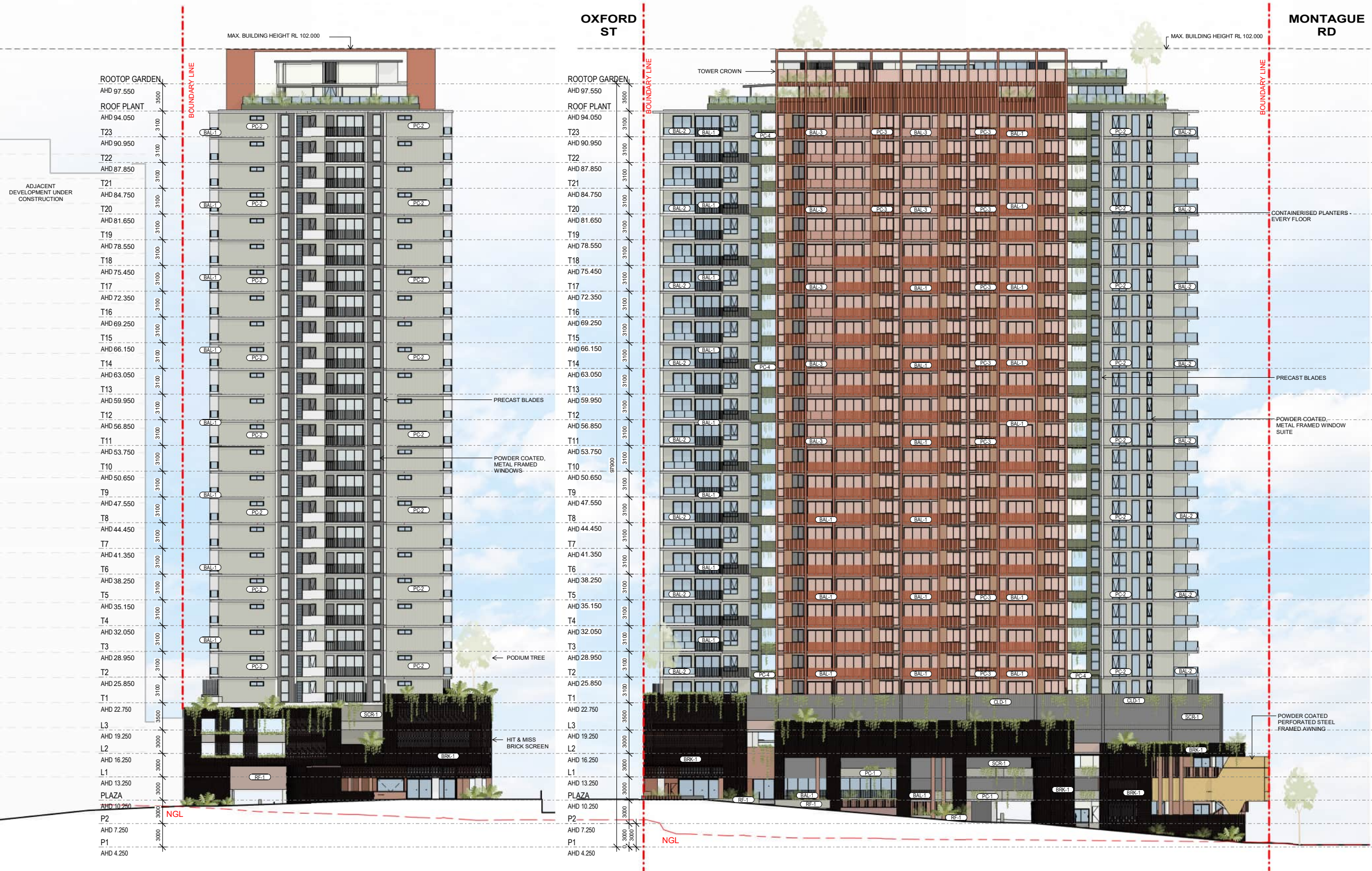


1 OVERALL ELEVATIONS - NW (MONTAGUE)

2 OVERALL ELEVATIONS - SW (BRERETON ST)

NOTES

| CODE  | DESCRIPTION                 |
|-------|-----------------------------|
| BAL-1 | Balustrade - Aluminium      |
| BAL-2 | Balustrade - Glass - Type 1 |
| BAL-3 | Balustrade - Glass - Type 2 |
| BRK-1 | Brink Inlay                 |
| CLD-1 | Vertical Cladding - Type 1  |
| PC-1  | Precast Panel - Colour 1    |
| PC-2  | Precast Panel - Colour 2    |
| PC-3  | Precast Panel - Colour 3    |
| PC-4  | Precast Panel - Colour 4    |
| RF-1  | Cement Render - Type 1      |
| SCR-1 | Metal Screening - Type 1    |



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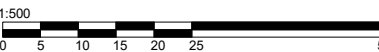
Project

**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
**OVERALL ELEVATIONS - NORTH  
EAST & SOUTH EAST (BRERETON  
ST)**  
DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:30:49 PM

| DISC | PHASE | DWG NO | REVISION |
|------|-------|--------|----------|
| AR   | DA    | 301    | A        |

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1 OVERALL ELEVATIONS - SOUTH EAST (OXFORD TCE)

2 OVERALL ELEVATIONS - NORTH EAST (LITTLE MANNING)





|     |         |                  |          |
|-----|---------|------------------|----------|
| A   | JD      | FOR DA LODGEMENT | 05.06.26 |
| Rev | Initial | Description      | Date     |

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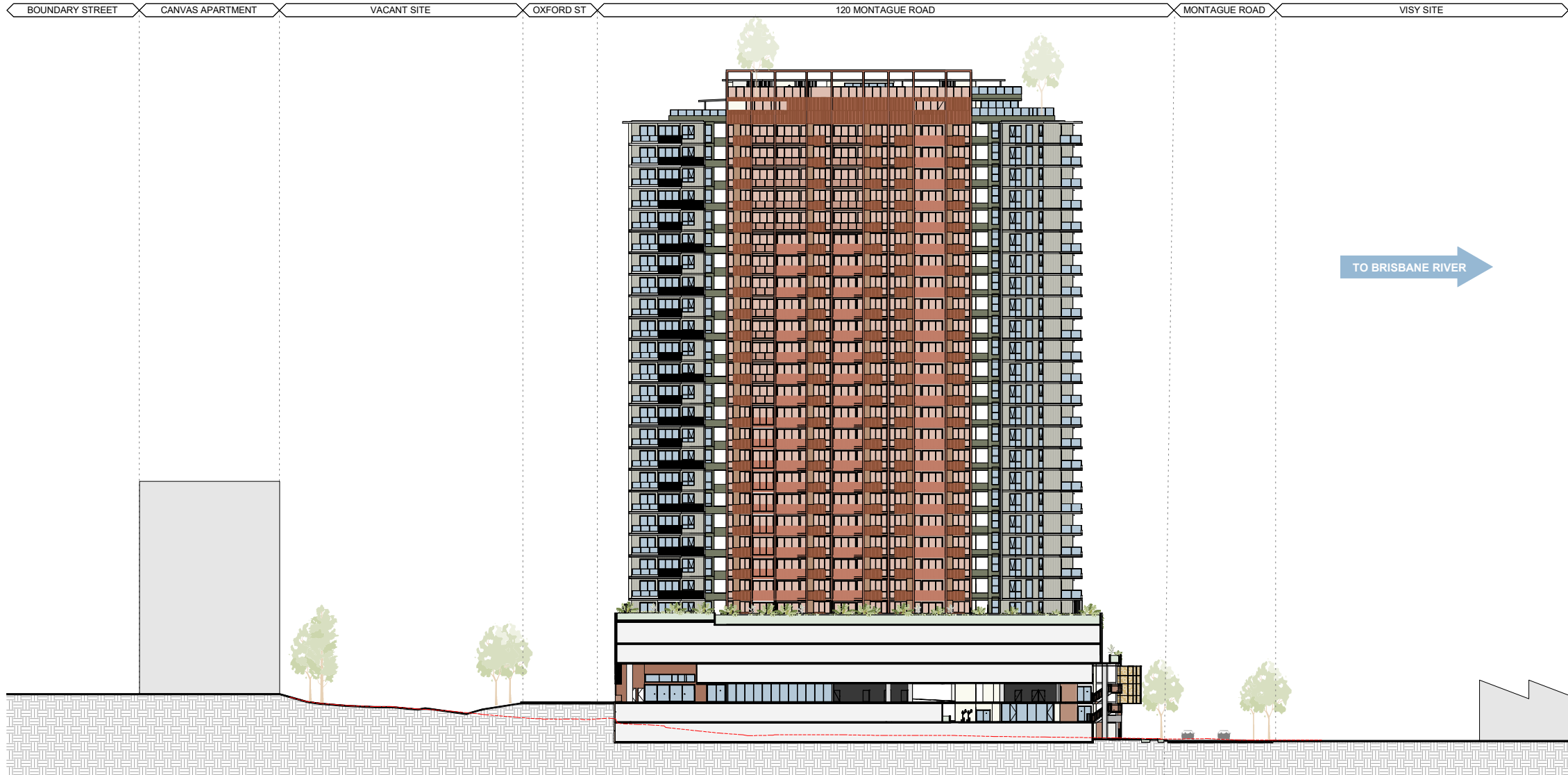
Project  
**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
**OVERALL SECTIONS - CROSS  
SECTION B-B**

DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:31:01 PM

|      |       |        |          |
|------|-------|--------|----------|
| DISC | PHASE | DWG NO | REVISION |
| AR   | DA    | 401    | A        |

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1:500  
0 5 10 15 20 25 50



|     |         |                  |          |
|-----|---------|------------------|----------|
| A   | JD      | FOR DA LODGEMENT | 05.06.26 |
| Rev | Initial | Description      | Date     |

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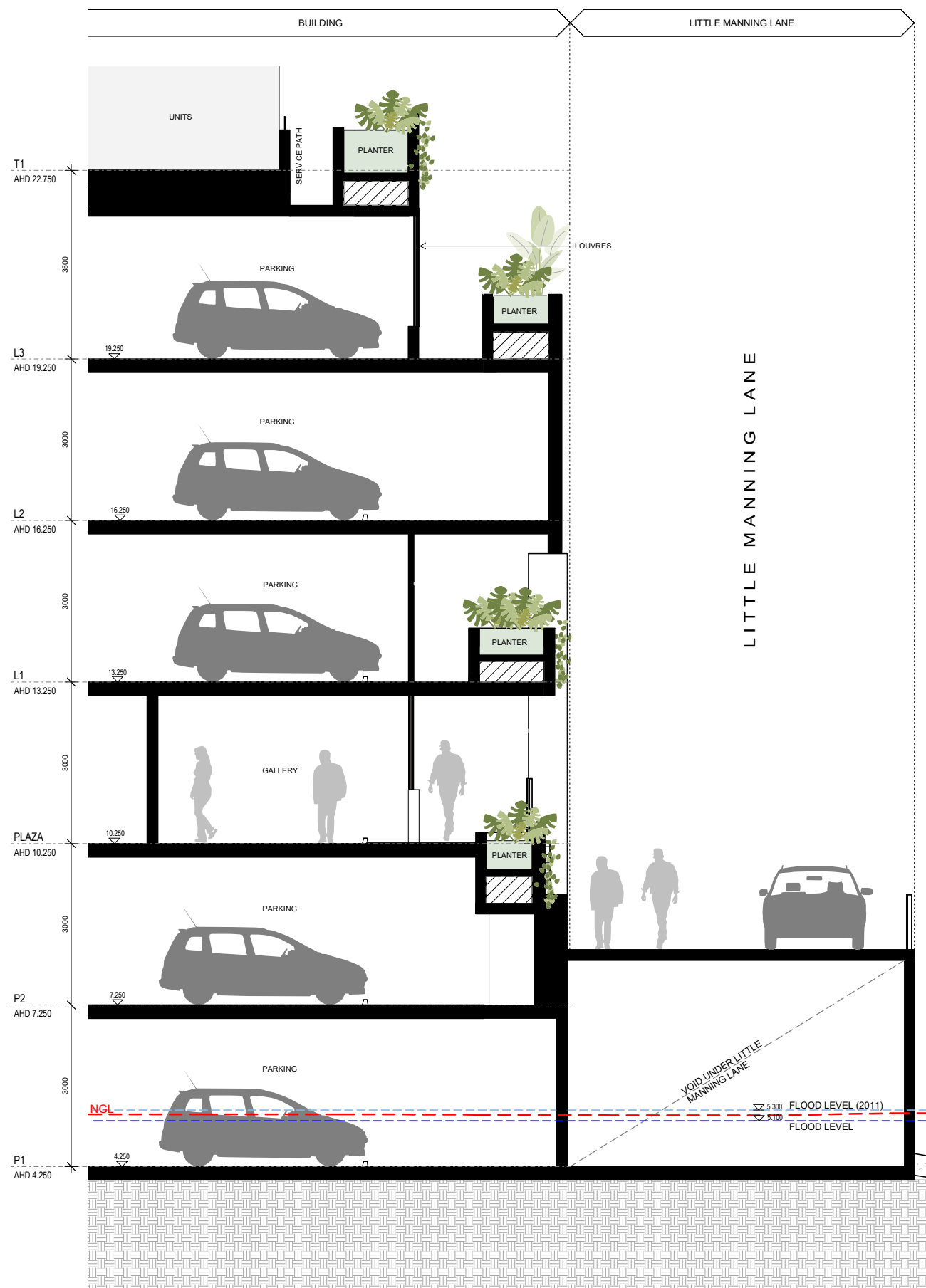
Project  
**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
**OVERALL SITE SECTION -  
LONGITUDINAL**

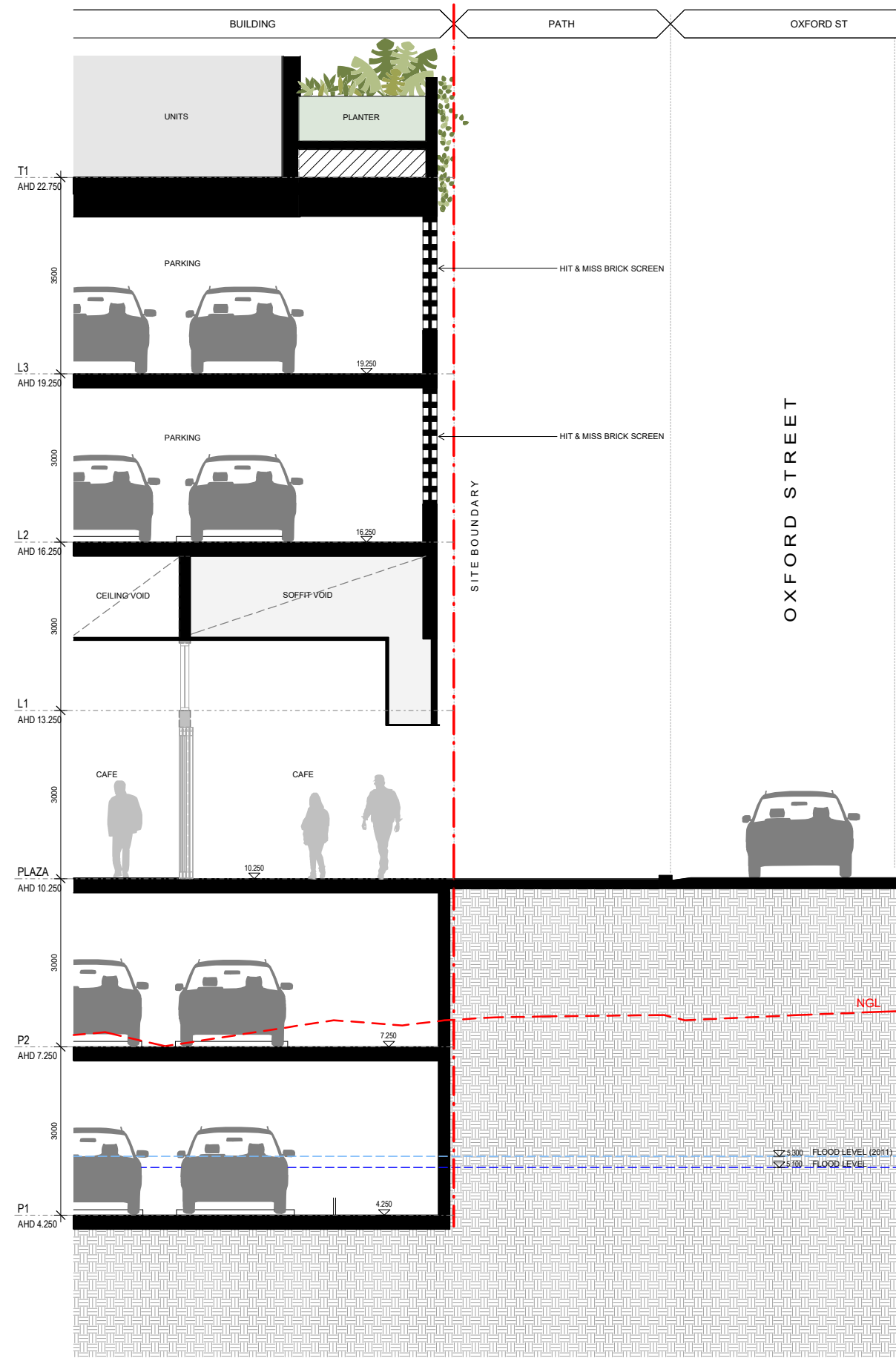
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CHECKED DC  
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|------|-------|--------|----------|
| AR   | DA    | 410    | A        |

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1:500  
0 5 10 15 20 25 50



1 **DETAIL FACADE SECTION - GALLERY**



2 **DETAIL FACADE SECTION- CAFE**

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Rev Initial Description Date

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**25026**  
**108 MONTAGUE ROAD**

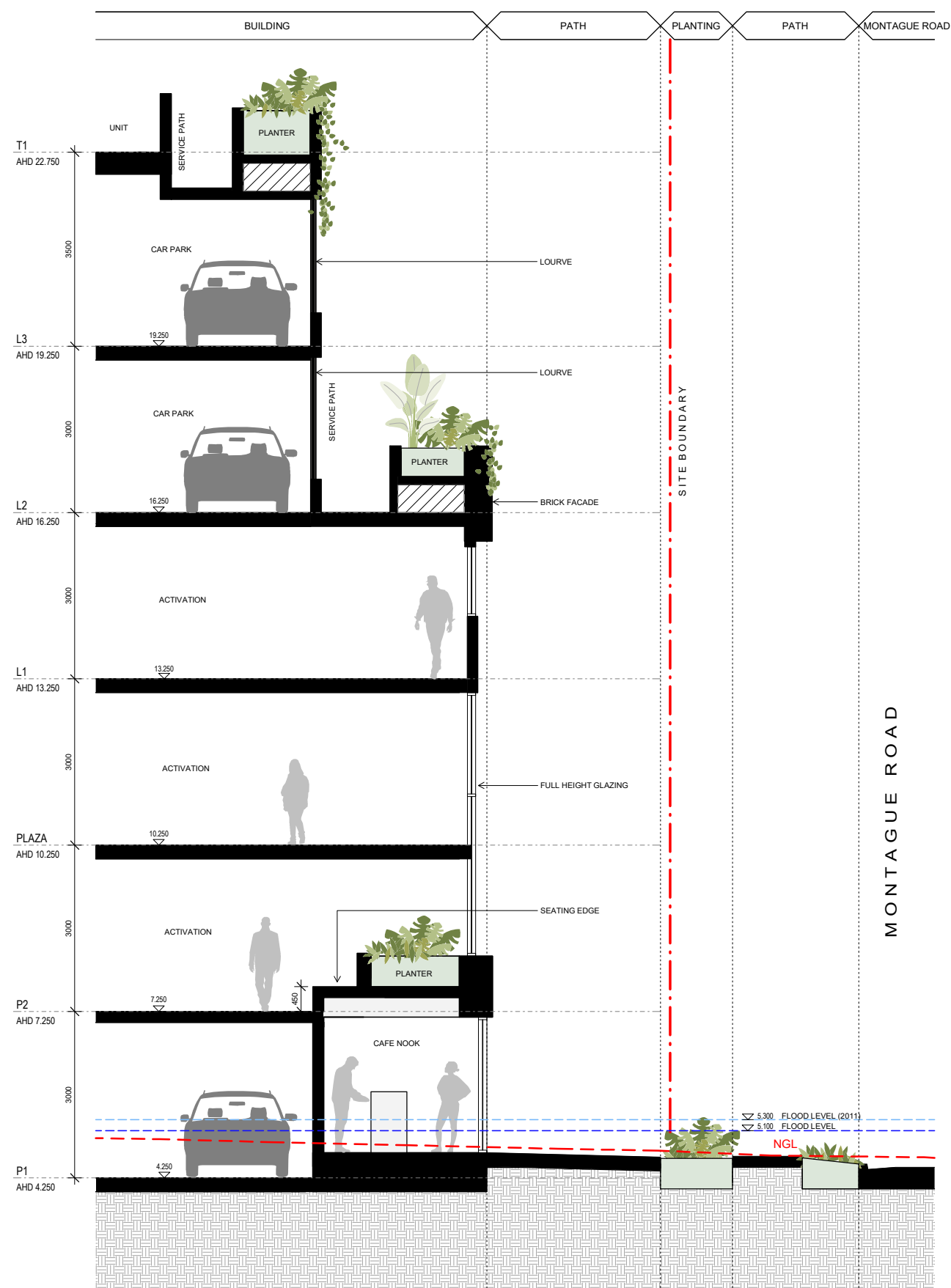
DRAWING TITLE  
**FACADE DETAILS - OXFORD  
STREET AND LITTLE MANNING**

DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:31:16 PM

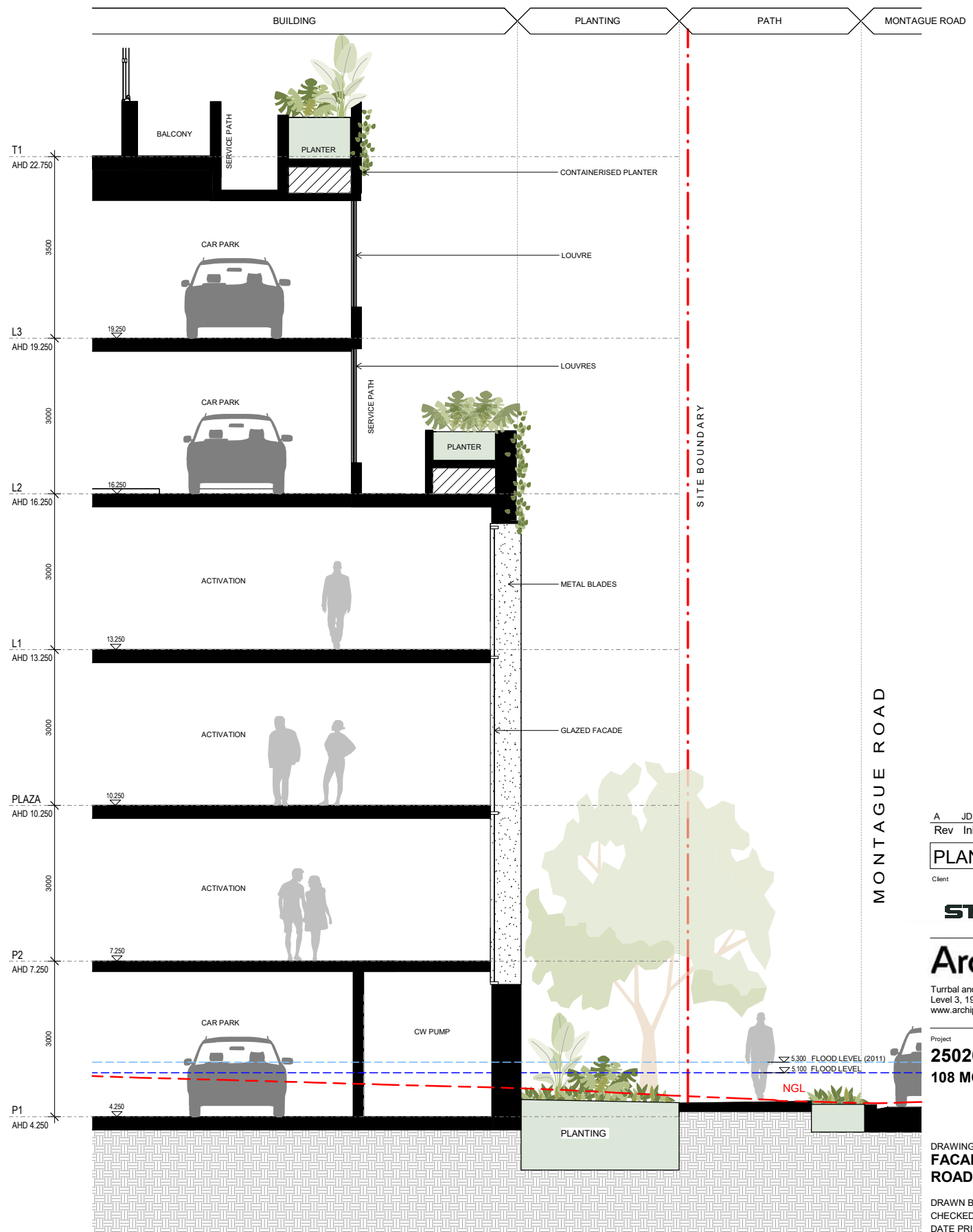
| DISC | PHASE | DWG NO | REVISION |
|------|-------|--------|----------|
| AR   | DA    | 901    | A        |

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1:100  
0 1 2 3 4 5 10



**DETAIL FACADE SECTION - MONTAGUE ROAD  
ACTIVATION 01**



**DETAIL FACADE SECTION- MONTAGUE ROAD  
ACTIVATION 02**

A JD FOR DA LODGEMENT 05.06.26  
Rev Initial Description Date

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**108 MONTAGUE ROAD**

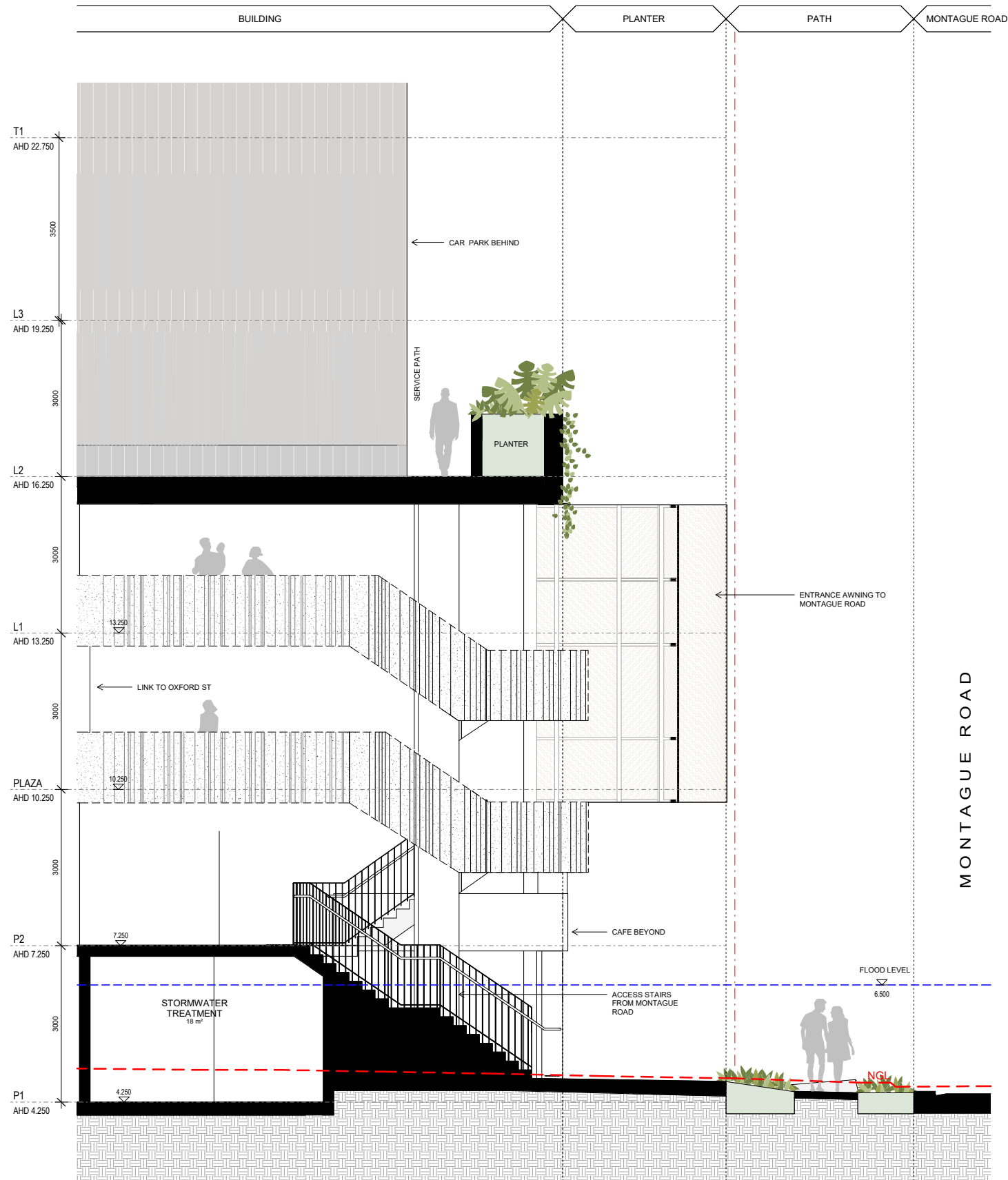
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**FACADE DETAILS - MONTAGUE  
ROAD - SHEET 1**

DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:31:18 PM

| DISC | PHASE | DWG NO | REVISION |
|------|-------|--------|----------|
| AR   | DA    | 902    | A        |

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1:100  
0 1 2 3 4 5 10



DETAIL FACADE SECTION - MONTAGUE ROAD  
SCREEN

1

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**25026**

**108 MONTAGUE ROAD**

DRAWING TITLE  
**FACADE DETAILS - MONTAGUE  
ROAD - SHEET 2**

DRAWN BY JD  
CHECKED DC  
DATE PRINTED 5/06/2026 4:31:22 PM

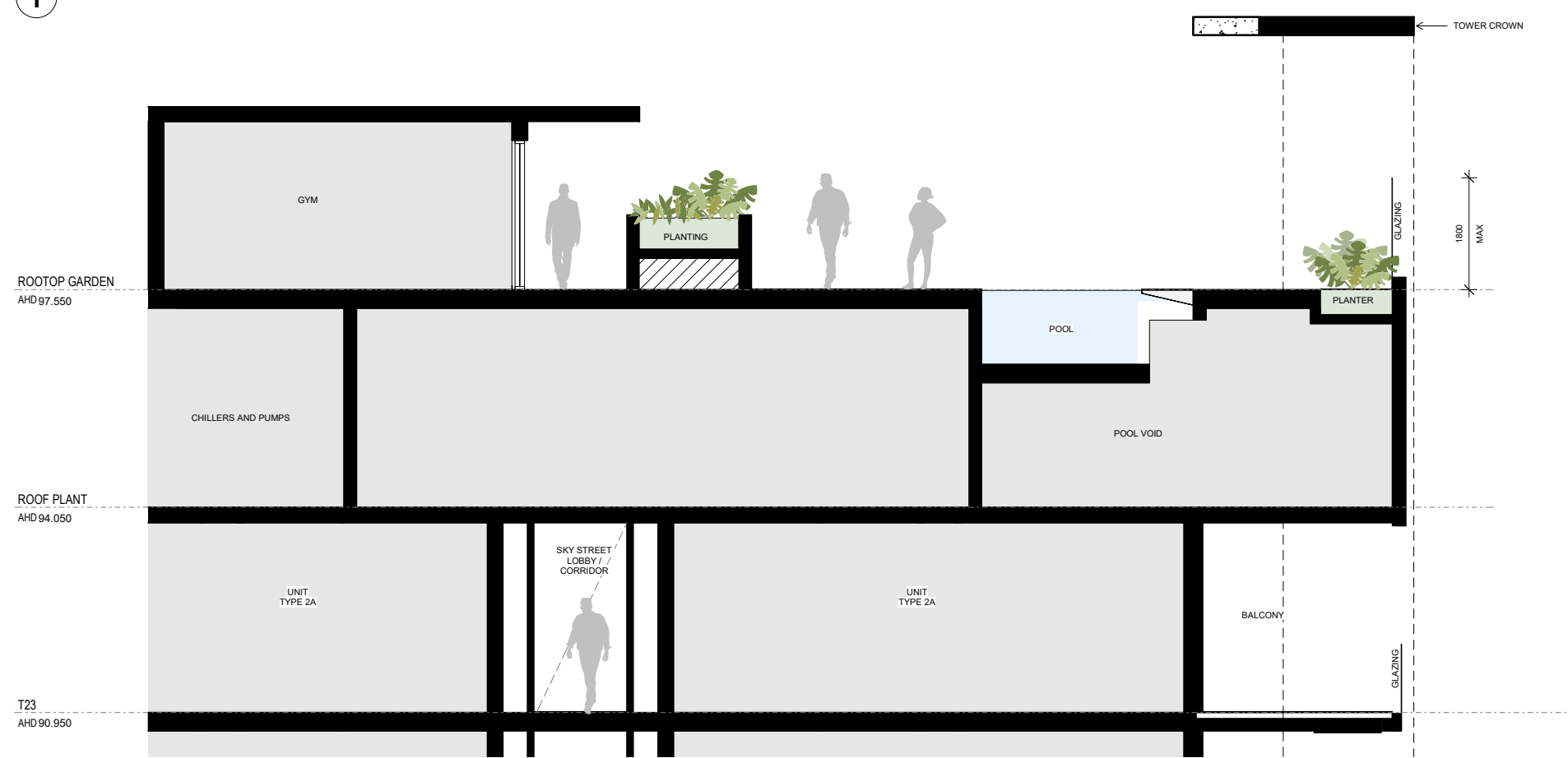
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|------|-------|--------|----------|
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1:100  
0 1 2 3 4 5 10



1 ROOFTOP AMENITIES - FUNCTIONS & BBQ TCE



2 ROOFTOP AMENITIES - GYM AND POOL

|     |         |                  |          |
|-----|---------|------------------|----------|
| A   | JD      | FOR DA LODGEMENT | 05.06.26 |
| Rev | Initial | Description      | Date     |

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**25026**

**108 MONTAGUE ROAD**

DRAWING TITLE

**FACADE DETAILS - ROOFTOP**

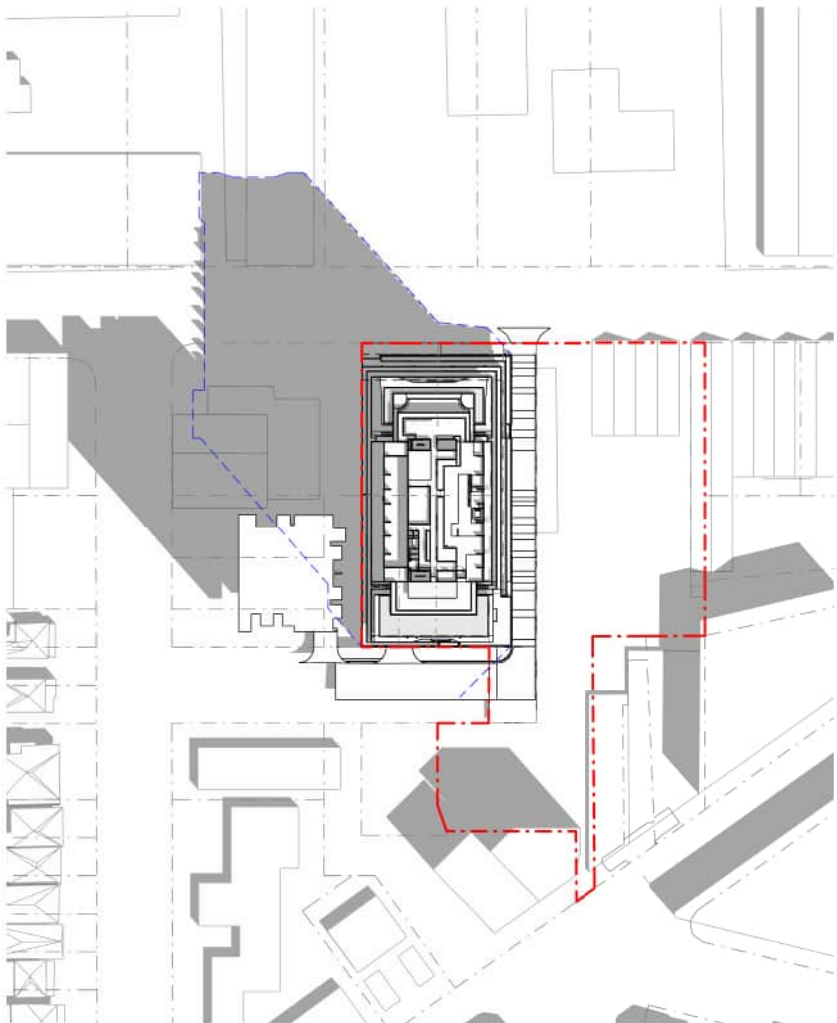
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|------|-------|--------|----------|
| DISC | PHASE | DWG NO | REVISION |
| AR   | DA    | 904    | A        |

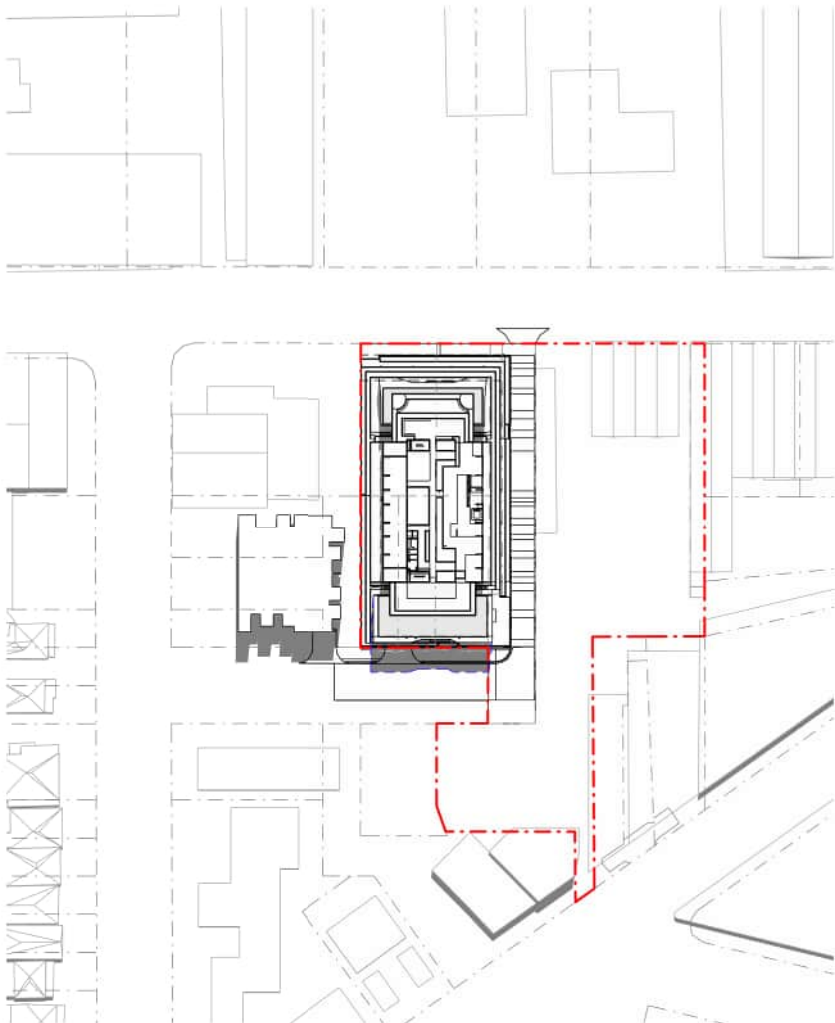
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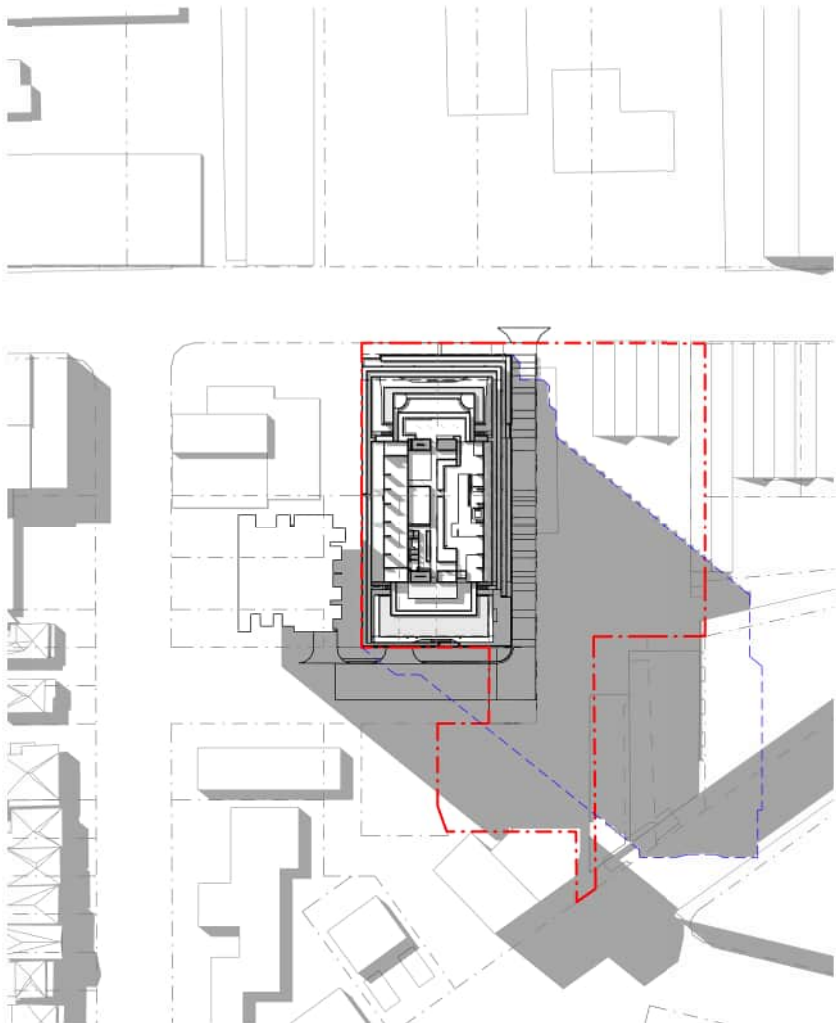
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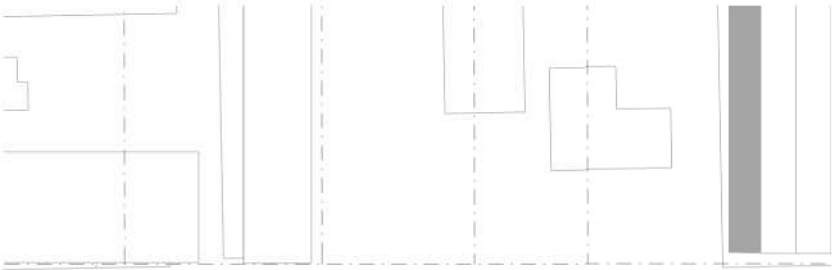
SUN DIAGRAM - SUMMER SOL. - 9AM



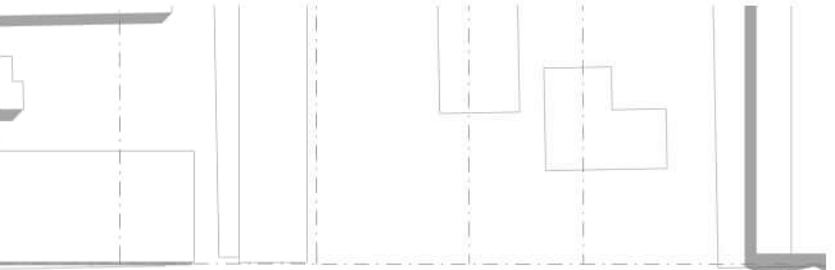
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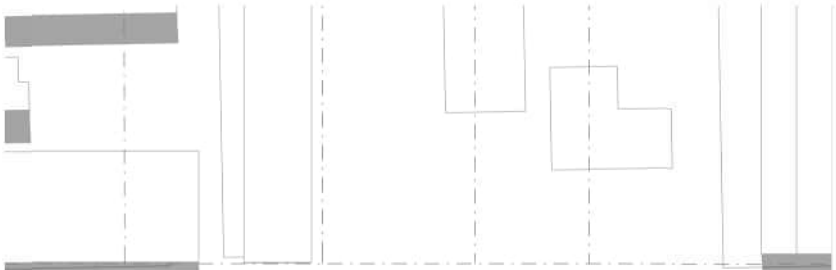
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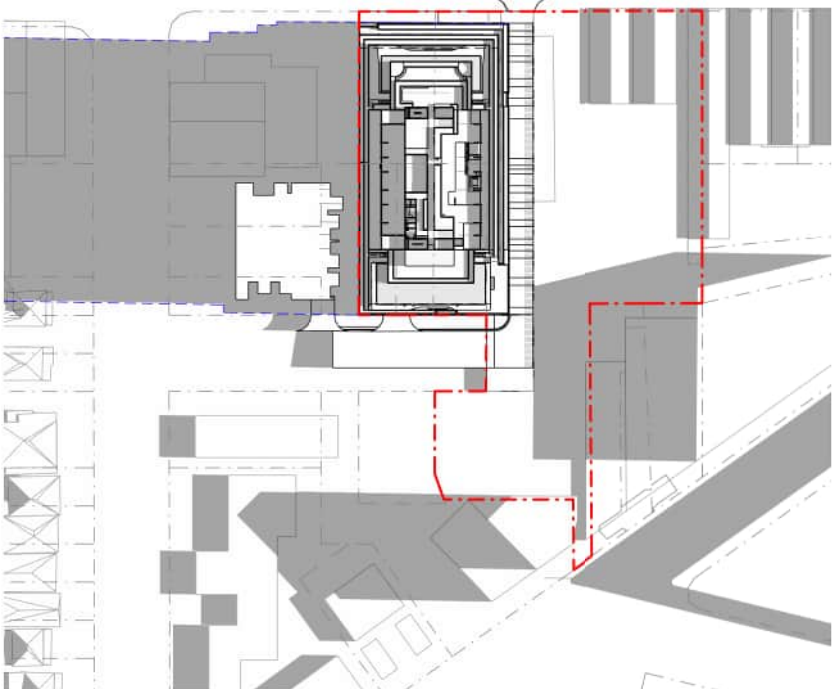
SUN DIAGRAM - WINTER SOL. - 9am



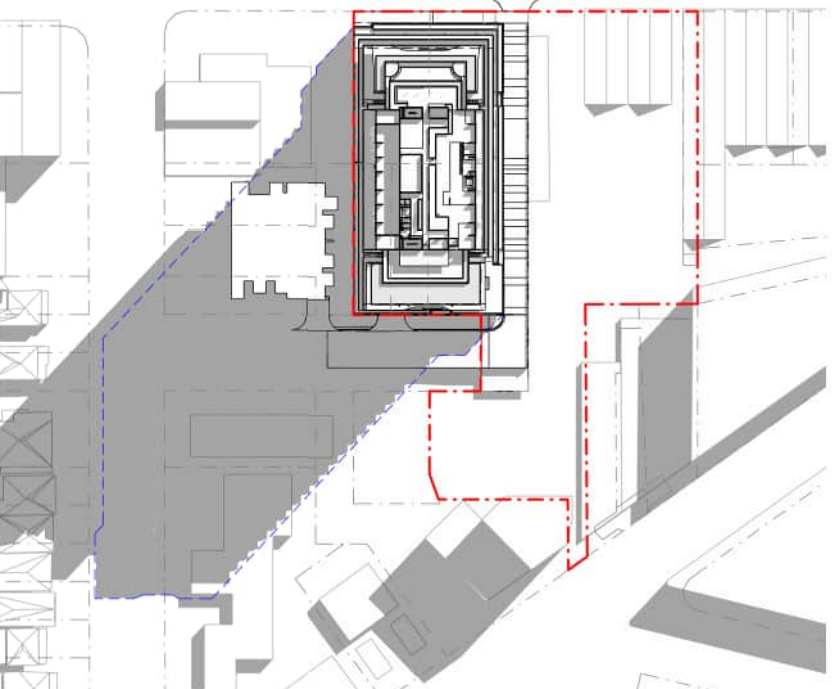
SUN DIAGRAM - WINTER SOL. - 12pm



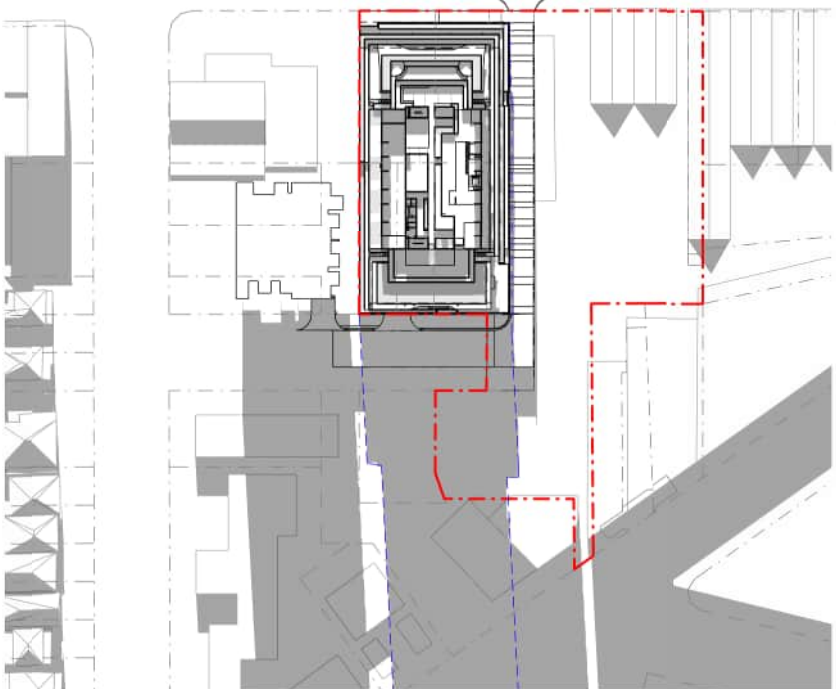
SUN DIAGRAM - WINTER SOL. - 3pm



SUN DIAGRAM - WINTER SOL. - 9am



SUN DIAGRAM - WINTER SOL. - 12pm



SUN DIAGRAM - WINTER SOL. - 3pm

|     |         |                  |          |
|-----|---------|------------------|----------|
| A   | JD      | FOR DA LODGEMENT | 05.06.26 |
| Rev | Initial | Description      | Date     |

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Level 3, 199 George Street Brisbane QLD 4000  
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Project

**25026**  
**108 MONTAGUE ROAD**

DRAWING TITLE  
**SUN DIAGRAMS**

|              |                      |
|--------------|----------------------|
| DRAWN BY     | JD                   |
| CHECKED      | DC                   |
| DATE PRINTED | 5/06/2026 4:43:39 PM |



|      |       |        |          |
|------|-------|--------|----------|
| DISC | PHASE | DWG NO | REVISION |
| AR   | DA    | 950    | A        |

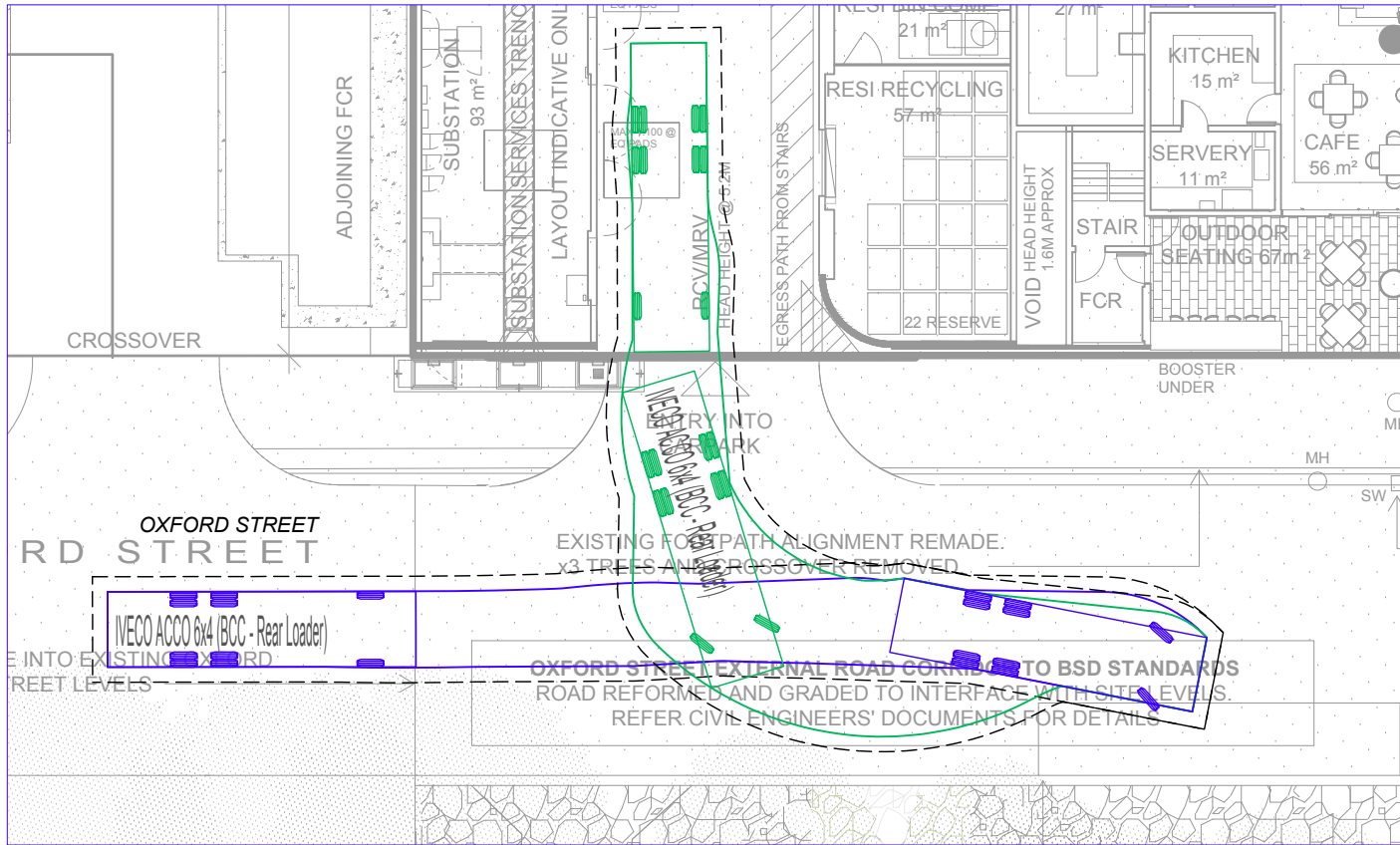
Do not scale from drawings. Contractor to verify all dimensions on site prior to construction, and are to advise Archipelago of any discrepancy. © Copyright 2023 All rights reserved.

1:2000

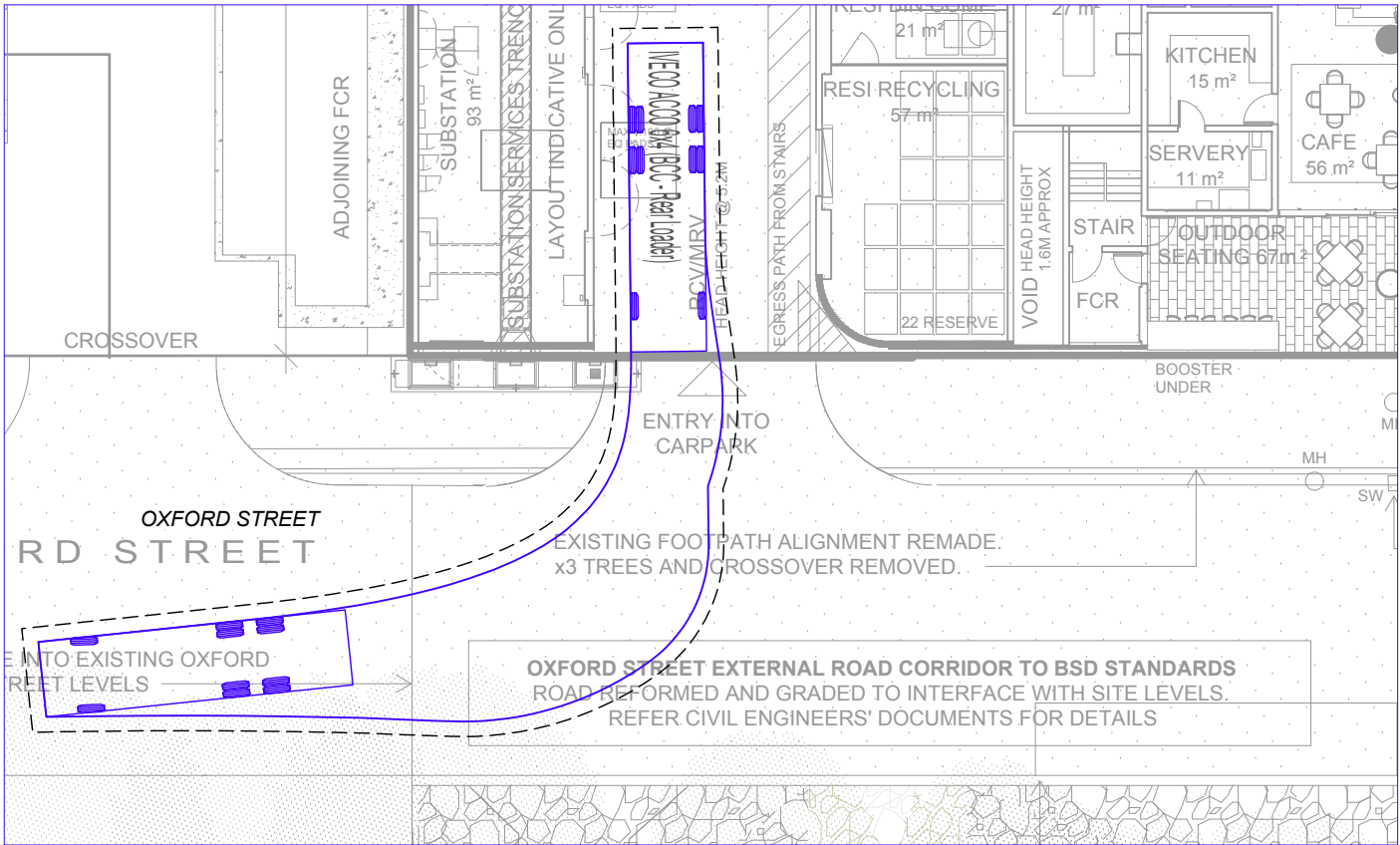




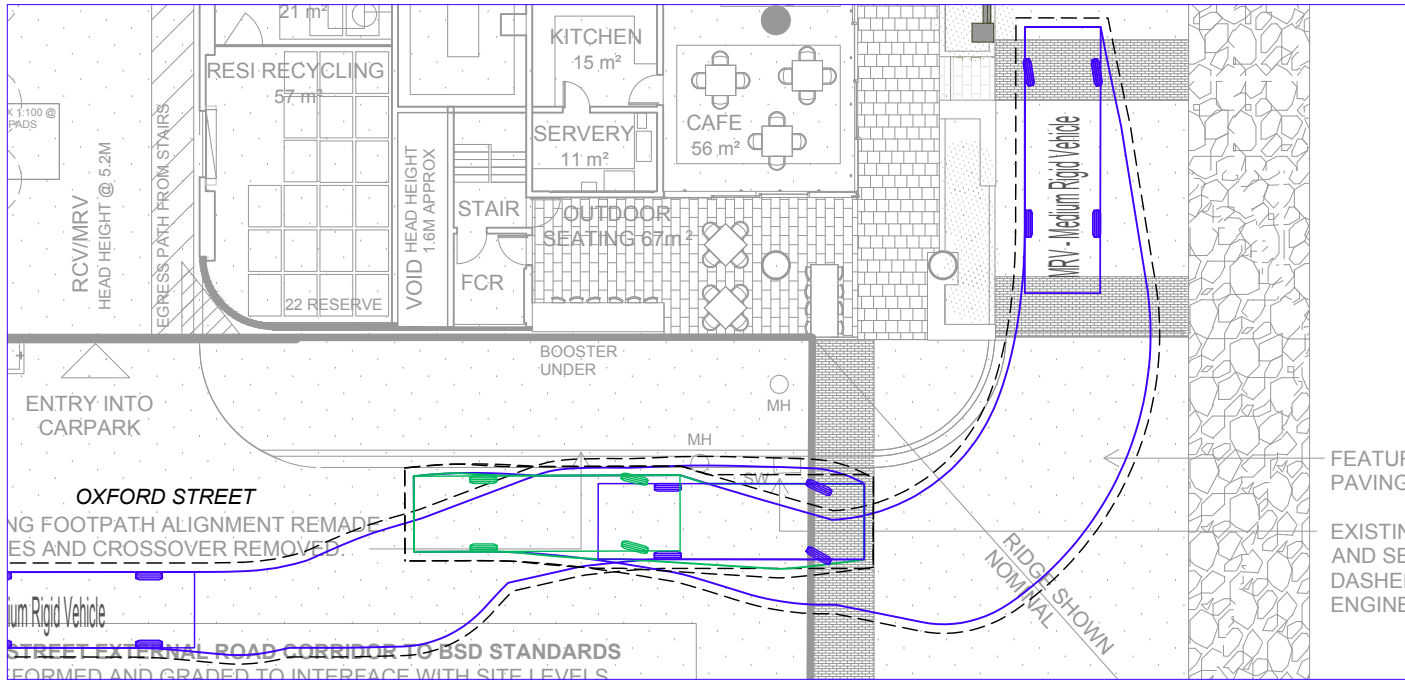
## Appendix B Colliers Drawings



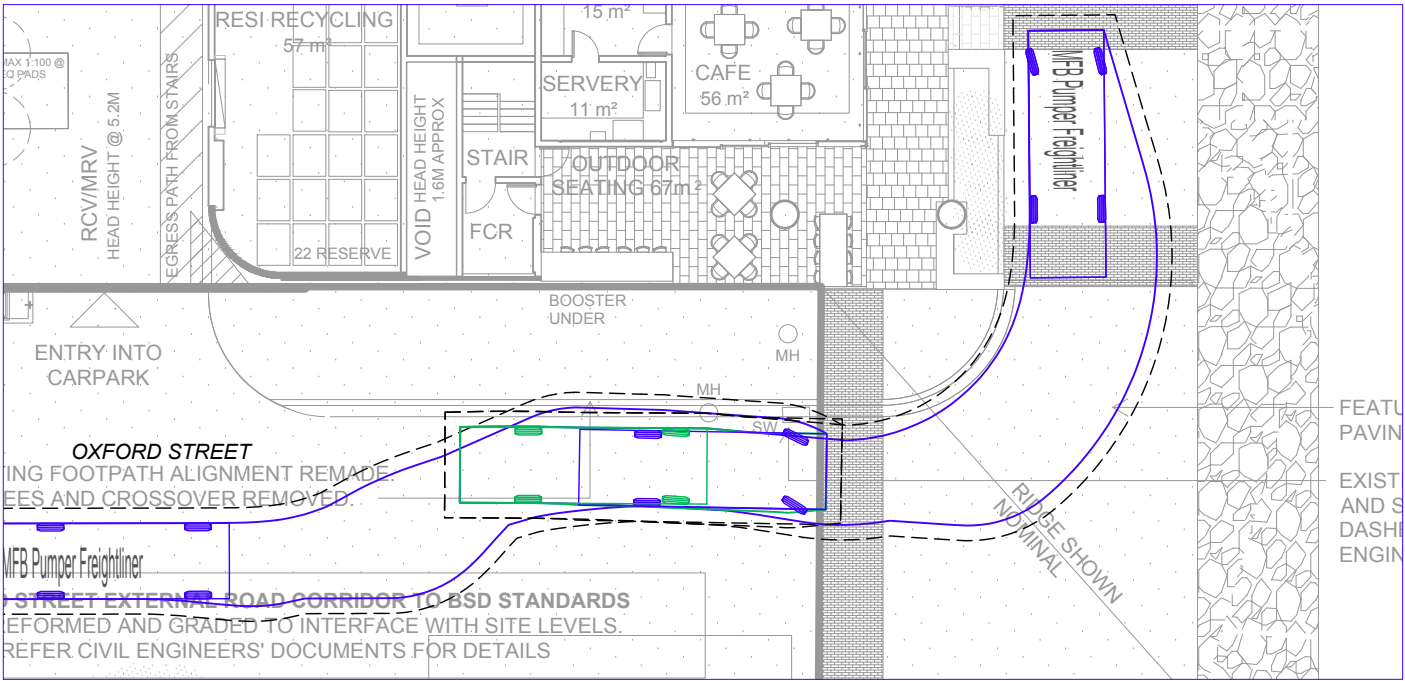
10.24m REAR LOADING REFUSE COLLECTION VEHICLE - INGRESS MANOEUVRE



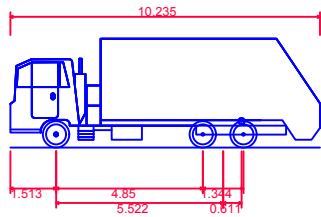
10.24m REAR LOADING REFUSE COLLECTION VEHICLE - EGRESS MANOEUVRE



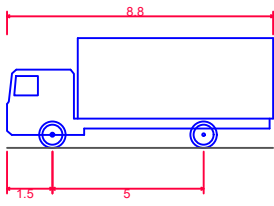
MEDIUM RIGID VEHICLE



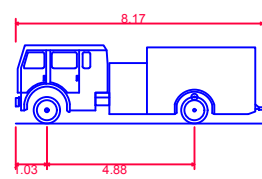
FIRE TRUCK CIRCULATION



**IVECO ACCO 6x4 (BCC - Rear Loader)**  
Overall Length 10.235m  
Overall Width 2.500m  
Overall Body Height 3.600m  
Min Body Ground Clearance 0.260m  
Track Width 2.500m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 9.757m  
Design Speed Forward 5.00km/h  
Clearance Envelope 0.500m



**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 5.00km/h  
Clearance Envelope 0.300m



**MFB Pumper Freightliner**  
Overall Length 8.170m  
Overall Width 2.500m  
Overall Body Height 2.584m  
Min Body Ground Clearance 0.313m  
Track Width 2.500m  
Lock-to-lock time 4.00s  
Max Wheel Angle 38.20°  
Clearance Envelope 0.500m

**PRELIMINARY  
ADVICE ONLY**

8 June 2026

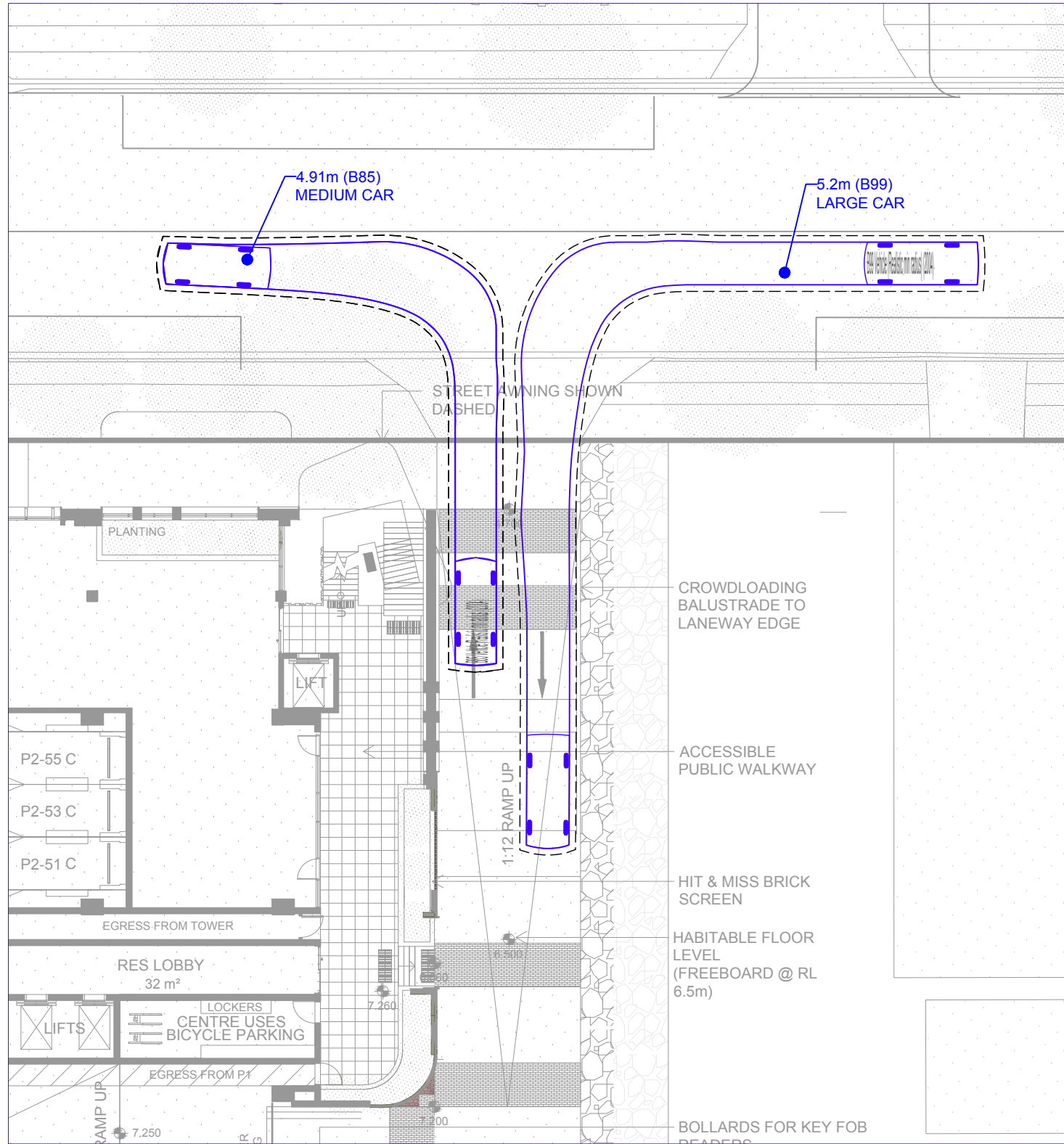
| REV. | DATE     | AMENDMENT DESCRIPTION      | DRAWN | CHECKED | APPROVED |
|------|----------|----------------------------|-------|---------|----------|
| B    | 08-06-26 | REVISED ARCHITECTURAL BASE | DSF   | VB      | SC       |
| A    | 18-05-26 | ORIGINAL ISSUE             | DSF   | AAO     | SC       |

|        |                                     |     |   |     |    |       |
|--------|-------------------------------------|-----|---|-----|----|-------|
| SCALE  | 0                                   | 2.5 | 5 | 7.5 | 10 | 12.5m |
|        | SCALE 1:250 AT ORIGINAL SIZE        |     |   |     |    |       |
| NORTH  |                                     |     |   |     |    |       |
| CLIENT | STOCKWELL DEVELOPMENT GROUP PTY LTD |     |   |     |    |       |

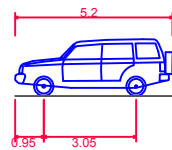
**Colliers International Engineering & Design (TTMC) Pty Ltd**  
ABN 65 010 868 621  
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000  
P.O. BOX 12015, BRISBANE QLD 4003  
T: (07) 3327 9500 F: (07) 3327 9501  
E: ttmbis@ttmgroup.com.au W: www.ttmgroup.com.au

|               |                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|
| PROJECT       | 108 MONTAGUE ROAD, SOUTH BRISBANE                                                                                           |
| DRAWING TITLE | <b>SWEPT PATH ANALYSIS</b><br>10.24m REAR LOADING REFUSE COLLECTION VEHICLE, 8.8m MEDIUM RIGID VEHICLE AND 8.17m FIRE TRUCK |

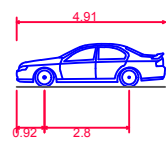
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|----------------|--------------|---------------|--------|
| PROJECT NUMBER | 25BRT0421    | ORIGINAL SIZE | A3     |
| DRAWING NUMBER | 25BRT0421-01 | REVISION      | B      |
| DATE           | 8 Jun 2026   | SHEET         | 1 OF 1 |



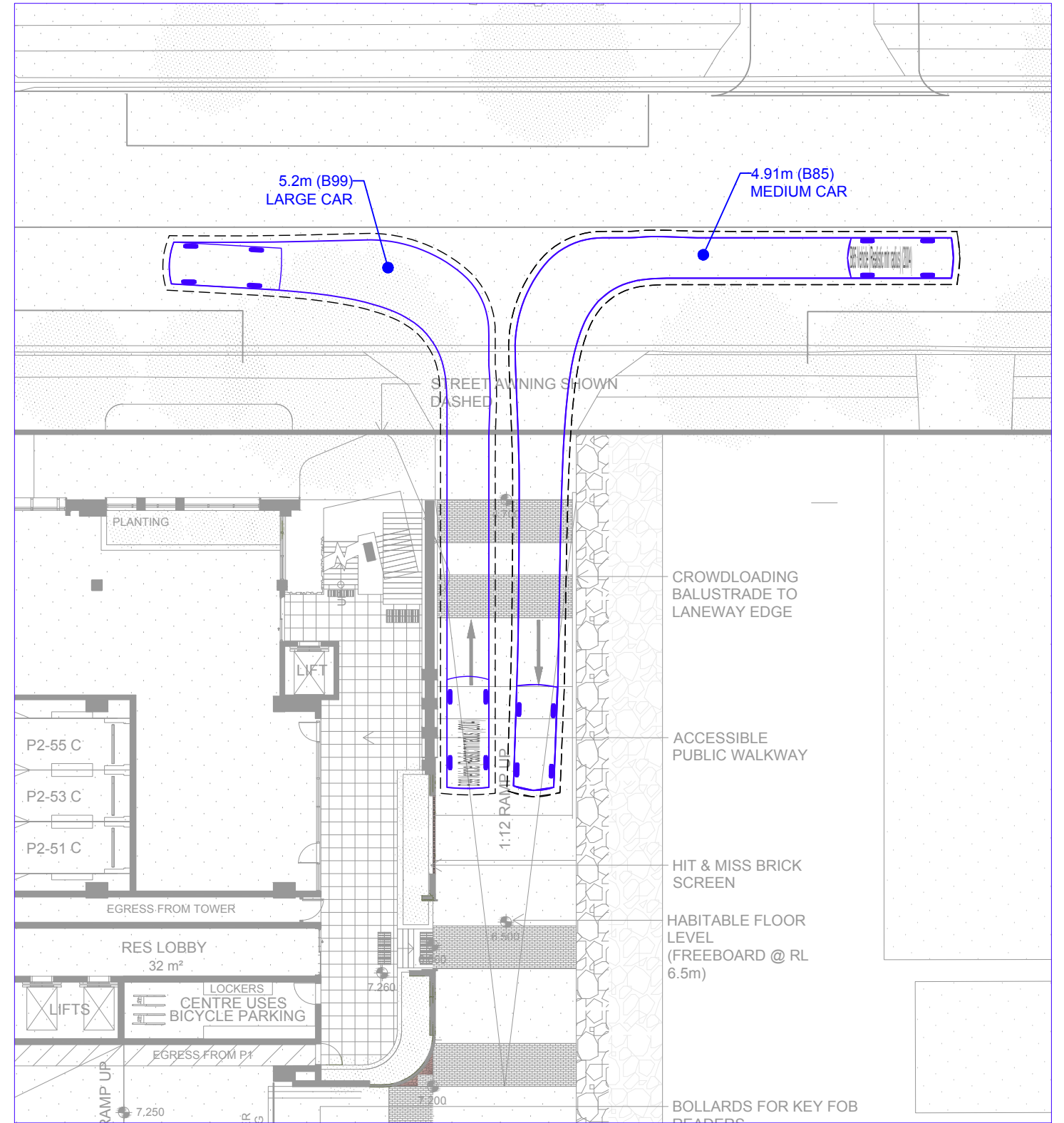
5.2m (B99) LARGE CAR INGRESS PAST EGRESSING 4.91m (B85) MEDIUM CAR



**B99 Vehicle (Realistic min radius) (2004)**  
Overall Length 5.200m  
Overall Width 1.940m  
Overall Body Height 1.878m  
Min Body Ground Clearance 0.272m  
Track Width 1.840m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 6.250m  
Design Speed Forward 5.00km/h  
Clearance Envelope 0.300m



**B85 Vehicle (Realistic min radius) (2004)**  
Overall Length 4.910m  
Overall Width 1.870m  
Overall Body Height 1.421m  
Min Body Ground Clearance 0.159m  
Track Width 1.770m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 5.750m  
Design Speed Forward 5.00km/h  
Clearance Envelope 0.300m



4.91m (B85) MEDIUM CAR INGRESS PAST EGRESSING 5.2m (B99) LARGE CAR

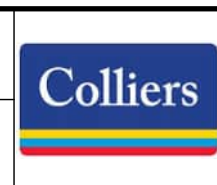
**PRELIMINARY  
ADVICE ONLY**

8 June 2026

25BRT0421-F02 V00 SERVICE VEHICLE ACCESS DWG

| REV. | DATE     | AMENDMENT DESCRIPTION      | DRAWN | CHECKED | APPROVED |
|------|----------|----------------------------|-------|---------|----------|
| B    | 08-06-26 | REVISED ARCHITECTURAL BASE | DSF   | VB      | SC       |
| A    | 18-05-26 | ORIGINAL ISSUE             | DSF   | AAO     | SC       |

|                                                               |            |                                                  |
|---------------------------------------------------------------|------------|--------------------------------------------------|
| SCALE<br>0 2.5 5 7.5 10 12.5m<br>SCALE 1:250 AT ORIGINAL SIZE | NORTH<br>N | CLIENT<br>STOCKWELL DEVELOPMENT<br>GROUP PTY LTD |
|---------------------------------------------------------------|------------|--------------------------------------------------|



**Colliers International Engineering  
& Design (TTMC) 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  
E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

|                                                                                                                                                  |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| PROJECT<br><b>108 MONTAGUE ROAD, SOUTH BRISBANE</b>                                                                                              | PROJECT NUMBER<br>25BRT0421    |
| DRAWING TITLE<br><b>SWEPT PATH ANALYSIS - PODIUM - LEVEL P2</b><br>5.2m (B99) LARGE CAR PASSING 4.91m (B85) MEDIUM CAR<br>(MONTAGUE ROAD ACCESS) | DRAWING NUMBER<br>25BRT0421-02 |
|                                                                                                                                                  | DATE<br>8 Jun 2026             |

|                     |               |
|---------------------|---------------|
| ORIGINAL SIZE<br>A3 | REVISION<br>B |
| SHEET<br>1 OF 1     |               |





## Appendix C Traffic Network Diagrams

### Traffic Network Diagram 1

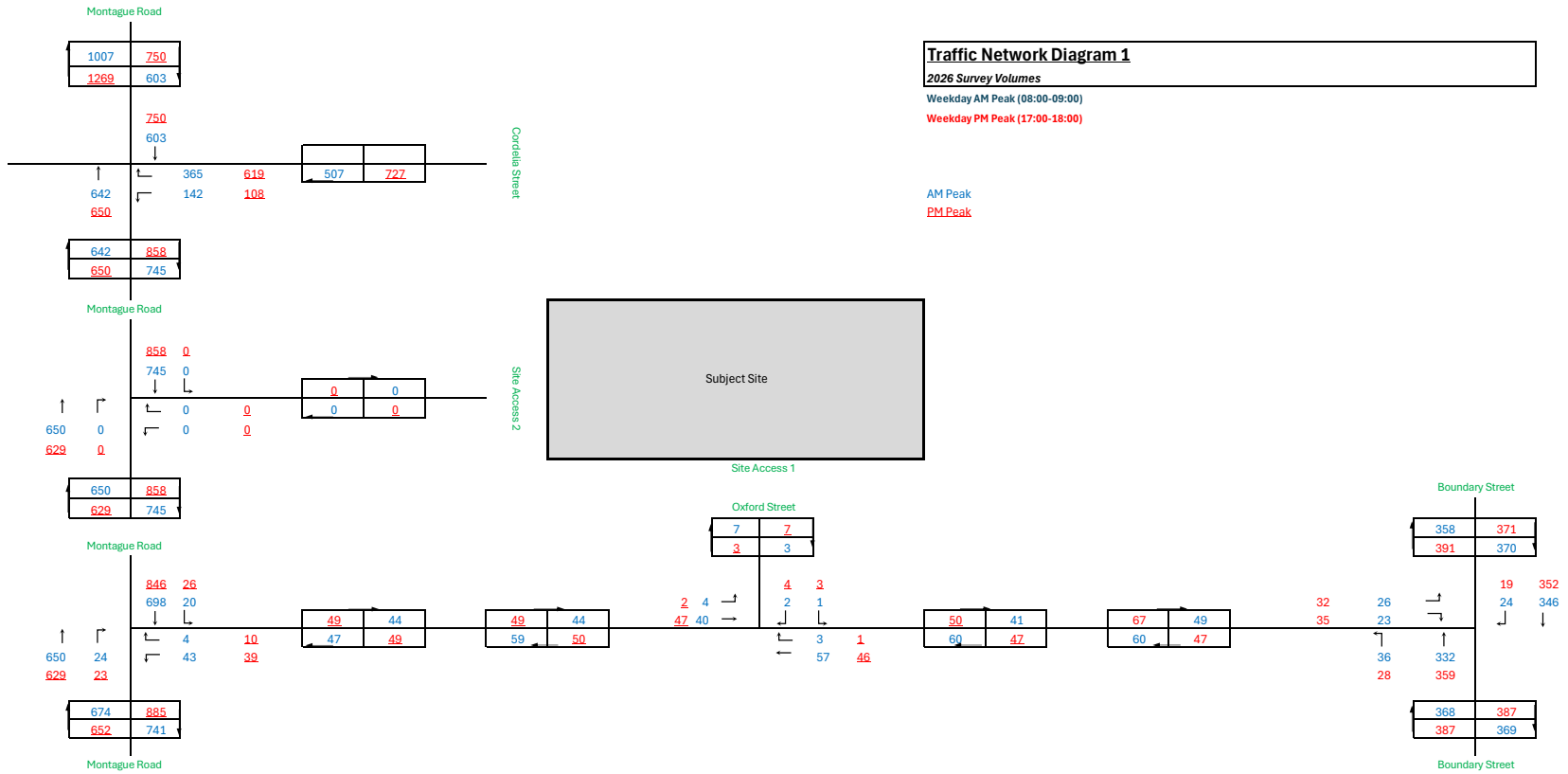
2026 Survey Volumes

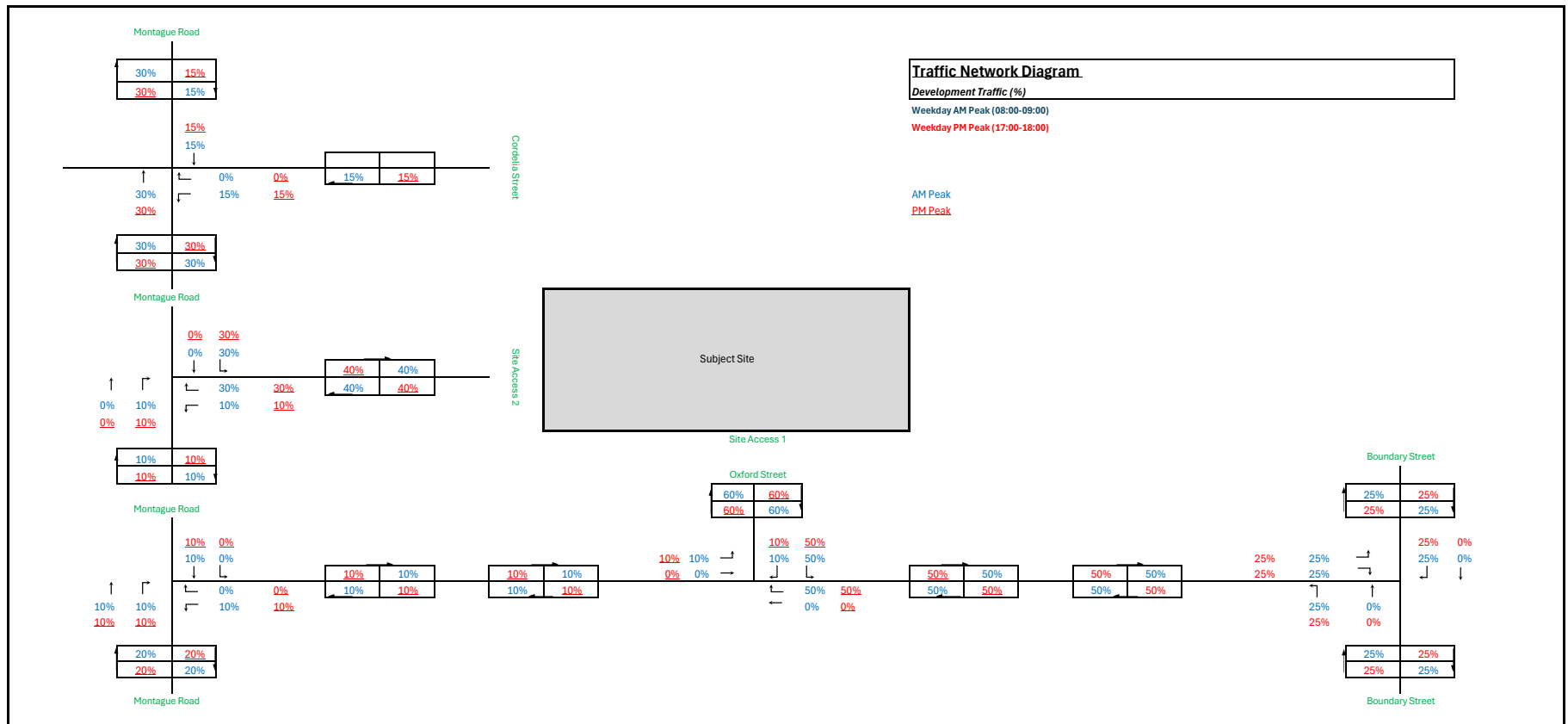
Weekday AM Peak (08:00-09:00)

Weekday PM Peak (17:00-18:00)

AM Peak

PM Peak





## Traffic Network Diagram 2

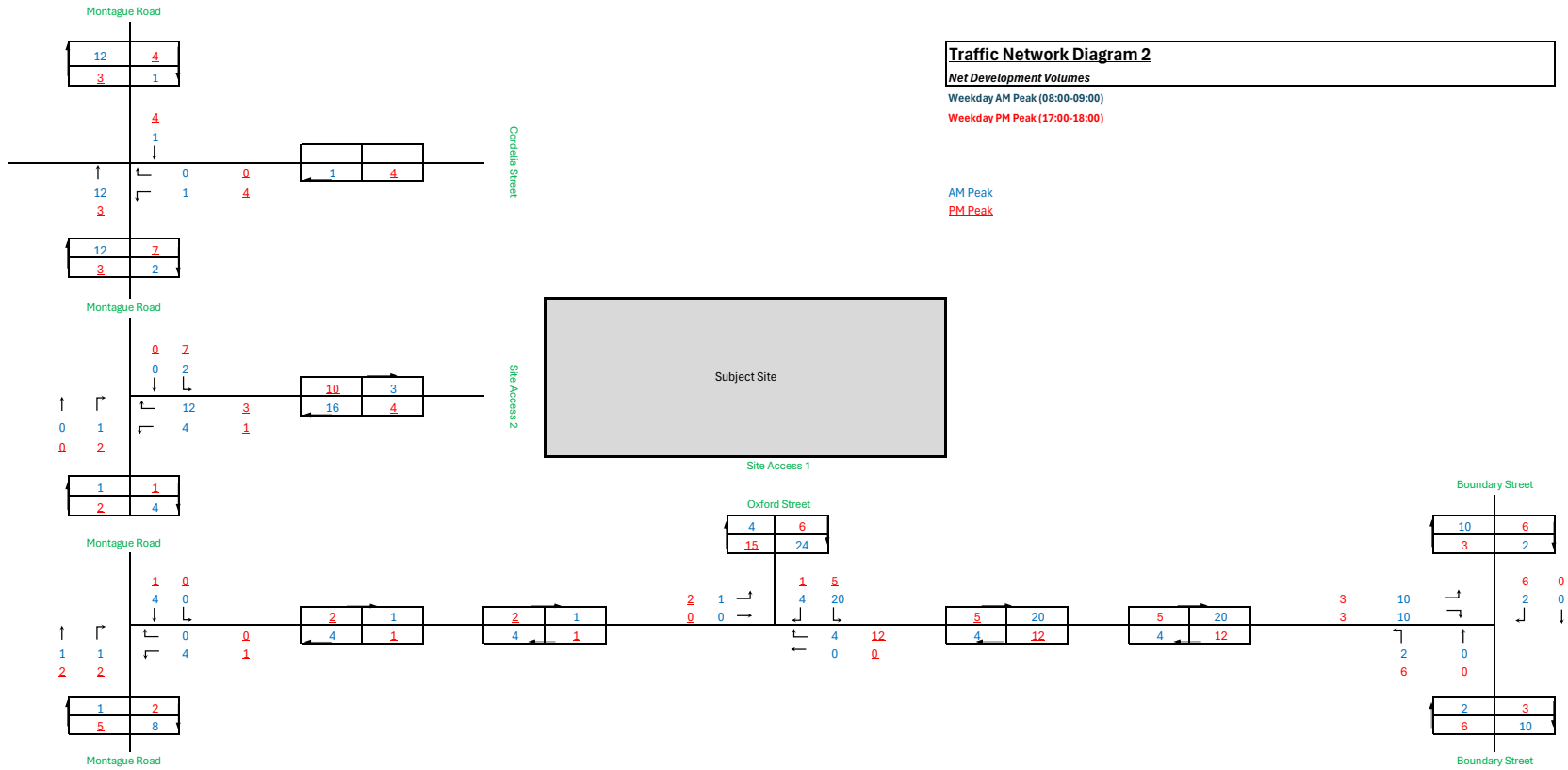
Net Development Volumes

Weekday AM Peak (08:00-09:00)

Weekday PM Peak (17:00-18:00)

AM Peak

PM Peak



### Traffic Network Diagram 3

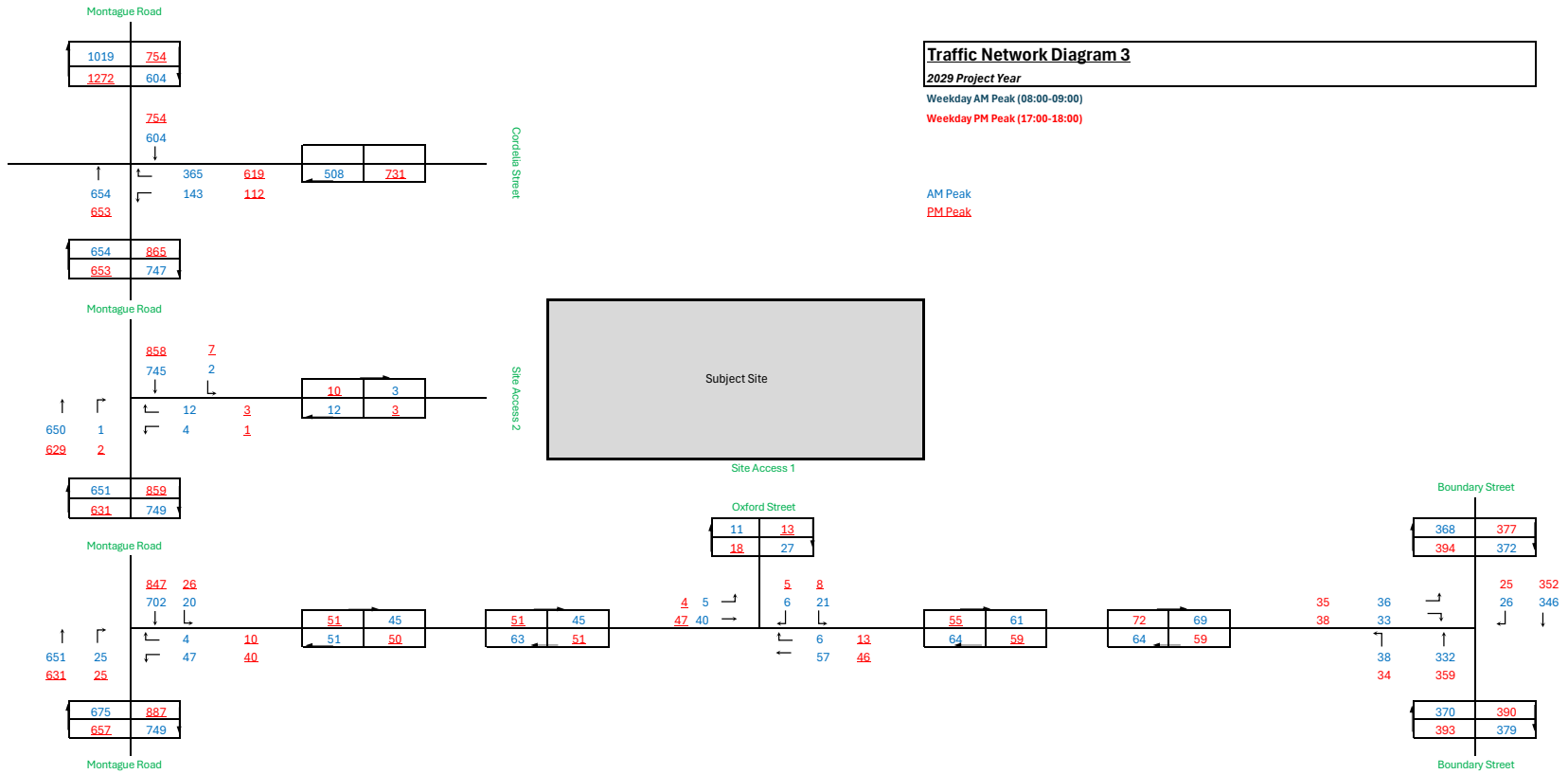
2029 Project Year

Weekday AM Peak (08:00-09:00)

Weekday PM Peak (17:00-18:00)

AM Peak

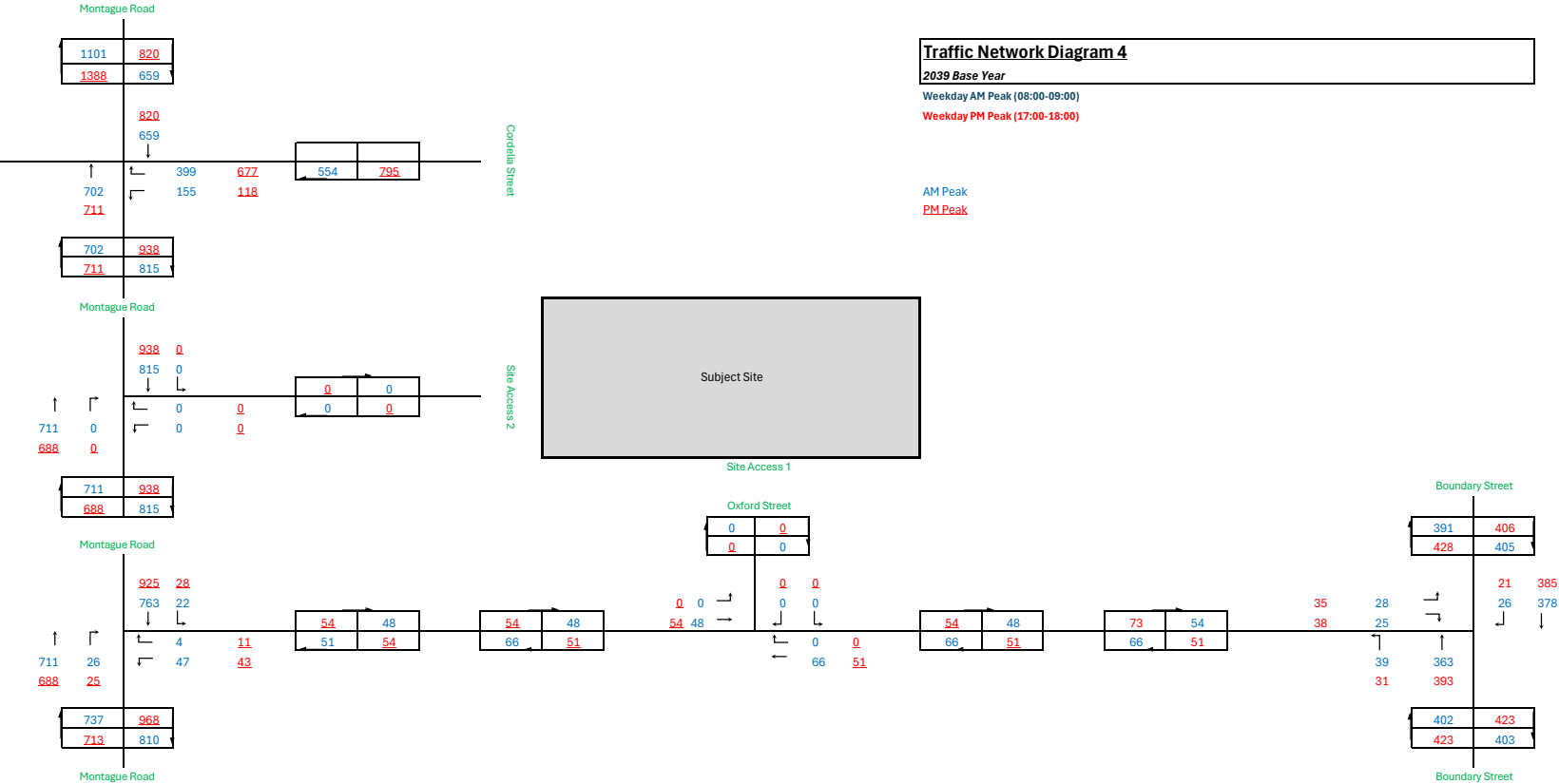
PM Peak



**Traffic Network Diagram 4**

2039 Base Year  
Weekday AM Peak (08:00-09:00)  
Weekday PM Peak (17:00-18:00)

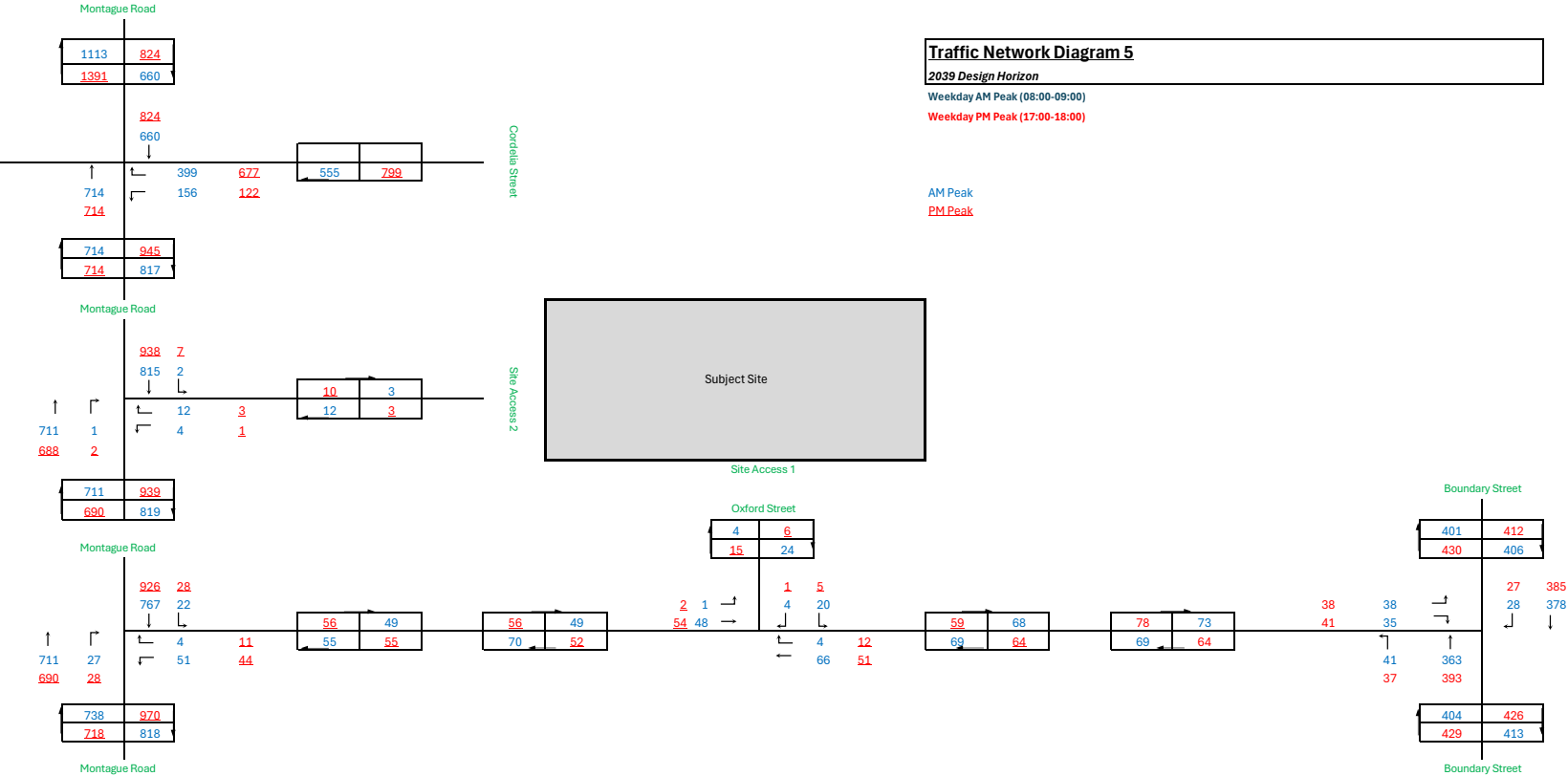
AM Peak  
PM Peak



**Traffic Network Diagram 5**

2039 Design Horizon  
Weekday AM Peak (08:00-09:00)  
Weekday PM Peak (17:00-18:00)

AM Peak  
PM Peak



## Appendix D    SIDRA Output Reports

# MOVEMENT SUMMARY

Site: [1] AM - Montague Rd / Site Access 2 (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            |                |                            |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                |                            | km/h        |
| South: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 2                            | T1   | All MCs   | 684          | 0.0          | 684           | 0.0          | 0.352     | 0.0         | LOS A            | 0.0               | 0.1      | 0.00       | 0.00           | 0.00                       | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.352     | 6.2         | LOS A            | 0.0               | 0.1      | 0.00       | 0.00           | 0.00                       | 57.1        |
| Approach                     |      |           | 685          | 0.0          | 685           | 0.0          | 0.352     | 0.0         | NA               | 0.0               | 0.1      | 0.00       | 0.00           | 0.00                       | 60.0        |
| East: Site Access 2          |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 4                            | L2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.007     | 9.3         | LOS A            | 0.0               | 0.1      | 0.76       | 0.79           | 0.76                       | 46.5        |
| 6                            | R2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.007     | 20.8        | LOS C            | 0.0               | 0.1      | 0.76       | 0.79           | 0.76                       | 46.3        |
| Approach                     |      |           | 2            | 0.0          | 2             | 0.0          | 0.007     | 15.0        | LOS C            | 0.0               | 0.1      | 0.76       | 0.79           | 0.76                       | 46.4        |
| North: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 7                            | L2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.403     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 57.3        |
| 8                            | T1   | All MCs   | 784          | 0.0          | 784           | 0.0          | 0.403     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.7        |
| Approach                     |      |           | 785          | 0.0          | 785           | 0.0          | 0.403     | 0.1         | NA               | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.7        |
| All Vehicles                 |      |           | 1473         | 0.0          | 1473          | 0.0          | 0.403     | 0.1         | NA               | 0.0               | 0.1      | 0.00       | 0.00           | 0.00                       | 59.8        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [2] AM - Montague Rd / Brereton St (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                   |                            | km/h        |
|                              |      |           | veh/h        |     | veh/h         |     |           |             |                  | veh               | m      |            |                   |                            |             |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 2                            | T1   | All MCs   | 684          | 0.0 | 684           | 0.0 | 0.385     | 0.4         | LOS A            | 0.5               | 3.5    | 0.08       | 0.10              | 0.09                       | 59.2        |
| 3                            | R2   | All MCs   | 25           | 0.0 | 25            | 0.0 | 0.385     | 10.3        | LOS B            | 0.5               | 3.5    | 0.08       | 0.10              | 0.09                       | 56.5        |
| Approach                     |      |           | 709          | 0.0 | 709           | 0.0 | 0.385     | 0.8         | NA               | 0.5               | 3.5    | 0.08       | 0.10              | 0.09                       | 59.1        |
| East: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 4                            | L2   | All MCs   | 45           | 0.0 | 45            | 0.0 | 0.083     | 9.2         | LOS A            | 0.3               | 2.0    | 0.62       | 0.83              | 0.62                       | 49.5        |
| 6                            | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.083     | 21.3        | LOS C            | 0.3               | 2.0    | 0.62       | 0.83              | 0.62                       | 49.3        |
| Approach                     |      |           | 49           | 0.0 | 49            | 0.0 | 0.083     | 10.2        | LOS B            | 0.3               | 2.0    | 0.62       | 0.83              | 0.62                       | 49.5        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 7                            | L2   | All MCs   | 21           | 0.0 | 21            | 0.0 | 0.388     | 5.6         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02              | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 735          | 0.0 | 735           | 0.0 | 0.388     | 0.1         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02              | 0.00                       | 59.6        |
| Approach                     |      |           | 756          | 0.0 | 756           | 0.0 | 0.388     | 0.3         | NA               | 0.0               | 0.0    | 0.00       | 0.02              | 0.00                       | 59.5        |
| All Vehicles                 |      |           | 1515         | 0.0 | 1515          | 0.0 | 0.388     | 0.8         | NA               | 0.5               | 3.5    | 0.06       | 0.08              | 0.06                       | 58.9        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▽ Site: [3] AM - Brereton St / Oxford St Site Access 1 (2029  
Base Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 5                                | T1   | All MCs   | 61           | 0.0 | 61            | 0.0 | 0.033     | 0.0         | LOS A            | 0.0               | 0.1      | 0.01       | 0.02              | 0.01                       | 59.8        |
| 6                                | R2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.033     | 5.5         | LOS A            | 0.0               | 0.1      | 0.01       | 0.02              | 0.01                       | 57.0        |
| Approach                         |      |           | 63           | 0.0 | 63            | 0.0 | 0.033     | 0.2         | NA               | 0.0               | 0.1      | 0.01       | 0.02              | 0.01                       | 59.7        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                                | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0      | 0.13       | 0.54              | 0.13                       | 52.5        |
| 9                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.8         | LOS A            | 0.0               | 0.0      | 0.13       | 0.54              | 0.13                       | 52.3        |
| Approach                         |      |           | 2            | 0.0 | 2             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0      | 0.13       | 0.54              | 0.13                       | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 10                               | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.024     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.03              | 0.00                       | 57.3        |
| 11                               | T1   | All MCs   | 44           | 0.0 | 44            | 0.0 | 0.024     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.03              | 0.00                       | 59.7        |
| Approach                         |      |           | 46           | 0.0 | 46            | 0.0 | 0.024     | 0.3         | NA               | 0.0               | 0.0      | 0.00       | 0.03              | 0.00                       | 59.6        |
| All Vehicles                     |      |           | 112          | 0.0 | 112           | 0.0 | 0.033     | 0.3         | NA               | 0.0               | 0.1      | 0.01       | 0.03              | 0.01                       | 59.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▼ Site: [4] AM - Brereton St / Boundary St (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            |                |                            |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                |                            | km/h        |
| South: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 1                            | L2   | All MCs   | 38           | 0.0          | 38            | 0.0          | 0.200     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 56.9        |
| 2                            | T1   | All MCs   | 349          | 0.0          | 349           | 0.0          | 0.200     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 59.4        |
| Approach                     |      |           | 387          | 0.0          | 387           | 0.0          | 0.200     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 59.1        |
| North: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 8                            | T1   | All MCs   | 364          | 0.0          | 364           | 0.0          | 0.208     | 0.2         | LOS A            | 0.2               | 1.7      | 0.08       | 0.09           | 0.08                       | 59.3        |
| 9                            | R2   | All MCs   | 25           | 0.0          | 25            | 0.0          | 0.208     | 7.1         | LOS A            | 0.2               | 1.7      | 0.08       | 0.09           | 0.08                       | 56.7        |
| Approach                     |      |           | 389          | 0.0          | 389           | 0.0          | 0.208     | 0.6         | NA               | 0.2               | 1.7      | 0.08       | 0.09           | 0.08                       | 59.1        |
| West: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 10                           | L2   | All MCs   | 27           | 0.0          | 27            | 0.0          | 0.063     | 6.7         | LOS A            | 0.2               | 1.5      | 0.47       | 0.68           | 0.47                       | 51.1        |
| 12                           | R2   | All MCs   | 24           | 0.0          | 24            | 0.0          | 0.063     | 9.5         | LOS A            | 0.2               | 1.5      | 0.47       | 0.68           | 0.47                       | 50.9        |
| Approach                     |      |           | 52           | 0.0          | 52            | 0.0          | 0.063     | 8.0         | LOS A            | 0.2               | 1.5      | 0.47       | 0.68           | 0.47                       | 51.0        |
| All Vehicles                 |      |           | 828          | 0.0          | 828           | 0.0          | 0.208     | 1.1         | NA               | 0.2               | 1.7      | 0.07       | 0.11           | 0.07                       | 58.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [5] PM - Montague Rd / Site Access 2 (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            |                |                            |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                |                            | km/h        |
| South: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 2                            | T1   | All MCs   | 662          | 0.0          | 662           | 0.0          | 0.341     | 0.0         | LOS A            | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.341     | 6.7         | LOS A            | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 57.1        |
| Approach                     |      |           | 663          | 0.0          | 663           | 0.0          | 0.341     | 0.0         | NA               | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 60.0        |
| East: Site Access 2          |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 4                            | L2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.009     | 10.6        | LOS B            | 0.0               | 0.2      | 0.82       | 0.86           | 0.82                       | 44.8        |
| 6                            | R2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.009     | 25.4        | LOS D            | 0.0               | 0.2      | 0.82       | 0.86           | 0.82                       | 44.6        |
| Approach                     |      |           | 2            | 0.0          | 2             | 0.0          | 0.009     | 18.0        | LOS C            | 0.0               | 0.2      | 0.82       | 0.86           | 0.82                       | 44.7        |
| North: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 7                            | L2   | All MCs   | 1            | 0.0          | 1             | 0.0          | 0.464     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 57.2        |
| 8                            | T1   | All MCs   | 903          | 0.0          | 903           | 0.0          | 0.464     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.6        |
| Approach                     |      |           | 904          | 0.0          | 904           | 0.0          | 0.464     | 0.2         | NA               | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.6        |
| All Vehicles                 |      |           | 1569         | 0.0          | 1569          | 0.0          | 0.464     | 0.1         | NA               | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 59.8        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [6] PM - Montague Rd / Brereton St (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |     |           |             |                  |                   |        |            |                     |                  |             |
|------------------------------|------|-----------|--------------|--------------|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|---------------------|------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] |               |     |           |             |                  | [ Veh.            | Dist ] |            | Rate to Depart      |                  |             |
|                              |      |           | veh/h        | %            | veh/h         | %   | v/c       | sec         |                  | veh               | m      |            |                     |                  | km/h        |
| South: Montague Rd           |      |           |              |              |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 2                            | T1   | All MCs   | 662          | 0.0          | 662           | 0.0 | 0.383     | 0.7         | LOS A            | 0.6               | 4.5    | 0.10       | 0.11                | 0.11             | 58.9        |
| 3                            | R2   | All MCs   | 24           | 0.0          | 24            | 0.0 | 0.383     | 12.5        | LOS B            | 0.6               | 4.5    | 0.10       | 0.11                | 0.11             | 56.2        |
| Approach                     |      |           | 686          | 0.0          | 686           | 0.0 | 0.383     | 1.1         | NA               | 0.6               | 4.5    | 0.10       | 0.11                | 0.11             | 58.8        |
| East: Brereton St            |      |           |              |              |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 4                            | L2   | All MCs   | 45           | 0.0          | 45            | 0.0 | 0.110     | 11.0        | LOS B            | 0.4               | 2.5    | 0.72       | 0.88                | 0.72             | 48.1        |
| 6                            | R2   | All MCs   | 4            | 0.0          | 4             | 0.0 | 0.110     | 28.3        | LOS D            | 0.4               | 2.5    | 0.72       | 0.88                | 0.72             | 47.9        |
| Approach                     |      |           | 49           | 0.0          | 49            | 0.0 | 0.110     | 12.4        | LOS B            | 0.4               | 2.5    | 0.72       | 0.88                | 0.72             | 48.1        |
| North: Montague Rd           |      |           |              |              |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 7                            | L2   | All MCs   | 27           | 0.0          | 27            | 0.0 | 0.471     | 5.7         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02                | 0.00             | 57.0        |
| 8                            | T1   | All MCs   | 891          | 0.0          | 891           | 0.0 | 0.471     | 0.2         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02                | 0.00             | 59.5        |
| Approach                     |      |           | 918          | 0.0          | 918           | 0.0 | 0.471     | 0.3         | NA               | 0.0               | 0.0    | 0.00       | 0.02                | 0.00             | 59.4        |
| All Vehicles                 |      |           | 1654         | 0.0          | 1654          | 0.0 | 0.471     | 1.0         | NA               | 0.6               | 4.5    | 0.06       | 0.08                | 0.07             | 58.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [7] PM - Brereton St / Oxford St Site Access 1 (2029  
Base Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|-------------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                   |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 5                                | T1   | All MCs   | 48           | 0.0 | 48            | 0.0 | 0.025     | 0.0         | LOS A            | 0.0               | 0.0    | 0.01       | 0.01              | 0.01                       | 59.9        |
| 6                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.025     | 5.5         | LOS A            | 0.0               | 0.0    | 0.01       | 0.01              | 0.01                       | 57.0        |
| Approach                         |      |           | 49           | 0.0 | 49            | 0.0 | 0.025     | 0.1         | NA               | 0.0               | 0.0    | 0.01       | 0.01              | 0.01                       | 59.8        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 7                                | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.003     | 5.7         | LOS A            | 0.0               | 0.1    | 0.13       | 0.55              | 0.13                       | 52.5        |
| 9                                | R2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.003     | 5.7         | LOS A            | 0.0               | 0.1    | 0.13       | 0.55              | 0.13                       | 52.3        |
| Approach                         |      |           | 4            | 0.0 | 4             | 0.0 | 0.003     | 5.7         | LOS A            | 0.0               | 0.1    | 0.13       | 0.55              | 0.13                       | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 10                               | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.024     | 5.5         | LOS A            | 0.0               | 0.0    | 0.00       | 0.03              | 0.00                       | 57.3        |
| 11                               | T1   | All MCs   | 44           | 0.0 | 44            | 0.0 | 0.024     | 0.0         | LOS A            | 0.0               | 0.0    | 0.00       | 0.03              | 0.00                       | 59.7        |
| Approach                         |      |           | 46           | 0.0 | 46            | 0.0 | 0.024     | 0.3         | NA               | 0.0               | 0.0    | 0.00       | 0.03              | 0.00                       | 59.6        |
| All Vehicles                     |      |           | 100          | 0.0 | 100           | 0.0 | 0.025     | 0.4         | NA               | 0.0               | 0.1    | 0.01       | 0.04              | 0.01                       | 59.4        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [8] PM - Brereton St / Boundary St (2029 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|---------------------|------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            | Rate to Depart      |                  |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                     |                  | km/h        |
| South: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 1                            | L2   | All MCs   | 29           | 0.0          | 29            | 0.0          | 0.210     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.04                | 0.00             | 57.1        |
| 2                            | T1   | All MCs   | 378          | 0.0          | 378           | 0.0          | 0.210     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.04                | 0.00             | 59.5        |
| Approach                     |      |           | 407          | 0.0          | 407           | 0.0          | 0.210     | 0.5         | NA               | 0.0               | 0.0      | 0.00       | 0.04                | 0.00             | 59.3        |
| North: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 8                            | T1   | All MCs   | 371          | 0.0          | 371           | 0.0          | 0.207     | 0.1         | LOS A            | 0.2               | 1.4      | 0.07       | 0.08                | 0.07             | 59.4        |
| 9                            | R2   | All MCs   | 20           | 0.0          | 20            | 0.0          | 0.207     | 7.2         | LOS A            | 0.2               | 1.4      | 0.07       | 0.08                | 0.07             | 56.8        |
| Approach                     |      |           | 391          | 0.0          | 391           | 0.0          | 0.207     | 0.5         | NA               | 0.2               | 1.4      | 0.07       | 0.08                | 0.07             | 59.3        |
| West: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 10                           | L2   | All MCs   | 34           | 0.0          | 34            | 0.0          | 0.092     | 6.9         | LOS A            | 0.3               | 2.2      | 0.50       | 0.72                | 0.50             | 50.8        |
| 12                           | R2   | All MCs   | 37           | 0.0          | 37            | 0.0          | 0.092     | 9.8         | LOS A            | 0.3               | 2.2      | 0.50       | 0.72                | 0.50             | 50.7        |
| Approach                     |      |           | 71           | 0.0          | 71            | 0.0          | 0.092     | 8.4         | LOS A            | 0.3               | 2.2      | 0.50       | 0.72                | 0.50             | 50.7        |
| All Vehicles                 |      |           | 868          | 0.0          | 868           | 0.0          | 0.210     | 1.1         | NA               | 0.3               | 2.2      | 0.07       | 0.11                | 0.07             | 58.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [9] AM - Montague Rd / Site Access 2 (2029 Project Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                   |                            | km/h        |
|                              |      |           | veh/h        |     | veh/h         |     |           |             |                  | veh               | m      |            |                   |                            |             |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 2                            | T1   | All MCs   | 684          | 0.0 | 684           | 0.0 | 0.352     | 0.0         | LOS A            | 0.0               | 0.1    | 0.00       | 0.00              | 0.00                       | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.352     | 6.2         | LOS A            | 0.0               | 0.1    | 0.00       | 0.00              | 0.00                       | 57.1        |
| Approach                     |      |           | 685          | 0.0 | 685           | 0.0 | 0.352     | 0.0         | NA               | 0.0               | 0.1    | 0.00       | 0.00              | 0.00                       | 60.0        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 4                            | L2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.070     | 9.5         | LOS A            | 0.2               | 1.4    | 0.82       | 0.93              | 0.82                       | 44.5        |
| 6                            | R2   | All MCs   | 13           | 0.0 | 13            | 0.0 | 0.070     | 21.6        | LOS C            | 0.2               | 1.4    | 0.82       | 0.93              | 0.82                       | 44.3        |
| Approach                     |      |           | 17           | 0.0 | 17            | 0.0 | 0.070     | 18.6        | LOS C            | 0.2               | 1.4    | 0.82       | 0.93              | 0.82                       | 44.3        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 7                            | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.403     | 5.7         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 57.3        |
| 8                            | T1   | All MCs   | 784          | 0.0 | 784           | 0.0 | 0.403     | 0.1         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 59.7        |
| Approach                     |      |           | 786          | 0.0 | 786           | 0.0 | 0.403     | 0.2         | NA               | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 59.7        |
| All Vehicles                 |      |           | 1488         | 0.0 | 1488          | 0.0 | 0.403     | 0.3         | NA               | 0.2               | 1.4    | 0.01       | 0.01              | 0.01                       | 59.6        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

 **Site: [10] AM - Montague Rd / Brereton St (2029 Project Year)**  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
**Site Scenario: 1 | Local Volumes**

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            |             |
|                              |      |           | veh/h        | %   | veh/h         | %   |           |             |                  |                   |          |            |                   |                            | v/c         |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 2                            | T1   | All MCs   | 685          | 0.0 | 685           | 0.0 | 0.387     | 0.5         | LOS A            | 0.5               | 3.8      | 0.08       | 0.10              | 0.09                       | 59.2        |
| 3                            | R2   | All MCs   | 26           | 0.0 | 26            | 0.0 | 0.387     | 10.4        | LOS B            | 0.5               | 3.8      | 0.08       | 0.10              | 0.09                       | 56.4        |
| Approach                     |      |           | 712          | 0.0 | 712           | 0.0 | 0.387     | 0.8         | NA               | 0.5               | 3.8      | 0.08       | 0.10              | 0.09                       | 59.1        |
| East: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 4                            | L2   | All MCs   | 49           | 0.0 | 49            | 0.0 | 0.089     | 9.2         | LOS A            | 0.3               | 2.1      | 0.62       | 0.83              | 0.62                       | 49.5        |
| 6                            | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.089     | 21.6        | LOS C            | 0.3               | 2.1      | 0.62       | 0.83              | 0.62                       | 49.3        |
| Approach                     |      |           | 54           | 0.0 | 54            | 0.0 | 0.089     | 10.2        | LOS B            | 0.3               | 2.1      | 0.62       | 0.83              | 0.62                       | 49.5        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                            | L2   | All MCs   | 21           | 0.0 | 21            | 0.0 | 0.390     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 739          | 0.0 | 739           | 0.0 | 0.390     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 59.6        |
| Approach                     |      |           | 760          | 0.0 | 760           | 0.0 | 0.390     | 0.3         | NA               | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 59.5        |
| All Vehicles                 |      |           | 1525         | 0.0 | 1525          | 0.0 | 0.390     | 0.9         | NA               | 0.5               | 3.8      | 0.06       | 0.08              | 0.07                       | 58.9        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [11] AM - Brereton St / Oxford St Site Access 1 (2029

Project Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site

Site Category: (None)

Give-Way (Two-Way)

Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. veh        | Dist ] m |            |                |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 5                                | T1   | All MCs   | 60           | 0.0 | 60            | 0.0 | 0.035     | 0.0         | LOS A            | 0.0               | 0.3      | 0.03       | 0.06           | 0.03                       | 59.4        |
| 6                                | R2   | All MCs   | 6            | 0.0 | 6             | 0.0 | 0.035     | 5.5         | LOS A            | 0.0               | 0.3      | 0.03       | 0.06           | 0.03                       | 56.6        |
| Approach                         |      |           | 66           | 0.0 | 66            | 0.0 | 0.035     | 0.5         | NA               | 0.0               | 0.3      | 0.03       | 0.06           | 0.03                       | 59.1        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 7                                | L2   | All MCs   | 22           | 0.0 | 22            | 0.0 | 0.019     | 5.7         | LOS A            | 0.1               | 0.5      | 0.12       | 0.55           | 0.12                       | 52.5        |
| 9                                | R2   | All MCs   | 6            | 0.0 | 6             | 0.0 | 0.019     | 5.8         | LOS A            | 0.1               | 0.5      | 0.12       | 0.55           | 0.12                       | 52.3        |
| Approach                         |      |           | 28           | 0.0 | 28            | 0.0 | 0.019     | 5.7         | LOS A            | 0.1               | 0.5      | 0.12       | 0.55           | 0.12                       | 52.5        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 10                               | L2   | All MCs   | 5            | 0.0 | 5             | 0.0 | 0.024     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.07           | 0.00                       | 56.9        |
| 11                               | T1   | All MCs   | 42           | 0.0 | 42            | 0.0 | 0.024     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.07           | 0.00                       | 59.4        |
| Approach                         |      |           | 47           | 0.0 | 47            | 0.0 | 0.024     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.07           | 0.00                       | 59.1        |
| All Vehicles                     |      |           | 142          | 0.0 | 142           | 0.0 | 0.035     | 1.6         | NA               | 0.1               | 0.5      | 0.04       | 0.16           | 0.04                       | 57.6        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\Vrushali.Barot\OneDrive - Colliers International\2025 Synergy Projects - Documents\TotalSynergy\25BRT0421 108 Montague Road, South Brisbane - TR\06 Analysis\SIDRA analysis.sipx

# MOVEMENT SUMMARY

▼ Site: [12] AM - Brereton St / Boundary St (2029 Project Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  |                   |          |            |                   |                            |             |
| South: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                   |                            |             |
| 1                            | L2   | All MCs   | 40           | 0.0          | 40            | 0.0          | 0.201     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 56.9        |
| 2                            | T1   | All MCs   | 349          | 0.0          | 349           | 0.0          | 0.201     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.3        |
| Approach                     |      |           | 389          | 0.0          | 389           | 0.0          | 0.201     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.1        |
| North: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                   |                            |             |
| 8                            | T1   | All MCs   | 364          | 0.0          | 364           | 0.0          | 0.210     | 0.2         | LOS A            | 0.3               | 1.8      | 0.09       | 0.10              | 0.09                       | 59.2        |
| 9                            | R2   | All MCs   | 27           | 0.0          | 27            | 0.0          | 0.210     | 7.1         | LOS A            | 0.3               | 1.8      | 0.09       | 0.10              | 0.09                       | 56.7        |
| Approach                     |      |           | 392          | 0.0          | 392           | 0.0          | 0.210     | 0.7         | NA               | 0.3               | 1.8      | 0.09       | 0.10              | 0.09                       | 59.1        |
| West: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                   |                            |             |
| 10                           | L2   | All MCs   | 38           | 0.0          | 38            | 0.0          | 0.090     | 6.8         | LOS A            | 0.3               | 2.2      | 0.48       | 0.70              | 0.48                       | 51.0        |
| 12                           | R2   | All MCs   | 35           | 0.0          | 35            | 0.0          | 0.090     | 9.6         | LOS A            | 0.3               | 2.2      | 0.48       | 0.70              | 0.48                       | 50.9        |
| Approach                     |      |           | 73           | 0.0          | 73            | 0.0          | 0.090     | 8.1         | LOS A            | 0.3               | 2.2      | 0.48       | 0.70              | 0.48                       | 50.9        |
| All Vehicles                 |      |           | 854          | 0.0          | 854           | 0.0          | 0.210     | 1.3         | NA               | 0.3               | 2.2      | 0.08       | 0.13              | 0.08                       | 58.3        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▽ Site: [13] PM - Montague Rd / Site Access 2 (2029 Project Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                                 |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|---------------------|---------------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles Rate to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. ]          | [ Dist ] |            |                     |                                 |             |
|                              |      |           | veh/h        | %   | veh/h         | %   | v/c       | sec         |                  | veh               | m        |            |                     |                                 | km/h        |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                                 |             |
| 2                            | T1   | All MCs   | 662          | 0.0 | 662           | 0.0 | 0.343     | 0.0         | LOS A            | 0.0               | 0.3      | 0.01       | 0.01                | 0.01                            | 59.9        |
| 3                            | R2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.343     | 8.0         | LOS A            | 0.0               | 0.3      | 0.01       | 0.01                | 0.01                            | 57.1        |
| Approach                     |      |           | 664          | 0.0 | 664           | 0.0 | 0.343     | 0.0         | NA               | 0.0               | 0.3      | 0.01       | 0.01                | 0.01                            | 59.9        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                                 |             |
| 4                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.023     | 10.7        | LOS B            | 0.1               | 0.4      | 0.86       | 0.94                | 0.86                            | 42.6        |
| 6                            | R2   | All MCs   | 3            | 0.0 | 3             | 0.0 | 0.023     | 25.9        | LOS D            | 0.1               | 0.4      | 0.86       | 0.94                | 0.86                            | 42.4        |
| Approach                     |      |           | 4            | 0.0 | 4             | 0.0 | 0.023     | 22.1        | LOS C            | 0.1               | 0.4      | 0.86       | 0.94                | 0.86                            | 42.5        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                                 |             |
| 7                            | L2   | All MCs   | 7            | 0.0 | 7             | 0.0 | 0.467     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00                | 0.00                            | 57.2        |
| 8                            | T1   | All MCs   | 903          | 0.0 | 903           | 0.0 | 0.467     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00                | 0.00                            | 59.6        |
| Approach                     |      |           | 911          | 0.0 | 911           | 0.0 | 0.467     | 0.2         | NA               | 0.0               | 0.0      | 0.00       | 0.00                | 0.00                            | 59.6        |
| All Vehicles                 |      |           | 1579         | 0.0 | 1579          | 0.0 | 0.467     | 0.2         | NA               | 0.1               | 0.4      | 0.01       | 0.01                | 0.01                            | 59.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [14] PM - Montague Rd / Brereton St (2029 Project Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|---------------------|------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            | Rate to Depart      |                  |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                     |                  | km/h        |
| South: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 2                            | T1   | All MCs   | 665          | 0.0          | 665           | 0.0          | 0.391     | 0.8         | LOS A            | 0.8               | 5.4      | 0.11       | 0.13                | 0.13             | 58.7        |
| 3                            | R2   | All MCs   | 27           | 0.0          | 27            | 0.0          | 0.391     | 12.5        | LOS B            | 0.8               | 5.4      | 0.11       | 0.13                | 0.13             | 56.0        |
| Approach                     |      |           | 693          | 0.0          | 693           | 0.0          | 0.391     | 1.3         | NA               | 0.8               | 5.4      | 0.11       | 0.13                | 0.13             | 58.6        |
| East: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 4                            | L2   | All MCs   | 42           | 0.0          | 42            | 0.0          | 0.148     | 11.0        | LOS B            | 0.5               | 3.2      | 0.77       | 0.90                | 0.77             | 46.8        |
| 6                            | R2   | All MCs   | 11           | 0.0          | 11            | 0.0          | 0.148     | 28.8        | LOS D            | 0.5               | 3.2      | 0.77       | 0.90                | 0.77             | 46.6        |
| Approach                     |      |           | 53           | 0.0          | 53            | 0.0          | 0.148     | 14.6        | LOS B            | 0.5               | 3.2      | 0.77       | 0.90                | 0.77             | 46.7        |
| North: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 7                            | L2   | All MCs   | 27           | 0.0          | 27            | 0.0          | 0.472     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 57.0        |
| 8                            | T1   | All MCs   | 892          | 0.0          | 892           | 0.0          | 0.472     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 59.5        |
| Approach                     |      |           | 919          | 0.0          | 919           | 0.0          | 0.472     | 0.3         | NA               | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 59.4        |
| All Vehicles                 |      |           | 1664         | 0.0          | 1664          | 0.0          | 0.472     | 1.2         | NA               | 0.8               | 5.4      | 0.07       | 0.09                | 0.08             | 58.6        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [15] PM - Brereton St / Oxford St Site Access 1 (2029

Project Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site

Site Category: (None)

Give-Way (Two-Way)

Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                  |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|---------------------|------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | [ Dist ] |            | Rate to Depart      |                  | km/h        |
|                                  |      |           | veh/h        |     | veh/h         |     |           |             |                  | veh               | m        |            |                     |                  |             |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                  |             |
| 5                                | T1   | All MCs   | 48           | 0.0 | 48            | 0.0 | 0.033     | 0.0         | LOS A            | 0.1               | 0.5      | 0.07       | 0.14                | 0.07             | 58.6        |
| 6                                | R2   | All MCs   | 14           | 0.0 | 14            | 0.0 | 0.033     | 5.6         | LOS A            | 0.1               | 0.5      | 0.07       | 0.14                | 0.07             | 55.9        |
| Approach                         |      |           | 62           | 0.0 | 62            | 0.0 | 0.033     | 1.3         | NA               | 0.1               | 0.5      | 0.07       | 0.14                | 0.07             | 57.9        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                  |             |
| 7                                | L2   | All MCs   | 8            | 0.0 | 8             | 0.0 | 0.010     | 5.7         | LOS A            | 0.0               | 0.2      | 0.14       | 0.55                | 0.14             | 52.5        |
| 9                                | R2   | All MCs   | 5            | 0.0 | 5             | 0.0 | 0.010     | 5.8         | LOS A            | 0.0               | 0.2      | 0.14       | 0.55                | 0.14             | 52.2        |
| Approach                         |      |           | 14           | 0.0 | 14            | 0.0 | 0.010     | 5.7         | LOS A            | 0.0               | 0.2      | 0.14       | 0.55                | 0.14             | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                     |                  |             |
| 10                               | L2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.028     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.05                | 0.00             | 57.1        |
| 11                               | T1   | All MCs   | 49           | 0.0 | 49            | 0.0 | 0.028     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.05                | 0.00             | 59.6        |
| Approach                         |      |           | 54           | 0.0 | 54            | 0.0 | 0.028     | 0.4         | NA               | 0.0               | 0.0      | 0.00       | 0.05                | 0.00             | 59.4        |
| All Vehicles                     |      |           | 129          | 0.0 | 129           | 0.0 | 0.033     | 1.4         | NA               | 0.1               | 0.5      | 0.05       | 0.15                | 0.05             | 57.9        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\Vrushali.Barot\OneDrive - Colliers International\2025 Synergy Projects - Documents\TotalSynergy\25BRT0421 108 Montague Road, South Brisbane - TR\06 Analysis\SIDRA analysis.sipx

# MOVEMENT SUMMARY

Site: [16] PM - Brereton St / Boundary St (2029 Project Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. veh        | Dist ] m |            |                |                            | km/h        |
| South: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 1                            | L2   | All MCs   | 36           | 0.0          | 36            | 0.0          | 0.213     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.05           | 0.00                       | 57.0        |
| 2                            | T1   | All MCs   | 378          | 0.0          | 378           | 0.0          | 0.213     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.05           | 0.00                       | 59.4        |
| Approach                     |      |           | 414          | 0.0          | 414           | 0.0          | 0.213     | 0.5         | NA               | 0.0               | 0.0      | 0.00       | 0.05           | 0.00                       | 59.2        |
| North: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 8                            | T1   | All MCs   | 371          | 0.0          | 371           | 0.0          | 0.213     | 0.2         | LOS A            | 0.3               | 1.8      | 0.08       | 0.10           | 0.08                       | 59.3        |
| 9                            | R2   | All MCs   | 26           | 0.0          | 26            | 0.0          | 0.213     | 7.3         | LOS A            | 0.3               | 1.8      | 0.08       | 0.10           | 0.08                       | 56.7        |
| Approach                     |      |           | 397          | 0.0          | 397           | 0.0          | 0.213     | 0.7         | NA               | 0.3               | 1.8      | 0.08       | 0.10           | 0.08                       | 59.1        |
| West: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 10                           | L2   | All MCs   | 37           | 0.0          | 37            | 0.0          | 0.101     | 6.9         | LOS A            | 0.3               | 2.4      | 0.51       | 0.73           | 0.51                       | 50.7        |
| 12                           | R2   | All MCs   | 40           | 0.0          | 40            | 0.0          | 0.101     | 9.9         | LOS A            | 0.3               | 2.4      | 0.51       | 0.73           | 0.51                       | 50.6        |
| Approach                     |      |           | 77           | 0.0          | 77            | 0.0          | 0.101     | 8.5         | LOS A            | 0.3               | 2.4      | 0.51       | 0.73           | 0.51                       | 50.7        |
| All Vehicles                 |      |           | 887          | 0.0          | 887           | 0.0          | 0.213     | 1.3         | NA               | 0.3               | 2.4      | 0.08       | 0.13           | 0.08                       | 58.3        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [17] AM - Montague Rd / Site Access 2 (2039 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   |           |             |                  | [ Veh. veh        | Dist ] m |            |                |                            | km/h        |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 2                            | T1   | All MCs   | 748          | 0.0 | 748           | 0.0 | 0.386     | 0.0         | LOS A            | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.386     | 6.4         | LOS A            | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 57.1        |
| Approach                     |      |           | 749          | 0.0 | 749           | 0.0 | 0.386     | 0.0         | NA               | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 60.0        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 4                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.009     | 10.1        | LOS B            | 0.0               | 0.2      | 0.81       | 0.85           | 0.81                       | 44.7        |
| 6                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.009     | 26.1        | LOS D            | 0.0               | 0.2      | 0.81       | 0.85           | 0.81                       | 44.6        |
| Approach                     |      |           | 2            | 0.0 | 2             | 0.0 | 0.009     | 18.1        | LOS C            | 0.0               | 0.2      | 0.81       | 0.85           | 0.81                       | 44.6        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                |                            |             |
| 7                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.441     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 57.2        |
| 8                            | T1   | All MCs   | 858          | 0.0 | 858           | 0.0 | 0.441     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.7        |
| Approach                     |      |           | 859          | 0.0 | 859           | 0.0 | 0.441     | 0.2         | NA               | 0.0               | 0.0      | 0.00       | 0.00           | 0.00                       | 59.7        |
| All Vehicles                 |      |           | 1611         | 0.0 | 1611          | 0.0 | 0.441     | 0.1         | NA               | 0.0               | 0.2      | 0.00       | 0.00           | 0.00                       | 59.8        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [18] AM - Montague Rd / Brereton St (2039 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
|                              |      |           | veh/h        | %   | veh/h         | %   | v/c       | sec         |                  |                   |          |            |                   |                            |             |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 2                            | T1   | All MCs   | 748          | 0.0 | 748           | 0.0 | 0.426     | 0.6         | LOS A            | 0.8               | 5.3      | 0.08       | 0.10              | 0.12                       | 59.0        |
| 3                            | R2   | All MCs   | 27           | 0.0 | 27            | 0.0 | 0.426     | 11.4        | LOS B            | 0.8               | 5.3      | 0.08       | 0.10              | 0.12                       | 56.3        |
| Approach                     |      |           | 776          | 0.0 | 776           | 0.0 | 0.426     | 1.0         | NA               | 0.8               | 5.3      | 0.08       | 0.10              | 0.12                       | 58.9        |
| East: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 4                            | L2   | All MCs   | 49           | 0.0 | 49            | 0.0 | 0.103     | 9.9         | LOS A            | 0.3               | 2.4      | 0.67       | 0.86              | 0.67                       | 48.9        |
| 6                            | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.103     | 26.7        | LOS D            | 0.3               | 2.4      | 0.67       | 0.86              | 0.67                       | 48.6        |
| Approach                     |      |           | 54           | 0.0 | 54            | 0.0 | 0.103     | 11.2        | LOS B            | 0.3               | 2.4      | 0.67       | 0.86              | 0.67                       | 48.9        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                            | L2   | All MCs   | 23           | 0.0 | 23            | 0.0 | 0.424     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 803          | 0.0 | 803           | 0.0 | 0.424     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 59.6        |
| Approach                     |      |           | 826          | 0.0 | 826           | 0.0 | 0.424     | 0.3         | NA               | 0.0               | 0.0      | 0.00       | 0.02              | 0.00                       | 59.5        |
| All Vehicles                 |      |           | 1656         | 0.0 | 1656          | 0.0 | 0.426     | 1.0         | NA               | 0.8               | 5.3      | 0.06       | 0.09              | 0.08                       | 58.8        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▽ Site: [19] AM - Brereton St / Oxford St Site Access 1 (2039 Base Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                  |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|---------------------|------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            | Rate to Depart      |                  | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 5                                | T1   | All MCs   | 69           | 0.0 | 69            | 0.0 | 0.036     | 0.0         | LOS A            | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 59.9        |
| 6                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.036     | 5.5         | LOS A            | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 57.1        |
| Approach                         |      |           | 71           | 0.0 | 71            | 0.0 | 0.036     | 0.1         | NA               | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 59.9        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 7                                | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0    | 0.15       | 0.54                | 0.15             | 52.5        |
| 9                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.8         | LOS A            | 0.0               | 0.0    | 0.15       | 0.54                | 0.15             | 52.2        |
| Approach                         |      |           | 2            | 0.0 | 2             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0    | 0.15       | 0.54                | 0.15             | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                  |             |
| 10                               | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.026     | 5.5         | LOS A            | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 57.4        |
| 11                               | T1   | All MCs   | 51           | 0.0 | 51            | 0.0 | 0.026     | 0.0         | LOS A            | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 59.9        |
| Approach                         |      |           | 52           | 0.0 | 52            | 0.0 | 0.026     | 0.1         | NA               | 0.0               | 0.0    | 0.00       | 0.01                | 0.00             | 59.8        |
| All Vehicles                     |      |           | 124          | 0.0 | 124           | 0.0 | 0.036     | 0.2         | NA               | 0.0               | 0.0    | 0.01       | 0.02                | 0.01             | 59.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▼ Site: [20] AM - Brereton St / Boundary St (2039 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|----------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            |                |                            |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                |                            | km/h        |
| South: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 1                            | L2   | All MCs   | 41           | 0.0          | 41            | 0.0          | 0.218     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 56.9        |
| 2                            | T1   | All MCs   | 382          | 0.0          | 382           | 0.0          | 0.218     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 59.4        |
| Approach                     |      |           | 423          | 0.0          | 423           | 0.0          | 0.218     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.06           | 0.00                       | 59.1        |
| North: Boundary St           |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 8                            | T1   | All MCs   | 398          | 0.0          | 398           | 0.0          | 0.228     | 0.2         | LOS A            | 0.3               | 1.9      | 0.08       | 0.10           | 0.08                       | 59.3        |
| 9                            | R2   | All MCs   | 27           | 0.0          | 27            | 0.0          | 0.228     | 7.3         | LOS A            | 0.3               | 1.9      | 0.08       | 0.10           | 0.08                       | 56.7        |
| Approach                     |      |           | 425          | 0.0          | 425           | 0.0          | 0.228     | 0.7         | NA               | 0.3               | 1.9      | 0.08       | 0.10           | 0.08                       | 59.1        |
| West: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                |                            |             |
| 10                           | L2   | All MCs   | 29           | 0.0          | 29            | 0.0          | 0.073     | 6.9         | LOS A            | 0.3               | 1.8      | 0.50       | 0.71           | 0.50                       | 50.8        |
| 12                           | R2   | All MCs   | 26           | 0.0          | 26            | 0.0          | 0.073     | 10.1        | LOS B            | 0.3               | 1.8      | 0.50       | 0.71           | 0.50                       | 50.7        |
| Approach                     |      |           | 56           | 0.0          | 56            | 0.0          | 0.073     | 8.4         | LOS A            | 0.3               | 1.8      | 0.50       | 0.71           | 0.50                       | 50.7        |
| All Vehicles                 |      |           | 904          | 0.0          | 904           | 0.0          | 0.228     | 1.1         | NA               | 0.3               | 1.9      | 0.07       | 0.12           | 0.07                       | 58.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY



Site: [21] PM - Montague Rd / Site Access 2 (2039 Base Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                   |                            | km/h        |
|                              |      |           | veh/h        |     | veh/h         |     |           |             |                  | veh               | m      |            |                   |                            |             |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 2                            | T1   | All MCs   | 724          | 0.0 | 724           | 0.0 | 0.374     | 0.0         | LOS A            | 0.0               | 0.2    | 0.00       | 0.00              | 0.00                       | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.374     | 7.1         | LOS A            | 0.0               | 0.2    | 0.00       | 0.00              | 0.00                       | 57.1        |
| Approach                     |      |           | 725          | 0.0 | 725           | 0.0 | 0.374     | 0.0         | NA               | 0.0               | 0.2    | 0.00       | 0.00              | 0.00                       | 60.0        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 4                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.012     | 11.9        | LOS B            | 0.0               | 0.2    | 0.86       | 0.93              | 0.86                       | 42.3        |
| 6                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.012     | 33.7        | LOS D            | 0.0               | 0.2    | 0.86       | 0.93              | 0.86                       | 42.1        |
| Approach                     |      |           | 2            | 0.0 | 2             | 0.0 | 0.012     | 22.8        | LOS C            | 0.0               | 0.2    | 0.86       | 0.93              | 0.86                       | 42.2        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                   |                            |             |
| 7                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.507     | 5.7         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 987          | 0.0 | 987           | 0.0 | 0.507     | 0.2         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 59.6        |
| Approach                     |      |           | 988          | 0.0 | 988           | 0.0 | 0.507     | 0.2         | NA               | 0.0               | 0.0    | 0.00       | 0.00              | 0.00                       | 59.6        |
| All Vehicles                 |      |           | 1716         | 0.0 | 1716          | 0.0 | 0.507     | 0.2         | NA               | 0.0               | 0.2    | 0.00       | 0.00              | 0.00                       | 59.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [22] PM - Montague Rd / Brereton St (2039 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|---------------------|------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            | Rate to Depart      |                  |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                     |                  | km/h        |
| South: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 2                            | T1   | All MCs   | 724          | 0.0          | 724           | 0.0          | 0.428     | 1.2         | LOS A            | 1.1               | 7.5      | 0.11       | 0.13                | 0.15             | 58.4        |
| 3                            | R2   | All MCs   | 26           | 0.0          | 26            | 0.0          | 0.428     | 14.4        | LOS B            | 1.1               | 7.5      | 0.11       | 0.13                | 0.15             | 55.7        |
| Approach                     |      |           | 751          | 0.0          | 751           | 0.0          | 0.428     | 1.7         | NA               | 1.1               | 7.5      | 0.11       | 0.13                | 0.15             | 58.3        |
| East: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 4                            | L2   | All MCs   | 45           | 0.0          | 45            | 0.0          | 0.206     | 12.9        | LOS B            | 0.6               | 4.5      | 0.83       | 0.94                | 0.89             | 44.7        |
| 6                            | R2   | All MCs   | 12           | 0.0          | 12            | 0.0          | 0.206     | 38.9        | LOS E            | 0.6               | 4.5      | 0.83       | 0.94                | 0.89             | 44.5        |
| Approach                     |      |           | 57           | 0.0          | 57            | 0.0          | 0.206     | 18.2        | LOS C            | 0.6               | 4.5      | 0.83       | 0.94                | 0.89             | 44.7        |
| North: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                  |             |
| 7                            | L2   | All MCs   | 29           | 0.0          | 29            | 0.0          | 0.515     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 57.0        |
| 8                            | T1   | All MCs   | 974          | 0.0          | 974           | 0.0          | 0.515     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 59.4        |
| Approach                     |      |           | 1003         | 0.0          | 1003          | 0.0          | 0.515     | 0.4         | NA               | 0.0               | 0.0      | 0.00       | 0.02                | 0.00             | 59.3        |
| All Vehicles                 |      |           | 1811         | 0.0          | 1811          | 0.0          | 0.515     | 1.5         | NA               | 1.1               | 7.5      | 0.07       | 0.09                | 0.09             | 58.3        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [23] PM - Brereton St / Oxford St Site Access 1 (2039  
Base Year)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 5                                | T1   | All MCs   | 69           | 0.0 | 69            | 0.0 | 0.036     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.9        |
| 6                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.036     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 57.1        |
| Approach                         |      |           | 71           | 0.0 | 71            | 0.0 | 0.036     | 0.1         | NA               | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.9        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                                | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0      | 0.15       | 0.54              | 0.15                       | 52.5        |
| 9                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.002     | 5.8         | LOS A            | 0.0               | 0.0      | 0.15       | 0.54              | 0.15                       | 52.2        |
| Approach                         |      |           | 2            | 0.0 | 2             | 0.0 | 0.002     | 5.7         | LOS A            | 0.0               | 0.0      | 0.15       | 0.54              | 0.15                       | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 10                               | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.026     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 57.4        |
| 11                               | T1   | All MCs   | 51           | 0.0 | 51            | 0.0 | 0.026     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.9        |
| Approach                         |      |           | 52           | 0.0 | 52            | 0.0 | 0.026     | 0.1         | NA               | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.8        |
| All Vehicles                     |      |           | 124          | 0.0 | 124           | 0.0 | 0.036     | 0.2         | NA               | 0.0               | 0.0      | 0.01       | 0.02              | 0.01                       | 59.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [24] PM - Brereton St / Boundary St (2039 Base Year)  
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            |             |
|                              |      |           | veh/h        | %   | veh/h         | %   |           |             |                  |                   |          |            |                   |                            |             |
| South: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 1                            | L2   | All MCs   | 41           | 0.0 | 41            | 0.0 | 0.218     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 56.9        |
| 2                            | T1   | All MCs   | 382          | 0.0 | 382           | 0.0 | 0.218     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.4        |
| Approach                     |      |           | 423          | 0.0 | 423           | 0.0 | 0.218     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.1        |
| North: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 8                            | T1   | All MCs   | 398          | 0.0 | 398           | 0.0 | 0.228     | 0.2         | LOS A            | 0.3               | 1.9      | 0.08       | 0.10              | 0.08                       | 59.3        |
| 9                            | R2   | All MCs   | 27           | 0.0 | 27            | 0.0 | 0.228     | 7.3         | LOS A            | 0.3               | 1.9      | 0.08       | 0.10              | 0.08                       | 56.7        |
| Approach                     |      |           | 425          | 0.0 | 425           | 0.0 | 0.228     | 0.7         | NA               | 0.3               | 1.9      | 0.08       | 0.10              | 0.08                       | 59.1        |
| West: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 10                           | L2   | All MCs   | 29           | 0.0 | 29            | 0.0 | 0.073     | 6.9         | LOS A            | 0.3               | 1.8      | 0.50       | 0.71              | 0.50                       | 50.8        |
| 12                           | R2   | All MCs   | 26           | 0.0 | 26            | 0.0 | 0.073     | 10.1        | LOS B            | 0.3               | 1.8      | 0.50       | 0.71              | 0.50                       | 50.7        |
| Approach                     |      |           | 56           | 0.0 | 56            | 0.0 | 0.073     | 8.4         | LOS A            | 0.3               | 1.8      | 0.50       | 0.71              | 0.50                       | 50.7        |
| All Vehicles                 |      |           | 904          | 0.0 | 904           | 0.0 | 0.228     | 1.1         | NA               | 0.3               | 1.9      | 0.07       | 0.12              | 0.07                       | 58.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [25] AM - Montague Rd / Site Access 2 (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                                 |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|---------------------|---------------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Cycles | Number of Cycles Rate to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                     |                                 | km/h        |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                                 |             |
| 2                            | T1   | All MCs   | 748          | 0.0 | 748           | 0.0 | 0.386     | 0.0         | LOS A            | 0.0               | 0.2    | 0.00       | 0.00                | 0.00                            | 60.0        |
| 3                            | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.386     | 6.4         | LOS A            | 0.0               | 0.2    | 0.00       | 0.00                | 0.00                            | 57.1        |
| Approach                     |      |           | 749          | 0.0 | 749           | 0.0 | 0.386     | 0.0         | NA               | 0.0               | 0.2    | 0.00       | 0.00                | 0.00                            | 60.0        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                                 |             |
| 4                            | L2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.091     | 10.3        | LOS B            | 0.3               | 1.8    | 0.86       | 0.95                | 0.86                            | 42.2        |
| 6                            | R2   | All MCs   | 13           | 0.0 | 13            | 0.0 | 0.091     | 27.2        | LOS D            | 0.3               | 1.8    | 0.86       | 0.95                | 0.86                            | 42.0        |
| Approach                     |      |           | 17           | 0.0 | 17            | 0.0 | 0.091     | 23.0        | LOS C            | 0.3               | 1.8    | 0.86       | 0.95                | 0.86                            | 42.1        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                                 |             |
| 7                            | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.441     | 5.7         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00                | 0.00                            | 57.2        |
| 8                            | T1   | All MCs   | 858          | 0.0 | 858           | 0.0 | 0.441     | 0.2         | LOS A            | 0.0               | 0.0    | 0.00       | 0.00                | 0.00                            | 59.7        |
| Approach                     |      |           | 860          | 0.0 | 860           | 0.0 | 0.441     | 0.2         | NA               | 0.0               | 0.0    | 0.00       | 0.00                | 0.00                            | 59.7        |
| All Vehicles                 |      |           | 1626         | 0.0 | 1626          | 0.0 | 0.441     | 0.3         | NA               | 0.3               | 1.8    | 0.01       | 0.01                | 0.01                            | 59.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [26] AM - Montague Rd / Brereton St (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|---------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Cycles | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                     |                            | km/h        |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 2                            | T1   | All MCs   | 749          | 0.0 | 749           | 0.0 | 0.428     | 0.7         | LOS A            | 0.8               | 5.6    | 0.09       | 0.11                | 0.12                       | 58.9        |
| 3                            | R2   | All MCs   | 28           | 0.0 | 28            | 0.0 | 0.428     | 11.5        | LOS B            | 0.8               | 5.6    | 0.09       | 0.11                | 0.12                       | 56.2        |
| Approach                     |      |           | 778          | 0.0 | 778           | 0.0 | 0.428     | 1.1         | NA               | 0.8               | 5.6    | 0.09       | 0.11                | 0.12                       | 58.8        |
| East: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 4                            | L2   | All MCs   | 54           | 0.0 | 54            | 0.0 | 0.110     | 10.0        | LOS A            | 0.4               | 2.6    | 0.67       | 0.86                | 0.67                       | 48.9        |
| 6                            | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.110     | 27.1        | LOS D            | 0.4               | 2.6    | 0.67       | 0.86                | 0.67                       | 48.6        |
| Approach                     |      |           | 58           | 0.0 | 58            | 0.0 | 0.110     | 11.2        | LOS B            | 0.4               | 2.6    | 0.67       | 0.86                | 0.67                       | 48.9        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 7                            | L2   | All MCs   | 23           | 0.0 | 23            | 0.0 | 0.427     | 5.7         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02                | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 807          | 0.0 | 807           | 0.0 | 0.427     | 0.2         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02                | 0.00                       | 59.6        |
| Approach                     |      |           | 831          | 0.0 | 831           | 0.0 | 0.427     | 0.3         | NA               | 0.0               | 0.0    | 0.00       | 0.02                | 0.00                       | 59.5        |
| All Vehicles                 |      |           | 1666         | 0.0 | 1666          | 0.0 | 0.428     | 1.0         | NA               | 0.8               | 5.6    | 0.06       | 0.09                | 0.08                       | 58.7        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [27] AM - Brereton St / Oxford St Site Access 1 (2039

Design Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site

Site Category: (None)

Give-Way (Two-Way)

Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] | %   | [ Total HV ]  | %   |           |             |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 5                                | T1   | All MCs   | 69           | 0.0 | 69            | 0.0 | 0.038     | 0.0         | LOS A            | 0.0               | 0.2      | 0.02       | 0.04              | 0.02                       | 59.6        |
| 6                                | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.038     | 5.5         | LOS A            | 0.0               | 0.2      | 0.02       | 0.04              | 0.02                       | 56.8        |
| Approach                         |      |           | 74           | 0.0 | 74            | 0.0 | 0.038     | 0.3         | NA               | 0.0               | 0.2      | 0.02       | 0.04              | 0.02                       | 59.4        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                                | L2   | All MCs   | 21           | 0.0 | 21            | 0.0 | 0.017     | 5.7         | LOS A            | 0.1               | 0.5      | 0.13       | 0.54              | 0.13                       | 52.5        |
| 9                                | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.017     | 5.8         | LOS A            | 0.1               | 0.5      | 0.13       | 0.54              | 0.13                       | 52.2        |
| Approach                         |      |           | 25           | 0.0 | 25            | 0.0 | 0.017     | 5.7         | LOS A            | 0.1               | 0.5      | 0.13       | 0.54              | 0.13                       | 52.5        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 10                               | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.026     | 5.5         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 57.4        |
| 11                               | T1   | All MCs   | 51           | 0.0 | 51            | 0.0 | 0.026     | 0.0         | LOS A            | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.9        |
| Approach                         |      |           | 52           | 0.0 | 52            | 0.0 | 0.026     | 0.1         | NA               | 0.0               | 0.0      | 0.00       | 0.01              | 0.00                       | 59.8        |
| All Vehicles                     |      |           | 151          | 0.0 | 151           | 0.0 | 0.038     | 1.2         | NA               | 0.1               | 0.5      | 0.03       | 0.11              | 0.03                       | 58.3        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: [28] AM - Brereton St / Boundary St (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. veh        | Dist ] m |            |                   |                            | km/h        |
| South: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 1                            | L2   | All MCs   | 44           | 0.0 | 44            | 0.0 | 0.220     | 5.6         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 56.9        |
| 2                            | T1   | All MCs   | 382          | 0.0 | 382           | 0.0 | 0.220     | 0.1         | LOS A            | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.3        |
| Approach                     |      |           | 426          | 0.0 | 426           | 0.0 | 0.220     | 0.6         | NA               | 0.0               | 0.0      | 0.00       | 0.06              | 0.00                       | 59.1        |
| North: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 8                            | T1   | All MCs   | 398          | 0.0 | 398           | 0.0 | 0.231     | 0.2         | LOS A            | 0.3               | 2.1      | 0.09       | 0.11              | 0.09                       | 59.2        |
| 9                            | R2   | All MCs   | 31           | 0.0 | 31            | 0.0 | 0.231     | 7.4         | LOS A            | 0.3               | 2.1      | 0.09       | 0.11              | 0.09                       | 56.6        |
| Approach                     |      |           | 428          | 0.0 | 428           | 0.0 | 0.231     | 0.7         | NA               | 0.3               | 2.1      | 0.09       | 0.11              | 0.09                       | 59.0        |
| West: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 10                           | L2   | All MCs   | 41           | 0.0 | 41            | 0.0 | 0.103     | 6.9         | LOS A            | 0.4               | 2.5      | 0.51       | 0.72              | 0.51                       | 50.7        |
| 12                           | R2   | All MCs   | 37           | 0.0 | 37            | 0.0 | 0.103     | 10.3        | LOS B            | 0.4               | 2.5      | 0.51       | 0.72              | 0.51                       | 50.6        |
| Approach                     |      |           | 78           | 0.0 | 78            | 0.0 | 0.103     | 8.5         | LOS A            | 0.4               | 2.5      | 0.51       | 0.72              | 0.51                       | 50.6        |
| All Vehicles                 |      |           | 933          | 0.0 | 933           | 0.0 | 0.231     | 1.3         | NA               | 0.4               | 2.5      | 0.09       | 0.14              | 0.09                       | 58.2        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [29] PM - Montague Rd / Site Access 2 (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|----------|------------|-------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Rate | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. ]          | [ Dist ] |            |                   |                            |             |
|                              |      |           | veh/h        | %   | veh/h         | %   | v/c       | sec         |                  | veh               | m        |            |                   |                            | km/h        |
| South: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 2                            | T1   | All MCs   | 724          | 0.0 | 724           | 0.0 | 0.376     | 0.0         | LOS A            | 0.1               | 0.4      | 0.01       | 0.01              | 0.01                       | 59.9        |
| 3                            | R2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.376     | 8.8         | LOS A            | 0.1               | 0.4      | 0.01       | 0.01              | 0.01                       | 57.1        |
| Approach                     |      |           | 726          | 0.0 | 726           | 0.0 | 0.376     | 0.1         | NA               | 0.1               | 0.4      | 0.01       | 0.01              | 0.01                       | 59.9        |
| East: Site Access 2          |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 4                            | L2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.041     | 12.0        | LOS B            | 0.1               | 0.8      | 0.90       | 0.96              | 0.90                       | 39.0        |
| 6                            | R2   | All MCs   | 4            | 0.0 | 4             | 0.0 | 0.041     | 34.5        | LOS D            | 0.1               | 0.8      | 0.90       | 0.96              | 0.90                       | 38.9        |
| Approach                     |      |           | 5            | 0.0 | 5             | 0.0 | 0.041     | 30.0        | LOS D            | 0.1               | 0.8      | 0.90       | 0.96              | 0.90                       | 38.9        |
| North: Montague Rd           |      |           |              |     |               |     |           |             |                  |                   |          |            |                   |                            |             |
| 7                            | L2   | All MCs   | 7            | 0.0 | 7             | 0.0 | 0.510     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00              | 0.00                       | 57.1        |
| 8                            | T1   | All MCs   | 987          | 0.0 | 987           | 0.0 | 0.510     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.00              | 0.00                       | 59.5        |
| Approach                     |      |           | 995          | 0.0 | 995           | 0.0 | 0.510     | 0.3         | NA               | 0.0               | 0.0      | 0.00       | 0.00              | 0.00                       | 59.5        |
| All Vehicles                 |      |           | 1726         | 0.0 | 1726          | 0.0 | 0.510     | 0.3         | NA               | 0.1               | 0.8      | 0.01       | 0.01              | 0.01                       | 59.6        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

Site: [30] PM - Montague Rd / Brereton St (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                                 |             |
|------------------------------|------|-----------|--------------|--------------|---------------|--------------|-----------|-------------|------------------|-------------------|----------|------------|---------------------|---------------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |              | Arrival Flows |              | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |          | Prop. Qued | Eff. Stop of Cycles | Number of Cycles Rate to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | [ Total HV ] | [ Total HV ]  | [ Total HV ] |           |             |                  | [ Veh. ]          | [ Dist ] |            |                     |                                 |             |
|                              |      |           | veh/h        | %            | veh/h         | %            | v/c       | sec         |                  | veh               | m        |            |                     |                                 | km/h        |
| South: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                                 |             |
| 2                            | T1   | All MCs   | 726          | 0.0          | 726           | 0.0          | 0.436     | 1.4         | LOS A            | 1.3               | 8.8      | 0.12       | 0.14                | 0.17                            | 58.2        |
| 3                            | R2   | All MCs   | 29           | 0.0          | 29            | 0.0          | 0.436     | 14.5        | LOS B            | 1.3               | 8.8      | 0.12       | 0.14                | 0.17                            | 55.5        |
| Approach                     |      |           | 756          | 0.0          | 756           | 0.0          | 0.436     | 1.9         | NA               | 1.3               | 8.8      | 0.12       | 0.14                | 0.17                            | 58.0        |
| East: Brereton St            |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                                 |             |
| 4                            | L2   | All MCs   | 46           | 0.0          | 46            | 0.0          | 0.210     | 12.9        | LOS B            | 0.7               | 4.6      | 0.83       | 0.95                | 0.89                            | 44.7        |
| 6                            | R2   | All MCs   | 12           | 0.0          | 12            | 0.0          | 0.210     | 39.4        | LOS E            | 0.7               | 4.6      | 0.83       | 0.95                | 0.89                            | 44.5        |
| Approach                     |      |           | 58           | 0.0          | 58            | 0.0          | 0.210     | 18.2        | LOS C            | 0.7               | 4.6      | 0.83       | 0.95                | 0.89                            | 44.6        |
| North: Montague Rd           |      |           |              |              |               |              |           |             |                  |                   |          |            |                     |                                 |             |
| 7                            | L2   | All MCs   | 29           | 0.0          | 29            | 0.0          | 0.516     | 5.7         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00                            | 57.0        |
| 8                            | T1   | All MCs   | 975          | 0.0          | 975           | 0.0          | 0.516     | 0.2         | LOS A            | 0.0               | 0.0      | 0.00       | 0.02                | 0.00                            | 59.4        |
| Approach                     |      |           | 1004         | 0.0          | 1004          | 0.0          | 0.516     | 0.4         | NA               | 0.0               | 0.0      | 0.00       | 0.02                | 0.00                            | 59.3        |
| All Vehicles                 |      |           | 1818         | 0.0          | 1818          | 0.0          | 0.516     | 1.6         | NA               | 1.3               | 8.8      | 0.08       | 0.10                | 0.10                            | 58.2        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# MOVEMENT SUMMARY

▽ Site: [31] PM - Brereton St / Oxford St Site Access 1 (2039

Design Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site

Site Category: (None)

Give-Way (Two-Way)

Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance     |      |           |              |     |               |     |           |             |                  |                   |        |            |                |                            |             |
|----------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|----------------|----------------------------|-------------|
| Mov ID                           | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop Rate | Number of Cycles to Depart | Aver. Speed |
|                                  |      |           | [ Total HV ] |     | [ Total HV ]  |     |           |             |                  | [ Veh. ]          | Dist ] |            |                |                            |             |
|                                  |      |           | veh/h        | %   | veh/h         | %   | v/c       | sec         |                  | veh               | m      |            |                |                            | km/h        |
| East: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                |                            |             |
| 5                                | T1   | All MCs   | 54           | 0.0 | 54            | 0.0 | 0.035     | 0.0         | LOS A            | 0.1               | 0.5    | 0.06       | 0.13           | 0.06                       | 58.7        |
| 6                                | R2   | All MCs   | 13           | 0.0 | 13            | 0.0 | 0.035     | 5.6         | LOS A            | 0.1               | 0.5    | 0.06       | 0.13           | 0.06                       | 56.0        |
| Approach                         |      |           | 66           | 0.0 | 66            | 0.0 | 0.035     | 1.1         | NA               | 0.1               | 0.5    | 0.06       | 0.13           | 0.06                       | 58.2        |
| North: Oxford St - Site Access 1 |      |           |              |     |               |     |           |             |                  |                   |        |            |                |                            |             |
| 7                                | L2   | All MCs   | 5            | 0.0 | 5             | 0.0 | 0.004     | 5.7         | LOS A            | 0.0               | 0.1    | 0.14       | 0.54           | 0.14                       | 52.5        |
| 9                                | R2   | All MCs   | 1            | 0.0 | 1             | 0.0 | 0.004     | 5.8         | LOS A            | 0.0               | 0.1    | 0.14       | 0.54           | 0.14                       | 52.2        |
| Approach                         |      |           | 6            | 0.0 | 6             | 0.0 | 0.004     | 5.7         | LOS A            | 0.0               | 0.1    | 0.14       | 0.54           | 0.14                       | 52.4        |
| West: Brereton St                |      |           |              |     |               |     |           |             |                  |                   |        |            |                |                            |             |
| 10                               | L2   | All MCs   | 2            | 0.0 | 2             | 0.0 | 0.030     | 5.5         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02           | 0.00                       | 57.3        |
| 11                               | T1   | All MCs   | 57           | 0.0 | 57            | 0.0 | 0.030     | 0.0         | LOS A            | 0.0               | 0.0    | 0.00       | 0.02           | 0.00                       | 59.8        |
| Approach                         |      |           | 59           | 0.0 | 59            | 0.0 | 0.030     | 0.2         | NA               | 0.0               | 0.0    | 0.00       | 0.02           | 0.00                       | 59.7        |
| All Vehicles                     |      |           | 132          | 0.0 | 132           | 0.0 | 0.035     | 0.9         | NA               | 0.1               | 0.5    | 0.04       | 0.10           | 0.04                       | 58.5        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: [32] PM - Brereton St / Boundary St (2039 Design  
Horizon Year )

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site  
Site Category: (None)  
Give-Way (Two-Way)  
Site Scenario: 1 | Local Volumes

| Vehicle Movement Performance |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
|------------------------------|------|-----------|--------------|-----|---------------|-----|-----------|-------------|------------------|-------------------|--------|------------|---------------------|----------------------------|-------------|
| Mov ID                       | Turn | Mov Class | Demand Flows |     | Arrival Flows |     | Deg. Satn | Aver. Delay | Level of Service | 95% Back Of Queue |        | Prop. Qued | Eff. Stop of Cycles | Number of Cycles to Depart | Aver. Speed |
|                              |      |           | [ Total HV ] | %   | [ Total HV ]  | %   | v/c       | sec         |                  | [ Veh. ]          | Dist ] |            |                     |                            | km/h        |
|                              |      |           | veh/h        |     | veh/h         |     |           |             |                  | veh               | m      |            |                     |                            |             |
| South: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 1                            | L2   | All MCs   | 39           | 0.0 | 39            | 0.0 | 0.233     | 5.6         | LOS A            | 0.0               | 0.0    | 0.00       | 0.05                | 0.00                       | 57.0        |
| 2                            | T1   | All MCs   | 414          | 0.0 | 414           | 0.0 | 0.233     | 0.1         | LOS A            | 0.0               | 0.0    | 0.00       | 0.05                | 0.00                       | 59.4        |
| Approach                     |      |           | 453          | 0.0 | 453           | 0.0 | 0.233     | 0.5         | NA               | 0.0               | 0.0    | 0.00       | 0.05                | 0.00                       | 59.2        |
| North: Boundary St           |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 8                            | T1   | All MCs   | 405          | 0.0 | 405           | 0.0 | 0.233     | 0.2         | LOS A            | 0.3               | 2.0    | 0.09       | 0.11                | 0.09                       | 59.3        |
| 9                            | R2   | All MCs   | 28           | 0.0 | 28            | 0.0 | 0.233     | 7.5         | LOS A            | 0.3               | 2.0    | 0.09       | 0.11                | 0.09                       | 56.7        |
| Approach                     |      |           | 434          | 0.0 | 434           | 0.0 | 0.233     | 0.7         | NA               | 0.3               | 2.0    | 0.09       | 0.11                | 0.09                       | 59.1        |
| West: Brereton St            |      |           |              |     |               |     |           |             |                  |                   |        |            |                     |                            |             |
| 10                           | L2   | All MCs   | 40           | 0.0 | 40            | 0.0 | 0.118     | 7.1         | LOS A            | 0.4               | 2.8    | 0.54       | 0.76                | 0.54                       | 50.4        |
| 12                           | R2   | All MCs   | 43           | 0.0 | 43            | 0.0 | 0.118     | 10.7        | LOS B            | 0.4               | 2.8    | 0.54       | 0.76                | 0.54                       | 50.3        |
| Approach                     |      |           | 83           | 0.0 | 83            | 0.0 | 0.118     | 8.9         | LOS A            | 0.4               | 2.8    | 0.54       | 0.76                | 0.54                       | 50.3        |
| All Vehicles                 |      |           | 969          | 0.0 | 969           | 0.0 | 0.233     | 1.3         | NA               | 0.4               | 2.8    | 0.09       | 0.14                | 0.09                       | 58.3        |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
Vehicle movement LOS values are based on average delay per movement.  
Minor Road Approach LOS values are based on average delay for all vehicle movements.  
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
Two-Way Sign Control Capacity Model: SIDRA Standard.  
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

## Appendix E    Network Delay

## Intersection Delay Impact Calculations

### 2039 Base and Design Horizon

| Leg    | Movement | Weekday AM Peak Hour |            |          |              |          | Weekday PM Peak Hour |            |          |              |          |
|--------|----------|----------------------|------------|----------|--------------|----------|----------------------|------------|----------|--------------|----------|
|        |          | Base Volume          | Base Case  |          | Project Case |          | Base Volume          | Base Case  |          | Project Case |          |
|        |          |                      | Avg. Delay | Veh-Mins | Avg. Delay   | Veh-Mins |                      | Avg. Delay | Veh-Mins | Avg. Delay   | Veh-Mins |
| South  | Left     | 41                   | 5.60       | 3.83     | 5.60         | 3.83     | 41                   | 5.60       | 3.83     | 5.60         | 3.83     |
|        | Thru     | 382                  | 0.10       | 0.64     | 0.10         | 0.64     | 382                  | 0.10       | 0.64     | 0.10         | 0.64     |
| North  | Thru     | 398                  | 0.20       | 1.33     | 0.20         | 1.33     | 398                  | 0.20       | 1.33     | 0.20         | 1.33     |
|        | Right    | 27                   | 7.30       | 3.29     | 7.40         | 3.33     | 27                   | 7.30       | 3.29     | 7.50         | 3.38     |
| West   | Left     | 29                   | 6.90       | 3.34     | 6.90         | 3.34     | 29                   | 6.90       | 3.34     | 7.10         | 3.43     |
|        | Right    | 26                   | 10.10      | 4.38     | 10.30        | 4.46     | 26                   | 10.10      | 4.38     | 10.70        | 4.64     |
| Totals |          | 903                  | 30.20      | 16.79    | 30.50        | 16.92    | 903                  | 30.20      | 16.79    | 31.20        | 17.23    |

### Overall Intersection Delay

Base Year            33.57    veh-mins

Project Year        34.15    veh-mins

% Average Change    1.72%

## Appendix F     Code Responses

## **9.4.11 Transport, access, parking and servicing code**

### **9.4.11.1 Application**

1. This code applies to assessing:
  - a. operational work which is assessable development if this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for operational work (section 5.8); or
  - b. a material change of use or reconfiguring a lot if:
    - i. assessable development where this code is identified as a prescribed secondary code in the assessment benchmarks column of a table of assessment for a material change of use (section 5.5) reconfiguring a lot (section 5.6), or an overlay (section 5.10); or
    - ii. impact assessable development, to the extent relevant.
2. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code contains performance outcomes or acceptable outcomes that relate to:

- crime prevention through environmental design principles, guidance is included in the Crime prevention through environmental design planning scheme policy;
- design for the reduction of graffiti, guidance is provided in the Graffiti prevention planning scheme policy;
- infrastructure design and construction works, guidance is provided in the Infrastructure design planning scheme policy;
- refuse and recycling, guidance is provided in the Refuse planning scheme policy;
- transport, access, parking and servicing standards and guidelines are contained in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.

Note—If involving a standard format lot with common property such as requiring a community management scheme under the *Body Corporate and Community Management Act 1997*, the development contains a reconfiguring a lot aspect of development and the Subdivision code will apply.

### **9.4.11.2 Purpose**

1. The purpose of the Transport, access, parking and servicing code is to assess the suitability of the transport, access, parking and servicing aspects of development.
2. The purpose of the code will be achieved through the following overall outcomes:
  - a. Development provides for access, circulation, parking and vehicle-based services for all relevant transport modes, including walking, cycling and public transport relevant to the nature of the proposed development and its location in relation to the transport network and surrounding existing and future land uses.
  - b. Development enhances the potential for trip making other than by private vehicle.
  - c. Development provides safe access for all transport modes that does not impact adversely on the efficiency and safety of the transport network or diminish the amenity of nearby land uses.
  - d. Development ensures that impacts on amenity caused by traffic generation is consistent with the community's reasonable expectations for the intended use.
  - e. Development provides site access arrangements to ensure that any adverse impacts on other development, the transport network and those who use it, are

- minimised to maintain amenity of the area and the safety and efficiency of the transport system.
- f. Development ensures that access, parking and servicing arrangements and impacts such as noise, are consistent with the community's reasonable expectations and avoid risk of damage to people, property and vehicles.
  - g. Development maximises safety in the use of the transport network, particularly for the most vulnerable users (children, pedestrians, persons with disabilities and cyclists) so that all transport modes are safe and convenient.
  - h. Development provides for walking and cycling routes and end-of-trip facilities for pedestrians and cyclists, designed and located to make walking and cycling attractive and viable transport options.
  - i. Development envisaged by the planning scheme, which will potentially have an adverse impact on the operation of the transport network, is designed and of a scale that maintains the safety and efficiency of the transport network.
  - j. Development provides for on-site parking and manoeuvring areas for cars, motorcycles, bicycles and service vehicles which:
    - i. are safe and convenient to use;
    - ii. if outside the City core and the City frame identified in Figure a are adequate to meet the design peak-parking demands without significant overflow to adjacent premises or the generation of excessive on-street car parking demand, taking into account the requirements of other road users.
  - k. Development provides for on-site servicing that is safe, convenient to use, but discrete, and adequate to meet the reasonably expected demands generated by the development, without significant adverse impacts on the external road system or adjacent premises.
  - l. Development accommodates future road upgrades and widenings ensuring the ongoing capacity, efficiency and safety of the transport network.

#### 9.4.11.3 Performance outcomes and acceptable outcomes

**Table 9.4.11.3—Performance outcomes and acceptable outcomes**

| Performance outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Acceptable outcomes                                                                                                           | Comments                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PO1</b><br>Development is designed: <ul style="list-style-type: none"> <li>a. to include a technically competent and accurate response to the transport and traffic elements of the development;</li> <li>b. in accordance with the standards in the Transport, access, parking and servicing planning scheme policy;</li> <li>c. to ensure the efficient operation and safety of the development and its surrounds.</li> </ul> Note—The acceptable outcome and performance outcome can be | <b>AO1</b><br>Development complies with the standards in the Transport, access, parking and servicing planning scheme policy. | Refer to the attached Collier's Traffic Engineering report for a detailed assessment of the traffic and transport elements of the proposed development in accordance with the Council Transport, access, parking and servicing planning scheme policy (TAPS PSP). |

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| <p>demonstrated through a development application that:</p> <ul style="list-style-type: none"> <li>• is accompanied by sufficient information, including computer modelling input and output data, to allow the proposed development to be properly assessed against the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy;</li> <li>• is certified by a Registered Professional Engineer Queensland that all plans, documents and dimensioned drawings comply with the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy;</li> <li>• ensures that any computer modelling input and output data are accurate, reasonable and carried out in accordance with sound traffic engineering practices.</li> </ul> |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>PO2</b><br/> Development of a major size incorporates on-site provision for integration with the public transport network and the management of vehicles, public transport, pedestrians and cyclists, including providing appropriate pedestrian and cyclist linkages to adjoining uses, public areas and the transport network consistent with the planning by the Queensland Government and Council.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p><b>AO2</b><br/> No acceptable outcome is prescribed.</p>                                                                                                                                                                                                                                                                                 | <p>Complies</p> <p>The proposed development is a mixed-use development within an inner-city location and provides appropriate integration with the existing transport network.</p> <p>The site has access to high-frequency public transport services, including bus and rail, and provides safe pedestrian connections to surrounding streets and transport infrastructure.</p> <p>The development supports all transport modes, including walking, cycling and public transport.</p> |
| <p><b>PO3</b><br/> Development provides vehicle access that is located and designed so as to have no significant impact on the safety, efficiency, function, convenience of use or capacity of the road network.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>AO3.1</b><br/> Development provides site access that is located and designed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p> <p><b>AO3.2</b><br/> Development provides an easement for a vehicular access benefiting all adjoining landowners and the Council if the</p> | <p>Complies</p> <p>Vehicular access is provided via Oxford Street (primary access) and Montague Road (secondary access).</p> <p>The access locations and designs have been assessed against the TAPS PSP and are considered appropriate, with adequate sight distance, separation and functionality.</p>                                                                                                                                                                               |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | vehicular access services more than an individual development or premises.                                                                                                                                                                                                                                                                                                      | SIDRA assessment confirms that the proposed access arrangements will not adversely impact the safety, efficiency or performance of the surrounding road network.                                                                                                                                                                                                                                                                                             |
| <b>PO4</b><br>Development provides walking and cycle routes through the site which: <ul style="list-style-type: none"> <li>a. link to the external network and pedestrian and cyclist destinations such as schools, shopping centres, open space, public transport stations, shops and local activity centres along the safest, most direct and convenient routes;</li> <li>b. encourage walking and cycling;</li> <li>c. ensure pedestrian and cyclist safety;</li> <li>d. provide a direct and legible network.</li> </ul> Note—The Infrastructure design planning scheme policy provides additional guidance on how to comply with this performance outcome. | <b>AO4.1</b><br>Development provides walking and cycle routes which are constructed on the carriageway or through the site to: <ul style="list-style-type: none"> <li>a. create a walking or cycle route along the full frontage of the site;</li> <li>b. connect to public transport and existing cycle and walking routes at the frontage or boundary of the site.</li> </ul> | Complies<br><br>The development provides pedestrian access from both Montague Road and Oxford Street, with continuous external footpaths connecting to the surrounding network.<br><br>Internal site connections and shared access areas provide safe and legible movement for pedestrians and cyclists.<br><br>The development is well connected to nearby public transport, commercial areas and active transport routes, encouraging walking and cycling. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>AO4.2</b><br>Development provides walking and cycle routes that are constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>AO4.3</b><br>Development provides walking and cycle routes which do not include a potential entrapment area, blind corner or sudden change in level that restrict sightlines.                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>PO5</b><br>Development provides secure and convenient bicycle parking which: <ul style="list-style-type: none"> <li>a. for visitors is obvious and located close to the building's main entrance;</li> <li>b. for employees is conveniently located to provide secure and convenient access between the bicycle storage area, end-of-trip facilities and the main area of the building;</li> </ul>                                                                                                                                                                                                                                                           | <b>AO5.1</b><br>Development provides on-site bicycle parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.                                                                                                                                                                                                    | Complies<br><br>Resident Bicycle parking is provided in accordance with the TAPS PSP, including 302 storage cages<br><br>Visitor spaces exceed Austroads requirements, are considered suitable and can be increased in common areas if demand requires<br><br>Bicycle parking is accessible, convenient and supports                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>AO5.2</b><br>Development provides bicycle parking spaces for employees which are co-located with end-of-trip facilities (shower cubicles and lockers) in compliance with the Transport, access, parking and servicing planning scheme                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p>c. is easily and safely accessible from outside the site;</p> <p>d. does not impact adversely on visual amenity;</p> <p>e. does not impede the movement of pedestrians or other vehicles;</p> <p>f. is designed to comply with a recognised standard for the construction of bicycle facilities.</p> <p>Note—For a performance outcome relating to the number of bicycle parking spaces provided, the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.</p> | policy and AS 2890.3-1993 Bicycle parking facilities.                                                                                                                                                                                                                                                     | active transport. The provision is consistent with the intent of the Planning Scheme.                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b>AO5.3</b></p> <p>Development ensures that the location of visitor bicycle parking is discernible either by direct view or using signs from the street.</p>                                                                                                                                          |                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b>AO5.4</b></p> <p>Development provides visitor bicycle parking which does not impede pedestrian movement.</p>                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b>AO5.5</b></p> <p>Development provides bicycle parking which is constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                                             |                                                                                                                                                                                                                                                                                          |
| <p><b>PO6</b></p> <p>Development provides shower cubicles and lockers in sufficient numbers to meet the needs and volume of predicted pedestrian and cyclist users.</p> <p>Note—For a performance outcome the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                                                                                                                            | <p><b>AO6</b></p> <p>Development provides shower cubicles and lockers for pedestrians and cyclists in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                           | Not Applicable                                                                                                                                                                                                                                                                           |
| <p><b>PO7</b></p> <p>Development provides pedestrian and cyclist access to the site which is designed to provide safe movement and avoid unnecessary conflict between pedestrians, cyclists and motor vehicles.</p>                                                                                                                                                                                                                                                                                                                                                                              | <p><b>AO7</b></p> <p>Development provides pedestrian and cycle access that is designed and constructed in compliance with the site access design guidelines, pedestrian facilities standards and cyclist facilities standards in the Transport, access, parking and servicing planning scheme policy.</p> | <p>Complies</p> <p>Pedestrian and cyclist access is provided via clearly defined access points and shared low-speed environments within the site.</p> <p>The design minimises conflict between vehicles, pedestrians and cyclists and is consistent with TAPS PSP safety principles.</p> |
| <p><b>PO8</b></p> <p>Development provides pedestrian and cyclist access to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p><b>AO8</b></p> <p>No acceptable outcome is prescribed.</p>                                                                                                                                                                                                                                             | <p>Complies</p> <p>Pedestrian access to and from the site is appropriately</p>                                                                                                                                                                                                           |

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| and from the site which is located to take advantage of safe crossing points of the adjacent road system, key destinations and public transport facilities. |  | located with respect to the surrounding road network and nearby destinations. |
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| <p><b>PO9</b><br/>                 Development provides access driveways in the road area that are located, designed and controlled to:</p> <ul style="list-style-type: none"> <li>a. minimise adverse impacts on the safety and operation of the transport network, including the movement of pedestrians and cyclists;</li> <li>b. ensure the amenity of adjacent premises, from impacts such as noise and light.</li> </ul> | <p><b>AO9.1</b><br/>                 No acceptable outcome for access is prescribed, for a major development (as described in the Transport, access, parking and servicing planning scheme policy).</p> <p><b>AO9.2</b><br/>                 Development which is not a major development (as described in the Transport, access, parking and servicing planning scheme policy) provides a single site access driveway in the road area to the lowest order road to which the site has frontage.</p> <p><b>AO9.3</b><br/>                 Development ensures that sight distances to and from all proposed access driveways in the road area and intersections are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p> <p><b>AO9.4</b><br/>                 Development provides access driveways in the road area which:</p> <ul style="list-style-type: none"> <li>a. are located, designed and controlled in compliance with the standards in the Transport, access, parking and servicing planning scheme policy;</li> <li>b. are not provided through a bus stop, taxi rank or pedestrian crossing or refuge.</li> </ul> <p><b>AO9.5</b><br/>                 Development makes provision for shared access arrangements particularly where it is necessary to limit access points to a major road.</p> | <p>Complies</p> <p>Access is provided via Oxford Street and Montague Road in accordance with TAPS PSP requirements. The access arrangements include appropriate driveway design, sight distances and separation from intersections.</p> <p>The design accommodates expected traffic volumes and vehicle types, including service vehicles, without adverse impact on the surrounding road network.</p> |
| <p><b>PO10</b><br/>                 Redevelopment provides for:</p>                                                                                                                                                                                                                                                                                                                                                            | <p><b>AO10</b><br/>                 No acceptable outcome is prescribed.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>N/A</p>                                                                                                                                                                                                                                                                                                                                                                                             |

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| <p>a. the closure of all access driveways in the road area that no longer comply with the standards in the Transport, access, parking and servicing planning scheme policy;</p> <p>b. the reinstatement of adjacent footpaths.</p>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                         |
| <p><b>PO11</b><br/> Development provides that an internal approach to an access driveway in the road area is designed and located to provide for the safety of pedestrians and cyclists using paths adjacent to the frontage of the site, and motorists.</p> | <p><b>AO11.1</b><br/> Development provides sight distances to and from all proposed access driveways in the road area and intersections which are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p> <p><b>AO11.2</b><br/> Development ensures that convex mirrors are only used in a site:</p> <ul style="list-style-type: none"> <li>a. as a secondary support at access driveways;</li> <li>b. in addition to acceptable sight splays that comply with the sight distances standards in the Transport, access, parking and servicing planning scheme policy.</li> </ul> | <p>Compliant</p>                                                                                                                                                                                                                                                                                                        |
| <p><b>PO12</b><br/> Development in the City core and City frame as identified in Figure a provides car parking spaces at rates to discourage private car use and encourage walking, cycling and the use of public transport.</p>                             | <p><b>AO12</b><br/> Development in the City core and City frame as identified in Figure a provides maximum car-parking rates in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p> <p>Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                                 | <p>Complies</p> <p>The development is located within the City Core parking area and provides car parking in accordance with the maximum rates specified in the TAPS PSP.</p> <p>The proposed parking provision supports reduced reliance on private vehicles and encourages the use of public and active transport.</p> |
| <p><b>PO13</b><br/> Development outside of the City core and City frame as identified in Figure a provides on-site car parking spaces to accommodate the design peak parking demand without any overflow of car parking to an</p>                            | <p><b>AO13</b><br/> Development outside of the City core and City frame as identified in Figure a:</p> <ul style="list-style-type: none"> <li>a. provides on-site car parking spaces in compliance with the standards in the Transport, access,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           | <p>Not Applicable</p> <p>The development is located within the City Core parking area, therefore PO13 does not apply.</p>                                                                                                                                                                                               |

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| <p>adjacent premises or adjacent street.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <p>parking and servicing planning scheme policy; or<br/> b. for accepted development subject to compliance with identified requirements, does not result in on-street car parking if no parking standard is identified in the Transport, access, parking and servicing planning scheme policy.</p> <p>Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.</p> |                                                                                                                                                                                                                                                                                                                                       |
| <p><b>PO14</b><br/> Development ensures that the number of car parking spaces and design of the car parking area:</p> <ul style="list-style-type: none"> <li>a. meet the combined design peak parking demand for residential, visitor and business parking;</li> <li>b. allow for the temporal sharing of car-parking spaces for uses with different peak parking demands.</li> </ul> <p>Note—In order to demonstrate that adequate car parking is provided, a traffic impact assessment prepared in compliance with the Transport, access, parking and servicing planning scheme policy is to identify the appropriate number of car parking spaces to be provided.</p> | <p><b>AO14.1</b><br/> Development provides a number of car parking spaces on site equalling the sum of the maximum design peak parking demand for the individual uses at any point in time.</p> <p><b>AO14.2</b><br/> Development involving mixed use provides a non-residential car parking area with shared parking for all the businesses in the development.</p>                                                                                                                                                                                                                          | <p>Complies</p> <p>The car parking provision has been assessed in accordance with the TAPS PSP and accommodates the combined peak parking demand for residential, visitor and non-residential components.</p> <p>The proposed parking supply is appropriate for the scale and nature of the development.</p>                          |
| <p><b>PO15</b><br/> Development provides a car park layout which allows for on-site vehicle parking that:</p> <ul style="list-style-type: none"> <li>a. is clearly defined, safe and easily accessible;</li> <li>b. is designed to contain potential adverse impacts within the site;</li> <li>c. does not detract from the aesthetics or amenity of an area;</li> <li>d. discourages on-street parking if parking has an adverse traffic management safety or amenity impact;</li> <li>e. is consistent with safe and convenient</li> </ul>                                                                                                                             | <p><b>AO15</b><br/> Development provides parking bays, queue areas and manoeuvring areas which are designed for the design service vehicle to the standards in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                                                                                                                                                                                                                                                                                       | <p>Complies</p> <p>The car park layout provides clearly defined and safe parking and manoeuvring areas.</p> <p>Swept path assessment confirms that vehicles can safely access and manoeuvre within the site.</p> <p>The layout is consistent with the TAPS PSP and supports safe movement for vehicles, pedestrians and cyclists.</p> |

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| pedestrian and cyclist movement.                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                 |
| <b>PO16</b><br>Development creates a safe environment by incorporating the key elements of crime prevention through environmental design.              | <b>AO16</b><br>Development incorporates the key elements of crime prevention through environmental design in its layout, building and structure design and landscaping by: <ul style="list-style-type: none"> <li>a. facilitating casual surveillance opportunities and including good sightlines to publicly accessible areas such as car parks, pathways, public toilets and communal areas;</li> <li>b. defining different uses and ownerships through design and restricting access from non-residential uses into private residential dwellings;</li> <li>c. promoting safety and minimising opportunities for graffiti and vandalism through exterior building design and orientation of buildings and use of active frontages;</li> <li>d. ensuring publicly accessible areas such as car parks, pathways, public toilets and communal areas are well lit;</li> <li>e. including way-finding cues;</li> <li>f. minimising predictable routes and entrapment locations near public spaces such as car parks, public toilets, ATMs and communal areas.</li> </ul> Note—For guidance in achieving the key elements of crime prevention through environmental design, refer to the Crime prevention through environmental design planning scheme policy. |                                                                                                                                                                                 |
| <b>PO17</b><br>Development minimises the potential for graffiti and vandalism through access control, canvas reduction and easy maintenance selection. | <b>AO17</b><br>Development incorporates graffiti and vandalism prevention techniques in its layout, building and structure design and landscaping, by: <ul style="list-style-type: none"> <li>a. denying access to potential canvases through access control techniques;</li> <li>b. reducing potential canvases through canvas reduction techniques;</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | It is understood that the design of the proposed development will create a safe environment by incorporating the key elements of crime prevention through environmental design. |

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| Complies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>c. ensuring graffiti can be readily and quickly removed through easy maintenance selection techniques.</p> <p>Note—For guidance on graffiti and vandalism prevention techniques, refer to the Graffiti prevention planning scheme policy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>PO18</b><br/> Development is serviced by an adequate number and size of service vehicles.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p><b>AO18</b><br/> Development ensures that the number and size of design service vehicles selected for the site is in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>Complies</p> <p>Servicing is provided via Oxford Street and accommodates relevant design vehicles, including MRV and RCV.</p> <p>Swept path analysis confirms that service vehicles can safely enter, manoeuvre within and exit the site.</p> <p>Servicing arrangements are consistent with TAPS PSP requirements and do not impact the surrounding road network.</p> |
| <p><b>PO19</b><br/> Development layout provides for services which:</p> <ul style="list-style-type: none"> <li>a. are wholly within the site, other than service vehicle manoeuvring areas which may overhang the verge on a minor road where use of the footpath is not adversely affected;</li> <li>b. are clearly defined, safe and easily accessible;</li> <li>c. are designed to contain potential adverse impacts of servicing within the site;</li> <li>d. do not detract from the aesthetics or amenity of the surrounding area.</li> </ul> | <p><b>AO19.1</b><br/> Development ensures that a service bay provided on site:</p> <ul style="list-style-type: none"> <li>a. is provided and designed to comply with the design vehicle table and service area design standards in the Transport, access, parking and servicing planning scheme policy;</li> <li>b. is located away from street frontages and screened from adjoining premises.</li> </ul> <p><b>AO19.2</b><br/> Development provides on-site servicing facilities and associated on-site vehicle manoeuvring areas which are designed in compliance with the service area design standards in the Transport, access, parking and servicing planning scheme policy.</p> <p><b>AO19.3</b></p> | <p>Complies</p> <p>Servicing is provided via Oxford Street and accommodates relevant design vehicles, including MRV and RCV.</p> <p>Swept path analysis confirms that service vehicles can safely enter, manoeuvre within and exit the site.</p> <p>Servicing arrangements are consistent with TAPS PSP requirements and do not impact the surrounding road network.</p> |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Development provides service areas for refuse collection in compliance with the standards in the Refuse planning scheme policy, Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| <b>PO20</b><br>Development provides service vehicle access routes to and from the site which minimise the impact on:<br>a. amenity and safety in residential areas;<br>b. streets not constructed to a standard that accommodate increased heavy vehicle movements.                                                                                                                                                                                               | <b>AO20</b><br>Development ensures that service vehicles use the shortest and most direct route to the major road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Compliant |
| <b>If for development which is required to be serviced by a b-double (Austroad class 10 vehicle), multi-combination vehicle, over-dimensional vehicle or any other vehicle identified by the Queensland Government as requiring a permit to operate on the road (freight-dependent development)</b>                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| <b>PO21</b><br>Development which is freight-dependent development ensures that the traffic generated by the development does not impact on:<br>a. the operation of the transport network;<br>b. the safety and amenity of a residential area;<br>c. a road not constructed to accommodate a non-standard vehicle such as a road only constructed to accommodate a vehicle that has a legal right of access to all roads including Austroads vehicles classes 1—9. | <b>AO21.1</b><br>Development which is freight-dependent development is located on a site which:<br>a. has frontage to or direct access to the freight network in the Road hierarchy overlay via roads in a zone in the Industry zones category; or<br>b. can be serviced by a route that can act as a primary freight access route and connect to an existing primary freight route without impacting on the safe operation of the road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.<br><br><b>AO21.2</b><br>Development which is freight-dependent development provides any necessary upgrade to a road used as an access route in compliance with the Infrastructure design | N/A       |

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|  | planning scheme policy. |  |
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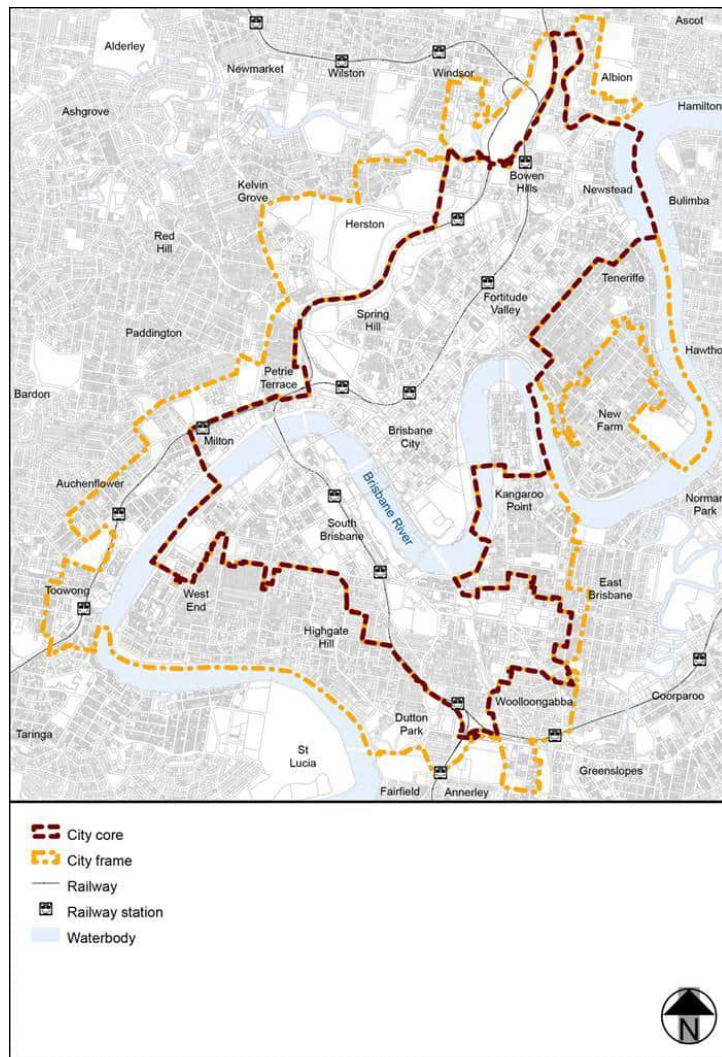


Figure a—City core and City frame

View the high resolution of Figure a-City core and City frame