# Bruce Precinct Master Plan

Transport Access and Movement Report

Prepared for:
DITRDCSA & ACT Government

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# Revision Schedule

| Revision No. | Date | Description | Prepared by | Quality Reviewer | Project Manager Final Approval |
|---|---|---|---|---|---|
| A-Dr | 22/06/26 | Draft | Lara Al-Hassany | Chris Coath | Chris Coath |
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| | | | | | |

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# 1 Introduction

## 1.1 Background

The Bruce Sports, Health and Education Precinct is located within the Australian Capital Territory (ACT) in the suburb of Bruce. The precinct sits within an established institutional and recreational hub, with major sporting facilities, health services, and tertiary education providers, positioning it as a key destination within Canberra.

The ACT Government is committed to delivering a high value, integrated mixed-use precinct that maximises public value and delivers strong community benefit. The vision for the precinct is to create a vibrant and connected place that leverages its existing assets to support a diverse range of uses, including sport, health, education and complementary commercial and community activities.

Recognising the complexity of the precinct the ACT Government is preparing a Draft Strategic Framework. This framework is intended to establish a shared vision and enable strategic alignment between Commonwealth and Territory Government stakeholders, ensuring a coordinated and cohesive approach to planning and delivery.

The development of the precinct ambition and strategic maps plans has already been completed, providing a foundation for future planning. The project has now progressed to the preparation of the final Strategic Framework and Options Report, which will guide decision making and the next stages of implementation of the precinct.

## 1.2 Previous Reports

Stantec and Hatch were engaged by the Department of Infrastructure, Transport, Regional Development, Communications, Sports and the Arts (DITRDCSA) to prepare the **Bruce Precinct Master Plan,** building on previous strategic work and aligning with the Australian Government and ACT Governments visions.

A '**Background Review and Place Analysis Report'** reviewed existing background reports and information, identifying key opportunities, constraints and gaps to guide design decisions.

Subsequently, the '**Bruce Precinct Master Plan Scenarios Report'** documented two development scenarios. These scenarios tested assumptions across the eight design brief elements, mapped similarities, and put forward urban design recommendations to inform the Strategic Framework.

The '**Precinct Ambition Report'** summarised the place principles that informs the framework at a strategic level enabling the delivery of stakeholders and community aspirations for the site.

To provide a clear and integrated basis for future decision making, the '**Strategic Maps Report'** validated the urban design recommendations against the strategic direction established by the place principles.

## 1.3 Scope of Report

This report sets out a transport movement and access assessment of the master plan with the strategic context of the site and surrounds, relevant standards and its anticipated transport implications on the surrounding transport network, including consideration of the following:

- Road network and operation
- Master plan traffic generation
- Site access
- Network traffic operation
- Parking provisions
- Active travel connections
- Public transport including light rail
- Loading and servicing
- Future transport

## 1.4 Design Standards

The master plan transport assessment has been prepared having regard to the following key design guidelines and standards including:

- Austroads Guide to Road Design series
- Austroads Guide to Traffic Management series
- Austroads Guide to Road Safety series
- Australian Standard, Parking facilities series (AS2890)
- ACT Government, Territory Plan and associated Design Guides
- ACT Government, Municipal Infrastructure Design Standards (MIS)
- ACT Government, Estate Development Code

## 1.5 Reference Documents

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

- Austroads Guide to Road Design series
- Austroads Guide to Traffic Management series
- Austroads Guide to Road Safety series
- Australian Standard, Parking facilities series (AS2890)
- ACT Government, Territory Plan and associated Design Guides and technical specifications
- ACT Government, Municipal Infrastructure Design Standards (MIS)
- ACT Government, Estate Development Code
- ACT Government, ACT Transport Strategy 2020
- ACT Government, ACT Climate Change Strategy
- ACT Government, Active Travel Plan 2024-2030, 2023
- ACT Government, Design Guide- Best Practices for intersections and other active travel infrastructure in the ACT, 2024
- ACT Government, Movement and Place Assessment Guide, May 2025
- ACT Government, ACT Road Safety Action Plan 2024-2025, 2023

- ACT Government, ACT Infrastructure Plan Update – Transport
- ACT Government, Parking Action Plan

# 2 Precinct Context

The Bruce precinct is located in Canberra's Belconnen District and covers approximately 214 hectares. The site is strategically significant, comprising major education, health and sporting institutions including the Australian Institute of Sport (AIS), Canberra Institute of Technology (CIT) Bruce campus, North Canberra Hospital and GIO Stadium. These anchors generate diverse travel demands resulting in the need to effectively master plan the precinct to optimise land use and improve movement, access and connectivity across the precinct.

The site is located approximately 7 kilometres northwest of Canberra's city centre and is bounded by major arterial roads, including Belconnen Way to the south, Ginninderra Drive to the north, Haydon Drive to the west and Gungahlin Drive to the east.

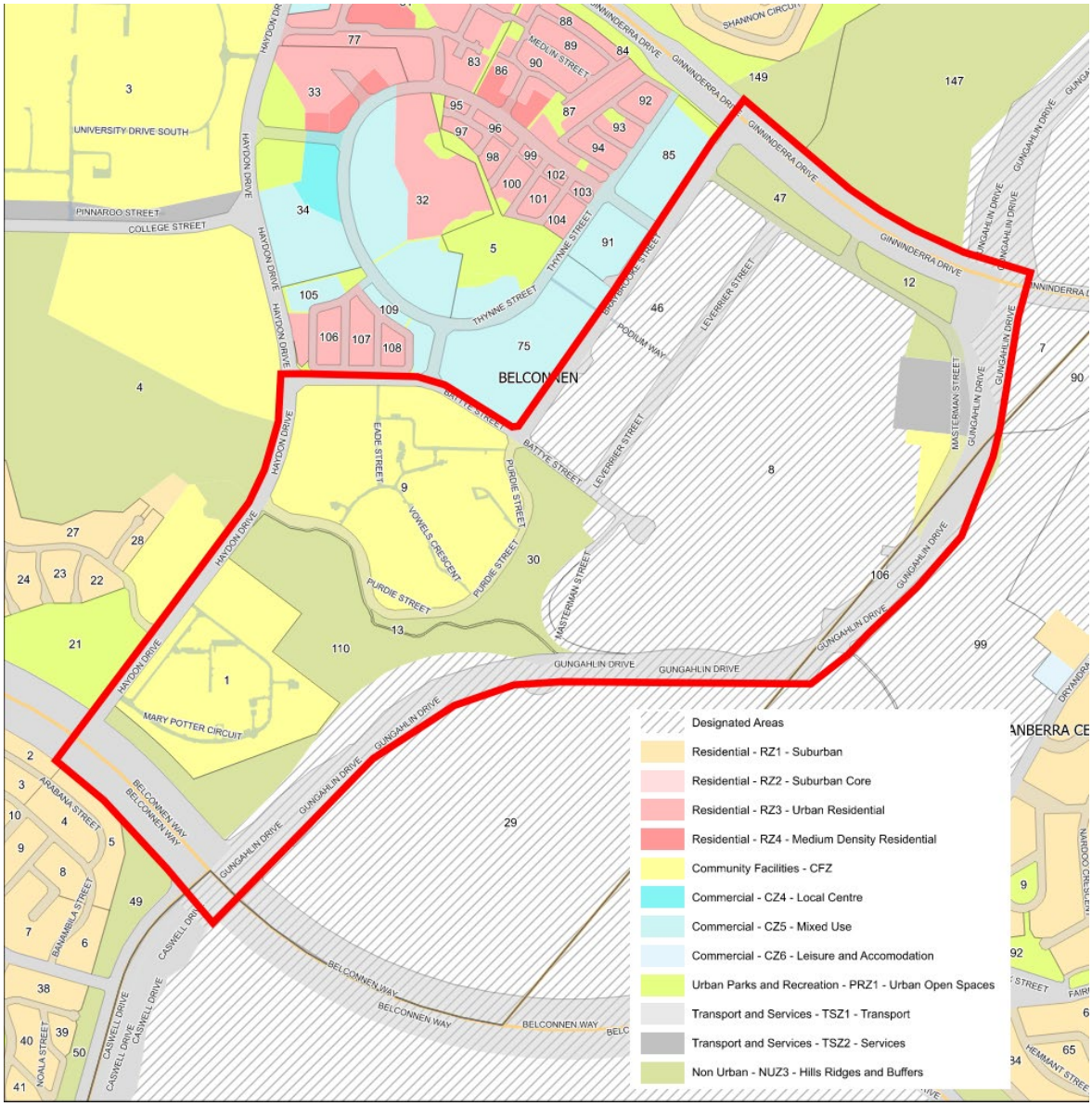
Generating diverse travel demands and patterns, the precinct accommodates daily commuter, student, visitor and event based demand associated with major sporting and entertainment uses. As such, the precinct requires a well-coordinated and multimodal transport system to support efficient movement, improve connectivity and enable future growth opportunities.

The land uses within the precinct comprises community facilities (i.e. North Canberra Hospital and CIT), transport and services (i.e. Evoenergy switching station) and designated areas (GIO stadium and AIS). The areas marked as non-urban represent the substantial proportion of green space across the precinct.

*Figure 2-1 Site Location and Key Stakeholders*


*Source: Hatch*

*Figure 2-2 Land Uses*




*Source: ACTmapi Map*

*Table 2-1 Land Uses*

| Land Uses | Sites Represented in this Area |
|---|---|
| CFZ- Community Facilities | North Canberra Hospital, CIT |
| TSZ1- Transport and Services | Evo Energy |
| Designated Areas | GIO Stadium, AIS |
| NUZ3 Non Urban- Hills Ridges and Buffers | N/A |

# 3 Strategic Context

The Bruce precinct is defined by a concentration of key institutions of national and regional significance, including the Canberra Institute of Technology (CIT) Bruce campus, the Australian Institute of Sport (AIS), GIO Stadium and North Canberra Hospital. Together, these stakeholders anchor the precinct's role in education, elite sport, health and major events, forming a strong foundation for its repositioning as an innovation precinct.

There is significant opportunity to leverage this institutional base through mixed use development, enabling a more vibrant and integrated precinct with complementary commercial, residential, education, health and hospitality and enabling greater day-to-day activation alongside event-based activity.

Strategically, Bruce benefits from strong regional connectivity. It is bordered by major arterial routes, Gungahlin Drive, Belconnen Way, Haydon Drive, and Ginninderra Drive, which serve as key transport corridors within the ACT. The future rapid transit boulevard will further strengthen this role, providing a critical spine for public and active transport and connecting the precinct to the regionally significant Centenary Trail.

Building on these strengths and informed by the Belconnen District Strategy (2022), which identifies Bruce as a key component of the broader National Canberra Innovation Corridor, the masterplan focuses on unlocking the precinct's potential through improved multimodal connectivity, enhanced walking and cycling networks, and stronger integration with regional active travel routes. It also prioritises more efficient land use through the rationalisation of dispersed car parking and better management of peak event demand. Together, these initiatives support stronger collaboration between institutions and enable integrated mixed-use development, positioning Bruce as a leading and connected innovation precinct in Canberra.

# 4 Principles and Objectives

The Bruce Precinct Strategic Maps Report provides Place principles, movement framework and urban design recommendations. Based on this, the following Transport Principles have been prepared to guide the design and delivery of the Bruce precinct.

## 4.1 Transport Principles

**Transit Oriented Development First**

Prioritise rapid transit, aligning destinations and public spaces within walkable catchments to maximise accessibility and patronage. Leverage transit to reinforce the precinct's role within the National Canberra Innovation Corridor.

**Active Movement as the Default**

Enable walking, cycling and micromobility as the most safe, convenient and attractive modes to move within and through the precinct. Transform movement corridors to link key anchors and public spaces by active modes.

**Integrated Multimodal Network**

Deliver a coordinated transport system where rapid transit, active travel, micromobility and vehicles operate efficiently as a network.

**Hierarchy of Movement**

Establish a clear movement hierarchy with active travel and transit prioritised in the core; vehicles accommodated at the periphery; and strategic access provided for key destinations (hospital, stadium, AIS).

**Efficient Land Use and Parking Strategy**

Consolidate car parking into strategically located facilities. Support land use optimisation and daily efficiency through coordinated parking and demand management.

**Access for All**

Ensure transport infrastructure is inclusive and intuitive. Provide safe and convenient access for all users regardless of age, ability, or travel mode.

**Event and Peak Demand Management**

Plan for major event conditions through peripheral parking strategies; managed access from arterial roads; and strong public transport provision to reduce car dependence. Prioritise high capacity, public transport modes to reduce congestion and support efficient, safe crowd movement.

**Future Ready and Flexible Infrastructure**

Design corridors and transport infrastructure to accommodate staged delivery, evolving technologies, and long term growth. Enable adaptability and intensification aligned with precinct ambition.

## 4.2 Transport Objectives

The transport objectives identify the specific desired outcomes of the transport system.

**Strategic Connectivity**

- Connect the precinct to Belconnen, Canberra City and the broader region via high-quality rapid transit
- Integrate key anchors (hospital, AIS, CIT, stadium) through direct, intuitive movement corridors
- Strengthen links to surrounding neighbourhoods and regional trails (e.g. Centenary Trail)

**Mode Shift**

- Achieve a meaningful shift toward public and active transport use
- Reduce reliance on private vehicles for internal and event- related trips

**Accessibility and Walkability**

- Enable daily internal trips to occur within a 5-10 minute walk
- Deliver continuous, safe and attractive pedestrian and cycling routes
- Provide high-quality connections between transit stops and destinations
- Strengthen connections to regional networks including the Centenary Trail.

**Network Efficiency**

- Provide logical, efficient access to key destinations and parking
- Manage congestion during events and peak periods

**Place and Amenity**

- Create vibrant, activated streets along transit corridors and green spines
- Integrate transport infrastructure with public space and urban design outcomes
- Enhance the experience of arrival to major destinations

**Safety and Comfort**

- Deliver safe environments for all users, prioritising vulnerable modes
- Provide clear wayfinding and intuitive navigation
- Ensure comfort through shading, lighting and passive surveillance

**Resilience and Adaptability**

- Support long term growth and intensification
- Enable staged delivery aligned with development timing

## 4.3 Desired Outcomes

### 4.3.1 Road Network

To achieve the previously identified transport principles, the road network should aim to be structured to accommodate future development while supporting best practice transport planning practices of mode shift and reducing reliance on private vehicle for internal and event related trips. A clear movement hierarchy will concentrate higher traffic volumes on peripheral routes and limit through movements in core areas, ensuring efficient circulation while discouraging unnecessary car travel. Roads will be well integrated with the surrounding urban environment, with clear layouts, appropriate speed environments and reduced conflict points to support all users. The network will perform effectively during peak and event conditions through managed access, clear routing, and directing traffic to the periphery.

This approach will maintain reliable, strategic access to key destinations and parking facilities while reinforcing a road network that prioritises essential vehicle trips. In doing so, it will support sustainability outcomes, efficient network use and provide for long term growth and intensification, without resulting in unnecessary expansion or over-provision of road infrastructure.

### 4.3.2 Parking Provisions

Parking provision should support land use optimisation and best practice transport planning practices for a shift toward more sustainable transport modes by reducing reliance on private vehicles and encouraging greater uptake of public and active transport. It must also accommodate peak demand associated with major sporting and recreational events through a coordinated and efficient parking management approach. Particular consideration should be given to integrating the access and operational requirements of the North Canberra Hospital into the overall parking strategy. The precinct will rely on a combination of structured parking to accommodate future demand, supported by demand reduction measures to encourage alternative travel choices.

### 4.3.3 Active Travel Connections

The desired outcome to support best practice transport planning practices is to establish a people-focused movement environment supported by safe, convenient, and attractive walking, cycling, and micromobility networks that connect key anchors, public spaces and destinations across the precinct.

A highly permeable network will enable direct and legible routes, supported by comfortable, low stress environments with appropriate levels of separation, low speed conditions and safe crossings. High-quality amenity, including shade, active frontages, and well-designed public realm interfaces, will make active travel an appealing and intuitive choice for everyday and recreational trips.

A fully integrated multimodal system will enable seamless connections to rapid transit while ensuring active travel and micromobility operate efficiently as a cohesive network. This will be supported by appropriate end-of-trip facilitates, secure bicycle parking, and infrastructure that accommodates a range of users and micromobility options.

The network will be underpinned by a clear movement hierarchy that prioritises active travel within the precinct core and maintains strategic access to key destinations such as the hospital, stadium, and AIS.

### 4.3.4 Public Transport

The desired outcome to align with best practice transport planning practices is to create a clear movement hierarchy that will prioritise public transport within the core of the precinct, while accommodating vehicles at the periphery and maintaining access to strategic destinations, including the hospital, stadium and AIS.

It will effectively respond to peak and event demand through managed access, peripheral parking and high-capacity public transport. Integration of existing game day bus services with future light rail will be critical to managing event surges, with a clear hierarchy that prioritises light rail as the primary high-capacity mode and positions bus services as a complementary secondary and local access network.

Overall, the network will provide intuitive and efficient access to destinations, manage congestion during peak and event conditions, and support long term growth and intensification. Its delivery will be flexible and staged, aligned with development timing and will reinforce a connected, resilient and future focused public transport system.

# 5 Bruce Master Plan Scenarios

Hatch has prepared two scenarios for the master plan, developed following the establishment of the ambition for the precinct. These scenarios explore alternative approaches to land use, connectivity, and movement within the area.

The following sections introduce each scenario from a transport perspective, highlighting their key features, network structure and approach to connectivity.

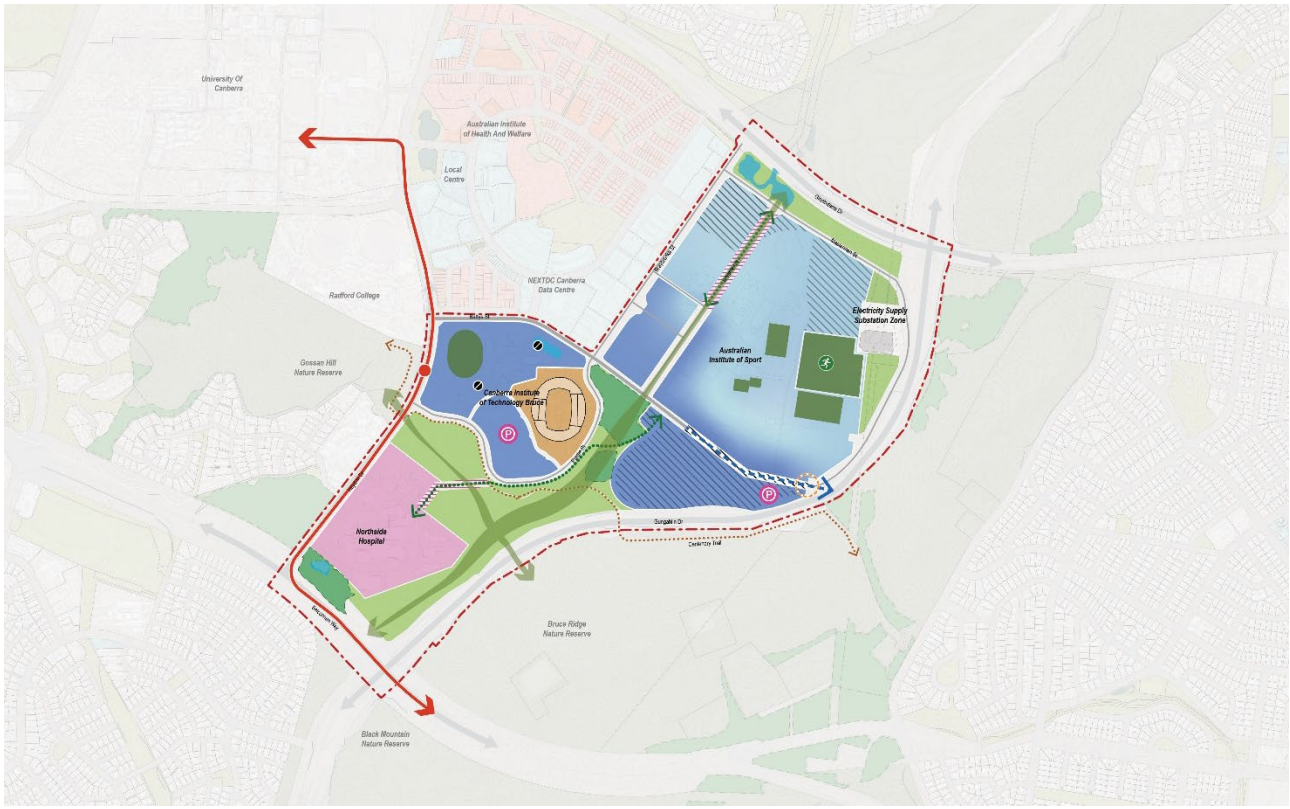
## 5.1 Scenario 1

Scenario 1 relocates the renewed GIO stadium to within the current CIT campus along with additional space for housing, mixed use development and public amenities. This establishes the key civic destinations along the rapid transit alignment along Haydon Drive and Belconnen Way.

Battye Street is extended east to form a new at-grade connection at Gungahin Drive.

A new pedestrian corridor is introduced linking Purdie Street to the North Canberra Hospital, while Leverrier Street is upgraded to an additional pedestrian corridor.

*Figure 5-1 Scenario 1 Master Plan*



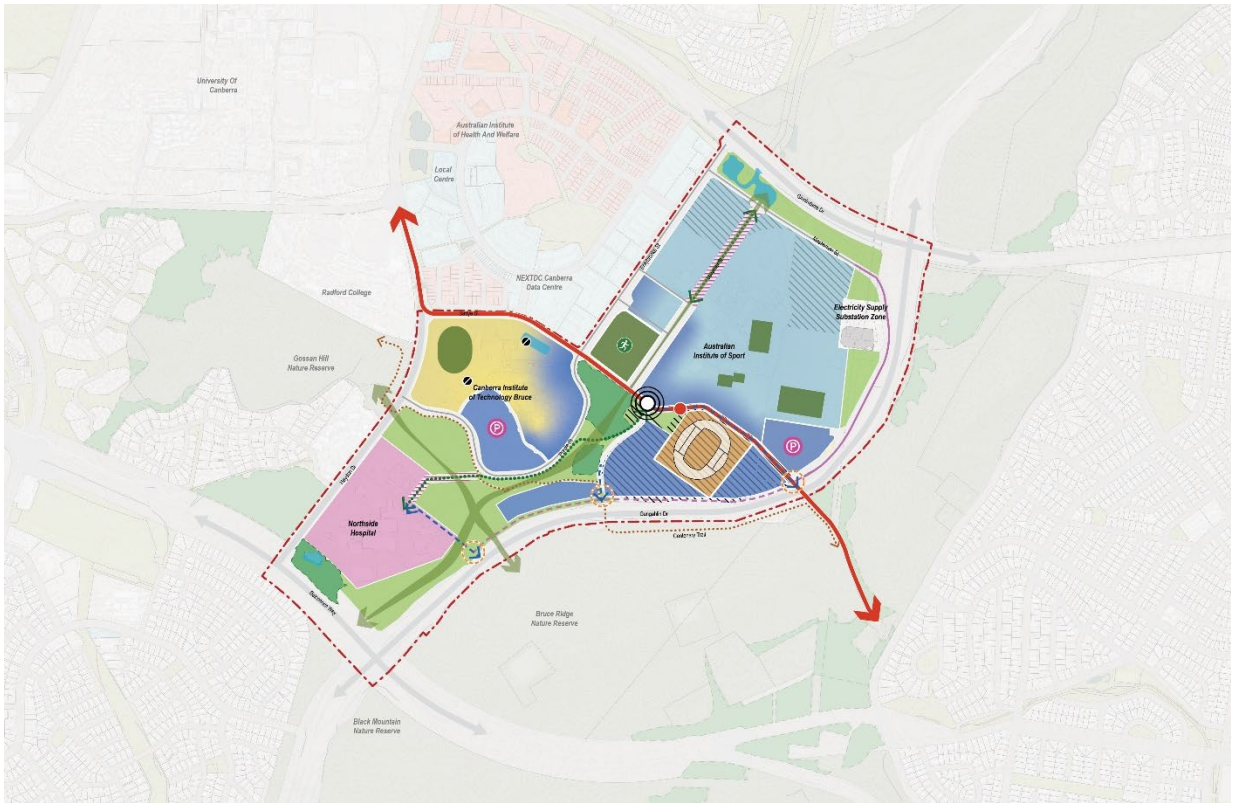
## 5.2 Scenario 2

Scenario 2 presents a central rapid transit alignment forming a strong east-west link through the precinct. The Rapid transit corridor also serves to provide a vehicle connection running under Gungahlin Drive toward the City.

An extension of Masterman Street creating two new connections from Battye Street and North Canberra Hospital to increase the flexibility of vehicle movement through the precinct.

Upgrades consistent with Scenario 1 include the new pedestrian link from Purdie Street to North Canberra Hospital; pedestrianisation of Leverrier Street; and extension of Battye Street eastward.

*Figure 5-2 Scenario 2 Master Plan*




### 5.2.1 Master Plan Development Yield Assumptions

A preliminary assessment of development capacity within the master plan precinct has identified the following indicative development yields:

Residential Development:

- Approximately 4,000 to 5,800 dwellings.

This range is understood to primarily reflect medium- to high-density residential development. However, the ultimate composition is expected to comprise a mix of land uses, including conventional apartments, student accommodation, aged care / seniors living, and other specialised housing typologies.

Commercial Development:

- Approximately 30,000 to 43,000 square metres (sqm) of gross floor area (GFA).

This is anticipated to include a mix of retail, commercial office, innovation, and institutional uses, consistent with the strategic vision for a mixed-use precinct.

# 6 Road Network and Operation

## 6.1 Existing Road Network

### 6.1.1 Frontage Roads

The frontage roads located within and adjacent to the precinct are listed in the table below along with their classification (based on the ACT Active Travel Planning Tool).

*Table 6-1 Frontage Road Classifications*

| Frontage Roads | Classification |
|---|---|
| Gungahlin Drive | Arterial |
| Belconnen Way | Arterial |
| Haydon Drive | Arterial |
| Ginninderra Drive | Arterial |
| Battye Street | Major Collector |
| Braybrooke Street | Minor Collector |

*Table 6-2 Internal Road Classifications*

| Internal Roads | Classification |
|---|---|
| Masterman Street | Local Access Road |
| Leverrier Street | Local Access Road |
| Purdie Street | Minor Collector |

### 6.1.2 Road Connections

The following intersections provide access to the precinct and are present within the precinct:

- Ginninderra Drive/Braybrooke Street – Signalised T-Intersection
- Masterman Street/Braybrooke Street – Roundabout controlled T-Intersection
- Masterman Street/Leverrier Street – Unsignalised T-Intersection
- Braybrooke Street/Battye Street/Purdie Street – Unsignalised Cross Intersection
- Battye Street/Leverrier Street – Unsignalised T-Intersection
- Haydon Drive/Battye Street – Signalised Cross Intersection
- Haydon Drive/Purdie Street – Unsignalised T-Intersection
- Haydon Street/Belconnen Way – Signalised T-Intersection
- Belconnen Way/Gungahlin Drive – Grade separated interchange
- Ginninderra Drive / Agar Street – Unsignalised T-Intersection (only open during GIO Stadium events)

No vehicular access to the precinct is available directly from Gungahlin Drive.

### 6.1.3 Internal Road Network

There is an internal road network connecting the major destinations to their associated at-grade car parking and to the surrounding arterial roads at the perimeter of the precinct. Individual institutions are serviced by smaller internal access roads which primarily support movement within their own areas. The

movement within the site is characterised by vehicle travel needs from arterial roads to specific destinations. Local road network connectivity exists between the AIS, GIO Stadium and CIT. The North Canberra Hospital is however isolated from the remaining precinct network not having any local road network connections between itself and the other precinct land uses. Its access is solely to and from Haydon Drive.

The lack of through connections between institutions restricts the ability for traffic to distribute across the broader precinct, reducing overall network efficiency.

### 6.1.4 Existing Traffic Volumes

Weekday average daily traffic volumes (average of Tuesday, Wednesday, Thursday) by approach have been assessed at the signalised intersections providing access to the precinct and within the nearby vicinity. These volumes are identified in the table below. This was undertaken to understand typical demand on the intersection approaches. While a direct comparison of volumes is not possible between tables 5-3 and 5-4, the weekday average volumes do allow an understanding of the magnitude of traffic demand experienced on a typical weekday.

*Table 6-3 Weekday Average Volumes*

| Weekday (Tues, Weds, Thurs) Average Volume by Approach | | | | |
|---|---|---|---|---|
| **Intersection** | **North** | **South** | **West** | **East** |
| Belconnen Way/Haydon Drive | 9,467 | N/A | 15,650 | 22,555 |
| Battye Street/Haydon Drive | 8,361 | 10,047 | 1325 | 5,794 |
| Ginninderra Drive | N/A | 6719 | 11036 | 10,883 |
| Haydon Drive/Mary Potter Circuit | 11,034 | 12,308 | N/A | 2,899 |
| Jaeger Circuit/Haydon Drive | 10,798 | 10,219 | 504 | N/A |
| Ginninderra Drive/Braybrooke Street | N/A | 4,682 | 12,874 | 10,919 |

In addition, it is recognised that GIO Stadium is a major event destination boasting a 25,000 seat capacity that attracts substantial crowds to the precinct on event days. According to the AUS Stadiums website, rugby league matches featuring the Canberra Raiders recorded crowds of 13,723 on Thursday 19 March 2026 and 17,457 on Sunday 29 March 2026.

To understand how these events influence traffic conditions, SCATS data from key signalised intersections within the precinct has been analysed and compared against typical (non-event) conditions. This assessment focuses on intersections that capture the primary access routes to the stadium precinct. The signalised intersections at Mary Potter Circuit have been excluded, as it is assumed that traffic using these approaches is already accounted for at the Haydon Drive/Battye Street and Haydon Drive/Belconnen Way intersections.

For the purpose of this analysis[1], traffic volumes have been assessed for the period of arrival before the event the period of the event and the departure period following the event. Arrival periods have been

[1] It is recognised that egress traffic may extend beyond this period, however for the purposes of volume analysis, at this time, this timeframe has been adopted.

assumed to occur between one hour and 15 minutes prior to the commencement of each event, while departure periods are considered to extend from game end to approximately 30 minutes post event.

These same time periods on a non-event day have been assessed to understand the impact that events have on the road network. Specifically, the Thursday 8:00pm event has been benchmarked against a typical alternate Thursday evening, while the Sunday 4:05pm event has been compared with a corresponding alternate Sunday afternoon period.

This approach provides a basis for quantifying the impact of event-related traffic and demonstrates the extent to which game days increase traffic volumes across the precinct relative to typical daily conditions.

The traffic volumes assessed are shown in the table below.

Event attendance records on AUS Stadiums, showed GIO Stadium held Rugby League games on the following days:

- Thursday 19 March 2026 NRL Raiders vs Bulldogs @8:00pm
- Sunday 29 March 2026 NRL Raiders vs Sharks @4.05pm

In comparison, two dates have been selected to compare traffic volumes for non-game days as follows:

- Thursday 26th March 2026
- Sunday 22nd March 2026

*Table 6-4 Game Day Effect on Intersection Volumes*

| | **Thursday** | | | **Sunday** | | |
|---|---|---|---|---|---|---|
| **Intersection** | **Non-game day** | **Game Day** | **Volume %** | **Non-game day** | **Game Day** | **Volume %** |
| Belconnen Way/Haydon Drive | 1745 | 2583 | 48% | 2429 | 3454 | 42% |
| Battye Street/Haydon Drive | 957 | 2357 | 146% | 1035 | 2359 | 128% |
| Ginninderra Drive | 1214 | 1962 | 62% | 1471 | 1760 | 20% |
| Jaeger Circuit/Haydon Drive | 795 | 1775 | 123% | 840 | 1982 | 136% |
| Ginninderra Drive/Braybrooke Street | 1261 | 1764 | 40% | 1459 | 1767 | 21% |

All intersections saw substantial traffic volume increases on game days as expected, with the most notable increases at the Haydon Drive/Battye Street and Haydon Drive/Jaeger Circuit intersections. While the intersection of Ginninderra Drive / Braybrooke Street only experiences an increase of between 20 - 40%, it is noted that the Agar Street access point would be open allowing access into the precinct from the east prior to drivers reaching the Braybrooke Street intersection.

# 6.2 Master Plan Traffic Generation

## 6.2.1 Traffic Generation Considerations

The estimation of traffic generation has been undertaken having regard to the principles Integrated Transport Assessments principles, which emphasises the need to consider land use context, travel demand characteristics, and broader network impacts when assessing development-related traffic.

Key considerations include:

- Variability in the ultimate development yield within the identified ranges; and
- Variation in trip generation rates associated with different land use types and operational characteristics.

The assessment adopts an integrated, multi-modal perspective, recognising that traffic generation should not be considered solely in terms of vehicular demand, but in the context of the overall transport system, including public and active transport networks. This includes consideration of the importance of balancing network performance with broader community outcomes, including safety, accessibility, and environmental considerations.

In this context, designing the road network to accommodate a theoretical worst-case traffic scenario—particularly where such a scenario is unlikely to eventuate—may result in an over-provision of road capacity and infrastructure. This can contribute to induced demand, reinforcing private vehicle reliance and potentially undermining objectives to promote public and active transport modes. An overemphasis on vehicle capacity may also weaken the strategic and economic justification for investment in sustainable transport infrastructure.

To address the variability in development outcomes and associated traffic generation rates, a matrix of scenarios has been developed. This matrix considers a range of residential and commercial development combinations and their corresponding trip generation characteristics.

### Residential

A range of daily traffic generation rates are defined by the ACT Government ranging from 6 vehicle movements per dwelling for medium density dwellings to 3.37 for high density dwellings within city and town centres. While the precinct does not sit within a ‘town centre’ the future intensification of this precinct and the collection of land uses could give rise to the consideration of adopting a rate more in line with the higher density rate rather than a more typical medium density rate. Further lower traffic generation rates are typically associated with alternate housing typologies such as student housing and aged care / seniors living. On this basis rates of 0.6 and 0.337 vehicle trips per dwelling have been used to form the limits of the ranges to be tested. These rates apply to both the AM and PM peak hours.

*Table 6-5: Residential Peak Hour (AM and PM) Traffic Generation*

| Traffic Generation Rate Range (Peak Hour) | Land Use Scale Range (dwellings) | |
|---|---|---|
| | **4,000** | **5,800** |
| **0.337 mvmts / dwelling (High Density)** | 1,348 | 1,955 |
| **0.6 mvmts / dwelling (Medium Density)** | 2,400 | 3,480 |
| **Average** | **2,296 vehicle movements** | |

## Commercial

A range of traffic generation rates are applicable for a range of commercial use types that could be expected to make up an overall commercial offering across the precinct.

In this regard rates have been referenced from the TfNSW Guide to Transport Impact Assessments for retail shopping centres and office land uses as follows:

- Retail:
  - AM Peak: 2.25 vehicle movements per 100 sqm
  - PM Peak: 4 vehicle movements per 100 sqm
- Office
  - AM Peak: 1.69 vehicle movements per 100 sqm
  - PM Peak: 1.2 vehicle movements per 100 sqm

These would be expected to form the key range limits to be tested, however it should be noted that lower traffic generation rates such as 'business park' could be associated with innovation type uses should these be applicable in the future refinement of uses.

*Table 6-6 Commercial AM Peak Hour Traffic Generation*

| Traffic Generation Rate Range (Peak Hour) | Land Use Scale Range (sqm) | |
|---|---|---|
| | **30,000** | **43,000** |
| **1.69 mvmts / 100sqm (Office)** | 507 | 727 |
| **2.25 mvmts / 100sqm (Retail)** | 675 | 968 |
| **Average** | **719 vehicle movements** | |

*Table 6-7 Commercial PM Peak Hour Traffic Generation*

| Traffic Generation Rate Range (Peak Hour) | Land Use Scale Range (sqm) | |
|---|---|---|
| | **30,000** | **43,000** |
| **1.2 mvmts / 100sqm (Office)** | 360 | 516 |
| **4.0 mvmts / 100sqm (Retail)** | 1,200 | 1,720 |
| **Average** | **949 vehicle movements** | |

For the purposes of this assessment, an average traffic generation scenario has been adopted. This approach limits the influence of both:

- Lower-bound scenarios, characterised by low development yield and low trip generation; and

- Upper-bound scenarios, comprising high development yield combined with conservative (i.e. high) trip generation rates.

The adoption of an average scenario is considered appropriate for the following reasons:

- Low likelihood of extreme scenarios:

  The combination of maximum development yield and highest applicable trip generation rates is unlikely to represent a realistic development outcome.

- Recognition of demand-moderating factors:

  Higher-density, mixed-use precincts typically exhibit characteristics that reduce external vehicle trip generation, including:

  i) Mode shift to public and active transport;
  ii) Internal trip capture within the precinct; and
  iii) Trip chaining and shared travel behaviour.

  Adopting high-end traffic generation scenarios do not adequately account for these moderating factors.

- Alignment with sustainable transport objectives:

  Austroads guidance and associated research emphasise the importance of delivering transport systems that support sustainability outcomes and efficient network use, rather than encouraging unnecessary expansion of road capacity.

It is further relevant to apply typical arrival and departure splits to these generations as follows:

- Residential:
  - AM Peak – 20% Arrival / 80% Departure
  - PM Peak – 60% Arrival / 40% Departure
- Office:
  - AM Peak – 90% Arrival / 10% Departure
  - PM Peak – 10% Arrival / 90% Departure
- Retail:
  - AM Peak – 80% Arrival / 20% Departure
  - PM Peak – 50% Arrival / 50% Departure

On this basis, Table 6-8 provides a summary of the average vehicle movements to be applied to the transport modelling to be discussing in subsequent section of this report.

*Table 6-8 Master Plan Peak Hour Traffic Generation*

| **Land Use** | **AM Peak** | | **PM Peak** | |
|---|---|---|---|---|
| | **Arrival** | **Departure** | **Arrival** | **Departure** |
| Residential | 459 | 1,837 | 1,377 | 918 |
| Commercial | 606 | 113 | 387 | 562 |
| **Total** | **1,065** | **1,950** | **1,764** | **1,480** |

Having regard to the above the use of an average traffic generation scenario provides a balanced, realistic, and policy-aligned basis and robust basis for transport planning and network assessment. This approach reflects the likely range of development outcomes while appropriately accounting for the influence of mixed-use development, travel behaviour change, and sustainable transport objectives.

Accordingly, the adopted scenario supports the design of a transport network that is efficient, fit-for-purpose, and aligned with broader strategic planning principles, without resulting in unnecessary over-provision of road infrastructure.

### 6.2.2 Existing Precinct Land Use Development

In addition to the master plan development, it is understood that redevelopment and augmentation of existing facilities are expected across the precinct. The exact nature of these redevelopments has however not been made available at this time. As such the following assumptions have been made:

#### GIO Stadium

It has been assumed that the capacity of GIO Stadium will remain the same in the future. Notwithstanding the primary operating times of the stadium occur outside of the road network peak hours (and outside of the modelled periods), therefore should capacity changes eventuate they are unlikely to significantly impact the traffic modelling undertaken as part of this project.

#### North Canberra Hospital

It is understood that a significant redevelopment of the North Canberra Hospital is planned which includes more than 200 inpatient beds, a birth centre and at least 700 additional parking spaces.

Details of additional traffic generations associated with the redevelopment have not been made available to date, however the transport model provided by the ACT Government as part of this project includes the hospital development. This includes in the order of an additional 1,000 vehicle movements during the AM and PM peak hours (1,130 and 897 vehicle movements respectively).

These generations will be adopted for the purposes of modelling.

#### Australian Institute of Sport (AIS)

It is understood that an Architect has been engaged to investigate the redevelopment of the AIS which includes three major infrastructure components:

- Multi-level athlete accommodation for up to 200 people
- An indoor all-weather sports dome for year-round training
- A new High Performance Testing and Training Centre equipped with state-of-the-art sports science and recovery facilities

Further details of the redevelopment have not been provided to date.

While the redevelopment will provide improved facilities and the potential greater year round use of these facilities it is not expected that these changes will result in significant changes to peak hour traffic generations.

Notwithstanding the future transport model provided by the ACT Government as part of this project includes a traffic increase between 2024 and 2041 in the order of 100 vehicle movements during the AM and PM peak hours (100 and 86 vehicle movements respectively) at the nodes serving the AIS.

These generations have been adopted for the purposes of modelling.

#### Canberra Institute of Technology (CIT)

Details of any redevelopment of the Canberra Institute of Technology have not been provided to date.

Notwithstanding the future transport model provided by the ACT Government as part of this project includes a traffic increase between 2024 and 2041 in the order of 100 vehicle movements during the AM and PM peak hours (86 and 111 vehicle movements respectively) at the nodes serving the CIT.

These generations have been adopted for the purposes of modelling.

## 6.3 Network Traffic Operation

### 6.3.1 Overview

The ACT Government (City and Environment Directorate) has provided Aimsun microsimulation models for the Bruce area which included the 2041 Project Case model (refer to as 2041 Reference Case henceforth for the purpose of this study) which included the background traffic growth to 2041 and traffic increases associated to the proposed North Canberra Hospital redevelopment as identified in Section 5.3.3 of this report. This model was updated and used to assess the impact of the Bruce Precinct Master Plan land use development on the existing network.

### 6.3.2 Assumptions

#### 6.3.2.1 Direction distribution & demand profiling

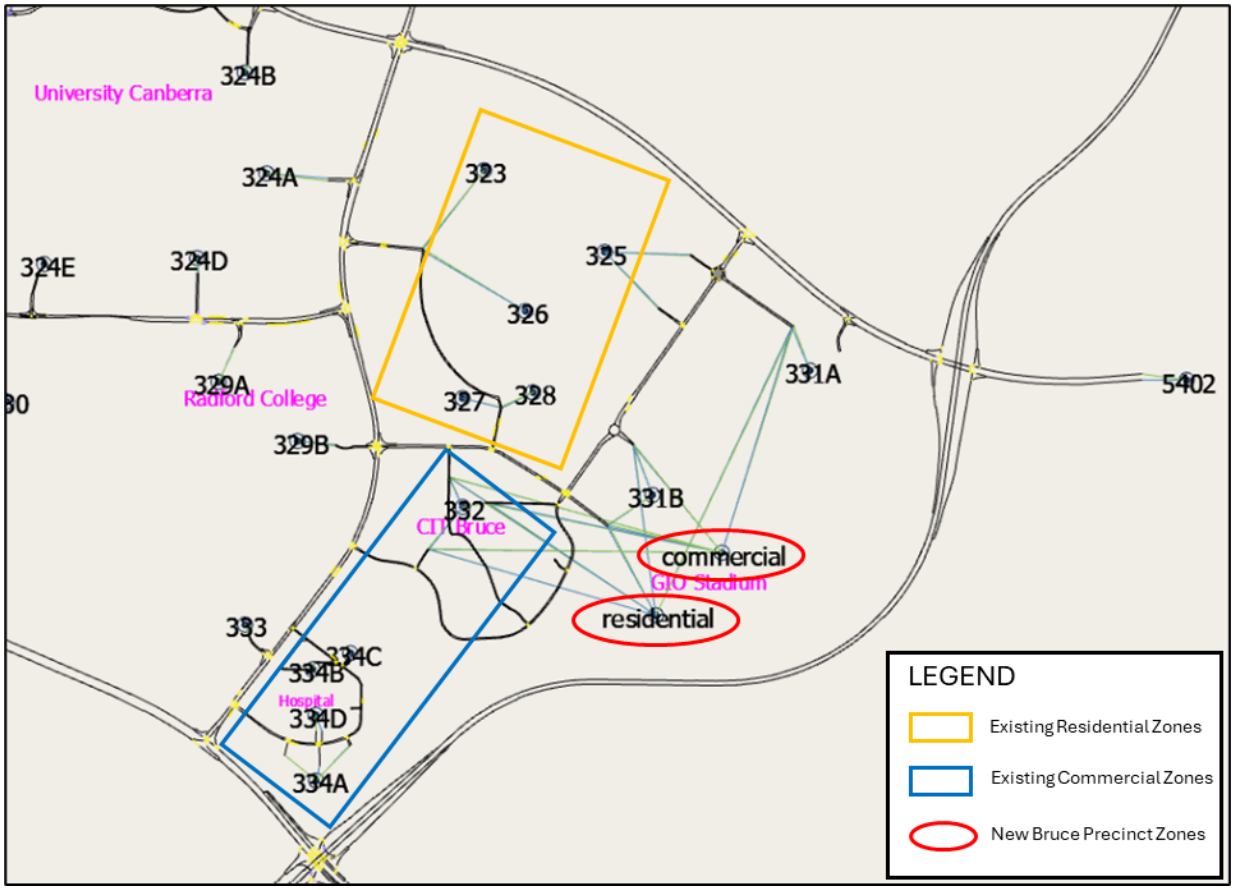
The directional distribution of the additional demand has been based on the future demands (i.e. 2041 Reference Case) included in the original model representing the residential zones (Zone 323, 325, 326, 327 and 328) and commercial zones (Zone 332, 334A, 334B, 334C and 334D).

As the additional demand was developed on an hourly basis, demand profiling was applied to disaggregate the hourly demand into 15-minute intervals. The profiling factors were derived from the future demand patterns in the original model by calculating the percentage of hourly demand occurring within each 15-minute period.

#### 6.3.2.2 Site Accesses

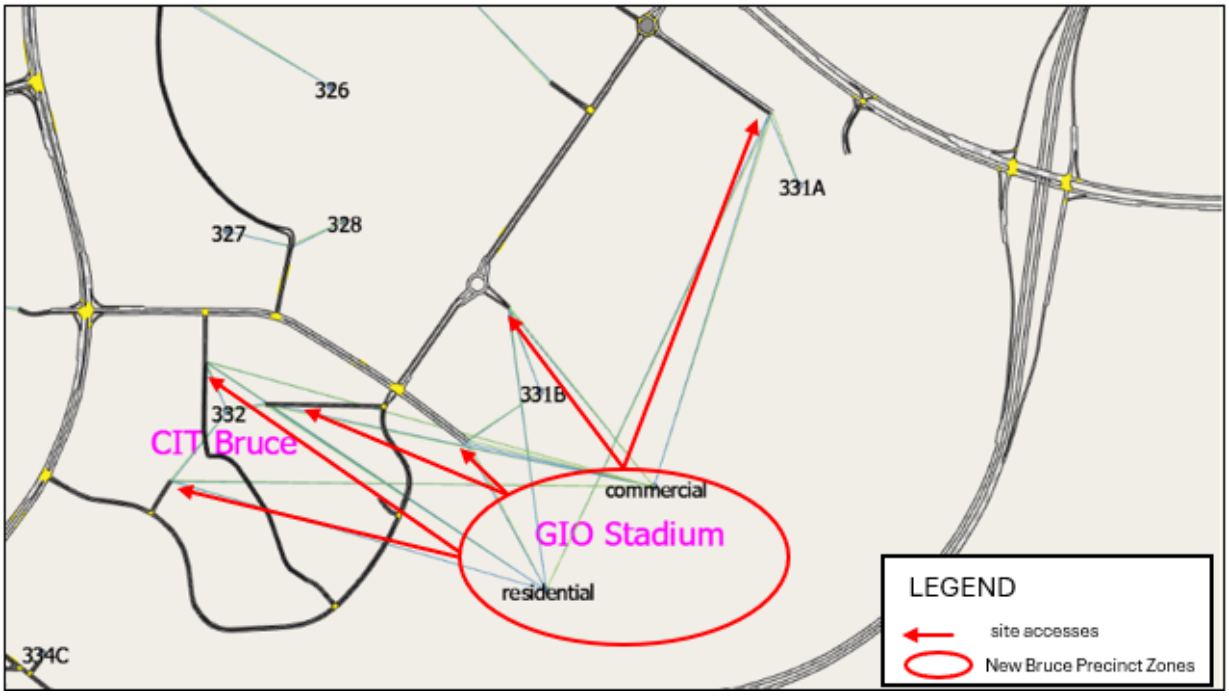
Two zones (Commercial and Residential) in the model representing the proposed Bruce Precinct Master Plan development are shown in Figure 6-1 below.

*Figure 6-1 Existing commercial and residential zones*




All trips generated by these zones allow access the surrounding road network via the six existing site access points. No additional site access connections or network capacity enhancements have been incorporated into this model. The location of the site access points serving the two development zones is shown in Figure 6-2.

*Figure 6-2 Bruce Precinct zones and site accesses*




### 6.3.2.3 Signal Optimisations

The signalised intersections in the original model were controlled using fixed-time signal plans. To accommodate the additional development traffic, the following intersections were converted to actuated signal control with associated detector function based on the existing signal phasing and operation.

Signal optimisation was undertaken concurrently to improve overall network performance and traffic efficiency:

- Battye Street / Haydon Drive Intersection

  The existing fixed-time signal control plan at the Battye Street / Haydon Drive intersection was converted to an actuated control plan. For both the AM and PM scenarios, green time allocated to the northbound and southbound through movements was reduced and reassigned to the northbound right-turn movement to accommodate the increased right-turn demand generated by the development.

- Belconnen Way / Haydon Drive Intersection

  To improve coordination with the Haydon Drive / Mary Potter Circuit intersection and facilitate more efficient discharge of inbound and outbound traffic, the cycle time at the Belconnen Way / Haydon Drive intersection was reduced to 90 seconds in the AM peak and 76 seconds in the PM peak, matching the cycle time adopted at the Haydon Drive / Mary Potter Circuit intersection.

  In both the AM and PM peak periods, the southbound right-turn movement at Belconnen Way / Haydon Drive was coordinated with the southbound through movement at Haydon Drive / Mary Potter Circuit. Further the westbound right-turn movement from Haydon Drive to Belconnen

Way was coordinated with the northbound right-turn movement at from Haydon Drive to Mary Potter Circuit.

In addition, green time allocated to the eastbound and westbound through movements was reduced and reassigned to the westbound right-turn and southbound movements during both peak periods to accommodate the additional traffic demand.

- Haydon Drive / Mary Potter Circuit Intersection

In addition to the signal coordination measures implemented with the Belconnen Way / Haydon Drive intersection, the green time allocated to the northbound right-turn movement from Belconnen Way to Haydon Drive was increased during AM peak periods to accommodate the higher commuter demand associated with hospital traffic compared to the Reference Case scenario.

### 6.3.3 Model Outcome

In general, the Option Case scenario results in a deterioration of network performance compared to the Reference Case scenario due to the additional traffic demand associated with the Bruce Precinct.

The Belconnen Way / Haydon Drive intersection is already at/approaching capacity in the 2041 Reference Case, with competing demands from the right turn movement from Belconnen Way into Haydon Drive and the right turn from Haydon Drive onto Belconnen Way. Additional traffic to the network from the proposed Bruce Precinct developments further intensifies this existing bottleneck, while the ability for the network to accommodate and release this demand remains constrained.

Furthermore, the increased demand exacerbates congestion at the Haydon Drive / Mary Potter Circuit intersection, particularly in the southbound direction where right turn queues extends from Belconnen Way / Haydon Drive intersection, limiting throughput.

Capacity limitations at the unsignalised Battye Street / Braybrooke Street intersection also restrict traffic discharge, which in turn degrades overall network performance and limits the ability to accommodate/redistribute demand in the northern area of the network.

Table 6-9 compares the 15-minutes density plots for the Reference Case and Option Case in the AM period. The last 15 minutes of the previously reported (i.e. *"Bruce Precinct Traffic Model Base year update"* prepared by WSP dated 3 October 2025) peak hour have been selected which is also the critical 15 minutes of the peak hour simulation.

*Table 6-9 Density plots of Reference Case and Option Case in AM period*

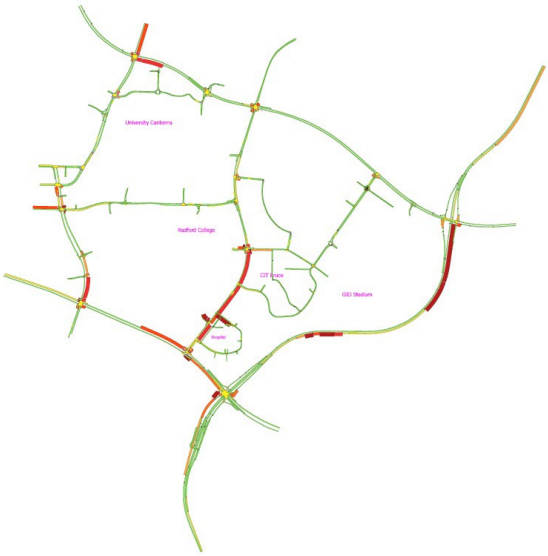
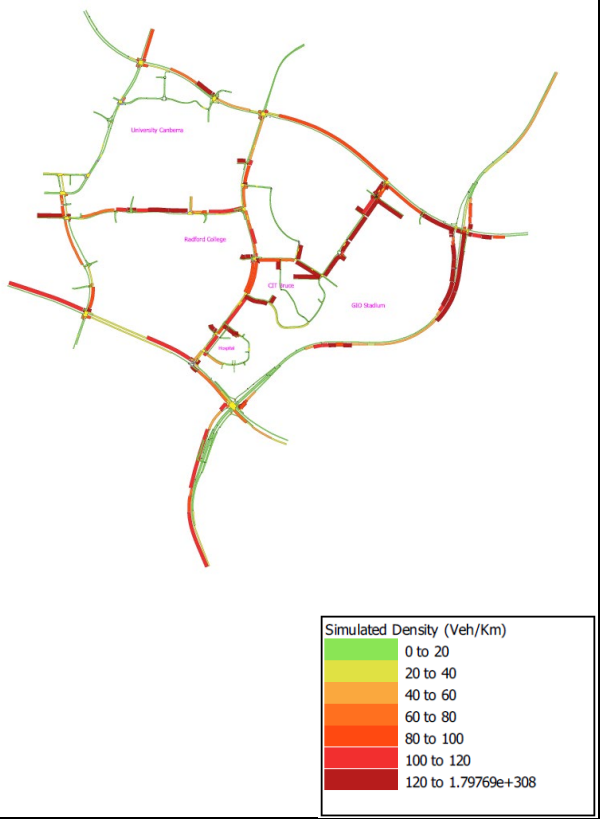
| 2041 Reference Case – AM (08:45am - 09:00 am) | 2041 Option Case – AM (08:45am - 09:00 am) |
|---|---|
|  |   |

Table 6-9 indicates:

- Significant congestion is observed in the southbound direction at the Haydon Drive / Mary Potter Circuit intersection, driven by high through movement demand as well as throughput being limited by meeting the back of the right turn queues from Belconnen Way/Haydon Drive intersection. As a result, queues extend back to the Haydon Drive / University Drive intersection.
- A significant queue is also observed on the southbound approach of the Battye Street / Braybrooke Street intersection, extending back towards the Ginninderra Drive and Gungahlin Drive northbound off-ramp. This queue also increases congestion at the Braybrooke Street / Ginninderra Drive intersection, particularly for the southbound left-turn movement from Ginninderra Drive to Braybrooke Street. The unsignalised nature of this intersection restricts traffic discharge and contributes to increased queuing.
- Significant congestion is further observed at the Belconnen Way / Haydon Drive intersection in the westbound direction. Driven by high right-turn demand from Belconnen Way to Haydon Drive, the queue extends back to the Gungahlin Drive northbound off-ramp. The off-ramp queues extend beyond the storage length and impedes the mainline flows.

Table 6-10 compares the 15-minute density plots for the reference case and option case in the PM period.

*Table 6-10 Density plots of Reference Case and Option Case in AM period*

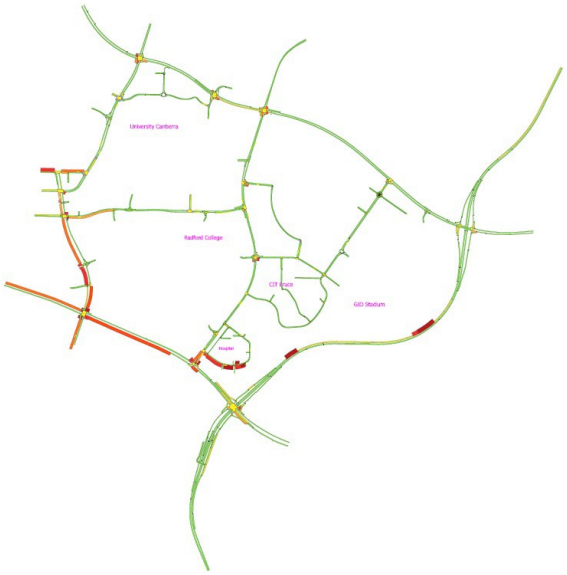
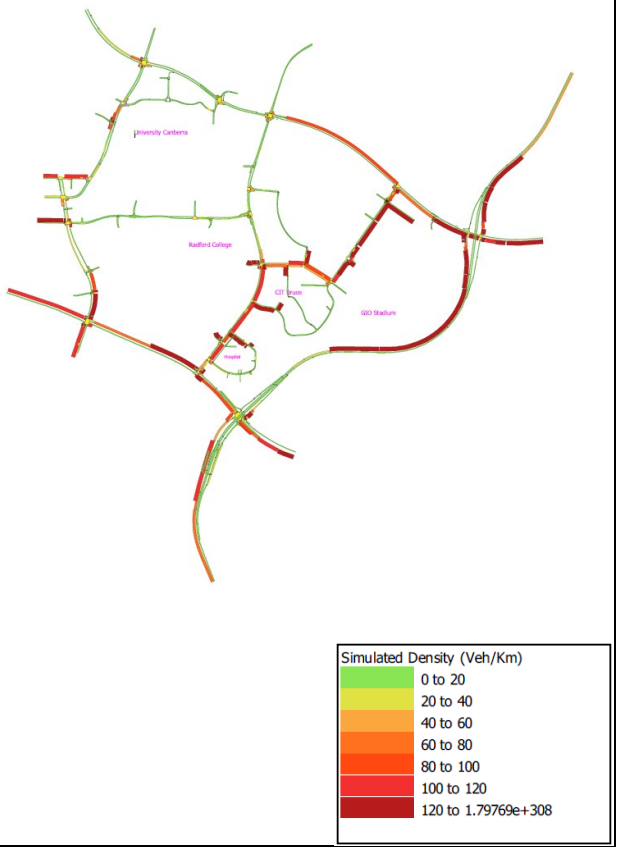
| 2041 Reference Case – PM (05:30pm - 05:45pm) | 2041 Option Case – PM (05:30pm - 05:45pm) |
|---|---|
|  |   |

Table 6-10 indicates:

- Similarly to the AM peak, significant congestion is observed in the southbound direction of the Haydon Drive / Mary Potter Circuit signalised intersection during the PM period compared to the Reference Case. Caused by high through movement demand and queues extending back to the Haydon Drive / Battye Street intersection. However it is noted that the southbound queues are shorter compared to the AM peak with queues extending back to Haydon Drive / College Street intersection.
- Queuing on Braybrooke Street in the southbound direction is worse compared to the AM peak period which is stemming from Battye Street / Braybrooke Street unsignalised intersection. Increased traffic demand associated with the Bruce Precinct, combined with give-way restrictions, significantly constrains vehicle entry into Battye Street. This results in congestion at the Braybrooke Street / Ginninderra Drive intersection, with westbound queues on Ginninderra Drive extending back and affecting throughput on the northbound off-ramp.
- A significant queue is observed at the westbound right-turn movement at the Belconnen Way / Haydon Drive intersection due to additional traffic demand, with queues extending back to the Caswell Drive northbound off-ramp.

The key network performance metrics are summarised in the Table 6-11 below for AM and PM peak.

*Table 6-11 Network Statistics results*

| Statistics | 2041 Reference Case | 2041 Bruce Precinct Master Plan Option |
|---|---|---|
| AM Peak (7:30am – 9:30am) | | |
| Total Vehicle Kilometres Travelled (VKT) – kms | 130,005 | 118,080 |
| Total Hours Travelled (VHT) – hours | 4,136 | 6,107 |
| Average Speed – km/hr | 36.6 | 27.6 |
| Average Delay (sec/km) | 81.8 | 161.7 |
| Average Distance Travelled (km/veh) | 3.7 | 2.9 |
| Average Travel Time (sec/km) | 135 | 215 |
| Total Number of Stops | 60,502 | 93,893 |
| Total Missed Turns | 72 | 552 |
| Total Traffic Demand (veh) | 35,282 | 41,067 |
| Latent Demand (veh) | 72 | 3,317 |
| Latent Demand (%) | 0% | 8% |
| PM Peak (04:15pm - 06:15pm) | | |
| Total Vehicle Kilometres Travelled (VKT) – kms | 133,965 | 118,300 |
| Total Hours Travelled (VHT) – hours | 3,698 | 5,796 |
| Average Speed – km/hr | 41.3 | 30.7 |
| Average Delay (sec/km) | 72.9 | 160.8 |
| Average Distance Travelled (km/veh) | 3.6 | 2.7 |
| Average Travel Time (sec/km) | 125.99 | 215 |
| Total Number of Stops | 37,970 | 82,677 |
| Total Missed Turns | 26 | 372 |
| Total Traffic Demand (veh) | 37,470 | 43,833 |
| Latent Demand (veh) | 97 | 4,286 |
| Latent Demand (%) | 0% | 10% |

In general, the network performance of the Bruce Precinct Master Plan Option is worse than that of the Reference Case due to the additional demand. The network performance results for the Reference Case and Option Case indicate the following key outcomes:

### AM Peak

- The additional traffic demand in the Option Case is expected to significantly increase congestion levels, with average speed decreasing by approximately 9 km/h (24%), average delay increasing by approximately 80 seconds (98%), and average travel time increasing by approximately 80 seconds (60%) compared to the Reference Case.
- In addition, the total number of stops increases by 55%, while the total number of missed turns increases by 667% during the AM peak period in the Option Case compared to the Reference Case.

**PM Peak**

- Similarly, under the PM peak scenario, the additional traffic demand in the Option Case is expected to significantly increase congestion levels, with average speed decreasing by approximately 10 km/h (26%), average delay increasing by approximately 88 seconds (121%), and average travel time increasing by approximately 89 seconds (71%) compared to the Reference Case.
- In addition, the total number of stops increases by 118%, while the total number of missed turns increases by 1,331% during the PM peak period in the Option Case compared to the Reference Case.

### 6.3.4 Potential Mitigation Recommendations/Opportunities

The modelling, at this time undertaken on the existing road network, indicates that both demand side (achieving mode shift from private vehicle travel) and supply side (increasing road network capacity) measures need to be investigated. Further investigations and potential opportunities need to be explored at later stages of the project as follows:

- Site access arrangements to encourage Ginninderra Drive rather than Haydon Drive and Belconnen Way.
- Upgrade of the Belconnen Way/Haydon Drive intersection is recommended, particularly to increase the right turn capacity from Haydon Drive to Belconnen Way. Currently, only a single right turn lane is provided, and this movement is susceptible to queues extending back to adjacent intersection, limiting throughput. This queueing issue is also observed in 2041 Reference Case scenario.
- Upgrade internal intersections, in particular the Battye Steet / Braybrook Street / Purdie Street intersection from priority controlled to a signalised intersection to manage internal congestion and pedestrian prioritisation.
- Provide additional access to the precinct by opening Agar Street to Ginninderra Drive on non-event days and signalising the intersection. The intersection would be located approximately 280 m from the Ginninderra Drive interchange and 390 m from the existing signalised intersection at Ginninderra Drive/Braybrooke Street, indicating that there is adequate spacing from nearby signalised intersections. Given the constraints of the site this intersection represents one of the few opportunities to create additional access to the external road network. Appropriate internal road network configuration would be required to ensure that such an external access point aligns with the internal design of the precinct. The use of Agar Street could assist to collect traffic travelling around the eastern side of the site from future parking provisions rather than forcing these drivers all the way to Braybrooke Street, therefore potentially minimising intrusions into more sensitive areas where pedestrians are to be prioritised. Ultimately a new access to Agar Street would be subject to future modelling and integration with future precinct design.
- Increase/encourage in travel model shift to reduce reliance on private vehicle trips.
- Increase the mixed-use nature of the precinct to enhance the internal trip capture by active travel modes, thus reducing vehicle trip generation.

- Consideration and feasibility for ACT Government investment in additional vehicle access under Gungahlin Drive to the south.

Any proposed road network mitigations identified within this report are indicative only at this early planning phase of the study, with further detailed investigations required in the subsequent planning processes. For example, the operation and capacity of the following roads and intersections should continue to be reviewed in subsequent assessments, identifying any opportunities for additional upgrades to minimise potential impacts with refinements to the proposed development yields and site access arrangements changes:

  - Haydon Drive
  - Belconnen Way
  - Ginninderra Drive
  - Braybrooke Street

The increase in event traffic volumes, albeit outside of typical road network peak periods, will further add to the traffic congestion in the precinct highlighting the need for further demand and supply side measures and specific event traffic management planning.

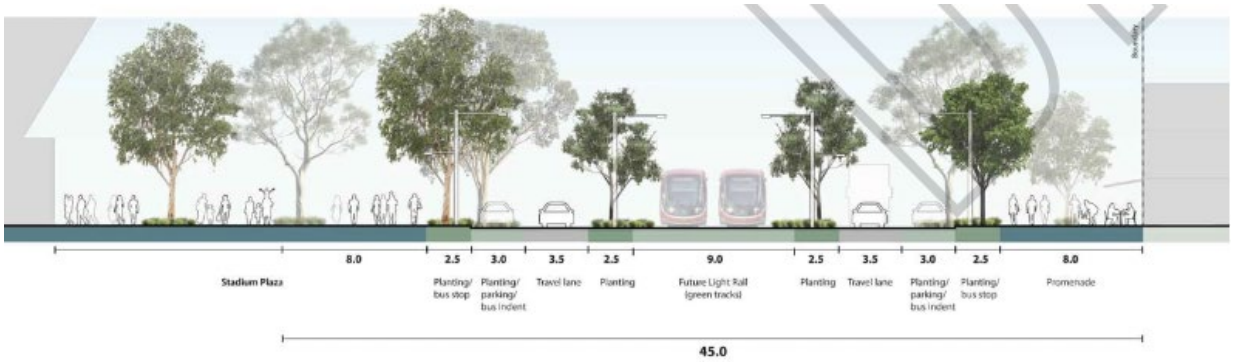
## 6.4 Master Plan Assessment

### 6.4.1 Network Configuration

The transport networks presented for each scenario explore alternative alignments of the Rapid Transit Boulevard which influences the broader movement framework across the precinct. While the alignments vary between scenarios, a representative cross section is proposed to illustrate the intended corridor design and functionality.

The rapid transit boulevard integrates capacity for future light rail (or dedicated bus lanes), with a single traffic lane in each direction, alongside planting, on-street parking, indented bus bays and an 8.0m wide promenade designed for community use. This indicative cross section, shown in Figure 6-3 below illustrates the intent of the transit boulevard for shared transport and public realm outcomes. Priority is given to public transport, while accommodating limited vehicle access through one traffic lane in each direction.

*Figure 6-3 Example Transit Boulevard Section*




*Source: Hatch*

The following sections describe the key differences between the scenarios in terms of the east-west and north-south corridors, the distribution of movement between the precinct core and its periphery, the balance between internal connectivity and through-connections to surrounding areas, and the location and function of access points into the precinct.

### 6.4.2 Scenario 1

Scenario 1 establishes a clear distinction between the precinct core and its periphery. The Rapid Transit Boulevard is positioned along the edge of the precinct, running along Haydon Drive and Belconnen Way. This draws public transport to the perimeter while reinforcing the route as the primary movement corridor.

In contrast, the core of the precinct accommodates vehicles along Battye Street while prioritising pedestrian movement along north-south internal connections via Leverrier Street and an active travel link between the stadium, CIT and North Canberra Hospital. While these destinations benefit from improved connection, AIS is more separated and relies on arterial connections via Ginninderra Drive and Haydon Drive.

East west connectivity is anchored by Battye Street and its potential extension to Gungahlin Drive, forming the main internal spine and a key-through connection to surrounding suburbs. The additional precinct access point increases direct connectivity to the precinct but has the potential to affect the operation of Gungahlin Drive due to the existing interchanges being already at minimum spacing.

Geometric and physical spacing constraints may affect the feasibility of an additional Gungahlin Drive interchange, particularly in respect to providing adequate ramp tapers and storage length. Weaving of traffic especially during event days will put pressure on north-south traffic flow on Gungahlin Drive. While this additional access point could be anticipated to be predominantly used for providing additional event capacity, it is more suitable to provide event specific access solutions rather than introducing a permanent new interchange. Further investigation of such an access point would need to be explored through modelling, geometric design and government engagement.

Traffic modelling undertaken in the Belconnen to City Transitway report indicates a reduction in Haydon Drive operation will require improvements, in particular, recommending corridor widening near Belconnen Way and Haydon Drive to support interim operations and the potential longer term transition to light rail. Further modelling of the Transit Boulevard configuration would be required along Haydon

Drive to understand its impact more fully, along with the densification of the Bruce Precinct. However, based on the Belconnen to City Transitway modelling it would be expected that a reduction in general traffic capacity along Haydon Drive would need to be accepted as an inherent consequence of any upgrade to Transitway proposals.

In summary, Scenario 1 aligns public transport with the arterial through traffic route however separating its connection with land use attractors and increases potential conflicts for pedestrians to access future public transport.

### 6.4.3 Scenario 2

Scenario 2 is structured to prioritise a transit and active travel focused precinct core, with general vehicle movement shifted to the periphery. The rapid transit boulevard runs centrally through the precinct along the Battye Street alignment, passing beneath Gungahlin Drive and bringing public transport directly to the centre. This reinforces the core as people focused environment, while existing arterial routes accommodate vehicle movement around the edges.

Opportunity exists to for private vehicle movements to be combined with the Rapid Transit Boulevard providing an eastern precinct connection across (under) Gungahlin Drive through the Bruce Ridge Nature Reserve to Dryandra Street and Fairfax Street.

East-west connectivity is defined by this central rapid transit boulevard, which forms the primary spine of movement and a strong connection to outer suburbs. Private vehicle movement is distributed to the surrounding arterial network, supporting reduced traffic within the core and aligning with the ambition for internal movement to be dominated by public transport and active modes.

North-south movement within the precinct is provided via the pedestrianised Leverrier Street and the extended Masterman Street along the eastern edge, which functions as an important internal link. This corridor supports access between major destinations, including North Canberra Hospital, the CIT campus and GIO Stadium while also keeping this traffic off Gungahlin Drive. The extension of Masterman Street seeks to provide opportunity for greater dispersal and flexibility of traffic movements across the precinct.

Overall, under this scenario, the network emphasises internal connectivity through high quality public transport and pedestrian links, while maintaining broader accessibility via the peripheral road network.

# 7 Parking Provisions

## 7.1 Existing Conditions

Parking across the precinct is predominantly provided through a combination of large at-grade car parks and select parking buildings associated with individual institutions. Provision and management vary with a mix of free and controlled parking supporting staff, students, visitors and event based demand.

While this approach accommodates existing needs, it results in a dispersed and land-intensive parking pattern, with limited coordination across the precinct. The following outlines the current parking arrangements for key institutions.

### North Canberra Hospital

The hospital campus has a free 24/hr multi-storey car park on the Mary Potter Circuit approximately 100m from the main hospital entrance. Across the campus, enforced parking conditions and time limits apply to the at grade uncovered car park opposite the main hospital entrance, and short term parking outside the Marian Building and Emergency Department.

Accessible parking is available around the campus and within the multi storey car park.

### CIT Bruce Campus

A large at grade uncovered car park is available at the Bruce campus, free for all students. Accessible parking is provided outside various buildings.

### GIO Stadium

Designated car parks are available on the east and west sides of the stadium catering to visitors for $10 per vehicle. VIP, corporate and disabled parking is also provided. Additionally, GIO stadium directs visitors to additional parking at CIT and the University of Canberra about 10 or 20 minutes' walk respectively.

### AIS

Three parking areas are provided for visitors, with two areas accommodating buses. Separate staff and athlete parking is also available. Accessible parking is available close to the main entrances.

## 7.2 Master Plan Parking Generation

In a similar manner to traffic generation above, an estimate the future parking needs of the contemplated master plan uses has been undertaken in the following.

### Residential

Adopting a rate of 1 car parking space per dwelling would result in a demand in the order of 4,000 to 5,800 resident spaces.

## Commercial

A range of parking generation rates are applicable for a range of commercial use types that could be expected to make up an overall commercial offering across the precinct.

In this regard car parking expectations have been referenced from the ACT Government Technical Specification (Commercial Zone) for retail shop and office land uses as follows:

- Retail (Shop): 5 spaces per 100 sqm
- Office: 2 spaces per 100 sqm

These would be expected to form the key range limits to be tested.

*Table 7-1 Commercial Parking Generation*

| Traffic Generation Rate Range (Peak Hour) | Land Use Scale Range (sqm) | |
|---|---|---|
| | **30,000** | **43,000** |
| **2 spaces / 100sqm (Office)** | 600 | 860 |
| **5 spaces / 100sqm (Shop)** | 1500 | 2150 |
| **Average** | **1,278 spaces** | |

Table 7-1 indicates an average commercial parking expectation of 1,278 spaces. This average has been obtained by adopting the mid point of a range of parking rate and land use scale outcomes associated with potential future office and retail (shop) commercial uses.

Combined with future resident parking a total additional parking requirement in the order of 5,000 – 7,000 spaces could be required above that currently provided within the precinct.

The above figures are considered to represent an upper bound scenario, noting that a significant proportion of demand is likely to be accommodated through shared and walk-up trips between future residential development and adjacent retail/commercial uses. This internalisation of trips is expected to reduce the overall parking demand compared to a conventional, stand-alone land use approach.

The internalisation of trips is influenced by a number of factors known as the 7D's. These factors represent those that most influence travel in the urban development process:

- Density of population and employment
- Diversity of different land uses
- Design of street network and development
- Destination accessibility
- Distance to mass transit (rail/light rail)
- Demand management
- Demographics

Many of these elements are imbedded in the evolution of the Bruce Precinct Master Plan and will therefore contribute to a change in future transport characteristics.

It is important to put in place a forward-looking parking strategy at the outset which balances travel and parking needs now, however, has the flexibility to evolve in the future as densification of a mixed-use activity centre occurs. Parking controls and future planning provisions and ownership of parking assets play a role in creating a future flexibility for change.

Notwithstanding this, the provision and distribution of parking will require careful calibration in future development stages, particularly in response to the congestion issues identified in the traffic assessment. Parking supply should be aligned with network capacity constraints to avoid exacerbating peak period pressures on the surrounding road network.

It is important to recognise that parking provision is a key determinant of private vehicle travel behaviour. As such, parking supply may need to be deliberately moderated to discourage unnecessary car use, mitigate congestion impacts, and support a shift toward more sustainable transport modes. An oversupply of parking can induce additional vehicle trips, undermining broader transport and land use objectives.

In this context, opportunities to maximise the efficiency and utilisation of parking should be actively pursued. This includes, but is not limited to, shared parking arrangements across complementary land uses with differing peak demand profiles, flexible allocation strategies, and potential integration with demand management measures. These approaches will help to optimise parking provision across the precinct and avoid unnecessary capital investment in underutilised parking infrastructure, while still maintaining appropriate levels of accessibility for residents, workers, and visitors.

These measures will need to be documented via a development framework at future planning stages. This framework should establish a clear and adaptive guide for parking provision, appropriate to the evolving needs of each development phase as the precinct densifies, and is structured to support sustainable mode shift outcomes.

As densification progresses, subsequent development will be expected to provide adjusted parking supply ratios that reflect changing demand and transport priorities. Notwithstanding this longer-term transition, current requirements must be addressed through immediate provisions embedded within the same development framework, ensuring that the existing deficit in public transport accessibility and active travel infrastructure is appropriately mitigated in the interim.

As a whole, each phase of development should respond to precinct-wide requirements, allowing benefits to be progressively unlocked and realised through a cumulative approach toward the desired long-term outcomes.

## 7.3 Master Plan Assessment

The revitalisation of the precinct is expected to place increased pressure on parking provision, driven by new development, including additional dwellings and intensified land uses. This demand is shaped by an established expectation of parking availability in the ACT, where private vehicle use remains dominant.

Without intervention, this is likely to result in increased demand for on-site parking and continued reliance on dispersed at-grade supply.

To respond effectively, future parking provision should be carefully managed and optimised, with a greater proportion of demand accommodated through high-capacity public transport, including rapid transit, and improved active travel connections. This will be critical to reducing parking demand long term, supporting more efficient land use, and avoiding the expansion of land intensive parking.

## 7.4 Scenario 1

Scenario 1 identifies, two multi-storey parking structures. The first parking structure is located adjacent to the relocated stadium and is accessed from Haydon Drive. It supports both hospital staff and stadium demand while keeping vehicles out of the precinct core and utilising existing parking land. The second parking structure is located on mixed-use development land and is proximate to the proposed access to Gungahlin Drive.

Together, these multi-storey parking structures respond to event-related congestion and reduce excess traffic movements through the precinct. They provide the ability to supplement and provide shared parking for hospital staff and stadium events, while accommodating increased traffic associated with development intensification and the anticipated needs of institutions, residents, and visitors within the precinct.

Overall, the approach delivers shared benefits across the wider precinct and a range of stakeholders, noting that considerations of investment, ownership and ongoing operation and maintenance of these structures have not been addressed at this stage.

## 7.5 Scenario 2

Scenario 2 identifies two multi-storey parking structures. The first parking structure involves upgrading existing parking land adjacent to the CIT campus to a multi-storey facility, accessed from Haydon Drive.

The second parking structure is located adjacent to the rapid transit boulevard near AIS. It is accessed from the extension of Master man Street and the proposed connection under Gungahlin Drive.  This utilises existing parking land. This peripheral parking approach reduces the need for vehicles to enter the core of the precinct, supporting event day traffic management.

Collectively, these multi-storey parking structures support the precinct's evolving access and parking demands by accommodating increased traffic associated with development intensification. By locating parking at the periphery, they reduce the need for vehicles to enter the precinct core, enabling the epicentre to be prioritised for active travel.

# 8 Active Travel Connections

## 8.1 Existing Conditions

### 8.1.1 Path Networks

A series of active travel routes exist through the precinct comprising both Principal Routes and Main Routes.

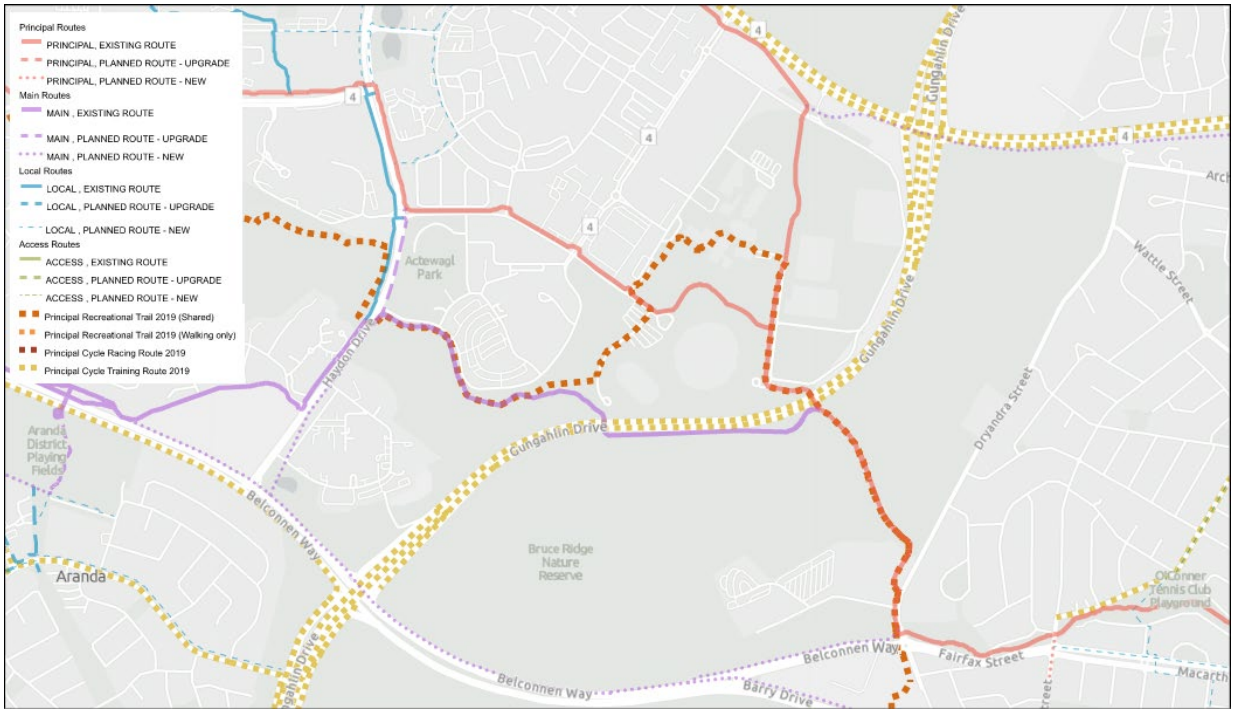
The Main Route provides connection along the northern side of Battye Street from Haydon Drive to GIO Stadium travelling onwards under Gungahlin Drive continuing through the Bruce Ridge Nature Reserve to Fairfax Street. This route facilitates a number of crossing points of local roads through the use of raised pedestrian zebra crossing treatments. As precinct intensification increases vehicle volumes, the route will experience heightened interaction between pedestrians, cyclists and traffic, reinforcing the need for safe crossing design and effective traffic management. This existing route network will become increasingly valuable, offering users an attractive alternative to private vehicle use which enables a shift toward more active travel modes while maintaining the continuous connection between Belconnen Town Centre and the Canberra CBD.

A further main route is provided from Ginninderra Drive providing connections from the north to the GIO Stadium linking with the path network that continues south under Gungahlin Drive.

The Main Route through the site provides a connection to the Centenary Trail, a 138 km shared use trail which runs through urban and rural Canberra and passes through the Bruce precinct. This provides an important corridor for walking, running and cycling. Connection of this trail is provided under Gungahlin Drive to the Bruce Ridge Nature Reserve. To the west the path crosses Haydon Drive in an uncontrolled manner linking with the Gossan Hill Nature Reserve. Kerb ramps are provided however formal crossing control is not.

These routes are shown in Figure 8-1.

*Figure 8-1 Existing Active Travel Routes*




*Source: ACT Active Travel Planning Tool*

Several local streets support cycling in lower-speed environments such as Braybrooke Street and Leverrier Street which function as bicycle friendly streets, these include:

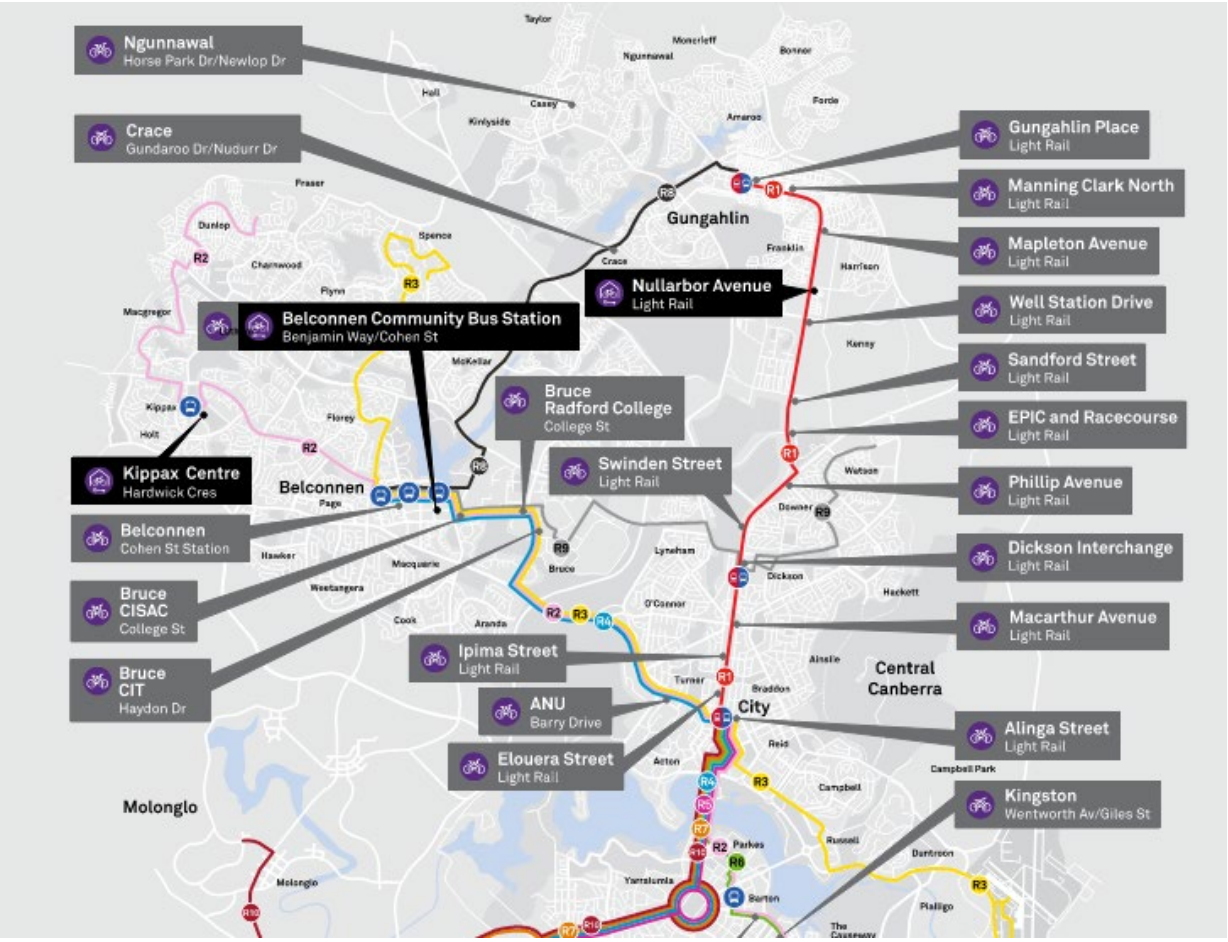
- Traffic calming measures, raised crossings, and signage to encourage slower vehicle speeds particularly through the AIS area
- Raised zebra crossings e.g. on Braybrooke near Battye Street intersection that further support pedestrian safety

Battye Street includes sections of shared path infrastructure known as the Belconnen Bikeway, supporting both pedestrians and cyclists and connecting to the main entrance of the GIO stadium.

### 8.1.2 Bike and Ride

Transport Canberra provides a network of Bike and Ride facilities that support multimodal travel by enabling seamless connections between cycling and bus or light rail services. One such facility is located within the precinct at the CIT Bruce campus, with several additional sites in the surrounding area. These facilities allow cyclists to securely park their bikes before transferring to other modes, supporting convenient access into and through the precinct.

*Figure 8-2 Transport Canberra Bike and Ride Services*




*Source: Transport Canberra*

### 8.1.3 Pedestrian Access

Around Mary Potter Circuit, footpaths and crossings are provided to support access to bus services, improving connections to public transport, however footpath provision across the precinct is inconsistent, for example Braybrooke Street has a footpath on one side only which many local roads have limited or no formal footpath provision.

### 8.1.4 Recreational Routes

The precinct does contain an extensive network of informal trails and mountain bike tracks through surrounding green open space areas, which provide strong recreational opportunities, however they are not well integrated with key destinations for everyday transport use.

### 8.1.5 Micromobility

GIO Stadium promotes an e-scooter share scheme run by Transport Canberra and ACT Government. The scheme allows visitors to the stadium to ride e-scooters directly from Belconnen to Civil and back, with drop off points provided on Leverrier Street in front of the AIS arena.

## 8.2 Master Plan Assessment

### 8.2.1 Scenario 1

Scenario 1 drives significant land use and movement change by transforming Haydon Drive into an active mixed-use rapid transit boulevard, forming a key north–south spine along the precinct. This corridor utilises the socialised space along Haydon Drive to connect major anchors, including the hospital, Fern Hill residential neighbourhoods, and Radford College. It strengthens connectivity by facilitating links to Jaeger Circuit and Purdie Street, as well as pedestrian connections into Aranda to the southwest. While access to the AIS and the precinct core would rely on the internal local movement network, the boulevard enhances broader connectivity by linking into the existing Centenary Trail, improving access to surrounding nature reserves. The scenario prioritises active travel through upgrades to the north–south route while retaining the east–west recreational trail, supporting a framework for a more integrated and walkable movement network across the precinct.

While links to regional and recreational routes are provided, connectivity at a local level is more limited, necessitating a more comprehensive internal movement network. Scenario 1 has a clearer separation between commuter movement along the rapid transit boulevard and connections to the broader precinct, which results in weaker direct integration, particularly in relation to the pedestrianised Leverrier Street.

Enhancements such as the development of Battye Street are required to establish continuous and legible active travel infrastructure, ensuring both effective connections between key destinations and also improving overall network permeability.

### 8.2.2 Scenario 2

Scenario 2 establishes a regionally significant active transit corridor along an east–west boulevard, forming the primary movement spine of the precinct. This is complemented by north–south links that transition into pedestrian-focused street environments, creating a fine-grained and people-oriented network. This scenario builds on and expands the existing Centenary Trail, strengthening connections to recreation and surrounding open space. Permeability is enhanced through new, upgraded and extended connections, including Leverrier Street and additional thoroughfares—particularly in the northern section—at intervals of up to 100 metres, supporting a highly walkable urban form. Active travel is prioritised along the east–west transit boulevard through activated frontages, with movement and land use focused around the precinct epicentre and integrated with key recreational connections.

With large traffic volumes arriving via rapid transit and from the CIT parking centre, strong active travel connections—particularly between Battye Street and the CIT—are critical to ensure efficient and safe movement. Access to the hospital is closely tied to station placement, which must be optimised to maintain walkable distances. Similarly, access to other key destinations may require complementary measures such as bicycle depots or a loop bus to support last-mile connectivity.

In this scenario, the direct stadium link to the light rail caters for event traffic, reducing the need for additional active travel measures to manage game day surges.

# 9 Public Transport

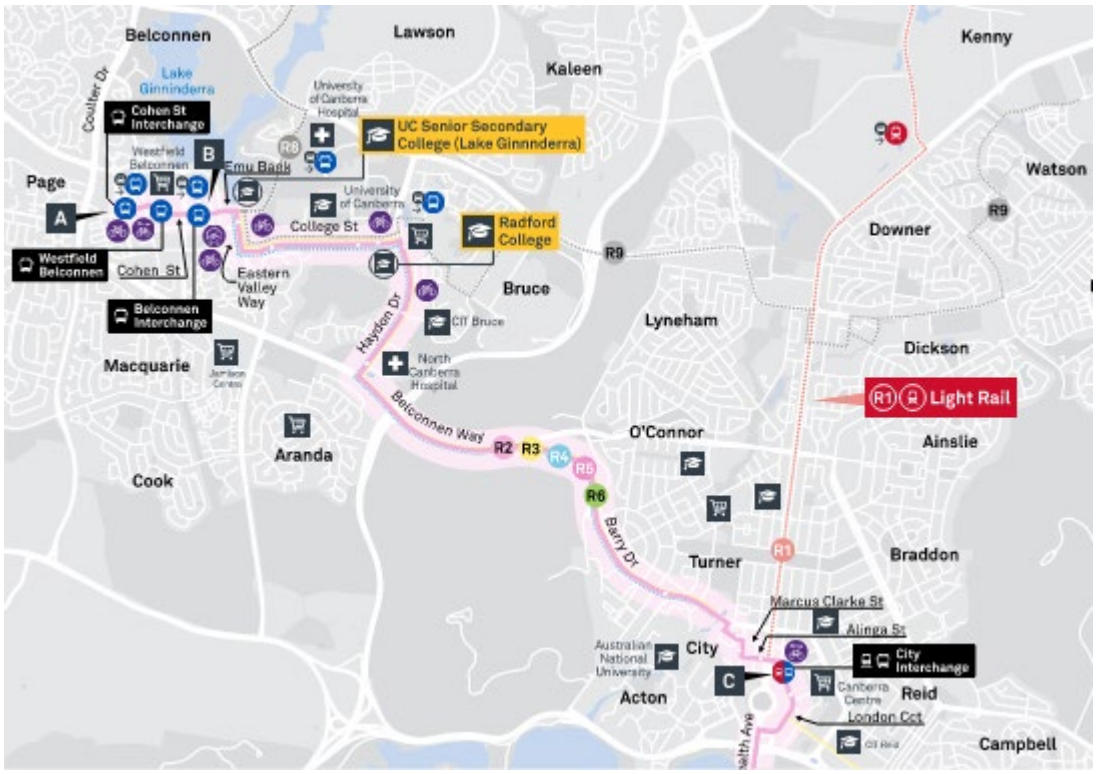
## 9.1 Existing Conditions

The existing public transport network comprises a mix of regular, event and school bus services, each serving a distinct function in providing coverage, managing commuter and event related demand and supporting access to destinations across the precinct and wider network.

### 9.1.1 Regular Bus Services

The precinct is serviced by a network of local bus routes that provide connections between the major interchanges in nearby areas. Rapid routes R2, R3, R4, R5, and R6 form the primary public transport spine, operating at a high frequency between Belconnen Interchange and City Interchange. These routes cater to the majority of commuter demand and provide access to key employment, retail and activity centres.

*Figure 9-1 Routes R2, R3, R4, R5, R6*



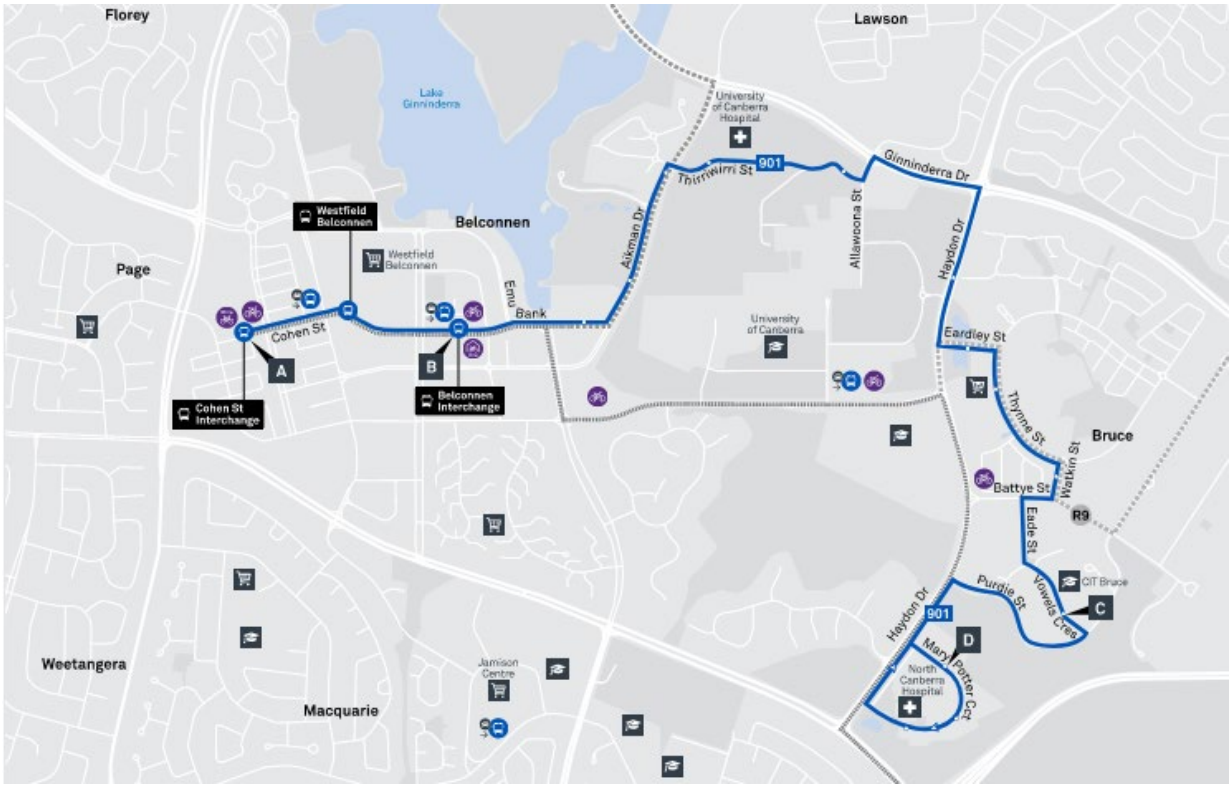

*Source: Transport Canberra*

Route 9 supplements this network by linking Belconnen Interchange to Dickson Interchange, supporting cross-town movement and improving connectivity to the inner north.

*Figure 9-2 Route R9*


At a more local level, route 901 operates as a circulator service from Belconnen Interchange through the Bruce precinct. This route provides important access to major local institutions, including North Canberra Hospital and CIT campus, facilitating shorter intra-precinct trips and improving overall accessibility within the area.

*Figure 9-3 Route 901*



## 9.1.2 School Bus Services

Dedicated school bus routes also form an important component of the existing network. Routes 1055 and 2012 operate along Haydon Drive and Belconnen Way, connecting residential areas with schools across the surrounding precincts. These services are focused on peak school travel periods and contribute to increased demand along these corridors, particularly during morning and afternoon peaks.

*Figure 9-4 Route 1055*

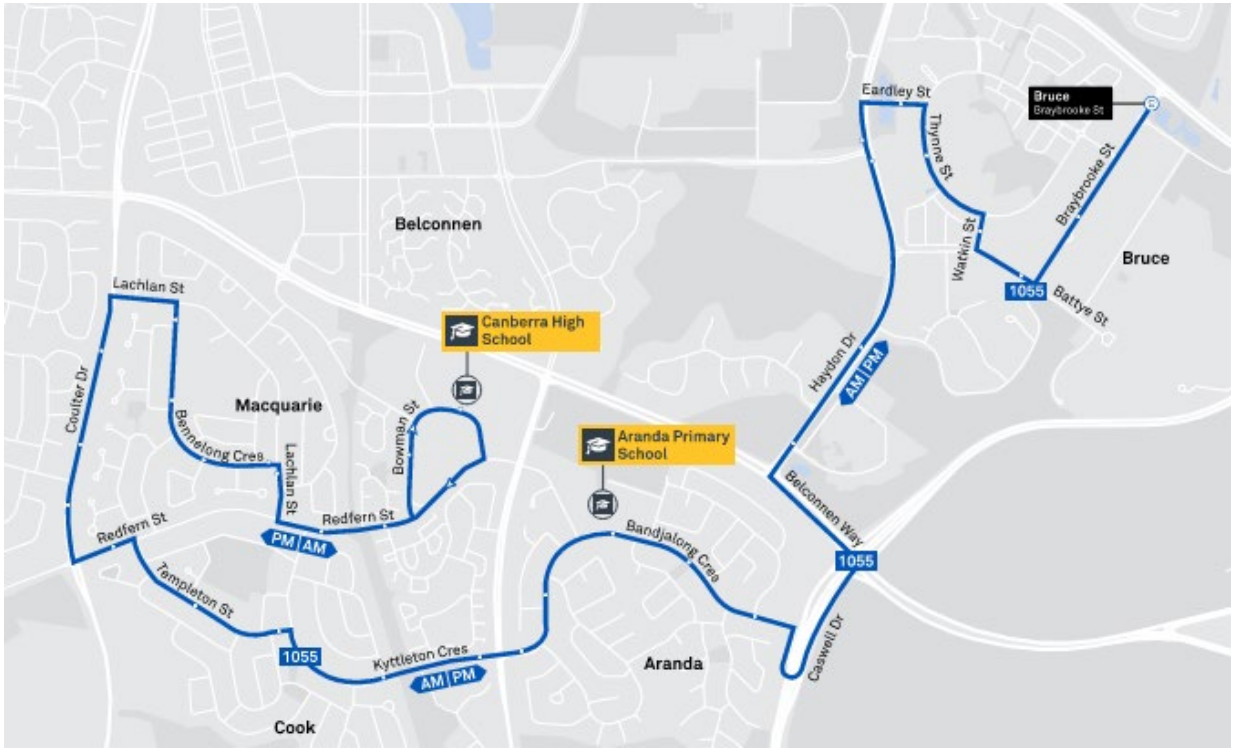
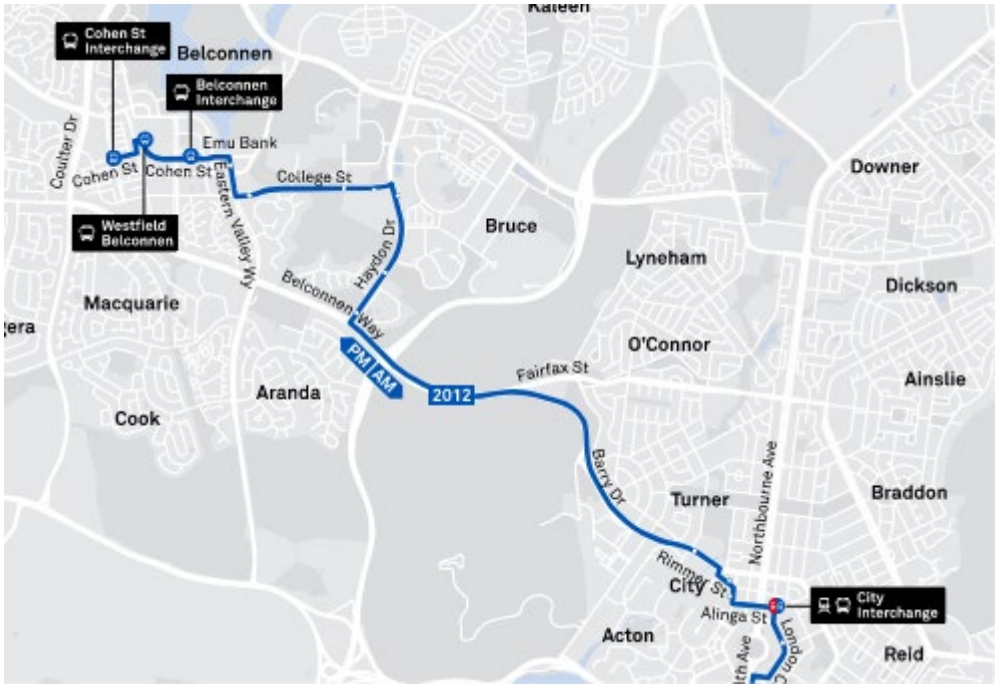


*Figure 9-5 Route 2012*




## 9.1.3 Game Day Bus Services

GIO Stadium provides free game day bus services for ACT Brumbies and Canberra Raiders matches. These services depart from major interchanges across Canberra and drop off and pick up passengers at the East Gate of GIO Stadium, adjacent to the East car park.

Services are scheduled with staggered arrivals ahead of the match, and return trips commence approximately 20 minutes after the game concludes. These buses are free of charge and operated by CDC Canberra.

For regular, non-event bus services, there are no stops located close to the stadium. Passengers typically arrive at bus stops on the western side of the precinct and walk on average 15 minutes to reach the venue.

## 9.1.4 Additional Services

Additional transport services are available to support ACT residents who may have difficulty accessing conventional public transport. These include community bus services operating Monday to Friday, offering flexible, pre-booked routes tailored to individual passenger needs.

Flexible bus services are also provided for eligible users, including those aged over 70, people with mobility challenges, or those unable to access regular bus services.

In addition, an Aboriginal and Torres Strait Islander transport program operates during weekday business hours, providing targeted bus services for individuals who do not have access to standard public transport options.

The presence of these services highlights the importance of delivering an accessible and inclusive transport network that effectively connects and supports residents across the region.

### 9.1.5 Key observations

Overall, the public transport network exhibits a strong radial structure centred on Belconnen Interchange, with high frequency rapid routes providing efficient connections City Interchange and supporting regional travel demand. Local routes such as the 901 complement this structure by servicing key destinations within the Bruce precinct and enabling accessibility.

School services further reinforce the importance of key corridors such as Haydon Drive and Belconnen Way, highlighting concentrated peak-period movements associated with education facilities.

While the existing network provides a solid foundation of coverage and connectivity, it is primarily oriented towards connecting outer suburbs and passing through Bruce. This suggests opportunities to enhance cross-precinct and local connectivity, as well as to better integrate key institutions and activity centres within the broader transport network.

A summary of the available bus routes is in Table 9-1 below along with maps showing the routes as they relate to the Bruce precinct.

*Table 9-1 Bus Routes Passing through Precinct*

| Route Number | Route | Roads through Precinct |
|---|---|---|
| R2 | Belconnen to Fyshwick<br>Via City and Railway Station | Belconnen Way, Haydon Drive |
| R3 | Belconnen to Airport<br>Via City and Russell | Belconnen Way, Haydon Drive |
| R4 | Tuggeranon to Belconnen<br>Via Woden and City | Belconnen Way, Haydon Drive |
| R5 | Belconnen to Lanyon<br>Via ANU, City, Woden and Erindale | Belconnen Way, Haydon Drive |
| R6 | Belconnen to Woden<br>Via ANU, City and Kingston | Belconnen Way, Haydon Drive |
| R9 | Belconnen to Watson<br>via Bruce and Dickson | Braybrooke Street, Battye Street |
| 901 | Belconnen to North Canberra Hospital<br>Via UC Hospital and CIT Bruce | Mary Potter Circuit, Haydon Drive, Purdie Street, Vowels Crescent |
| **Route Number** | **Schools** | **Roads through Precinct** |
| 1055 | Aranda Primary School, Canberra High School | Braybrooke Street, Battye Street |
| 2012 | St Clare's/St Edmund's College | Belconnen Way, Haydon Drive |

## 9.2 Light Rail/Transit Corridor

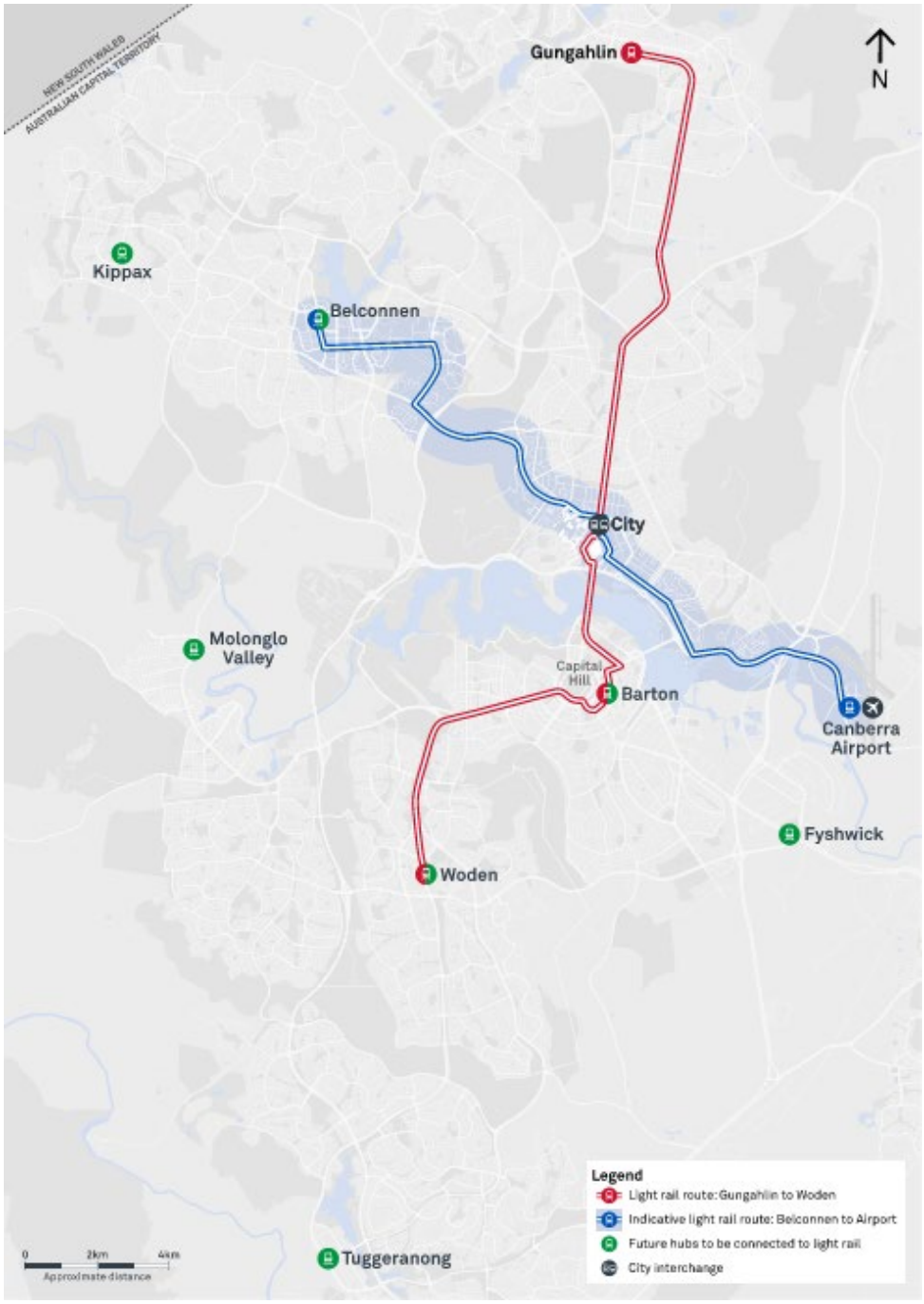
The existing light rail network comprises the north-south Route R1, which connects Alinga Street in the City to Gungahlin Place. Operated by Canberra Metro Operations, the line provides a high-frequency rapid transit service, with services running approximately every 5 to 15 minutes across weekdays, weekends, and public holidays. All stops along the corridor are fully accessible.

While the current light rail alignment does not directly service Bruce, indirect access is available via connecting bus service Route 9 from Dickson Interchange.

### 9.2.1 Future Expansion

Transport Canberra has planned network expansion which will extend light rail to additional destinations, following a hub-and-spoke model centred on the City, with new corridors radiating outward to serve surrounding areas.

*Figure 9-6 Moving Canberra 2019-2045 Integrated Transport Strategy: Current Planned Network*



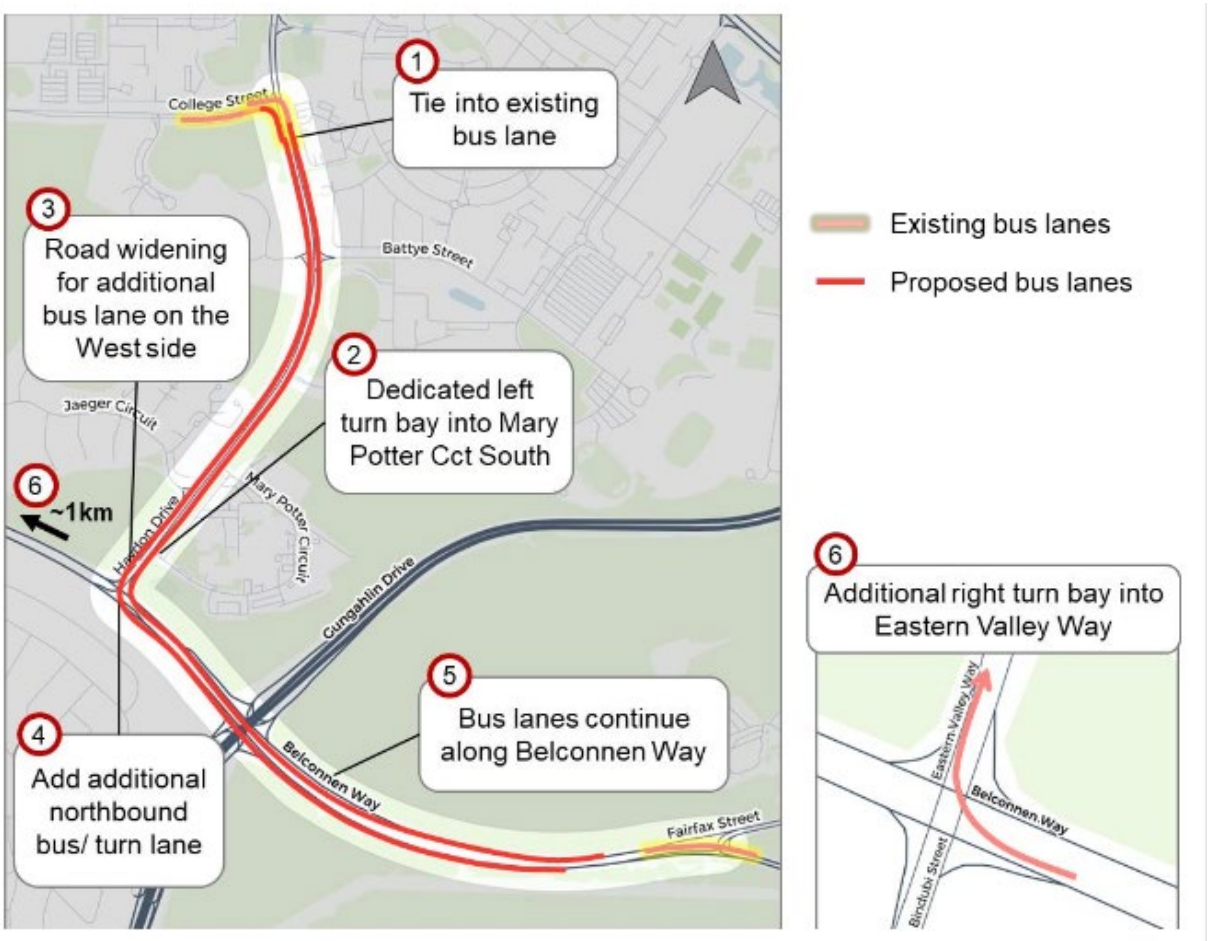

*Source: Moving Canberra 2019-2045 Integrated Transport Strategy: Current Planned Network*

A feasibility study undertaken by WSP in March 2026 investigated opportunities to enhance transit performance along Haydon Drive and eastern portion of Belconnen Way through targeted interventions that address the short to medium term needs. The existing connections of this corridor are currently constrained, and infrastructure limitations affect the efficiency and reliability of public transport. The study developed two tactical kerbside treatment options described below.

### Option 1- Bus Lanes

This option proposes the repurposing of existing kerbside lanes as dedicated bus lanes, maximising public transport priority and improving service reliability along the corridor.

*Figure 9-7 Belconnen to City Transitway Option 1- Bus Lanes*

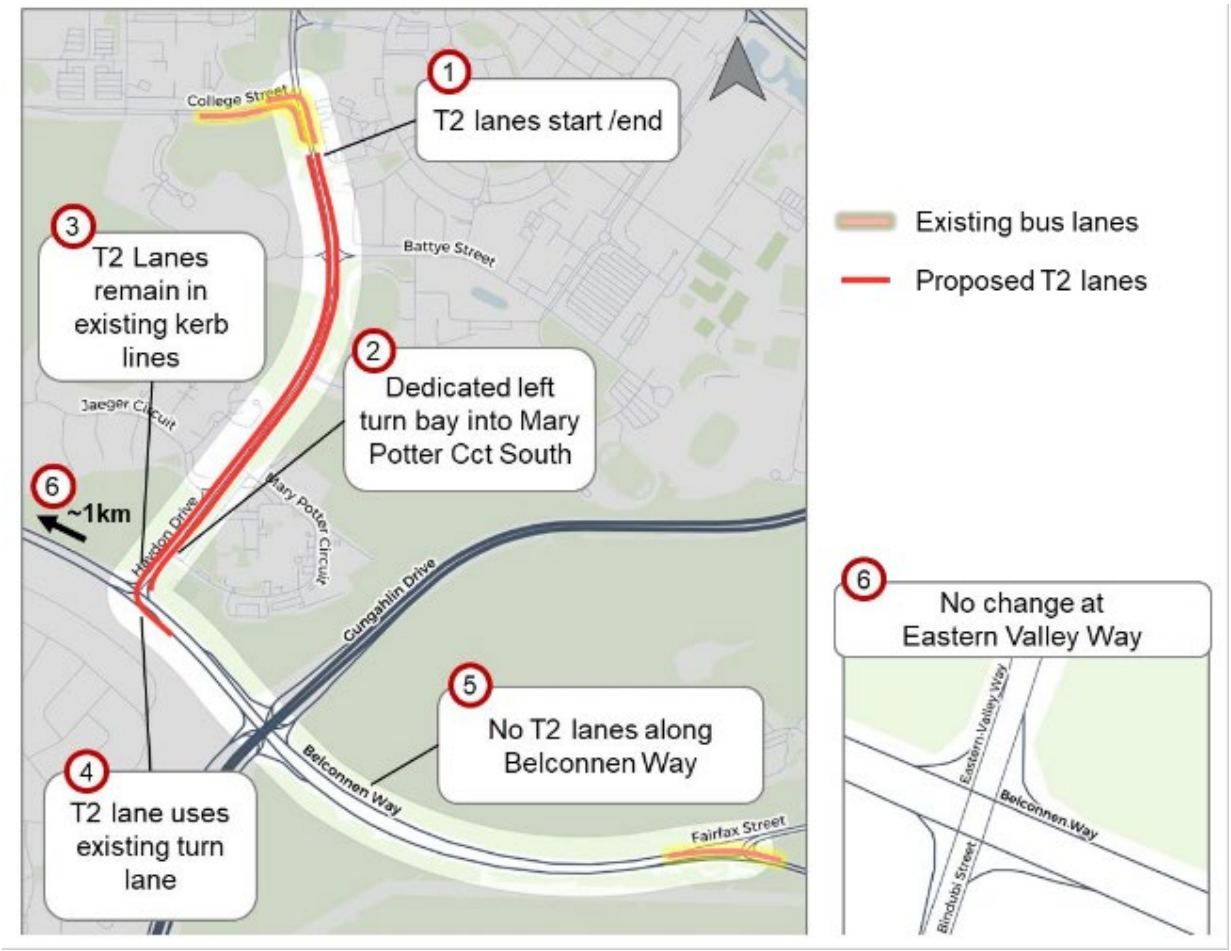



*Source: WSP Belconnen to City Transitway Feasibility Report, March 2026*

### Option 2- T2 Lanes

Option 2 introduces high occupancy vehicle (T2) lanes, allowing access for buses and vehicles with two or more occupants. This option provides a balance between enhanced transit priority and broader network efficiency, with the potential to reduce impacts on general traffic while still supporting mode shift.

*Figure 9-8 Belconnen to City Transitway Option 2- T2 Lanes*




*Source: WSP Belconnen to City Transitway Feasibility Report, March 2026*

Both options are designed to operate within the existing road corridor and avoid the need for major widening or reconstruction works, enabling cost effective and immediately deliverable improvements to transit performance. From a strategic perspective, while Option 2 represents a lower cost and potentially less disruptive measure, it is less aligned with the corridor's long term mass transit objectives. Through a multi-criteria assessment, Option 1 has therefore been identified as the preferred short term intervention for the Belconnen to City transitway corridor, as it provides stronger immediate public transport benefits while maintaining compatibility with the future transition to light rail.

## 9.3 Master Plan Assessment

### 9.3.1 Scenario 1

Under Scenario 1, no new or modified bus services are specifically identified at this time. Instead, the focus is on enabling infrastructure, including the provision of new bus stops and an upgraded bus corridor integrated within the proposed rapid transit boulevard. This approach is intended to support direct and convenient public transport access to the future mixed-use development, as well as key destinations such as the stadium and hospital.

With the stadium centrally located and new mixed-use development, housing and public amenity surrounding the precinct, these key destinations will be anchored by the rapid transit corridor along Haydon Drive.

The overall strategy maintains a strong emphasis on the future delivery of high-capacity light rail as the primary mode, with bus services playing a complementary role in providing local access and network coverage.

Under Scenario 1, the rapid transit alignment is oriented to serve key civic destinations, including the hospital, northern education precincts, and the proposed stadium location (noting the relocation of the stadium is required to place it within a reasonable walking catchment of the Transit Corridor). The corridor follows Haydon Drive and Belconnen Way, providing strong regional connectivity and direct access to these high-demand uses. This aligns with the short and medium term transitway alignments contained within the recent feasibility study prepared by the ACT Government. While this configuration supports efficient movement to major destinations, the perimeter alignment limits coverage over the core of the precinct. In particular, it introduces a degree of separation from the AIS campus, reducing the directness of connections and potentially constraining accessibility within this area. As a result, while the alignment performs well at a strategic level, additional measures may be required to strengthen internal connectivity and ensure equitable access across the precinct.

Figure 9-9 below shows a 400m catchment along the transit corridor representing the coverage of the public transport network available to the precinct and surrounding areas.

*Figure 9-9 Scenario 1 Public Transport Catchment 400m*


## 9.3.2 Scenario 2

Under Scenario 2, there are no new or modified bus routes proposed at this time, with the public transport strategy relying on a new east–west light rail corridor along Battye Street, supported by active travel, to address future transport demand. In this context, bus services are not identified as a primary intervention, reflecting a shift toward high-capacity rapid transit as the dominant mode. The concept design only identifies the potential for a loop bus service, subject to patronage and demand analysis, to support the light rail corridor by providing local circulation and informing stop placement and coverage. Overall, bus services are envisaged as a secondary, adaptable layer, complementing the light rail network rather than driving network structure.

The rapid transit alignment along Battye Street, extending to Gungahlin Drive, establishes a regionally significant and highly active transit corridor through the precinct. This alignment strengthens east–west connectivity and creates a strong public transport spine that integrates with the wider network. With the stadium retained in its existing location, the corridor is well positioned to support event-related demand,

providing direct and efficient access for large passenger volumes. It also enhances connectivity to key destinations within the precinct, including the heart of the AIS campus, the CIT campus, and other education facilities to the north. Overall, the alignment supports both daily and peak demand, reinforcing the role of rapid transit as the primary mode while improving accessibility across major activity centres. This alignment is however at the expense of the North Canberra Hospital which would fall outside of a 400m walking catchment of the Rapid Transit route.

*Figure 9-10 Scenario 2 Public Transport Catchment 400m*

# 10 Loading and Servicing

## 10.1 Objectives

Loading and servicing will support the operational needs of the precinct while maintaining a high standard of liveability and accommodating future intensification, with detailed requirements to be refined through subsequent planning and design stages.

Servicing and waste management functions will be integrated to enable safe and efficient access for service and collection vehicles while minimising conflicts with pedestrians, cyclists, general traffic and the primary movement network, particularly within high activity areas. The design and operation of these functions will also protect the visual and acoustic amenity of the public realm.

The strategy should aim to respond to the anticipated operational demands of key destinations, including GIO Stadium, ensuring event related servicing is accommodated without compromising visitor experience. To deliver best practice transport planning practices it will align with the precinct's road network principles to support efficient operation without driving unnecessary road expansion or over provision of infrastructure and remain adaptable to emerging delivery technologies and evolving servicing models.

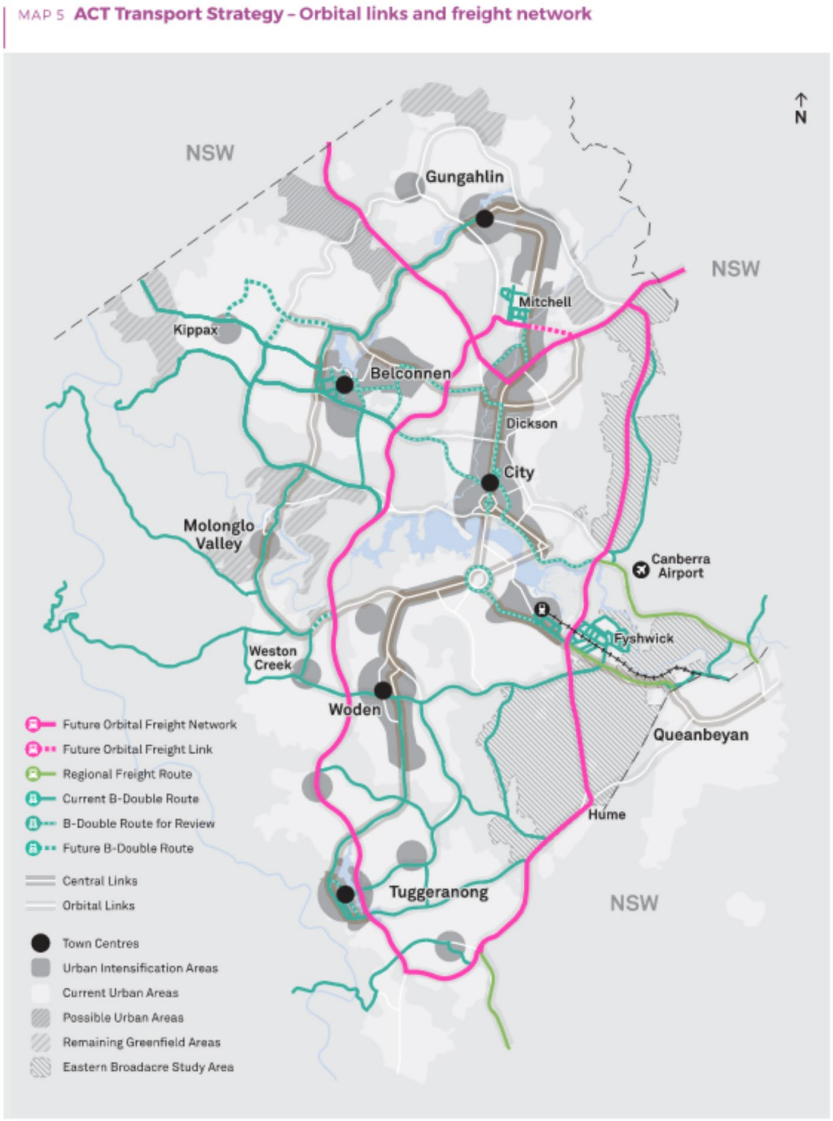
## 10.2 Key Considerations

### 10.2.1 Existing and Planned Routes

The strategy will respond to the existing and planned transport network, including key orbital links and freight routes identified in the ACT Freight Strategy. Servicing access will align with these corridors to support efficient regional movement while minimising impacts on local streets.

The precincts bordering arterial roads all currently allow B-Double access as part of the National Heavy Vehicle Register. The future orbital network is shown in Figure 10-1 below.

*Figure 10-1 Freight Current and Planned Network*




*Source: ACT Transport Strategy 2020*

## 10.2.2 Land Use

A diverse mix of residential, health, education and event uses generates varied servicing and waste management needs. Future residential growth will increase demand, requiring solutions that protect amenity, while major destinations such as the hospital, stadium and CIT campus will require tailored servicing approaches to support their specific operational needs.

## 10.2.3 Vehicle Types and Frequency

The precinct must accommodate a range of vehicle types, including waste trucks, delivery vans, removalists, trades, emergency services and event related loading vehicles. Increasing small vehicle parcel deliveries will require flexible, short term loading spaces near residential areas and local centres, with servicing managed to balance efficiency and minimise disruption.

### 10.2.4 Access and Circulation

Servicing access will be designed to support safe and efficient operations by:

- Accommodating MRV and where required HRV and Semi Trailer turning paths
- Minimising reversing in public streets
- Maintaining clear sightlines and pedestrian priority
- Integrating with the street hierarchy and traffic calming measures

# 11 Future Transport

## 11.1 Objectives

Future transport in the precinct should integrate land use and movement to support a mixed-use environment, prioritising active and public transport while maintaining efficient, managed vehicle access. A forward looking approach will enable the adoption of emerging technologies and innovative mobility solutions, ensuring the network remains accessible, resilient, and aligned with broader ACT objectives.

The infrastructure should be designed to support long term growth and intensification, with corridors capable of staged delivery aligned to development timing. The network will remain flexible and adaptable to evolving technologies and travel behaviours while maintaining efficient and sustainable performance.

## 11.2 Key Considerations

### 11.2.1 Emerging Technologies and Multimodal Integration

The Bruce Master Plan Precinct will support the integration of emerging transport technologies while reinforcing a coordinated, multimodal network. This includes expanding EV charging infrastructure, integrating real-time transport information systems, and enabling mobility-as-a-service (MaaS) platforms. Future-ready design will accommodate autonomous and connected vehicle technologies, supported by data driven traffic and demand management tools, particularly around event related surges. These advancements will be integrated with strong active and public transport connectivity, alongside strategically located mobility hubs, to enable seamless interchange, efficient travel across the precinct, and support of the travel mode hierarchy.

### 11.2.2 Monitoring and Adaptability

The future transport strategy will remain flexible and responsive to changing conditions. This will include ongoing monitoring of travel patterns and mode share and periodic review of infrastructure performance and capacity. The approach will allow for adaptation to evolving technologies, user behaviours, and policy settings, including the use of pilot programs and temporary interventions.

### 11.2.3 Sustainability and Behaviour Change

Encouraging sustainable travel behaviour will be central to the precinct vision, particularly given its role as a major destination for events, education, and health services. Travel demand management will be critical to reducing reliance on private vehicles, with measures tailored to these uses, such as event travel planning, and incentives for staff, students, patients and visitors to choose active and public transport.

Flexible working and study arrangements, personalised travel planning, and targeted initiatives during major events will further support mode shift. Community engagement and education can further reinforce sustainable travel choices and support a transition to less car dependent travel patterns.

# 12 Summary and Conclusions

The precinct as envisioned, will generate diverse travel demands, including commuter, student, visitor and major event travel, requiring a coordinated and integrated multimodal transport system. Anchored by the North Canberra Hospital, CIT, AIS and GIO Stadium, and supported by strong regional connections via surrounding arterial roads, the precinct is well positioned to leverage a future rapid transit corridor as the primary spine for movement and connectivity.

### Road Network and Operation

Traffic modelling indicates that both demand-side and supply-side measures would be required to support efficient operation of the road network. In general, the Master Plan Option Case results in a deterioration and breakdown of network performance compared to the 2041 Reference Case, driven by the additional traffic demand associated with the Bruce Master Plan.

Increasing mode shift to public and active transport, along with stronger internal trip capture, will therefore be critical to reducing reliance on private vehicles. However, targeted upgrades to intersections, site access arrangements, and local circulation will also be needed to address key constraints Event traffic will place additional pressure on the road network, reinforcing the need for dedicated event management strategies.

All mitigation measures remain indicative and require further investigation. Overall, an integrated approach combining travel demand management, land use optimisation, and targeted infrastructure improvements will be essential to support efficient network performance without widespread road expansion.

### Scenarios Assessment

Both Master Plan Scenario 1 and Scenario 2 align strongly with the desired transport outcomes by establishing a clear movement hierarchy and integrating land use with transport. High-capacity rapid transit forms the backbone of the public transport network, supported by active travel connections and a road network that accommodates vehicles primarily at the periphery. This approach supports mode shift, improves access to key destinations, and limits unnecessary vehicle movement within central areas, creating a more efficient and people focused environment.

### Next Planning and Design Stages

Further work is required to resolve gaps in connectivity and network performance. This includes refining road access points; intersection performance; improving the permeability and coverage of active travel networks; and strengthening integration between rapid transit and local connections to support first/last mile access. Ensuring equitable access to key destinations including AIS and the North Canberra Hospital, and developing effective event management strategies will be critical. These refinements will help ensure all modes operate efficiently under daily and peak conditions while maximising mode shift.

A parking framework strategy will be important to deliver a parking plan that provides for the current precinct needs and allows for evolution in provision and management in the future to support the future precinct needs.

Loading, servicing and future transport strategies should be further developed through the next stages of planning and design. These should support efficient servicing within the road network while

minimising conflicts with pedestrians and cyclists and protecting public realm amenity. A flexible, future focused approach should also support emerging technologies, integrated multimodal networks and staged delivery to ensure adaptability as the precinct grows.

Overall, the master plan provides a strong foundation for a coordinated, multimodal transport system that supports growth, enhances accessibility, and promotes sustainable travel, positioning Bruce as a high value and integrated mixed-use precinct.

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