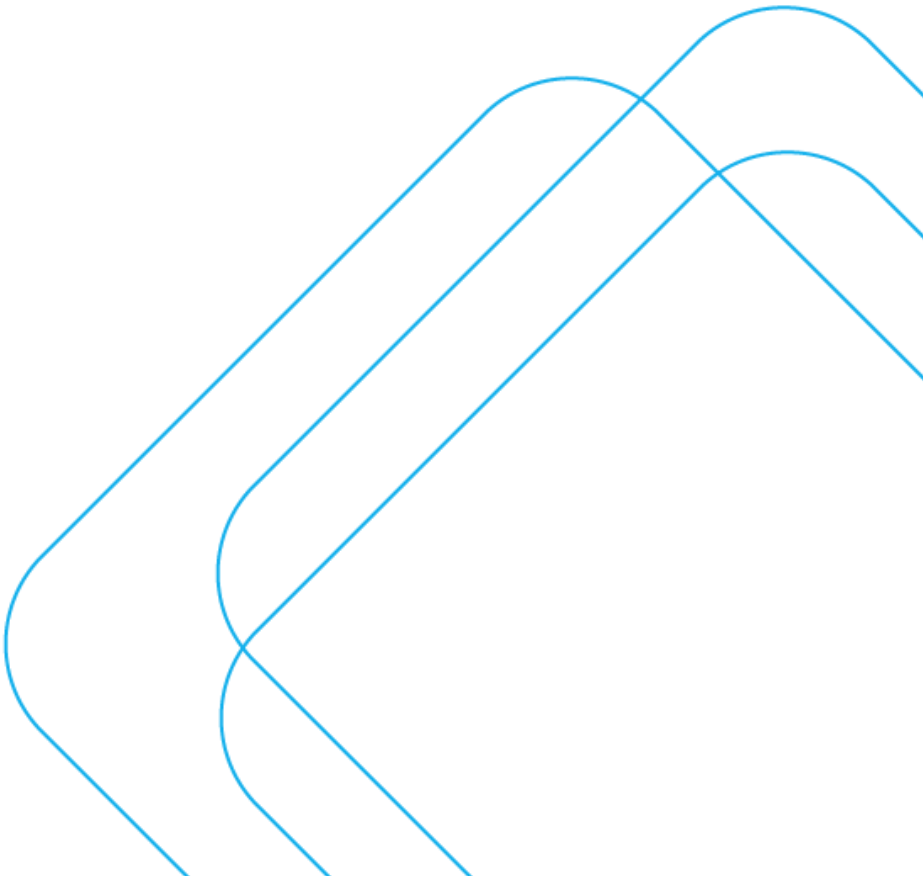
SCT Consulting

LOTS 4-5, 6-7 AND 8 BUCHAN AVENUE, EDMONDSON PARK

Transport Impact Assessment

5 MARCH 2026

SCT Consulting acknowledges
the traditional owners of the lands
on which we work.
We pay our respects to Elders
past, present and emerging.



Quality Assurance

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Contents

Appendices

Executive Summary

This Transport Impact Assessment (TIA) is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf UPG Edmondson Parkland Pty Ltd (UPG) (the Applicant), to support a State Significant Development Application (SSDA) and Concurrent Rezoning Report for the construction of a new multi stage residential project at Lots 4-5, 6-7, and 8 Buchan Avenue, Edmondson Park (known as Sites 3, 4 and 5) (the site).

The proposed development comprises a mix of shop-top housing, residential flat buildings (RFB), co-living housing, and affordable housing, together with public domain improvements, including a new publicly accessible plaza, a public library and through-site pedestrian links. An aerial view of the consolidated landholding is provided in **Figure ES-1**.

Figure ES-1 Aerial of sites

Future context without proposal

The Edmondson Park precinct is expected to continue its transition from former rural land into a high-density, mixed-use centre within the South West Growth Area. Under the updated MOD 5 assumptions, residential density around Edmondson Park Station increases, dwellings and land uses are redistributed within the town centre boundary, and the school layout and capacity are revised. These changes collectively lift the underlying population and employment base, resulting in higher levels of trip-making in the future year baseline independent of the proposal.

The future transport network is anticipated to evolve in parallel with this growth. Rail services on the T2 Inner West & Leppington Line and T5 Cumberland Line are expected to maintain their current high-frequency operations, with no additional services planned before 2026. Existing bus routes and the on-demand bus zone are expected to remain in place, while the broader precinct is earmarked for future bus priority measures and strategic network upgrades as demand increases. Active transport connections will continue to expand, including continuous shared paths along Campbelltown Road and Soldiers Parade, supported by additional local links identified in Liverpool Council's bicycle network. Road network upgrades across the precinct are also expected to improve regional connectivity, enhance corridor capacity, and support increased travel demand as the town centre matures.

Future year baseline modelling for MOD 5 indicates increased through-traffic and turning movements across the precinct by 2026, reflecting higher residential yields and more established travel patterns. Key corridors such as Bernera Road, Soldiers Parade, Croatia Avenue and Campbelltown Road are forecast to carry higher peak-hour volumes consistent with their role as primary movement routes. Overall, intersections across the precinct are forecast to operate within acceptable levels of service under the 2026 baseline.

Future context with proposal

The transport impacts of the proposal have been assessed in accordance with the Guide to Transport Impact Assessments (Transport for NSW, 2024). The development is expected to generate additional travel demand across all modes, including approximately 62 active-transport trips in the AM peak hour and 68 in the PM peak hour, around 188 public transport trips in the AM peak and 203 in the PM peak, and approximately 348 private-vehicle trips in the AM peak and 406 in the PM peak.

The additional walking and cycling activity generated by the development can be readily accommodated within the surrounding network. Existing pedestrian and cycling facilities currently operate with low demand and no identified capacity constraints, and the dispersed nature of active-transport movements means that the forecast increase in trips is not expected to materially affect network performance.

Public transport impacts are also manageable. The anticipated 190 AM and 204 PM peak-hour public transport trips can be absorbed by the existing and planned network, supported by improved bus connections outlined in **Section 4.3.1** and the substantial spare capacity on most train services identified in **Section 3.4**.

Road network impacts have been assessed using microsimulation modelling prepared for the MOD 5 network. The required road infrastructure upgrades are detailed in **Section 6.2.3.2** and are expected to form part of the broader infrastructure delivery program for the precinct. These upgrades will support efficient operation of the network as travel demand increases.

Parking provision within the development is also appropriate, with an overall residential average of 0.72 spaces per dwelling—well below the maximum rate—and a surplus of retail parking that ensures on-site demand is met without generating additional on-street parking pressure.

The modelling also highlights an existing issue within the precinct, unrelated to the proposal, where on-street parking demand exceeds supply along Buchan Avenue. This constraint results in extended delays in the surrounding road network. The development interfaces directly with the High School, meaning all school-related trips are expected to occur on foot or by bicycle. As a result, the proposal does not generate any additional demand on the existing Buchan Avenue pick-up and drop-off zone and to some degree does not exacerbate the identified parking issue.

Proposal-related infrastructure staging and delivery

The majority of transport-related infrastructure required to support the development is already committed through the approved master plan under MP 10_0118 MOD 5. This includes the staged delivery of key road upgrades, active-transport links, and public transport corridors that form the backbone of the precinct's movement network. As a result, the development benefits from a coordinated, precinct-wide infrastructure program that has been strategically planned and endorsed through the MOD 5 approval process.

Separate from the upgrades being delivered as part of MOD5, the development includes a suite of upgrades that are aimed at enhancing the surrounding transport network – particularly the pedestrian network. These will be delivered by the Proponent (Urban Property Group) as part of this SSDA. These improvements are summarised in **Table ES-1**.

Table ES-1 Infrastructure delivery program (project-related)

Infrastructure	Responsibility	Timing
Public domain works (i.e. footpath widening on northern boundary of Site 05)	Proponent	Prior to the first Occupation Certificate
Wombat crossing on the laneway	Proponent	Prior to Site 05's Occupation Certificate
Internal Road delivery	Proponent	Prior to Site 05's Occupation Certificate
Internal pedestrian network (i.e. through-site links, internal footpaths, internal open space)	Proponent	Prior to each site's respective Occupation Certificate

Introduction

1

1.1 Background

This Transport Impact Assessment (TIA) is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf UPG Edmondson Parkland Pty Ltd (UPG) (the Applicant), to support a State Significant Development Application (SSDA) and Concurrent Rezoning Report for the construction of a new multi stage residential project at Lots 4-5, 6-7, and 8 Buchan Avenue, Edmondson Park (known as Sites 3, 4 and 5) (the site). The proposed development comprises a mix of shop-top housing, residential flat buildings (RFB), co-living housing, and affordable housing, together with public domain improvements, including a new publicly accessible plaza, a public library and through-site pedestrian links. An aerial view of the consolidated landholding is provided in **Figure 1-1**.

The project has been identified by the NSW Housing Delivery Authority (HDA) as a key development to accelerate the delivery of well-located, diverse and affordable housing across Greater Sydney, with the HDA playing a coordinating role across government agencies to unlock complex sites through strategic planning, infrastructure coordination and streamlined assessment pathways. On 19 February 2025, the HDA recommended that the proposed development on Sites 4 and 5 (6–7 and 8 Buchan Avenue, Edmondson Park), as outlined in EOI application 232588 dated 17 January 2025, be declared State Significant Development (SSD) under section 4.36(3) of the Environmental Planning and Assessment Act 1979, followed by a similar recommendation on 2 June 2025 for Site 3 (4–5 Buchan Avenue, Edmondson Park) as described in EOI application 246574 dated 14 March 2025. These recommendations were formalised through the Minister's issuance of State Significant Development Declaration Order (No. 9) 2025 on 12 June 2025, with the proposals to be facilitated by a concurrent amendment to the State Environmental Planning Policy (Precincts – Western Parkland City) 2021.

Figure 1-1 Location of the site

Source: Beam Planning, SSD Scoping Report HDA Residential Precinct Lots 4-5, 6-7 and 8 Buchan Avenue, Edmondson Park

1.2 Purpose and scope

This TIA report has been prepared to support the proposal for amendments to the planning controls applied to the site in Edmondson. It seeks to investigate the potential transport impacts associated with the proposal and includes the following:

- Review of committed development and future infrastructure delivery in the area surrounding the site
- Study of the existing conditions around the site, including site context, travel behaviour, road network, active transport network, public transport network, and road crashes
- Review of the subject proposal, including the proposed access arrangements and pedestrian links
- Analysis of trip generation and distribution associated with the proposal
- Assessment of the potential transport impacts on the road network, including modelling (requested by SEARs), active transport network, public transport network, and safety
- Preliminary construction traffic management plan
- Reference to relevant environmental planning instruments and local planning controls, including the State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (Precincts SEPP)
- Reference to guides relevant to transport impact assessment, including the *Guide to Transport Impact Assessment* (2024).

1.3 Requirements from government agencies and Council

The Planning Secretary's Environmental Assessment Requirements (SEARs) for the project (**SSD-88953706**) were issued on 25 August 2025 following the issue of the scoping report for the site. All relevant comments from the Department of Planning, Housing and Infrastructure (DPHI), Transport for NSW (TfNSW) and Liverpool City Council (Council) received as part of the SEARS are summarised in **Table 1-1**.

Table 1-1 Requirements for the proposal

Source	Comments	Section addressed
DPHI (SEARS)	– Provide a Transport Impact Assessment (TIA) in accordance with the processes and methodology recommended in the Guide to Transport Impact Assessment (GITA) published by TfNSW. This must include the following:	This document
	• The applicant must demonstrate that the traffic impact assessment methodology, including any required transport modelling has been endorsed by DPHI, in consultation with Council and Transport for NSW	**Section 1.5**
	• Prepare a model scoping memo in accordance with TS 05442 Operational Modelling Reporting Structure. Consider use of previous/recent analysis if applicable. If recent modelling has been undertaken at the rezoning stage, or other studies, and it can be shown that this development is within the bounds of that analysis, then reference to previous model outputs can be used.	**Appendix A**
	• Provide evidence of consultation and endorsement by DPHI in consultation with Council and TfNSW of the transport impact assessment methodology.	**Section 1.5**
	– Provide a Transport Impact Assessment, developed in accordance with the Guide to Transport Impact Assessment ('GTIA') version 1.1, which includes the following:	
	• Provide evidence of regular consultation with DPHI, Council, TfNSW and SINSW.	**Section 1.5**
	• Baseline for existing and future transport network conditions to inform the assessment of impacts. This may include maps, illustrations and/or description of land uses and transport networks surrounding and within the development site. It should detail both existing and committed improvements to transport systems, identification of nearby transport facilities and evaluation of accessibility of the development by all	**Section 3.0**

Source	Comments	Section addressed
	transport modes, as well as existing road safety performance. (GTIA Section 3.3.1)	
	• Document the existing and proposed use of the site (if developed), including land use type(s), scale and access arrangements for each mode (GTIA Section 3.3.1). o Document estimated trips generated by the development and mode share, deducting any trips generated by any removed uses in line with GTIA Chapter 5.	**Section 5.0 & Section 6.0**
	• Identify the requirements for parking for each mode of transport (GTIA Section 8.3 & 8.5) Document the number of parking spaces by mode proposed by the development. If statutory parking requirements are not satisfied, the assessment must provide justification.	**Section 5.4**
	• Assess the impact of the development on the safety and operational efficiency for transport users of all types at the year of completion (GTIA Chapter 6), including a performance assessment for each mode of transport per GTIA Section 6.2.3 Table 6.1. Intersection level of service should be provided for all scenarios agreed with DPHI, in consultation with Council and TfNSW. Consider use of previous/recent analysis if applicable.	**Section 6.0**
	• Preparation of traffic modelling in accordance with the agreed traffic modelling methodology with DPHI, in consultation with Council and TfNSW.	**Section 6.0**
	• Recommendations to address issues and reasonably manage potential impacts of trips generated by the proposed development on the surrounding transport network.	**Section 5.7**
	• The safety and functionality of the development's proposed multimodal access arrangements and internal and surrounding road layout, including service and parking areas for all user groups (e.g. freight and servicing, general traffic, visitor parking, disabled parking, car share and car charging), and pedestrians and cyclists. In particular, the integration with the adjacent school development, including its associated pick-up and drop-off arrangements, should be carefully considered in consultation with SINSW.	**Section 5.3**
	• The provision of well-designed active transport connections both within the site and linking to the surrounding area is essential. To support the best practice design, please refer to the following guidance documents: ○ Edmondson Park Landcom Town Centre North – Public Domain and Landscape Plan (Taylor Brammer) ○ Edmondson Park Landcom Town Centre North Design Guidelines (Willow Tree Planning) ○ Edmondson Park Town Centre North – Master Plan – Urban Design Report (Roberts Day) ○ Design Excellence Strategy – Landcom Town Centre North – Edmondson Park. ○ Cycleway Design Toolbox (2020) ○ Walking Space Guide (2020).	**Section 5.3**
	• A statement by a chartered / registered engineer for any bicycle, car, commercial vehicle or mobility parking spaces that they parking spaces comply with AS2890 and that any new or modified driveway has sufficient sight distance and appropriate dimensions for the design vehicle (refer GTIA Section 7.3.1). If the facilities do not comply with standards, deficiencies should be documented and justified. Swept path plans should be provided as required to demonstrate the compliance.	**Section 5.6**

Source	Comments	Section addressed
	• If there are intersection upgrades required specifically as a result of the development on a State Road, new or intensified access arrangements on a State Road, or new traffic signals, evidence should be provided of consultation of the initiatives with TfNSW regarding these initiatives.	N/A
	• The TIA should clearly outline the staging plan, including the associated impacts and the corresponding infrastructure delivery strategy. In particular, any road upgrades required at various stages—triggered by the development yield—must be clearly documented and supported by robust evidence.	**Section 6.3**
	• A preliminary Construction Transport Management Plan (CTMP) must be prepared to address the impact of construction traffic on the road network. The CTMP must include a detailed description of the proposed construction activities, anticipated vehicle types and volumes, designated truck routes, and construction access points. The plan must outline traffic control measures, parking arrangements, and loading zones, ensuring minimal disruption to public roads and safety. The CTMP should address any potential cumulative construction traffic impacts arising from adjacent development sites (e.g. the schools). It should also identify responsible personnel, regulatory approvals required, and strategies for managing environmental impacts and community communication. All vehicle movements and site operations must comply with relevant council and TfNSW guidelines. Evidence must clearly demonstrate that consultation has been undertaken with relevant road agencies including Council and TfNSW.	**Section 7.0**
	• A Green Travel Plan (GTP) is required to identify site-specific measures that promote and maximise the use of more sustainable modes of transport, such as walking, cycling, public transport, and carpooling. The preparation of the GTP should align with the principles and requirements outlined in Transport for NSW's Travel Demand Management framework (Travel Demand Management | NSW). This includes adopting a data-led, evidence-based approach tailored to the specific characteristics of the site, with the aim of influencing travel behaviour, reducing reliance on private vehicles, and supporting long-term mode shift. The plan should also include clear targets, implementation strategies, and monitoring mechanisms to ensure its effectiveness over time.	**Section 5.7**
	• Address any additional requirements outlined by the additional advice provide in Appendix A	**See next row in this table**
TfNSW (Appendix A)	– An analysis of the existing traffic network, including the road hierarchy, current and future daily peak hour (light and heavy) vehicle movements and existing and future performance levels of nearby intersections.	**Section 3.0 & Section 6.0**
	– A forecast of additional daily and peak hour vehicle movements because of the proposal and identification of potential traffic impacts on road capacity, intersection performance and road safety (including pedestrian and cycle conflict).	**Section 6.0**
	– Undertake traffic and network modelling to understand the impacts of the development site on key local intersections and key state intersections (using SIDRA modelling or similar at 5-year intervals), plus any traffic changes as a result any planned or committed road projects.	**Section 6.0**
	– Proposals to mitigate any traffic impacts, including intersection upgrades to achieve acceptable performance.	**Section 6.2.3**
	– Details of car parking provision, having regard to relevant parking rates, specifications and standards.	**Section 5.4**
	– Details of proposed vehicular access, loading and unloading deliveries and servicing arrangements, and any proposed infrastructure improvements or measures to reduce potential conflicts with pedestrians and cyclists.	**Section 5.3 & Section 5.5**
	– Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site.	**Section 5.6**

Source	Comments	Section addressed
	– Details of road upgrades, infrastructure works, or new roads or access points required for the development.	**Section 5.3**
Liverpool City Council	1. Traffic, Transport and Accessibility Impact Assessment	This document
	• Must model cumulative traffic impacts, including school peak periods, late night trading periods and peak commute periods (both AM and PM).	**Section 6.2.3**
	• Should include consultation with Council and Transport for NSW (School Infrastructure).	**Section 1.5**
	2. School Zone Road Safety Audit	**Appendix B**
	• A road safety audit should be undertaken for all streets and intersections within 400m of the development site, with a particular focus on school zone activity, pedestrian crossing facilities, and traffic calming.	
	3. Parking Provision and Management Strategy	**Section 5.4**
	• Council recommends the proposal provide off-street parking in excess of minimum standards, particularly for larger or family-oriented dwellings.	
	• A parking management plan should address visitor parking and peak demand scenarios.	
	• A Loading Dock Management Plan (LDMP) shall address service vehicle parking needs and access. Access locations to be located to minimise conflicts with high pedestrian movement corridors (e.g. Shared Path locations or similar), especially access frontages that are located opposite school areas or within designated school zones.	
	4. Construction Traffic Management Plan (CTMP)	**Section 7.0**
	• To be developed in consultation with Council and the Department of Education.	
	• Should include restrictions on haulage and delivery times to avoid school peak periods and ensure the safety of school children and pedestrians.	
	5. Pedestrian and Cycling Infrastructure	**Section 5.3**
	• Upgrades to pedestrian pathways and crossings should be delivered as part of the development to support safe and convenient access to and from surrounding schools and the station.	
	• Opportunities for traffic calming or separated pedestrian zones should be investigated.	
	6. Staging of Development	**Section 6.3**
	• Consideration should be given to aligning development staging with the delivery of key transport upgrades and school access measures to ensure upgrades are aligned with community needs.	

1.4 Report structure

The report is structured into the following sections:

- **Section 2.0** reviews the State, regional, and local strategic contexts around the site.
- **Section 3.0** describes the existing site context, travel behaviour, and transport conditions.
- **Section 4.0** establishes a future baseline to understand the future context surrounding the proposal.
- **Section 5.0** outlines an overview of the proposal.
- **Section 6.0** provides an assessment of the potential transport impacts of the proposal on road, active transport, and public transport networks.
- **Section 7.0** discusses preliminary construction traffic impact and mitigation.
- **Section 8.0** presents the conclusion of the assessment.

1.5 Consultation

SCT Consulting has engaged with TfNSW, Council and DPHI in the preparation of this TIA. The details of the consultations are summarised in **Table 1-2**.

Table 1-2 Record of consultation with DPHI, TfNSW and Council

Consultation	Parties involved	Date	Details
Inception meeting to discuss model scoping note	DPHI, TfNSW, Council, Urban Property, Beam Planning and SCT Consulting	14 January 2026	Model scoping note and initial modelling results presented to TfNSW, Council and DPHI
Revision to model scoping note based on TfNSW and Council feedback	DPHI, TfNSW, Council, Urban Property, Beam Planning and SCT Consulting	19 January 2026	Model scoping note was revised based on comments shared during 14 January meeting with stakeholders
TfNSW additional comments received on model scoping and reporting details	DPHI, TfNSW, Council, Urban Property, Beam Planning and SCT Consulting	3 February 2026	Request for clarification on items in the model scoping note.
Response to comments provided to DPHI	DPHI, TfNSW, Council, Urban Property, Beam Planning and SCT Consulting	5 February 2026	Response to TfNSW comments were provided to DPHI with a request for a decision on the model scope.
DPHI endorsement of model scope	DPHI, Urban Property, Beam Planning and SCT Consulting	6 February 2026	DPHI confirmed in writing acceptance of the model scope.

In addition to the above, School Infrastructure was consulted as part of the Scoping Report as well as the Request for SEARS by DPHI. The key issues raised were the: interface between Site 5 and the new high school, as well as traffic flow considerations around the school.

The site layout intentionally avoids any driveway access from Horrie Road, consistent with the feedback provided by School Infrastructure NSW. To support safe pedestrian movement (particularly to/from Edmondson Park Station and Ed. Square), the proposal incorporates footpath widening along Buchan Avenue and the installation of an additional zebra crossing. A Road Safety Audit has also been completed to identify and address potential risks in the surrounding network, and a detailed response has been prepared for all items raised.

Given that the key potential conflict points between student movements and site access have been resolved through the design and supporting mitigation measures, further consultation with School Infrastructure NSW may occur during the exhibition period to confirm that their concerns have been appropriately addressed.

As per advice from DPHI, the intent of early stakeholder engagement was met through the above consultation. More consultation is required; however, there are no critical items at this stage that would warrant a hold point or delay in the Test of Adequacy submission.

Strategic context

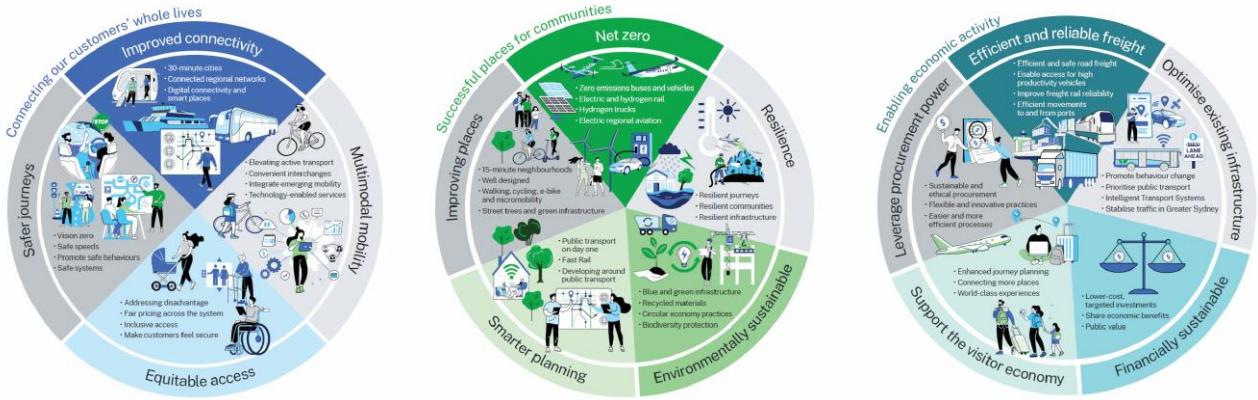
2

2.1 State-level context

2.1.1 Future Transport Strategy

Future Transport Strategy is a 40-year strategy developed by Transport for NSW (TfNSW), which outlines the directions and principles for mobility and transport investment as a guiding document. Future Transport 2056 builds on the achievements of the Long-Term Transport Master Plan, which has delivered local and international investment in the NSW transport network and placed a focus on customer-oriented planning. The strategy covers three aspects of vision, which are replicated in **Figure 2-1**.

Figure 2-1 Future Transport Strategy vision elements



Connectivity **Successful places** **Enabling economic activity**

A total of 14 strategic directions have been established, supported by a suite of responses, to achieve the three outcomes. The Strategy's vision is relevant to the proposed development to provide more choices and better access to the transport network and create thriving places. Key responses include:

- **Enhance 30-minute metropolitan cities:** Improve public transport access to centres, jobs, and essential services, and integrate transport and land use planning to support more sustainable travel and reduce urban sprawl.
- **Connect our regional cities, centres, towns, and villages:** Harmonise and improve the frequency of public transport services between regional cities, centres, towns, and villages.
- **Support car-free, active, and sustainable transport options:** Invest in walking, cycling, and micromobility infrastructure and programs that integrate with public transport and green infrastructure.
- **Transform rail between metropolitan centres:** Enhance and transform train services between NSW's largest cities through Fast Rail, reducing the travel time between Sydney and Newcastle by about one hour.
- **Support thriving and healthy 15-minute neighbourhoods:** Partner with councils to support 15-minute neighbourhoods and improve priority for walking trips in centres, towns and villages.

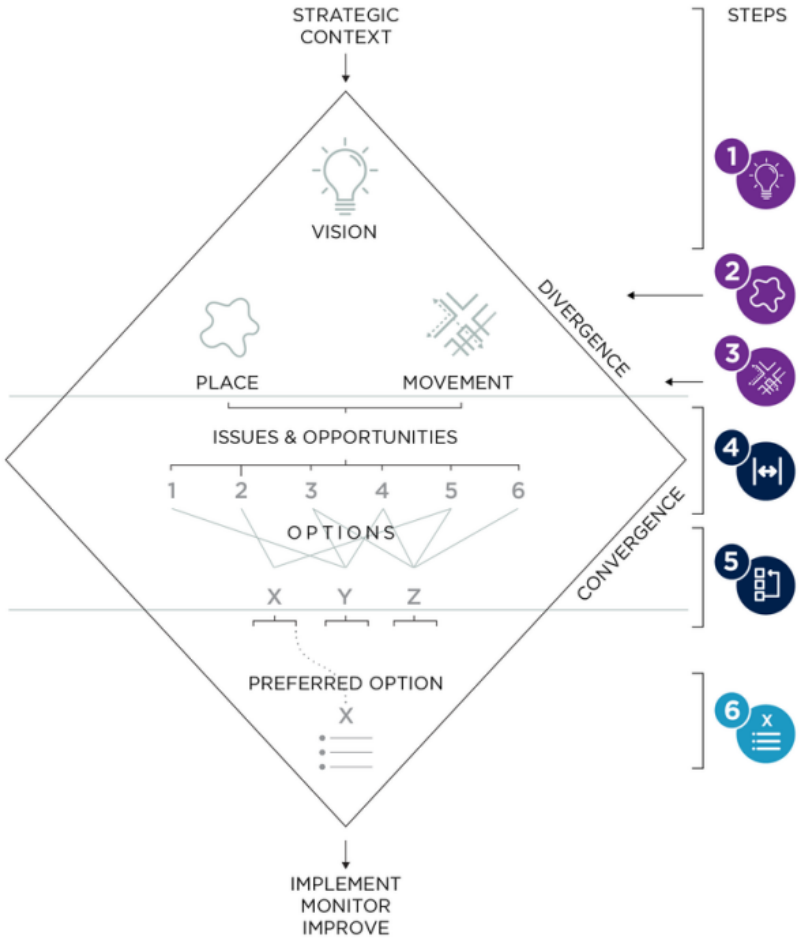
2.1.2 NSW Movement and Place Framework

TfNSW has adopted the Movement and Place Framework for planning and managing its road network. The Place-based planning approach embedded in the Movement and Place Framework involves a collaborative, spatial, long-term approach to develop contextual responses that better meet the needs of local people and their environment in a defined geographic location. The Framework aims to support and build thriving communities and is ideally characterised by partnering and shared design, shared stewardship, and shared accountability for outcomes and impacts. This plan has used a place-based approach, with land use, urban form, and population demographics playing key roles. It also provides a standard structure for place-based transport and urban planning across NSW. The objectives of the Framework are to achieve roads and streets that:

- Contribute to the network of public space within a location where people can live healthy, productive lives, meet each other, interact, and go about their daily activities.
- Are enhanced by transport and have the appropriate space allocation to move people and goods safely and efficiently and connect places. Supporting the Place recognises that trade-offs may be required to fit the objectives best.

The Movement and Place Framework sets out a collaborative approach for practitioners, stakeholders, and the community to work together, shown in **Figure 2-2**, as well as criteria for measuring and evaluating the alignment of movement and Place.

Figure 2-2 Movement and Place Framework



This Practitioner's Guide to Movement and Place provides practitioners with a collaborative, iterative process that can guide consultation, analysis, decision-making, and evaluation throughout the life cycle of a plan or project. It details the importance of considering the whole street, which includes people walking and cycling and spending time in places. There are also a variety of Built Environment Indicators, which are based on qualities that contribute to a well-designed built environment. The ones relevant to this study are as follows:

– **Active transport**

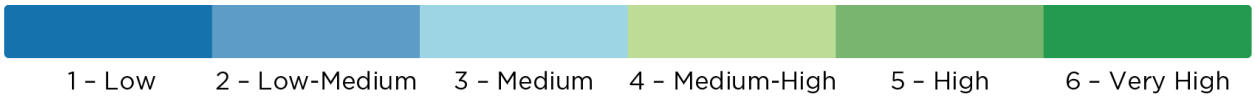
- Catchments assess the walkability/cyclability of a network. It provides an understanding of what can be accessed within a set distance.
- Permeability provides an insight into the extent to which an urban area permits ease of movement for people walking and cycling. It is a direct count of intersections within a 1km hexagon. Depending on the number of intersections, the result will be related to a Level of Service (LoS) ranging from A to F (**Figure 2-3**), with F being the least number of intersections.

Figure 2-3 Permeability index (LoS F to A, left to right)

– **Public transport**

  - Public Transport Accessibility Level (PTAL) suggests how well the Place is connected to public transport services for any selected place. It does not cover trips by car. **Figure 2-4** shows the different PTAL categories.

Figure 2-4 Public Transport Accessibility Levels



Implications on site

The framework provides practitioners with assessment metrics that can be used to assess the suitability of a proposal. The metrics introduced in this section will be used to assess the proposal.

2.1.3 Road User Space Allocation Policy

The Road User Space Allocation Policy applies to the entirety of the public road reserve from boundary to boundary on proposed and existing classified roads in built-up areas in regional and metropolitan NSW, except for motorways.

By implementing this policy, Transport ensures that the allocation of road user space is a deliberate exercise that considers the place, function, and movement requirements of roads to achieve the strategic intent and outcomes set out in state-wide, metropolitan, and regional strategies and plans. An action that assists in achieving these objectives is optimising how space is allocated throughout the day, week or year, including the dynamic control of space, access, priority level, speed, and kerbside use through signage, signals, and other technology.

It also notes that when allocating road user space based on the network vision and road functions, it is important to consider all road users in order of:

1. Walking (including equitable access for people of all abilities)
2. Cycling (including larger legal micromobility devices)
3. Public transport, freight, and deliveries
4. Point-to-point transport
5. General traffic and on-street parking for private motorised vehicles.

2.1.4 State Environment Planning Policy (Housing) 2021

The State Environment Planning Policy (Housing) 2021, or HSEPP, facilitates the development of affordable and diverse housing in the right places and for every stage of life. The HSEPP includes the planning provisions for:

– Boarding houses
– Build-to-rent housing
– Senior's Housing
– Caravan parks and manufactured home estates
– Group homes
– Retention of existing affordable rental housing
– Secondary dwellings (granny flats)
– Social and affordable housing
– Short-term rental accommodation
– Co-living accommodation.

Implications on site

The development contains a co-living component and would need to consider the requirements under Chapter 3, Part 3 of the Housing SEPP.

2.1.5 State Environment Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 aims to facilitate the planning and development of transport and infrastructure systems while ensuring environmental sustainability and community benefits. The SEPP outlines the planning rules for delivering most infrastructure works across NSW, includes rules for:

- Providing greater flexibility in the location of infrastructure and services
- Allowing for efficient development of land for infrastructure
- Identifying projects where environmental impacts are likely to be minimal as exempt or complying development
- Outlining the approval process and assessment requirements for infrastructure proposals
- Allowing for consultation with relevant public authorities and communities about infrastructure development.

Implications on site

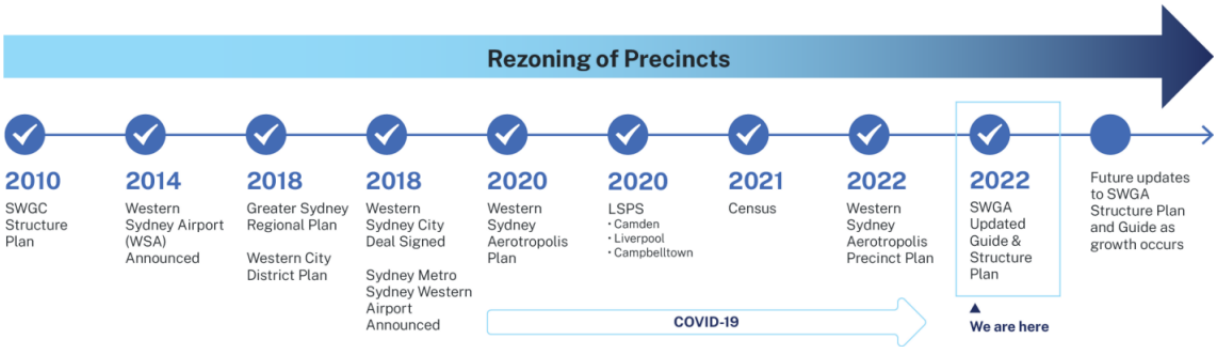
The development triggers the requirements under Schedule 3 and therefore, requires consultation with TfNSW.

2.2 Region level context

2.2.1 South West Growth Area Structure Plan

The South West Growth Area (SWGA) is a major urban development initiative led by the NSW Government to accommodate Sydney's growing population through strategic planning, modern transport infrastructure, and essential public facilities. The SWGA Structure plan was released after the Western Sydney Aerotropolis Precinct Plan and is currently the latest document for the SWGA (**Figure 2-5**).

Figure 2-5 Timeline of strategic plans from 2010



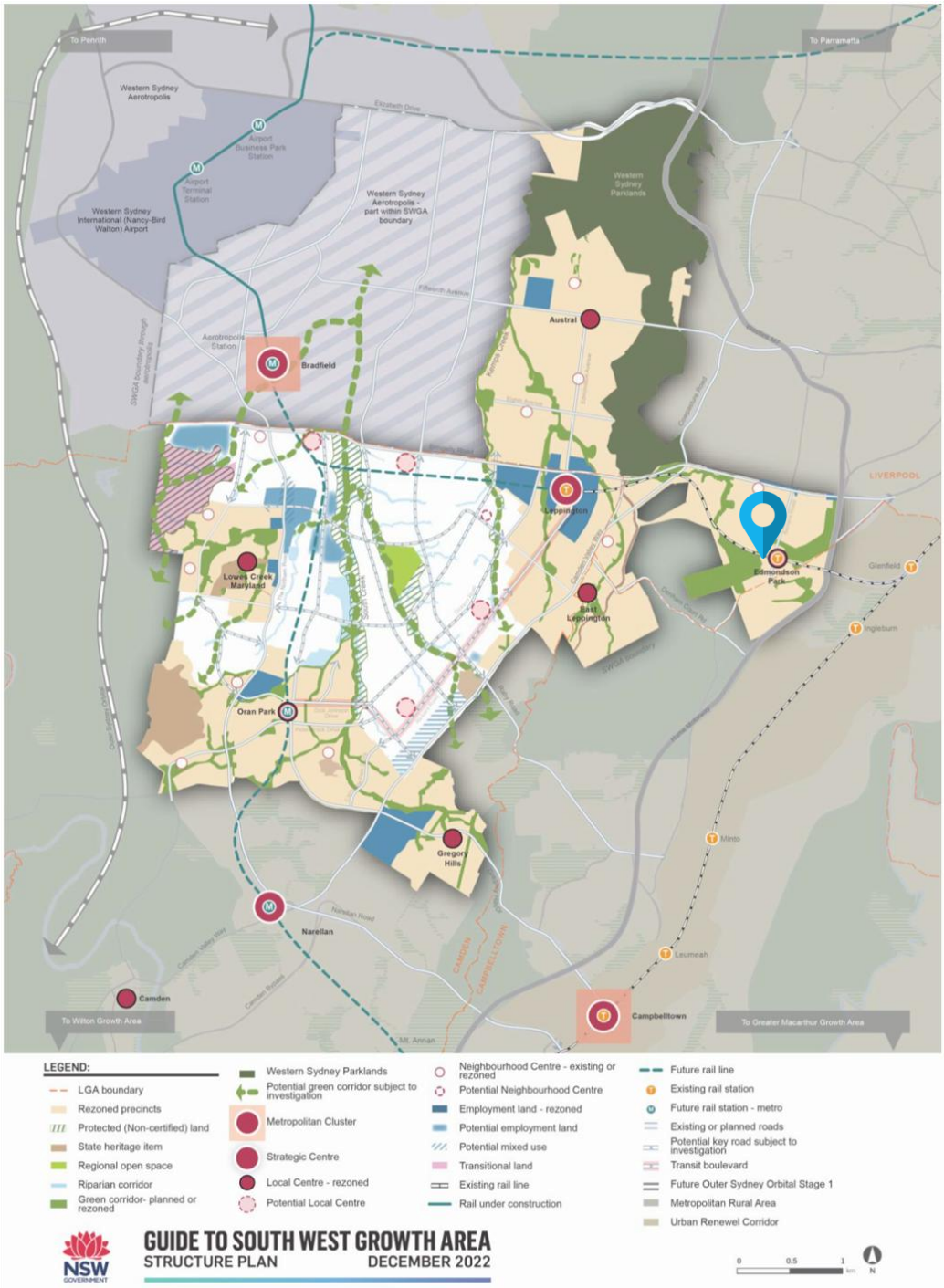
The area will benefit from key road projects, including the M12 Motorway, which will provide a direct link between the Western Sydney Aerotropolis and the M7 Motorway, significantly improving regional connectivity. Additional upgrades to Bringelly Road and The Northern Road will enhance traffic flow, while a network of new arterial roads and local streets will support increased mobility across residential and commercial precincts.

The Sydney Metro – Western Sydney Airport Line will provide a direct rail connection between St Marys, the Aerotropolis, and the future airport, improving accessibility and reducing travel times. Complementing this, Bus Rapid Transit (BRT) corridors will enable high-frequency bus services to connect key residential and employment centres.

Leppington Station, already a major transport hub, will continue to serve as a key interchange, with potential future rail extensions to further improve regional integration.

Active transport options, including cycling paths and pedestrian walkways, are a key focus to encourage sustainable travel. Green corridors and shared pathways will link residential areas to schools, parks, and transport hubs, promoting walkability and reducing reliance on cars.

Figure 2-6 South West Growth Area Structure Plan



Implications on site

The site was rezoned as part of the growth area and will contribute to the affordable housing targets.

2.2.2 Greater Sydney Region Plan – A Metropolis of Three Cities (Greater Sydney Commission), 2018

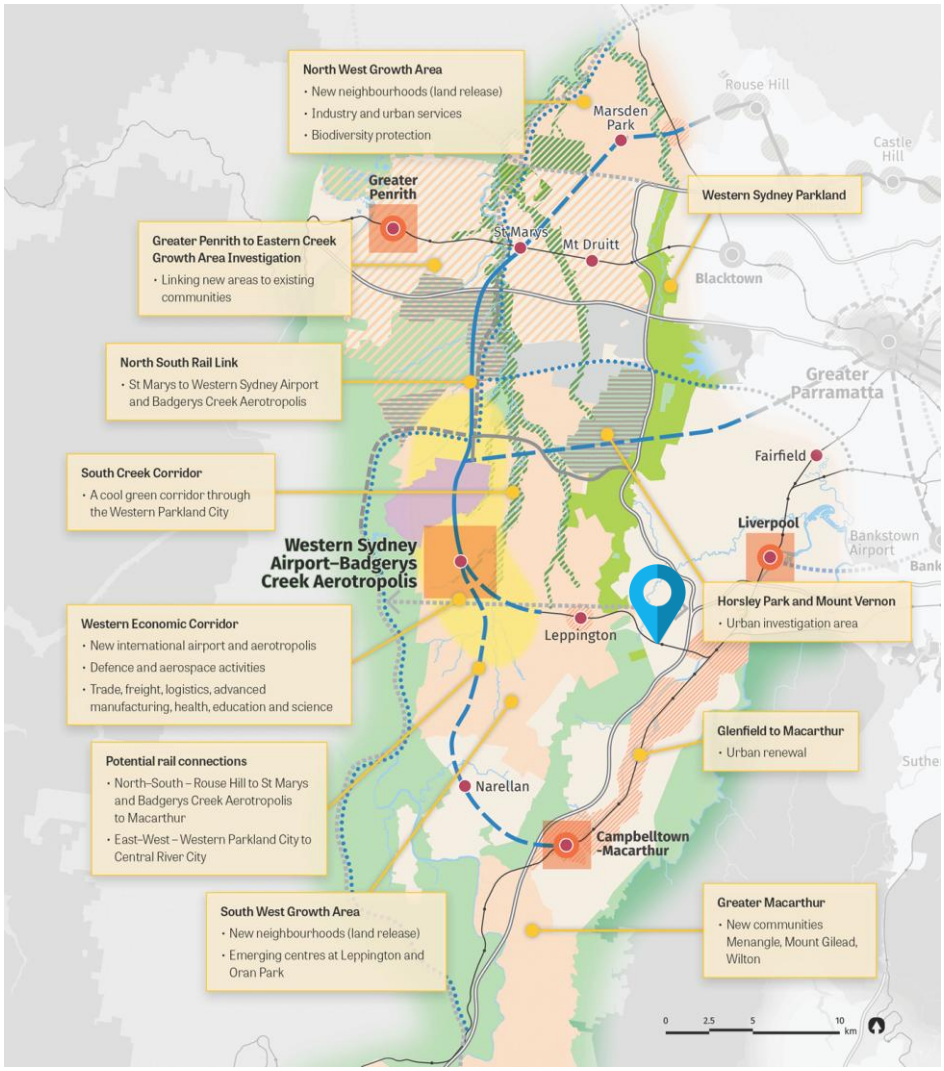
The Greater Sydney Region Plan, A Metropolis of Three Cities, aims to deliver three cities where most residents are within a 30-minute commute to employment, education, health facilities, services, and great places. The vision seeks to develop Greater Sydney into a metropolis comprised of Western Parkland City, Central River City, and Eastern Harbour City. **Figure 2-7** outlines key growth areas and infrastructure upgrades envisioned to develop Western Parkland City. The vision of Western Parkland City is to form new city-shaping transport and to introduce the airport that makes the city the most connected place in Australia:

– The Australian and NSW Governments will deliver the first stage of the North-South Rail Link from St Marys to the Western Sydney Airport and Badgerys Creek Aerotropolis.

– A potential new east-west mass transit corridor will connect Western Parkland City to the Central River City

– Potential Outer Sydney Orbital will provide the city with direct connections to Greater Newcastle, Wollongong and Canberra.

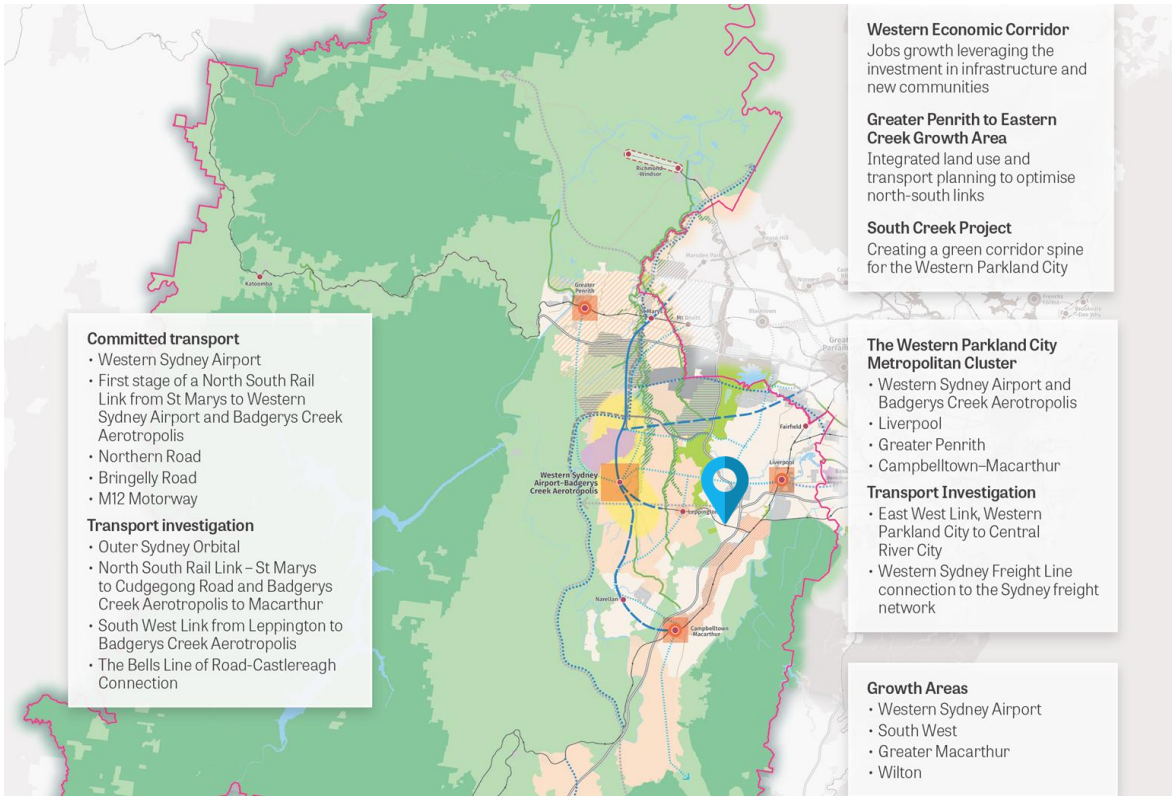
Figure 2-7 Western City Parkland Infrastructure Development



2.2.3 Western City District Plan

The Western City District Plan involves the local government areas of Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly. It aims to ensure future generations have excellent connections to local jobs, housing, services, and great places.

Figure 2-8 Western City District Plan



The Western Sydney Airport and Badgerys Creek Aerotropolis creating a once-in-a-generation economic boom for residents, bringing infrastructure, businesses and knowledge-intensive local jobs to residents.

– Planning a city supported by infrastructure, including infrastructure that supports the new Western Sydney Airport and responds to growth.

– Giving people housing choices by providing housing supply, choice and affordability, with access to jobs and services.

– Designing places for people by creating and renewing great places and local centres, and respecting the district's heritage.

– Developing a more accessible and walkable city by establishing the land use and transport structure to deliver a liveable, productive and sustainable Western Parkland City.

– Creating the conditions for a stronger economy by actions including leveraging the industry opportunities from the Western Sydney Airport and Badgerys Creek Aerotropolis, planning and managing industrial and urban services land and growing investment, business opportunities and jobs in strategic centres.

– Valuing green spaces and landscapes by actions including creating a protecting and enhancing bushland and biodiversity Planning Priority, better managing rural areas and delivering high-quality open spaces.

2.3 Local-level context

2.3.1 Edmondson Park South Development Control Plan 2012

The Edmondson Park South Development Control Plan 2012 (DCP) set out controls that facilitate the development of residential, open space, recreation, retail, and commercial uses in Edmondson Park South. Regarding transport infrastructure, the DCP reinforces Council's plans to encourage a transit-oriented community with high-quality pathways that encourage walking and cycling. The DCP also establishes the desired outcomes for Edmondson Park South, which include:

– **Housing**

  - A community of around 3,530 dwellings.

- Higher-density housing within walking distance of the Town Centre, rail station, bus/rail interchange and other local amenities.
- A range of housing products and densities provides housing choice.
- Promotion of innovative housing types/design.

– **Transport and Accessibility**

- Public transport and arterial roads connect Edmondson Park to other business centres, employment lands and community facilities in surrounding localities.
- A hierarchy of roads and paths provides clear and convenient links throughout the precinct, particularly between key urban places.
- A cycleway network links destination points and open spaces.
- A safe walkable community.

The DCP also includes maps and diagrams of the future of Edmondson Park South, including a structure plan, transport network and staging plan. There were minor updates to these plans that were approved under MOD 5. More details have been included in Section 5.1.

Implications on site

The development is within Edmondson Park South, specifically within the Indicative Town Centre. The DCP identifies that there are transport upgrades that aim to improve amenity and connectivity to/from the town centre to other destinations. Hence, the site is well located to benefit from the planned transport infrastructure improvements.

2.3.2 Edmondson Park Town Centre North Design Guidelines (2024)

The Edmondson Park Town Centre North Design Guidelines (2024) provide the key urban design, built form and movement criteria guiding development across the Town Centre North precinct. The Guidelines sit under the endorsed Edmondson Park South Planning Framework and establish the intended character, street hierarchy, and desired pedestrian-oriented environment envisioned for the northern half of the Town Centre.

In relation to transport and access, the Guidelines emphasise:

– A fine-grain street network with multiple pedestrian connections, prioritising walkability between the station, mixed-use core, and surrounding neighbourhoods.

– Activation of key edges, including Buchan Avenue and MacDonald Road, with building entries, clear sightlines, and high-quality public domain treatments.

– Integration of development with the planned east–west through-site links, mid-block connections, and future laneway network (including the laneway forming the northern boundary of the subject site).

– Support for reduced car dependency given the town centre context, proximity to Edmondson Park Station, and planned high-frequency bus services.

– A movement network that accommodates service and emergency vehicle access while limiting vehicle dominance through basement parking, shared zones, and safe pedestrian priority areas.

– Parking rates calibrated to a **Town Centre context**, with maximum residential and non-residential rates that reflect a transit-oriented environment.

Figure 2-9 presents the urban structure proposed in the guidelines.

Figure 2-9 Urban structure

Source: 2.3.2: Edmondson Park Town Centre North Design Guidelines (Willow Tree Planning, 2024)

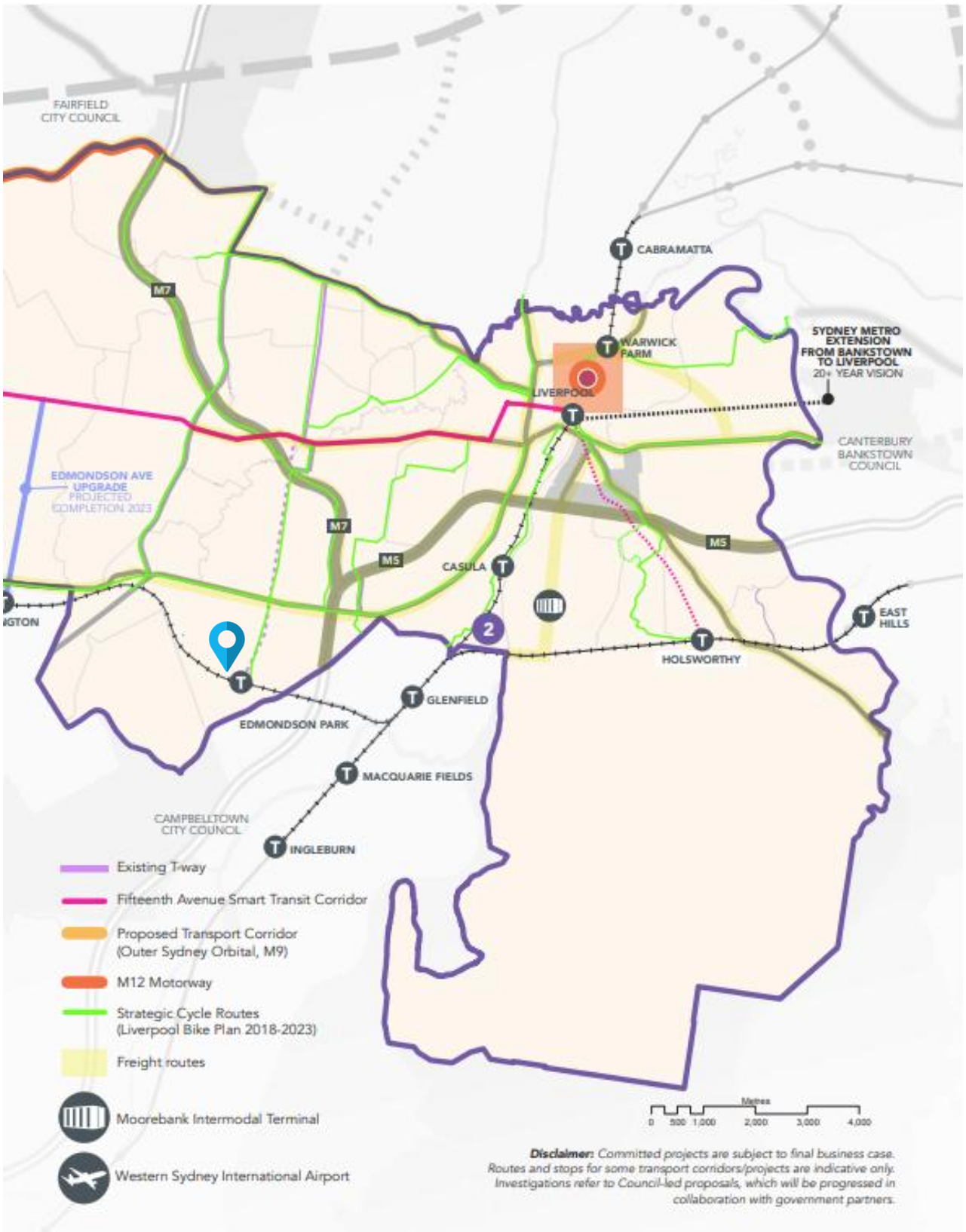
2.3.3 Liverpool Local Strategic Planning Statement (LSPS): Connected Liverpool 2040

Connected Liverpool 2040 is Liverpool City Council's comprehensive Local Strategic Planning Statement (LSPS), outlining a 20-year vision to transform Liverpool into a vibrant, sustainable, and well-connected city. A central component of this vision is enhancing transport infrastructure to improve connectivity, accessibility, and sustainability.

The key transport links and strategic destinations are shown in **Figure 2-10**. The key transport initiatives were:

- **Fifteenth Avenue Smart Transit (FAST):** A proposed rapid transit link connecting the Liverpool Central Business District (CBD) to the Western Sydney International Airport and the Western Sydney Aerotropolis. This initiative aims to provide efficient public transport options, reduce traffic congestion, and support economic growth in the region.
- **Integration with Regional Transport Plans:** The LSPS aligns with broader regional strategies, such as the Greater Sydney Region Plan and the Western City District Plan, to ensure cohesive development and connectivity across the metropolitan area. This includes collaboration with state agencies to integrate local transport projects with regional networks, enhancing overall accessibility.
- **Active Transport Infrastructure:** The plan emphasises the development of pedestrian-friendly environments and cycling infrastructure to promote active transport modes. This includes expanding footpaths, creating dedicated cycleways, and improving public spaces to encourage walking and cycling as viable alternatives to car travel.
- **Public Transport Enhancements:** Connected Liverpool 2040 advocates for improvements to the public transport system, including increased service frequency, reliability, and coverage. This involves working closely with transport authorities to upgrade existing services and explore new routes that cater to the growing population.
- **Sustainable Transport Solutions:** The LSPS promotes the adoption of sustainable transport options, such as electric vehicle infrastructure and low-emission public transport, to reduce the city's carbon footprint and improve air quality. This aligns with Liverpool's commitment to environmental sustainability and resilience.

Figure 2-10 Key transport links

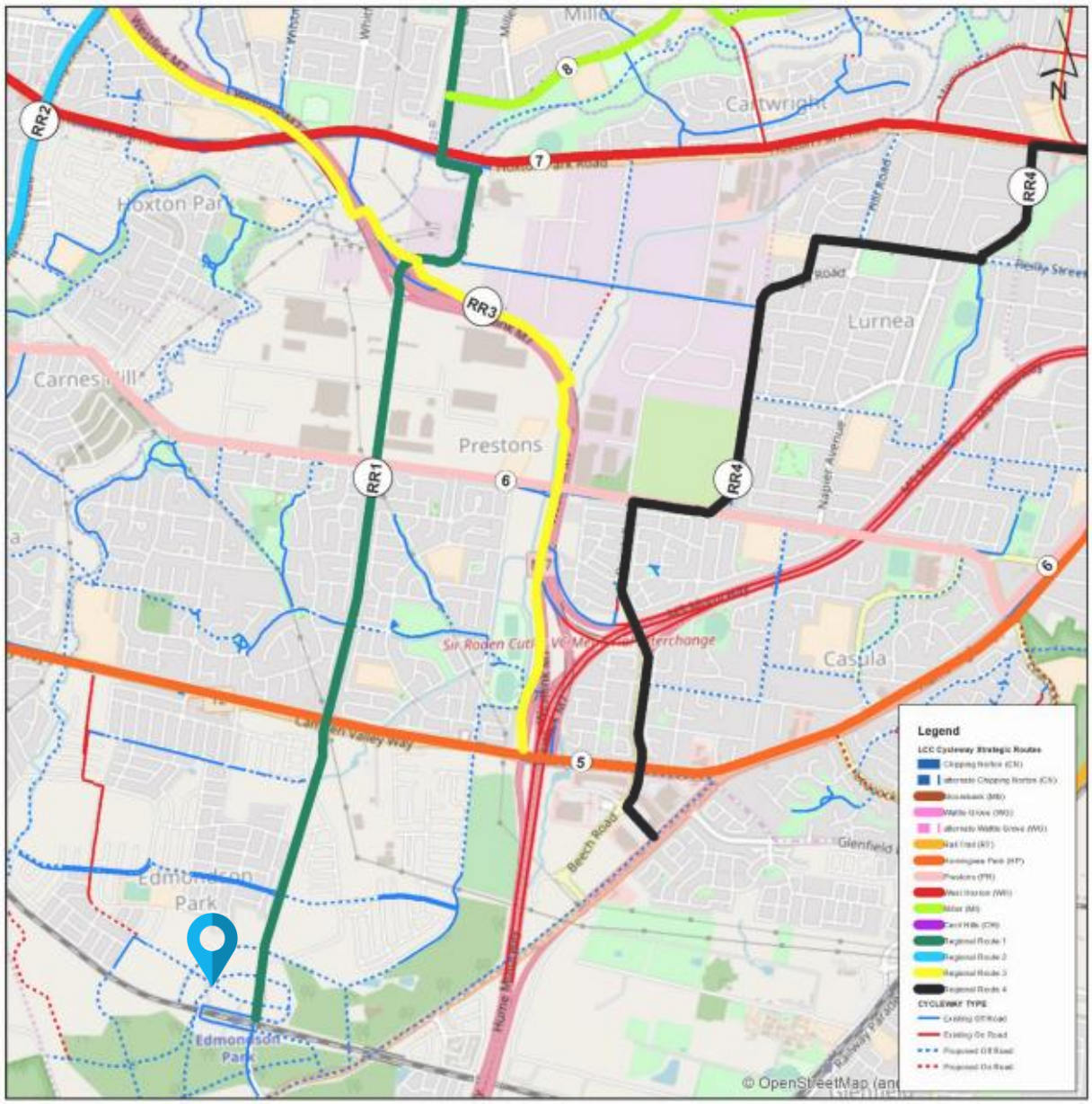


2.3.4 Liverpool Bike Plan (2018 – 2023)

Liverpool City Council's Bike Plan 2018-2023 aims to enhance cycling infrastructure, promote sustainable transport, and improve community health by expanding the network of shared paths and cycleways. The plan focuses on constructing new cycleways, addressing missing links in the existing network, and providing adequate bike storage

and parking facilities. In collaboration with the Liverpool Bicycle Users Group (Liverpool BUG), the Council advocates for safer cycling conditions and organises community rides. Events like NSW Bike Week raise awareness of cycling as a viable transport option. The Liverpool City Centre Public Domain Master Plan complements these efforts by envisioning a greener city centre with dedicated cycleways, wider footpaths, street trees, and improved pedestrian lighting to support an 18-hour economy. The proposed cycleways surrounding the site are shown in **Figure 2-11**.

Figure 2-11 Proposed cycleways in the Prestons Area



Implications on site

The development is surrounded by proposed off-road cycleways. These cycleways connect to various local and strategic destinations, making cycling an attractive travel mode. The cycleways also provide a continuous connection to Edmondson Park train station.

2.4 Approval history

The Edmondson Park Concept Plan (MP 10_0118), initially approved in August 2011 under the former Part 3A of the EP&A Act, provides for a new diverse and sustainable urban community covering an area of 605.4 hectares. Once complete, Edmondson Park South is expected to accommodate a mix of land uses, a diversity of housing, a new town centre incorporating retail, business and commercial floor space with employment opportunities, multi-purpose community and education facilities, a new 150-hectare regional park, several other local parks, and environmental conservation areas.

The Concept Plan has been modified several times to date, with the latest modification to the transport network being MOD 5. Since the Concept Plan's approval, staged development applications have also been determined and constructed, with Edmondson Park now comprising a growing local centre with shops and supporting community services, residential dwellings and open space and public domain.

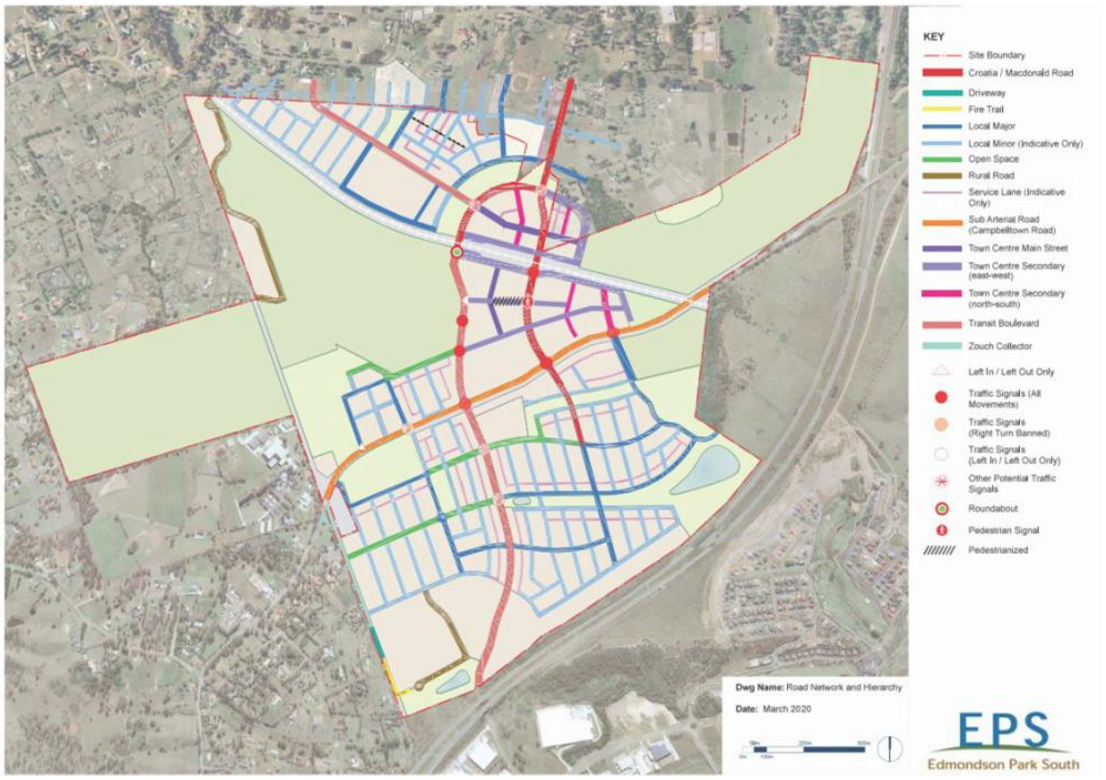
2.4.1 Edmondson Park South Concept Plan MOD 5 (MP10_0118 MOD 5)

The Edmondson Park South Concept Plan MOD 5 (to be referred to as the EPS Planning Proposal) was recently approved and proposed the following changes:

- Revising the boundary area of the concept plan to include OSL land.
- Increasing the minimum yield within the Edmondson Park Town Centre North from 440 to 3,286 dwellings.
- Increasing the building heights to allow for more dwellings adjacent to the train station.
- Introducing a maximum gross floor area (140,389m^2) for the Station Precinct equivalent to FSR permissible under the Precincts SEPP.
- Revising the road network and road hierarchy.
- Amending the school site to allow for a minimum site area of 2ha and an additional 4ha if required by the Department of Education and Training.
- Allowing for strata subdivision of studio dwellings and limiting the permissibility of residential flat buildings in specific locations through height limit controls.

The proposed road network plan is shown in **Figure 2-12**.

Figure 2-12 Proposed road network under MOD 5



2.4.2 Edmondson Park South Concept Plan MOD 4 (MP10_0118 MOD 4)

The Edmondson Park South Concept Plan MOD 4 was a previous modification to the initial concept plan approval. This modification features a variety of changes, including changes to the transport network. The MOD 5 approval featured further amendments to the road network and noted that the pedestrian, cycle and public transport network remains the same as approved in MOD 4.

Hence, MOD 4 is relevant to this report because it features the approved pedestrian, cycle and public transport network (**Figure 2-13**).

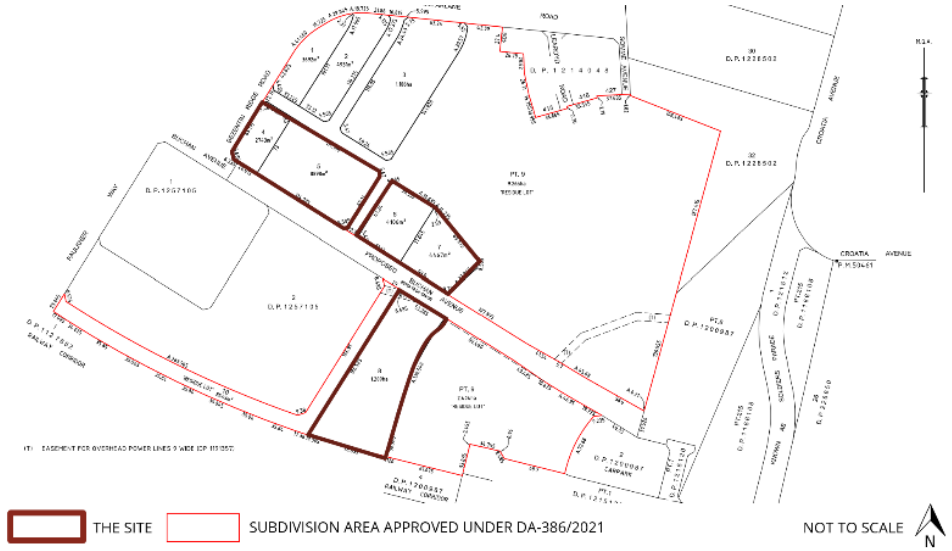
Figure 2-13 Approved Pedestrian, Cycle and Public Transport Network

2.4.3 DA-386/2021 Subdivision

Approval was granted on 15 September 2022 for the subdivision of Lot 2 DP 1264963 and Lot 3 DP 1257105 into 8 new super lots and 2 residue lots, in addition to associated servicing works.

This SSDA relates to lots 4, 5, 6, 7 and 8 of this subdivision plan, as shown at **Figure 2-14**.

Figure 2-14 DA-386/2021 subdivision plan

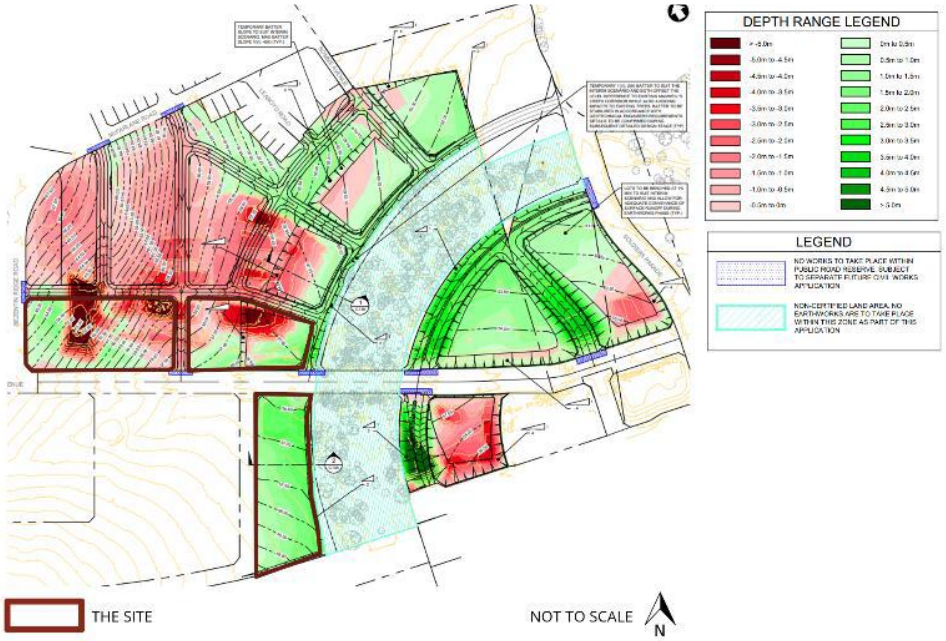


Source: Beveridge Williams, edits by Beam Planning

2.4.4 DA-504/2021 Bulk Earthworks

Approved 20 December 2022 for bulk earthworks comprising cut and fill of the site and grading to achieve necessary levels and benching requirements (**Figure 2-15**), Landcom as applicant.

Figure 2-15 DA-504/2021 Cut & fill plan

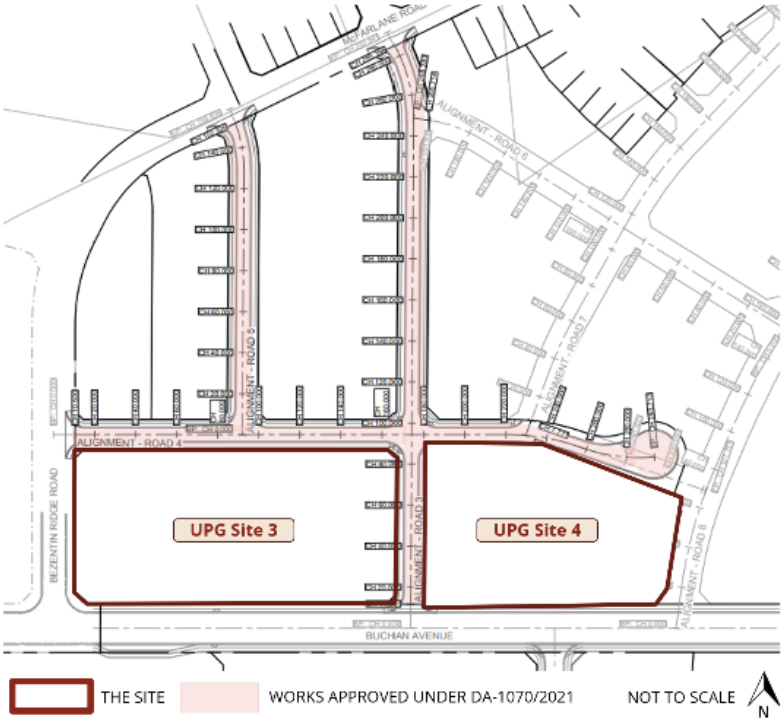


Source: Infrastructure and Development Consulting, edits by Beam Planning

2.4.5 DA-1070/2021 Minor Local Roads

Approved 9 April 2024 for the construction and dedication of secondary access roads and construction of associated infrastructure to service super lots (**Figure 2-16**), Landcom as applicant. These roads adjoin the UPG 'Site 3' to the north and east, and 'Site 4' to the north and west.

Figure 2-16 Minor local roads approved under DA-1070/2021

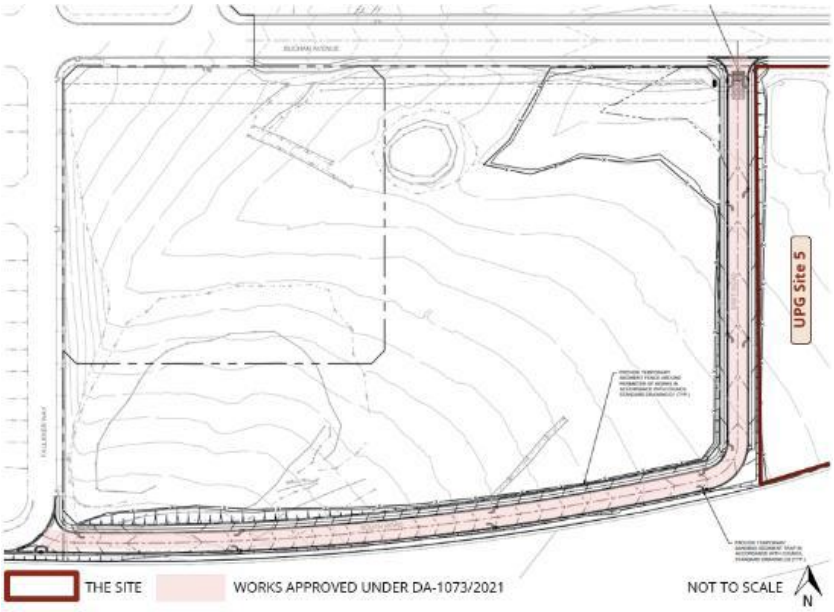


Source: Beveridge Williams, edited by Beam Planning

2.4.6 DA-1073/2021 Major Local Roads

Approved 25 August 2022 for the construction of two local major roads and associated infrastructure and works adjoining the future school site, Landcom as applicant. This road also adjoins the UPG 'Site 5' to the west.

Figure 2-17 Major local roads approved under DA-1073/2021



Source: Beveridge Williams, edited by Beam Planning

2.4.7 DA-1245/2022 (PPSSWC-300) Townhouses on Sites 1, 2 and 3

Sites 1, 2 and 3 benefit from an approval for the construction of 178 x 3 storey townhouses, approved by the regional panel in December 2024 (DA-1245/2022), UPG as the applicant.

UPG will proceed with the development of townhouses on Sites 1 and 2 only (a total of 106 townhouses), with construction having recently commenced. UPG will not proceed with the townhouses on Site 3.

Given the change in intent for Site 3, the proposed SSDA may need to include an amending condition pursuant to Section 4.17 of the EP&A Act, requiring a post-consent modification to DA-1245/2022 to reflect the updated development outcome for Site 3.

2.4.8 DA-855/2022 (PPSSWC-278) Residential Flat Buildings on Site 5

Approved 27 May 2025 for the construction of four residential towers above 2 separate podiums on the UPG Stage 5 site. The DA included 40 terrace houses and 266 apartments (ranging from 1 to 5 bedrooms), one retail unit, and basement and podium-level parking for 398 vehicles. It also included landscaping, public domain works, and improvements to the Maxwells Creek riparian corridor.

UPG will not be proceeding with this application.

2.4.9 DA-1090/2022 (PPSSWC-297) Residential Flat Building on Site 4

Approved 23 May 2025 for the construction of an 8-storey residential flat building on the UPG Stage 4 site. The development includes 131 apartments across two towers above a 2-storey podium, and 30 three-storey townhouses over a shared basement.

UPG will not be proceeding with this application.

Existing conditions

3

3.1 Site context

The combined site is located at 4-5, 6-7, and 8 Buchan Avenue, Edmondson Park, and is legally described as Lots 4, 5, 6, 7 and 8 in DP1275478. The site has a total area of approximately 3.1 hectares, with a primary street frontage of approximately 298m to Buchan Avenue, and a secondary street frontage of approximately 186m to Horrie Road. The combined site is owned by UPG Edmondson Parkland Pty Ltd.

The site is located approximately 330m from the Edmondson Park Train Station and directly adjacent to a future high school (currently under construction). The site is also approximately 400m northwest of Frasers Ed Square Town Centre, placing it in a highly accessible and active urban precinct. The site and its surroundings are currently undeveloped, presenting a significant opportunity for coordinated and well-integrated urban development.

It is noted that earthworks, subdivision, and the construction of the major and minor roads surrounding the site have been undertaken under previous development consents. **Figure 3-1** below provides an aerial image for the site.

Figure 3-1 Aerial view of site

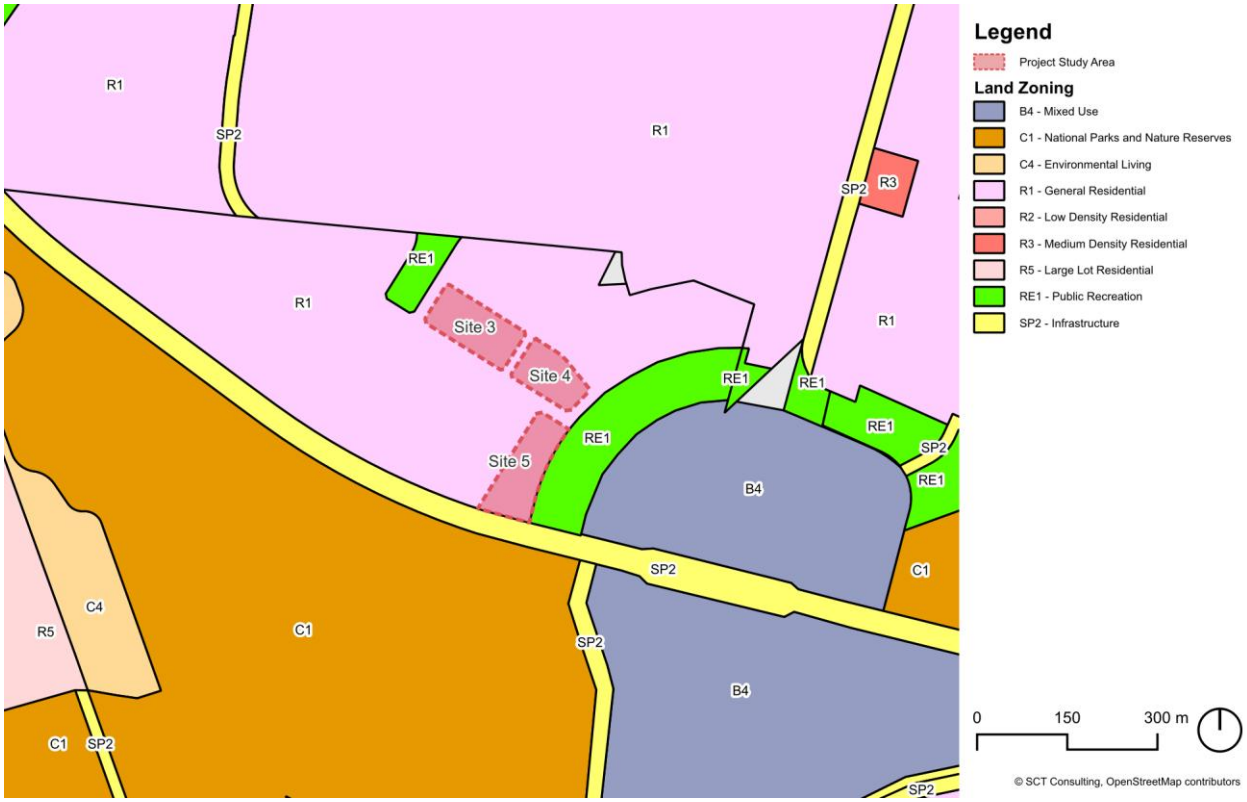
The surrounding area is undergoing a major transformation following the staged delivery of the Edmondson Park South development framework. Immediately east of the site is Edmondson Park Station, located roughly 400 metres away, which provides high-frequency rail services and establishes the precinct as a key focus for transit-oriented growth. To the south-east, Frasers' Ed Square Town Centre is situated within a short walking distance (approximately 700 metres) and offers retail, dining, entertainment and community services. A new public high school is currently being constructed directly west of the site, complementing nearby primary and secondary education facilities and contributing to the broader concentration of social infrastructure in the locality.

Much of the land surrounding the site remains undeveloped but has been progressively cleared, serviced and approved for future urban use. Recent approvals and subdivision works have established the internal road network, enabling coordinated development of adjacent super lots. New local roads adjoin the northern, eastern and western edges of the site, while the rail corridor forms a distinct boundary to the south.

The site sits within a broader landscape of planned high-density mixed-use development, with several large-scale residential and commercial projects either under construction or subject to recent development approvals. This includes the Ed Square residential precincts to the south and UPG's adjoining development sites to the north. The location, therefore, represents a central piece of the Town Centre North structure, positioned to integrate future housing, retail activity and public domain improvements.

The site and its immediate surrounds are currently zoned R1 General Residential, forming part of the broader residential land within Edmondson Park Town Centre North. Land directly to the east is zoned RE1 Public Recreation, providing an open-space interface between the residential precinct and the station area. The established town centre core around Edmondson Park Station is zoned B4 Mixed Use, supporting higher-density development and active ground-floor uses. South of the rail corridor, the land is zoned C1 National Parks and Nature Reserves, reflecting protected environmental areas. The land zoning surrounding the site is presented in **Figure 3-2.**

Figure 3-2 Land zoning



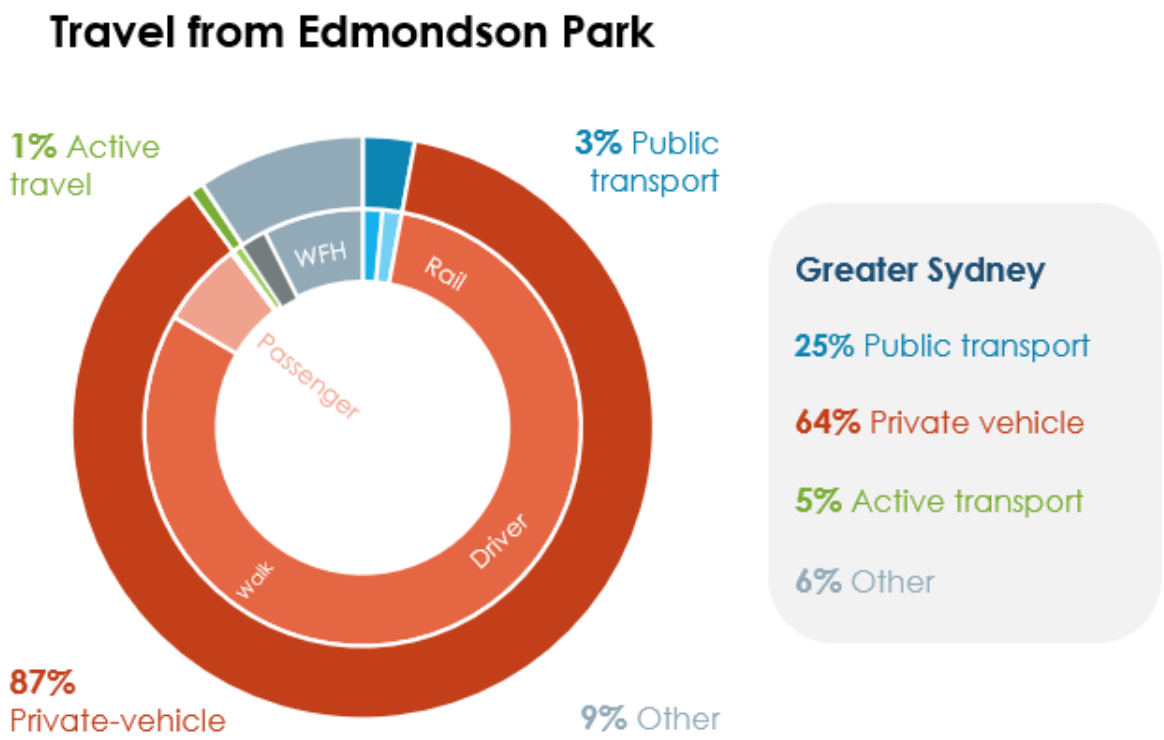
3.2 Travel mode share

The Australian Bureau of Statistics (ABS) 2016 Census Journey to Work (JTW) data was analysed to understand the typical travel behaviour of residents living near the proposed development. The 2016 Census data was chosen for the analysis because the 2021 Census was conducted during state-wide lockdowns due to COVID-19. The lockdowns would have skewed the survey data, leading to inaccurate estimates of travel behaviour.

It is important to recognise the historical context of the 2016 Census period. At that time, Edmondson Park was still transitioning from a largely rural and underdeveloped area into an emerging strategic centre. The train station had opened only in 2015 and was surrounded by vacant land, with no residential or mixed-use development in the immediate catchment. Bus services were limited, walkability was poor, and the broader road network was still evolving. As a result, public transport usage in 2016 was substantially lower than it is today, and the suburb functioned primarily as a car-dependent locality.

The ABS data is aggregated at different geographic levels. The proposed site is located within the Edmondson Park suburb. Mode-share characteristics based on the 2016 census data are presented in **Figure 3-3**.

Figure 3-3 Journey to Work, UR destinations



In 2016, Edmondson Park exhibited a higher private-vehicle mode share and comparatively lower public transport usage than Greater Sydney. This reflects the prevailing conditions at the time, where private vehicles offered the most convenient travel option due to ample parking supply, limited congestion, and a road network designed around 70km/h+ arterial corridors.

Active transport levels were also negligible. This is attributable to the limited local employment catchment, the absence of meaningful cycling infrastructure, and early-stage urban development that provided few destinations within walking distance (approximately 1.5km) or cycling distance (approximately 3.6km).

Given the significant uplift in local density, the completion of Edmondson Park Town Centre South, the ongoing delivery of Town Centre North, and the substantial increase in rail patronage since 2016, it is envisaged that current public transport usage is considerably higher than indicated in the 2016 Census dataset. As such, the 2016 figures should be interpreted as a historical baseline rather than a representation of contemporary or future travel behaviour in the precinct.

3.3 Active transport

3.3.1 Pedestrian

The footpath network within an 800m walking catchment of the site is shown in **Figure 3-4**. The streets bounding the site have a footpath on at least one side of the street. Footpath widths generally range between 1.5m (e.g. Shaggy Ridge) and 2.5m (shared path along the western side of Soldier Parade). Edmondson Park Station is approximately 600m, 500m and 400m walking distance from Sites 3, 4 and 5, respectively. There are four raised pedestrian crossings near the future high school and existing Edmondson Park Public School, providing safe crossing opportunities of Buchan Avenue and Horrie Road, these are shown along with the route from the site in **Figure 3-5**.

Overall, the site is surrounded by an adequate footpath network, with footpaths extending beyond the 800m radius along local streets near the site. The footpath network surrounding the site is expected to improve as the remainder of the roads are delivered as per the structure plan.

Figure 3-4 Walking catchment

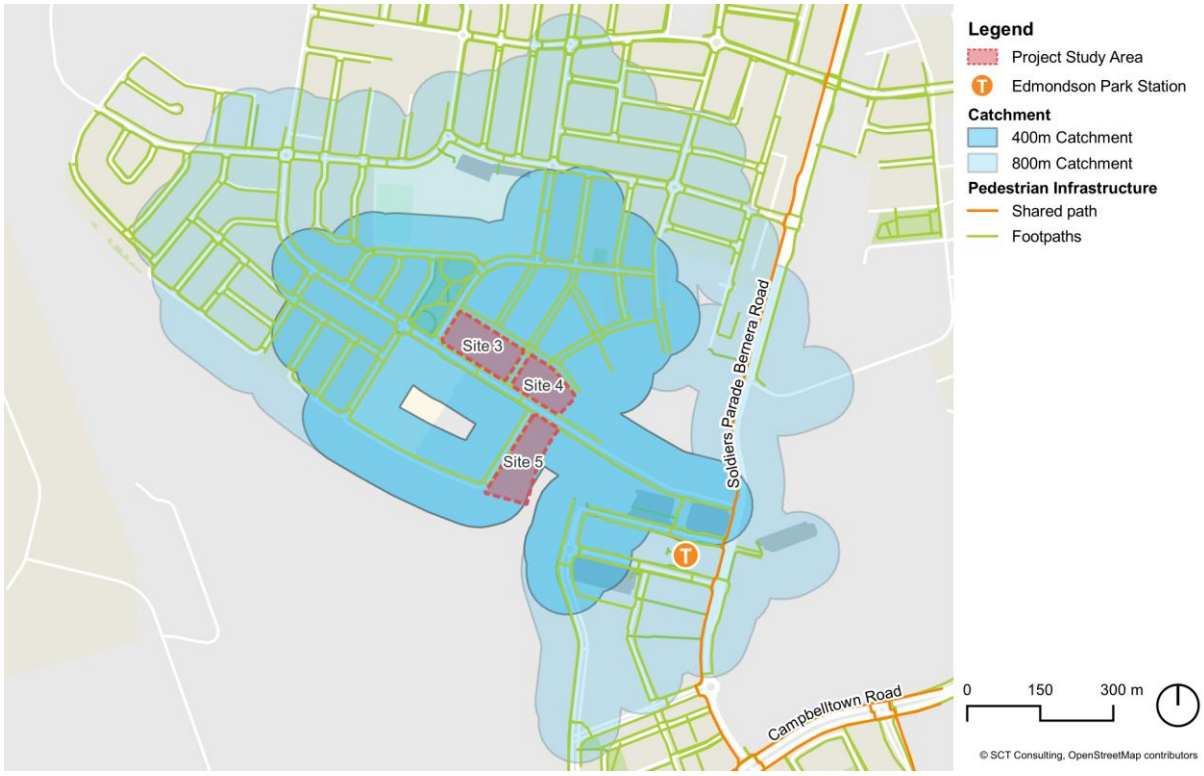
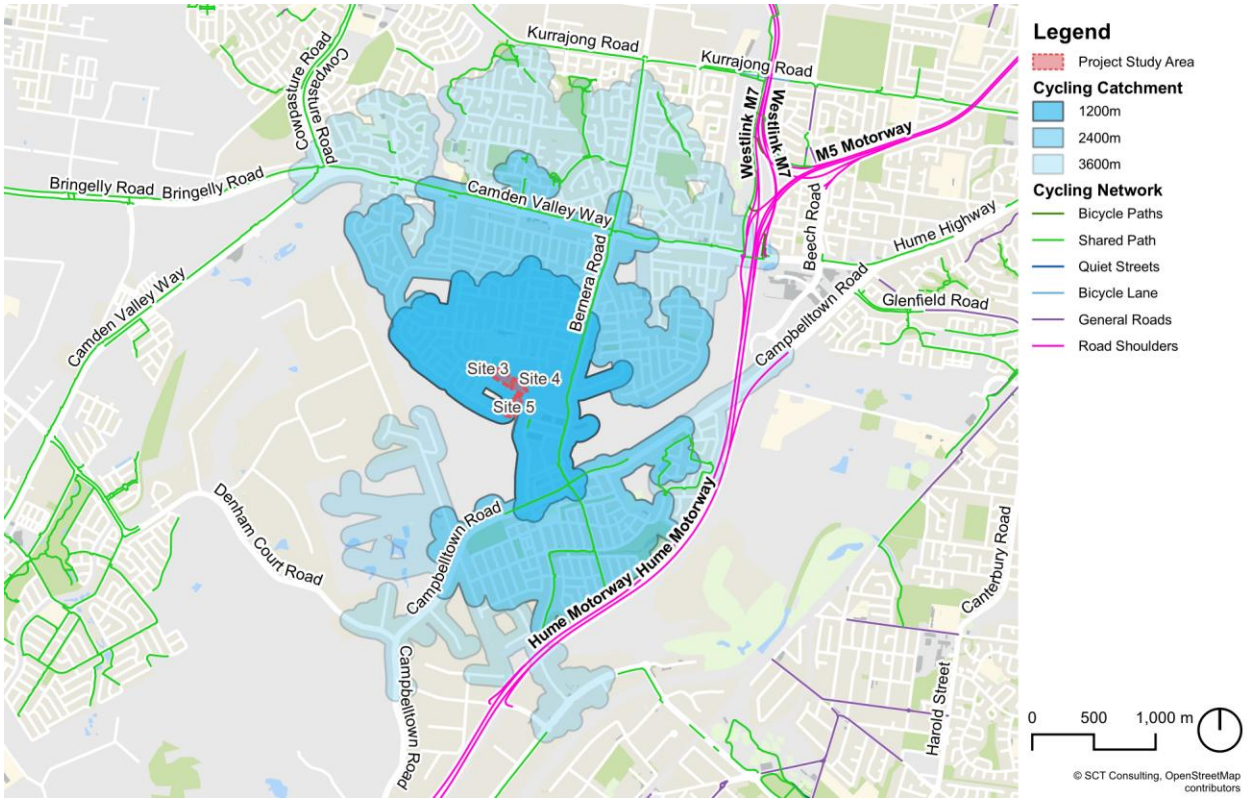


Figure 3-5 Travel to Edmondson Park Station

3.3.2 Cycling

Cycling facilities surrounding the site are shown in **Figure 3-4**. There is dedicated on-road cycle lanes provided in vicinity of the site along both sides of Buchan Avenue. This connects to the shared path along the western side of Soldiers Parade and Bernera Road providing connectivity to the wider cycle network. Beyond these facilities, generally cyclists need to share local roads with general traffic.

Figure 3-6 Cycling infrastructure



Source: TfNSW, 2025

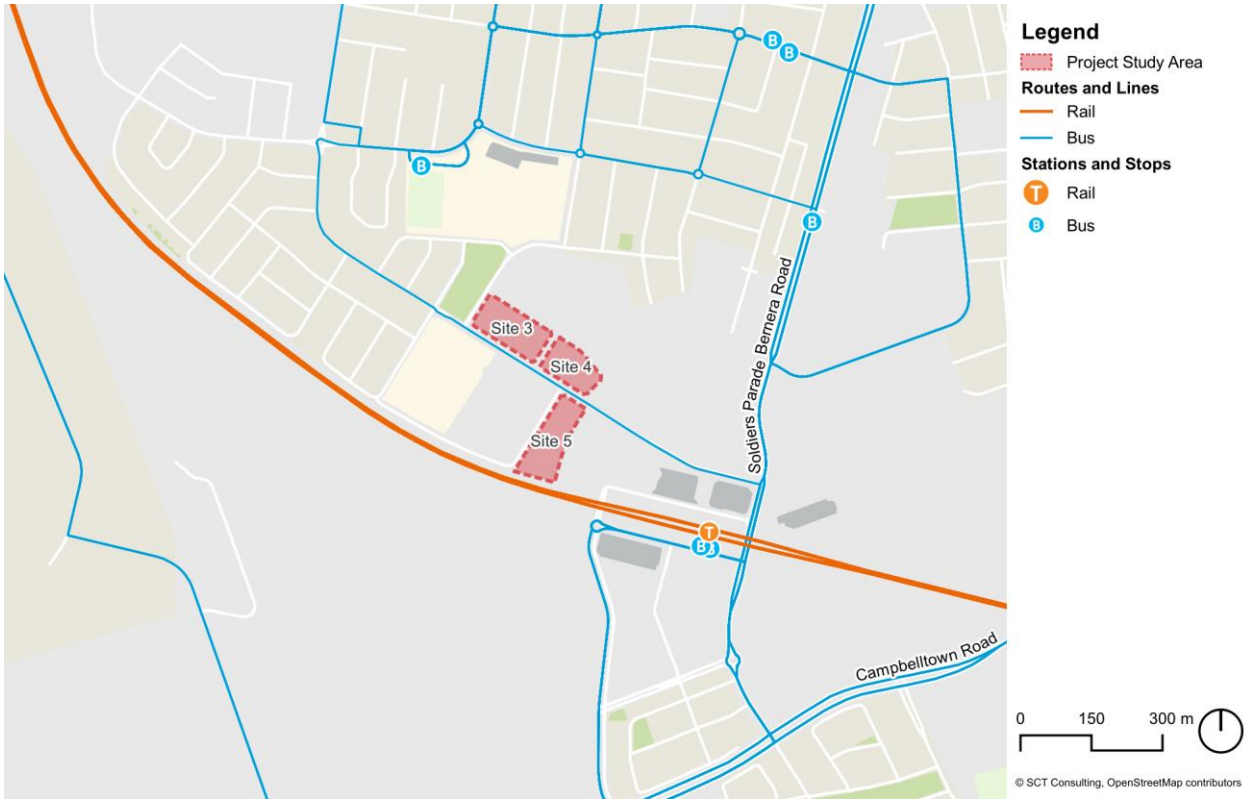
3.4 Public transport

The public transport network surrounding the site is presented in **Figure 3-7**. Depending on the site, Edmondson Park Station is located within 400m-600m (5-8-minute walk), which serves both buses and trains.

The station is served by both the T2 and T5 train lines, linking the centres such as the Sydney CBD (approximately 45 minutes with interchange), Liverpool (approximately 12 minutes) and Parramatta (approximately 40 minutes). During peak hours, trains run every six minutes on average.

The bus stops are serviced by a combination of routes, providing access to Liverpool to the north and Ingleburn to the south. Route 869 provides direct access to Liverpool (approximately 40 minutes bus ride), with buses departing on average every 15 minutes during the AM peak hour. Additionally, residents can access Ingleburn (within 25 minutes) via the 868 and 869 bus routes. The AM and PM peak hour frequency is shown in **Table 3-1**.

Figure 3-7 Public transport network



Source: TfNSW, 2025

Table 3-1 Bus AM and PM route frequencies

Route number	Route Description	Weekday AM	Weekday PM
859	Carnes Hill to Edmondson Park Station	Every 15 minutes	Every 15 minutes
868	Edmondson Park Station to Ingleburn	Every 30 minutes	Every 30 minutes
869	Ingleburn to Liverpool via Edmondson Park & Prestons	Every 15 minutes	Every 15 minutes

Table 3-2 provides a summary of the Rail Opal Assignment Model (ROAM) data, detailing rail occupancies on weekdays before arrival at Edmondson Park Station. It is important to note that ROAM data currently only considers seated capacity; however, in urban areas, passengers often stand on rail services. Despite this, the standard seating capacity has been used to provide a more conservative estimate of current rail capacity.

The data show that existing train services have ample capacity, with over 33 per cent available even during the worst weekday PM peak on the T5 service. All other services operate with more than 84 per cent available capacity.

Table 3-2 Existing train occupancy

Route number	Average Occupancy	
	Weekday AM (8-9am)	Weekday PM (5-6pm)
T2	12%	1%
T5	4%	49%

Source: TfNSW Transport Open Data, 2025

3.5 Road network

The characteristics of the key roads adjacent to the development include:

- **Soldiers Parade/Bernera Road** between Camden Valley Way and Campbelltown Road is a two-way road aligned in the north south direction with two travel lanes in each direction. It supports access to residential dwellings, Edmondson Park Train Station and Ed Square Shopping Centre. The road has a 60km/h speed limit and is serviced by a shared path on at least one side of the street. Unrestricted parking north of Buchan Avenue is available along the west side of the street, and unrestricted parking is available on both sides of the street south of Henderson Road.
- **Buchan Avenue** is a local two-way road off Soldiers Parade that has a speed limit of 50km/h, with a 40km/h school zone in the vicinity of Edmondson Park Public School. It forms a left-in/left-out intersection with Soldiers Parade to the east of the site. The road primarily provides access to the residents in south-west Edmondson Park. There is unrestricted parking on both sides of the street, and a marked cycle lane provided between the parking and travel lanes. A raised pedestrian crossing is provided across the street between Faulkner Way and Bezentin Ridge Road. All three sites have frontages on Buchan Avenue.
- **Jericho Road** is a newly constructed local two-way road aligned east–west and is situated immediately north of Sites 3 and 4, both of which front the road. The carriageway width is approximately 7.6 metres, supporting two-way vehicle movement with on-street parking available on one side only. The road has been constructed as part of the surrounding precinct works and has a posted speed limit of 50km/h. Jericho Road will primarily serve local residential properties.
- **Shaggy Ridge** is a newly constructed local two-way road aligned north–south and intersects with Buchan Avenue between Sites 3 and 4. Similar to Jericho Road, Shaggy Ridge provides a 7.6-metre carriageway, enabling two-way vehicle operation while retaining on-street parking on one side of the street. The road will provide direct access to residential lots and the proposed development sites, and has a speed limit of 50km/h. Its connection to Buchan Avenue supports circulation within the internal neighbourhood road network.
- **Horrie Road** is a recently constructed local major road that forms a loop around the school precinct and provides frontage to Site 5 along its eastern side. The road forms a priority intersection with Buchan Avenue and features a 9.6-metre carriageway, allowing on-street parking on both sides while maintaining comfortable two-way travel lanes. Horrie Road is envisioned to function as a key internal connector within the neighbourhood for the school with a speed limit of 50km/h.

A series of new internal streets are planned as part of the Town Centre North structure plan, including the future roads that will directly front Site 4 on its eastern edge. These new connections will establish finer-grain permeability across the precinct, distribute local traffic movements, and provide dedicated frontage and access opportunities for future development.

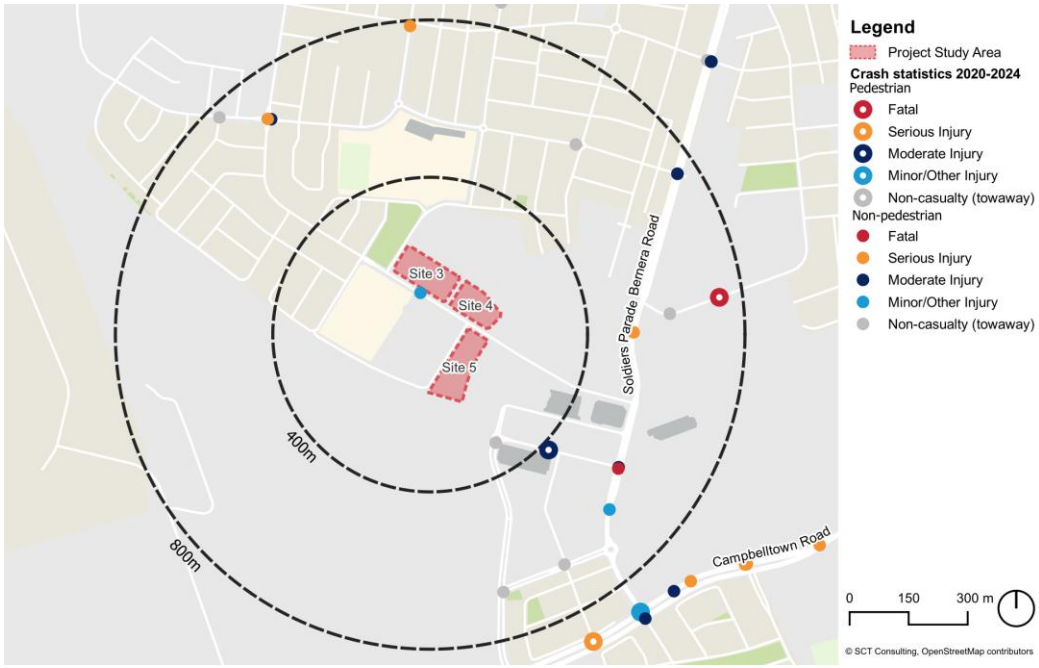
The surrounding road network is presented in **Figure 3-8**.

Figure 3-8 Surrounding road network

3.6 Road safety

A review of the most recent five years of Transport for NSW crash data identified one minor/other injury crash along the site frontage, involving a vehicle leaving a parking space. No other incidents were recorded within approximately 400 metres of the site. Two fatal crashes were identified further from the site in 2020: one at the Henderson Road / Soldiers Parade intersection (around 600 metres from the site) involving a right-through collision between a car and motorcycle, and another on Croatia Avenue to the east involving a pedestrian, which is attributable to the then-absence of adequate pedestrian facilities along that corridor. Both fatal crashes occurred in 2020, at a time when the surrounding precinct was significantly less developed and lacked the urban structure, lighting, and pedestrian connections now present or planned. The crash locations are shown in **Figure 3-9.**

Figure 3-9 Crash statistics 2020-2024



Source: NSW Centre for Road Safety

Future context without proposal

4

4.1 Introduction

This section aims to understand the future context in which the proposal will fit. It explores changes in local population and employment levels that will progress regardless of whether the proposal proceeds, as well as planned developments to the transport network, to establish an understanding of the future context. This helps establish a clear baseline of current and projected conditions (independent of the proposal) to ensure that any observed changes are not misattributed to the proposal. This section is structured as follows:

– **Future year land use changes** details land use changes and the impacts they have on the transport demand.

– **Future transport network** details the planned transport network changes.

– **Future year baseline performance** develops a clear baseline of expected future conditions without the proposal.

4.2 Future year land use changes

Edmondson Park Town Centre North forms part of the South West Growth Area, where Western Sydney's population is projected to grow by 464,450 residents over the next 20 years (Western Sydney City Deal).

The precinct was rezoned for urban development in 2008 and continues to transition from former rural land into a high-density mixed-use centre.

Under the updated planning assumptions adopted in Mod 5, the baseline future land-use context includes:

– Increased residential density surrounding Edmondson Park Station

– Redistribution of dwellings and land uses within the town centre boundary

– Updated town centre layout, building massing and school configuration

These changes increase local population density and baseline trip-making, independent of any development proposal.

4.3 Future transport network

As Edmondson Park continues to develop under the South West Growth Area program, demand on the transport network is expected to increase. The supporting transport infrastructure assumed in the Concept Plan Mod 5 establishes the future baseline conditions for 2026, ensuring capacity is in place to accommodate the maturing town centre, growing residential population, and increasing mobility needs of the Western Parkland City. The following sections outline the future transport network and service uplift reflected in Mod 5.

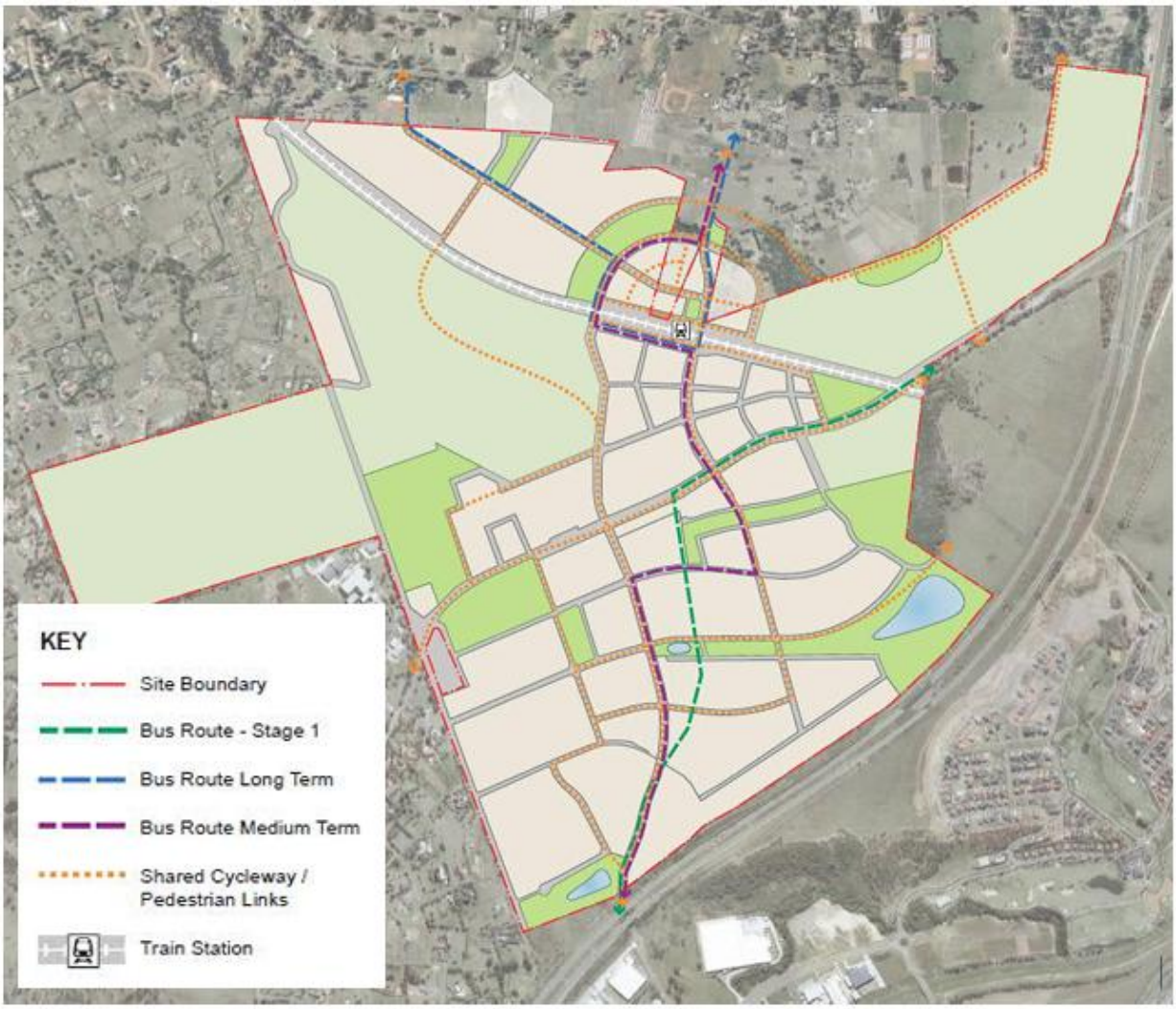
4.3.1 Future Public Transport Network

There are no forecast changes to rail service frequencies prior to 2026, with the T2 Inner West & Leppington Line and T5 Cumberland Line continuing to operate at their current high-frequency peak service levels. The future network preserves the South West Rail Link Extension corridor**,** providing long-term connections from Leppington to Bringelly, the Western Sydney Airport and Narellan. This corridor is identified in the strategic transport plans and remains a fundamental component of the future rail framework for the district.

Future baseline bus services continue to operate through Edmondson Park Station and the Town Centre, with the existing fixed routes and the on-demand bus zone assumed to remain in operation. The strategic planning framework (Connecting NSW) identifies the precinct as a candidate for enhanced bus priority and increasing strategic bus corridor capacity as the surrounding population grows. These improvements are expected to lift public transport reliability and reduce dependency on commuter parking north of the station.

The future public transport network is shown in **Figure 4-1**.

Figure 4-1 Future active and public transport network



Source: AECOM, Edmondson Park South – Concept Plan MOD 5, August 2018

4.3.2 Future Walking and Cycling Network

The future active transport network includes continuous shared paths along Campbelltown Road and Soldiers Parade, forming the primary pedestrian and cycling corridors. Additional links identified in Liverpool Council's endorsed bicycle network will supplement these main spines, improving access across the town centre and toward Edmondson Park Station. The future road layout delivered under Mod 5 supports high pedestrian permeability and short walking distances to key destinations, reinforcing walking and cycling as viable modes for local trips.

The future walking and cycling network are shown in **Figure 4-1**.

4.3.3 Future Road Network

The future baseline incorporates committed upgrades to regional and local roads that support expected growth. Completion of the Campbelltown Road Upgrade delivers a four-lane divided arterial road with improved east–west connectivity and increased vehicular capacity. Broader regional improvements provided under the Western Sydney Infrastructure Plan enhance access to the M5, M7 and Camden Valley Way, while the preserved Outer Sydney Orbital corridor represents the long-term freight and inter-regional transport spine for Western Sydney.

Several road network upgrades are expected to be delivered to ensure the local and regional network can accommodate future travel demand. These upgrades focus on improving turning capacity, reducing intersection delays and supporting the increased traffic volumes anticipated along Campbelltown Road, Bernera Road and the

adjacent town centre approaches. The following intersections have been identified for upgrade as part of the MOD 5 approval, in addition to the upgrades previously identified for the precinct.

– Camden Valley Way / Bernera Road (also known as MacDonald Road) / Croatia Avenue
– Campbelltown Road / Bernera Road (also known as MacDonald Road)
– Campbelltown Road / East Town Centre Street

These upgrades underpin the traffic modelling and form the baseline against which the traffic impacts of the subject development are assessed. TfNSW noted in correspondence that these intersection upgrades are not funded.

4.3.4 Modification 5 traffic generation – sites 3 to 5

The Mod 5 modelling considers the traffic generated by the entire precinct, including sites 3 to 5 under the previous proposal. The land uses incorporated into the Mod 5 assessment are as follows:

– Site 3: 72 townhouse dwellings
– Site 4: 30 townhouse dwellings
– Site 5: 266 dwellings, including 40 townhouse dwellings and 398 car spaces.

The person and trip generation for the previous proposal has been estimated using the rates provided in the Guide to Transport Impact Assessments 2024 (GTIA 2024), as shown in **Table 4-1**.

Table 4-1 Trip generation rates

Site	Land use	Peak hour person trip rate		Vehicular trip rate		Source
		AM	PM	AM	PM	
3	Townhouse	1.05 per dwelling	0.98 per dwelling	0.39 per unit	0.37 per unit	Residential (2013), GTIA 2024
4	Townhouse					
4	Apartments	0.35P+3.65	0.35P+3.65	0.19P+1.79	(0.35P+3.65)*65% car mode share*	Residential (2017), GTIA 2024
5	Townhouses	1.05 per dwelling	0.98 per dwelling	0.39 per unit	0.37 per unit	Residential (2013), GTIA 2024
	Apartments	0.35P+3.65	0.35P+3.65	0.19P+1.79	(0.35P+3.65)*65% car mode share*	Residential (2017), GTIA 2024

Where P = Parking spaces

Based on the above rates, the vehicle and person trip generation is summarised below in **Table 4-2**. The difference between person and vehicle trips was split between modes based on existing travel behaviour to find active transport and public transport trips.

Table 4-2 Trip generation results

Site	Land use	Trips	
		AM	PM
Person trips			
3	Townhouses	76	71
4	Townhouses	32	29
	Apartments	67	67
5	Townhouses	42	39
	Apartments	143	143
	Total person trips	**359**	**349**
Public transport trips			
3	Townhouses	36	33
4	Townhouses	15	14
	Apartments	23	19
4	Townhouses	20	18
	Apartments	49	39
	Total public transport trips	**143**	**124**
Active transport trips			
3	Townhouses	12	11
4	Townhouses	5	5
	Apartments	8	6
5	Townhouses	7	6
	Apartments	16	13
	Total active transport trips	**48**	**41**
Vehicle trips			
3	Townhouses	28	27
4	Townhouses	12	11
	Apartments	36	41
5	Townhouses	16	15
	Apartments	77	91
	Total vehicle trips	**169**	**184**

4.4 Future year baseline performance

4.4.1 MOD 5 TMAP modelling

The MOD 5 modelling incorporates updated precinct land-use forecasts, revised internal road layouts and known background growth associated with school expansions, adjacent residential development and the delivery of the broader town centre road network. Forecast traffic volumes in 2026 reflect both increased residential yield in the precinct and maturing travel patterns as the town centre becomes fully operational. Growth along Campbelltown Road is based on Transport for NSW's adopted background rate of 1.1% per annum, while local roads incorporate redistributed demand across the expanded town centre street grid. These assumptions form the baseline traffic environment.

It is important to note that the intersections assessed in the MOD 5 modelling reflect the former road-naming convention, in which the primary north–south connection (refer to **Figure 4-2**) was designated Bernera Road. Since that time, the road has been delivered and formally named MacDonald Road. For consistency and to align with the current network, this report refers to the corridor as MacDonald Road throughout.

Across the network, mid-block volumes in 2026 show significant directional increases consistent with the wider development of Edmondson Park. Key corridors such as MacDonald Road, Soldiers Parade, Buchan Avenue and Croatia Avenue exhibit higher peak-hour volumes, reflecting their function as primary connectors between the station precinct, the town centre and the surrounding residential neighbourhoods. Camden Valley Way volumes similarly increase as the precinct matures, with the 2026 forecasts indicating around 4,770 vehicles in the AM peak and 5,281 in the PM peak at the Camden Valley Way / MacDonald Road / Soldiers Parade intersection, representing typical arterial-level demands for the corridor.

Intersection performance under the 2026 Mod 5 future year scenario has been assessed using VISSIM microsimulation. The results represent baseline operating conditions for the precinct without the subject development. Overall, intersections generally operate within acceptable levels of service, with delays largely influenced by arterial road demands and the distribution of traffic across the precinct access points. Higher delays are observed at Campbelltown Road intersections during the PM peak, reflecting typical commuter directional flows.

The Mod 5 baseline results are summarised in **Table 4-3.**

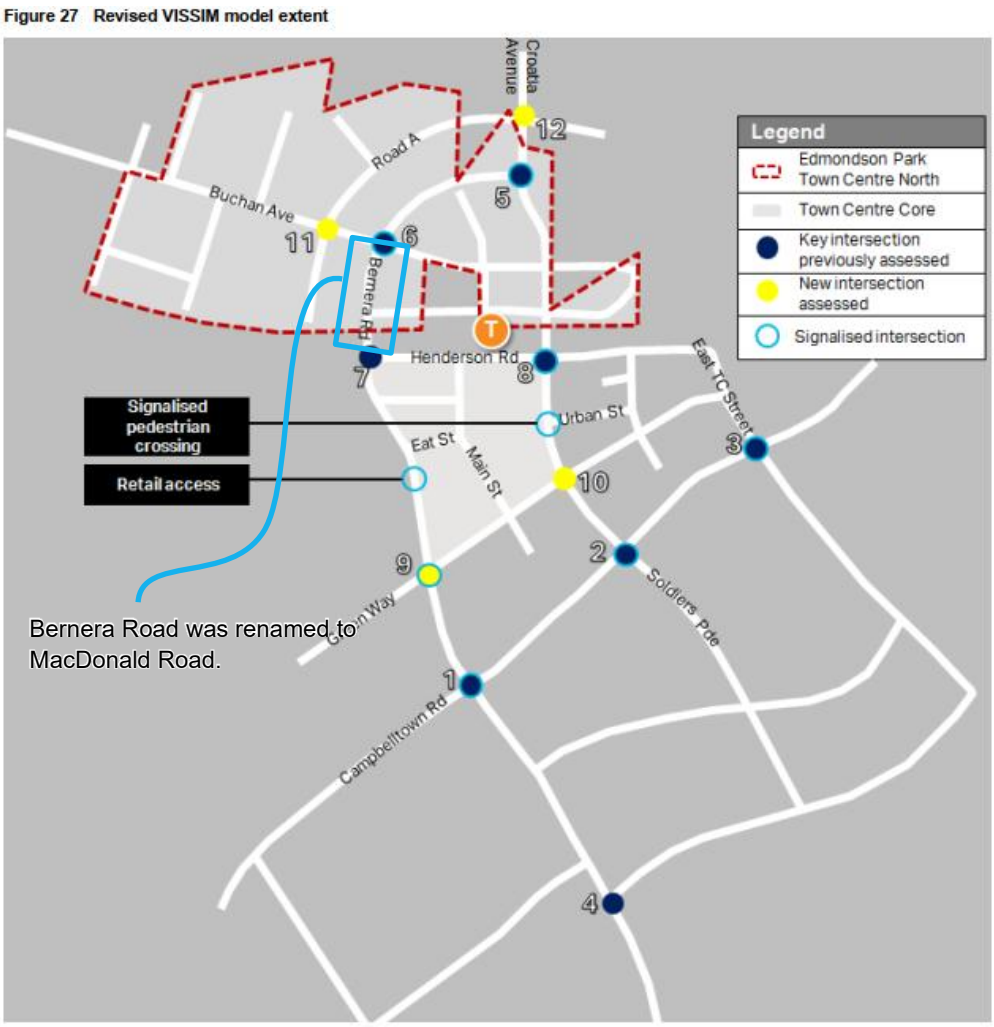
Table 4-3 2026 AM and PM peak hour intersection performance

Intersection	2026 Peak Hour	Volumes (veh/hr)	Average Delay (sec)	Overall Level of Service
1. Campbelltown Rd / MacDonald Rd	AM	3,340	44.6	D
	PM	3,641	51.7	D
2. Campbelltown Rd / Soldiers Pde	AM	2,404	40.3	C
	PM	2,651	47.1	D
3. Campbelltown Rd / East Town Centre St	AM	2,910	54.4	D
	PM	3,343	42.4	D
4. MacDonald Rd / Primary School South	AM	1,596	10.7	A
	PM	1,924	23.2	B
5. MacDonald Rd / Soldiers Pde / Croatia Ave	AM	1,437	13.3	A
	PM	1,547	16.3	B
6. MacDonald Rd / Buchan Ave	AM	1,956	53.9	D
	PM	2,144	33.9	C
7. MacDonald Rd / Henderson Rd	AM	1,810	26.1	B
	PM	1,900	18.4	B
	AM	1,188	41.0	C

Intersection	2026 Peak Hour	Volumes (veh/hr)	Average Delay (sec)	Overall Level of Service
8. Soldiers Pde / Henderson Rd	PM	1,476	41.3	C

Source: AECOM, 2018, *Edmondson Park South - Concept Plan MOD 5 (TMAP)*.

Figure 4-2 VISSIM model extent



Source: AECOM, 2018, *Edmondson Park South - Concept Plan MOD 5 (TMAP)*.

4.4.2 Available base models

The Edmondson Park South Concept Plan (MP10_0118) was lodged by Landcom and established the overall planning framework for Edmondson Park South. It was approved under the historical Part 3A of the EP&A Act.

This original application included the preparation of a VISSIM model. This model was prepared in consultation with Liverpool City Council, Transport for NSW and Roads and Maritime Services.

Landcom sought a modification to the original concept approval (MOD 5), which was approved in 2025. AECOM prepared a TMAP in 2020 to support the modification. This included an update to the VISSIM model to capture the traffic generation of the increased yield sought under Mod 5. No issues were raised by TfNSW during the most recent modification to the use of the Landcom VISSIM model. Comments from Council and TfNSW were on sharing the model with Council and testing of pedestrian demands. DPHI endorsed the use of this model for use in this SSDA.

A copy of the model used in preparing the TMAP has been provided. A comparison between the received model and the results reported in the TMAP is shown in **Table 4-4**. The differences are deemed acceptable. For the purposes of the traffic assessment, the provided model's results will act as the future year base.

Table 4-4 Differences between the TMAP results and the AECOM provided model

Intersection	MOD 5 TMAP (AM)			MOD 5 TMAP (PM)			Model (AM)			Model (PM)			Difference (AM)		Difference (PM)	
	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	Vol	Delay
Campbelltown Rd | Bernera Rd	3,340	44.6	D	3,641	51.7	D	3,480	45.0	D	4,164	67.4	E	+4%	+0.4	+14%	+15.7
Campbelltown Rd | Soldiers Pde	2,404	40.3	C	2,651	47.1	D	2,563	49.5	D	2,713	47.9	D	+7%	+9.2	+2%	+0.8
Campbelltown Rd | East Town Centre St	2,910	54.4	D	3,343	42.4	D	2,941	29.4	C	3,278	19.7	B	+1%	-25.0	-2%	-22.7
Bernera Rd | Primary School South	1,596	10.7	A	1,924	23.2	B	1,791	14.6	B	1,919	9.9	A	+12%	+3.9	-0%	-13.3
Bernera Rd | Soldiers Pde | Croatia Ave	1,437	13.3	A	1,547	16.3	B	1,268	20.6	B	1,700	22.0	B	-12%	+7.3	+10%	+5.7
Bernera Rd | Buchan Ave	1,956	53.9	D	2,144	33.9	C	1,870	47.0	D	2,274	31.8	C	-4%	-6.9	+6%	-2.1
Bernera Rd | Henderson Rd	1,810	26.1	B	1,900	18.4	B	1,722	25.9	B	2,087	19.2	B	-5%	-0.2	+10%	+0.8
Soldiers Pde | Henderson Rd	1,188	41.0	C	1,476	41.3	C	1,467	39.9	C	1,003	41.6	C	+23%	-1.1	-32%	+0.3
Bernera Rd | Green Way	1,630	38.2	C	2,026	34.2	C	1,702	37.8	C	2,351	26.6	B	+4%	-0.4	+16%	-7.6
Soldiers Pde | Green Way	921	21.1	B	1,046	15.3	B	1,251	38.9	C	613	8.9	A	+36%	+17.8	-41%	-6.4

4.5 Summary

The future conditions for Edmondson Park Town Centre North can be summarised as follows:

– Future year land use changes

- The Edmondson Park precinct will continue its transition from former rural land to a high-density mixed-use centre within the South West Growth Area.
- Updated MOD 5 assumptions include increased residential density around Edmondson Park Station, redistribution of dwellings and land uses within the town centre boundary, and an updated school layout and capacity.
- These changes result in higher baseline population and employment activity, generating increased trip-making independent of the proposal.

– Future transport network

- Rail services on the T2 Inner West & Leppington Line and T5 Cumberland Line are expected to continue operating at current high-frequency levels, with no additional services introduced before 2026.
- Existing bus routes and the on-demand bus zone are expected to remain in operation, with the broader precinct identified for future bus priority and strategic network upgrades as the population increases.
- The active transport network will expand, with continuous shared paths along Campbelltown Road and Soldiers Parade supported by additional local links in Liverpool Council's bicycle network.
- Road network improvements across the precinct are expected to enhance regional connectivity and support increased travel demand as the town centre matures. These upgrades are intended to improve corridor capacity, intersection performance and access to key regional routes.

– Future year baseline performance

- MOD 5 VISSIM modelling shows increased through-traffic and turning movements across the precinct by 2026, reflecting higher residential yields and maturing travel patterns.
- Key links such as Bernera Road, Soldiers Parade, Croatia Avenue and Campbelltown Road are forecast to experience higher peak-hour volumes consistent with their role as primary movement corridors.
- For the purpose of this assessment, the models that are available were used.
- Overall, intersections are expected to operate within acceptable levels of service under the 2026 baseline, with higher delays occurring at Campbelltown Road intersections during the PM peak due to commuter-direction flows.

The proposal

5

5.1 Proposed planning amendments

To facilitate the proposed development described in **Section 5.2**, a Rezoning Proposal is sought to seek the following amendments to the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021* (Precincts SEPP):

- Amend the Height of Buildings Map to apply a suite of maximum building heights across the site, ranging from 52m – 135m;
- Amend the Floor Space Ratio Map to apply maximum FSRs of 3.7:1 - 5.4:1 across the site;
- Remove the requirement for a Development Control Plan for the site;
- Permit development for the purposes of 'commercial premises' on Site 5.

5.2 Proposed development

The proposed amendments to the Precincts SEPP, as outlined above, will facilitate the following development, sought via a concurrent SSDA. Specifically, the proposed works sought under the SSDA include:

- Construction of fourteen residential towers (ranging in height between 6 to 40 storeys) over five podiums (ranging in height between 2-5 storeys), comprising:
  - Mixed-use podiums in Site 5.
  - Public library in Site 3.
  - A total of 1,805 residential apartments located above in a combination of build-to-sell, affordable, and co-living formats.
- Basement car parking.
- Associated landscaping and public domain improvements, including a new publicly accessible plaza, public library and through-site links.

It is noted that the project will commit to providing 15% of the GFA as affordable housing for a minimum of 15 years, to be managed by a registered Community Housing Provider (CHP).

For a detailed description of the proposed development, refer to the Environmental Impact Statement (EIS) prepared by Beam Planning, and the Architectural Drawings prepared by Plus Architecture. The breakdown of the development yields for all three sites is summarised in **Table 5-1**.

Table 5-1 Project yield

Component	Site 3	Site 4	Site 5
Co-Living Rooms	–	–	180
Studio Apartments	–	–	172
1-Bedroom Apartments	165	108	232
2-Bedroom Apartments	254	264	212
3-Bedroom Apartments	72	75	71
Total Dwellings	491	447	867

5.3 Access arrangements

Site access arrangements are depicted in **Figure 5-1**.

Figure 5-1 Access arrangements

Site 3 will gain vehicular access from Shaggy Ridge Road, while Site 4 will be served by vehicular access on Jericho Road, both supporting residential parking and service vehicle movements. The locations of these access points have been deliberately arranged away from Buchan Avenue, which forms the primary approach to the new school and is expected to experience concentrated pedestrian activity and school-related pick-up and drop-off. Positioning accesses on the secondary streets reduces conflict with school traffic, enhances pedestrian safety along Buchan Avenue, and ensures vehicle entry and exit movements from both sites occur in a lower-intensity traffic environment.

Site 5 accommodates the most complex access arrangement due to its mixed-use role within the precinct. The vehicle entry is located on Buchan Avenue (entry only), supported by a one-way internal loop road along the eastern and southern edges of the site, with egress onto Horrie Road. Two separate access points from this internal road provide entry to the basement car parks, and a dedicated, segregated loading dock access is provided for the supermarket to avoid conflicts with customer traffic.

For pedestrians, all three sites provide active frontages along their surrounding streets, ensuring continuous, legible and well-connected walking routes throughout the precinct. The proposal also aims to strengthen pedestrian connectivity between the development, the High School, and Edmondson Park Station. It does this by widening key footpaths and introducing new wombat crossings along the primary desire lines. These upgrades are designed to create a safer, more legible, and more comfortable walking environment, particularly during peak commuter periods.

5.4 Parking requirement and provision

The parking provision for the proposed development has been assessed with reference to the relevant planning and design documents that apply to the Edmondson Park Town Centre North precinct. Given the mixed-use nature of the project and the variety of residential and non-residential land uses proposed, different policy sources apply to different components of the scheme. The adopted approach ensures that parking supply is appropriate for a high-density, transit-oriented location while remaining consistent with statutory controls and precinct-specific design requirements.

For residential apartments and retail uses, parking has been assessed against the maximum rates contained within the *Edmondson Park Landcom Town Centre North Design Guidelines (2024, Willow Tree Planning)*. These guidelines serve as the primary reference document for the precinct and specify upper limits on car parking that may be provided for dwellings and retail tenancies within the town centre. This approach aligns with the strategic intent for Edmondson Park to develop as a walkable, transit-focused mixed-use centre.

The Design Guidelines do not contain parking rates for co-living, build-to-rent or affordable housing. Accordingly, parking for these components has been assessed under the *State Environmental Planning Policy (Housing) 2021*, which includes dedicated parking controls for these typologies. As outlined in Section 3.4, the site is located within 800 metres of Edmondson Park Station and is therefore classified as an accessible area, which means the lower parking rates under the Housing SEPP apply. These rates operate as minimums and reflect the expectation that well-located housing near high-frequency public transport relies less on private vehicle ownership.

Similarly, the Design Guidelines do not include rates for gym or childcare uses. Parking for these land uses has therefore been determined using the *Liverpool Development Control Plan (LDCP) 2008*, which provides established minimum parking benchmarks suitable for these activities.

Provision for bicycle and motorcycle parking has been assessed using the *Edmondson Park Landcom Town Centre North Design Guidelines (2024)*, which set out the relevant requirements for residential, mixed-use and retail premises. These controls support active transport uptake and provide necessary facilities to reinforce the precinct's transit-oriented structure. Across the project, it is noted that the Edmondson Park Town Centre North Design Guidelines apply maximum rates, whereas the Housing SEPP and LDCP apply minimum rates.

5.4.1 Car parking provision

The residential parking is shown in **Table 5-2.** Across the three sites, the totals show a consistent pattern of providing well below the maximum permissible parking, which aligns with the transit-oriented vision for Edmondson Park Town Centre. Site 3 supplies 435 spaces against a maximum of 663, Site 4 supplies 461 against 620, and Site 5 supplies 405 against 869. In total, the development provides 1,301 spaces compared with a combined maximum of 2,152, demonstrating a deliberate shift away from car-dependent design.

Additionally, the co-living component on Site 5 is proposed to provide no on-site car parking. The zero-parking approach aligns with the intended character of Edmondson Park Town Centre, where planning emphasises compact, transit-oriented living supported by high-frequency public transport and strong walkability. Co-living is designed as a low-car housing model, with compact units, shared facilities and a resident profile that typically relies on rail, bus, walking, cycling and shared mobility rather than private vehicles.

In a precinct located within easy walking distance of Edmondson Park Station and the Town Centre's services, the expectation is that daily mobility will be met through these non-car modes. Providing no dedicated parking, therefore, reflects both the lifestyle patterns associated with co-living and the broader vision for a dense, efficient, and sustainable Town Centre where private vehicle ownership plays a limited role.

Table 5-2 Residential car parking requirements vs provision

Site No.	Type	Yield	Rate	Req.		Prov.
Site 3	Studio/1-bedroom	165	1 space per dw (max)	165	663	435
	2-bedroom	254	1.2 spaces per dw (max)	305		
	3-bedroom	72	2 spaces per dw (max)	144		
	Visitor	491	1 space per 10 dws (max)	49		
Site 4	Studio/1-bedroom	108	1 space per dw (max)	108	620	461
	2-bedroom	264	1.2 spaces per dw (max)	317		
	3-bedroom	75	2 spaces per dw (max)	150		
	Visitor	447	1 space per 10 dws (max)	45		
Site 5	Co-living	180	0.2 space per dw (min.)	36		0
	Studio/1-bedroom	404	1 space per dw (max)	404	869	405
	2-bedroom	212	1.2 spaces per dw (max)	254		
	3-bedroom	71	2 spaces per dw (max)	142		
	Visitor*	687	1 space per 10 dws (max)	69		

* Visitor parking only applies to market dwellings

The non-residential car space breakdown is shown in **Table 5-3**. Across the non-residential components, the totals indicate that the development provides fewer spaces than the applicable maximums, reflecting the same principles taken for the residential component.

Excluding the library (which has no prescribed rate), the childcare, retail and gym uses generate a combined maximum of 253 spaces, while 177 spaces are proposed.

Table 5-3 Non-residential car parking spaces

Site No.	Development component	Yield	Rate	Source	Requirement	Provision
Site 3	Library	1,419m^2	N/A			8
Site 5	Childcare	120 children + 8 staff	1 space per 10 children and staff member	Liverpool DCP 2008	13	13
	Retail	3,153m^2 GFA	4.1 spaces per 100m^2 GLFA	Edmondson Park Landcom Town Centre North Design Guidelines 2024	129	73
	Gym	2,459m^2 GFA	1 space per 22sqm of LFA	Liverpool DCP 2008	111	83
			Total (does not include the library)		**253**	**177**

*GFA was assumed to be equal to LFA and GLFA.

5.4.2 Motorcycle parking

Motorcycle parking depends on the number of car spaces provided and is stipulated in the Design Guidelines as 1 motorcycle space per 20 car spaces.

In the context of the Edmondson Park Town Centre, where private vehicular travel is being discouraged, a lower rate is considered appropriate due to the very low motorcycle ownership and mode share observed across Sydney, particularly within envisioned transit-oriented precincts.

Motorcycle parking demand is typically marginal compared with car and bicycle demand, and the provision of extensive bicycle parking within the development further supports short-trip substitution away from motorised modes. In a Town Centre environment where efficient use of basement and podium space is critical, oversupplying a low-demand mode would not represent good planning or design practice.

A rate of 1 motorcycle space per 50 car spaces provides a more appropriate balance between accommodating genuine demand and avoiding unnecessary allocation of valuable floor area. The motorcycle parking requirements are summarised below in **Table 5-4**.

Table 5-4 Motorcycle parking

Site No.	Yield	Rate	Source	Requirement	Provision
Site 3	443 spaces	1 space per 20 car spaces	Edmondson Park Landcom Town Centre North Design Guidelines 2024	22	9
Site 4	461 spaces			23	9
Site 5	582 spaces			29	12
			Total	**74**	**30**

5.4.3 Bicycle parking

The bicycle parking requirements and provision is summarised in **Table 5-5**. The development provisions as stipulated by the Design Guide support the envisioned shift towards active transport.

Table 5-5 Bicycle parking

Site No.	Development component	Yield	Rate	Source	Requirement	Provision
Site 3	Residential	491 dw	1 space per dwelling (min)	Edmondson Park Landcom Town Centre North Design Guidelines 2024	491	491
Site 4	Residential	447 dw	1 space per dwelling (min)		447	447
Site 5	Residential	867 dw	1 space per dwelling (min)		867	867
	Retail – staff	3,207m^2	1 space per 200m^2 GFA		16	16
	Retail – visitor		2 plus 1 space per 100m^2 GFA		34	34
			Total bicycle parking spaces for residents/ staff		**1,839**	**1,839**
			Total bicycle parking spaces for visitors		**34**	**34**

5.5 Servicing

Service vehicles are expected to share access to each site with private cars. They are able to enter and exit in a forward direction. However, the reversing manoeuvre is required within the loading dock area. The delivery vehicle should be equipped with appropriate reversing sensors and alarms to alert nearby pedestrians and other vehicles of the reversing movement.

Each loading dock has been designed to accommodate Council's 9.9m waste truck, the breakdown of each site's waste vehicle capacity is documented in **Table 5-1**.

Table 5-6 Project yield

Vehicle Type	Site 3	Site 4	Site 5
B99/Van	4	4	9
Small Rigid Vehicle	2	2	4
9.9m Council Waste Truck	1	1	1
Car wash bay	2	2	2
Total	**9**	**9**	**16**

A loading dock management plan is expected to be prepared at a later stage of development to minimise conflicts between service vehicles and other car park users.

All loading docks were assessed for compliance with AS2890.2.

5.6 Car park design compliance

The proposed car parking layout has been reviewed against the relevant Australian Standards, including AS2890.1:2004 (off-street car parking), AS2890.2:2018 (off-street commercial vehicle facilities), AS2890.3:2015 (bicycle parking), and AS2890.6:2022 (accessible parking). The design generally complies with these standards, with minor refinements to be addressed in detailed design, as summarised below.

All service and loading bays achieve the required 3.5-metre width and are matched to the length of the applicable design vehicle, being either a 9.9-metre council waste collection truck or a 6.4-metre Small Rigid Vehicle. Manoeuvring areas have been designed to enable safe forward entry and exit consistent with AS2890.2.

Resident parking has been designed to minimum Class 1A standards, providing 2.4-metre by 5.4-metre spaces supported by 5.8-metre aisles to enable compliant manoeuvring. Parking associated with non-residential land uses (Site 5 only), including the childcare centre, gym, and retail premises has been designed to Class 3A with 2.7-metre by 5.4-metre spaces and 6.2-metre aisles to suit the higher turnover and larger vehicles expected.

Minor refinements to the basement layout of Site 5 will be incorporated in the post-submission, namely the relocation of several bicycle parking spaces to maintain the minimum clear aisle widths required under AS2890.1. These changes do not affect the overall parking provision, access arrangements or circulation strategy.

Accessible parking complies with AS2890.6:2022, with each bay sized at 2.4 metres by 5.4 metres and accompanied by an adjacent shared area of equal dimensions. Gradients, vertical clearances and adjacent circulation areas meet all minimum criteria.

The southern ramp of Site 5 will operate with reversed ramp flow to minimise potential vehicle conflicts at the basement access point. This arrangement will be clearly supported by linemarking and signage to ensure correct driver behaviour and safe operation. All remaining ramps across the development will operate with standard circulation arrangements.

All remaining design elements, including driveway locations, internal road widths, ramp design (Site 5), bicycle parking, motorcycle parking and general circulation arrangements, align with the requirements of the relevant standards. Overall, the proposed car parking layout satisfies all applicable Australian Standards and provides a safe, efficient and accessible parking arrangement for all users.

Key swept path diagrams demonstrating compliant manoeuvring of the relevant design vehicles are included in **Appendix C**. These swept paths demonstrate that sufficient space is available to accommodate compliant vehicle movements within the proposed layout. The precise operational arrangements and any minor refinements to manoeuvring areas will be further confirmed during the detailed design phase.

5.7 Green travel plan

A Green Travel Plan (GTP) is a set of initiatives that seek to encourage people to travel by public transport, walking, or cycling. This is often known as Travel Demand Management (TDM), where policies, objectives, measures and targets are applied to influence travel behaviour.

GTPs largely focus on the adequate provision of infrastructure and services and programs/initiatives that encourage people to use them. As parking and roadways enable car use, investment and thoughtful design in active transport infrastructure and public transport services are needed to enable sustainable travel behaviour. For this site, the GTP should propose to: a

– Provide a highly permeable and safe walking and cycling network, connecting regional routes and major transport hubs.

– Have adequate, safe and accessible bicycle parking opportunities.

– Provide safe and direct access to public transport services to establish a non-car travel behaviour.

The development is within 400m-600m (5-8 minute walk) of Edmondson Park train station. The station has well-maintained amenities, including commuter parking, bike racks and bus connections, offering a convenient multimodal transport hub for the growing community. The station is vital in enhancing connectivity and accessibility within southwestern Sydney. The facilities available at Edmondson Park Station are shown in **Figure 5-2**.

Figure 5-2 Edmondson Park Station facilities

Source: Transport for NSW

The presence of adequate, well-lit, sheltered waiting areas and frequent services can improve public transport accessibility and attractiveness. Given the reduced parking rates and the availability of bus and train services within the region, public transport is likely to be the key mode of transport for the residents of the proposed development.

Additionally, a range of initiatives that could encourage the uptake of active and public transport have been tabulated in **Table 5-7**.

Table 5-7 Sustainable travel initiatives

Mode	Initiative
Public transport	– Provide residents with public transport information and estimated travel times to key destinations. – Information can be in the form of bus network maps circulated to residents or made available in shared spaces, e.g. in the building lobby or car park.

Mode	Initiative
	– Clear signage and wayfinding to support bus stop access.
Active transport	– Provide residents with maps of active transport routes around the LGA. – Provide e-bike charging facilities within the bicycle parking area. – Provide sufficient lighting and surveillance at the entrance and pathways within the site to safely access bicycle parking and the local walking network. – Promotion of bicycle initiatives – such as cycle-to-work days, free bike check-up events, and bike riding lessons.
Car use	– The development is proposing reduced parking rates, limiting car use and vehicle trips compared to the maximum available.
Monitoring	– While developing a Travel Plan to manage travel demand and reduce reliance on car travel, it is more important to monitor and evaluate the effectiveness of individual measures and the need to adjust them. – Different initiatives may have different levels of effectiveness for this specific site. Monitoring mode share and people's sentiment will be key to understanding how to encourage sustainable travel behaviour in the proposed site and subsequent developments.

Impact assessment

6

6.1 Four-step travel model

6.1.1 Trip generation by mode

The proposal comprises residential and non-residential uses. Person and vehicle trip generation were calculated using the Guide to Transport Impact Assessments 2024 (GTIA 2024) and is summarised below in **Table 6-1**.

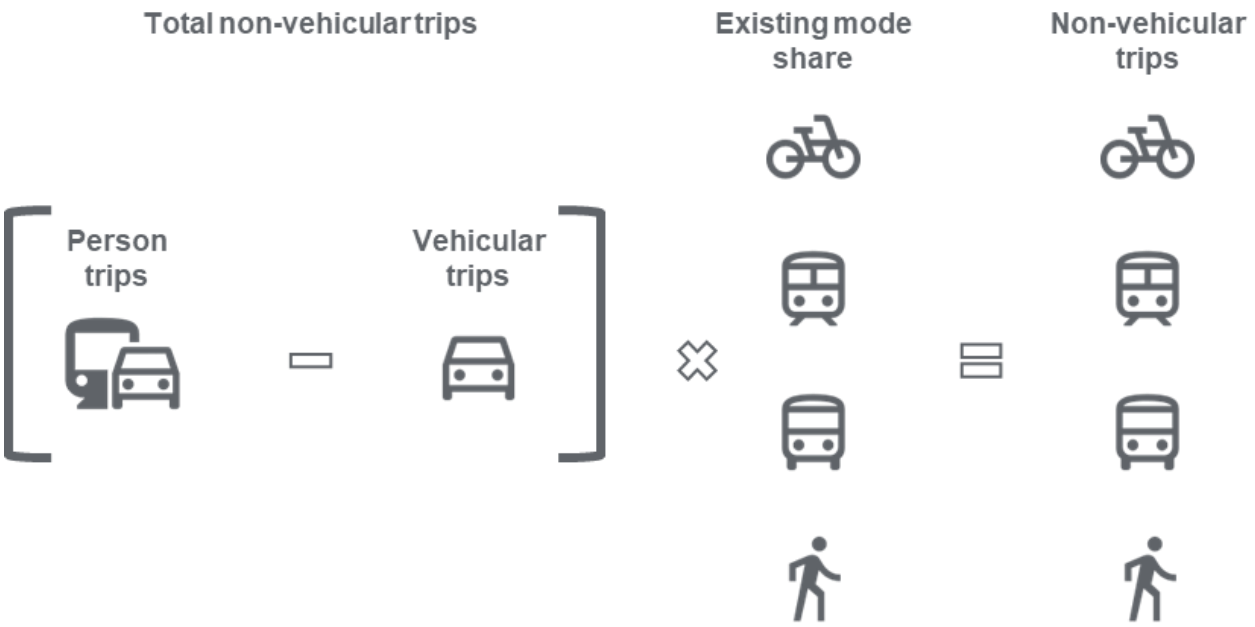
Table 6-1 Trip generation rates

Land use	Peak hour person trip rate		Vehicular trip rate		Source
	AM	PM	AM	PM	
High-density residential	0.35P+3.65	0.35P+3.65	0.19P+1.79	(0.35P+3.65) x 65% car mode share*	Residential (2017), GTIA 2024
Retail	3.58 per 100m^2 GFLA	7.46 per 100m^2 GFLA	1.78 per 100m^2 GFLA	3.71 per 100m^2 GFLA	Shopping centres (2011), GTIA 2024
Gym	8.5 per 100m^2 GFA	6.7 per 100m^2 GFA	3.6 per 100m^2 GFA	3.6 per 100m^2 GFA	Fitness Centres (2014), GTIA 2024
Childcare centre	0.81 per child place	0.67 per child place	0.69 per child place	0.33 per child place	Childcare (all excl. OSHC, 2015) GTIA, 2024

Where P = Parking spaces
* In the absence of PM vehicular trip rate for high density residential dwellings with low public transport accessibility, the PM person trip rate along with the estimated mode share has been used to estimate the trip generation.

With the person and vehicular trip generation established, the remaining trip generation was estimated using the methodology illustrated in **Figure 6-1**. The difference between person and vehicle trips was split between modes based on existing travel behaviour.

Figure 6-1 Trip generation methodology for the non-vehicular trips



The proposed library has not been separately included in the trip generation assessment. Its inclusion within the Contributions Plan (Item CF01 in **Figure 6-2**) indicates that this community facility formed part of the original master plan (MOD 5 approved master plan) assumptions for the precinct and was therefore already accounted. In this context, the current proposal is simply delivering a community facility that was envisaged and planned for as part of the original development framework, rather than introducing a new land use that would generate additional trips.

Figure 6-2 Infrastructure service delivery plan proposed as part of MOD 5

Draft MOD 5 Infrastructure Service Delivery Plan – Landcom

Contribution Plan Ref	Type – land or works	Description	Contribution Value	Developer contribution (March 2024)	Delivery Method	Landcom response with clarified comments - 5/2/25		
COMMUNITY PLACESPACES –CENTRES & PLAZA						**Comment**	**Value**	**Timing**
CF01	Land	Multipurpose Community Centre and Library – 6,500sqm – location unidentified. *Note: $695/sqm land value applied in contribution plan.*	Dedication of land (valuation)	6,500sqm x $695/sqm = $4,517,500 for land acquisition.	Land Dedication (6,500sqm) for site owned by Landcom or Monetary Contribution	Landcom accepts a maximum monetary contribution for this item totalling **$12,639,199**. Landcom notes Council's postion that the location is not identified. If Council intends for this facility to be located on Landcom's land, Landcom must agree to the location and the value of the land (determined through a land valuation process). If the value of the land is greater than the notional value of **$4,517,500**, then the monetary contibution towards works would be reduced so that the total contibution remains **$12,639,199**. Landcom will not make any further monetary contribution to cover land in relation to this item. If located outside of Landcom's land, the facility should be in proximity to Edmondson Park.	$ 12,639,199	Monetary contribution to be paid prior to issuing the first OC in Precinct 9 or within 3 years of determination of MOD 5, whichever occurs sooner.
CF01	Works – Multipurpose community centre and library	Multipurpose Community Centre and Library – facility size amended to cater for increased dwelling yield (and population).	$35,297,000.00	$8,212,619 (apportioned)	Monetary Contribution (and 12-month defect period)			

Source: Letter of Offer to enter into a Planning Agreement (MP 10_0118 MOD 5), Landcom, 2025

The trip generation is summarised below in **Table 6-2**.

Table 6-2 Trip generation results

Site	Land use	Person trips		Active transport		Public transport		Private vehicle	
		AM	PM	AM	PM	AM	PM	AM	PM
3	Residential	159	159	18	14	55	42	86	103
4	Residential	168	168	19	15	58	44	91	109
5	Residential	150	150	17	13	51	39	81	97
	Retail	119	245	15	31	46	94	58	120
	Gym	213	213	31	31	93	93	89	89
	Childcare centre	101	47	5	2	14	5	83	40
Total		**910**	**981**	**106**	**106**	**317**	**317**	**487**	**558**
Mod 5 person trips		**359**	**349**	**48**	**41**	**143**	**124**	**169**	**184**
Net person trips		**+551**	**+632**	**+58**	**+65**	**+174**	**+194**	**+318**	**+374**

6.1.2 Trip distribution

As most of these trips are expected to be work-related, the Journey to Work 2016 dataset provides the most appropriate basis for trip distribution. To simplify assignment to the road network, the top SA2 destinations were grouped into cardinal directions. Based on this approach, the expected trip distribution is as follows:

- Internal: 23 per cent
- East: 27 per cent
- Northeast: 30 per cent
- North: 6 per cent
- South: 6 per cent
- Southwest: 4 per cent
- Southeast: 3 per cent
- Northwest: 2 per cent

6.1.2.1 Sustainable modes

It is expected that most public transport trips will be by bus and rail from Edmondson Park Station. The station is within a 400m-600m walk of the site and is served by several services providing access to the City and southwest Sydney.

6.1.2.2 Road network

For the road network, traffic was assigned using dynamic assignment in VISSIM. Under dynamic assignment, traffic demand is an input in the form of one of origin-destination matrix/matrices specifying the starting and end points of trips and the number of trips between these locations. This allows traffic to be assigned dynamically based on iterations of traffic route calculations established on a number of factors. Common factors used for assignment are Costs, Travel Time (expected, average, smoothed) and Distance. Once the dynamic model routes reach an equilibrium / converged to a comment set of repeatable routes. The models are deemed to be 'converged' and ready for assessment.

6.2 Impact appraisal

6.2.1 Walking and cycling

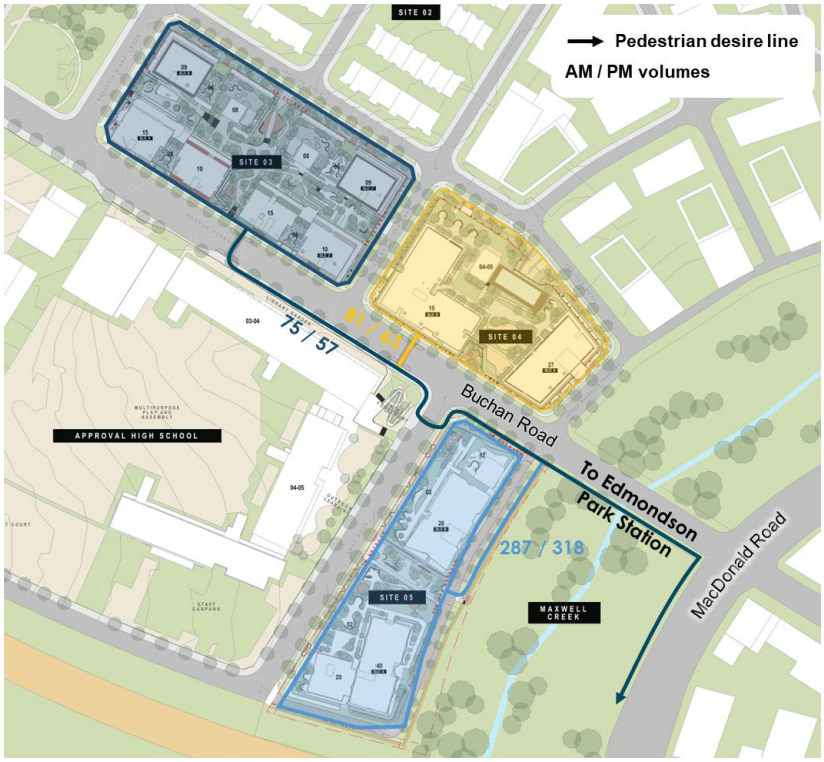
The MOD 5 proposal includes a suite of new and upgraded pedestrian and cycling links (refer to **Section 4.3.2**) that are intended to enhance the overall capacity, connectivity and amenity of the future active transport network across Edmondson Park. The TMAP supporting MOD 5 identifies improved internal connections, stronger links to the town centre and better integration with surrounding open-space corridors, ensuring that walking and cycling become more convenient and attractive modes for short local trips.

In this context, the additional 58 AM and 65 PM peak trips represent a modest increase that can be readily accommodated within the enhanced active-transport framework being delivered under MOD 5.

However, it is important to recognise that the walking and cycling network also plays a key role in supporting the net additional public transport trips generated by the development, particularly given that most of these trips will be directed to Edmondson Park Station. The pedestrian infrastructure improvements proposed as part of this development—such as widened footpaths and new wombat crossings—are specifically intended to enhance the capacity, safety, and overall amenity of the walking routes used by station-bound commuters (anticipated volumes are shown in **Figure 6-3**). These upgrades also provide improved connections to the High School, delivering a broader community benefit by creating safer and more legible routes for students.

With these measures in place, the development has effectively mitigated its walking and cycling impacts and contributes positively to the wider active-transport environment.

Figure 6-3 Active + public transport volumes anticipated to go to Edmondson Park Station



6.2.2 Public transport

In addition to the new walking and cycling links, MOD 5 also introduces a series of new and future public transport connections, including short-, medium- and long-term bus corridors that strengthen public transport accessibility in Edmondson Park (refer to **Section 4.3.1**). These planned routes expand the reach and convenience of public transport, supporting higher levels of mode shift as the area develops.

The proposal is expected to generate approximately 174 AM peak and 194 PM peak public transport trips. As highlighted in **Section 3.4**, the majority of services operating through Edmondson Park Station currently have substantial spare capacity (at a minimum 51 per cent available capacity), indicating that the network is well-positioned to absorb the forecast increase in demand.

Taken together, the existing and planned public transport network is capable of accommodating the additional trips without adverse operational impacts.

6.2.3 Road network

To assess the potential uplift in traffic generation of Sites 3 to 5, the AM and PM peak hour VISSIM models previously developed for the Landcom Edmondson Park were utilised to assess the operational performances of the following intersections:

1. Buchan Avenue | Bezentin Ridge Road
2. Buchan Avenue | Horrie Road
3. Soldiers Parade | Croatia Avenue
4. Henderson Road | Soldiers Parade
5. General Boulevard | Soldiers Parade
6. Borneo Street | Campbelltown Road
7. Soldiers Parade | Campbelltown Road
8. MacDonald Road | Campbelltown Road

Figure 6-4 Key intersections for assessment

6.2.3.1 Landcom Edmondson Park VISSIM model review

The Landcom Edmondson Park VISSIM models were reviewed and found to contain several irregularities, making the models, in its received state, unsuitable for assessing the impacts of revised development trips on the surrounding road network.

It was noted that the modelling contained a mixture of fixed routing, mainly utilised for on-street parking demands, and dynamically assigned vehicle routes, for all remaining vehicle demands. With dynamic assignment, vehicles learn which routes perform best during the simulation. As such, route choice is a behaviour and not a predefined input. Typically, the routing choice is constantly updated, based on the completed routes, to inform follow-up vehicles on what route to take in advance.

For dynamic assignment, traffic demand is an input in the form of one of origin-destination matrix/matrices specifying the starting and end points of trips and the number of trips between these locations. This allows traffic to be assigned dynamically based on iterations of traffic route calculations established on a number of factors. Common factors used for assignment are Costs, Travel Time (expected, average, smoothed) and Distance. Once the dynamic model routes reach an equilibrium / converged to a set of repeatable routes. The models are deemed to be 'converged' and ready for assessment.

With the MOD 5 modelling, it was identified that a significant proportion of dynamically assigned traffic demand was bypassing the primary arterial corridor of Campbelltown Road within the modelled network. For example, vehicles originating from Campbelltown Road (east) and destined for Buchan Avenue were predominantly routed through the local internal road network, turning right onto Eastern Avenue and then travelling via Henderson Road or Soldiers Parade to access Buchan Avenue. Conversely, vehicle trips destined to Campbelltown Road (east) were observed to mostly utilise the local network rather than the main arterial road.

Such localised routing requires multiple turns through lower-speed environments and is not representative of typical driver behaviour. A more realistic pattern, especially in an uncongested network, would involve vehicles remaining on the arterial road before turning onto primary collector roads. While this issue did not materially affect traffic volumes assessed in the Landcom Edmondson Park VISSIM model, it became more pronounced when assessing increased traffic volumes associated with Sites 3–5.

The model's higher preference for local road usage was attributed to the retention of the default vehicle setting within the model. While additional cost values were manually applied to multiple links, the default vehicle configuration considered travel time only and did not account for the added distance or cost coefficients, i.e., vehicles did not consider cost factors as part of their route decision-making process. Such a consequence resulted in:

– Vehicle route choice based only on the shortest expected travel times between the origin and destination zones.

– Vehicles avoiding major roads and using lower-order local road links.

– Modelling not capturing factors that typically influence drivers, such as avoiding multiple turns, delays from on-street parking, slower traffic or pedestrian crossings.

6.2.3.2 VISSIM model amendments

To reflect a more realistic driver behaviour, the following model adjustments were applied to the Landcom Edmondson Park VISSIM models:

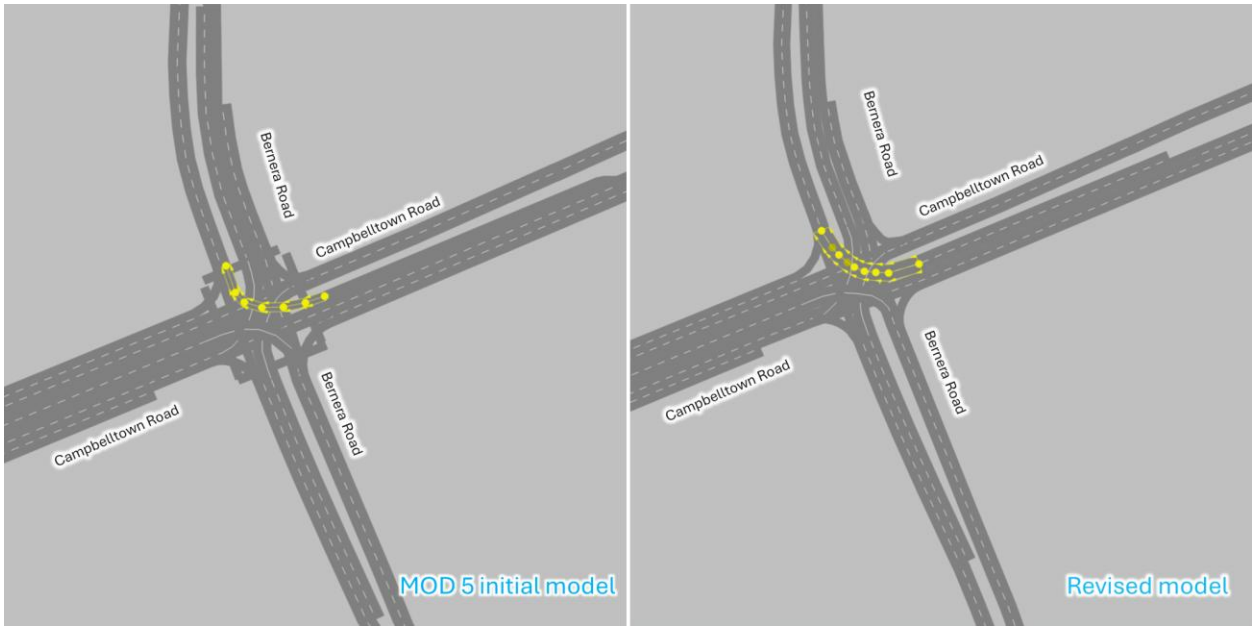
– Application of 'Cost' coefficient values of 1.00 for Travel Time, 0.144 for Distance and 1.00 Cost applied to all vehicles.

– Additional costs were added to turns and the use of local roads to encourage vehicles to utilise more practical and realistic routes using major roads, consistent with the road hierarchy.

– Intersection layout update:

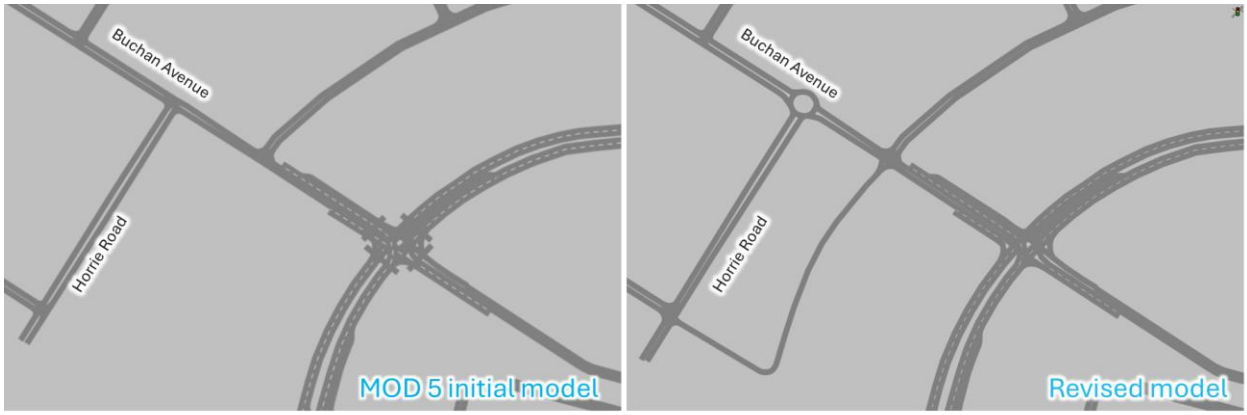
  - The Campbelltown Road / MacDonald Road intersection was updated to provide two right-turn lanes from Campbelltown Road (east) to Soldiers Parade (north), replacing the previous single right-turn lane. This change reflects the higher turning demand between the two major roads and was implemented by modifying the Campbelltown Road (east) approach so that the kerbside lane operates as a shared left-turn and through lane, rather than being dedicated solely to left-turn movements, as shown in **Figure 6-5**.

Figure 6-5 Campbelltown Road | Bernera Road intersection adjustment



  - The Buchan Avenue | Horrie Road intersection layout was updated as per the existing roundabout layout and a new road link was added east of the intersection for Site 5, as shown in **Figure 6-6**.

Figure 6-6 Buchan Avenue intersection updates



– Movements at roundabouts were adjusted to discourage unnecessary U-turns, whilst maintaining valid U-turn routes.

– Priority settings were amended, including implementation of no-stopping across intersections to provide paths for traffic adjoining road links to enter the intersections.

– Several minor edits were made to improve overall model consistency, structure, and practicality of the models such that vehicles do not overlap each other.

– The models were re-converged to ensure model stability with the applied cost factors and the resulting routing decisions.

6.2.3.3 Road network performance

The following metrics will be used to assess the road transport network performance:

– Level of Service (LoS)

– 95th percentile queue lengths.

Level of Service (LoS) is a typical measure used by transport professionals to assess the operational performance of roads and intersections based on the average delay experienced by all vehicles passing through the road segment or intersection. The LoS, as defined in the *Transport Modelling Guidelines* (Transport for NSW, 2025) is provided in **Table 6-3**.

Table 6-3 Level of Service definitions

Level of Service	Average delay (d) per vehicle in seconds	Performance explanation
A	d ≤ 14.5	Good operation
B	14.5 < d ≤ 28.5	Good with acceptable delays and spare capacity
C	28.5 < d ≤ 42.5	Satisfactory
D	42.5 < d ≤ 56.5	Operating near capacity
E	56.5 < d ≤ 70.5	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control method.
F	d > 70.5s	Unsatisfactory with excessive queuing, requires other control method.

Source: Transport for NSW, 2025, *Transport Modelling Guidelines*.

There is a difference between LoS determination between traffic signals and non-signalised. For traffic signals, the average movement delay and level of service should be taken over all movements. For roundabouts and priority control intersections (with Stop and Give Way signs or operating under the T-junction rule), the critical movement for LoS assessment should be the one with the worst movement delay.

As acknowledged in the *Guide to Transport Impact Assessments* (Transport for NSW, 2024), a comparison of the existing and future average delay provides a better appreciation of the impact of a proposal, and not simply the change in the level of service.

Degree of Saturation (DoS) is included to complement the LoS analysis. The DoS measures the volume-to-capacity ratio for the worst turning movement at an intersection. For instance, a DoS of 1.0 implies that the turning movement is at capacity.

6.2.3.4 Future year with development performance

A comparison of the intersection performances between the 2026 MOD 5 and the additional development trips is summarised **Table 6-4**. The modelling was conducted in accordance with the approved modelling scoping note provided in **Appendix A**.

As expected, the additional demand from the proposal resulted in some of the intersections experiencing higher delay than the base case. Although all intersections continue to operate at acceptable levels of service.

Conversely, there were some intersections that were observed to perform better than the base case in at least one of the peaks, even with the increased demand. Particularly, this was observed in Buchan Avenue | Horrie Road, Soldiers Parade | Campbelltown Road and MacDonald Road | Campbelltown Road.

– Buchan Avenue | Horrie Road: This intersection improved significantly due to its conversion into a roundabout. This configuration is what exists now.

– MacDonald Road | Campbelltown Road: Further review of the MOD 5 base models identified that this intersection was not constrained by overall capacity, but by an inefficient lane allocation. It was observed that the through movement had ample capacity, while the right-turn movement into MacDonald Road were operating well above capacity. To address this imbalance, one of the through lanes was reallocated to provide additional right-turn capacity, improving the operational performance of the intersection.

– Soldiers Parade | Campbelltown Road: After applying more realistic routing behaviour—where vehicles appropriately favour higher-order roads instead of local streets—more traffic began using Campbelltown Road between Soldiers Parade and MacDonald Road, rather than unrealistically diverting via Lawson Street. This indicates that the performance of this intersection declined during both the AM and PM peak periods. However, it was the subsequent lane reallocation at the MacDonald Road | Campbelltown Road intersection that resulted in a more balanced distribution of delays between the right-turn into MacDonald Road and the right-turn into Soldiers Parade.

It also important to note that for the AM peak hour, the model indicated that the demand for on-street pick-up/drop-off bays outside the school along Buchan Avenue far exceeds the capacity. This is the case under both scenarios, that result congestion along Buchan Avenue and errors reported for the model as model input demands are unable to access the parking bays.

Table 6-4 Peak hour intersection performance

Intersection	Peak	Volume (veh/hr)		Average Delay (sec)		Level of Service	
		MOD 5	Dev	MOD 5	Dev	MOD 5	Dev
1. Buchan Avenue | Bezentin Ridge Road	AM	1,259	1,135	9.0	15.1	A	B
	PM	740	849	2.4	2.6	A	A
2. Buchan Avenue | Horrie Road	AM	1,641	1,761	120.0	32.2	F	C
	PM	981	1367	4.8	8.4	A	A
3. Soldiers Parade | Croatia Avenue	AM	1,648	1,717	13.8	10.5	A	A
	PM	1687	1711	10.8	19.0	A	B
4. Henderson Road | Soldiers Parade	AM	1,390	1,244	23.6	13.4	A	A
	PM	1,388	1,048	12.6	3.3	A	A
5. General Boulevard | Soldiers Parade	AM	1,188	1,195	41.0	35.1	C	C
	PM	1,476	973	41.3	42.8	C	D
6. Borneo Street | Campbelltown Road	AM	2,910	3,028	54.4	46.6	D	D
	PM	3,343	3,456	42.4	20.9	D	B
7. Soldiers Parade | Campbelltown Road	AM	2,404	2,560	40.3	57.1	C	E
	PM	2,651	2,695	47.1	28.8	D	C
8. MacDonald Road | Campbelltown Road	AM	3,340	4,280	45.0	53.6	D	D
	PM	3,641	4,563	63.3	51.8	E	D

6.2.4 Parking impact

The residential component not only complies with the maximum rates specified in the Design Guidelines but also demonstrates a thoughtfully balanced approach. With an average rate of just 0.72 parking spaces per dwelling, the development effectively aligns parking supply with sustainable, low-car ownership goals, avoiding overprovisioning.

The co-living component on Site 5 is proposed to provide no on-site car parking. The absence of dedicated parking is not anticipated to create operational issues or on-street parking pressure. As discussed in **Section 5.4.1**, co-living is designed as a low-car housing model, with compact units, shared facilities and a resident profile that typically relies on rail, bus, walking, cycling and shared mobility rather than private vehicles. In a precinct located within easy walking distance of Edmondson Park Station and the Town Centre's services, the expectation is that daily mobility will be met through these non-car modes. Providing no dedicated parking, therefore, reflects both the lifestyle patterns associated with co-living and the broader vision for a dense, efficient, and sustainable Town Centre where private vehicle ownership plays a limited role.

At the same time, the additional parking provided for the retail component offers a practical buffer that accommodates anticipated customer and staff demand, reducing the likelihood of overflow into the surrounding street network. With this combination of restrained residential supply and market-responsive non-residential provision, the development is not expected to generate any adverse on-street parking impacts, and the proposed parking strategy is considered appropriate for the scale and context of the precinct.

Regarding the motorcycle parking shortfall, its demand is typically marginal relative to car parking. A rate of 1 motorcycle space per 50 car spaces provides a more appropriate balance between accommodating genuine demand and avoiding unnecessary allocation of valuable floor area. According to JTW2016 statistics, 0.3 per cent of commuting trips are made by motorcycle. The reduced rate, therefore, is not expected to create operational issues and remains consistent with the broader transport objectives for the precinct.

As noted in the **Section 6.2.3.4**, the model indicates that demand for the on-street pick-up/drop-off bays along Buchan Avenue currently exceeds capacity during the AM peak period. The development directly interfaces with the High School, meaning that any students residing within the site would be expected to walk or cycle rather than be driven. As a result, the development does not generate additional vehicle trips to the school and therefore does not place any further demand on the existing pick-up/drop-off zone.

6.3 Staging of infrastructure

The majority of transport-related infrastructure required to support the development is already committed through the approved master plan under MP 10_0118 MOD 5. This includes the staged delivery of key road upgrades, active-transport links, and public transport corridors that form the backbone of the precinct's movement network. As a result, the development benefits from a coordinated, precinct-wide infrastructure program that has been strategically planned and endorsed through the MOD 5 approval process.

Separate from the upgrades delivered as part of MOD5, the development includes a suite of upgrades aimed at enhancing the surrounding transport network – particularly the pedestrian network. These will be delivered by the Proponent (Urban Property Group) as part of this SSDA. These improvements are summarised in **Table 6-5**.

Table 6-5 Infrastructure delivery program (project-related)

Item	Infrastructure	Responsibility	Timing
1	Public domain works (i.e. footpath widening on the northern boundary of Site 05)	Proponent	Prior to the first Occupation Certificate
2	Wombat crossing on the laneway	Proponent	Prior to Site 05's Occupation Certificate
3	Internal Road delivery	Proponent	Prior to Site 05's Occupation Certificate
4	Internal pedestrian network (i.e. through-site links, internal footpaths, internal open space)	Proponent	Prior to each site's respective Occupation Certificate

Figure 6-7 Infrastructure required from the project

6.4 Other infrastructure staging considerations

In addition to the infrastructure being delivered by the development. There are some surrounding infrastructure upgrades that were considered as part of the impact assessment that are worth noting. The impact assessment revealed that the development can be accommodated within the existing network and does not necessarily depend on the upgrades discussed in **Table 6-6**.

Table 6-6 Wider network infrastructure delivery staging

Infrastructure	Responsibility	Timing	Notes
Edmondson Park South road network including footpaths (i.e. Macdonald Road)	Landcom	As per the Voluntary Planning Agreement for Precinct 9. The earlier of: – prior to the issue of the Occupation Certificate for the 1000th dwelling in Precinct 9; – Within 18 months of the Developer obtaining Approval for the Works in Item C1.	The Edmondson Park South road network is already committed and funded through existing Contribution Plans (shown in the figure below). The proposed development does not require any additional road infrastructure beyond that planned and endorsed. Most of the primary arterial and collector roads serving the site have already been delivered, with the only outstanding item being the extension of Macdonald Road to connect with Buchan Avenue. This extension is expected to be fully funded independently of the proposal. Without relying on any surrounding development in Precinct 9, the proposed development alone is sufficient to trigger the VPA requirement for MacDonald Road (item 5) and Roosevelt Crescent (Item 6) to be delivered prior to the Occupation Certificate for the 1000th dwelling. As this trigger will be reached well before completion of the project, it is fair to assume that MacDonald Road will be in place and operational as part of the development's delivery. TfNSW has planned the signalisation of the new intersection created by the extension, and this upgrade is included within the MOD 5 Infrastructure Service Delivery Plan (shown below).

Infrastructure	Responsibility	Timing	Notes
			 *Figure 2 – Summary of VPA-45 Land Dedication and Infrastructure Items* In summary, all infrastructure required to support the development is already funded. The contributions generated by the additional yield therefore exceed the infrastructure needs attributable to the proposal, allowing the surplus to be directed toward other TfNSW/Council-identified infrastructure priorities.
Lane reallocation for Campbelltown Road | Soldiers Parade	TfNSW	When funding is made available.	This item stems from an existing deficiency in the approved MOD 5 baseline modelling. The MOD 5 assessment proposed an eastern approach with four lanes (three through and one right-turn). However, once more realistic routing behaviour and updated costing were applied, it became evident that this arrangement is inefficient. A more appropriate layout is a two-through and two-right-turn lane configuration on the eastern approach, which better reflects the observed demand. It is understood that TfNSW currently has no funding allocated to deliver the additional lanes identified in the approved MOD 5 plans. Nonetheless, there is physical space available to introduce additional lanes on both the eastern and western approaches (as shown below). It is therefore recommended that TfNSW consider this revised configuration when preparing the detailed design for the upgraded signalised intersection.

Infrastructure	Responsibility	Timing	Notes
			
Improved public transport services	Landcom to deliver infrastructure as per the VPA. TfNSW retains responsibility for determining, approving, and operating any bus services	Infrastructure timing is in accordance with the Precinct 9 VPA. Service commencement remains at the discretion of TfNSW.	As outlined in **Section 6.2.2**, the proposal's public transport demand can be accommodated within the existing (and therefore planned) public transport services. The Edmondson Park South master plan identifies the introduction of additional bus services to further increase network capacity and improve accessibility across the precinct. These future services are intended to strengthen public transport connectivity and encourage a shift toward more sustainable travel modes. Given that the development does not rely on the delivery of these new services to meet its transport needs, there is no requirement to adjust the timing or staging of the additional routes.

Preliminary Construction Traffic Management Plan

7

7.1 Introduction

Given the project design is in its early stages, a preliminary construction traffic management plan is outlined below. The contractor responsible for delivery will prepare a detailed construction traffic management plan (CTMP) or a Construction Traffic Management Plan (CTMP), which may need to be approved by relevant authorities before construction commences. The CTMP includes Temporary Traffic Management Plans (TTMPs) and a Driver's Code of Conduct.

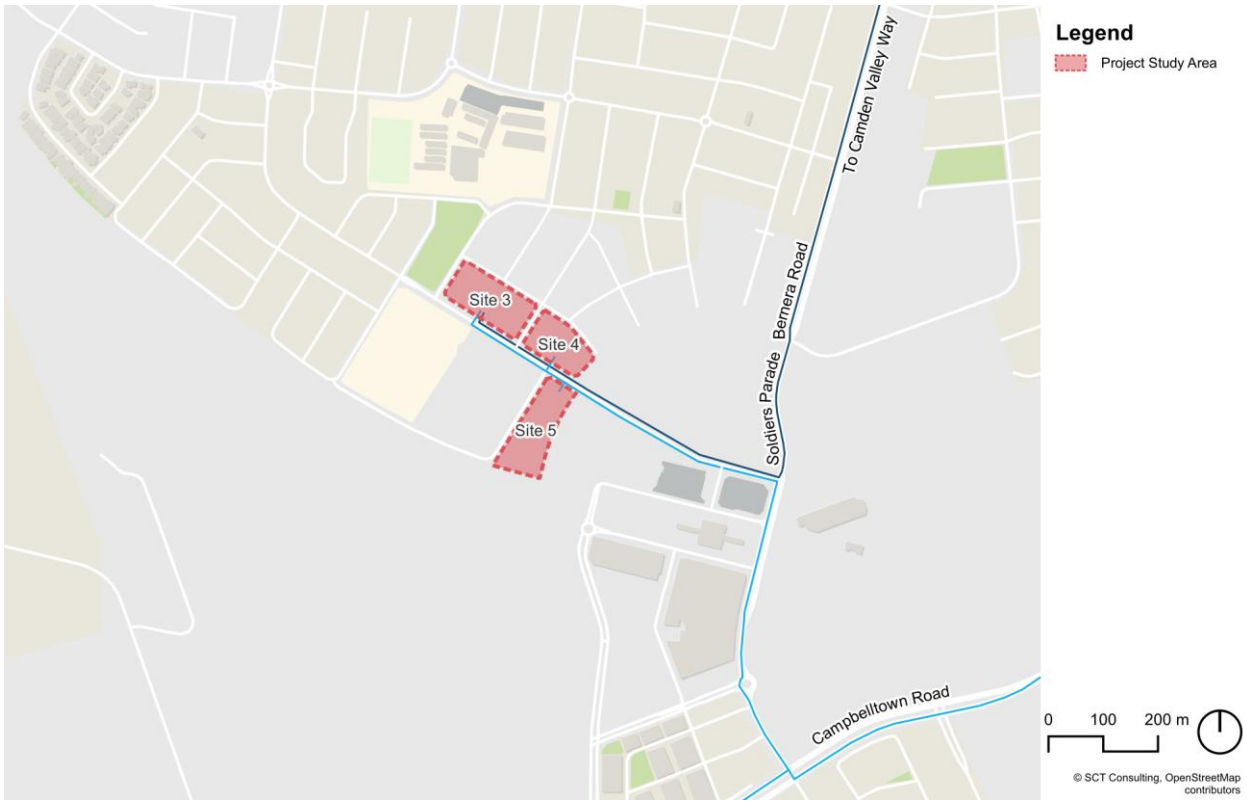
7.2 Construction program

As the proposal is being lodged as a State Significant Development Application, detailed construction staging and timing are not yet finalised. However, construction is expected to occur in multiple coordinated stages to manage interfaces, limit overlap between high-intensity activities, and minimise cumulative impacts on the surrounding road network and public domain. The staging strategy will ensure works are sequenced to avoid compounding traffic, access and safety effects, supported by a Construction Traffic Management Plan to be prepared prior to commencement.

7.3 Construction site access

Construction vehicles are anticipated to access the sites via Buchan Avenue and Soldiers Parade, which links to Campbelltown Road, Camden Valley Way, and the wider road network, forming the key haulage routes. Given the access to Buchan Avenue is restricted to left-in/left-out from Soldiers Parade, it is envisioned that construction vehicles will access the site from Campbelltown Road, turning left into Buchan Avenue from Soldiers Parade. On departure, vehicles will turn left out of Buchan Avenue onto Soldiers Parade and continue to Camden Valley Way. The proposed haulage routes are shown in **Figure 7-1**.

Figure 7-1 Haulage Route



Source: SCT Consulting

7.4 Construction hours

Construction hours would be implemented per the conditions of consent. Based on precedence from Council, construction is expected to be undertaken under the following conditions:

– D3. Construction, including the delivery of materials or machinery to and from the site, may only be carried out between the following hours: (a) between 7am and 5pm, Monday to Friday inclusive; and (b) between 8am and 1pm, Saturdays.

– D4. No work may be carried out on Sundays or public holidays.

– D5. Activities may be undertaken outside of these hours if required: (a) by the Police or a public authority for the delivery of vehicles, plant or materials to and from the site; or (b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm.

7.5 Construction traffic volume

The volume of construction traffic required to deliver this proposal has not yet been determined. This level of detail will be considered and assessed in a detailed CTMP provided by the principal contractor before construction commences. Given the scale of this project, it is not expected that high volumes of construction traffic will be generated during the peak periods.

Additionally, the LILO treatment minimises delays at the construction site access, reducing potential disruptions.

7.6 Construction impact on parking

It is expected that the construction traffic park within the bounds of the site as the subdivision works (for Road 1) provides ample space. The construction site is within proximity of good public transport access that can be leveraged to reduce the number of vehicle movements. Considering this, most workers are expected to arrive at the site via public transport and therefore will not need parking. Specific parking requirements based on construction staging will need to be further considered by the principal contractor under the detailed CTMP and/or a specific construction worker transport and parking strategy. The following measures could be implemented to encourage staff to utilise public transport:

– Provision of a secure tool storage facility on-site to allow tradespeople to safely store tools required for the project, allowing them to use public transport to travel to and from the site daily.

– During the site induction phase and regular management meetings, staff will be instructed to use public transport when travelling to the site and will be provided public transport timetables. Workers would also be informed of restricted parking conditions on-site and the surrounding road network.

7.7 Construction impact on pedestrian and cyclist access

The Roads Act does not give any special treatment to trucks leaving a construction site. Vehicles already on the road have the right-of-way. Vehicles entering, exiting, and driving around the site will always be required to give way to pedestrians and cyclists.

All vehicles are recommended to enter and exit the site in a forward direction to ensure that pedestrians and drivers have clear sight distances and can easily gauge any hazards.

Currently, there are no pedestrian or cyclist facilities on the same side of the site. Pedestrians and cyclists are expected to predominantly use the shared path on the western side of Soldiers Parade. Hence, no closures or impacts are expected. Nonetheless, if footpath closures exist, appropriate signage and pedestrian detours must be provided to support them.

7.8 General mitigations

The following mitigations are proposed to reduce the impact of traffic movements on the community:

– Construction is to be staged to limit overlap between high intensity activities

– Truckloads are to be covered during transportation

- Neighbouring properties are to be notified of construction works and timing. Any comments would be recorded and taken into consideration when planning construction activities.
- All activities, including materials delivery, must be conducted wholly within the sites to not impede traffic flow along local roads.
- Materials are to be delivered and spoil removed during standard construction hours.
- Avoidance of idling trucks alongside sensitive receivers
- Deliveries are planned to ensure a consistent and minimal number of trucks arriving at the site at any time.
- Additionally, to manage driver conduct, the following measures are to be implemented:
    a. All truck movements will be scheduled
    b. Vehicles are to enter and exit the site in a forward direction along the travel path shown on delivery maps
    c. Drivers are to always give way to pedestrians and plants.

7.9 Detailed CTMP requirements

The Principal Contractor will develop a detailed CTMP and include/formalise the following information:

- Administrative details such as construction activities description, duration, work hours and key contact details.
- Detailed assessment of construction traffic impacts, including any cumulative impacts from surrounding developments
- Construction Worker Transport Strategy detailing how staff will be travelling to/from the site.
- Details regarding one-off activities such as crane installation and other equipment
- Swept path analysis of heavy vehicle access to the site
- Detailed assessment of on-street parking and footpath impacts
- Detailed strategy for pedestrian diversion (including typical pedestrian routes)
- Emergency vehicle access
- Traffic and Pedestrian Guidance Schemes

Conclusion

8

This Transport Impact Assessment has been prepared to support the State Significant Development Application and associated Rezoning Proposal for Sites 3, 4 and 5 at Buchan Avenue, Edmondson Park. The proposal comprises a coordinated mixed-use precinct delivering approximately 1,805 dwellings (including co-living component), retail, gym and childcare uses, basement parking, new public domain elements and through-site pedestrian connections linking Buchan Avenue to Edmondson Park Station. The development sits within Edmondson Park Town Centre North, a strategically located, transit-oriented precinct undergoing substantial transformation following the approval of the Edmondson Park South Concept Plan (MOD 5).

This assessment has examined the proposal within its strategic planning context, existing and future transport conditions, multimodal access arrangements, and the expected operational impacts of the development. The key findings are summarised as follows.

- The proposal is integrated with the established and planned street network, with vehicular access arranged on Shaggy Ridge Road, Jericho Road and an internally managed one-way loop road for Site 5. This arrangement deliberately avoids additional driveways on Buchan Avenue, improving pedestrian safety and reducing conflict with school-related traffic.
- The site provides highly legible pedestrian permeability across all frontages, including new public connections that enhance walkability between Edmondson Park Station, the Town Centre and the adjoining high school.
- The development provides parking in accordance with the Housing SEPP and the Edmondson Park Landcom Town Centre North Design Guidelines. While some dwelling types exceed the maximum rates (reflecting market expectations for certain products), this is balanced by lower parking provision in other dwelling types. When considered in aggregate, the total parking supply remains below the maximum permissible under the Design Guidelines. This outcome aligns with the local planning strategy, which encourages sustainable mode shift by avoiding an oversupply of private-vehicle parking.
- The design provides safe and functional servicing for all land uses, including a segregated supermarket loading dock on Site 5, avoiding conflicts with customer and residential movements.
- Active transport access is strongly supported through direct frontage to existing cycle lanes on Buchan Avenue, connections to the broader shared-path network, and compliance with the Town Centre North bicycle parking requirements.
- The proposal is anticipated to generate an additional:
    - Active transport: 58 trips in the AM peak hour and 65 trips in the PM peak hour
    - Public transport: 174 trips in the AM peak hour and 194 trips in the PM peak hour
    - Private vehicle: 318 trips in the AM peak hour and 374 trips in the PM peak hour
- In terms of impacts:
    - Walking and cycling: The additional active-transport trips generated by the development can be comfortably accommodated, as the surrounding pedestrian and cycling network operates with low existing demand and no identified capacity constraints.
    - Public transport: The forecast 174 AM and 194 PM peak public transport trips can be absorbed by the existing and planned network, with **Section 4.3.1** outlining improved bus connections and **Section 3.4** confirming that most train services have substantial spare capacity
    - Road network: Microsimulation modelling was conducted for the MOD 5 network. The required road infrastructure upgrades are detailed in **Section 6.2.3.2** and are anticipated to form part of the infrastructure delivery program.
    - Parking: Despite localised surpluses in some dwelling types, the development provides an overall residential average of 0.68 spaces per dwelling, well below the maximum rate, and includes a retail parking surplus that ensures on-site demand is met without generating on-street parking impacts.
- As part of the modelling, it was observed that there was an existing issue (from the MOD 5 modelling) regarding the on-street parking demand, where the demand exceeds the available supply. This results in extended delays along Buchan Avenue. The development interfaces directly with the High School, meaning all school-related trips are expected to occur on foot or by bicycle, and it therefore generates no additional demand on the existing Buchan Avenue pick-up/drop-off zone.

– The proposal aligns with broader place-making objectives for Edmondson Park Town Centre North by promoting reduced car dependency, integrating land use and transport outcomes, and supporting improved conditions for pedestrians, cyclists and public transport users.
– Preliminary construction staging and haulage arrangements have been developed to minimise impacts on the adjacent school, maintain pedestrian safety, and manage heavy vehicle movements in accordance with agency requirements.

Based on the findings of this assessment, the proposed development is not expected to generate adverse transport impacts when considered within the context of the approved future baseline for Edmondson Park. The proposal supports a high-density, transit-oriented urban centre, delivers safe and efficient multimodal access, and contributes to a well-connected and walkable district consistent with the planning vision for the Western Parkland City.

APPENDIX A

MODELLING SCOPING NOTE

SCT Consulting

Edmondson Park Sites 3-5

HDA SSDA Traffic Modelling Scoping

19.1.2026

Quality Assurance

Project details			
Project number:	SCT_00824		
Document name:	Edmondson Park Sites 3-5 HDA SSDA Traffic Modelling Scoping		
Client:	UPG Edmondson Parkland Pty Ltd	ABN:	44 656 550 793
Prepared by:	SCT Consulting Pty. Ltd.	ABN:	53 612 624 058

Information	Name	Position	Signature
Author:	Jonathan Busch	Director	
Reviewer:	Andy Yung	Director	
Authoriser:	Jonathan Busch	Director	

Version	Date	Details
1.0	8.10.2025	Draft
2.0	13.1.2026	Draft
3.0	14.1.2026	Draft
4.0	16.1.2026	Updated following stakeholder feedback
5.0	19.01.2026	Minor wording changes

Overview of sites and planning history

The subject sites are shown in **Figure 1**. All of the sites are within a 600m walk of Edmondson Park Station.

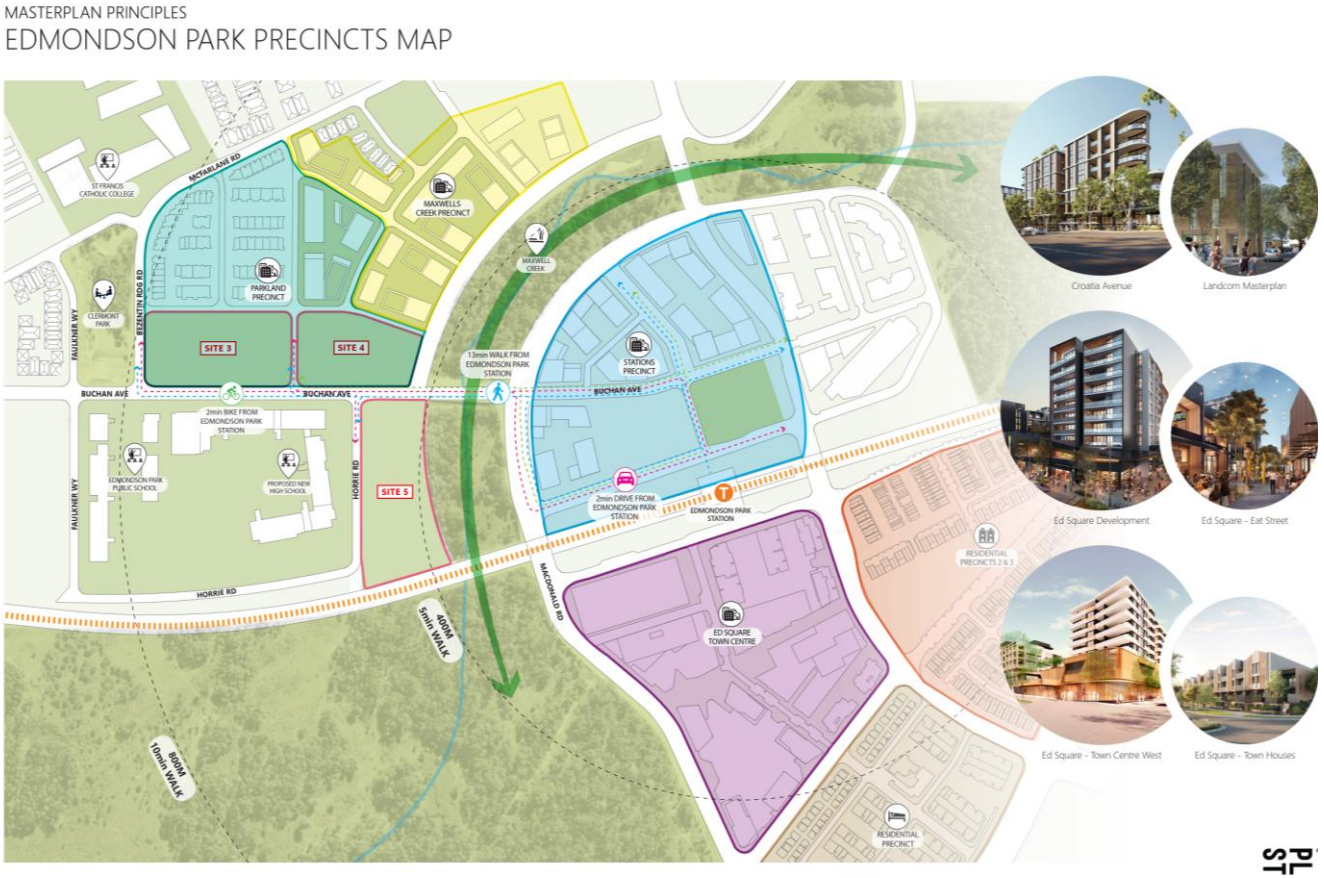
Each of the three sites has a recently approved Development Application for residential development. These are provided in **Table 1**.

Table 1: Approved residential uses by site

Site	Approved use
3	72 townhouses (DA-1245/2022)
4	30 townhouses 131 apartments (DA-1090/2022)
5	40 terrace houses 266 apartments (DA-855/2022)

The broader Edmondson Park is subject to the Edmondson Park South Concept Plan (MP100118). Mod 5, approved on 14 February 2025, applies to this subject land. MOD 5 included an increase in the anticipated dwelling yield from 440 to 3,030 dwellings. The concept plan includes parking controls.

Figure 1: Location of Sites 3 - 5



Potential land uses being considered

The final land use uplift will be determined based on planning controls, architectural design and placemaking. **Table 2** shows the current proposal and the yield changes.

Table 2: Potential site yields

Items	Site 3	Site 4	Site 5
Address	Lots 4 & 5 DP 1275478	Lots 6 & 7 DP 1275478	Lot 8 DP1275478
Distance from Station	580m crow flies 600m walk	470m crow flies 430m walk	440m crow flies 370m walk
Indicative yield	500 apartments	440 apartments	735 BTR apartments, 150 co-living units, 3,500m^2 GFA retail (including supermarket), childcare (120 children) and 3,000m^2 commercial GFA
Uplift	-72 townhouses +500 apartments	-30 townhouses +310 apartments	-40 terrace houses +470 apartments +150 co-living units +retail & commercial

Traffic generation approach

Traffic generation rates are proposed to be adopted as follows:

- Residential land uses – Guide to Transport Impact Assessment (GTIA) ***CHANGE***
- Retail – as per traffic generation assumptions in MOD 5
- Commercial –GTIA (new use not included in MOD 5)
- Childcare – GTIA(new use not included in MOD 5)

The major difference is that residential traffic generation rates are proposed to be adopted from GTIA. It is acknowledged that there is a long history of specific traffic generation rates being adopted for residential. These are proposed to be updated for the following reasons:

- SSDAs in the HDA need to follow GTIA
- GTIA was not around when traffic generation rates were defined for previous planning, so GTIA should be considered more appropriate/modern
- GTIA rates already account for higher levels of car ownership, as traffic generation rates are per parking space.

Traffic generation rate calculations are provided in **Table 3**. These are based on the concept plan parking provision controls.

Table 3: Traffic generation rate conversion from per parking space to per unit (indicative)

Dwelling	Target Parking	Share
Studio	1.0	0%
1 Bed	1.0	25%
2 Bed	1.2	60%
3 Bed	2.0	15%
Visitor	0.2	
Average parking space / unit	1.47	

Peak	Traffic generation rate per parking space	Traffic generation rate per unit
AM	Vehicle: 0.19P	0.28
PM	Vehicle: 0.35P x mode share of 65% car driver	0.33

Approved traffic generation

The previously approved traffic generation for the sites is provided in **Table 4**. In total, the sites would generate 169 veh/h in the morning peak and 184 veh/h in the afternoon peak.

Table 4: Approved site traffic generation

Site	Land use	Yield	AM Trip rate	PM Trip rate	AM	PM
3	Townhouses	72 dwgs	0.39 /unit	0.37 /unit	28	27
4	Townhouses	30 dwgs	0.39 /unit	0.37 /unit	12	11
	Apartments	181 car spaces	0.19 /space + 1.79	0.35 P *65% car mode share	36	41
5	Townhouses	40 dwgs	0.39 /unit	0.37 /unit	16	15
	Apartments	398 car spaces	0.19 /space + 1.79	0.35 P *65% car mode share	77	91
Total					**169**	**184**

Indicative site uplift traffic generation

The site's traffic generation would increase from 169-184 veh/h in the approved scheme to 494-562 veh/h in the proposed scheme, an increase of 325-378 veh/h. Refer to **Table 5** for details of the traffic generation calculations.

Historical planning for the site adopted a high traffic generation rate that is inconsistent with the position from the Guide to Transport Impact Assessment (GTIA). GTIA adopts the traffic generation rate of 0.19 veh/h/parking space in the AM peak and 0.35 person trips/h/parking space in the PM peak (**Table 5.8, Sub-Metropolitan Rates adopted**). By comparison, the traffic generation rates in historical planning are 0.51 veh/h/dwelling for high density and 0.62 veh/h/dwelling for medium density.

Number of parking spaces is indicative and subject to change

Table 5: Potential site traffic generation uplift

Site	Land use	Yield	AM Trip Rate	PM Trip Rate	AM Traffic	PM Traffic
3	Units	608 car spaces	0.19P + 1.79	(0.35 P + 3.65)*65% car mode share	117	141
4	Units	485 car spaces	0.19P + 1.79	(0.35 P + 3.65)*65% car mode share	94	113
5	Units	249 car spaces	0.19P + 1.79	(0.35 P + 3.65)*65% car mode share	49	59
	Retail	3,182 m2 GFA	1.78 /100m2 GFA	3.71 /100m2 GFA	57	118
	Gym	2,475 m2 GFA	3.6 /100m2 GFA (weekday)	3.6 /100m2 GFA (weekday)	89	89
	Childcare centre	128 places	0.69 /veh/child (network peak)	0.33 /veh/child (network peak)	88	42
Total					**494**	**562**

Landcom Edmondson Park VISSIM model

The Edmondson Park South Concept Plan (MP10_0118) was lodged by Landcom and established the overall planning framework for Edmondson Park South. It was approved under the historical Part 3A of the EP&A Act.

This original application included the preparation of a VISSIM model. This model was prepared in consultation with Liverpool City Council, Transport for NSW and Roads and Maritime Services.

Landcom sought a modification to the original concept approval (MOD 5), which was approved in 2025. AECOM prepared a TMAP in 2020 to support the modification. This included an update to the VISSIM model to capture the traffic generation of the increased yield sought under Mod 5. No issues were raised by TfNSW during the most recent modification to the use of the Landcom VISSIM model. Comments from Council and TfNSW were on sharing the model with Council and testing of pedestrian demands. While this is not a formal endorsement of the model, it demonstrates that it was accepted by all parties for planning purposes.

We have been given a copy of a model that was being used to prepare the TMAP. A comparison of the model received and the results reported in the TMAP is provided in **Table 6** (next page). The differences are considered acceptable.

Figure 2: Model study area

How does the model compare to the TMAP?

Table 6: Comparison of TMAP published model results and VISSIM model outputs

Intersection	MOD 5 TMAP (AM)			MOD 5 TMAP (PM)			Model (AM)			Model (PM)			Difference (AM)		Difference (PM)	
	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	LoS	Vol	Delay	Vol	Delay
Campbelltown Rd | Bernera Rd	3,340	44.6	D	3,641	51.7	D	3,480	45.0	D	4,164	67.4	E	+4%	+0.4	+14%	+15.7
Campbelltown Rd | Soldiers Pde	2,404	40.3	C	2,651	47.1	D	2,563	49.5	D	2,713	47.9	D	+7%	+9.2	+2%	+0.8
Campbelltown Rd | East Town Centre St	2,910	54.4	D	3,343	42.4	D	2,941	29.4	C	3,278	19.7	B	+1%	-25.0	-2%	-22.7
Bernera Rd | Primary School South	1,596	10.7	A	1,924	23.2	B	1,791	14.6	B	1,919	9.9	A	+12%	+3.9	-0%	-13.3
Bernera Rd | Soldiers Pde | Croatia Ave	1,437	13.3	A	1,547	16.3	B	1,268	20.6	B	1,700	22.0	B	-12%	+7.3	+10%	+5.7
Bernera Rd | Buchan Ave	1,956	53.9	D	2,144	33.9	C	1,870	47.0	D	2,274	31.8	C	-4%	-6.9	+6%	-2.1
Bernera Rd | Henderson Rd	1,810	26.1	B	1,900	18.4	B	1,722	25.9	B	2,087	19.2	B	-5%	-0.2	+10%	+0.8
Soldiers Pde | Henderson Rd	1,188	41.0	C	1,476	41.3	C	1,467	39.9	C	1,003	41.6	C	+23%	-1.1	-32%	+0.3
Bernera Rd | Green Way	1,630	38.2	C	2,026	34.2	C	1,702	37.8	C	2,351	26.6	B	+4%	-0.4	+16%	-7.6
Soldiers Pde | Green Way	921	21.1	B	1,046	15.3	B	1,251	38.9	C	613	8.9	A	+36%	+17.8	-41%	-6.4

Proposed modelling methodology

Re-run the Landcom Edmondson Park VISSIM model based on the addition of the net increase of development yield at Sites 3-5 to examine the intersection performance at:

1. Buchan Avenue | Bezentin Ridge Road
2. Buchan Avenue | Horrie Road
3. Soldiers Parade | Croatia Avenue
4. Henderson Road | Soldiers Parade
5. General Boulevard | Soldiers Parade
6. General Boulevard | Campbelltown Road
7. MacDonald Road | Campbelltown Road
8. Borneo Street | Lawson Road | Campbelltown Road

We will consider the likely traffic impacts of the weekday peak / typical traffic generation and identify infrastructure upgrades if necessary.

Why VISSIM?

- VISSIM has been used as the basis for planning in the region for years and has the best available assumptions, making it the easiest tool to test the uplift in.
- There is no need to revisit the study area as the sites use the same street network.

Figure 3: VISSIM model study area

Model methodology details

Modelling will include:

- Assessment of the cumulative impacts of the Mod 5 increase in traffic demands and the subject SSDA.
- A review of traffic generation associated with Edmondson Park PS and the new Edmondson Park HS. The model will have consistent traffic generation with planning for these schools (i.e. full capacity for both)
- Inclusion of any currently implemented or planned/funded works associated with the new Edmondson Park HS, including the marked pedestrian crossing, new roundabout and bus bays.
- Review of intersection layouts for Macdonald Rd | Henderson Rd, Macdonald Rd | Buchan Avenue and Macdonald Rd | Soldiers Parade based on information supplied by Landcom.
- Review of the traffic generation around Edmondson Park Station between the model and the current traffic behaviours.
- The core demands of the model will not be altered unless justification is provided.
- Upgrades will be identified if intersections perform poorly. Upgrades will be considered based on modal priority.

The reporting will include:

- Any advice on the timing of delivery of the northern extension of Macdonald Road able to be publicly communicated by Landcom.
- Assessment of the number of pedestrian volumes arising from the subject development and the implications on crossings in the vicinity of the site and to Edmondson Park Station. An assessment of the appropriate crossing form will be conducted.
- A review of the additional traffic generation on Camden Valley Way arising from the development of the site. If the traffic generation is significant, SIDRA modelling will be conducted for the intersections of Camden Valley Way | Bernera Road and Camden Valley Way | Rynan Avenue.
- The report will include consideration of Travel Demand Management initiatives.

Preliminary results

The model was updated to ensure that the traffic generation from the school was appropriate, and to include the roundabout recently constructed at Buchan Ave | Horrie Rd,

The intersection performance is provided in **Table 6**. This requires the following upgrades:

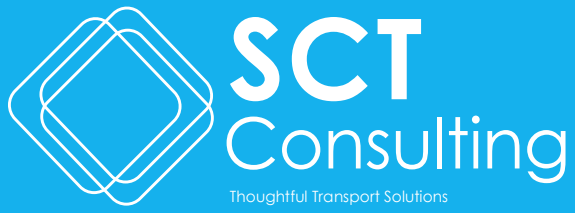
- Conversion of the through movement to right turn on Campbelltown Road at Macdonald Road.
- New one way southbound loop road from Buchan Avenue to Horrie Road

With these upgrades, the additional traffic generation can fit within the network capacity.

Some intersections improve in performance because of signal optimisation.

Table 7: Model results

Intersection		Received model		With proposed uplift	
		AM	PM	AM	PM
4	Henderson Road | Soldiers Parade	23.6s - A	12.6s - A	20.4s – B	2.5s - A
5	General Boulevard | Soldiers Parade	39.9s - C	59.3s - E	32.5s – C	43.0s - C
6	General Boulevard | Campbelltown Road	29.4s - C	45.5s - D	48.1s - D	23.5s - B
7	General Boulevard | Campbelltown Road	49.5s - D	28.1s - B	49.3s - D	32.3s – C
8	Borneo Street | Lawson Road | Campbelltown Road	45s - D	63.3s - E	52.6s - D	52.7s – D


SCT
Consulting
Thoughtful Transport Solutions

APPENDIX B

ROAD SAFETY AUDIT

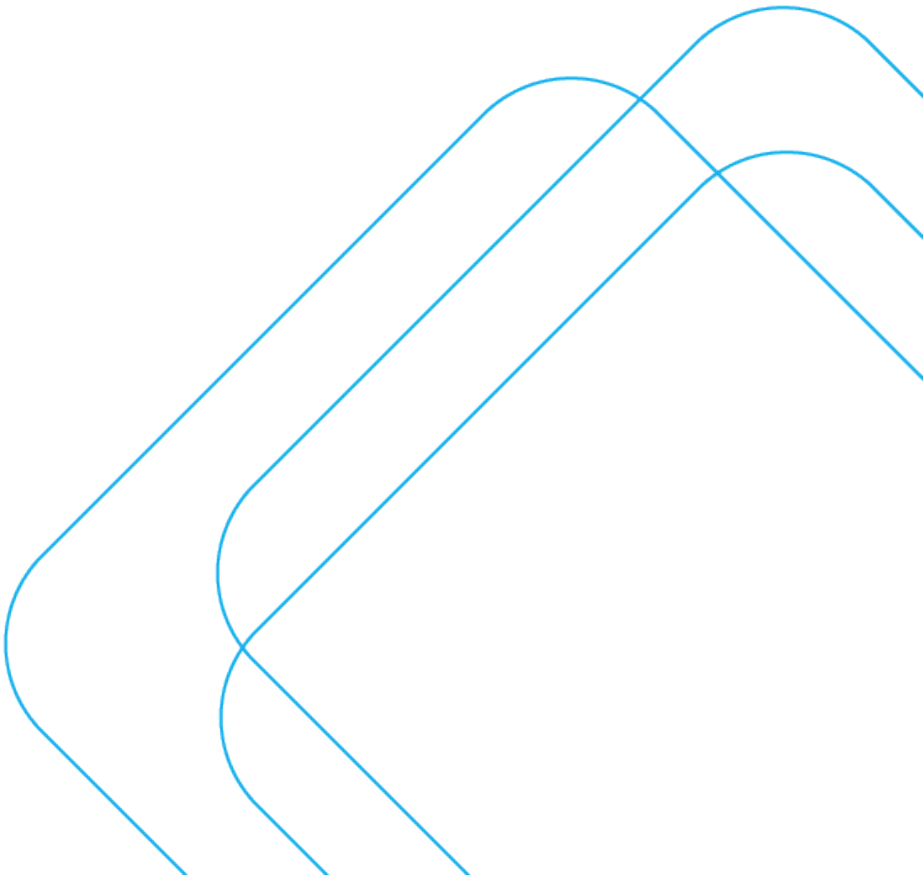
SCT Consulting

EDMONSON PARK

Existing Condition RSA

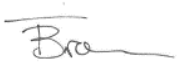
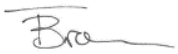
5 MARCH 2026

SCT Consulting acknowledges
the traditional owners of the lands
on which we work.
We pay our respects to Elders
past, present and emerging.



Quality Assurance

Project:	Edmonson Park		
Project Number:	SCT_00824		
Client:	Landcom		
Prepared by:	SCT Consulting PTY. LTD. (SCT Consulting)	**ABN:**	53 612 624 058

Information	Name	Position	Signature
Author:	Thomas Brown	Lead, Level 3 Road Safety Auditor	
Reviewer:	Matthew Cen	Level 2 Road Safety Auditor	
Authoriser:	Thomas Brown	Lead, Level 3 Road Safety Auditor	

Version	Date	Details
1.0	6 February 2026	Draft RSA Report
2.0	5 March 2026	Final RSA Report

Contents

List of Figures

Appendices

Executive Summary

This report is an Existing Condition stage Road Safety Audit, for Edmonson Park.

Positive aspects of the site have not been recorded. The purpose of this audit was to report on the defects and deficiencies of the project from a road user safety perspective only. The safety audit is not a design check, although some design issues may be raised during the audit process.

The audit is based on Nearmap and Google Maps Street View and a day / night site inspection on Monday 2nd February 2026.

The risk ratings provided in this audit are the assessment of the auditors. Ultimately, it is the client and / or road authority's responsibility to determine the response to risk for each road safety deficiency identified.

With each audit, a client response section has been provided. The purpose of this section is to assist the client in formalising an appropriate action required and/or deemed necessary to satisfy the safety issue raised. For example, "do nothing", action or what action was taken to address the issue, and then the form can be signed off.

The comments listed under the heading "Appendix B - Other Observations" are observations noted whilst carrying out the audit and do not necessarily relate to safety issues. This list is not comprehensive, it is simply a record of some of the additional observations made by the auditors and has been provided purely as additional information for the client.

The Safe System Approach

The Safe System approach to improving road safety, takes a holistic view of the road transport system and the interactions among the key components of that system: Safe Roads, Safe Vehicles, Safe Speeds, and Safe People.

Road safety is a shared responsibility. We all need to make decisions with safety in mind, from the design of our roads and vehicles, investments, laws and education, and each road user acting safely each and every day.

The principles underpinning the Safe System acknowledge that:

– People sometimes don't follow the rules and make mistakes which can lead to crashes; however, no one should die or be seriously injured on the road as a result of these mistakes.

– The human body has a limited physical ability to tolerate crash forces – any impact greater than 30km/h increases the risk of dying significantly.

– Road safety is a shared responsibility among everyone, including those that design, build, operate and use the road system.

– We need to improve the safety of all four parts of the system - roads and roadsides, speeds, vehicles, and people/road use - so that if one part fails, other parts will still protect the person from serious injury or death.

The SCT Consulting Audit team is committed to delivering Road Safety Audits which follow the Safe System Approach.

1.0 Introduction

1.1 Background

SCT Consulting was commissioned by Landcom in January 2026 to undertake an Existing Condition stage Road Safety Audit, for Edmonson Park. This report presents the findings of the road safety audit.

1.2 Site Location

The Existing Conditions at Edmonson Park, at the subject location, comprised the following key features:

- Braithwaite Road
- Buchan Avenue between Braithwaite Road and Guillemont Road
- Faulkner Way between Buchan Avenue and Horrie Road
- Horrie Road
  - Inaccessible during the site inspection due to construction works
- Guillemont Road
- McAree Road
- Faulkner Way
- Bezentin Ridge Road / McFarlane Road between Buchan Avenue and Steenson Street
- Steenson Street south of McFarlane Road
- Nell Street
  - Inaccessible during the site inspection due to construction works
- Jericho Road
  - Inaccessible during the site inspection due to construction works
- Sandy Way

The scope of the audit undertaken included the following:

- All road users; and
- The full width of the road corridor on all roads within the scope of the audit, including approaches.

The site location is shown in **Figure 2–1**.

Figure 2–1 Site Location

Source: Nearmap 2025

1.3 Client

The Project Sponsor for this Road Safety Audit is:

Name	Jonathan Busch
Company	SCT Consulting
Position	Director
Telephone	0481 818 776
Email	jonathan.busch@sctconsulting.com.au
Address	Suite 1.02, Level 1, 2 Elizabeth Plaza, North Sydney NSW 2060

2.0 The Audit Process

2.1 Scope of this report

This audit comprises an Existing Condition stage road safety audit. The audit was conducted to ascertain potential road safety issues for all road users. As an Existing Condition audit, the audit is limited to consideration of elements identifiable from an appreciation of the site inspection only. Issues considered during the audit included:

- Road alignment and typical cross-section;
- Auxiliary lanes;
- Intersections;
- Parking;
- Local and property access;
- Lighting;
- Pedestrians and cyclists;
- Utilities;
- Physical objects;
- Bridges and culverts;
- Drainage and floodway;
- Pavement;
- Roadside safety barriers and clear zones;
- Line marking and signage;
- Landscaping;
- Provision for heavy vehicles; and
- Animals.

The objective of the audit was to review the road design plan set, with the intention of identifying road safety deficiencies and areas of risk that could lead to road crashes. The road safety audit team considered, for example:

- Have the permitted movements for all of the various road users been catered for in a safe way?;
- Are the appropriate operational and control mechanisms in place to promote safety?;
- Would the system operate to an acceptable level of safety in all situations, such as peak periods, poor weather and during darkness?; and
- Are there opportunities to reduce the occurrence or severity of crashes?

Although the audit reviewed and identified safety issues, the responsibility for assessing and implementing corrective action(s) lies with the Project Sponsor. It is not the role of the auditor to provide recommendations or solutions to the identified safety issues; however, identification of potential safety concerns may assist the Project Sponsor in reducing the incidence and severity of crashes.

2.2 Audit Team

Thomas Brown	Level 3 Auditor	RSA-02-1013	Accreditation Expiry: 27/03/2027
Matthew Cen	Level 2 Auditor	RSA-02-1619	Accreditation Expiry: 22/11/2027

2.3 Audit Methodology

The Road safety audit has been conducted to consider the site from an appreciation of Aerial image (i.e. Google / Near Maps) and site inspection. A day time site inspection was undertaken on 2nd February 2026 from 3pm to 4.30pm and a night time inspection was undertaken on 2nd February 2026 from 8.55pm to 9.15pm involving Thomas Brown (Audit Team Leader) and Matthew Cen (Level 2 auditor). The conditions were sunny during the site inspection.

2.4 Commencement Meeting

A commencement meeting was held at 11.00am on 30/01/2026 involving Thomas Brown (Audit Team Leader), Matthew Cen (Level 2 Auditor) and Jonathan Busch (Project sponsor).

2.5 Closing Meeting

The Project sponsor provided client comments on 02/03/2026 for inclusion as part of the Final report issue. Authority was granted by the Project Sponsor, to issue the final road safety audit report.

2.6 Previous Audits

There were no previous road safety audits provided to the auditors.

2.7 Exclusions

Exclusions are noted as follow:

– Drainage considerations (sunny during the site inspection)

This may lead to the Audit team not fully appreciating the site conditions for all road users along and on the approaches to the proposed road works at this location.

2.8 Information Sources

The road safety audit was undertaken with reference to:

– Austroads, Guide to Road Safety Part 6: Road Safety Audits (2022)

The potential risk associated with the deficiencies identified has been based on a subjective assessment of the accident likelihood and crash consequence, as outlined in Section 4.

The proposed design drawings received by the auditors, refer to **Appendix B**.

3.0 Risk classification methodology

3.1 Risk assessment system

The rating of each identified deficiency was based on the crash likelihood and consequence, in accordance with the methodology and risk matrix described in the following subsections. The crash likelihood and consequence are based on the auditor's assessment and are necessarily subjective on this basis.

Risk levels based on the criteria set out in Austroads Guide to Road Safety, Part 6: Road Safety Audit, 2009, has been assigned to each deficiency identified. The rationale behind the assignment of risk has been reproduced in **Table 4-1**, **Table 4-2** and **Table 4-3** from the Austroads document.

3.2 Crash likelihood

The probable frequency of crash occurrence, resulting from each safety issue identified in the audit is assessed from the options presented in **Table 4-1**.

Table 4-1 Frequency

Frequency	Description
Almost certain	Occurrence once per quarter
Likely	Occurrence once per quarter to once per year
Possible	Occurrence once per year to once every three years
Unlikely	Occurrence once every three years to once every seven years
Rare	Occurrence less than once every seven years

3.3 Severity

The potential severity of a crash resulting from the identified safety issue has been rated from the choices presented in **Table 4-2**.

Table 4-2 Severity

Severity	Description
Fatal	Death within 30 days of a crash
Serious	Admitted to hospital
Moderate	Major first aid and/or presents to hospital (not admitted)
Minor	Minor first aid
Insignificant	Property Damage

Reference to related severity of crash types should be read in conjunction with Figure 10.3 Severity Guidance Sheet from Austroads Guide to Road Safety Part 6:

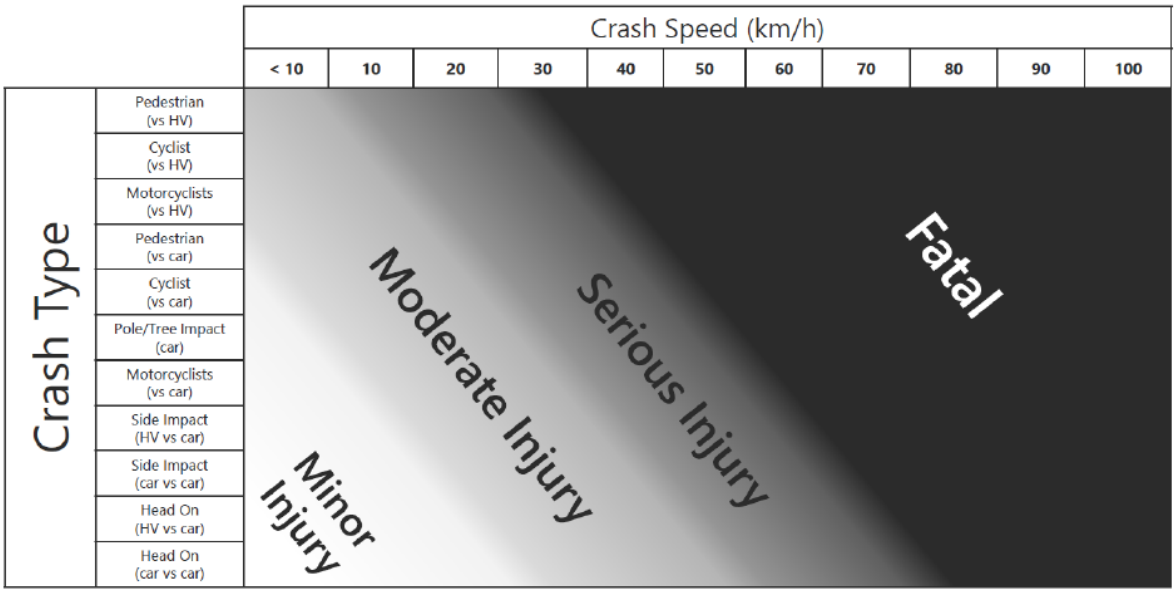


Figure 10.3 – Severity Guidance Sheet
(Sourced from Austroads Guide to Road Safety Part 6: Road Safety Audits (2022))
It is stressed that the information contained within the severity guidance sheet (Figure 10.3) is a general indication only and that professional engineering judgement is required with its usage.

3.4 Risk Level

Deficiencies are rated for their importance according to a five-tiered system, based on the following matrix, summarised in **Table 4-3**.

Table 4-3 Risk level

	Fatal	Serious	Moderate	Minor	Insignificant
Almost certain	Extreme	Extreme	High	High	Medium
Likely	Extreme	Extreme	High	Medium	Medium
Possible	Extreme	High	High	Medium	Low
Unlikely	High	High	Medium	Low	Negligible
Rare	High	Medium	Low	Negligible	Negligible

Safe system crash outcome threshold

3.5 Suggested level of prioritisation based on risk rating

Possible suggested level of prioritisation for each road safety deficiency, are summarised in **Table 4-4** below. As noted in the Executive Summary of this report, ultimately, it is the client and / or road authority's responsibility to determine the response and / or action to risk for each road safety deficiency identified.

Table 4-4 Level of prioritisation

Risk Rating	Level of Prioritisation
Extreme	Must be corrected regardless of cost
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
Low	Should be corrected or the risk reduced if the treatment cost is low
Negligible	No action required

The risk matrix above is aligned to Safe System principles and has been designed to be used with consideration of a severity guidance sheet (Refer Figure 10.3), based on Austroads Guide to Road Safety Part 6: Road Safety Audits (2022).

It should be noted that from **Table 4-4**, above, the ratings are based on the criteria set out in Austroads Guide to Road Safety, Part 6: Road Safety Audits (2022). The project sponsor (also known as the project manager) assigns a priority rating for each identified risk in road safety, which shows the importance of putting the treatment into action.

In terms of recommendations for suggested treatments for each identified risk to road safety, generally the audit team does not provide these, as this is not the responsibility of the auditors. Rather it is the responsibility of the client (or an appropriate representative of the client such as the project manager from the design team contracted for delivering/overseeing the project) to devise the appropriate corrective actions and implement them for the identified risks to road safety in the report.

It will be up to the discretion of the respective owning organisation/s to address their corresponding risks in the instance where local and state road authorities are responsible for an audit finding. The project manager's responsibility is to ensure all auditing findings are appropriately addressed.

For each client response addressing each audit finding, project managers must respond to close-out each finding. Where it is decided not to respond to an audit finding, justification should be given for the determination that no action will follow.

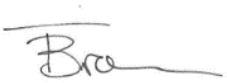
It is not the responsibility of the auditors to approve the client response actions or the project manager's responses to the findings. The auditors are however able to provide input (not recommendations) to assist the project manager, and ultimately the project, in determining appropriate responses to reach a suitable outcome for possibly addressing in future design projects.

4.0 Audit Statement

We, the undersigned, have undertaken an Existing Condition stage Road Safety Audit, for Edmonson Park.

The audit was conducted in accordance with Austroads Guide to Road Safety Part 6: Road Safety Audits (2022), for the purpose of identifying any features, that potentially impacts on road safety.

While every care and diligence has been taken to identify potential safety concerns, as detailed in this report, we do not warrant that every safety issue has been identified.



Thomas Brown

Lead Auditor - Auditor Level 3
Registered No: RSA-02-1013

Date: 05/03/2026

Matthew Cen

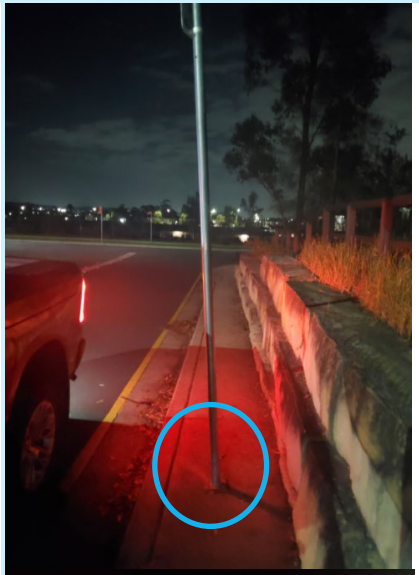
Auditor Level 2
Registered No: RSA-02-1619

Date: 05/03/2026

5.0 Audit Findings

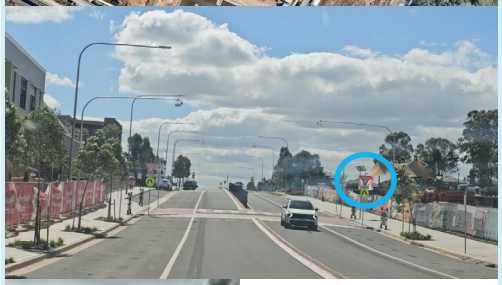
The audit findings are presented in the following table. Where applicable, the findings are presented in order of road chainage and drawing number accordingly, and are not presented in order of relative importance to road safety.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
1	Faulkner Way Northbound / southbound Pedestrian infrastructure	The eastern verge on Faulkner Way has a combination of narrow footpath width (900mm width approx.), two sign posts in the middle of the footpath on the northern end near Guillemont Road, and an overgrown shrub on the southern end near Buchan Avenue. These combinations may require pedestrians to walk within the road carriageway, particularly where the sign posts and overgrown bush block their path. Vulnerable pedestrians (i.e. school children from the two nearby schools, wheel chair users, vision impaired pedestrians and elderly) may be at an increased risk of being struck by oncoming vehicles. This may lead to serious injury to a pedestrian.	 	**Likelihood** Possible **Consequence** Serious **Risk Level** High	As this path is not a desire line to the site and an existing deficiency, this is the responsibility of Liverpool City Council

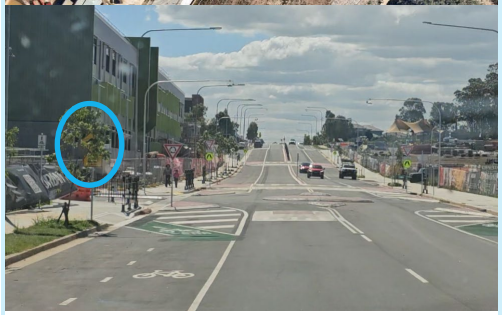
CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
			 		

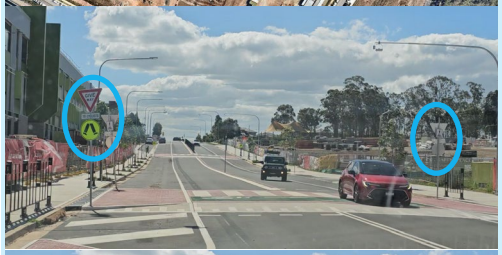
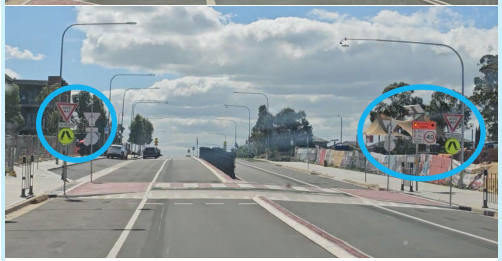
CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
2	Faulkner Way Southbound Delineation	At the intersection of Faulkner Way and Buchan Avenue there is redundant pavement arrows for a through/left and right turn movement. There is an island with a “Left only” sign at the intersection. Note – The “Left only” sign was observed to be skewed to the right, which may reduce readability for drivers. This combination may increase the likelihood of drivers attempting a through / right movement. During peak traffic periods this may increase delays and traffic queueing on Faulkner Street and increase the risk of vehicle crashes. Note – The audit team were not provided with traffic counts / volumes on Buchan Avenue.	 	**Likelihood** Rare **Consequence** Moderate **Risk Level** Low	As this path is not a desire line to the site and an existing deficiency, this is the responsibility of Liverpool City Council

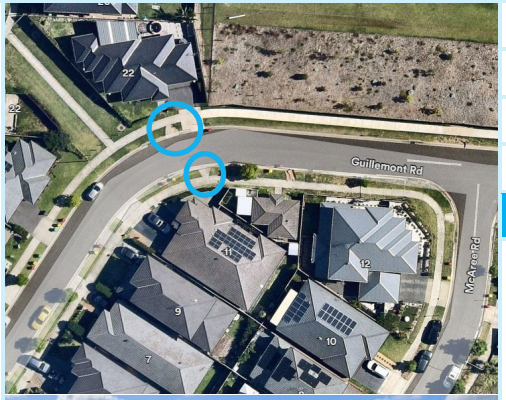
CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
					

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
3	Buchan Avenue Westbound Traffic signs And Delineation	The school zone sign is located on the right hand side of Buchan Avenue, westbound, with no school zone sign provided on the left hand side. This sign is obscured on approach by a tree, and “Give-way” and “Pedestrian crossing” signage. Additionally there is no “40” and Dragons teeth pavement marking on approach to the start of the school zone. This combination may increase the risk of approaching drivers having readability issues to the school zone sign. This may lead to drivers not observing the school zone sign and traveling at increased speeds during school zone operating hours. This may increase the risk of school children being struck by an oncoming vehicle, leading to serious injury.	   	**Likelihood** Possible **Consequence** Serious **Risk Level** High	This recently installed zebra crossing is part of the scope of works of School Infrastructure delivered as part of the new High School. Any rectification is the responsibility of School Infrastructure and/or Liverpool City Council.

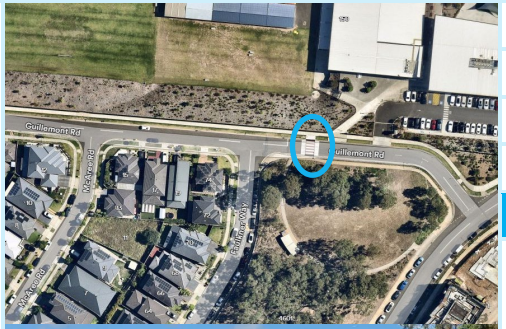
CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
					

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
4	Buchan Avenue Westbound Traffic signs	On the westbound approach to Horrie Avenue roundabout, the existing “Speed hump” and “25” advisory speed sign are obscured by a tree in the verge. This may increase readability issues for drivers approaching the speed hump prior to the roundabout. This may lead to drivers not sufficiently reducing speed on approach to the speed hump which may lead to vehicle damage.	 	**Likelihood** Rare **Consequence** Insignificant **Risk Level** Negligible	Tree maintenance is the responsibility of Liverpool City Council

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
5	Buchan Avenue Eastbound / Westbound Traffic signs	On Buchan Avenue between Horrie Road and Bezentin Road, two wombat crossings contain a lack of warning of the hump profile and lack of speed advisory. This may increase readability issues for drivers approaching the speed hump profile. This may lead to drivers not sufficiently reducing speed on approach to the wombat crossing which may lead to vehicle damage.	  	**Likelihood** Rare **Consequence** Insignificant **Risk Level** Negligible	These recently installed zebra crossings are part of the scope of works of School Infrastructure delivered as part of the new High School. Any rectification is the responsibility of School Infrastructure and/or Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
6	Guillemont Road Northbound / Southbound Pedestrian infrastructure	The kerb ramps out the front of 22 Guillemont Road do not align with each other. Vulnerable pedestrians (i.e. vision impaired) may have reduced capacity to view the kerb ramp path due to the offset. Pedestrian crossing at this location may be required to walk diagonally across the road travel lanes or access the footpath by the grass verge / driveway. This may increase the likelihood of pedestrians being struck by an oncoming vehicle, leading to injury to a pedestrian.	 	**Likelihood** Rare **Consequence** Moderate **Risk Level** Low	This is an existing deficiency and the responsibility of Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
					

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
7	Guillemont Road Eastbound / Westbound Traffic signs	On Guillemont Road between Faulkner Way amd Bezentin Ridge Road, a wombat crossing contains a lack of warning of the hump profile and lack of speed advisory. This may increase readability issues for drivers approaching the speed hump profile. This may lead to drivers not sufficiently reducing speed on approach to the wombat crossing which may lead to vehicle damage.	  	**Likelihood** Rare **Consequence** Insignificant **Risk Level** Negligible	This is an existing deficiency and the responsibility of Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
8	Buchan Avenue Eastbound Traffic signs	On Buchan Avenue, eastbound, there is no “End school zone” signage. This may create readability issues for eastbound drivers to observe where the school zone ends. This may lead to drivers continuing at 40km/h for a period past the actual end of the school zone. This may increase driver frustration and increase the risk of drivers attempting dangerous overtaking manoeuvres which may increase the risk of vehicle crashes.		**Likelihood** Rare **Consequence** Minor **Risk Level** Low	This recently installed zebra crossing is part of the scope of works of School Infrastructure delivered as part of the new High School. Any rectification is the responsibility of School Infrastructure and/or Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
9	Bezentin Ridge Road Northbound / Southbound Pedestrian infrastructure	On Bezentin Ridge Road, south of Guillemont Road there is a section of footpath with uneven bitumen infill. This may create a trip hazard for pedestrians at this location. This may lead to injury to a pedestrian.		**Likelihood** Unlikely **Consequence** Minor **Risk Level** Low	This is an existing deficiency and the responsibility of Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
10	Buchan Avenue Westbound Lighting	During the night time site inspection the audit team observed the lighting within the southern verge at the wombat crossings were not working. The audit team observed that these locations appeared illuminated from surrounding lighting, however not to the extents of the northern side of the wombat crossings. This may slightly reduce readability for approaching drivers to crossing pedestrians.		**Likelihood** Rare **Consequence** Insignificant **Risk Level** Negligible	These recently installed zebra crossings are part of the scope of works of School Infrastructure delivered as part of the new High School. Any rectification is the responsibility of School Infrastructure and/or Liverpool City Council.

CAR No	Location Category	Description of Risk to Road Safety	Photographs / Plans / Drawing No	Risk Assessment	Client Response
					

APPENDIX A

ROAD SAFETY AUDIT CATEGORIES

Road safety audit practices

Transport for NSW

INFORMATION SHEET: NO: L5

Road safety audit categories

Categories have been set up to assist in the management of corrective actions, and monitoring of trends in identified risks in road safety.

Category	Examples
Access impacts	Property, developments, traffic generators, rest areas, emergency vehicles, service vehicles, maintenance, vehicle breakdowns, etc.
Auxiliary lanes	Overtaking lanes, passing lanes, tapers, merges, etc.
Bridge structures	Road bridge, pedestrian bridge, rail bridge, etc.
Bus infrastructure	Bus lanes, bus facilities, bus stops, etc.
Cyclist infrastructure	Cycleways, on-road facilities, off-road cycle facilities, cycle routes, etc.
Delineation	Guide posts, pavement markings, reflectors, warning signs, etc.
Drainage	Ponding, aquaplaning, etc.
Heavy vehicle infrastructure	Inspection bays, facilities, provisions, routes, etc.
Intersections	Roundabouts, cross intersections, T-junctions, etc.
Landscaping	Shrubs, trees, etc.
Lighting	Street lighting, tunnel lighting, etc.
Miscellaneous	Matters not covered by categories listed.
Network effects	Road function, traffic composition, traffic volume, traffic characteristics, route choice, impact of continuity with the existing network, etc.
Special road users infrastructure	Trains, ferries, trams, equestrian, stock, etc.

Category	Examples
Pedestrian infrastructure	Pathways, pedestrian crossings, pedestrian fencing, etc.
Road alignment and cross section	Sight distance, visibility, readability by drivers, glare, widths, shoulders, crossfalls, batter slopes, drains, etc.
Road pavement	Pavement defects, skid resistance, ponding, loose stones/material, etc.
Road users	Behaviour, practices, travel patterns, interaction between different road users, etc.
Roadside activities	Roadside advertising, roadside designs, vending, etc.
Roadside hazards	Clear zones, utility poles, culverts, bridge structures, trees, etc.
Safety barriers	Concrete, guardrail, wire rope safety barriers, crash cushions, etc.
Speed zoning	Speed limits, speed zones, design speed, school zones, etc.
Traffic management and operations	Staging of works, temporary traffic control, detours, peak tidal flows, clearways, parking, etc.
Traffic management devices	Threshold treatments, road humps, kerb extensions, slow points, etc.
Traffic signals	Signal phasing, bus signals, bicycle signals, pedestrian signals, etc.
Traffic signs	Regulatory signs, warning signs, guide signs, etc.
Tunnel structures	Road tunnels, pedestrian tunnels, cycle tunnels, etc.

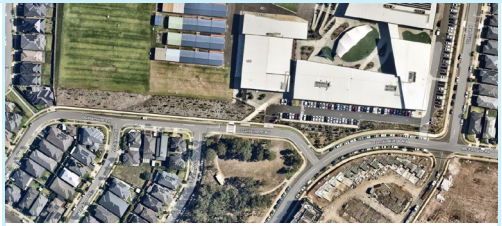
APPENDIX B

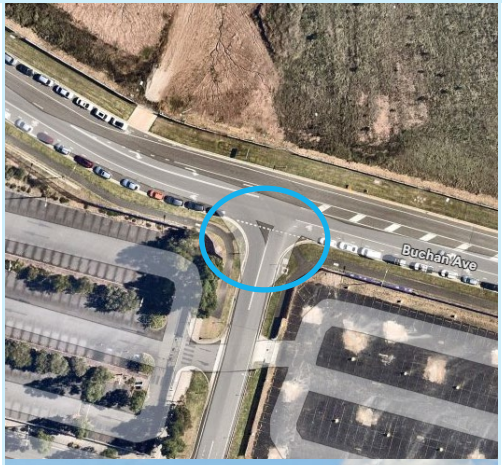
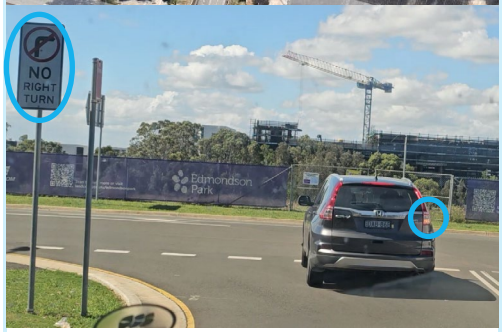
OTHER OBSERVATIONS

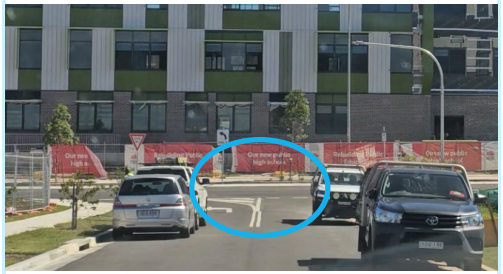
Below are observations of potential road safety audit items that may be outside the scope of works, excluded from the audit findings (refer to Section 3.7 Exclusions) or may require additional information linked to the observations below to determine if a road safety issue should be raised by the audit team.

These observations are not linked to the audit findings within the RSA report.

Car No	Location Category	Description of Risk to Road Safety	Photographs / Places / Drawings No	Client Response
1	Intersection of Buchan Avenue and Horrie Road Westbound Traffic management and operations	The temporary construction signage within the verge on the westbound approach to the Horrie Road roundabout is obscured by parked vehicles. This may lead to readability issues for drivers approaching Horrie Road.	  	Liverpool City Council to address

Car No	Location Category	Description of Risk to Road Safety	Photographs / Places / Drawings No	Client Response
2	St Francis Catholic College All Directions Speed zoning	During the site inspection, the audit team observed that there is no school zone on Guillemont Road, Bezentin Ridge Road or the approaching roads to suit St Francis Catholic College. The lack of school zones and increased speed limits may increase the risk to school children to be struck by vehicles in the vicinity of the schools surrounds. This may lead to injury to school children.	 	Liverpool City Council to address

Car No	Location Category	Description of Risk to Road Safety	Photographs / Places / Drawings No	Client Response
3	Intersection of Buchan Avenue and Braithwaite Road Eastbound Road users	During the site inspection, the audit team observed a driver disobey the “No right turn” sign to turn right onto Buchan Avenue. It is observed that there is no physical obstacles (i.e. median) in place or guiding pavement markings to force drivers to turn left only onto Buchan Avenue. At the time of the site inspection the right turning vehicle did not cause a delay to the audit team, however during peak periods right turning vehicles may be held up for significant periods, causing queueing on Braithwaite Road.	 	Liverpool City Council to address

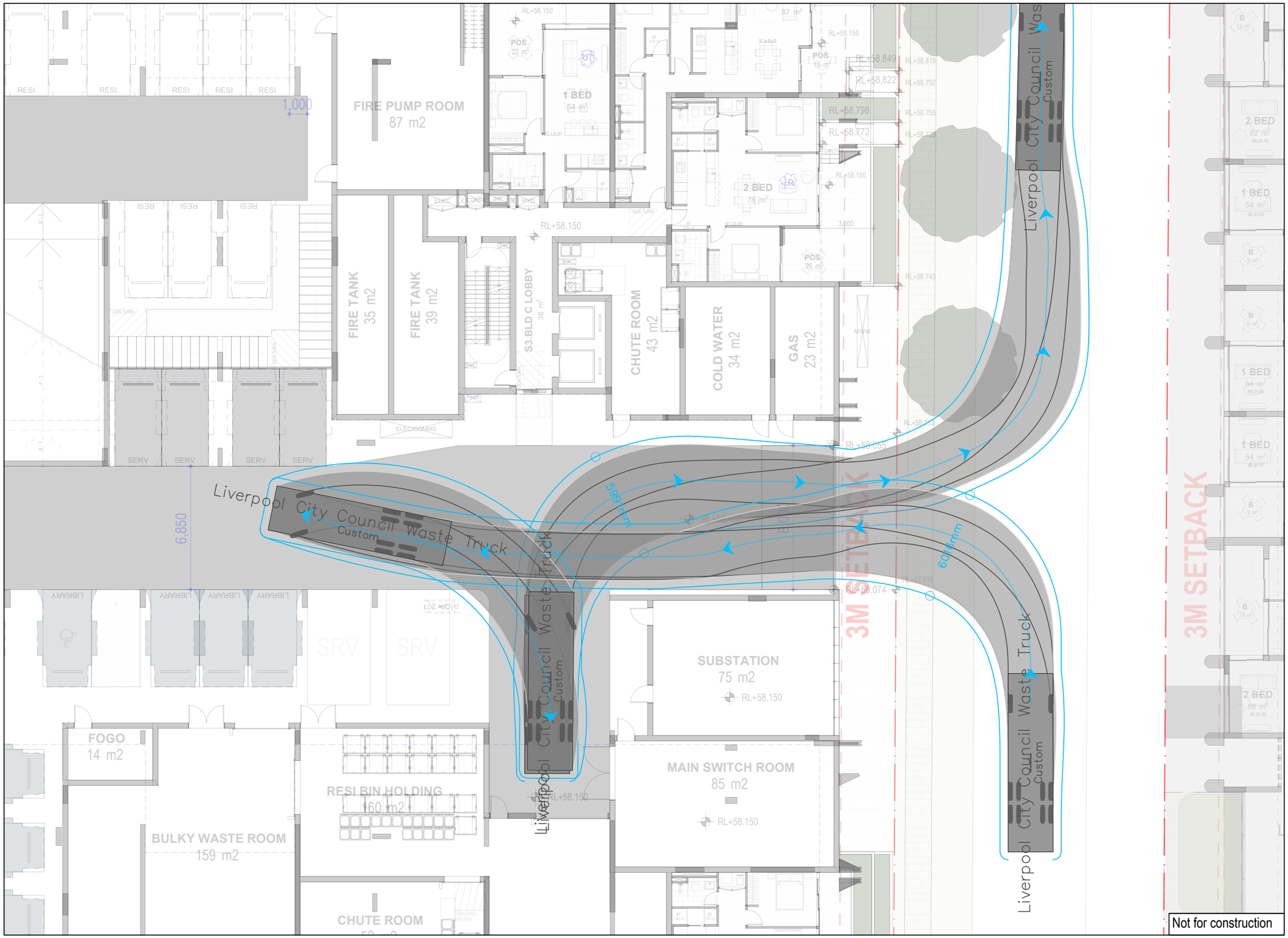
Car No	Location Category	Description of Risk to Road Safety	Photographs / Places / Drawings No	Client Response
4	Shaggy Ridge Road Northbound / Southbound Road alignment and cross section	During the site inspection the audit team observed that it is a very tight squeeze to pass two vehicles parked opposing each other on Shaggy Ridge Road. Larger vehicles, including garbage trucks, may be unable to pass between two parked vehicles. This may increase the risk of vehicle damage.		This will be considered in the final plans for the subject site.

Thoughtful Transport Solutions

Suite 4.03, Level 4, 157 Walker Street, North Sydney NSW 2060
sctconsulting.com.au

APPENDIX C

SWEPT PATH ANALYSIS



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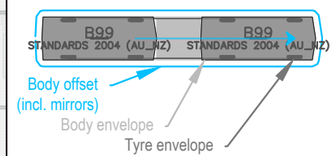
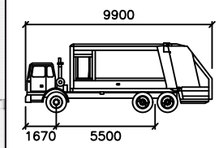


This swept path assessment is based on:

- 450mm body offset
- Vehicle speed of 5-10km/h
- A Liverpool City Council Waste Truck



Liverpool City Council Waste Truck

	mm
Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3

0 2 4

Scale 1:200

Project
SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title
Site 3 - Loading dock
Liverpool City Council waste truck

Project Number
SCT_00824_CAD_Ed Park Sites 3-5

Sheet number
01

A3

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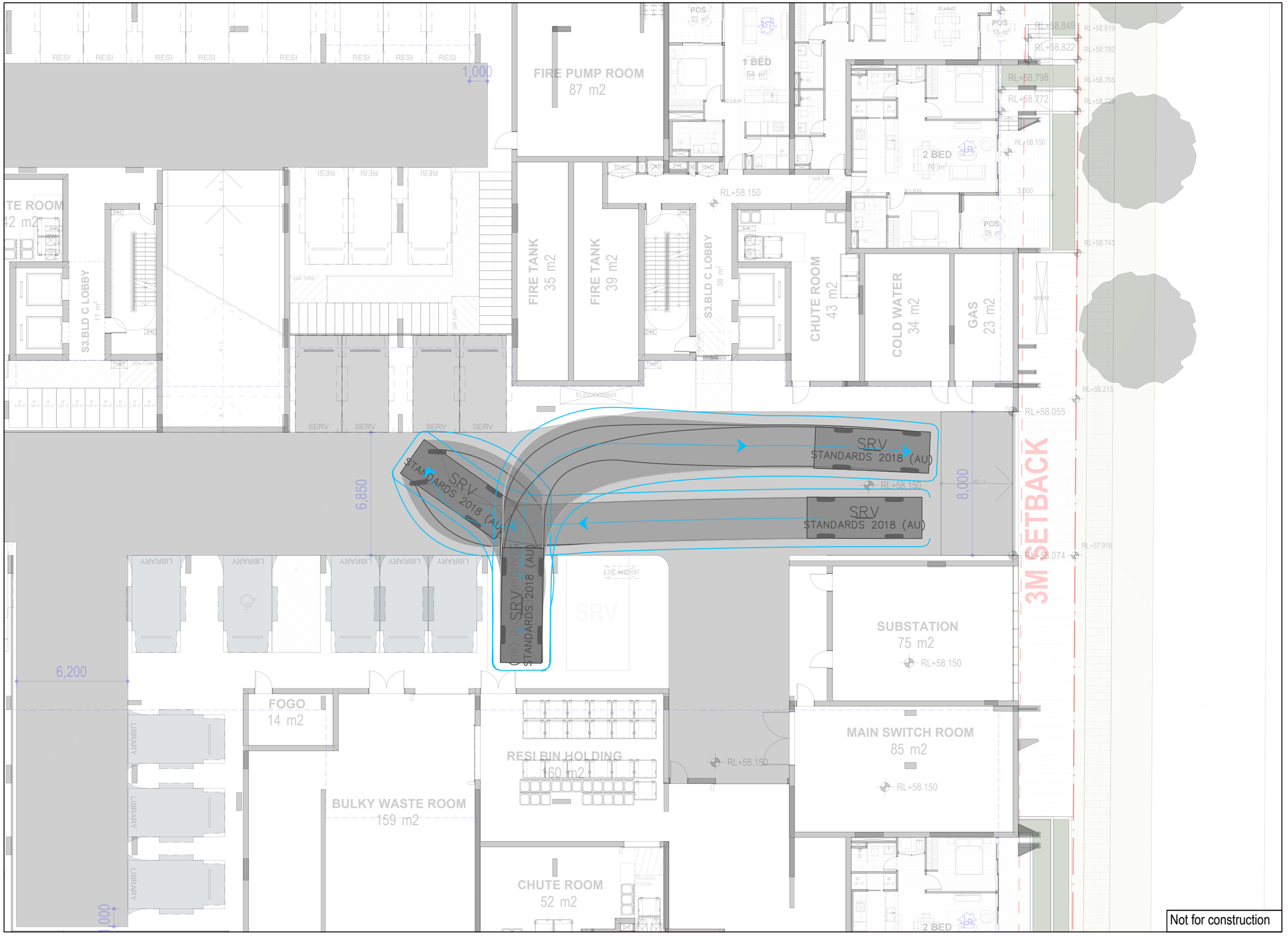

Not for construction

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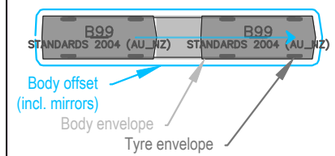
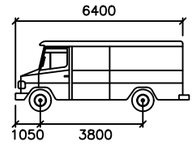


This swept path assessment is based on:

- 450mm body offset
- Vehicle speed of 5-10km/h
- A small rigid vehicle



SRV

	mm
Width	: 2300
Track	: 2300
Lock to Lock Time	: 6.0
Steering Angle	: 38.1

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3

0 2 4

Scale 1:200

Project: SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title: Site 3 - Loading dock
Small rigid vehicle

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 01

A3

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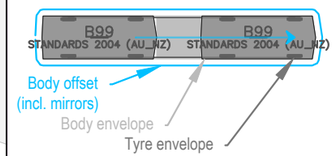
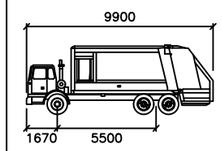


This swept path assessment is based on:

- 450mm body offset
- Vehicle speed of 5-10km/h
- A Liverpool City Council Waste Truck



Liverpool City Council Waste Truck

	mm
Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

Not for construction

v	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3: 0 2 4 — Scale 1:200

Project: SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title: Site 4 - Loading dock
Liverpool City Council waste truck

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 03

A3

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Not for construction

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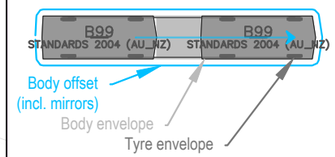
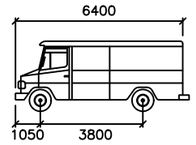


This swept path assessment is based on:

- 300mm body offset
- Vehicle speed of 5-10km/h
- A small rigid vehicle



SRV

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Width	: 2300
Track	: 2300
Lock to Lock Time	: 6.0
Steering Angle	: 38.1

v	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3: 0 2 4

Scale 1:200

Project: SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title: Site 4 - Loading dock
Small rigid vehicle

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 04

A3

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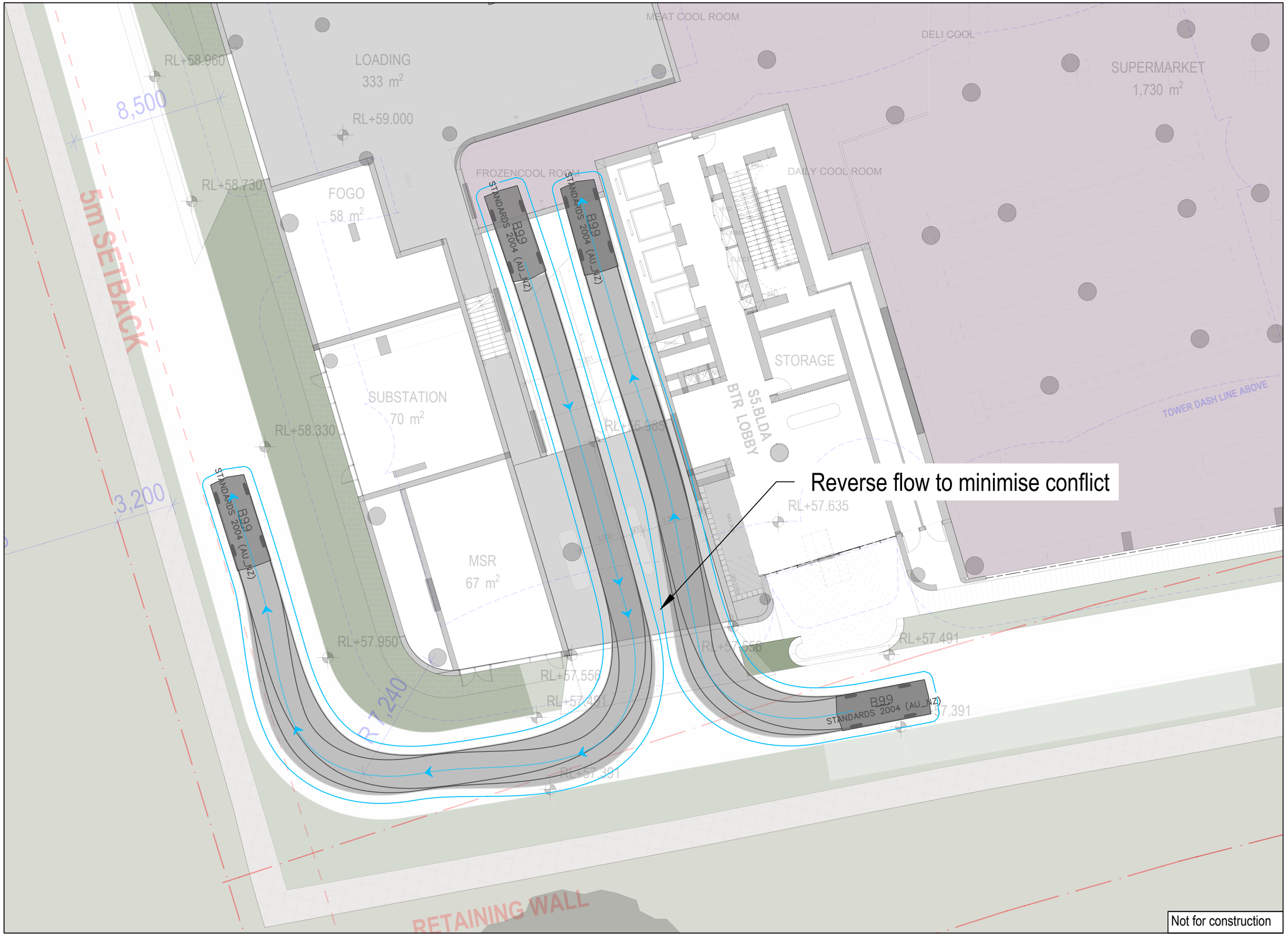

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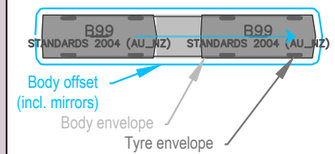

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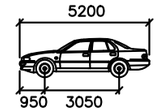
- 450mm body offset
- Vehicle speed of 5-10km/h
- A B99



B99

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Width	: 1940
Track	: 1840
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3

0 2 4

Scale 1:200

Project: SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title: Site 5 - Ground floor southern ramp
B99 passing

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 05

A3

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BULKY WASTE ROOM
177 m²

FIRE PUMP ROOM
62 m²

S5.BLD B LOBBY
11 m2

CARPARK
178 CARSPACES
9,297 m²

6,200

R99
STANDARDS 2004 (AU_NZ)

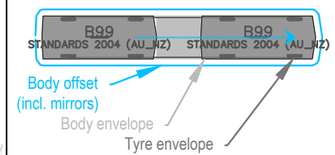
5m SETBACK

Reverse flow to minimise conflict

S5.BLD A LOBBY
21 m2

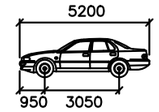
CHUTE ROOM
66 m²

Legend



This swept path assessment is based on:

- 450mm body offset
- Vehicle speed of 5-10km/h
- A B99



B99

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Width	: 1940
Track	: 1840
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

Not for construction

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for:
URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3
0 2 4
Scale 1:200

Project
SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title
Site 5 - Basement 1 southern ramp
B99 passing

Project Number
SCT_00824_CAD_Ed Park Sites 3-5

Sheet number
06

A3

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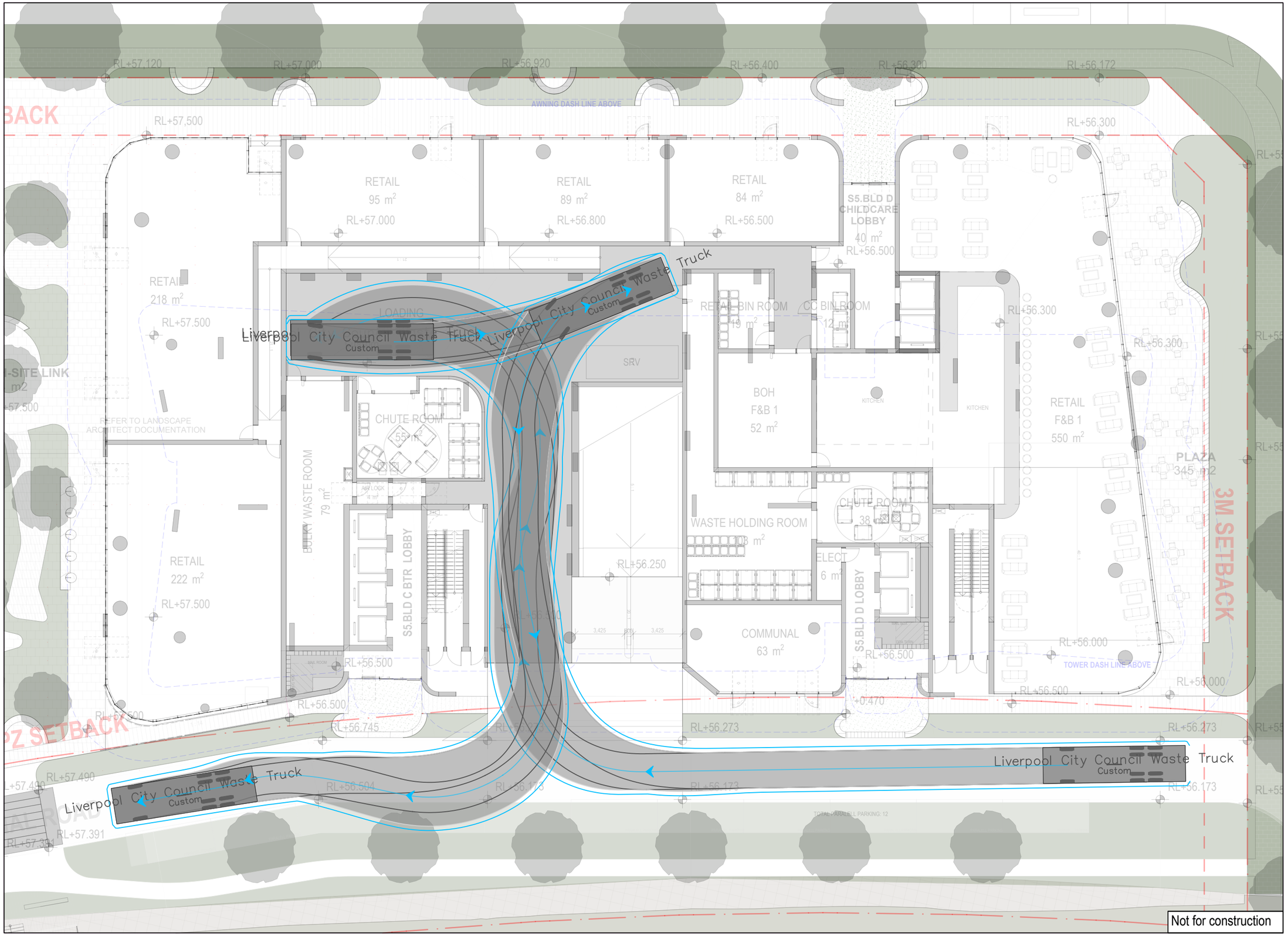

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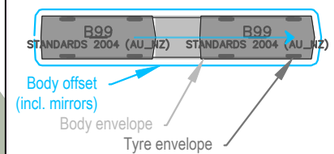
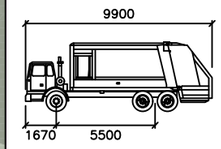


This swept path assessment is based on:

- 300mm body offset
- Vehicle speed of 5-10km/h
- A Liverpool City Council Waste Truck



Liverpool City Council Waste Truck

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Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3

0 2 4

Scale 1:250

Project
SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title
Site 5 - Northern loading dock
Liverpool City Council Waste Truck

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 07

A3

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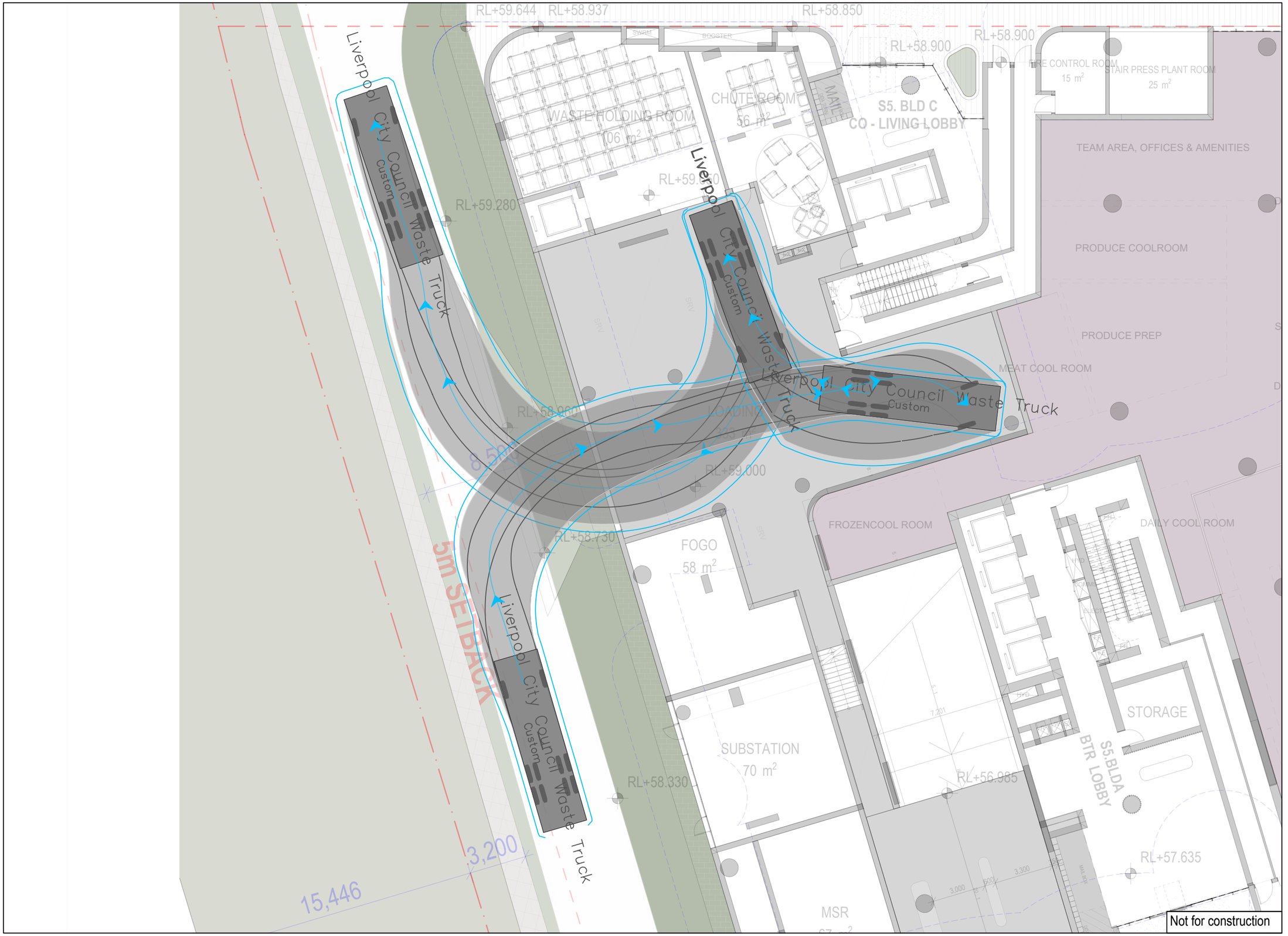

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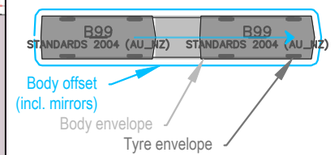
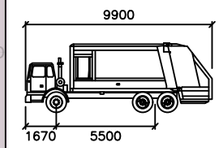


This swept path assessment is based on:

- 300mm body offset
- Vehicle speed of 5-10km/h
- A Liverpool City Council Waste Truck



Liverpool City Council Waste Truck

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Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

V	Description	Date
1.0	FOR SSDA LODGEMENT	04/03/2026

SCT Consulting

Prepared for: URBAN PROPERTY

Quality information	
Date	03/26
Prepared	JG
Reviewed	SF
Authorised	JB

Scale @ A3

0 2 4

Scale 1:250

Project: SITE 03. 04 & 05
BUCHAN AVENUE, EDMONDSON PARK 2174

Title: Site 5 - Northern loading dock
Liverpool City Council Waste Truck

Project Number: SCT_00824_CAD_Ed Park Sites 3-5

Sheet number: 08

A3

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Thoughtful Transport Solutions

Suite 4.03, Level 4, 157 Walker Street, North Sydney NSW 2060
sctconsulting.com.au