

North-South Corridor River Torrens to Darlington Local Area Traffic Management Plan

City of Mitcham

Final Report



24 November 2023

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PREPARED FOR: Department for Infrastructure and Transport

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Executive Summary

Study purpose and scope

The purpose of this Local Area Traffic Management (LATM) study is to identify and assess changes and potential improvements to local access affected by the North South Corridor River Torrens to Darlington (T2D) project. The impacts to local traffic and access for walking, cycling and public transport as a result of the T2D Reference Design as of July 2023 during the construction stage and with project completion. In particular, the scope included:

- A review of traffic volumes and speeds on local streets and at key intersections along the corridor.
- Changes to access to South Road to and from the local streets in the adjacent suburbs.
- Impacts on changes to traffic volumes on streets in the adjacent suburbs.
- Impacts on convenient and safe walk access to the bus stops or tram stops as relevant.
- Impacts on safety for cycling along and parallel to the corridor and connectivity across the corridor.
- Impacts on safety, amenity and connectivity for walking along and across the corridor and at key intersections.

The LATM study area for the City of Mitcham is bounded by Cross Road to the north, Goodwood Road to the east, South Road to the west and Mill Terrace to the south as shown in Figure 1-2. It includes the suburbs of Clarence Gardens, Cumberland Park, Melrose Park, Daw Park, St Marys and Bedford Park. The focus of the LATM study was in the sections where a surface motorway and around the northern and southern portals of the tunnel sections. The sections of the corridor over the Southern Tunnel north of Daws Road were not reviewed in detail, but are included in the existing conditions.

The LATM report was prepared assuming that many motorists will seek to avoid using South Road during the T2D construction period will use the other main arterial roads. The \$850M Broader Network Upgrade Program of works will expand the capacity of the network to facilitate expected increases in traffic volumes. Due to the traffic volumes and potential congestion, people will likely return to South Road or use the other main arterial roads, rather than using other local networks, such as Winston Avenue and East Terrace in Melrose Park and Clarence Gardens.

Community engagement findings

The key issues in the T2D corridor study area from the LATM engagement survey and drop-in sessions were about:

- traffic access, traffic volumes and rat-running in local streets with 201 comments (39 per cent)
- cyclist safety at crossings and network connectivity with 153 comments (30 per cent)
- pedestrian safety at crossings, access to local destinations and footpath amenity with 144 comments (28 per cent)
- access to public transport stops with 20 comments (4 per cent)

Issues regarding traffic management and safety provided from the community review of the T2D Reference Design are:

- Concerns about changes to access to and from South Road.
- Need for convenient local access to schools, shops and businesses.
- Need to improve east-west connectivity for local traffic.
- Issues to maintain access to businesses during construction including carparking and emergency services vehicles.
- During the construction stages, notify drivers about changes to access and traffic conditions.
- Need to maintain access for residents and motorists (detours and temporary restrictions).
- Need to manage “rat-running” between arterial roads and traffic congestion concerns.

Issues regarding pedestrian and cyclist movements provided from the community review of the T2D Reference Design are:

- Improve the pedestrian and cycling networks, including safety, on South Road and local streets, including PACs.
- Concern over removal of pedestrian crossings at schools, in particular the schools with access on South Road, such as Richmond Primary School, Black Forest Primary School and St Bernadette's Primary School.
- Need to install bike lanes on the surface roads of South Road.
- Provide for improved pedestrian access across the River Torrens and at James Congdon Drive.
- Provide separated bike paths and prioritise more bike paths across and parallel to the corridor.



The key issues for the City of Mitcham respondents from the LATM engagement survey and drop-in sessions were:

- rat-running with 21 comments in Rozelle Avenue and Wheaton Road, Melrose Park and Cashel Street, St Marys.
- traffic volumes with 20 comments in particular in Rozelle Avenue, Melrose Park.
- traffic access with 14 comments.
- tunnel/motorway access with 3 comments.
- traffic speed with 2 comments.
- pedestrian crossings with 9 comments, in particular to cross South Road to access Edwardstown railway station from Clarence Gardens, to Castle Plaza from Melrose Park and south of Celtic Avenue, St Marys
- pedestrian connectivity with 2 comments
- six issues for cycling with the need for safe cyclist crossings and bike lanes

Impacts on traffic, public transport, walking and cycling

The Reference Design was reviewed with feedback from the Council, community and technical team to identify the following impacts on traffic, public transport, walking and cycling in the T2D LATM study area of the City of Mitcham:

- The removal of right turns at Merriton Avenue, St Marys will create a diversion around 450 vehicles with 350 vehicles entering and 100 exiting.
- Crystal Avenue, St Marys will only be left-in and left-out so all right turn traffic will transfer to Tonsley Blvd and be required to U-turn. It will possibly be closed during construction. Current right turns movements is 280 vehicles split between 230 entering and 50 exiting.
- The removal of right turns at Walsh Avenue, St Marys will create a diversion for around 350 vehicles.
- The removal of right turns at Lloyd Street, St Marys will create a diversion for around 550 vehicles
- No change at Tobruk Avenue and Quinlan Avenue, St Marys so traffic access remains left-in and left-out.
- No change at Brookman Avenue, St Marys so traffic access remains exit only.
- No changes to bus stops in the southbound direction of South Road at:
 - Stop 19 South Rd - East side (opposite English Avenue), St Marys.
 - Stop 20 South Road (east side) north of Merriton Avenue, St Marys.
 - Stop 21 South Road (east side) south of Walsh Avenue, St Marys, however, pedestrian access to the stop post-construction will be on the west side of the corridor.
- Issues for cycling connectivity and safety will be created with:
 - The cyclist bridge at Crystal Avenue, St Marys is located too far north for convenient connection.
 - Impact of diverted traffic at Cross Road, Clarence Park on safety and amenity of proposed bikeway.
 - Impact of diverted traffic at Cross Road, Clarence Gardens on safety and amenity of proposed bikeway.
 - Poor access across South Road to Marino greenway at South Road, Clarence Gardens.
- Issues for pedestrian connectivity, safety and access are created with:
 - The removal of existing connection to South Road at Crystal Avenue, St Marys.
 - The removal of PAC at Walsh Avenue, St Marys that is important for walk access from Clovelly Park to St Bernadette's Primary School.



Proposed recommendations

The recommended actions in the T2D LATM study area identified with high importance for the Council to consider are grouped by transport mode and are provided in Table 1. For the affected bus stops along South Road in St Marys, Council is recommended to liaise with SAPTA for any requirements to maintain safe walk access to the stop and ensure contractors provide appropriate wayfinding signage during the construction stage.

Table 1: Key Recommendations for the City of Mitcham to Consider in St Marys

Location	Impact or Outcome for the T2D LATM	Recommended Council Scope
Traffic		
Merriton Avenue, St Marys	Traffic diversion around 450 vehicles/day with 350 vehicles/day for entry and 100 vehicles/day for 100 exit movements to South Road.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Crystal Avenue, St Marys	Traffic diversion is estimated around 900 existing vehicles/day.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Walsh Avenue, St Marys	Traffic diversion is estimated around 350 vehicles/day from Walsh Avenue. All diversions expected to transfer to Lloyd Street or Crystal Avenue and use Celtic Avenue and Tonsley Boulevard for u-turns.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Cycling		
Crystal Avenue, St Marys	New bridge over the motorway will provide improved and safer access for cyclists and students to St Bernadette's Primary School.	Council to consider an east-west cycling connection along Walsh Avenue to Dorene Street to connect to the Flinders to City bikeway with the new pedestrian/cyclist bridge over South Road. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.
Walking		
Crystal Avenue, St Marys	Janet Avenue to Crystal Avenue pedestrian access to be removed. New east-west pedestrian bridge at Walsh Avenue/Byron Avenue will provide improved pedestrian access to St Bernadettes Primary School, the bus stops and other local connections.	Council to liaise with DIT on a connected footpath network to the bridge. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.
Walsh Avenue, St Marys	New bridge over the motorway will provide improved and safer access for pedestrians and students walking to St Bernadette's Primary School.	Council to liaise with DIT on a connected footpath network to the bridge. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.



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Abbreviations

Abbreviation	Full Name
BPAC	Bicycle and Pedestrian Actuated Crossing
DIT	Department for Infrastructure and Transport, South Australian Government
LATM	Local Area Traffic Management
NSC	North-South Corridor
T2D	North-South Corridor Torrens to Darlington project
PAC	Pedestrian Actuated Crossing
SAPTA	South Australian Public Transport Authority, a division of the Department for Infrastructure and Transport

Glossary

Term	Definition
Go Zone	Go Zonestops and stations within a 'go zone' provide a bus, train or tram: • every 15 minutes between 7:30 am and 6:30 pm, Monday–Friday • every 30 minutes between 6:30 pm and 10 pm, Monday–Friday • every 30 minutes on Saturday, Sunday and South Australian public holidays.
Reference Design	The reference design reviewed in this LATM study was released for public comment in July 2023.



1. Introduction

1.1 Background

The Australian and South Australian Governments are investing in the final 10.5 km section of the North-South Corridor from the River Torrens to Darlington. The River Torrens to Darlington (T2D) Project will be delivered with a combination of tunnels, lowered and ground-level motorways, as well as overpasses and underpasses at key intersections to successfully complete the free-flowing transport route.

Construction is expected to start in 2024, pending the relevant planning approvals, with the details of the staging and timing to be confirmed following contractor appointment. The entire T2D project is expected to be completed in 2031.

The T2D corridor project map for the City of Mitcham section between Cross Road and Mill Terrace to St Marys north of Bedford Park is shown in Figure 1-1.

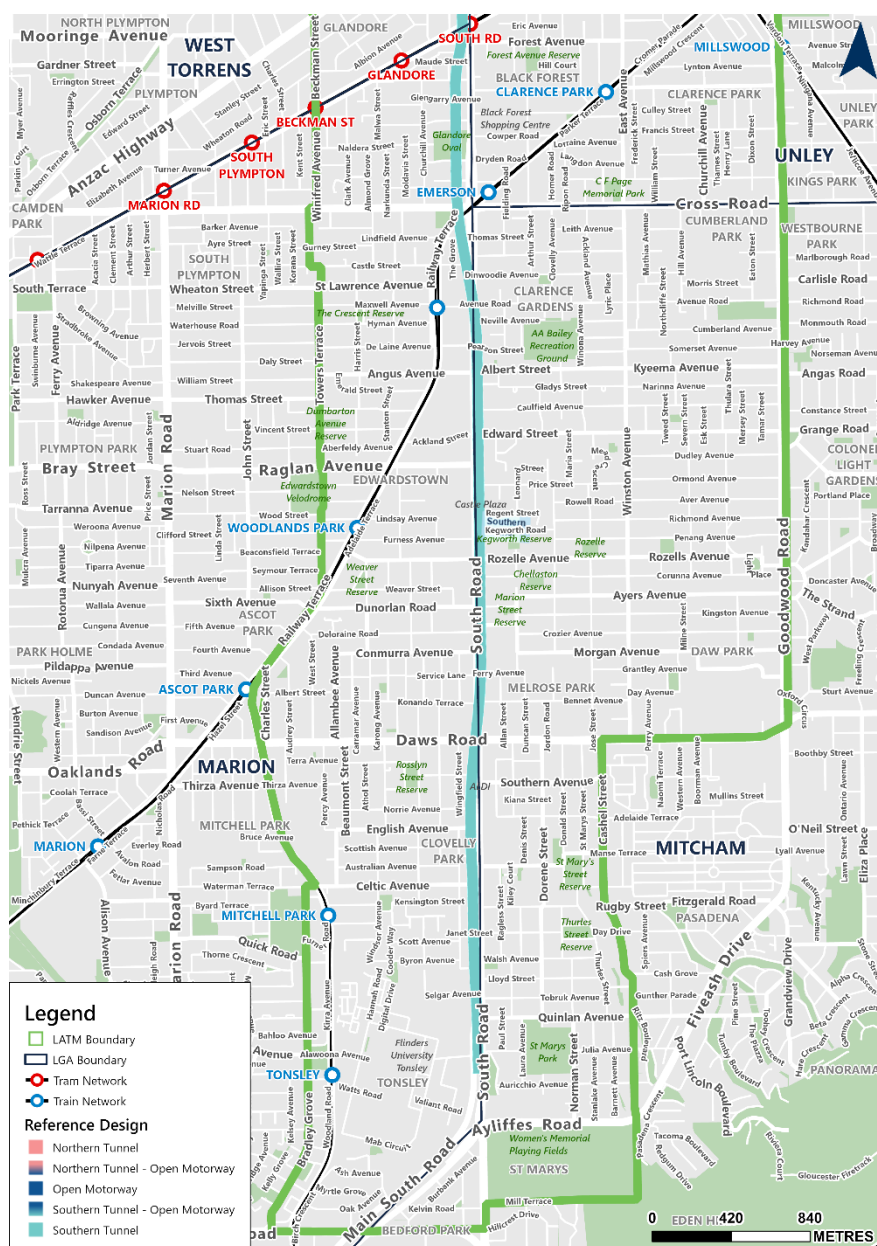


Figure 1-1: Southern Tunnel Section for the T2D Corridor Project



1.2 Scope

The T2D corridor study area for the City of Mitcham is east of South Road as shown in Figure 1-2. It is bounded by Cross Road to the north, Goodwood Road to the east, South Road to the west and Mill Terrace to the south. It includes the suburbs of Clarence Gardens, Cumberland Park, Melrose Park, Daw Park, St Marys and part of Bedford Park.

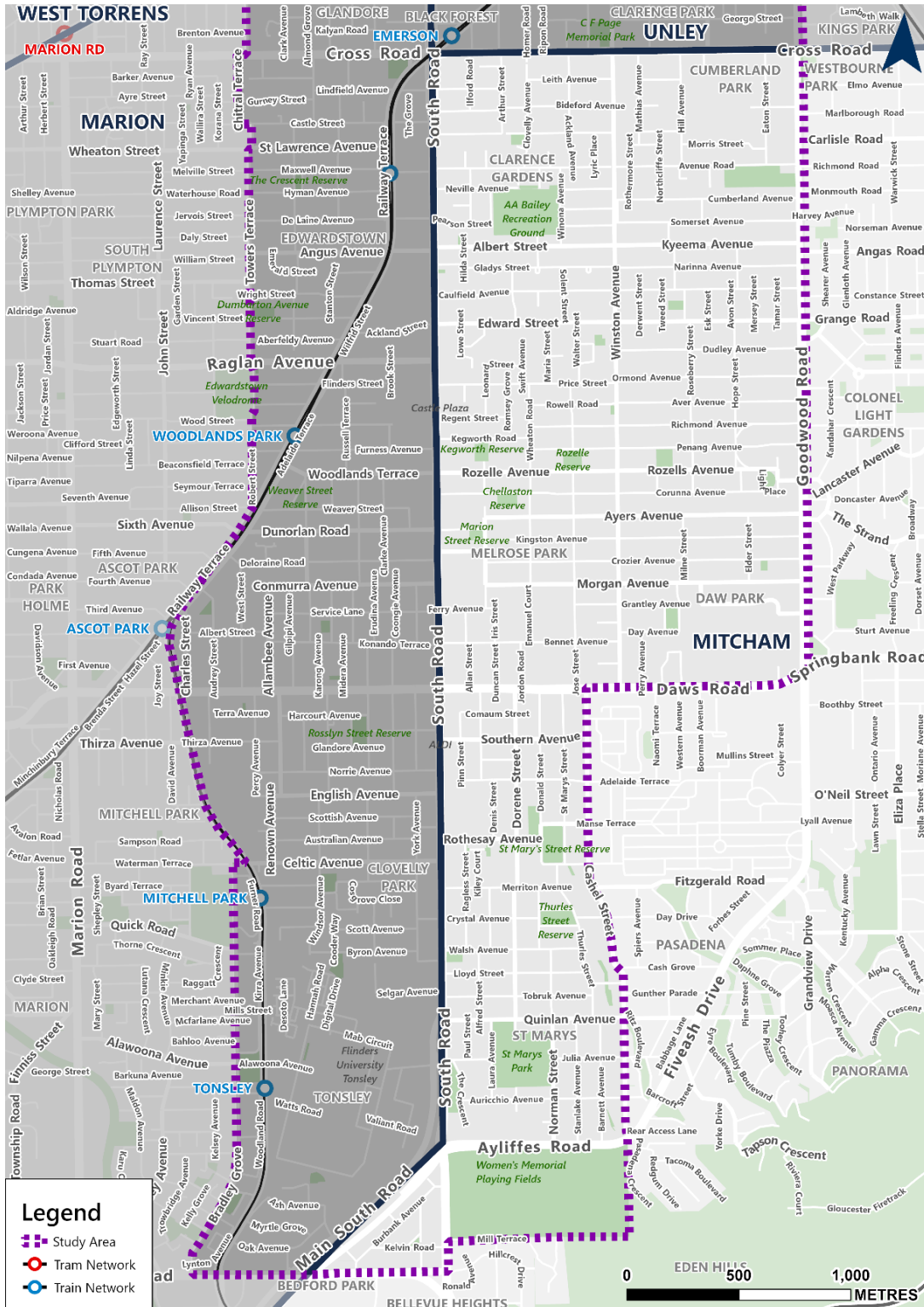


Figure 1-2: Study Area for the T2D Corridor in the City of Mitcham



1.3 Report structure

This Local Area Traffic Management (LATM) report is structured as follows:

- Section 2: Existing conditions review with maps of the land use, demography, road network hierarchy, and the public transport, bicycle and pedestrian networks.
- Section 3: Stakeholder consultation with the City of Mitcham with a summary of relevant Council projects and the findings from the community engagement held in July and August 2023.
- Section 4: Review of the Reference Design with impacts on the local traffic network, access to public transport, the cycling network and pedestrian access and safety.
- Section 5: Proposed LATM recommendations to mitigate the impacts from the Reference Design or to improve connectivity, amenity and safety for residents and businesses in the affected suburbs.
- Section 6: References for drawings and reports used in the preparation of this LATM report.



2. Existing Conditions

The existing conditions in the City of Mitcham section within the T2D study area are provided in this section.

2.1 Land use

The land use in the City of Mitcham section of the T2D study area is shown in Figure 2-1. The land uses are mostly low-density residential areas with public parks, reserves and several schools in the suburbs east of South Road and with retail, commercial and light industrial areas immediately adjacent to the eastern side of South Road.

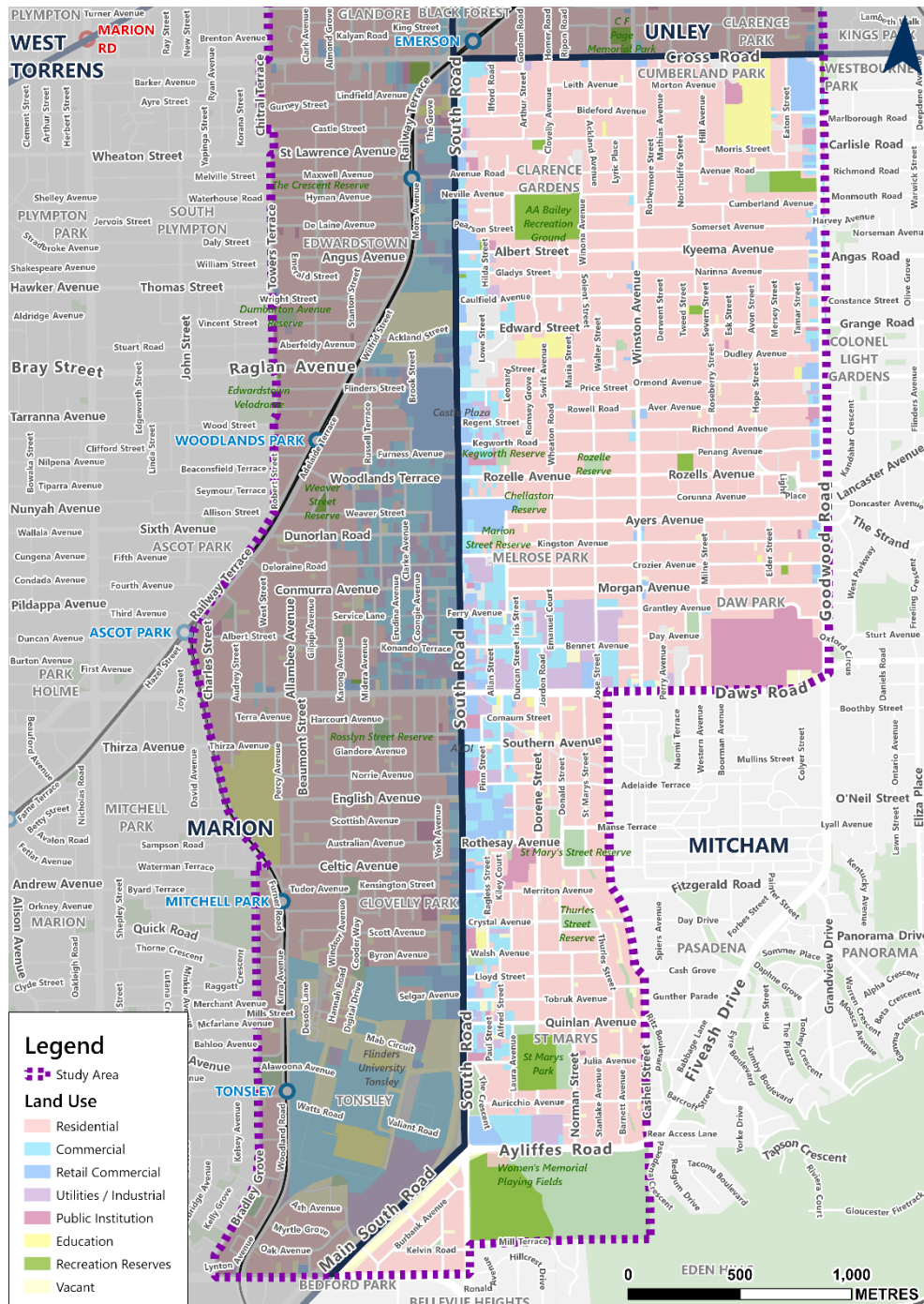


Figure 2-1: Land Use in the City of Mitcham within the T2D LATM Study Area



2.1.1 Schools

The schools within the City of Mitcham in this section of the T2D corridor are:

- Cabra Dominican College, Cumberland Park
- Edwardstown Primary School, Melrose Park
- St Bernadette's Primary School, St Marys
- Daws Road Early Learning Centre, St Marys
- Guardian Childcare and Education Daw Park, Daw Park

St Bernadette's Primary School north of Walsh Avenue in St Marys is most affected by the T2D project because it is on the eastern side of South Road and the students use the Pedestrian Actuated Signal (PAC) north of Walsh Avenue as a key crossing.

2.1.2 Retail and commercial

Retail and commercial developments within the City of Mitcham in this section of the T2D corridor include:

- The retail, commercial and industrial businesses along the eastern side of South Road
- The retail shopping precincts along Goodwood Road

2.1.3 Hospitals and medical centres

The hospital and local medical centres or clinics within the City of Mitcham in this section of the T2D corridor include:

- Repat Health Precinct, Daw Park
- St Marys Dental Care, St Marys
- Chiroactive, Melrose Park
- Sarah Bohbot Speech Pathology, Melrose Park

2.1.4 Employment centres

The major employment centres in this section of the T2D corridor are:

- Retail and commercial developments along South Road and Goodwood Road
- Repat Health Precinct, Daw Park

2.1.5 Parks, reserves and community centres

The parks, reserves and community centres in this section of the T2D corridor are:

- Cumberland Park Community Centre
- Westbourne Park Community Centre
- Avenue Road Reserve, Cumberland Park
- AA Bailey Recreation Ground, Clarence Gardens
- Kegworth Reserve, Melrose Park
- Rozelle Reserve, Melrose Park
- Marion Street Reserve, Melrose Park
- Crozier Reserve Playground, Daw Park
- Donald Street Reserve, St Marys
- St Marys Street Reserve, St Marys
- Thurles Street Reserve, St Marys
- St Marys Park, St Marys
- Women's Memorial Playing Fields, St Marys



2.2 Demographic overview

The population density in the City of Mitcham section of the T2D study area is shown in Figure 2-2. With the commercial and retail land uses along South Road, the populated areas are in the residential suburbs further east of South Road.

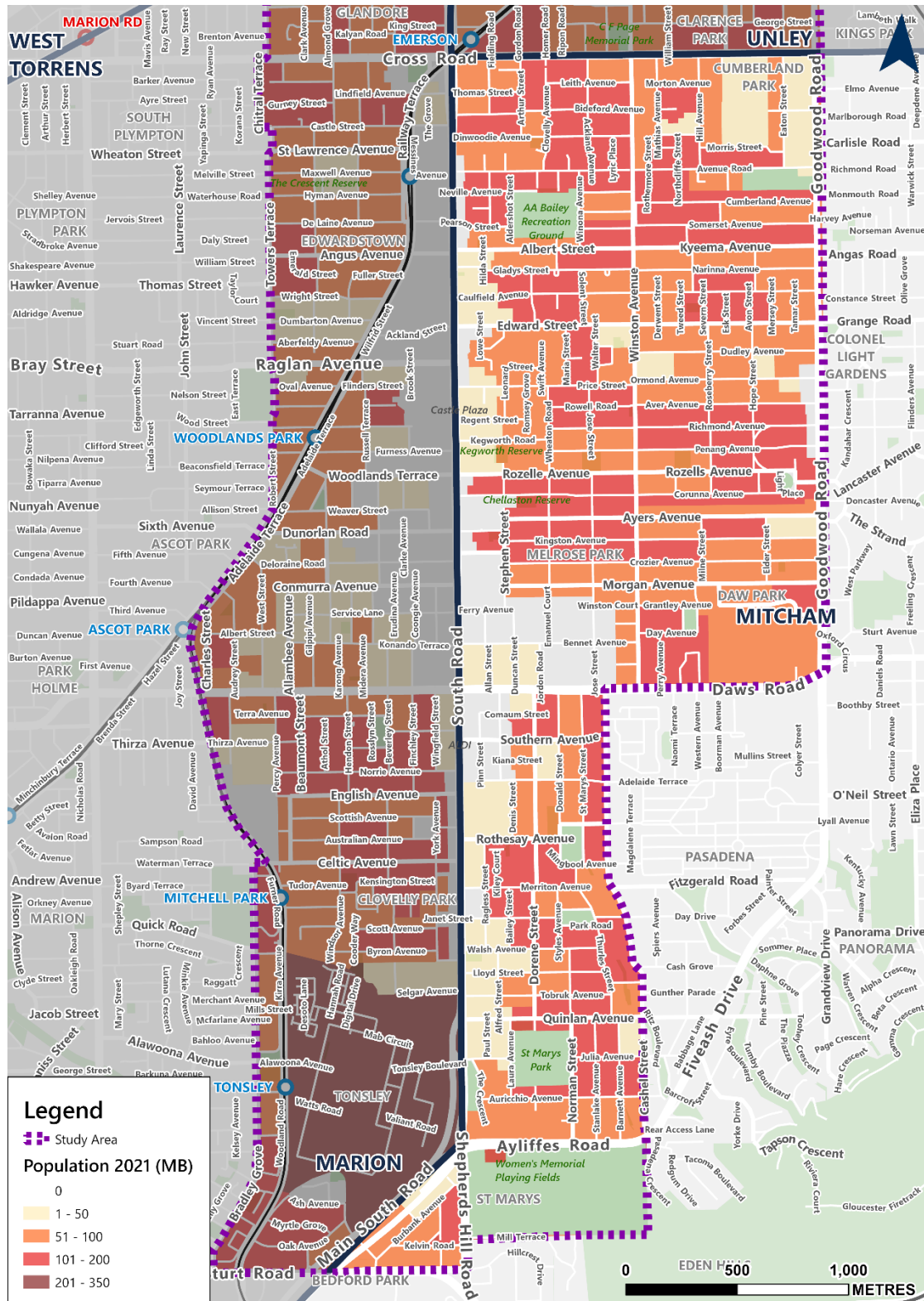


Figure 2-2: Population Distribution in the City of Mitcham



2.3 Road network

The road network within the City of Mitcham is shown in Figure 2-3. Within the study area, Cross Road and South Road are arterial roads. Goodwood Road is a sub-arterial road that is the eastern boundary of the study area, and other sub-arterial roads include Daws Road, Ayliffes Road and Shepherds Hill Road. Collector roads include Winston Avenue, Albert Street, Edward Street, Rozelle Avenue, Ayers Avenue, Stephen Street, Morgan Avenue, Rockville Avenue, Manfull Street, Southern Avenue, Dorene Street, Rothesay Avenue, Quinlan Avenue, Norman Street and Cashel Street.

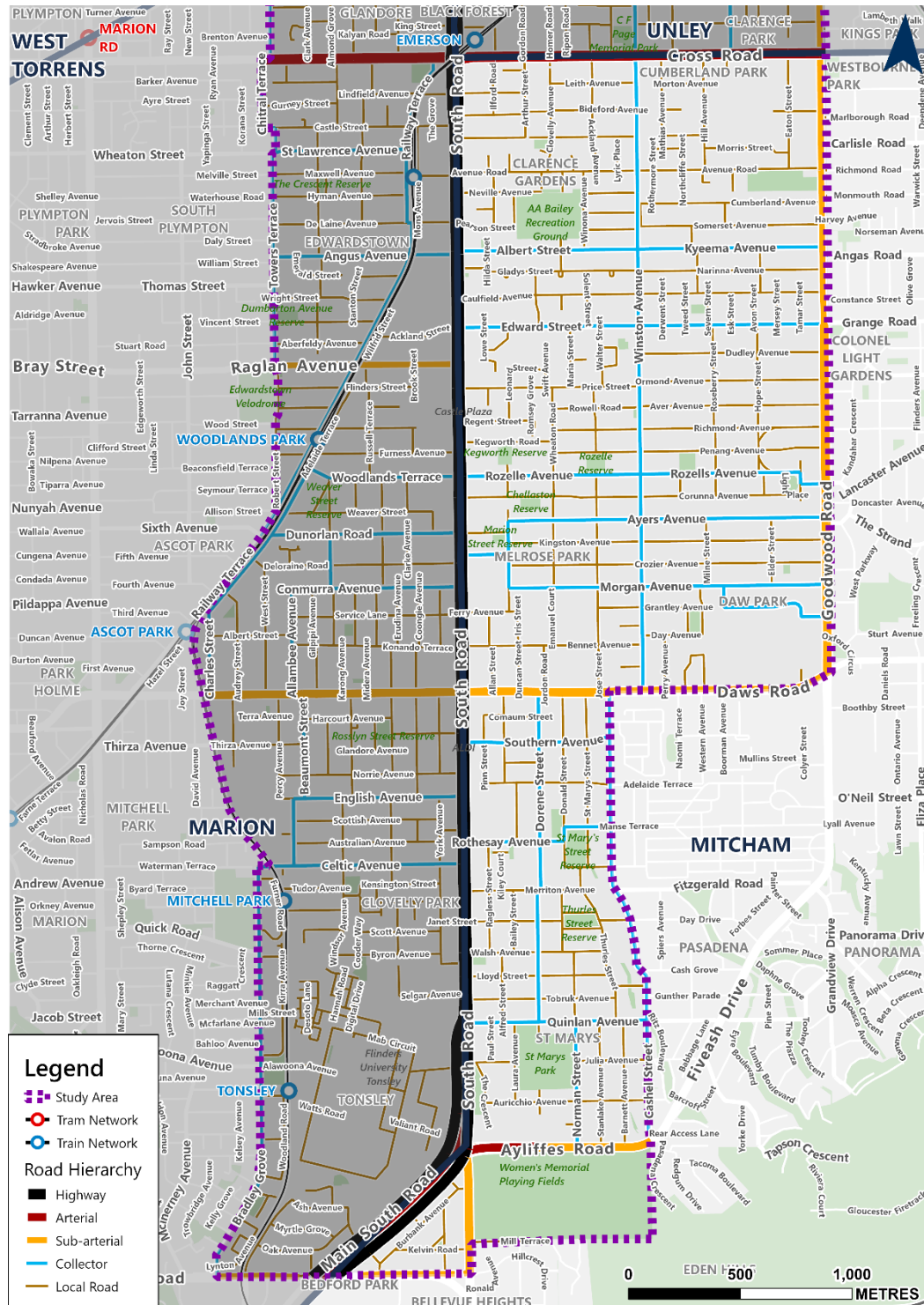


Figure 2-3: Road Network in the T2D Corridor within the City of Mitcham

The location of all the crashes within the study area over the five-year period from 2018 to 2022 are shown in Figure 2-4. Most of the crashes occur on the arterial roads and at intersections. Celtic Avenue at South Road and Lloyd Street at South Road have the most crashes in the area of St Marys that is most impacted by the T2D corridor.

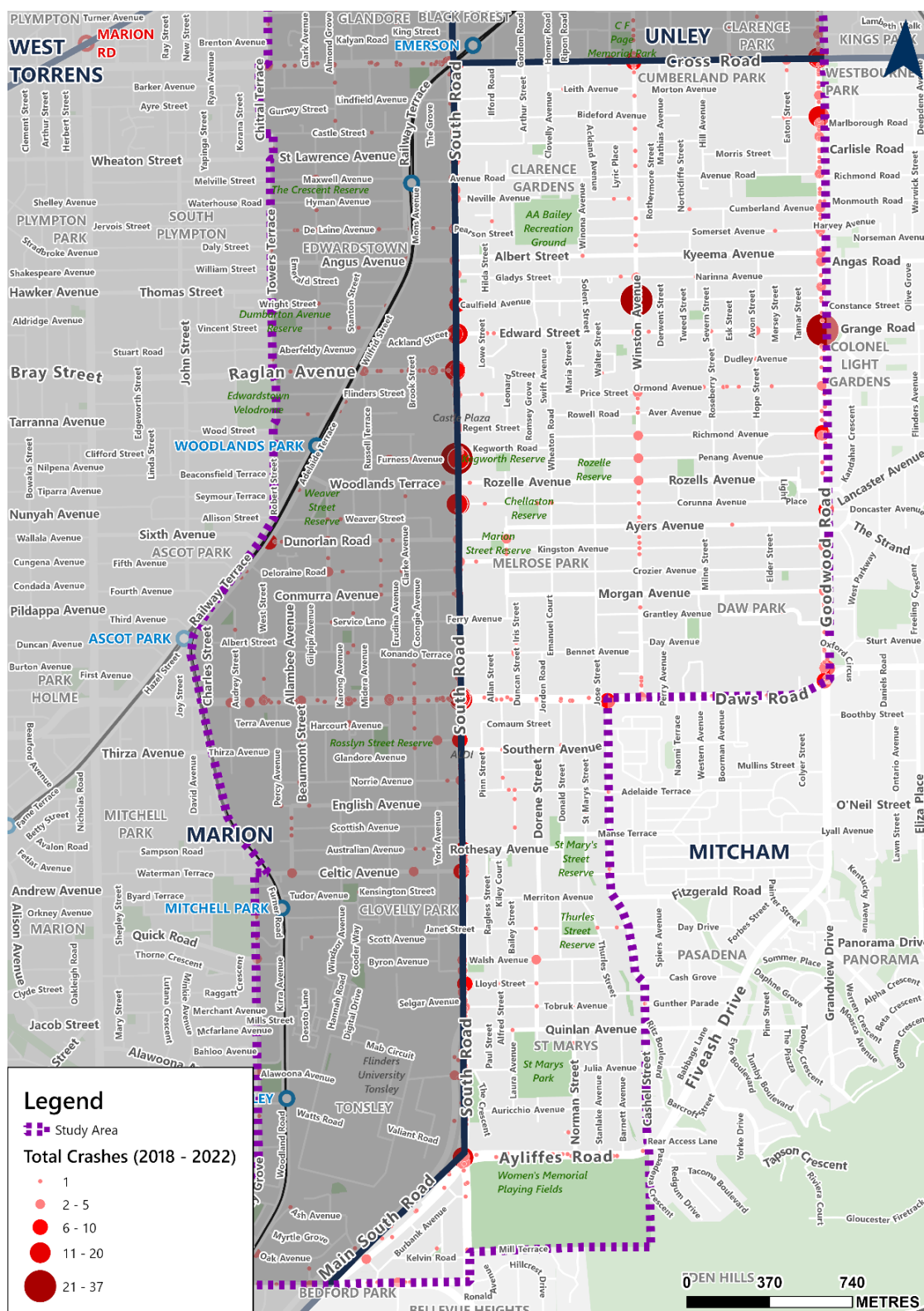


Figure 2-4: Crash Locations in the T2D Corridor within the City of Mitcham



Within the study area, most crashes were property damage and occurred along arterial roads, such as South Road and Goodwood Road. Hotspots of crash clusters are at the following intersections:

- South Road/Edward Street
- South Road/Raglan Avenue
- South Road/Furness Avenue
- South Road/Corunna Avenue
- South Road/Daws Road
- South Road/Ayliffes Road
- Winston Avenue/Caulfield Avenue
- Goodwood Road/Cross Road
- Goodwood Road/Little Street
- Goodwood Road/Edward Street/Grange Road

2.4 Public transport

The public transport services in the City of Mitcham are summarised by bus stop along South Road in Table 2-1. The T2D study area within the City of Mitcham has a total of 85 bus stops, but only 14 bus stops are along South Road on the eastern side in Bedford Park, St Marys, Melrose Park and Clarence Gardens.

Table 2-1: Bus Services along the T2D Corridor in the City of Mitcham

Suburb	Bus Stops	Number of Weekday Services
Bedford Park	Stop 25 Main South Road - South East side	260
	Stop 26 Main South Road - South East side	232
St Marys	Stop 23 South Road - East side	131
	Stop 21 South Road - East side	131
	Stop 18 South Road - East side	148
	Stop 19 South Road - East side	131
	Stop 20 South Road - East side	131
Melrose Park	Stop 15 South Road - East side	131
	Stop 16 South Road - East side	131
	Stop 14 South Road - East side	131
	Stop 13 South Road - East side	148
Clarence Gardens	Stop 11 South Road - East side	130
	Stop 10 South Road - East side	63
	Stop 12 South Road - East side	130

Public transport stops in the T2D study area within the City of Mitcham and the streets with the bus routes are shown in Figure 2-5.



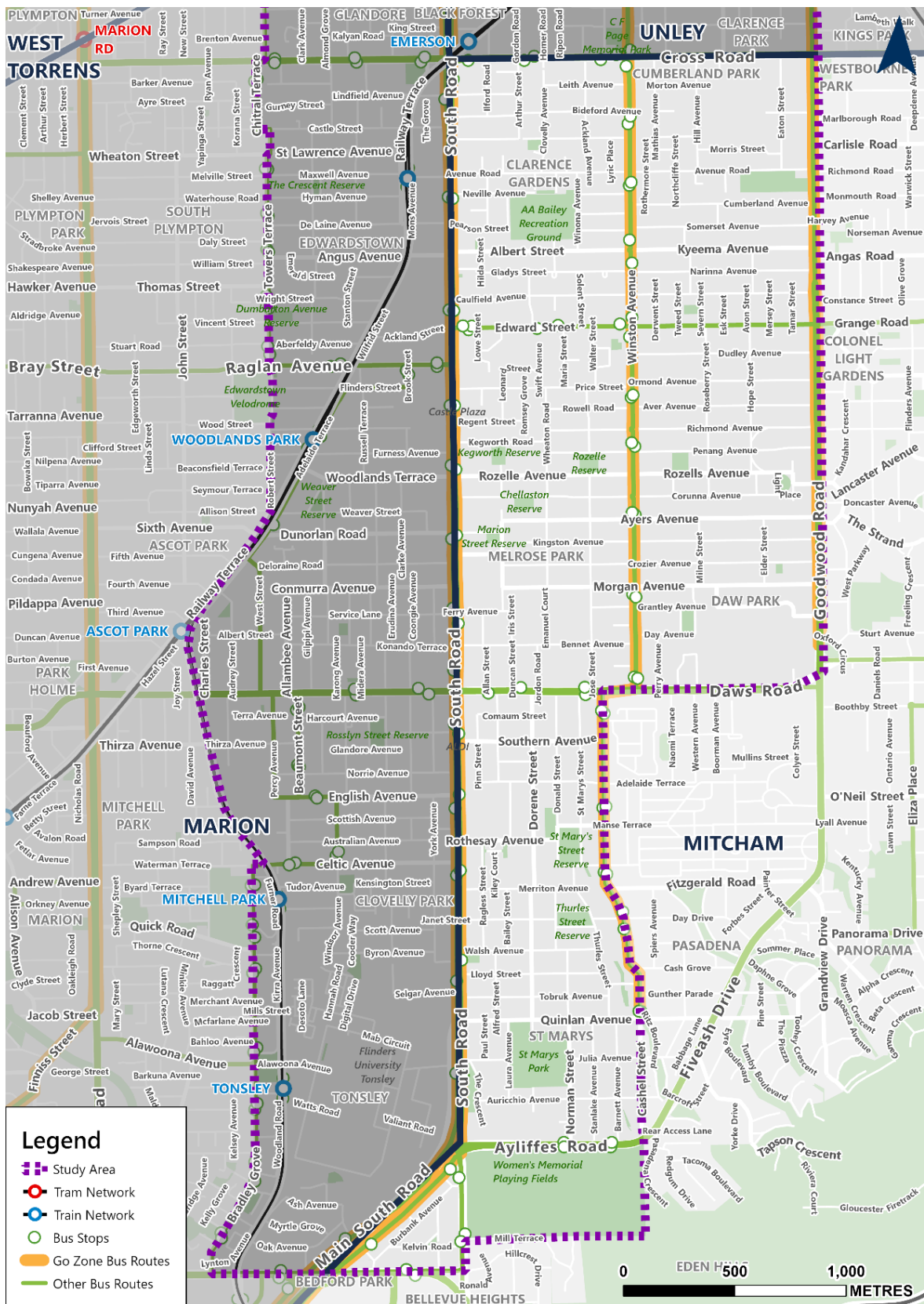


Figure 2-5: Public Transport in the T2D Corridor within the City of Mitcham



2.5 Bicycle network

The existing bicycle network in the T2D study area in the City of Mitcham is shown in Figure 2-6. It is based on the BikeDirect bicycle network that is maintained by each Council.

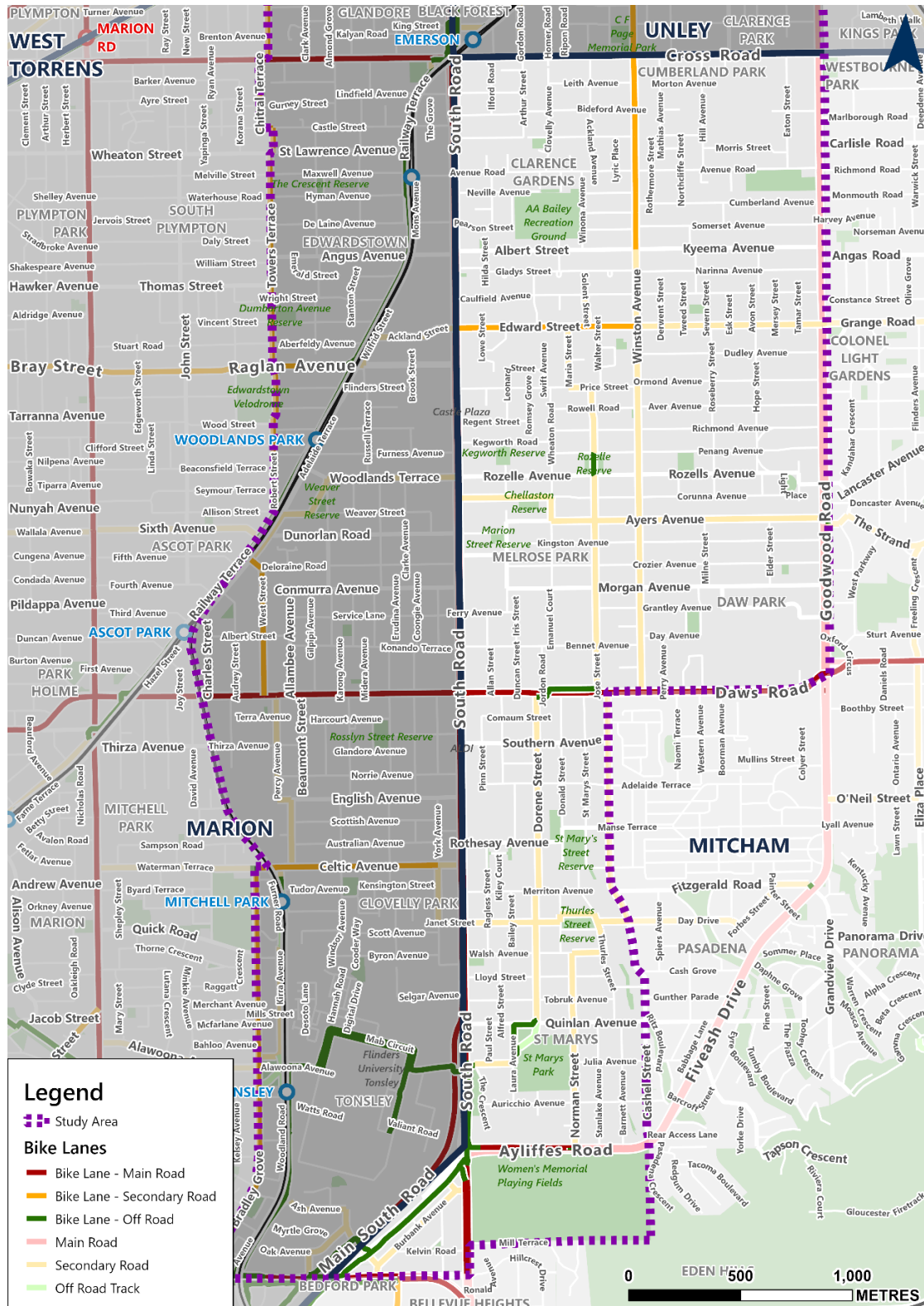


Figure 2-6: Bicycle Network in the T2D Corridor within the City of Mitcham



The primary bicycle routes within the City of Mitcham are located along the following corridors:

- South Road along the western boundary of the LGA
- Goodwood Road
- Shepherds Hills Road and Ayliffes Road at the southern end of the LGA, connecting South Road to the west and Goodwood Road to the east via Fiveash Drive
- Daws Road through the centre of LGA in an east-west alignment

Secondary bicycle routes are identified along the following corridors:

- Winston Avenue
- Goodwood Road
- Edward Street
- Maria Street and Jose Street between Edward Street and Ayers Avenue
- Ayers Avenue between South Road and Goodwood Road
- Dorene Street and Brookman Avenue between Daws Road and South Road
- Norman Street and Thurles Street between Day Drive and Ayliffes Road
- Crystal Avenue, Park Road and Day Drive between South Road and Goodwood Road

2.6 Pedestrian network

Within the City of Mitcham, sealed footpaths exist on both sides of the majority of the Council roads. This provides opportunities to walk within the Council area, although there are only limited opportunities to cross South Road, at the following locations:

- Pedestrian crossings as part of Cross Road/South Road signalised intersection, at the eastern and western approaches to the intersection only
- PAC across South Road between Thomas Street and Cross Road
- PAC across South Road between Pearson Street and Albert Street
- Pedestrian crossings as part of Edward Street/Ackland Street/South Road signalised intersection, at all approaches to the intersection
- Pedestrian crossings as part of Raglan Avenue/South Road signalised intersection, at the western and northern approaches to the intersection
- PAC across South Road between Price Street and Regent Street
- Pedestrian crossings as part of Furness Avenue/South Road signalised intersection, at the western, northern and eastern approaches to the intersection
- Pedestrian crossings as part of Corunna Avenue/South Road signalised intersection, at the southern and eastern approaches to the intersection
- Pedestrian crossings as part of Daws Road/South Road signalised intersection, at all approaches to the intersection
- PAC across South Road between Southern Avenue and Norrie Avenue
- Pedestrian crossings as part of Celtic Avenue/South Road signalised intersection, at the western and northern approaches to the intersection
- PAC outside St Bernadette's Primary School across South Road between Crystal Avenue and Walsh Avenue
- Pedestrian crossings as part of Tonsley Boulevard/Brookman Avenue/South Road signalised intersection, at the western, eastern and northern approaches to the intersection
- Pedestrian crossings as part of Ayliffes Road/Shepherds Hill Road /South Road signalised intersection, at the eastern and southern approaches to the intersection



3. Council and Community Engagement

The Council stakeholder and community engagement activities and findings are summarised in this section.

3.1 Council stakeholder consultation

The following meetings were held with Council officers from the five Councils:

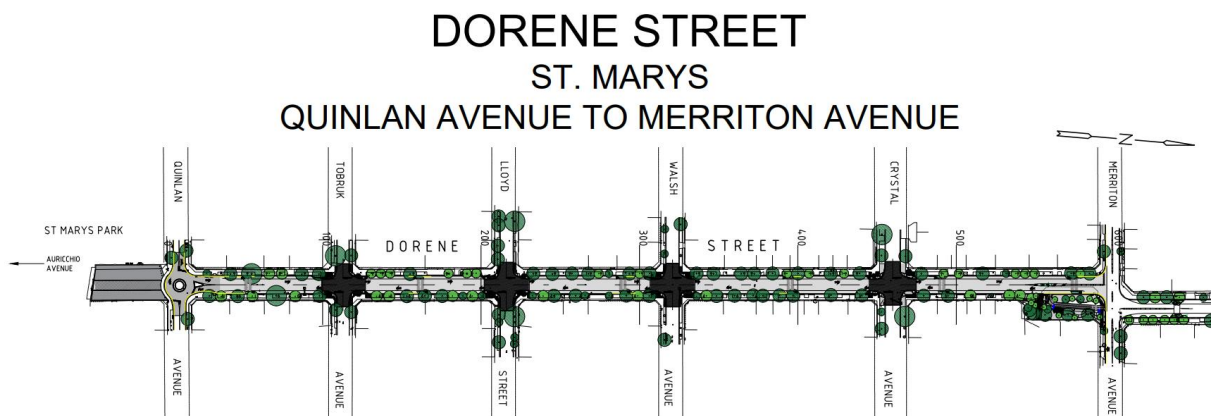
- T2D Working Group meeting via Teams online with the T2D and Stantec project teams and the group members from the five Councils held on Wednesday 9 February 2022 to discuss the LATM scope of work.
- An individual meeting via Teams online with Council staff and the T2D and Stantec project teams held on Friday 25 February 2022 to discuss data requests and issues and projects relevant to the study area.
- An Issues and Opportunities workshop conducted via Teams online with the T2D and Stantec project teams and representatives from the five Councils held on Thursday 17 March 2022 to discuss the impacts of the Reference Design on the local streets, walk access, bicycle routes and public transport stops in the study area.
- An updated Reference Design workshop with all five Councils held in person at the Clovelly Park T2D information centre on Wednesday 22 March 2023. The Council staff participated in two group sessions to discuss the following topics along the T2D corridor:
 - Connections with the local road network
 - Traffic and road safety hotspots
 - Access to public transport services at bus stops
 - Key routes for cycling connectivity
 - Key walk routes along and across the corridor
 - Other transport-related issues about new developments or projects

Information provided from the Council staff included:

- Flinders – City proposed bikeway concept plan.
- Traffic count and speed data for the local streets within the study area in the City of Mitcham.

3.1.1 Flinders – City bikeway, Dorene Street upgrade

The Dorene Street upgrade in St Marys will provide an improved alternate north-south cycling route as part of the Flinders to City Bikeway. The street upgrade, that started construction in May 2023 and is shown in Figure 3-1, incorporates the Flinders to City Bikeway while maintaining parking lanes and two traffic lanes, and includes kerbing renewal, new stormwater infrastructure, additional street trees and kerb inlets to promote stormwater reuse to improve the health of the street trees in the area.



Source: City of Mitcham <https://yoursay.mitchamcouncil.sa.gov.au/dorene-street-upgrade>

Figure 3-1: Flinders – City Bikeway, Dorene Street Upgrade in St Marys

The City of Mitcham is currently undertaking an LATM study for the suburbs of Cumberland Park and Melrose Park.



3.2 Community engagement summary

A total of 518 comments were received in the T2D corridor areas from respondents to the online survey and the attendees at the four drop-in sessions held in July and August 2023. A summary by transport mode for traffic, cycling, walking and public transport issues is provided in Figure 3-2. A total of 201 comments (39 per cent) were about traffic issues, including traffic volumes and speeds in local streets, changes to access at South Road and rat-running through the local residential suburbs. The area with the most comments from the community was with the residents in Glandore and Black Forest. Cycling issues were provided with 153 comments (30 per cent) and walking with 144 comments (28 per cent), with only 20 comments for public transport (4 per cent) about access to bus stops, more bus services and bus stop amenity and safety.

Issues regarding traffic management and safety provided from the community review of the T2D Reference Design are:

- Concerns about changes to access to and from South Road
- Need for convenient local access to schools, shops and businesses
- Improve east-west connectivity for local traffic
- Maintain access to businesses during construction including car parking
- Maintain access for emergency services vehicles
- Provide SMS information providing local access updates
- Use electronic message boards and traffic management signs to notify of changed access and traffic conditions
- Maintain access for residents and motorists (detours and temporary restrictions)
- Manage “rat-running” between arterial roads and traffic congestion concerns

Issues regarding pedestrian and cyclist movements provided from the community review of the T2D Reference Design are:

- Improve pedestrian and cycling networks, including safety, on South Road and local streets, including PACs
- Concern over removal of pedestrian crossings at schools
- Install bike lanes on the surface roads
- Need pedestrian overpasses with lifts at intervals to ensure east-west access is maintained
- Provide for improved pedestrian access across the River Torrens and at James Congdon Drive
- Provide separated bike paths and prioritise more bike paths across and parallel to the corridor

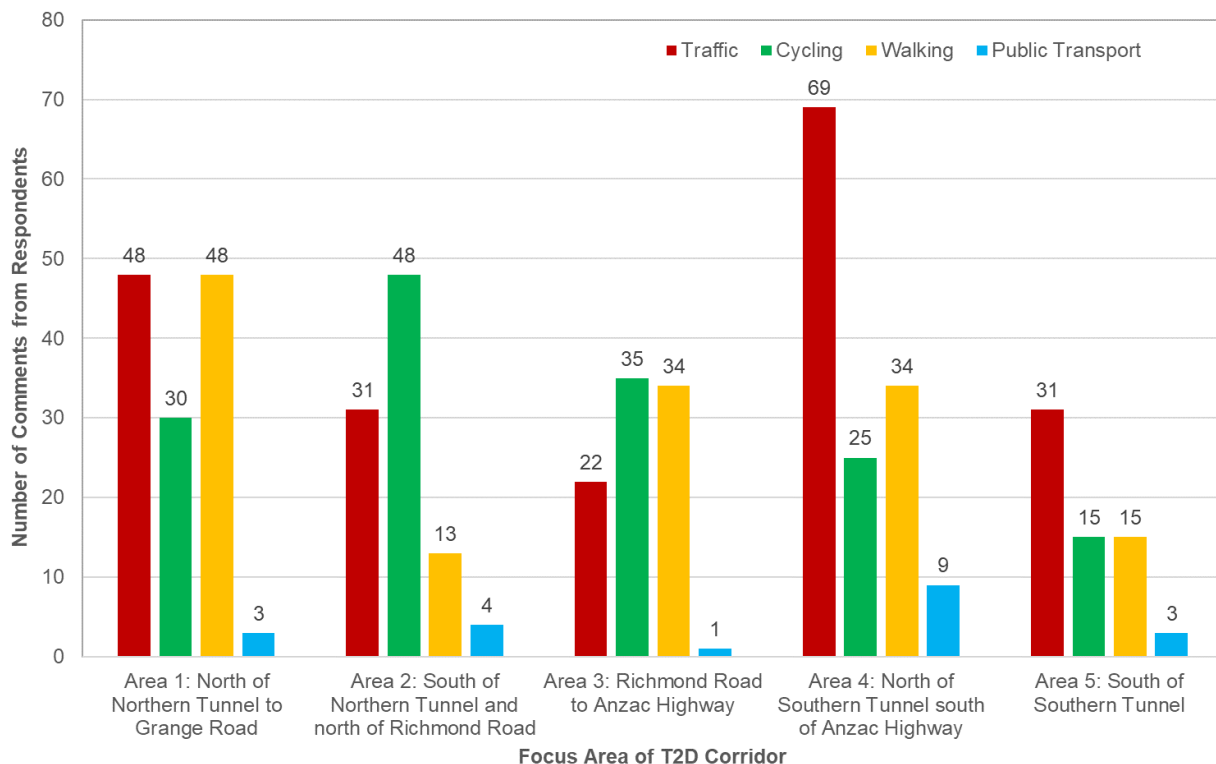


Figure 3-2: Comments by Type of Transport Issue from the T2D LATM Community Engagement



3.2.1 Southern Section of the Southern Tunnel

A total of 64 comments were provided from residents in the suburbs south of Daws Road with 28 comments (44 per cent) in Clovelly Park and 15 comments each (23.4 per cent) in St Marys and Tonsley. A breakdown of the number of comments by suburb and transport mode are provided in Table 3-1 and shown on Figure 3-3.

Table 3-1: Number of Comments by Type of Issue from Respondents South of Daws Road

Suburb	Traffic	Walking	Cycling	Public Transport	Grand Total	Percentage
Bedford Park	1	1			2	3.1%
Clovelly Park	16	3	6	3	28	43.8%
Mitchell Park	1	2	1		4	6.3%
St Marys	9	2	4		15	23.4%
Tonsley	4	7	4		15	23.4%
Total	31	15	15	3	64	100.0%
Total Percentage	48.4%	23.4%	23.4%	4.7%	100%	

The key issues and suggestions from the community engagement for residents and businesses south of Daws Road are:

- Concerns about increased traffic volumes in Celtic Avenue in Clovelly Park and Crystal Avenue in St Marys.
- Indirect and unsafe pedestrian access to St Bernadette's Primary School around the lowered motorway.
- Concerns about changes to access the Tonsley Innovation District.
- Need to maintain access to the Tonsley area during construction.
- Continue the shared-use path north from Darlington.

3.2.2 Community Feedback in the City of Mitcham

A total of 82 comments were provided from residents in seven suburbs in the City of Mitcham with 51 per cent from Melrose Park, 22 per cent from Clarence Gardens and 18 per cent from St Marys. A breakdown of the comments by suburb and transport mode are provided in Table 3-2.

Table 3-2: Types of Comments from Respondents in the City of Mitcham

Mitcham Suburb	Traffic	Cycling	Walking	Public Transport	Grand Total	Percentage
Melrose Park	37	2	3		42	51.2%
Clarence Gardens	14	1	3		18	22.0%
St Marys	9	2	4		15	18.3%
Cumberland Park	2		1		3	3.7%
Bedford Park	1	1			2	2.4%
Colonel Light Gardens	1				1	1.2%
Daw Park	1				1	1.2%
Total	65	6	11	0	82	100.0%
Percentage	79.3%	7.3%	13.4%	0.0%	100%	





Figure 3-3: Comments by Type of Transport Issue for the Southern Section of the Southern Tunnel



Traffic

A total of 65 comments in the City of Mitcham were related to traffic items, with the issues and locations provided in Table 3-3.

Table 3-3: Traffic Issues by Location in the City of Mitcham

Type of Traffic Issue	Suburb	Streets (Number of Comments)	Comment
rat-running with 21 comments	Melrose Park	Rozelle Avenue (11), Wheaton Road (2), Corunna Avenue (1)	Rozelle Avenue is used as a cut through to South Road from Winston Avenue. Support the road being blocked off.
	St Marys	Cashel Street, Quinlan Avenue	
	Clarence Gardens	Edwardstown Primary School, Dinwoodie Avenue	
	Cumberland Park	Winston Avenue	
	Colonel Light Gardens	Richmond Avenue	
	Daw Park	Ormond Avenue	
traffic volumes with 20 comments	Melrose Park	Rozelle Avenue (4), Wheaton Road (3), Corunna Avenue, South Road at Kegworth Road	Rozelle Avenue is a collector road that will likely attract more traffic
	Clarence Gardens	Edward Street (2), Cross Road, Albert Street, Edwardstown Primary School, Caulfield Avenue	
	St Marys	Southern Avenue, Rothesay Avenue, Donald Street	
	Cumberland Park	Winston Avenue	
traffic access with 14 comments	Clarence Gardens	Edward Street (3), Cross Road, Forest Avenue, Dinwoodie Avenue	
	Melrose Park	Marion Street, Rozelle Avenue, Penang Avenue	
	St Marys	Ragless Street, The Crescent, Brookman Avenue	
	Bedford Park	Ayliffes Road	
tunnel/motorway access with 3 comments	Clarence Gardens	Cross Road, Castle Street	
	St Marys	Daws Road	
traffic speed with 2 comments	Melrose Park	Rozelle Avenue, Wheaton Road	

Cycling

A total of six comments in the City of Mitcham were about cycling with the issues and locations provided in Table 3-4.

Table 3-4: Cycling Issues by Location in the City of Mitcham



Type of Cycling Issue	Suburb	Streets (Number of Comments)	Comment
cyclist crossing	St Marys	Walsh Avenue (2)	Need for a safe crossing of South Road at Walsh Avenue
	Clarence Gardens	Edwardstown Primary School	Providing a safe crossing for cyclists to the primary school
bike lanes	Bedford Park	South Road, St Marys	
website information	St Marys	Daws Road	
cyclist safety	Cumberland Park	Winston Avenue	

Walking

A total of 11 comments in the City of Mitcham were about walking with the issues and locations provided in Table 3-5.

Table 3-5: Walking Issues by Location in the City of Mitcham

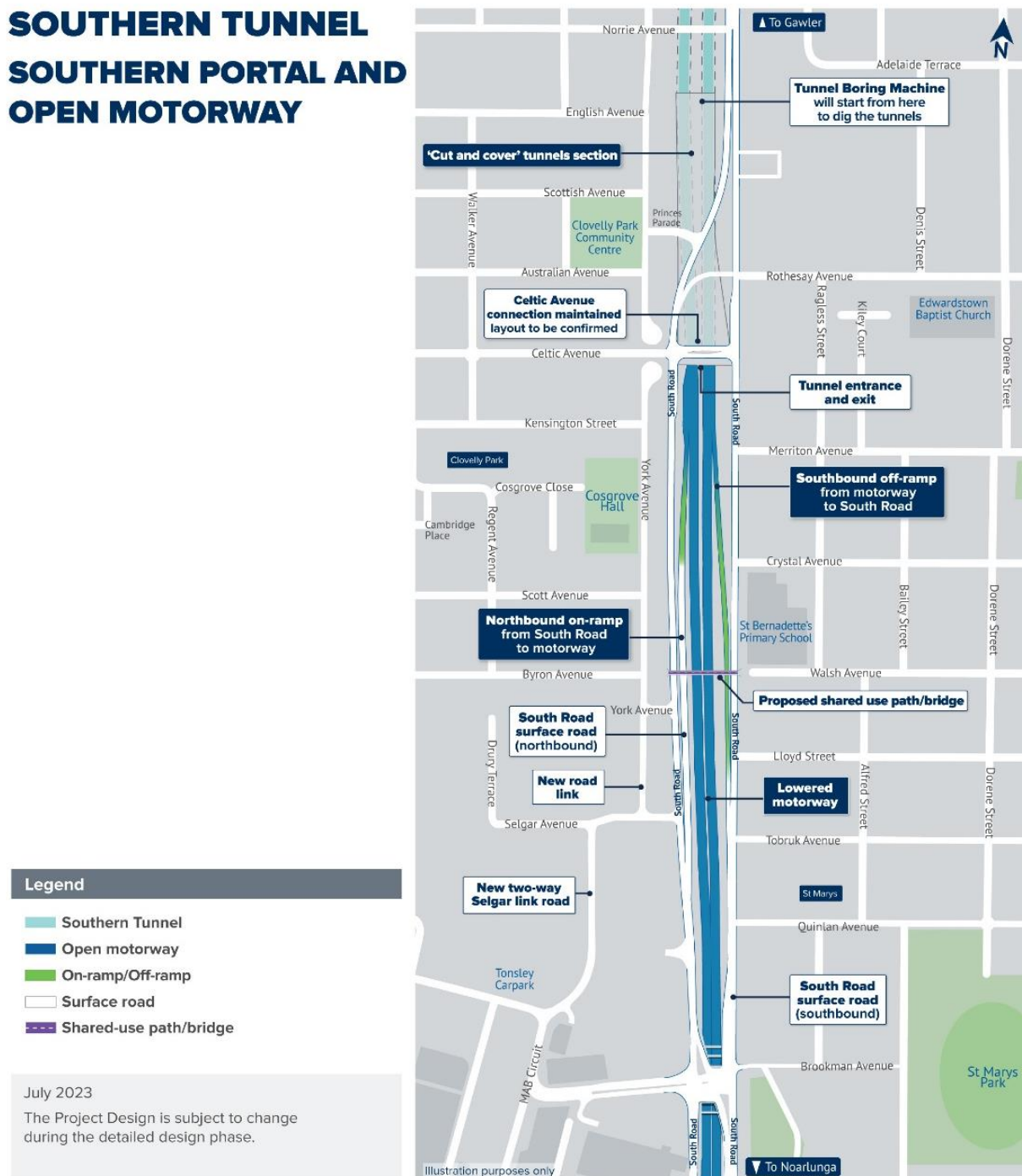
Type of Walking Issue	Suburb	Streets (Number of Comments)	Comment
pedestrian crossings with 9 comments	St Marys	Merriton Avenue, Crystal Avenue, Lloyd Street, Tobruk Avenue	Need to connect the footpaths across these local streets
	Clarence Gardens	Edwardstown train station	Access to safely cross South Road to access the train station
	Melrose Park	South Road at Price Street, South Road at Furness Avenue	Crossings to Castle Plaza shopping centre for Melrose Park residents
	Cumberland Park	Kyeema Avenue	
pedestrian connectivity with 2 comments	Clarence Gardens	Albert Street	
	Melrose Park	Regent Street opposite Castle Plaza	Need improved safe crossing for Melrose Park residents to walk to Castle Plaza shopping centre



4. Review of the Reference Design

The T2D Reference Design that was released for public comment in July 2023 was reviewed with respect to the local road network and access to public transport stops and stations, cycling and pedestrian movements. The relevant section of the T2D corridor in the City of Mitcham is the southern portal of the Southern Tunnel in St Marys and the connecting surface and lowered motorway between the tunnel portal and Darlington as shown in Figure 4-1.

SOUTHERN TUNNEL SOUTHERN PORTAL AND OPEN MOTORWAY



Reference: T2D website, July 2023

Figure 4-1: Reference Design for the T2D Corridor in the City of Mitcham



The T2D Reference Design is shown on the land use plan in Figure 4-2 with the motorway and tunnel sections on the western side of the existing South Road comprising mostly commercial properties that will be demolished. The commercial properties in St Marys are not affected and will have left-in, left-out access to the businesses and St Bernadette's Primary School between Crystal Avenue and Walsh Avenue.

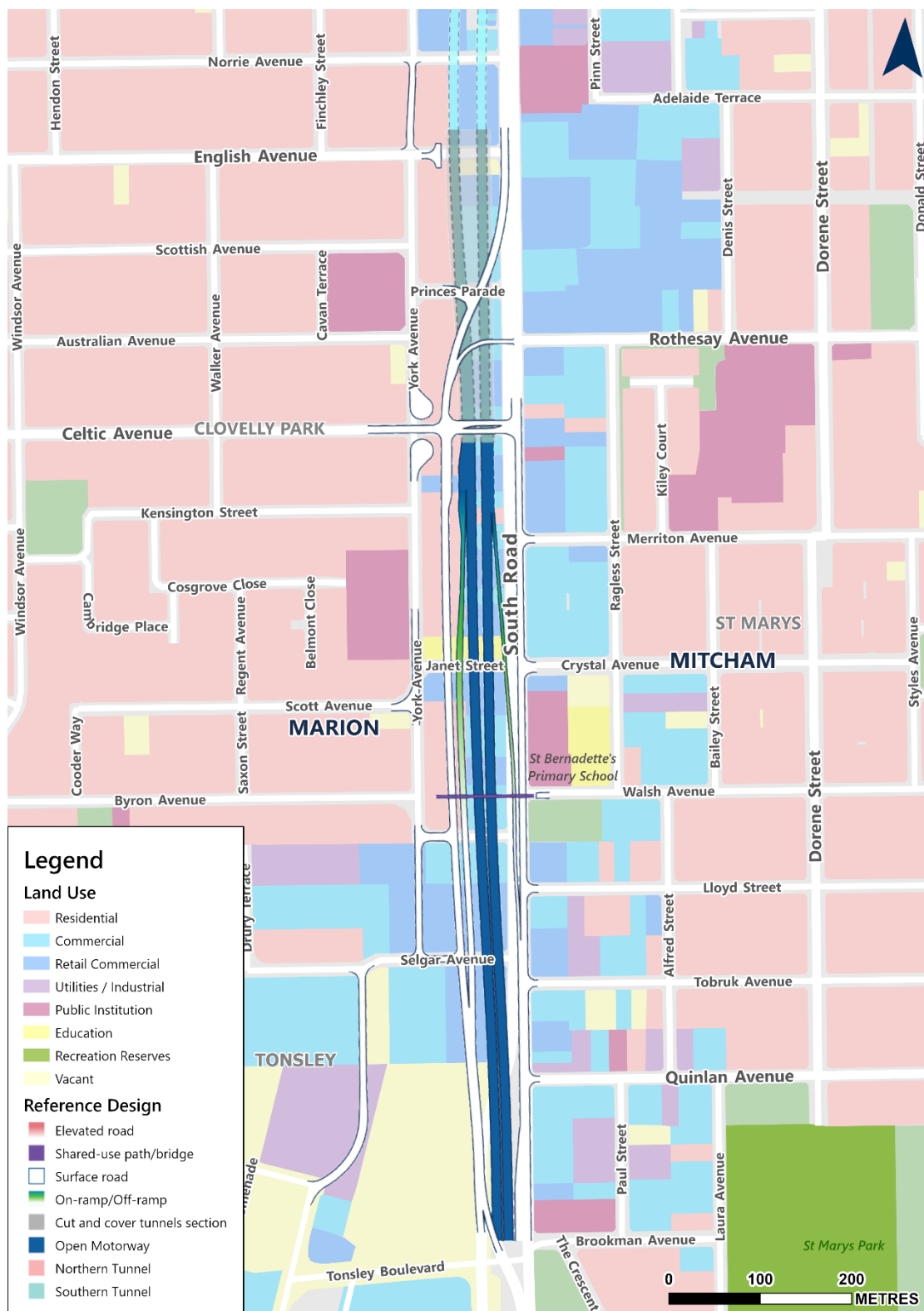


Figure 4-2: Reference Design for the T2D Corridor with Land Uses in the City of Mitcham



4.1.2 Public transport

The bus stops that are likely to be affected by the T2D Reference Design in the City of Mitcham are shown in Figure 4-4. Stop 23 west and east of South Road at Tonsley Boulevard will not be affected and is used for all buses servicing the Tonsley Innovation District and Flinders University at the Tonsley campus.

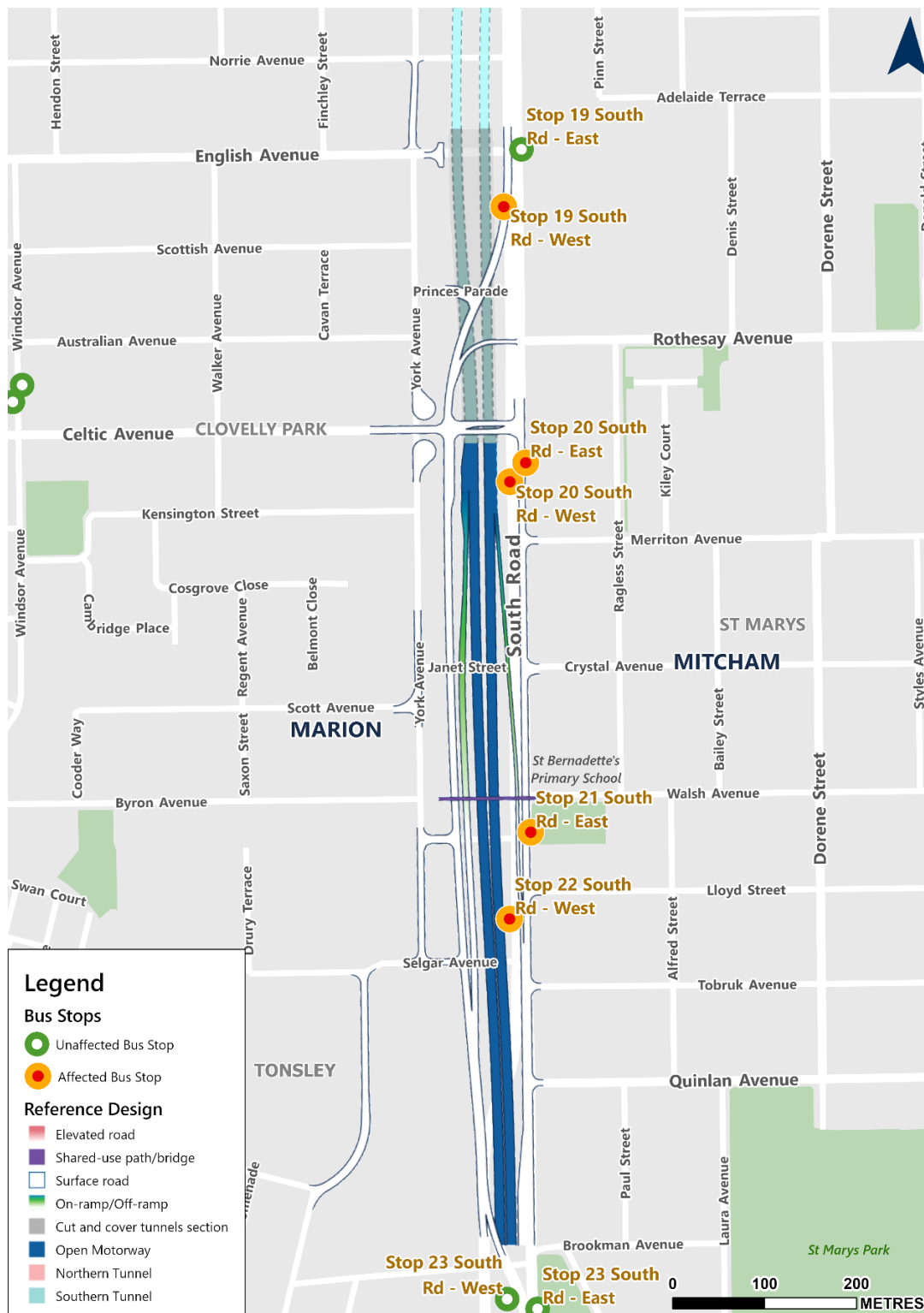


Figure 4-4: Impacts on Bus Stops from the T2D Reference Design in the City of Mitcham



Stops 19, 20 and 21 on the eastern side of South Road in St Marys may have limited affect during the construction and completion stages as the existing southbound carriageway is expected to remain largely as is. However, the bus stops on the west side of South Road for residents in St Marys to travel towards the city will be difficult to access from the start of construction and suitable access arrangements will need to be maintained. When the project is completed, the northbound stops should be reinstated close to the proposed crossing points at Celtic Avenue, the shared use footbridge near Walsh Avenue and Tonsley Boulevard. Stop 23 at Tonsley Boulevard that is a key stop for all bus routes, including the express services, will not be affected by the T2D project.

The bus stops affected by the surface and tunnel portal sections of the T2D Reference Design north of Tobruk Avenue and south of English Avenue are provided in Table 4-1. All bus stops have the same routes and number of services as they are all stops routes. The boardings at the bus stops on the western side in Clovelly Park are generally higher than the bus stops on the eastern side in St Marys.

Table 4-1: Bus Stops affected by the T2D Reference Design in the City of Mitcham

Location	Bus Routes	Level of Impact	Number of Weekday Services	Average Weekday Boardings (March 2019)
Stop 19 South Rd - East side, St Marys	719, 720, 721, 722, 720H, 721F, 722F, 723F, 972	Unchanged bus stop	131	estimated at 7 boardings from 3 months in 2019
Stop 19 South Rd - West side, Clovelly Park	719, 720, 721, 722, 720H, 721F, 722F, 723F, 972	Relocated during construction only	120	91
Stop 20 South Rd - East side, St Marys	719, 720, 721, 722, 720H, 721F, 722F, 723F	Relocated during construction only	131	155
Stop 20 South Rd - West side, Clovelly Park	719, 720, 721, 722, 782, 783, 720H, 721F, 722F, 723F, N721	Relocated during construction only	120	142
Stop 21 South Rd - East side, St Marys	719, 720, 721, 722, 720H, 721F, 722F, 723F, 972	Unchanged bus stop	131	0
Stop 22 South Rd - West side, Clovelly Park	719, 720, 721, 722, 782, 783, 720H, 721F, 722F, 723F, N721	Relocated during construction only	120	146



4.1.3 Bicycle network

The bicycle routes that are affected by the T2D Reference Design in the City of Mitcham are shown in Figure 4-5. The shared paths in the Tonsley Innovation District and near St Marys Park are not affected. The Flinders to City bikeway along Dorene Street will be completed and provide an improved north-south cycling route. The affected bicycle routes are:

- The on-road bicycle lanes on South Road that will be replaced on the service roads at completion.
- The bicycle lanes in Celtic Avenue.

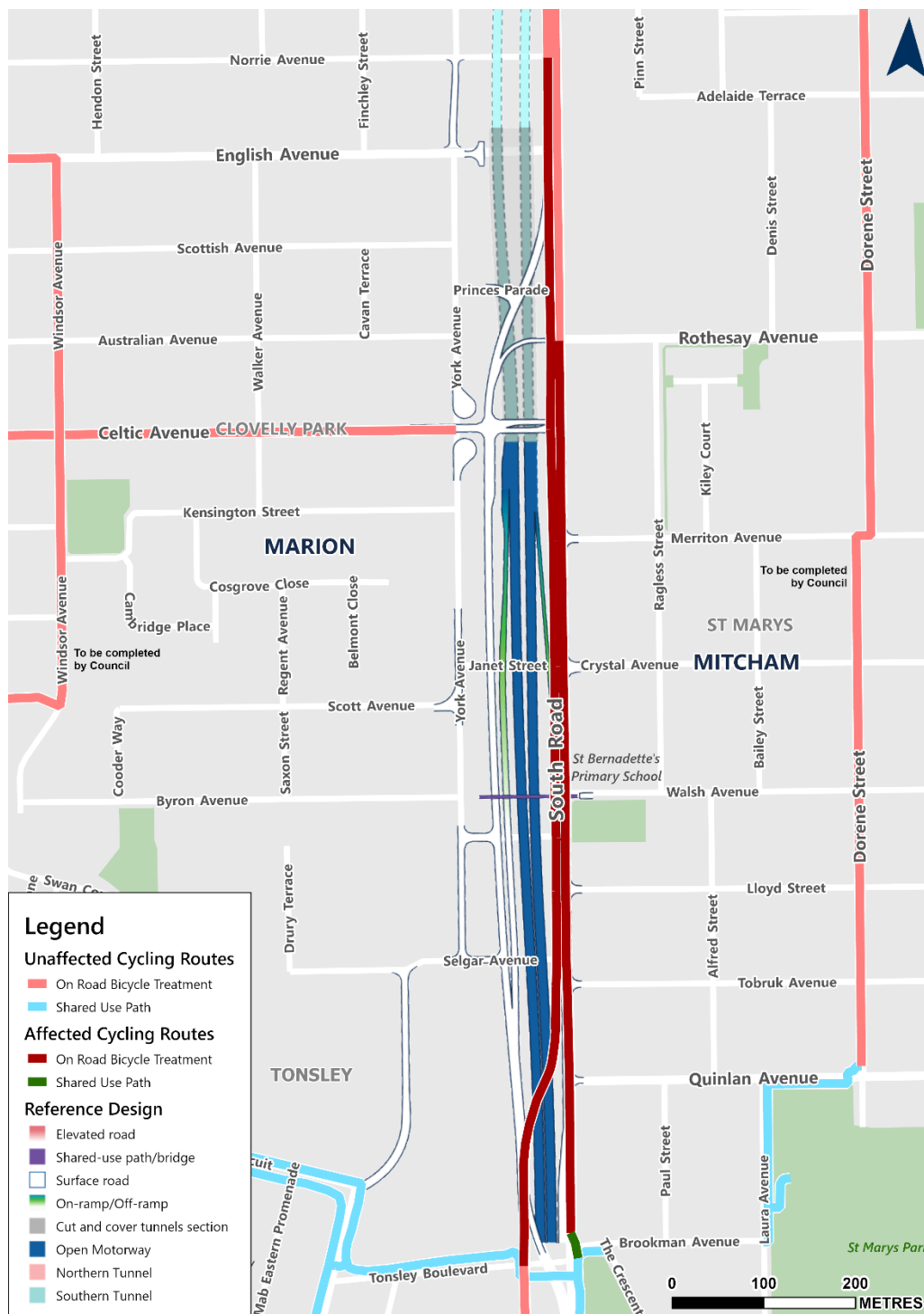


Figure 4-5: Impacts on the Bicycle Network from the T2D Reference Design in the City of Mitcham



4.1.4 Pedestrian network

The pedestrian crossing facilities that are affected by the T2D Reference Design in the City of Mitcham are shown in Figure 4-6. Impacts to safe pedestrian movements are from either the removal of existing crossing facilities or increased crossing distances. These affected pedestrian crossings are located within the surface and tunnel portal sections with the proposed removal of the existing PAC that provides access to St Bernadette's Primary School near Walsh Avenue.

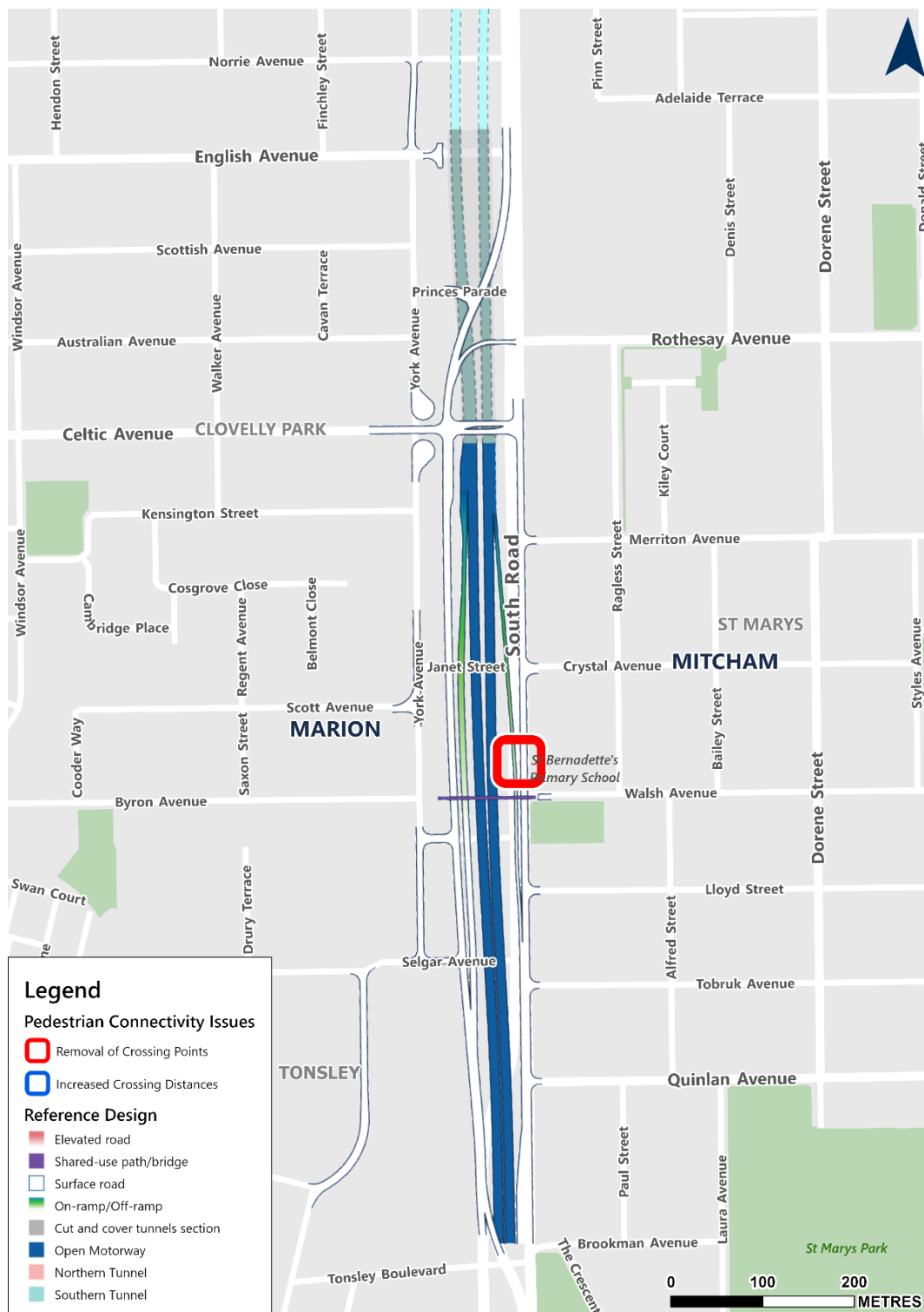


Figure 4-6: Impacts on Pedestrian Network from the T2D Reference Design in the City of Mitcham



4.2 Construction impacts on the local road network

During the construction stage of the southern portal of the Southern Tunnel, access to the local streets in St Marys from the south will be affected when the construction to build the lowered motorway section between Celtic Avenue and Tonsley Boulevard is started. The specific staging plans for the construction activity are not available for this LATM, however, the following impacts are identified for residents and businesses in St Marys on the eastern side of South Road.

- Northbound access into St Marys effectively removed. Some traffic may transfer to Ayliffes Road. This may result in some reduction in rat-running through St Marys as drivers can no longer access the area.
- In the southbound direction, drivers may have a perception that the road is impacted by the construction when it is likely to remain largely unchanged. Some traffic will already use roads south from Daws Road to avoid South Road so this may not change significantly.



5. Proposed LATM Recommendations

As part of a review of the Reference Design in Section 4, the impacts were identified in relation to the local transport networks within the City of Mitcham and the project study area, including streets, access to bus stops, bicycle routes and at key pedestrian crossings. This section provides recommendations to manage the traffic and access to the local residents and businesses with initiatives for traffic, access to the bus services and the provision of safety and connected cyclist and walk routes for the ultimate project completion and during the construction stage.

The comments from the community consultation were grouped by location and given a rating of low, medium or high community interest based on the number of pin comments provided in the online survey. This scoring does not include the general feedback comments received in the survey or from the drop-in sessions held in July and August 2023.

Legend for rating the community interest from the survey for each issue:

Low community interest with less than 3 pin comments	Medium community interest with 3 to 6 pin comments	High level of community interest with 7 or more pin comments
		

The level of importance for each issue is rated as no or minimal impact, some impact or critical or high impact to address as shown in the following legend.

Legend for rating the level of importance for each issue:

No or minimal impact	Some impact	Critical or high impact
		



5.1 Southern Section of the Southern Tunnel in St Marys

The proposed traffic management outcomes and recommended actions in area 5 in the southern section of the Southern Tunnel are provided in this section.

5.1.1 Traffic

The proposed traffic outcomes and recommended actions are provided by location with the issue and scope for the Council to consider in Table 5-1.

Table 5-1: Proposed Traffic Outcomes and Actions for Council in the T2D Corridor

Location	Reference Design Proposal	Community Interest	Level of Importance	Impact or Outcome to the LATM	Proposed Council Scope
Rothesay Avenue, St Marys	Traffic access from Rothesay Avenue to South Road southbound and northbound will be retained as existing. Traffic access to Rothesay Avenue from South Road from the south will be provided by a one-way link road north of Celtic Avenue post construction.	Low ●	Low ●	Impacts on traffic mitigated with the new connecting link road. Right turn entry from the south is currently 200 vehicles/day. Right turn exit to the north is currently 80 vehicles/day.	Liaise with DIT to consider the routing implications in the local network from the access arrangements proposed for Rothesay Avenue.
Merriton Avenue, St Marys	Removal of right turns to and from Merriton Avenue.	Low ●	High ●	Traffic diversion around 450 vehicles/day with 350 vehicles/day for entry and 100 vehicles/day for 100 exit movements to South Road.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Crystal Avenue, St Marys	Proposed to be left-in and left-out only so all right turn traffic will transfer to Tonsley Boulevard and make u-turns.	Low ●	High ●	Traffic diversion is estimated around 900 existing vehicles/day.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Walsh Avenue, St Marys	Road permanently closed at South Road.	Low ●	High ●	Traffic diversion is estimated around 350 vehicles/day from Walsh Avenue. All diversions expected to transfer to Lloyd Street or Crystal Avenue and use Celtic Avenue and Tonsley Boulevard for u-turns.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.



Location	Reference Design Proposal	Community Interest	Level of Importance	Impact or Outcome to the LATM	Proposed Council Scope
Lloyd Street, St Marys	Right turns removed to and from Lloyd Street at South Road. Left-in, left-out access only to Lloyd Street is retained.	Low ●	Low ●	Most traffic at Lloyd Street from about 480 vehicles/day is for right turn entry. Most traffic is expected to transfer to Celtic Avenue and Tonsley Boulevard intersections for u-turns.	Council to consider if reassigned traffic may require other traffic management treatments to address local traffic issues including potential precinct access from Ayliffes Road.
Tobruk Avenue, St Marys	No change; remains left-in, left-out only.	Low ●	Low ●	With the longer length of the u-turn diversion for traffic from the south, a potential for more traffic using Brookman Avenue to Paul Street and Alfred Street exists.	No action for the Council
Quinlan Avenue, St Marys	No change; remains left-in, left-out only.	Low ●	Low ●	no change	No action for the Council
Brookman Avenue, St Marys	no change, remains entry only from South Road southbound.	Low ●	Low ●	no change	No action for the Council



5.1.2 Public transport

The proposed public transport outcomes and recommended actions are provided by location with the issue and scope for the Council to consider in Table 5-2.

Table 5-2: Proposed Public Transport Outcomes and Actions for Council in the T2D Corridor

Location	Reference Design Proposal	Community Interest	Level of Importance	Impact or Outcome to the LATM	Proposed Council Scope
Stop 19 South Rd - East side (opposite English Avenue), St Marys	No change proposed to the stop location.	Low ●	Low ●	Access to the bus stop from the west affected during the construction period for bus passengers on the trip in the opposite direction.	Council to liaise with SAPTA for any requirements to maintain safe walk access to the stop and ensure contractors provide appropriate wayfinding signage during the construction stage.
Stop 20 South Road (east side) north of Merriton Avenue, St Marys	No change proposed to the stop location.	Low ●	Medium ●	Access to the bus stop from the west will be affected during the construction period.	Council to liaise with SAPTA for any requirements to maintain safe walk access to the stop and ensure contractors provide appropriate wayfinding signage during the construction stage.
Stop 21 South Road (east side) south of Walsh Avenue, St Marys	No change proposed to the stop location. Pedestrian access from the west side of the motorway will be provided with the proposed pedestrian bridge over the motorway at Walsh Avenue.	Low ●	Low ●	Pedestrian access from the west side of motorway will be provided with the proposed pedestrian bridge over the motorway at Walsh Avenue. Temporary bus stop arrangement is required during the construction period. Bus stop access and connectivity will be improved post construction with the new pedestrian bridge over the motorway.	Council to liaise with SAPTA for any requirements to maintain safe walk access to the stop and ensure contractors provide appropriate wayfinding signage during the construction stage.



5.1.3 Cycling

The proposed cycling infrastructure outcomes and recommended actions are provided by location with the issue and scope for the Council to consider in Table 5-3.

Table 5-3: Proposed Cycling Infrastructure Outcomes and Actions for Council in the T2D Corridor

Location	Reference Design Proposal	Community Interest	Level of Importance	Impact or Outcome to the LATM	Proposed Council Scope
Crystal Avenue, St Marys	Removal of the existing PAC north of Walsh Avenue that provides safe crossing access to students of St Bernadettes Primary School. New cyclist bridge to be provided over the motorway and South Road connecting Byron Avenue with Walsh Avenue.	Low ●	High ●	New bridge over the motorway will provide improved and safer access for cyclists and students to St Bernadette's Primary School.	Council to consider an east-west cycling connection along Walsh Avenue to Dorene Street to connect to the Flinders to City bikeway with the new pedestrian/cyclist bridge over South Road. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.



5.1.4 Walking

The proposed walking infrastructure outcomes and recommended actions are provided by location with the issue and scope for the Council to consider in Table 5-4.

Table 5-4: Proposed Walking Infrastructure Outcomes and Actions for Council in the T2D Corridor

Location	Reference Design Proposal	Community Interest	Level of Importance	Impact or Outcome to the LATM	Proposed Council Scope
Crystal Avenue, St Marys	New pedestrian bridge to be provided over the motorway and South Road between Byron Avenue and Walsh Avenue.	Low ●	High ●	Janet Avenue to Crystal Avenue pedestrian access to be removed. New east-west pedestrian bridge at Walsh Avenue/Byron Avenue will provide improved pedestrian access to St Bernadettes Primary School, the bus stops and other local connections.	Council to liaise with DIT on a connected footpath network to the bridge. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.
Walsh Avenue, St Marys	Removal of the existing PAC north of Walsh Avenue that provides safe crossing access to students of St Bernadettes Primary School. New pedestrian bridge to be provided over the motorway and South Road between Byron Avenue and Walsh Avenue.	Low ●	High ●	New bridge over the motorway will provide improved and safer access for pedestrians and students walking to St Bernadette's Primary School.	Council to liaise with DIT on a connected footpath network to the bridge. Liaise with DIT to prepare a school transport access plan for St Bernadette's Primary School.



6. References

The drawings, documents and policies used in the preparation of the LATM for the review of the T2D Reference Design are provided in this section.

6.1 Department for Infrastructure and Transport

- T2D Reference Design drawings for the community consultation released in July 2023
- Urban design plans prepared for the T2D project (March 2023)

6.2 City of Mitcham

Documents received from the City of Mitcham to inform the development of the LATM plan are listed in Table 6-1.

Table 6-1: Documents from the City of Mitcham

Document Name	Author and Date	Status and Relevance to the 2D Project
City of Mitcham Integrated Transport Plan 2016-2036	InfraPlan, April 2016	Current and high-level transport strategy
Transport Asset Management Plan Summary	City of Mitcham 2020	Relevant for the areas in the study area
Mitcham Integrated Transport Plan (ITP), Elected Members Information Session	City of Mitcham, 16 November 2021	Background information; not for the document review
Agenda for the Council Meeting on Tuesday 14 th December 2021	City of Mitcham, 2021	Background information; not for the document review
Mitcham Road Network Strategy	GTA Consultants, 2019	Relevant for the road network in the study area



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