

Traffic Engineering Assessment

Victoria Street and Bridge Road Activity Centres, Richmond

Appendix A: Clause 18 of the Yarra Planning Scheme

18.01 INTEGRATED TRANSPORT

28/03/2018 VC145

18.01-1 Land use and transport planning

16/01/2018 VC142

Objective

To create a safe and sustainable transport system by integrating land-use and transport.

Strategies

Develop integrated transport networks to connect people to jobs and services and goods to market.

Plan urban development to make jobs and services more accessible by:

- Ensuring equitable access is provided to developments in accordance with forecast demand, taking advantage of all available modes of transport and to minimise adverse impacts on existing transport networks and the amenity of surrounding areas.
- Coordinating improvements to public transport, walking and cycling networks with the ongoing development and redevelopment of the urban area.
- Requiring integrated transport plans to be prepared for all new major residential, commercial and industrial developments.
- Connecting activity centres, job rich areas and outer suburban areas through the Principal Public Transport Network.
- Providing for bus routes and stops and public transport interchanges in new development areas.
- Providing safe, convenient and direct pedestrian and cycling access to job rich areas, public transport interchanges and urban renewal precincts.
- Promote walking and cycling when planning for new suburbs, urban renewal precincts, greyfield redevelopment areas and transit-oriented development areas (such as railway stations).

Integrate public transport services and infrastructure into new development.

Policy Guidelines

Planning must consider as relevant:

- The Victorian Transport Plan (Department of Transport, 2008).
- Public Transport Guidelines for Land Use and Development (Department of Transport, 2008).
- Cycling into the Future 2013 23 (State Government of Victoria, 2012).
- Principal Public Transport Network 2017 (State Government of Victoria, 2017).

18.01-2 Transport system

31/03/2017 VC134

Objective

To coordinate development of all transport modes to provide a comprehensive transport system.

Strategies

Require transport system management plans for key transport corridors and for major investment proposals.

Reserve land for strategic transport infrastructure.

Incorporate the provision of public transport and cycling infrastructure in all major new State and local government road projects.

Locate transport routes to achieve the greatest overall benefit to the community and with regard to making the best use of existing social, cultural and economic infrastructure, minimising impacts on the environment and optimising accessibility, safety, emergency access, service and amenity.

Locate and design new transport routes and adjoining land uses to minimise disruption of residential communities and their amenity.

Plan or regulate new uses or development of land near an existing or proposed transport route to avoid detriment to, and where possible enhance the service, safety and amenity desirable for that transport route in the short and long terms.

Facilitate infrastructure that connects and improves train services between key regional cities and townships and Melbourne.

Ensure that pedestrian and cyclist access to public transport is facilitated and safeguarded.

Ensure transport practices, including design, construction and management, reduce environmental impacts.

Ensure careful selection of sites for freight generating facilities to minimise associated operational and transport impacts to other urban development and transport networks.

Consider all modes of travel, including walking, cycling, public transport, taxis and private vehicles (passenger and freight) in providing for access to new developments.

Policy guidelines

Planning must consider as relevant:

- The Victorian Transport Plan (Department of Transport, 2008).
- Freight Futures: Victorian Freight Network Strategy for a more prosperous and liveable Victoria (Department of Transport, 2008).
- Public Transport: Guidelines for land use and development (Department of Transport, 2008).
- Any relevant highway strategy published by VicRoads.

18.02 MOVEMENT NETWORKS

28/03/2018 VC145

18.02-1 Sustainable personal transport

31/03/2017 VC134

Objective

To promote the use of sustainable personal transport.

Strategies

Encourage the use of walking and cycling by creating environments that are safe and attractive.

Develop high quality pedestrian environments that are accessible to footpath-bound vehicles such as wheelchairs, prams and scooters.

Ensure development provides opportunities to create more sustainable transport options such as walking, cycling and public transport.

Ensure cycling routes and infrastructure are constructed early in new developments.

Improve access to the public transport network by:

- Ensuring integration with walking and cycling networks.
- Providing end of trip facilities for pedestrians and cyclists at public transport interchanges.

18.02-2 Cycling

31/03/2017 VC134

Objective

To integrate planning for cycling with land use and development planning and encourage as alternative modes of travel.

Strategies

Direct and connected bicycle infrastructure should be provided to and between key destinations including activity centres, public transport interchanges and major attractions.

Cycling infrastructure (on-road bicycle lands off-road bicycle paths) should be planned to:

- Separate cyclists from other road users, particularly motor vehicles.
- Provide the most direct route practical.

Require the provision of adequate bicycle parking and related facilities to meet demand at education, recreation, shopping and community facilities and other major attractions when issuing planning approvals.

Provide improved facilities, particularly storage, for cyclists at public transport interchanges, rail stations and major attractions.

Ensure provision of bicycle end of trip facilities in commercial buildings.

Develop local cycling networks and new cycling facilities that support the development of 20-minute neighbourhoods and that link to and complement the metropolitan-wide network of bicycle routes - the Principal Bicycle Network.

Policy guidelines

Planning must consider as relevant:

- Guide to Road Design, Part 6A: Pedestrian and Cycle Paths.
- Cycling into the Future 2013 23 (State Government of Victoria, 2012).

18.02-3 Principal Public Transport Network

31/03/2017 VC134

Objective

To facilitate greater use of public transport and promote increased development close to high-quality public transport routes in Metropolitan Melbourne.

Strategies

Maximise the use of existing infrastructure and increase the diversity and density of development along the Principal Public Transport Network, particularly at interchanges, activity centres and where principal public transport routes intersect.

Identify and plan for new Principal Public Transport Network routes.

Support the Principal Public Transport Network with a comprehensive network of local public transport.

Plan for local bus services to meet the need for local travel as well as providing for connections to the Principal Public Transport Network.

Improve the operation of the public transport network by providing for:

- A metro-style rail system.
- Extended tram lines and the establishment of a light rail system.
- Road-space management measures including transit lanes, clearways, stops and interchanges.

Ensure development supports the delivery and operation of public transport services on the Principal Public Transport Network.

Policy guidelines

Planning must consider as relevant:

- Public Transport Guidelines for Land Use and Development (Department of Transport, 2008).
- The Victorian Transport Plan (Department of Transport, 2008).
- Cycling into the Future 2013 23 (State Government of Victoria, 2012).
- Principal Public Transport Network 2017 (State Government of Victoria, 2017).

18.02-4 Management of the road system

31/03/2017 VC134

Objective

To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure.

Strategies

Plan and regulate the design of transport routes and nearby areas to achieve visual standards appropriate to the importance of the route with particular reference to landscaping, the control of outdoor advertising and, where appropriate, the provision of buffer zones and resting places.

Provide for grade separation at railway crossings except with the approval of the Minister for Transport.

Make better use of roads for all road uses through such techniques as the provision of wider footpaths, bicycle lanes, transit lanes (for buses and taxis) and specific freight routes.

Selectively expand and upgrade the road network to provide for:

- High-quality connections between Metropolitan Melbourne and regional cities, and between regional cities.
- Upgrading of key freight routes.
- Ongoing development in outer suburban areas.

- Higher standards of on-road public transport.
- Improved key cross-town arterial links in the outer suburbs including circumferential and radial movement.

Improve roads in developing outer-suburban areas by providing for all road users including cars, bicycles, public transport, and freight, commercial and service users.

Improve the management of key freight routes to make freight operations more efficient while reducing their external impacts.

Ensure that road space complements land use and is managed to meet community and business needs.

18.02-5 Car parking

31/03/2017 VC134

Objective

To ensure an adequate supply of car parking that is appropriately designed and located.

Strategies

Allocate or require land to be set aside for car parking subject to the existing and potential modes of access including public transport, the demand for off-street car parking, road capacity and the potential for demand management of car parking.

Encourage the efficient provision of car parking through the consolidation of car parking facilities.

Prepare plans for the design and location of local car parking to:

- Protect the role and function of nearby roads, enable easy and efficient use and the movement and delivery of goods.
- Achieve a high standard of urban design and protect the amenity of the locality, including the amenity of pedestrians and other road users.
- Create a safe environment, particularly at night.
- Facilitate the use of public transport.

Protect the amenity of residential precincts from the effects of road congestion created by on-street parking.

Plan adequate provision for taxi ranks as part of activity centres, transport interchanges and major commercial, retail and community facilities.

Policy guidelines

Planning must consider as relevant:

 Public Transport Guidelines for Land Use and Development (Department of Transport, 2008).



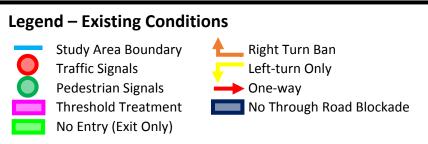
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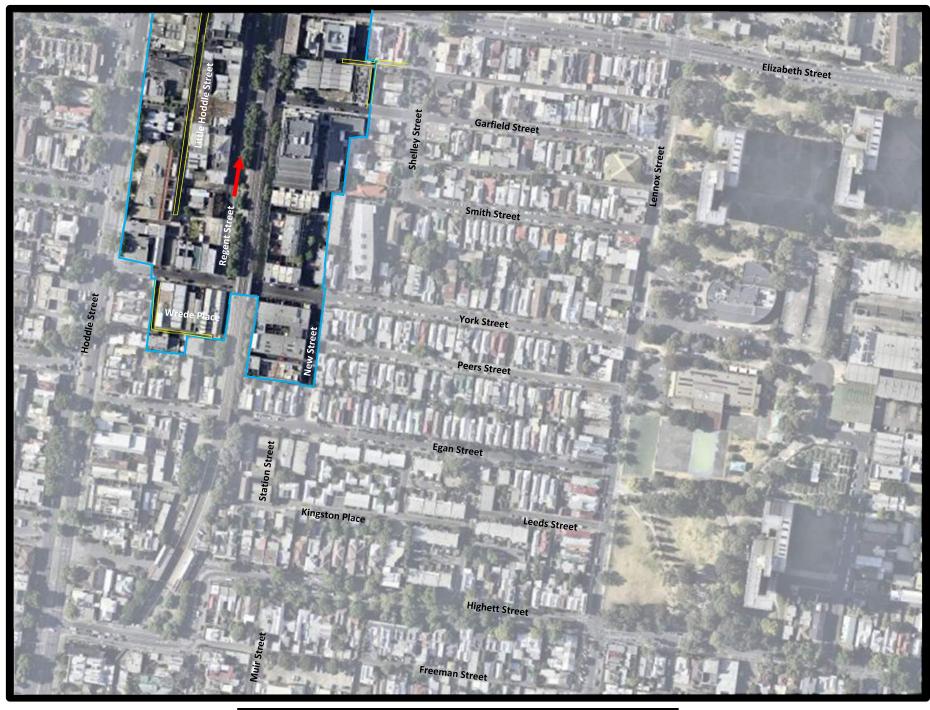
Appendix B: Existing Traffic Management Conditions

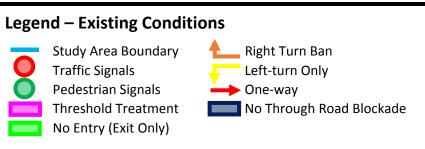




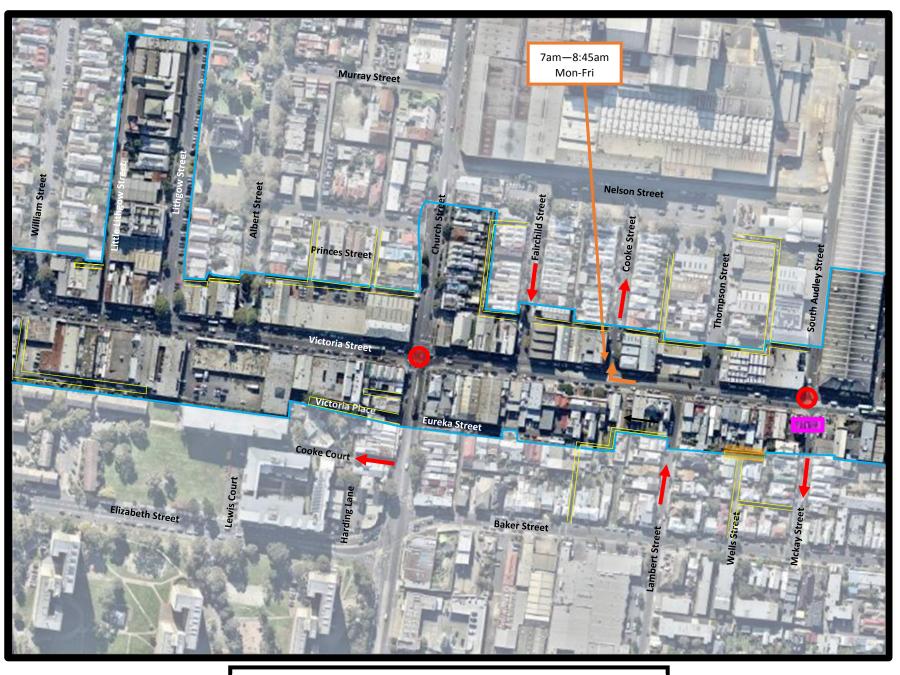


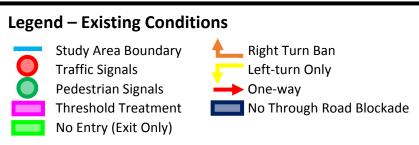






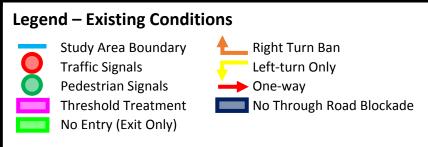






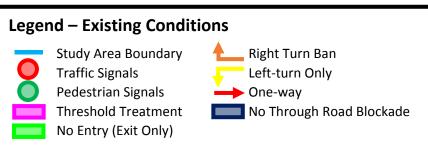




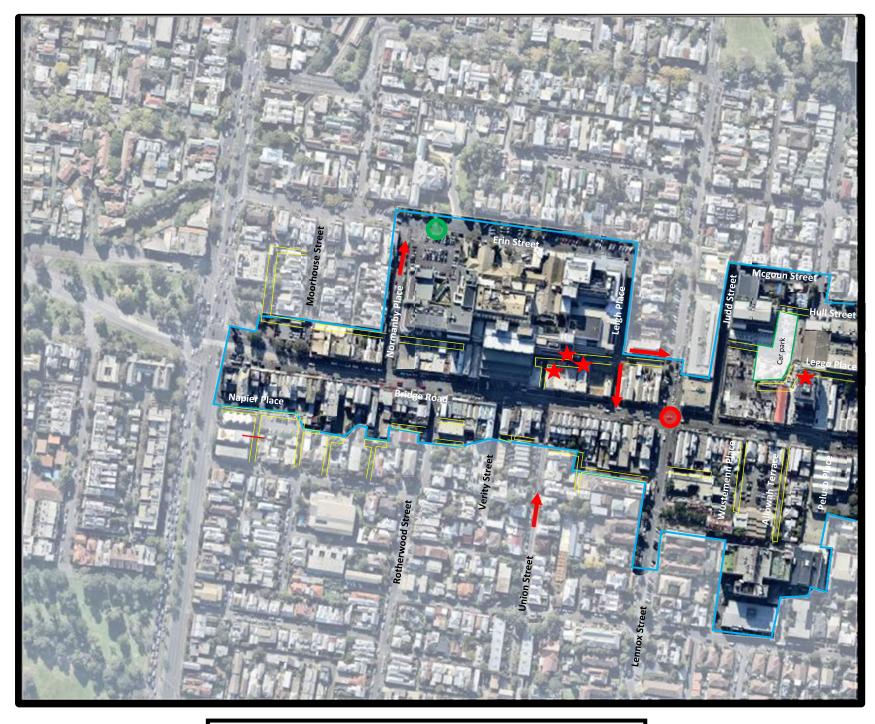


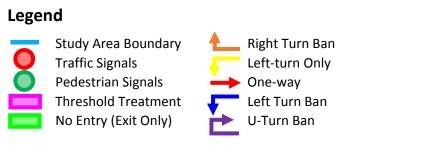




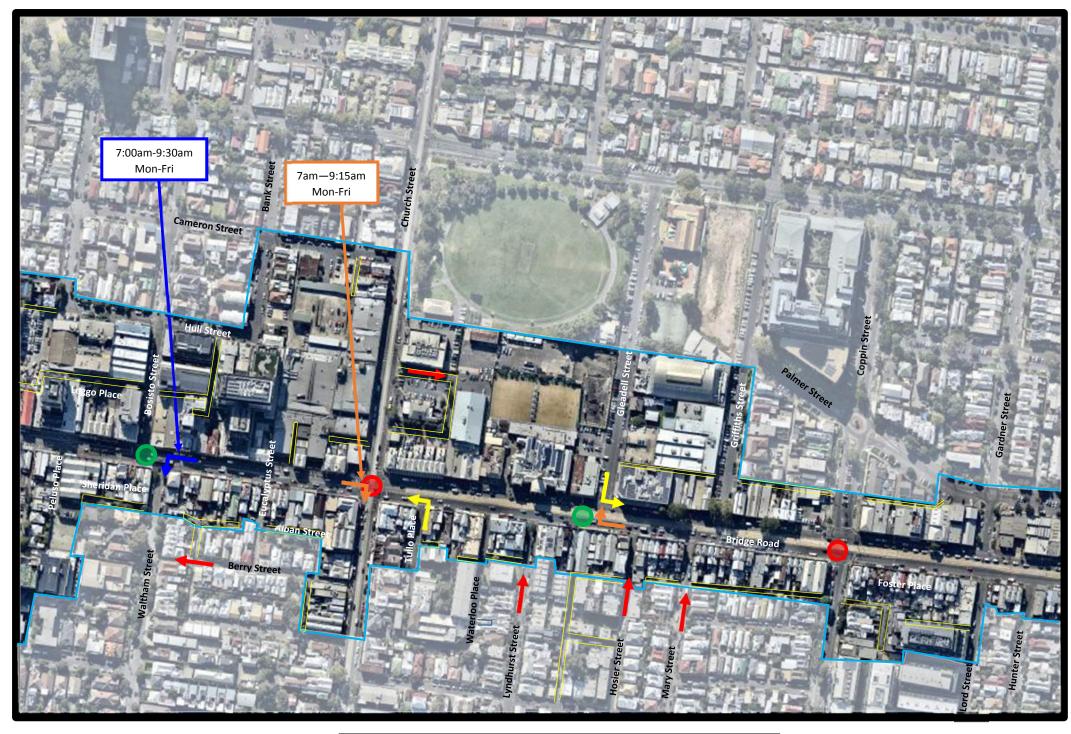






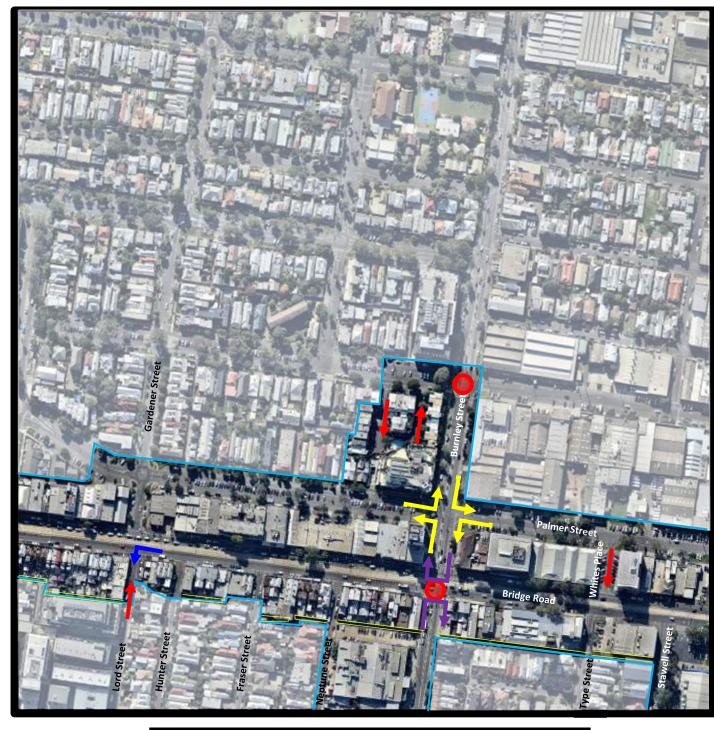


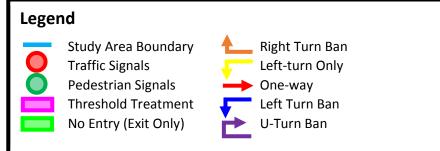






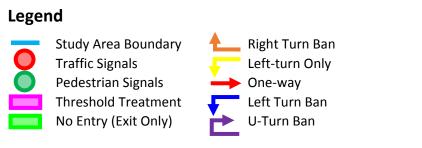




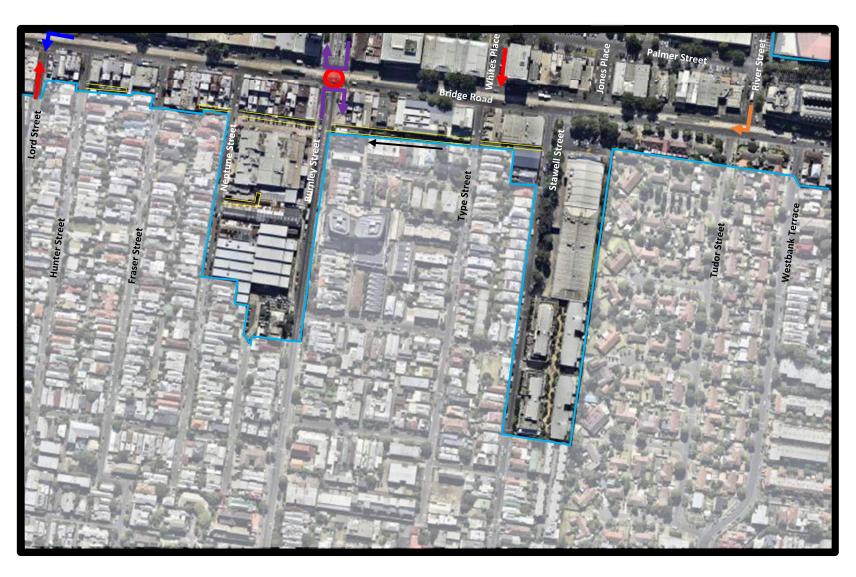


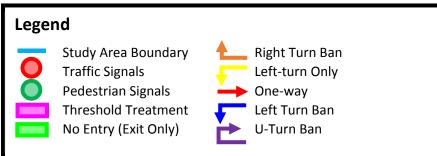












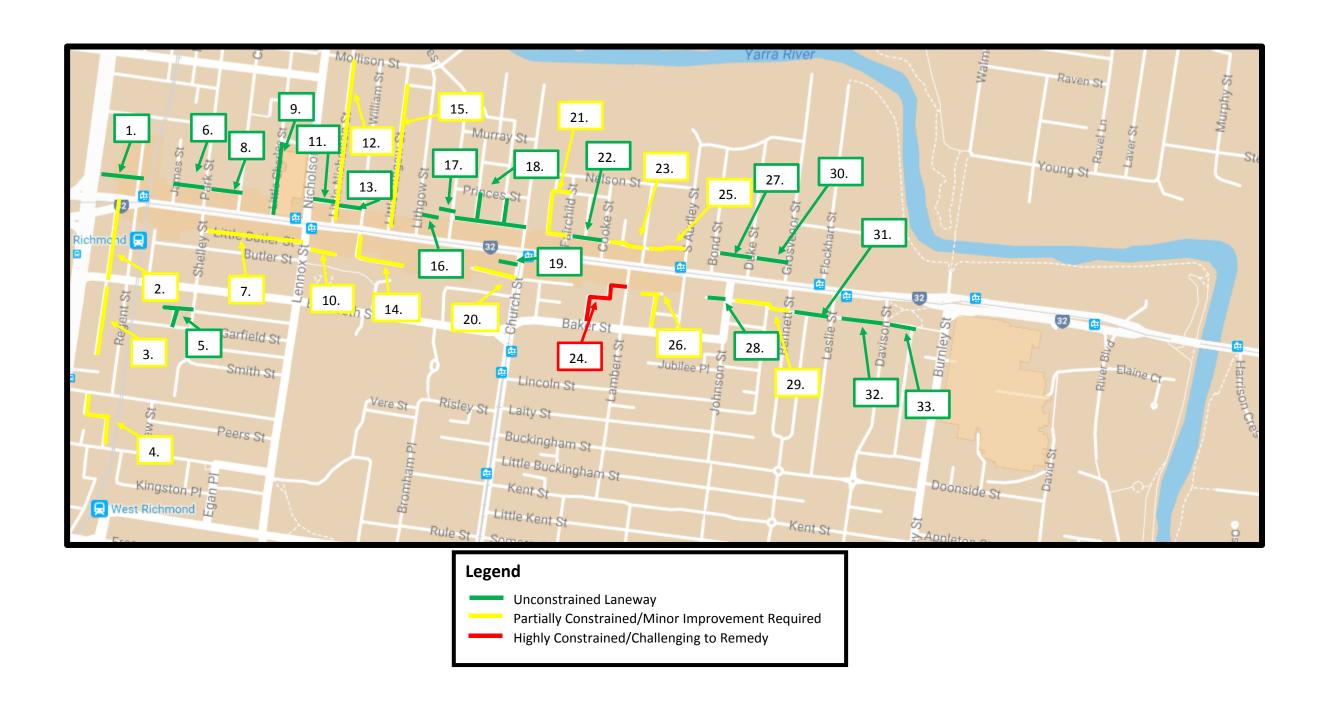


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Victoria Street and Bridge Road Activity Centres, Richmond

Appendix C: Existing Laneway Conditions







Street Name	Description	Photo
	Existing Conditions:	
	• Carriageway width – 2.85m-3.6m	
	Traffic management – Two-way	
	Parking – No parking	
1: ROW (from Hoddle Street	Footpaths – No footpaths	
to Ferguson	Material – Asphalt	
Street)	 Layout Features – continuous, generally straight 	
	Constraints: Unconstrained laneway	
	 Short, straight and connected at both ends. 	
	Existing Conditions:	
	Carriageway width – 4.6m	
	Road reservation – 5.95m	
	Traffic management – Two-way	
2: Little	Parking – No parking	
Hoddle Street (from Elizabeth	 Footpaths – Narrow kerbside/footpath on both sides 	
Street to	Material – Asphalt	
Victoria	Layout features – continuous, straight	
Street)	Constraints: Partially constrained	
	Single lane for two-way traffic	
	Long length, some development potential	
	Could be made two-way by creating a shared zone and removing the footpaths	
	Existing Conditions:	
	 Carriageway width – 3.7m-4.8m 	
	Road Reserve – 4.85m-6m	
	Traffic management – Two-way	
3: Little	 Parking – Parking along sections of the east side of the laneway 	
Hoddle Street (from	Footpaths – Narrow kerbing/path	R SAMX
Elizabeth Street to END)	Material – Asphalt	
	 Layout features – dead end, straight, narrows down towards the south 	
	Constraints: Partially Constrained	
	• Long	
	Narrower than 6m without road reserve	
	Parking Arrangements limit two-way flow	



Street Name	Description	Photo
	Existing Conditions:	
	• Carriageway width – 3.4m-3.85m	
	Traffic management – Two-way	Mintalia
	Parking – No parking	
4: Wrede	Footpaths – No footpaths	2
Place (from York Street to	 Material – Bluestone in sections and asphalt in sections 	
Egan Street)	 Layout features – continuous, s-shaped, no splays 	550
	Constraints: Partially Constrained	
	 Lack of splays makes navigating corners difficult 	
	Existing Conditions:	
	Carriageway width – 3.2m-3.95m	
	 Traffic management – Two-way 	
	Parking – No parking	
5: ROW (from	Footpaths – No footpaths	
Shelley Street to Garfield	Material – Asphalt	
Street)	 Layout features – continuous with a 90 degree bend and extending dead end section to the west, splays on south-east corner 	
	Constraints: Unconstrained laneway Short and connected at both ends.	
	Existing Conditions:	
	Carriageway width – 3m	
	 Traffic management – Two-way, must turn right at Park Street 	
6: ROW (from	 Parking – Shared off-street car park on south side of ROW 	
James Street to Park Street)	Footpaths – No footpaths	
	 Material – Asphalt with bluestone kerbing 	
	Layout features – continuous, straight	
	Constraints: Unconstrained laneway Short, straight and connected at both ends.	



Street Name	Description	Photo
	Existing Conditions:	
	Carriageway width – 2.7m-3m	
	Road reservation – 3.95m-4.75m Turffic many and Tur	
	Traffic management – Two-way Parking keeksida garallal bakk sidaa	
7: Little Butler Street	 Parking – kerbside parallel both sides Footpaths – No footpaths 	
(from Shelly	Footpaths – No footpathsMaterials – Asphalt	
Street to	Layout features – continuous, straight	
Lennox Street)	Constraints: Partially constrained	
	Long length	
	Inability to easily widen for 2-way traffic flow	
	Could be made one-way	
	Existing Conditions:	
	Carriageway width – 3.1m	
	Traffic management – Two-way	
8: ROW (from	 Parking – Shared off-street car park on south side and west end of ROW 	
Park to Charles)	Footpath – No footpath	
Charles	Material – Concrete	
	 Layout features – continuous, straight 	
	Constraints: Unconstrained laneway	
	Unconstrained due to short length	
	Existing Conditions:	
	Carriageway width – 3.5m	
	Road reservation – 5.15m	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
9: Little Charles Street (from Victoria Street to Little Charles Close)	 Traffic management – One-way (southbound) 	Ann Vales
	Parking – No parking	
	 Footpath – Narrow path on east side, with traversal onto road required at power poles 	
	Material – Asphalt	
	Constraints: Unconstrained laneway	
	Unconstrained due to one-way nature	



Street Name	Description	Photo
10: ROW (from Lennox Street to END)	 Existing Conditions: Carriageway width – 3.5m Traffic management – Two-way Parking – Car Park at east end Footpath – No footpaths Material – Concrete Layout features – slight bend to the south Constraints: Partially Constrained Constrained due to dead end 	
11: ROW (from Nicholson Street to Little Nicholson Street)	 Existing Conditions: Carriageway width – 4.55m Traffic management – Two-way Parking – No Parking Footpath – No footpaths Material – Concrete Constraints: Unconstrained laneway Unconstrained due to short length 	
12: Little Nicholson Street (from Victoria Street to Mollison Street)	Existing Conditions: Carriageway width – 4.9m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Concrete Layout Features – loading activity occurs frequently, blocking traversal of ROW Constraints: Partially constrained Long length Insufficient for 2-way flow Could be made one-way	



Street Name	Description	Photo
13: ROW (from Little Nicholson Street to William Street)	 Existing Conditions: Carriageway width – 2.95m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Bluestone Layout features – narrow Constraints: Unconstrained laneway Unconstrained due to short length, continuous 	
14: ROW (from Victoria Street to END, opposite William Street)	 Existing Conditions: Carriageway width – 4.75m for north-south section and 3m for east-west section Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Concrete Layout Features – Splay provided at bend, over land of 176 Victoria Street Constraints: Partially constrained Single Lane Length 90 degree bend Some development potential Would require widening for two-way traffic, particularly north-south leg 	
15: Little Lithgow Street (from Victoria Street to Mollison Street)	 Existing Conditions: Carriageway width – 5.1m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Partially Constrained Slightly too narrow for two-way traffic flow 	



Street Name	Description	Photo
16: ROW (from Lithgow Street to END)	 Existing Conditions: Carriageway width – 5.4m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Concrete Constraints: Unconstrained laneway Sufficient width for two-way traffic flow 	
17: ROW (from Albert Street to END)	 Existing Conditions: Carriageway width – 3.2m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – concrete Constraints: Unconstrained laneway Unconstrained due to short length 	
18: ROW (from Albert Street to Church Street)	 Existing Conditions: Carriageway width – 4.4m Traffic management – Two-way, right turn only at Fairchild Street Parking – Car park at midpoint of ROW Footpath – No footpath Material – Concrete Layout features – there is are two connecting north-south ROWs extending northerly Constraints: Unconstrained laneway Unconstrained due to being continuous, could be one-way 	SE SANSANIA



Street Name	Description	Photo
19: ROW (from Church Street to End)	 Existing Conditions: Carriageway width – 3.05m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Unconstrained due to short length 	
20: Victoria Place (from Church Street to END)	 Existing Conditions: Carriageway width – 4.75m, 5.7m aisle for western car park Traffic management – Two-way Parking – Parking provided in car park at western end Footpath – No footpath Material – Concrete Constraints: (Partially constrained) Dead end Some development potential 	
21: ROW (from Fairchild Street to Fairchild Street)	 Existing Conditions: Carriageway width – 3m Traffic management – Two-way, must enter via right turn from Fairchild, exit via left turn to Fairchild Parking – No parking Footpath – No footpath Material – Bluestone Layout features – connects to ROW extending north-south that loops back to Fairchild Street Constraints: Partially constrained No splay Low development potential Single lane Length Bends 	



Street Name	Description	Photo
	Existing Conditions:	
	Carriageway width – 2.9m	
	 Traffic management – Two-way, must travel south on Fairchild Street, and north on Cooke Street 	
	Parking – No parking	
22: ROW (from	Footpath – No footpath	Among to
Fairchild to	Material – Asphalt	ORDED LA CONTROL ORDED
Cooke Street)	 Layout features – there is a ROW that extends northerly, where there are no splays, making it difficult to traverse due to the narrow width 	
	Constraints: Unconstrained laneway	
	 Unconstrained due to short length, continuous 	
	Existing Conditions:	
	Carriageway width – 3.1m-3.8m	
	Road Reservation – 3.1m-4.7m	
	Traffic management – Two-way	
	Parking – No parking	
23: ROW	Footpath – No footpath	
(from Cooke	Material – Asphalt	
Street to Thompson Street)	Layout Features – there is a kink in the ROW at the midpoint, which is also where a northerly ROW also connects, the 4.2m width of the connecting ROW provides space to navigate this kink Constraints Partially and the second of the connection of the connectio	
	Constraints: Partially constrained	
	 An improved splay would assist with the kink in the ROW, especially for service vehicles 	



Street Name	Description	Photo
24: ROW (from Lambert Street to END)	 Existing Conditions: Carriageway width – 2.8m-4m Traffic management – Two-way Parking –No parking Footpath – No footpath Material – Asphalt and bluestone Layout features – There are a number of bends in the ROW. Splays are provided in the narrower sections, but not for bends connecting to the 4m width section. The ROW also connects to Baker Street in the south	
25: ROW (from Thompson Street to South Audley Street)	 Existing Conditions: Carriageway width – 3.6m-3.7m Traffic management – Two-way Parking – Car park on the north side of the ROW, behind 2 Thompson Street Footpath – No footpath Material – Asphalt Layout features – There is a kink in the middle of the ROW, where there is another northerly connected ROW. Potentially challenging to navigate the kink Constraints: Partially constrained Kink Lack of Splays 	



Street Name	Description	Photo
26: ROW (East-west ROW connected to Wells Street)	 Existing Conditions: Carriageway width – 4.7m-4.85m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout Features – connects to the northern end of Wells Street. No splays are provided at the intersection Constraints: Partially constrained 	
	90 degree bendsLack of splays	
27: ROW (from Bond Street to Duke Street)	 Existing Conditions: Carriageway width – 3.4m Traffic management – Two-way, Bond Street is one-way northerly and Duke Street is one-way southerly Parking – No Parking Footpath – No Footpath Material – Asphalt Constraints: Unconstrained laneway Unconstrained due to short length, continuous 	
28: ROW (from Johnson Street to END, on west side of Johnson Street)	 Existing Conditions: Carriageway width – 4.55m-6.35m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: (Unconstrained laneway) Unconstrained due to short length 	

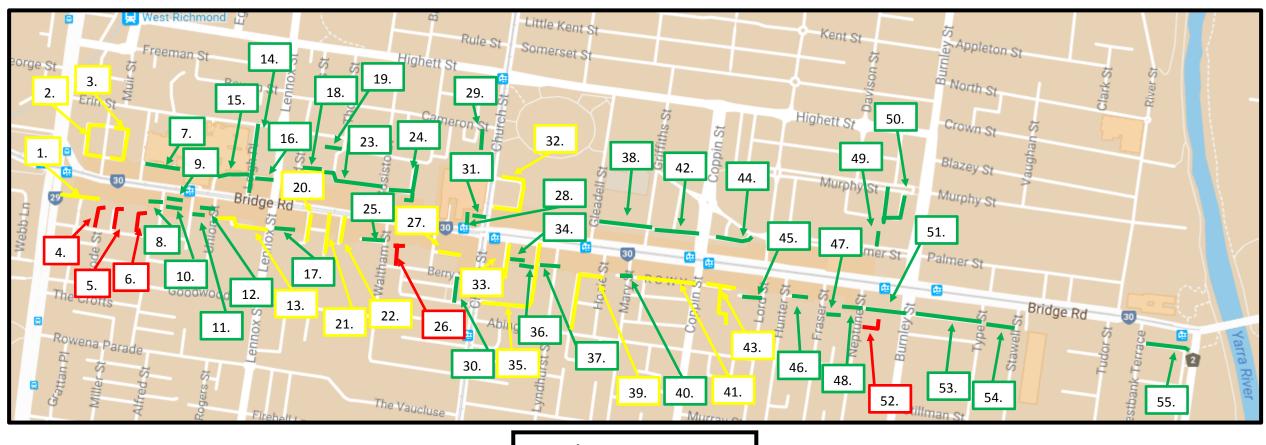


Street Name	Description	Photo
29: ROW (from Johnson Street to Bennett Street)	 Existing Conditions: Carriageway width – 2.95m-3.7m Traffic management – Two-way Parking – No Parking Footpath – No Footpath Material – Asphalt Layout features – There is a kink in the ROW, which also connects to a southerly ROW. There is a splay on the south-west side of the intersection Constraints: Partially constrained Kink 	
30: ROW (from Duke Street to Grosvenor Street)	 Existing Conditions: Carriageway width – 3.4m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Unconstrained due to short length, continuous 	THE CONTRACTOR OF THE CONTRACT
31: Coles Terrace (from Bennett Street to Leslie Street)	 Existing Conditions: Carriageway width – 2.7m-2.9m Traffic management – Two-way Parking – No parking Footpath – No parking Material – Bluestone Layout features – There is a connecting southerly ROW of 3.05m width with a splay on the south-west corner of the intersection Constraints: Unconstrained laneway Unconstrained due to short length, continuous 	



Street Name	Description	Photo
32: Coles Terrace (from Leslie Street to Davidson Street)	 Existing Conditions: Carriageway width – 3.15m Traffic management – Two-way Parking – No parking Footpath – No footpaths Material – Bluestone Layout features - There is a connecting southerly ROW of 2.85m width with a slight splay on each corner. Corner is still quite difficult to traverse due to narrow width, and shallow depth of splay 	Photo
	 Constraints: Unconstrained laneway Unconstrained due to short length, continuous 	
33: Coles Terrace (from Davidson Street to Burnley Street)	 Existing Conditions: Carriageway width – 3.6m-4.6m Traffic management – Bollards prevent vehicles from entering/exiting ROW at Burnley Street Parking – No parking Footpath – No footpaths Material – Asphalt Layout features - There is a connecting southerly ROW of 3.05m width with no splays. Low vegetation and kerbing on the northern side of the ROW allow for the vehicle body to overhang. Constraints: Unconstrained laneway Unconstrained due to short length, low development potential 	





Legend

Unconstrained Laneway
Partially Constrained
Highly Constrained



Street Name	Description	Photo
1: Napier Lane (from Hoddle Street to END)	 Existing Conditions: Carriageway width – 3.85m Trafficable width – 4.3m Traffic management – Two-way Parking – Car park attached to eastern end of lane Footpaths – No footpaths Material – Bluestone Layout features – There is a connecting ROW to the south which connects to Sherwood Street, however bollards block access. Constraints: Partially Constrained Limited Carriageway 	
2: ROW (from west side Moorhouse Street to END)	Existing Conditions: Carriageway width – 3.15m Traffic management – Two-way Parking – No parking Footpaths – No footpaths Material – Bluestone Layout features –there is a connecting northbound ROW which loops back to Moorhouse Street, with splays at the corners Constraints: Partially Constrained Lack of passing opportunities Lack of sight distance around bends.	
3: ROW (from east end of Moorhouse Street to END)	 Existing Conditions: Carriageway width – 3.2-3.25m Traffic Management – Two-way Parking – Car park at east end of ROW Footpaths – No footpaths Material – Bluestone Layout features – connecting ROW to the north which loops back to Moorhouse Street, with splays on each corner Constraints: Partially Constrained Lack of passing opportunities Lack of sight distance around bends. 	



Street Name	Description	Photo
4: ROW (East- West section of westernmost ROW from Sherwood Street)	 Existing Conditions: Carriageway width – 2.7m-3m Road reservation – 3.95m-4.75m Traffic management – Two-way Parking – kerbside parallel both sides Footpaths – No footpaths Materials – Asphalt Layout features – connected to ROW at the south, of width 3.6m, with no splays provided. Constraints: Highly Constrained Single lane No Splays at T-intersection Limited potential to widen critical north-south link 	
5: ROW (East- West section of middle ROW from Sherwood Street)	Existing Conditions: Carriageway width – 4.6m Traffic management – Two-way Parking – No Parking Footpath – No footpath Material – Asphalt Layout features – connected to ROW at the south, of width 3.5m, with no splays provided. Constraints: Highly Constrained Single lane No Splays at T-intersection Limited potential to widen critical north-south link	
6: ROW (easternmost ROW from Sherwood Street to END)	Existing Conditions: Carriageway width – 2.75m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – Narrow width and bend at north end. Setback property on western side. Constraints: Highly Constrained Single lane No Splays at T-intersection Limited potential to widen critical north-south link	



Street Name	Description	Photo
7: ROW (from Normanby Place to END)	 Existing Conditions: Carriageway width – 3.3m, widens at intersection with Normanby Place Traffic management – Two-way Parking – No Parking Footpath – No footpaths Material – Asphalt Layout features – Hospital uses this ROW Constraints: Unconstrained laneway Passing area at entrance to laneway 	
8: ROW (from west side of Rotherwood Street to END)	Existing Conditions: Carriageway width – 5.3m Traffic management – Two-way Parking – No Parking Footpath – No footpaths Material – Bluestone Constraints: Unconstrained laneway Wide enough for two-way traffic flow Short length	CORP.
9: ROW (from from east side of Rotherwood Street to END)	Existing Conditions: Carriageway width – 3.05m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – short and narrow Constraints: Unconstrained laneway Short Limited development potential	ALE PSIM
10: ROW (from east side of Rotherwood Street to END)	Existing Conditions: Carriageway width – 3.8m Traffic management – Two-way Parking – Car park on south side Footpath – No footpath Material – Concrete Constraints: Unconstrained laneway Short Limited development potential	



Street Name	Description	Photo
11: ROW (from Verity Street to END)	 Existing Conditions: Carriageway width – 6.05m Traffic management – Two-way Parking – Open tandem parking for adjacent properties Footpath – No footpath Material – Concrete Constraints: Unconstrained laneway Short Limited development potential 	
12: ROW (West side of Union Street to END)	 Existing Conditions: Carriageway width – 3m Traffic management – Two-way, No Entry to Union Street from Bridge Road Parking – No parking Footpath – No footpath Material – Bluestone Constraints: Unconstrained laneway Short Limited development potential 	
13: ROW (East side of Union Street to Lennox Street)	 Existing Conditions: Carriageway width – 3.7m-3.75m Traffic management – Two-way, No Entry to Union Street from Bridge Road Parking – No parking Footpath – No footpath Material – Asphalt and Bluestone Layout features – there is a kink involving two 90 degree bends. A splay is provided on one side of the northern bend Constraints: Partially Constrained Non-functional kink breaks laneway into two parts 	
14: Leigh Place (from Bridge Road to Erin Street)	Existing Conditions: Carriageway width – 5.7m Road reserve – 9m Traffic management – Two-way for northern section, One-way for southern section connecting to Bridge Road Parking – No parking Footpath – Footpath on west side Material – Asphalt Constraints: Unconstrained laneway One-way	



Street Name	Description	Photo
15: ROW (from Leigh Place to END)	 Existing Conditions: Carriageway width – 3.55m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – Slight kink at the middle, still easily traversable Constraints: Unconstrained laneway Short 	
16: Corns Place (from Leigh Place to Lennox Street)	Existing Conditions: Carriageway width – 3.1m Traffic management – Two-way, must turn left at Leigh Place Parking – Car park at midpoint of ROW Footpath – No footpath Material – Asphalt Constraints: Unconstrained Short Continuous Could be made one-way	
17: ROW (from Lennox Street to END)	Existing Conditions: Carriageway width – 3.5m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: (Unconstrained laneway) Short Low development potential	
18: ROW (from Judd Street to Carpark)	 Existing Conditions: Carriageway width – 6m (including mountable kerbing) Traffic management – Two-way Parking – No parking Footpath – Mountable footpath on south side Material – Asphalt Constraints: (Unconstrained laneway) Short Mountable kerbing allows for two-way passing 	



Street Name	Description	Photo
19: ROW (from Hull Street to END)	 Existing Conditions: Carriageway width – 3.15m Traffic management – Two-way Parking – Parking provided in car park at southern end Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short Small number of adjacent properties 	
20: Wustemenn Place (from Bridge Road to END)	 Existing Conditions: Carriageway width – 2.65m Traffic management – Two-way Parking – Parking provided in car park at southern end Footpath – No footpath Material – Asphalt Layout Features – Narrow width, shares car park with Allowah Terrace Constraints: Partially constrained Lack of passing area Dead end Could be connected to Allowah Terrace 	A STANDAR OF THE STAN
21: Allowah Terrace (from Bridge Road to END)	 Existing Conditions: Carriageway width – 2.6m Traffic management – Two-way Parking – Parking provided in car park at southern end Footpath – No footpath Material – Bluestone Layout features – Narrow width, shares car park with Wustemenn Place Constraints: Partially constrained Lack of passing area Dead end Could be connected to Wustemenn Place 	SOHO
22: Peluso Place (from Bridge Road to END)	 Existing Conditions: Carriageway width – 4.1m-4.85m Traffic management – Two-way Parking – Parking provided in car park at southern end Footpath – No footpath Material – Asphalt Constraints: Partially constrained Lack of passing area Dead end 	The state of the s



Street Name	Description	Photo
23: Leggo Place (from Bosisto Street to END)	 Existing Conditions: Carriageway width – 7.6m Traffic management – Two-way Parking – Large Car park at western end Footpath – No footpath Material – Asphalt Layout Features – Has a kink at the end, and connects to a large car park Constraints: Unconstrained laneway Sufficient width for two-way traffic 	
24: ROW (from Bosisto Street to Hull Street)	 Existing Conditions: Carriageway width – 3.5m-4.3m Traffic management – Two-way Parking –No parking Footpath – No footpath Material – Asphalt Layout features – Already 'built out' to a large degree Constraints: Unconstrained Laneway Properties already developed 	37-39 3:EAST
25: Sheridan Place (from Waltham Street to END)	Existing Conditions: Carriageway width – 3.55m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short	
26: ROW (from Berry Street to END)	 Existing Conditions: Carriageway width – 3.05m-3.3mm Traffic management – Two-way, Berry Street is one-way (westbound) Parking – No parking Footpath – No footpath Material – Bluestone Layout Features – has a T-intersection at the northern end, with splays on both corners. Constraints: Highly constrained Length T-shape 	



Street Name	Description	Photo
27: Alban Street (from Eucalyptus Street to END)	 Existing Conditions: Carriageway width – 5.8m Traffic management – Two-way Parking – Parking along the north side of Alban Street Footpath – No Footpath Material – Asphalt Constraints: Partially constrained Wide enough for two-way traffic Parking arrangements make two-way traffic flow unachievable 	
28: ROW (from Bridge Road to END, opposite Eucalyptus Street)	Existing Conditions: Carriageway width – 3.65m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short Low development potential	
29: Henry Street (from Cameron Street to END)	 Existing Conditions: Carriageway width – 3.9m Traffic management – Two-way, speed humps Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short 	



Street Name	Description	Photo
30: ROW (from Berry Street to Hodgson Terrace)	 Existing Conditions: Carriageway width – 4.15m Traffic management – Two-way, Berry Street is one-way (westbound) Parking – No parking Footpath – No footpath Material – Bluestone Layout features – Berry Street is a narrow street (3.5m road), and a splay is provided on the southeast corner of the intersection with the ROW to assist movement. Constraints: Unconstrained laneway Short Low development potential 	
31: ROW (from Church Street to END)	Existing Conditions: Carriageway width – 3.7m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short	
32: ROW (from Church Street to Church Street)	 Existing Conditions: Carriageway width – 4m-4.7m Traffic management – ROW is entry only for the northern section, however, an exit lane is provided via adjacent McDonalds car park, so is considered two-way for all practical purposes. Parking –No parking Footpath – No footpath Material – Asphalt Layout features – There are two 90 degree turns which loop the ROW back to Church Street. Splays are provided at each bend, and the ROW has enough width to allow for unimpeded turning. Constraints: Partially constrained Narrow U-shaped Lack of passing without 'McDonalds' site, however surrounding McDonalds site means that access issues could be easily resolved with re-development 	



Street Name	Description	Photo
33: Tullo Place (from Bridge Road to END)	 Existing Conditions: Carriageway width – 3.95m-4.55m Road reserve – 6.2m-6.8m Traffic management – Two-way, no right turn at Bridge Road Parking – No Parking Footpath – Footpath on west side Material – Asphalt Layout features – There is a connecting ROW on the east side of the road, with no splays provided Constraints: Partially Constrained Lack of passing area Could be converted shared zone for two-way traffic (footpath removed) 	
34: ROW (from Tullo Place to END)	 Existing Conditions: Carriageway width – 3.3m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – Connected to Tullo Place, with no splays provided Constraints: Unconstrained laneway Short Low development potential 	
35: Waterloo Place (from Bridge Road to Church Street)	 Existing Conditions: Carriageway width – 4.4m Road reserve – 6.2m Traffic management – Two-way Parking – No parking Footpath – Narrow footpaths on both sides Material – Asphalt Layout features – Waterloo Place has a 90 degree bend connecting it from Bridge Road to Church Street. A splay is provided at the bend on the northwest corner. There are also two ROWs connected to Waterloo Place Constraints: Partially Constrained Lack of two-way passing opportunities Length Could be made one-way 	Nando



Street Name	Description	Photo
36: ROW (from Waterloo Place to END)	 Existing Conditions: Carriageway width – 3.5m (with additional property boundary setback of 2.55m) Traffic management – Two-way Parking – Private parking on south side within property setback Footpath – No footpath Material – Bluestone Layout features – A property boundary setback allows for turning into ROW from Waterloo Place Constraints: Unconstrained laneway Short 	
37: ROW (from Waterloo Place to Lyndhurst Street)	 Existing Conditions: Carriageway width – 3.2m Traffic management – Two-way, Lyndhurst Street is one-way (northbound) Parking – No parking Footpath – No footpath Material – Bluestone Layout features – A splay on the southeast corner of Waterloo Place and the ROW is provided to assist turning. Constraints: Unconstrained laneway Short Continuous 	
38: ROW (from Gleadell Street to Griffiths Street)	Existing Conditions: Carriageway width — 3.15m Traffic management — Two-way Parking — No parking Footpath — No footpath Material — Asphalt Constraints: Unconstrained laneway Continuous Straight Could be one-way	



Street Name	Description	Photo
39: Spencer Place (from Hosie Street to Abinger Street)	 Existing Conditions: Carriageway width – 3.45m-3.8m Traffic management – Two-way, Hosie Street is one-way (northbound) Parking – No parking Footpath – No footpath Material – Asphalt and bluestone Layout features – There is a 90 degree bend in Spencer Place, with a splay provided on the southeast corner. There is another connecting ROW, which connects back to Hosie Street, with a splay also provided. Constraints: Partially Constrained Long Lack passing opportunities 	
40: Pandoleon Lane (from Mary Street to END)	 Existing Conditions: Carriageway width – 3.65m Traffic management – Two-way, Mary street is one-way (northbound) Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short Low development potential 	
41: ROW (from Mary Street to Coppin Street)	 Existing Conditions: Carriageway width – 3.2m Traffic management – Two-way, Mary Street is one-way (northbound) Parking – No parking Footpath – No footpath Material – Asphalt Layout features – Straight, limited splays on intersecting ROWs. Constraints: Partially Constrained Length No passing area Continuous, could be one-way 	



Street Name	Description	Photo
42: ROW (from Griffiths Street to Coppin Street)	 Existing Conditions: Carriageway width – 3.1m Traffic management – Two-way, must enter and exit via left on Coppin Street Parking – No parking Footpath – No footpath Material – Asphalt Layout features – There is a connecting ROW to the north, with splays provided on both corners of the intersection. Constraints: Unconstrained laneway Continuous Straight Could be one-way 	
43: Foster Place (from Coppin Street to END)	 Existing Conditions: Carriageway width – 3.15m-3.45m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – There is a connecting ROW of 4m width to the south, with no splays provided. Constraints: Partially Constrained Lack of passing area on east-west link T intersection 	
44: ROW (from Coppin Street to Palmer Street)	 Existing Conditions: Carriageway width – 3.7m-5.7m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – There is a connecting ROW to the north, with no splays provided at the intersection, however, properties on the south are set back. Constraints: Unconstrained laneway Continuous Short 	



Street Name	Description	Photo
45: ROW (from Lord Street to END)	 Existing Conditions: Carriageway width – 3.55m, widened by adjacent development Traffic management – Two-way, Lord Street is one-way (northbound) Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Provides two-way traffic 	
46: ROW (from Hunter Street to END)	Existing Conditions: Carriageway width – 3m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short Low development potential	
47: ROW (from Hunter Street to END)	Existing Conditions: Carriageway width – 4.4m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Concrete Layout features – appears to have been consumed as private property Constraints: Unconstrained laneway Short Low development potential	ORD OF THE PROPERTY OF THE PRO
48: ROW (from Neptune Street to END)	Existing Conditions: Carriageway width – 3m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Short Low development potential	



Street Name	Description	Photo
49: ROW (from Palmer Street to END)	Existing Conditions: Carriageway width – 3.45m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Concrete Constraints: Unconstrained laneway Short Low development potential	
50: Birch Square (from Murphy Street to Murphy Street)	 Existing Conditions: Carriageway width – 6.1m-9m Traffic management – One-way in an anticlockwise direction Parking – Parking on north side of eastwest section Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Already one-way to minimise vehicle conflict 	
51: ROW (from Neptune Street to Burnley Street)	Existing Conditions: Carriageway width – 3m Traffic management – Two-way, must exit/enter left at Burnley Parking – No parking Footpath – No footpath Material – Asphalt Constraints: Unconstrained laneway Continuous Straight Could be one-way	
52: ROW (from Neptune Street to END)	 Existing Conditions: Carriageway width – 3.15m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – ROW bends 90 to the north with no spays provided. North-south section is not trafficable and requires splays Constraints: Highly Constrained Requires splays on the corners 	B CLIP A.



Street Name	Description	Photo
53: ROW (from Burnley Street to Type Street)	 Existing Conditions: Carriageway width – 3.4m Traffic management – Two-way Parking – No parking Footpath – No footpath Material – Asphalt Layout features – There is a connecting ROW to the south, with no splays provided at the intersection. Constraints: Unconstrained laneway Continuous Straight Could be one-way 	TOTAL PARTY OF THE
54: ROW (from Type Street END)	Existing Conditions: Carriageway width – 5m Traffic management – Two-way Parking – No parking Footpath – Footpath on south side Material – Asphalt Constraints: Unconstrained laneway Continuous Straight Could be one-way	
55: Park Avenue (east- west section abutting Bridge Road properties from Westbank Terrace to bend)	Existing Conditions: Carriageway width – 3.65m Traffic management – Two-way Parking – No parking Footpath – Footpath on south side Material – Asphalt Constraints: Unconstrained laneway Continuous Straight Could be one-way	



Street Name	Description	Photo
Eucalyptus Street	 Existing Conditions: Carriageway width – 3.45m-5.95m Road Reserve – 5.95m Traffic management – Two-way Parking – No Parking Footpaths – Narrow footpath on both sides Material – Asphalt Layout features – Road provides passing area at intersection with Bridge Road, however road narrows soon after, providing no other opportunities for passing. 	SUB WAY
Neptune Street	 Existing Conditions: Carriageway width – 7.1m Road Reserve – 9.8m Traffic management – Two-way Parking – Parallel parking on both sides Footpaths – Narrow footpath on both sides Material – Asphalt Layout features – Parking on each side of the road only allows for one-way traffic flow. 	



Traffic Engineering Assessment

Victoria Street and Bridge Road Activity Centres, Richmond

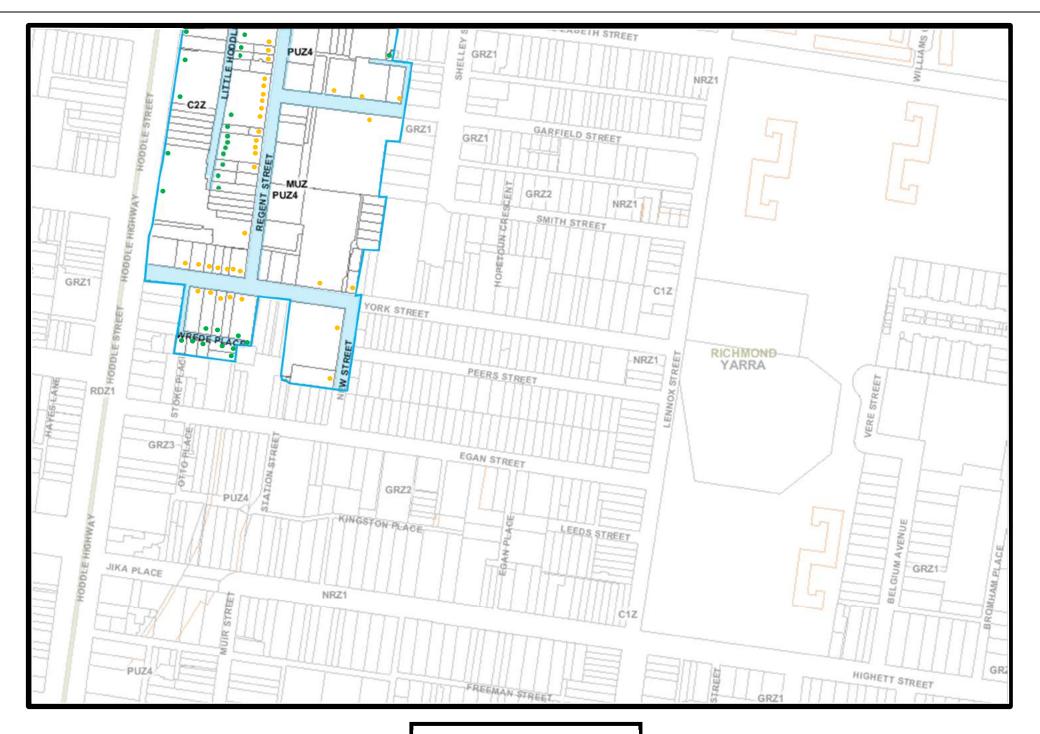
Appendix D: Existing Vehicle Access Arrangements





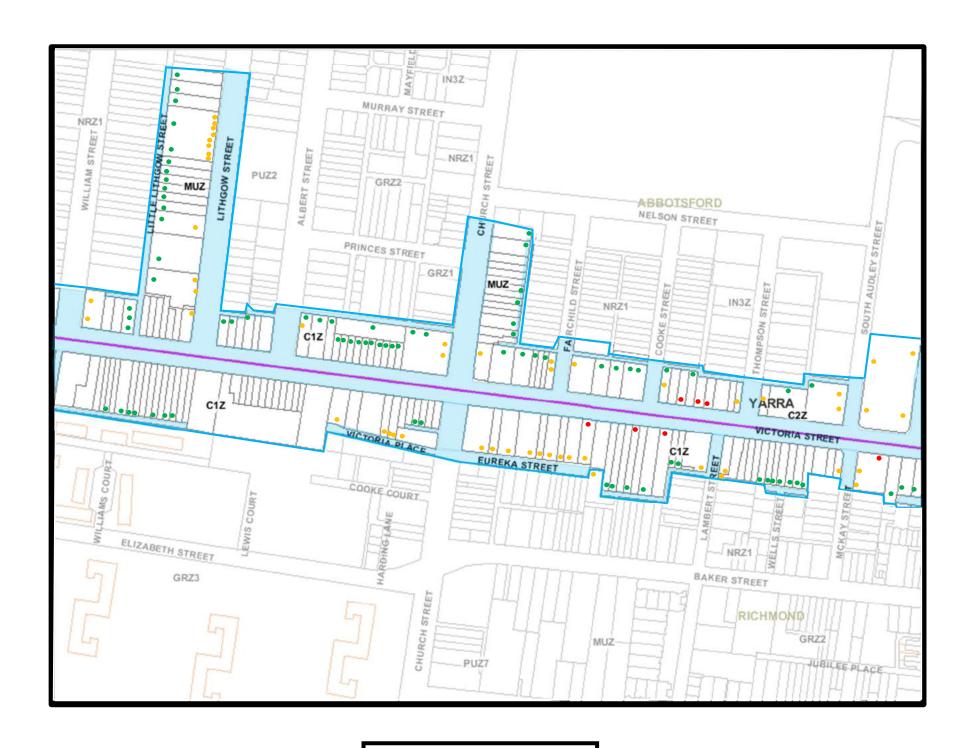
- Study Area Boundary
- Access to Victoria Street
- Access to side street
- Access to RoW





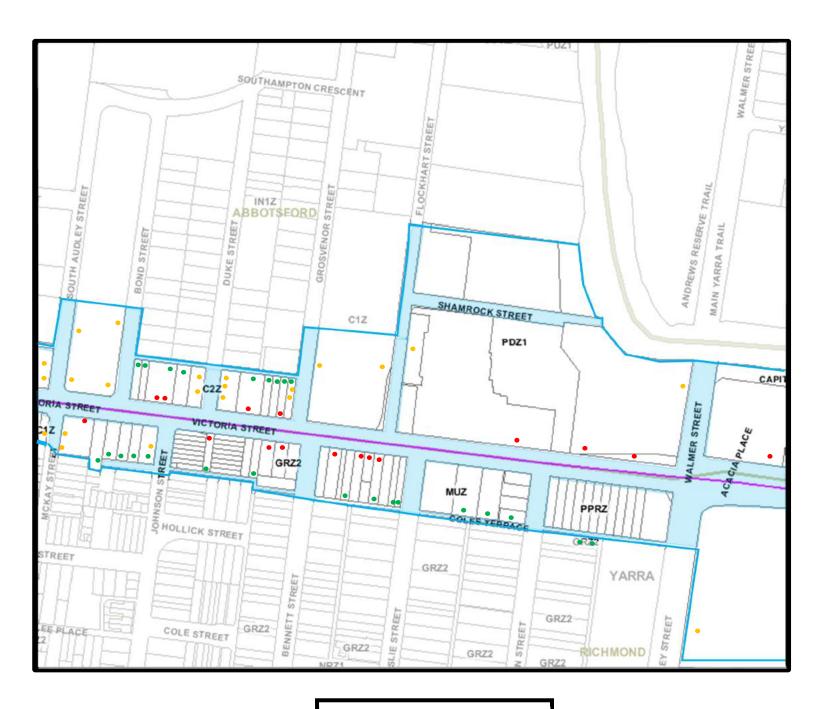
- Study Area Boundary
 - Access to Victoria Street
 - Access to side street
- Access to RoW





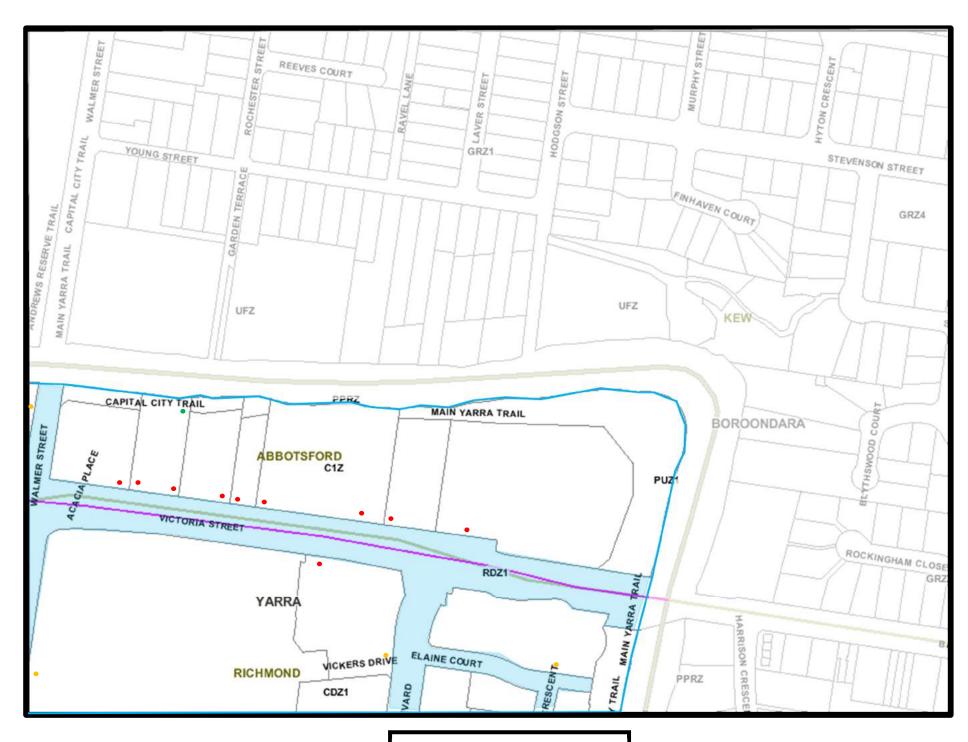
- Study Area Boundary
- Access to Victoria Street
- Access to side street
- Access to RoW





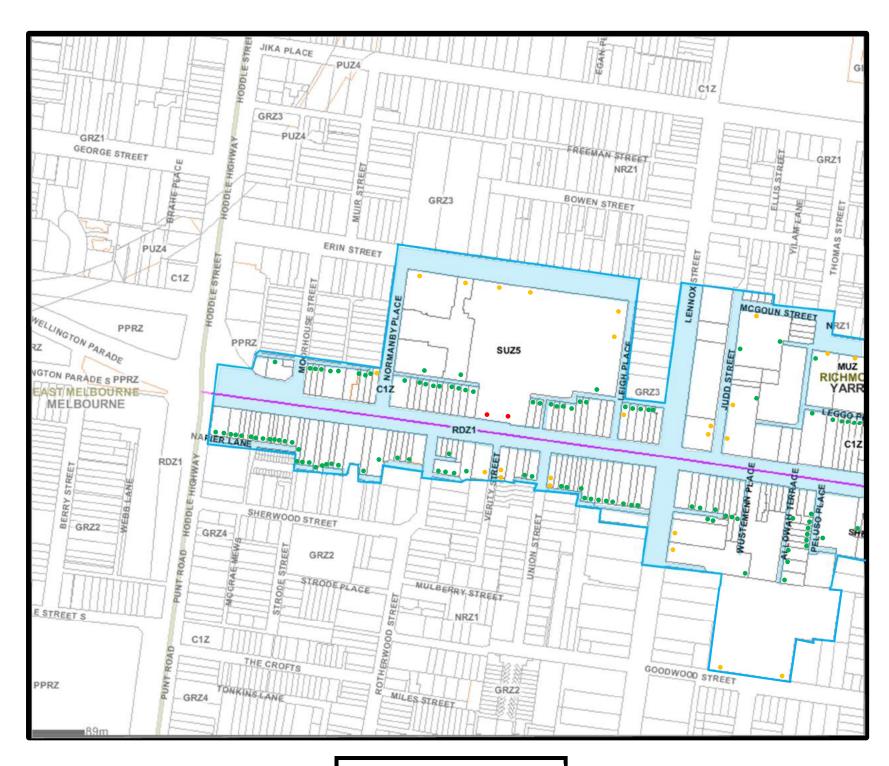
- Study Area Boundary
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- Access to RoW





- Study Area Boundary
- Access to Victoria Street
- Access to side street
- Access to RoW





- Study Area Boundary
- Access to Bridge Road
- Access to side street
- Access to RoW





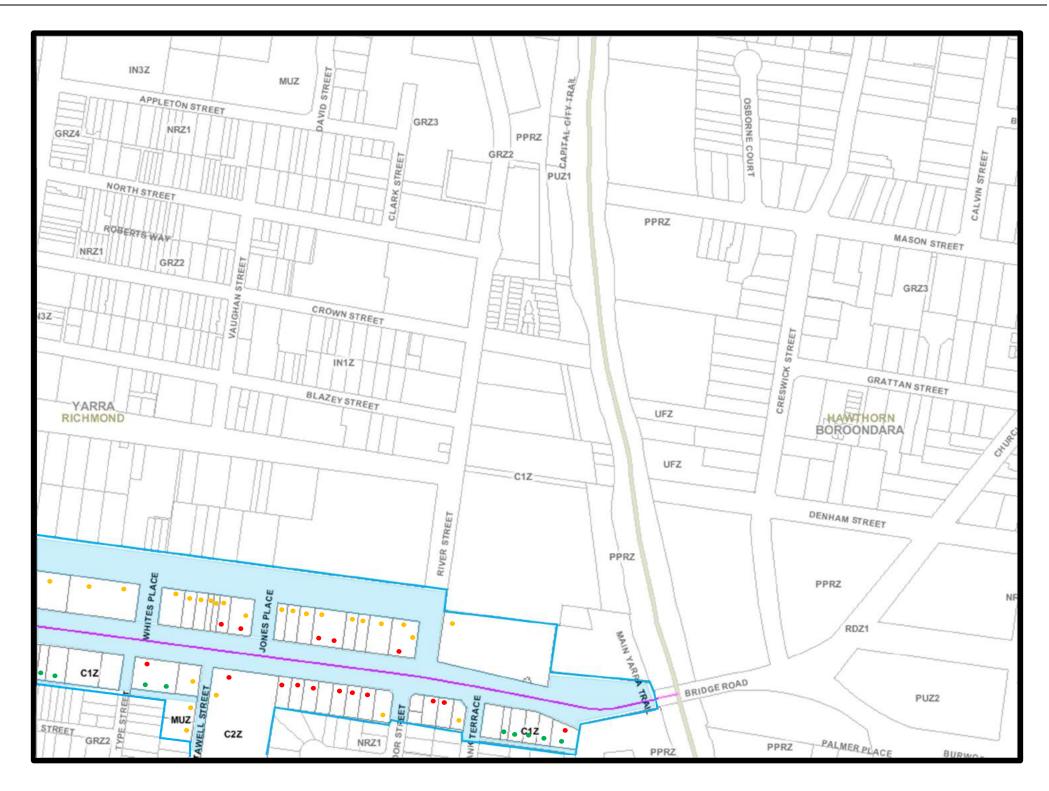
- Study Area Boundary
- Access to Bridge Road
- Access to side street
- Access to RoW





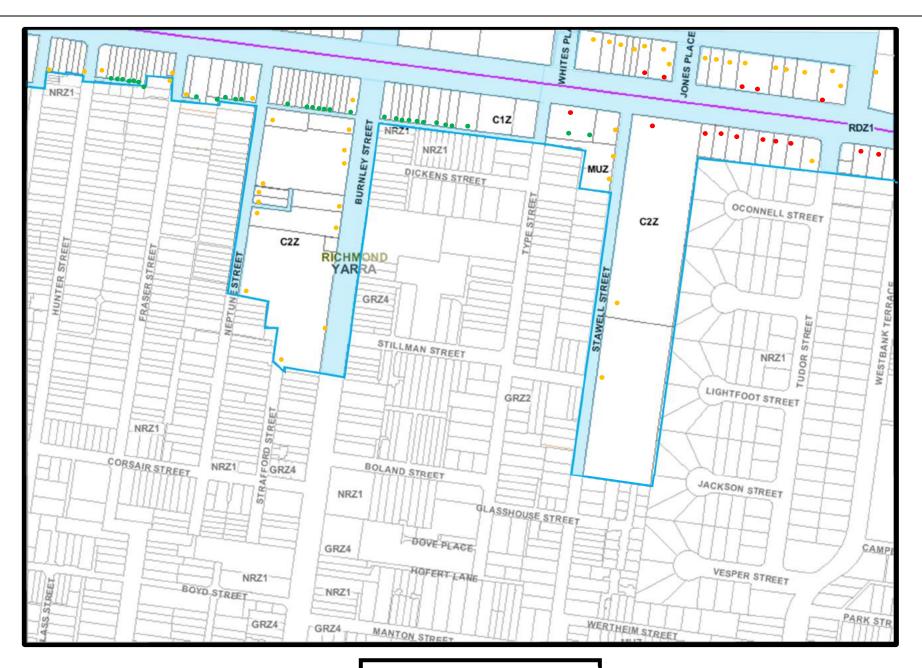
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- Access to Bridge Road
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- Access to side street
- Access to RoW





- Study Area Boundary
- Access to Bridge Road
- Access to side street
- Access to RoW