



Road Management Plan 2017 - 2021

Adopted by Council on 4 July 2017

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Appendix 3: Roads with Major On-road Bike Lanes

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Appendix 5: High Pedestrian Volume Streets

Register of Public Roads (separate document)

Revisions and Adoption Schedule

Document Control

| Rev No | Date | Version / Changes |
|--------|-------------|---|
| | Aug 2004 | First Edition |
| | July 2009 | Second Edition |
| 3.00 | 25 Jun 2013 | RMP Review as per s54(5) of Road Management Act 2004. <i>Amendments Summary:</i> <ul style="list-style-type: none"> • Focus on operational activities. Strategic planning activities removed from RMP • Asset maintenance hierarchies defined, with corresponding inspection regime (section 4.3) and response priority (section 4.4.3) • Footpath at vehicle crossing included (section 2.4.4) • Carparks and nature strips excluded (section 2.3) • Changes to road defects tolerance intervention levels (section 4.4.1) • Inclusion of 'Force Majeure' clause (section 1.10) |
| 3.01 | 11 Jul 2013 | Initial Draft issued for Public Comment |
| 3.02 | 17 Sep 2013 | RMP 2013 Adopted by Council |
| 4.00 | 15 Mar 2017 | RMP Review as per s54(5) of Road Management Act 2004. <i>Amendments Summary:</i> <ul style="list-style-type: none"> • <i>Changes to inspection program (Table 3)</i> • <i>Changes to defects type and intervention levels (Table 4)</i> • <i>Changes to response times (Table 4)</i> • <i>significant parks excluded</i> |
| 4.01 | 2 May 2017 | Initial Draft issued for Public Comment |
| 4.02 | 4 July 2017 | RMP 2017 – 2021 Adopted by Council |

1 INTRODUCTION

1.1 Legislation Applicable

The Road Management Act 2004 (the “Act”) has established a statutory framework for the management of public roads in Victoria. The Act, and any associated legislation as defined in the Act, applies to road authorities including the City of Yarra.

1.2 Meaning of Terms

Terms used in this Plan have the same meaning as the specific definitions included in the Act.

For the purposes of this plan the following terms shall be defined as:

| | |
|--------------------------|---|
| “the Act” | means the Road Management Act 2004. |
| “the Council” | means the Yarra City Council. |
| “Crossover” | means the vehicle crossing or access from back of kerb to property boundary including any section of footpath within the lateral limits of the crossing. |
| “Day” | in terms of response times a day is a business (working) day excluding weekends and declared public holidays. |
| “Defect” | is a localised failure in an asset, for example potholes in a road surface or a joint displacement in a concrete pathway. |
| “Hazard” | is an event, defect, condition or substance, which has the potential to cause harm to property or the health and safety of persons in their use of road infrastructure. |
| “Inspection Frequency” | is the period between scheduled inspections of the road to identify hazards. The nominated time is not precise and a reasonable margin is allowable. |
| “Intervention Level” | is the extent of a defect above which the defect may pose an unacceptable risk to users of that asset. The asset defect intervention levels are not definitive criteria with respect to accurate measurement due to the nature of on-site visual assessment, ground condition and light condition at the time of survey. Therefore, there may be variances within reasonable limit as to the extent of the reported severity of a defect when compared to detailed measurement of any particular defect |
| “Level of Service” | is the defined service quality for the road against which performance may be measured and relates to quality, quantity, reliability, responsiveness and cost. |
| “Maintenance Category” | the nominated maintenance category for each road or footpath determined by Council according to an assessment of risk, taking into account factors such as road classification, road type and volume and type of traffic. |
| “Programmed Maintenance” | works that are beyond the scope of reactive maintenance, but are not Capital Works projects. Generally they do not require a design to be completed and are seen as a method of rehabilitating infrastructure assets without the need for major capital works |
| “Remediate” | action to reduce a defect or hazard to below Council’s intervention levels. |
| “Response Times” | is the time to make safe or repair defects, identified by inspections undertaken by Council officers, or defects notified by the public. Response Time is measured from the time the defect is identified by, or notified to, Council. The nominated response time is not precise and a reasonable margin allowable. |

| | |
|------------------------|---|
| “Reactive Maintenance” | the work undertaken daily to keep assets operating at the required service levels. This includes pothole patching, minor repairs to footpath, kerb and channel, signs and street furniture. |
| “Service Agreement” | means the Service Agreement for Road Maintenance |
| “Shared Zone” | a road or network of roads where pedestrians, cyclists and vehicles share the roadway. |

1.3 Role of Road Authority

Under Part 4, Division 5 (s49 to s55) of the Act, Council elected to make a Road Management Plan in accordance with the Code of Practice for Road Management Plans (16 September 2004).

The Act provides that Council as the road authority is to exercise its functions within an overall policy context and to consider the expectations of the community and the resources available, and the competing demands for those resources.

Council is responsible for the development of the Road Management Plan and must ensure it manages the inspection, maintenance and repair of the road network within available funding levels to ensure that a safe and efficient road network is provided for use by members of the public.

1.4 Purpose of the Road Management Plan

The Road Management Plan (the “RMP”) is an *operational plan* within the City of Yarra.

The purpose of this RMP is to ensure Council has in place a plan that helps Council to achieve the following objectives –

1. Ensure that a safe and efficient network of municipal public roads is provided primarily for travel and transport.
2. Meet the statutory requirements of the Road Management Act, Road Management Regulations (the “Regulations”) and relevant Ministerial Code of Practice (the “Codes”). Purposes defined in s50 of the Act are quoted below –

“The purposes of a road management plan are having regard to the principal object of road management and the works and infrastructure management principles –

(a) to establish a management system for the road management functions of a road authority which is based on policy and operational objectives and available resources; and

(b) to set the relevant standard in relation to the discharge of duties in the performance of those road management functions.”

3. Provide a structure that advances Council’s asset management practice in delivering a sustainable road transportation service.
4. Adhere to good practice of achieving an appropriate level of statutory protection against civil liability claims under the Act.

1.5 How to achieve the RMP objectives

To achieve the above stated objectives, this RMP provides details in the following key management areas that are central to Council’s role as the road authority for municipal public roads –

- provide descriptions of the types of road and road-related infrastructure assets included in the RMP (section 2, Road Asset Description).
- set up a road and pathway hierarchy classification to facilitate the setting of performance standards (section 3, Maintenance Hierarchy).
- set relevant performance standards to help with the discharge of Council’s duties (section 4, Performance Standards).
- set details of management system to be implemented to help with the discharge of Council’s duties. (section 5, Management System).

1.6 Key stakeholders

Key stakeholders who will be affected by this RMP in the City of Yarra include –

- The community - ratepayers, residents, business, industry, education.
- Road users such as pedestrians (including those with disabilities and the elderly), bicyclists, motorcyclists, public transport passengers and vehicle drivers and passengers.
- Transport service providers - transport operators, bus operators and service providers supporting the delivery of transport service.
- Tourists and visitors to the area (for recreation, sport, leisure and business, or in transit).
- Emergency authorities (Police, Fire, Ambulance, SES).
- Utilities agencies that use the road reserve for their infrastructure such as water, sewerage, drainage, gas, electricity, telephone, telecommunications, cable TV, pipeline and other like services under the authority of an Act of Victoria or the Commonwealth.
- Land and property developers and their respective consultants and contractors.
- Other road authorities such as VicRoads, neighbouring Councils, Department of Environment, Land, Water and Planning, Parks Victoria, Melbourne Water Corporation, etc.
- Special interest groups such as RACV, ratepayer associations, Chambers of Commerce, industry-representing bodies and like community groups.
- Council as the responsible road authority.
- State & Federal Government agencies that periodically provide support funding to assist with management of the network.

1.7 Duty of road users

Whilst Council has certain duties and responsibilities, this RMP is predicated on the basis that the road users also have certain obligations and responsibilities to drive safely according to the prevailing road conditions, to have regard to the rights of other road users, the community and infrastructure managers, and to avoid damaging infrastructure.

s17A of the Road Safety Act 1986 and s106 of the Road Management Act 2004 set out the obligations of road users:

- road users are required to travel safely having regard to the road, weather and traffic conditions, and avoiding unreasonable risks to other road users;

Road users have additional duties and responsibilities under the Roads and Council Land Local Law (2012) of the City of Yarra.

In particular there are provisions relating to the protection of environment, public safety, management of traffic and roads, control of vehicles and animals on roads, and secondary activities on roads.

A copy of the Roads and Council Land Local Law is available from the municipal offices and on Council's web site at www.yarracity.vic.gov.au.

1.8 Relationship with Council Plan and Asset Management Policy

The Council Plan sets out Council's medium-term direction and the outcomes sought by Councillors for their four-year term of office. It details Council's strategic objectives, outlining some of the values, policy and research behind each objective.

The Asset Management Policy and its associated strategy framework have a direct link to the Council Plan through its budgetary and planning processes.

1.9 Relationship with Budget

Council's annual adopted Budget and Capital Works Program specifies the planning parameters by which the Road Management Plan is carried out. The annual Budget has been developed within an overall financial planning framework that guides Council in identifying community needs and

expectations over the short, medium and long term. In preparing the annual Budget, funding requirements for each year are linked with the objectives contained in the Council Plan.

In relation to road and road-related infrastructure assets that provide road transport service, Council recognises the importance of balancing appropriate performance standards with what the community is able to afford and sustain. In balancing the funding level for the inspection, maintenance, repairs, upkeep, rehabilitation and renewal of road and road-related infrastructure assets, Council gives regards to the following key considerations –

- its role and obligations under the Road Management Act 2004;
- achievement of statutory protection against civil liability claims;
- preservation of existing assets in an appropriate and safe working condition;
- ability to acquire additional infrastructure assets to serve new growth;
- market constraints in labour, plant and equipment, building materials and contractors; and
- the competing demands for Council resources.

The performance standards set in Section 4 of this RMP reflect such balance.

1.10 Force Majeure

Council will make every endeavour to meet all aspects of its RMP. However in the event of natural disasters and events but not limited to, fires, and floods, as well as human factors, but not limited to lack of Council staff or suitably qualified contractors, because of s83 of the Victorian Wrongs Act, 1958, as amended, Council reserves the right to suspend compliance with its Plan.

In the event that the Chief Executive Officer of Council, has to, pursuant to s83 of the said Act, consider the limited financial resources of Council and its other conflicting priorities, meaning Council's RMP cannot be met, they will write to Council's Officer in charge of its RMP and inform them that some, or all of the timeframes and responses in Council's RMP, are to be suspended.

Once the events beyond the control of Council have abated, or if the events have partly abated, Council's Chief Executive Officer will write to Council's Officer responsible for Council's RMP and inform them which parts of Council's RMP are to be reactivated and when.

1.11 Availability of Plan and Associated Documents

This RMP and associated documents is available at the following locations and may be viewed, free of charge, by the public during the hours of 8.30am to 5.00pm each working day:

Yarra City Council

Richmond Town Hall

333 Bridge Road Vic 3121

Customer Service Centre Phone 9205 5555

The RMP may also be viewed in PDF format on the Council website

<http://yarracity.vic.gov.au/New s/am end -road -m anagement -plan -2017-2021/>

2 ROAD ASSET DESCRIPTION

This section provides the details of road infrastructure and road-related infrastructure assets that are being covered under this RMP. It also outlines assets not covered under this RMP.

2.1 Overview

Yarra's 19.5 square kilometres include the suburbs of Abbotsford, Burnley, Clifton Hill, Collingwood, Cremorne, Fitzroy, North Carlton, North Fitzroy, Princes Hill and Richmond. Parts of Alphington and Fairfield - south of Heidelberg Road - are also included in Yarra.

The City has a population forecast for 2017 of approximately 89,710.

The local road network comprises –

- 225 km of public roads (sealed and unsealed roads);
- 85 km of laneways;
- 410 km of kerb and channel;
- 456 km of pathways; and
- 7 foot-bridges (4 co-owned with neighbouring Councils).

2.2 Assets covered

The road and road-related infrastructure assets covered in this RMP are those that exist within the roads nominated in the Register of Public Roads, and they are –

- trafficable roads including features such as traffic lane, on-road bicycle lane, parking lane, service road and shared zones;
- public carparks directly abutting edge of constructed road pavement;
- constructed laneways (the maintenance of unmade laneways that are not reasonably required for public access is not covered by this RMP)
- road shoulder and verge;
- roundabouts, speed humps, traffic or splitter islands, central median, outer separator;
- pedestrian bridges and major culverts;
- kerb and channel;
- pathways – constructed footpath, bicycle path within the road reserve;
- pedestrian operated signals, pedestrian crossings and school crossings;
- traffic signals, regulatory signs, guide posts, raised reflective pavement marker (cat eyes), traffic safety barriers and guard rails;
- street lighting infrastructure for *decorative* schemes where Council is the asset owner; and
- roadside Water Sensitive Urban Design features.

2.3 Assets not covered

This RMP does not cover the following assets:–

- road and road-related infrastructure assets that are the responsibilities of other road authorities, utilities and/or other infrastructure managers (e.g. VicRoads, Department of Environment, Land, Water and Planning, Yarra Trams, Parks Victoria, Melbourne Water Corporation, private roads, and the like);
- road, road-related and non-road infrastructure assets (e.g. gas pipes, water pipes, sewerage pipes, storm-water pipes, pits, electricity poles, cables, tram wires, rail infrastructure, bus shelters, public telephones, mail boxes, roadside furniture and fences erected by utilities) owned, managed and/or operated by private organisations, on private land or which interface on public land or within road reserves (e.g. shopping centres, educational institutions, body corporate subdivisions and the like);
- single property stormwater drains that are constructed within the reserve from the property;

- sub-divisional roads under construction and prior to the date the road became a public road;
- vehicle crossovers and driveways between the kerb and the property boundary;
- roads and laneways that have not been constructed to Council's design standards or by a responsible road authority (e.g. an unconstructed track such as a vehicle or motorcycle trodden roadway);
- park pathways and shared pathways;
- nature strips and infill areas between the edge of the road or back of the kerb and the property boundary not occupied by the pathway. These should be maintained by the abutting property owner;
- off-street car parks (including carparks in reserves and council maintained facility sites);
- rail crossings and associated structures (bridges);
- street lighting (Standard) – timber and concrete power poles;
- temporary road signs used in road works;
- any other road, road-related or non-road infrastructure asset not listed in the Register of Public Roads.

Regardless of its maintenance obligations, Council has a duty of care and will as far as practicable notify the relevant utility or authority where a defect related to third party asset has been identified. Council may also serve a notice on a property owner to have defects repaired within a given period.

2.4 Demarcation and Agreements with other Authorities

The Code of Practice – 'Operational Responsibility for Public Roads' defines the limits of responsibility between road authorities for different parts or elements within the road reserve.

2.4.1 Freeways and Arterial Roads

Classification of a road as a freeway or an arterial road is declared by VicRoads in accordance with s14 of the Act. VicRoads is both the coordinating road authority and the responsible road authority for freeways and arterial roads.

Declared arterial road and freeways within the municipality are listed in Appendix 1.

In the case of arterial roads VicRoads is responsible for the road pavement, kerb and channel, traffic signals, medians, 'easy access stop' raised pavement, some underground drainage and bike paths belonging to VicRoads.

Yarra City Council is responsible for Council owned assets contained within the area from the back of kerb to the building line and line-marking associated with parking bays.

The following figure illustrates the demarcation of responsibilities within VicRoads controlled arterial roads and council controlled local roads.

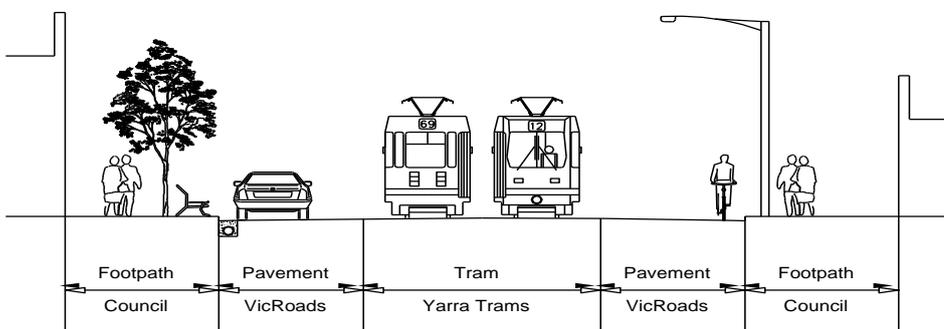


Figure 1 – Declared Arterial Road with Shared Responsibility

2.4.2 Local Roads with Tram Lines

Where tram tracks exist the Tram Operator is responsible for assets in the road reservation such as, tram tracks, yellow line marking, cat-eyes, overhead power lines and shelters. Tram operators are

also responsible for the tram track reserve area typically within 500mm each side of the outer track rails in road reserves including crib crossings installed to protect pedestrians crossing tram tracks.

Council is responsible for the road reserve outside these limits.

The demarcation of responsibilities between Council and Tram Operator is as shown in Figure 2.

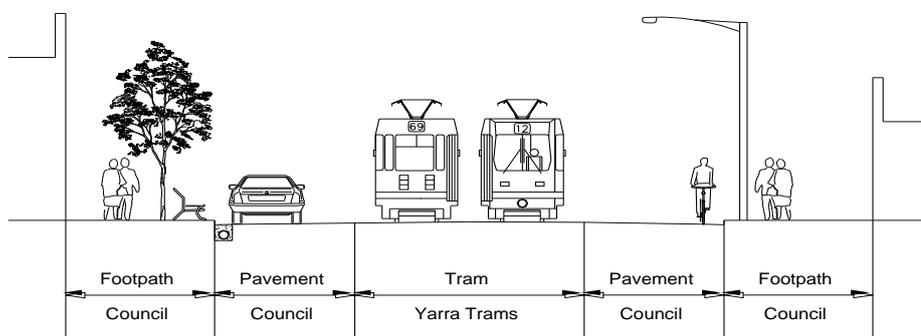


Figure 2 – Major Road with Shared Responsibility

2.4.3 Local Roads

Council is both the Coordinating and Responsible Road Authority for all local roads.

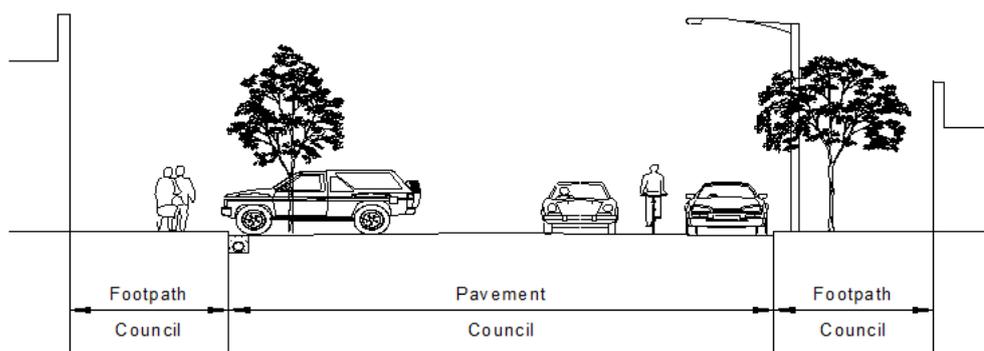


Figure 3 – Local Road with full Council Responsibility

2.4.4 Shared Roads

The City of Yarra shares boundaries with Melbourne, Moreland, Darebin, Banyule, Stonnington and Boroondara. Shared roads are those that may define boundaries with other municipalities. In most cases the adjoining municipalities are responsible for managing half of the road, depending on the boundary alignment.

The shared roads with adjoining municipalities are:

With Melbourne City Council

1. Bowen Crescent (Park Street to Garton Street), Princes Hill
2. Garton Street (Paterson Street to MacPherson Street), Princes Hill

With Moreland City Council

3. May Street (King Street to Ida Street), Fitzroy North
4. Park Street (Bowen Crescent to Wilson Street), Princes Hill

2.4.5 Bridges

There are a number of road bridges and railway line overhead bridges owned by others (Appendix 2).

VicRoads is responsible for the management and maintenance of the bridges and underpasses along Arterial Roads. All railway line bridges that cross above roads, underpasses, and level crossings are the responsibility of and maintained by the rail authority. The City of Yarra is however responsible the maintenance of the road pavement and/or footpath over the rail lines as listed in Appendix 2.

Some footbridges along shared boundaries crossing the creeks have a shared responsibility between neighbouring Councils.

The shared *pedestrian* bridges are:

With Boroondara City Council

1. Walmer Street bridge (over Yarra River), Clifton Hill

With Darebin City Council

2. Merri Path/Knott Reserve Bridge (over Merri Creek), Clifton Hill
3. Merri Path/Coulson Reserve Bridge at (over Merri Creek), Clifton Hill
4. Holden Street Bridge (over Merri Creek), Fitzroy North

Formalised agreements detailing the responsibilities for managing bridges that are shared between Yarra and the neighbouring councils for the above had been prepared.

2.4.6 Public (Off-street) Car Parks

Off-street car parks outside road reserves including open space and recreation reserves are not considered as road assets under the Act and are only inspected by customer request.

Constructed car parks directly abutting edge of constructed roads are considered as ancillary areas and are included in the Plan. The inspection frequency, intervention levels and response time obligations of these car parks will be the same as those for the abutting roads.

2.4.7 Repair of Damaged Council Assets

Where a party other than Council has damaged a Council asset or road, that party shall be responsible for repairing the damage to ensure that it is safe and operates at the level it previously operated at or higher.

In particular, where secondary damage has been caused to Councils assets, such as subsidence from water damage, at a location other than the specific site of the asset works or repairs, the damage must be repaired by the responsible party.

2.4.8 Legislation

This RMP has been prepared with reference to the following Acts, Regulations, and Codes of Practice:

- Road Management Act, 2004 (Vic)
- Local Government Act 1989 (Vic)
- Road Management (General) Regulations 2016 (Vic)
- Road Management (Works and Infrastructure) Regulations 2015 (Vic)
- Code of Practice for Operational Responsibility for Public Roads GG no s267, 17 December 2004
- Code of Practice for Road Management Plans GG nos201, 16 September 2004
- Code of Practice for Management of Infrastructure in Road Reserve GG no s117, 28 April 2016
- Code of Practice for Worksite Safety – Traffic Management GG nos276, 22 December 2004

2.5 Register of Public Roads

Council maintains a Register of Public Roads (the “Register”) in accordance with s19 of the Act. The Register is a stand-alone document titled “Yarra City Council – Register of Public Roads”.

The Register specifies all roads and road categories (including laneways) that Council will be responsible for maintaining and repairing.

The Register also defines the general demarcations between private assets and Council assets. Where the City of Yarra enters into an arrangement with another organisation to carry out works on other public roads, the responsibility of the City of Yarra is limited to the terms of that agreement.

The Register will be updated from time to time as required if new assets are constructed, identified /discovered, transferred or existing assets disposed of.

3 MAINTENANCE CATEGORY

3.1 Introduction

Pursuant to s36 of the Act, Council is the coordinating road authority for the roads as well as pathways and ancillary areas within the road reserves of those public roads, as specified in the “Register of Public Roads”.

This section describes the road and pathway maintenance categories adopted in this RMP. The classifications assist in determining relevant performance standards (see section 4) for key maintenance areas such as inspection, maintenance, repairs and intervention levels. It also assists in other management activities such as allocating resources and specifying design and construction standards.

3.2 Road

All Council managed roads are classified as municipal roads in the Register of Public Roads.

Council has adopted, however, the following road maintenance categories for the purpose of setting the performance standards in terms of inspection, maintenance, intervention levels and repairs.

| Traffic Type | Roads Included |
|--|---|
| Roads with major on-road bike lanes and shared zones | Refer to Appendix 3 and 4 |
| Other local roads | Other Council roads in the Register of Public Roads |
| Laneways | All constructed laneways |

Table 1 – Road Maintenance Categories

These categories are based on vehicle 'volume/service level' and reflect the perceived risk associated with vehicle usage.

Council has a number of laneways that are not constructed and is not obligated to do any particular work, and in particular, is not obligated to do any surface or drainage work on an unmade road or laneway.

3.3 Pathway

Council’s pathway maintenance category is based on ‘pedestrian volume /service level’ and reflects the perceived risk associated with the pedestrian usage.

The following pathway maintenance category has been adopted to assist in setting performance standards in terms of inspection, maintenance, intervention levels and repairs.

| Pedestrian Volume /Service Level | Pedestrian Environment |
|----------------------------------|---|
| High | Major shopping strips, schools, aged care centres, senior citizen centres, hospitals, libraries, main community facilities, transport hubs. |
| Low | Residential areas, mainly at local streets. |

Table 2 – Pathway Maintenance Categories

High pedestrian volume streets are listed in Appendix 5.

4 PERFORMANCE STANDARDS

4.1 Objectives

The objectives of setting performance standards –

- (1) Ensure public safety
- (2) Protect road infrastructure assets
- (3) Ensure an appropriate level of protection against civil liability claims based on available Council resources.

4.2 Determining Level of Service

Council has determined the standard to which it will inspect, maintain and repair roadways, pathways, road infrastructure and road related infrastructure assets. When assessing appropriate levels of service required for the various activities, the following are also taken into consideration;

- Utilisation
- Level of risk
- Cost

Council sets the performance standards for the following operational functions in roads, pathways and ancillary areas –

- Inspection Program
- Maintenance levels of service (Defect Intervention level), and
- Response time.

4.3 Inspection Programs

4.3.1 Proactive Inspection Program

Various proactive road inspection programs are undertaken to identify defects and obtain condition data on the road infrastructure. The information obtained from these inspections is used to prioritise maintenance activities and develop future capital works programs.

| Maintenance Category | Proactive Inspection Frequency |
|--|--------------------------------|
| Road | |
| Roads with major on-road bike lanes and shared zones | 1 year |
| Other Local Roads | 2 years |
| Laneways | 3 years. |
| Pathway | |
| High Pedestrian Volume ¹ | 4 months |
| Low Pedestrian Volume | 2 years |
| Bridges | |
| Pedestrian Bridge | 12 months (Level 1 Inspection) |
| Road Delineation² | |
| All Categories | 2 years |

¹ includes inspection of roads and kerb and channel along high pedestrian volume

² typically include safety signs, guide posts, safety barriers, line-marking and pavement markers

Table 3 – Proactive Inspection Frequencies

These inspections identify obvious defects (Table 4) to roads, footpaths, kerb and channels, and regulatory signs that are outside the maintenance intervention levels and are considered to be

potential hazards and pose unnecessary risk to the road users. Other road defects such as wheel ruts, delamination, crocodile cracks, line markings etc are considered to be condition issues affecting the performance and are not included in Table 4. These latter defects will be considered in the development of capital works program.

Any defects associated with service utility pits, private street trees and vehicle crossings are reported to asset owner with a request to the asset owner to rectify the defect.

4.3.2 Reactive Inspection

This is unscheduled inspection undertaken in response to a customer request or complaint, usually within 3 days of notification. It also includes ad-hoc inspections undertaken by Council staff. An ad-hoc inspection may follow extreme weather conditions or intense development activities.

4.4 Maintenance Levels of Service

Levels of Service, including inspection frequencies, defect intervention levels and response times have been established for specific activities within each maintenance category.

In developing these levels of service, Council has considered community expectations, current service levels, the level of risk exposed and *available resources*. The current maintenance service levels being delivered are seen as being very close to reflecting the balance between customer expectations and financial affordability.

It is envisaged that the Levels of Service will be reviewed annually as more accurate data becomes available and customer expectations and resource allocations are reassessed.

4.4.1 Defects Intervention Levels and Response Times

Defects intervention levels and the corresponding response times included in the RP are shown in the following table.

| Defect And Intervention Level | Intervention Action ¹ | Maintenance Category /Response Time | |
|---|--|---|-----------------|
| | | Roads with major on-road bike lanes | Other Roads |
| Pavement | | | |
| Potholes Pothole Ø=>300mm & D=>50mm (within major bike lane) Pothole Ø=>200mm & D=>50mm (roads with shared zones) Pothole Ø=>300mm & D=>100mm (all other roads) | Patch potholes <1 m ² , in travelled way using bituminous and other appropriate materials to restore the riding surface to a smooth condition | 10 working days | 15 working days |
| Cracking Longitudinal Cracks > 20mm width (within bike lanes) All Cracks > 20mm (road with shared zone) | Seal and fill cracks and joints using liquid bituminous sealants | As per City Works crack sealing program | |
| Tree Root Damage – When pavement is raised >150mm (outside 2m square tree root base). | Ramping out displacement | 15 working days | |
| Lips between Utilities Assets and Road Lip > 50mm | Level out to make safe and notify responsible service authority | Notify within 48 hours | |
| Missing or Damaged Pit or Cover (Utilities Assets) | Notify responsible service authority | Notify within 48 hours | |
| Damaged Stormwater Pit /Cover or Steps > 30mm | Level out to make safe, repair or replace | 10 working days | 15 working days |
| Regulatory signs and Supports Signs are damaged, incorrect, sign legend illegible at 150 m | Minor repair, straightening, re-erection, cleaning or replacement | 2 working days | |

| Defect And Intervention Level | Intervention Action ¹ | Maintenance Category /Response Time | |
|---|---|--|-------------------------------------|
| under low beam or in daylight, missing, or unstable support | of signs and sole purpose supports. | | |
| Kerb and Channel | | | |
| Settlement Channel settlement >150mm (over 5m length) | Repair / replace / realign kerb pitcher | 15 working days | |
| Displacement /rotation Lip > 50 mm (non-tree root related) Lip >100 mm (tree root related) | Repair / replace / realign kerb and channel | 15 working days | |
| Laneway (as measured beyond 0.5m from property boundary line on both sides of laneway) | | All Laneways | |
| Depression /Potholes (Asphalt or Concrete) Pothole Ø=>300mm & D=>100mm; or Mounding / depressions >100mm | Apply a regulating / levelling course of bituminous materials to depressed or heaved areas of pavement <5m ² | 20 working days (temporary repair) then Refer to Capital Works Program | |
| Depression (Bluestone) Adjoining stones level diff >100mm; or Mounding or depressions >150 mm Missing pitchers Area 0.25m ² | Reset, ramping out vertical displacement or replace broken, sunk, heaving, loose or missing bluestone | 20 working days (temporary repair) then Refer to Capital Works Program | |
| Footpaths (within road reserves) | | High Pedestrian Volume | Low Pedestrian Volume |
| Trip Hazard Lip >30mm (High Pedestrian) Lip >30mm (Low Pedestrian) | Grind (concrete footpath), repair or replace to level vertical displacement - <=5 bays - > 5 bays | 10 working days Programmed works | 15 working days Programmed works |
| Potholes Pothole Ø=>200mm & D>50mm | Patch potholes <0.2m ² using bituminous and other appropriate materials to restore the surface to a smooth condition | 10 working days | 15 working days |
| Cracking All Cracks >20mm width | Seal and fill cracks and joints using liquid bituminous sealants | As per City Works crack sealing program | |
| Tree Root Damage (outside 0.8m square tree root base) Surface raised >50mm | Ramping out the displacement around tree roots using an asphalt fillet, concrete slurry or similar suitable material. | 10 working days | 15 working days |
| Damaged Vehicle Crossing Noticeable defects as to be potential hazards | Notify owner and request repair damage | Notify owner within 30 days | |
| Overhanging Vegetation (Council trees) Min Clearance: - 2.7m (above footpath) - 5.0m (above pavement). | Notify Council's Streetscape for follow-up action. Trim trees obstructing footpath, obscuring signs or visibility | Notify within 48 hours As per tree pruning program | |
| Overhanging Vegetation (Private trees) Min clearance of 2.7 metres above the footpath and laneways. | Notify Council's Local Law for follow-up action. | Notify within 48 hours | |
| Lips between Utilities Assets and Footpath Level difference > 30mm | Level out to make safe and notify responsible service authority | Notify within 48 hours | |
| Missing or Damaged Pit or Cover (Third Party Assets) | | Notify within 48 hours | |

| Defect And Intervention Level | Intervention Action ¹ | Maintenance Category /Response Time |
|---|--|---|
| | Notify responsible service authority | |
| Pedestrian Bridges | | |
| Deck and Parapet Uneven deck, loose or missing screws /nails, planks or boards, spalled posts and parapets | Paint, realign, repair or replace damaged sections. | 30 working days |
| Hazards and Emergency | | |
| Obstructions Road /footpath obstructions such as fallen materials from vehicles, dead animals, fallen trees, wet clay and other slippery materials. | Appropriate protection action and rectification | Initial assessment within 4 hours. Remediate within 24 hours. |
| Emergency Response All works arising from emergency incidents including flooding, fires, storms, traffic accidents to ensure the safety of the public and protection of the asset | Appropriate traffic control /management actions and implement public safety measures | Respond within 20 minutes and implement public safety measures within 4 hours. Reemediate within agreed timeline dependent on defect |

1. Intervention action includes any action to remediate, conduct repairs, erect warning signs or reduce or remove a risk.

Table 4 –Response Regime by Defects Type /Maintenance Category

4.5 Heritage Infrastructure

Heritage bluestone kerb and channel and laneways are recognised as being of local importance to the City of Yarra with historical, aesthetic and technical significance and they contribute to the significant heritage overlay precincts in the City of Yarra.

City of Yarra adopts a ‘conservation’ approach to all aspects of works with these heritage assets even though some of these heritage assets may not meet modern design, construction or maintenance standards and thus impacting on service delivery. Due to this constrained intervention action, e.g. asphalt patching on some of the defects may, at times, be only ‘temporary’ until permanent repair is carried out through programmed capital works.

Council’s Infrastructure Materials Policy seeks to comply with Council’s Heritage policy by encouraging the retention of original bluestone road or laneway materials. The objective is to conserve and repair the traditional street fabric of Yarra using historic materials, sympathetic to the character of the municipality while also meeting technical, access, safety and health requirements.

4.6 Street Trees

Trees are the most important and highly visible asset within Yarra’s parks, gardens and streets. Many of the City’s trees are culturally important and some have heritage significance. They not only improve the liveability of the City, but characterise the place and provide enjoyment for people.

Council has a policy to preserve street trees as far as possible and to manage their well-being so that they continue to contribute to the quality of the urban environment.

Maintenance of roads, footpaths, kerb and channels may at times, where practical and without major damage to the integrity of the tree, require tree root pruning. If this is considered necessary, the optimal timing of this work would generally occur during the winter months in order to preserve the health of the trees.

Where tree root pruning is not immediately possible thus affecting effective remedial works it is recognized that local defects may persist such as ponding around the tree root base, obstruction to the natural flow of water in the kerb, and uplifting of footpath or road pavement outside the intervention levels.

Where a risk to pedestrians has occurred due to displacement of a footpath by tree roots, the site will initially be made safe and immediately referred to the program for temporary footpath repairs. Temporary repairs must be undertaken in such a manner that the integrity of the root system is not

compromised whilst ensuring the risk to pedestrians is reduced. This may involve restoring the alignment and leveling out of the pathway surface with either replacement of pathway sections or ramping out the displacement using an asphalt fillet, concrete slurry or similar suitable material.

5 MANAGEMENT SYSTEM

5.1 Management System to Inspect, Repair and Maintain

The key feature of Council's 'management system' is to assist people through the use of technology and computer systems, in particular, helping officers to deliver service to the community within the statutory framework of the Act.

The management system by which the components referred to in the Road Management Plan will be undertaken are detailed in the following.

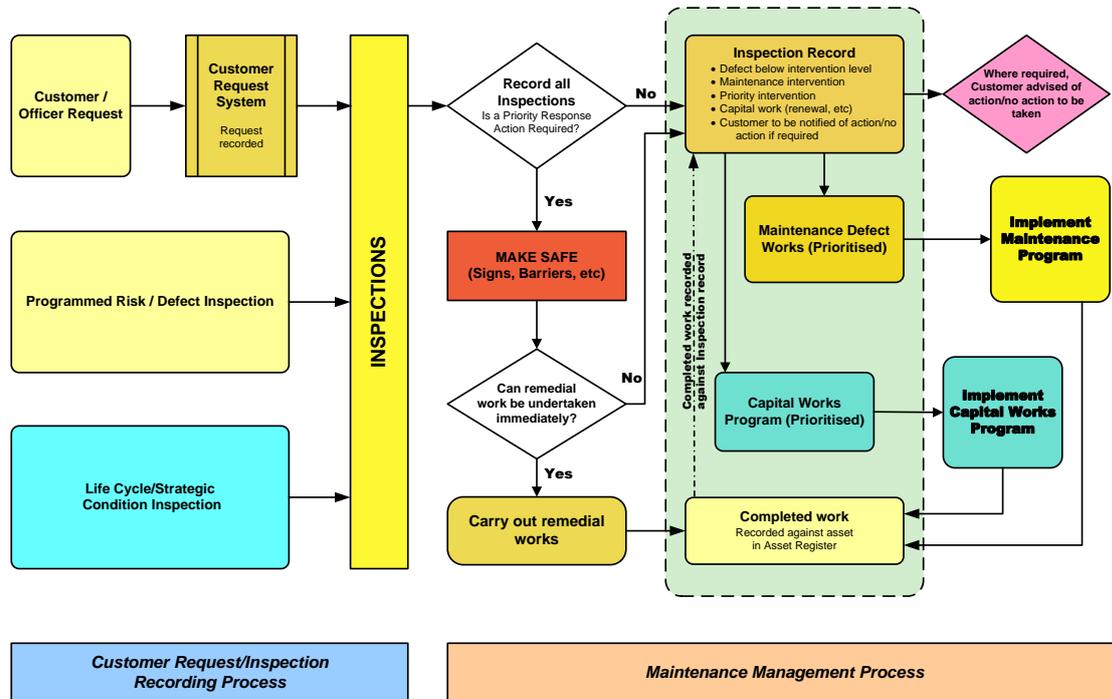


Figure 4 – Management System to Inspect, Repair and Maintain Roads

5.2 Road Reserve Inspection Program Audit System (RRIPA)

Council deploys an smartphone application with key functions to facilitate field data capture during the programmed inspections. The application enables field inspector to establish whether a defect manifestation is above the prescribed intervention level before defect data is logged. Defects information collected during field inspection are remotely transmitted to a server database which are then logged into Council's customer request management system to be further processed and programmed as either reactive or programmed maintenance depending on the risk assessment.

5.3 Customer Request Management System (CRM)

All requests and notifications received from both the public and requests generated during the programmed inspections are captured in Council's corporate customer request management system (CRM). Key functions of the CRM are record keeping and request tracking, including records of all maintenance work, inspections and other actions performed on public roads.

5.4 Asset Information Systems

The Municipal Asset Support System (MASS) is currently the primary asset database for all road assets and bridges. It provides the essential asset data to other computer systems such as Council's geographical information system. As an asset register with all engineering attributes pertaining to road assets, MASS also provides key functions in condition assessment and reporting, asset valuation and depreciation schedules for accounting purposes.

5.5 Maintenance Works Program

Works program are developed from both the reactive CRM requests and the proactive program works based on the required timelines to complete the works as specified in the relevant Service Level Agreement within City Works.

The works program provides a proactive approach to maintenance or other works required by assessing the existing condition to determine if it is below, meeting or above the required standard as specified. Works that are considered to be non-urgent and beyond the maintenance scope of works will be referred to Council's capital works program.

5.6 Risk Management and Maintenance Categories

With regard to risk management, the Council has developed a simple risk assessment framework that uses risk-based prioritised activities for identified defects, as reflected in the different inspection programmes, intervention levels and response times for defects rectification.

Generally, defects found within roads with on-road bike lanes and roads with high pedestrian volume traffic are considered to be of higher risks than defects found in other parts of the municipal road network. Defects in these 'high risk' areas are accorded more frequent inspections, stringent intervention levels and faster response times, as indicated in Table 3 and 4.

5.7 Emergency Responses and After Hour Service

Council has established a 24x7 hour response capability so that assistance can be quickly provided in the event of an emergency. After hours calls received are screened for public safety by a Council Officer.

Emergency means a situation which, due to the actual or imminent occurrence of an event, will –

- endanger or threaten the safety or health of any person,
- destroy or damage any property or infrastructure,
- endanger the environment.

Required stock of warning signs and barricades are maintained to make areas safe until the following working day. Backup resources are available to patrol staff if required. The details resulting from the afterhours calls are recorded in CRM and the Maintenance Management System for any follow up action.

5.8 Managing Works within Road Reserve

In general, Council is the Co-ordinating Road Authority for all the public roads in the municipality. VicRoads is the Co-ordinating Road Authority for freeways and arterial roads.

The Act requires that any person intending to perform works within a road reserve must obtain the consent of the Co-ordinating Road Authority unless they are exempted under the Road Management (Works and Infrastructure) Regulations 2015.

6 REVIEW OF ROAD MANAGEMENT PLAN

6.1 Performance Review

The performance of the RMP will be reviewed internally by City Works staff *annually* in relation to the specified duties and actions in the plan and in relation to contractor performance, maintenance schedule and resource availability. Where major discrepancies are found matters shall be referred to the appropriate officer in Council for rectification and actioning.

A report on the performance in regard to the RMP will be presented to the Audit Committee and the Council following the internal review.

Independent audits *may* be undertaken by Council's internal auditors or by external auditors such as Council's insurers as directed by Council's Audit Committee.

6.2 Review of Road Management Plan

If the adopted level of service, i.e. defect intervention level and/or rectification response time, is not achievable, the level of maintenance effort may need to be varied. The level of service, the anticipated quantity of works and Council's budget and resources would have to be reviewed and revision made to future version of the RMP.

A formal review, in accordance with sections s8(3) of the Road Management (General) Regulations 2016, will be conducted every four years generally in line with Council elections.

Any revision of the RMP would be subject to the consultation and approval processes as detailed in s54 of the Act.

Appendix 1 - Freeway and Declared Arterial Roads within Municipality

| Arterial Roads and Freeways | From – To |
|-----------------------------|--|
| Eastern Freeway | Gold St. to Yarra River |
| Alexandra Pde | Nicholson St to Gold St. |
| Punt Rd | Yarra River to Bridge Road |
| Bridge Road | Hoddle St to the Yarra River |
| Hoddle St | Bridge Road to Queens Pde |
| Brunswick St | Alexandra Pde to St Georges Rd |
| Burnley St | Barkly Ave to Victoria St |
| Chandler Highway | Heidelberg Rd to Yarra River |
| George St | Alexandra Pde to Queens Pde |
| Heidelberg Rd | Queens Pde to Darebin Creek |
| Johnston St | Nicholson St to Yarra River |
| Nicholson St | Victoria Pde to the Municipal boundary |
| Princes St | Nicholson St to Lygon St |
| Queens Pde. | Heidelberg Rd to Merri Creek |
| St Georges Rd | Brunswick St to Merri Creek |
| Swan St | Punt Rd to Yarra River. |
| Victoria Pde | Nicholson St to Hoddle St. |
| Victoria St | Hoddle St to the Yarra River |
| Church St | Yarra River to Victoria Street |
| Yarra Boulevard | Bridge Road to Loyola Gv |
| Barkly Av | Burnley St to Gibdon St |
| Twickenham Cr | Gibdon St to Loyola Gv |
| Loyola Gv | Twickenham Cr to Madden Gv |
| Madden Gv | Loyola Gv to Swan St |

Appendix 2 – Bridges Owned by Others

The following bridge structures are not maintained by the City of Yarra.

- Church St Bridge over Yarra River
- Johnston St Bridge over Yarra River
- Johnston St Footbridge at Clarke St
- St Georges Road Bridge over Merri Creek
- Hoddle Street Footbridge at Vere St
- Rushall Cres Footbridge over Merri Creek
- Victoria St Bridge over Yarra River
- Heidelberg Road Bridge over Merri Creek
- Queens Pde Bridge over Merri Creek
- Heidelberg Road Bridge over rail line

City of Yarra is responsible for the maintenance of the road pavement and/or footpath for the following bridges over the rail line:

- Mary St Bridge over rail line
- Swan St Bridge over rail line
- Burnley St Bridge over rail line
- Coppin St Bridge over rail line
- Church St Bridge over rail line
- Freeman St Bridge over rail line

Appendix 3 – Roads with Major On-road Bike lanes

Abbotsford

Bath Street (Turner St to Trenerry Cr)
Church Street (Victoria St to Murray St)
Gipps Street (Yarra River to Wellington St)
Langridge Street (Smith St to Nicholson St)
Murray Street (Albert St to Church St)
Nicholson Street (Johnston St to Victoria St)
Rich Street (Johnston St to Turner St)
Trenerry Crescent (Gray St to Johnston St)
Turner Street (Rich St to Bath St)
Victoria Crescent (Gipps St to Albert St)

Clifton Hill

Dwyer Street (Wright St to Heidelberg Rd)
Fenwick Street (Walker St to Heidelberg Rd)
Gray Street (Roseneath St to Alexandra Pde)
Ramsden Street (Hoddle St to Capital City Trail)
Roseneath Street (Hoddle St to Capital City Trail)
Wright Street (Fenwick St to Dwyer St)
Yambla Street (Wright St to Ramsden St)

Fitzroy

Brunswick Street (Alexandra Pde to Victoria Pde)
Gertrude Street (Smith St to Nicholson St)
Moor Street (Nicholson St to Smith St)
Napier Street (Freeman St to Victoria Pde)
Smith Street (Alexandra Pde to Queens Pde)
Smith Street (Victoria Pde to Gertrude St)

North Carlton

Canning Street (Park St to Princes St)
Newry Street (Lygon St to Nicholson St)
Rathdowne Street (Park St to Princes St)
Richardson Street (Lygon St to Nicholson St)
Scotchmer Street (Nicholson St to St Georges Rd)

North Fitzroy

Falconer Street (Alfred Crescent to Rushall Cr)

Michael Street (St Georges Rd to Queens Pde)
Rushall Crescent (St Georges Rd to Queens Pde)

Princes Hill

Park Street (Bowen Cr to Nicholson St)
Pigdon Street (Bowen Cr to Nicholson St)

Richmond

Coppin Street (Highett St to Swan St)
Elizabeth Street (Hoddle St to Church St)
Freeman Street (Muir St to Hoddle St)
Highett Street (Burnley St to Muir St)
Lennox Street (Victoria St to Swan St)
Muir Street (Freeman St to Highett St)

Yarra

Wellington Street (Queens Pde to Victoria Pde)

Appendix 4 – Shared Zones

Abbotsford

St Helier St

Collingwood

Robert Street

Cremorne

Walnut Street

Bryon Street

Fitzroy

Young Street (Between Duke Street and Victoria Parade)

Richmond

Lennox Street (Between Victoria Street and Butler Street)

Little Buckingham Street

Gibson Street (laneway to 511 Church Street)

Appendix 5 - High Pedestrian Volume / High Exposure Streets

| Precinct | Street | From | To | Suburb/s |
|----------|---------------|---------------|-----------------|---------------|
| 1 | Richardson St | Garton St | Lygon St | Princes Hill |
| 1 | Arnold St | McPherson St | Pigdon St | Princes Hill |
| 1 | Wilson St | Solly Ave | Pigdon St | Princes Hill |
| 1 | Garton St | Paterson St | McPherson St | Princes Hill |
| 2 | Rathdowne St | Princes St | Richardson St | Carlton North |
| 3 | Nicholson St | Richardson St | Park St | Fitzroy North |
| 3 | St Georges Rd | Watkins St | Scotchmer St | Fitzroy North |
| 4 | Queens Pde | Wellington St | Hoddle St North | Fitzroy North |
| 4 | St Georges Rd | Best St | Alfred Cr | Fitzroy North |
| 4 | Best St | St Georges Rd | Alfred Cr | Fitzroy North |
| 5 | Nil | | | |
| 6 | Spensley St | O'Dwyer St | The Esplanade | Clifton Hill |
| 7 | Nil | | | |
| 8 | Yarraberg St | Lucerne Cres | Heidelberg Rd | Alphington |
| 8 | Lucerne Cres | Heidelberg Rd | Yarralea St | Alphington |
| 9 | Brunswick St | Alexandra Pde | Johnston St | Fitzroy |
| 9 | Smith St | Alexandra Pde | Johnston St | Fitzroy |
| 10 | Nil | | | |
| 11 | Victoria Pde | Nicholson | Brunswick | Fitzroy |
| 11 | Gertrude St | Nicholson | Smith St | Fitzroy |
| 11 | Smith St | Victoria Pde | Johnston St | Fitzroy |
| 11 | Brunswick St | Victoria Pde | Johnston St | Fitzroy |
| 11 | Fitzroy St | Victoria Pde | Gertrude St | Fitzroy |
| 11 | Nicholson St | Victoria Pde | Hanover St | Fitzroy |
| 11 | Alma St | Entire length | | Fitzroy |
| 11 | Regent St | Entire length | | Fitzroy |
| 11 | Princes St | Entire length | | Fitzroy |
| 12 | Otter St | Smith St | Wellington St | Collingwood |
| 12 | Stanley St | Smith St | Wellington St | Collingwood |
| 13 | Stanton St | Hoddle St | Park St | Abbotsford |
| 13 | Clarke St | Entire length | | Abbotsford |
| 13 | St Heliers St | Entire length | | Abbotsford |
| 14 | Victoria St | Hoddle St | Church St | Richmond |
| 14 | Bridge Rd | Hoddle St | Church St | Richmond |
| 14 | Lennox St | Bridge Rd | Highett St | Richmond |
| 14 | Erin St | Lennox St | Normanby Pl | Richmond |
| 15 | Church St | Highett | Bridge Rd | Richmond |
| 15 | Gleadell St | Bridge Rd | Highett | Richmond |
| 16 | Victoria St | Burnley | Yarra River | Richmond |
| 17 | Church St | Bridge Rd | Swan St | Richmond |
| 17 | Swan St | Punt Rd | Church St | Richmond |
| 18 | Bridge Rd | Church St | Burnley | Richmond |
| 18 | Swan | Church St | Burnley | Richmond |
| 19 | Nil | | | |

| | | | | |
|----|-----------|------|-------------|----------|
| 20 | Church St | Swan | Yarra River | Cremorne |
| 21 | Nil | | | |