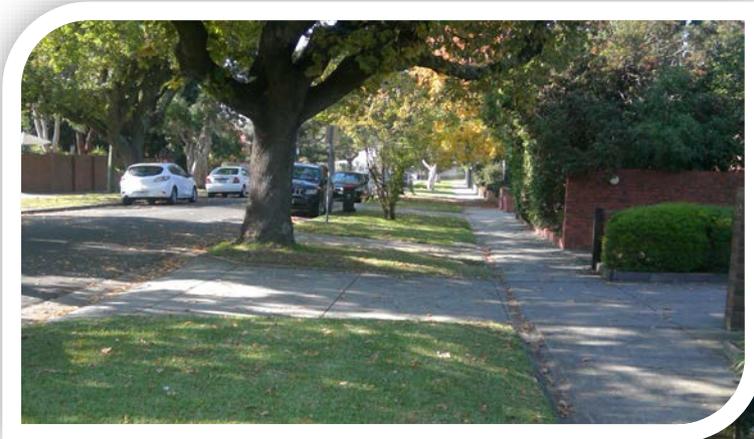


ROAD MANAGEMENT PLAN 2018

FINAL



Plan Adoption Record

Version	Comment	Date Adopted
Draft	Draft Plan accepted by Council for public consultation	31 August 2004
Version 1	Final Plan adopted by Council	14 December 2004
Version 2	Proposed amendments resulting from 2005 audit	6 June 2006
Version 3	Proposed amendments resulting from 2009 review	27 October 2009
Version 4	Proposed amendments resulting from 2013 review	29 October 2013
Version 5	Amended and adopted by Council following the 2017 review	30 May 2017
Version 5.1	Amended to correct omissions	25 July 2017
Version 5.2	Amended and adopted by Council	

Approval	Name
CEO	Andi Diamond

The latest approved version of this document and the Monash Register of Public Roads may be viewed at the City of Monash service centres during normal business hours. The Road Management Plan may also be viewed on Council's website.

City of Monash Civic Centre 293 Springvale Road Glen Waverley	City of Monash Oakleigh Service Centre 3 Atherton Road Oakleigh	City of Monash web site www.monash.vic.gov.au
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1 Executive Summary

The City of Monash is responsible for the management of the majority of the road network within the municipal boundaries. Council is committed to the provision of a safe and efficient road network for use by all members of the public. Council is also committed to good road asset management practices that deliver optimal road services with due regard to available financial resources, policies and priorities. The City of Monash is the road authority for approximately 734 kilometres of local roads and their associated pathways and road related assets.

This Road Management Plan has been prepared by the City of Monash in accordance with the Road Management Act 2004 to document the principles, methods and systems used by the City of Monash in managing the local road network. The Road Management Plan contains the following:

- A description of the types of road infrastructure managed by Council, the shared responsibilities with other road authorities and the infrastructure not included in this plan.
- A description of our standards for inspection, maintenance and repair

The Road Management Plan has two major components:

- Road Asset Management System – A description of the systems used by Council to manage all aspects of the road system;
- Schedule of Maintenance Standards – A statement of the levels of service that the City of Monash provides in managing the local road network.

The Register of Public Roads is a separate document.

The Plan seeks to balance the competing influences that impact on the level of service adopted by Council. These include economic, technical, social, safety and environmental influences. In managing the local road system, Council seeks to establish a reasonable level of service to meet the expectations of road users and the local community.

A key driver to the preparation of the Plan is to demonstrate that Council is also managing the risks associated with the use of the various assets in the road reserve. The management of risk drives the allocation of resources within the systems used to provide the reasonable level of service.

This Plan is a dynamic document that will be reviewed regularly and checked against the current needs and expectations of the community. Council will review the performance of the Plan on an annual basis through the Budget preparation process.

2 Introduction

2.1 Background to Monash

The City of Monash was formed in December 1994 through the amalgamation of part of the City of Oakleigh and the whole of the City of Waverley. Monash is a culturally diverse community with an estimated population of 192,850 in 2016 and a land area of 81.45 km².

Council is the coordinating road authority for 734 km of roads, 16 km of laneways and 1,550 km of pathways. VicRoads is the coordinating road authority for 182 km of arterial roads and freeways within the municipality. The roads have been constructed over a period dating from early settlement in the district but with the bulk of the local roads being constructed in a 30-year period between the 1960s and 1980s. The replacement value of Council's road infrastructure was \$710m in 2017.

2.2 Purpose of the Road Management Plan

The principal purpose of road management is to ensure that a safe and efficient integrated transport network is provided for the movement of persons and goods and that road reserves are available for other appropriate uses.

In accordance with the Road Management Act, this Road Management Plan (RMP):

1. Defines, in a Public Road Register, the roads Council considers are required for public use in an integrated network and will maintain to the defined standards;
2. Establishes a management system for the road management functions assigned to City of Monash as the Road Authority for local roads;
3. Bases the system on policy and operational objectives within the resources available, and;
4. Sets relevant standards for carrying out inspection, repair and maintenance functions for the road infrastructure.

The Register of Public Roads for the City of Monash is available separately to this document and is discussed further below.

2.3 Key Stakeholders

The key stakeholders in this Plan include:

- Residents and businesses abutting and using the road network;
- Users of motor vehicles;
- Pedestrians;
- Cyclists and other light vehicle users;
- VicRoads as the State road authority;
- Emergency services (police, fire, ambulance, SES); and

- Other infrastructure managers with assets in the road reserve.

2.4 Terms and Definitions

Terms used in this RMP have the same meaning as defined in the Road Management Act. Additional terms used and terms with different meanings in other Acts include:

Term	Definition
Road	The general term for the land between property boundaries used for vehicle or pedestrian movement and includes a street, right of way, cul-de-sac, pathway, ford, kerbing, channels.
Public Road	As defined in the Road Management Act is a road for which a road authority has made a decision that the road is reasonably required for general public use and it has been included in the Road Register of that road authority.
Municipal Road	Means any road that is not a State road and is referred to in the Local Government Act. This includes rights of way under common law, access roads in reserves as well as Public Roads.
Arterial Roads	Are roads which are managed by VicRoads to provide routes for the movement of people and goods across the city, Council has some responsibilities as laid out in the Code of Practice for Operational Responsibility for Public Roads.
Asset Management Information System (AMIS)	AMIS is the software system, procedures and data collection tools used by Monash to identify and relate assets, manage and record inspections, defects, repairs and maintenance of assets including roads and road related assets. AMIS is based on the 'Confirm' Asset Management System.
Condition	The calculated physical state of an asset used to facilitate the forward planning of its overall lifecycle and renewal activities and their budgets.
Condition Inspection	An inspection to determine the current general overall condition of an asset to facilitate the forward planning of its overall lifecycle and renewal activities and their budgets. It is not intended to identify individual defects against stated intervention standards as this is done via Proactive & Reactive Inspections.
Days	Means working days, which excludes weekends and public holidays.
Defect	Means a localised failure or damage to an asset or component, for example a cracked concrete pathway bay or a pothole in a road surface.

Term	Definition
Geographic Information System (GIS)	GIS is the system used to store, manage, display and analyse data spatially or geographically.
Level of Service	The reasonable acceptable parameters that reflect the technical, social, economic and environmental outcomes that have been established for an asset.
Maintenance	The activities necessary for retaining an asset at a condition at which it meets its acceptable service outcomes.
Proactive Inspection	An inspection to identify defects that exceed the stated intervention level performed as part of scheduled inspection program.
Reactive Inspection	An unscheduled inspection performed in response to a customer request, a request from an infrastructure manager or in response to an emergency.
Renewal	The works required to replace an existing asset with an asset of equivalent capacity or performance. For example, reconstruction of a road segment.
Repair	Action to restore a defect that is beyond an intervention level to return it to a level below the stated intervention level.
Risk Management	The coordinated activities used to identify, assess and mitigate risks.
Roadside	Means any land that is within the boundaries of a road which is not a roadway or pathway and is not included in this Road Management Plan. For example, any nature strip, bushland or landscaped area. Roadside is excluded from the Road Management Plan by s107 of the Road Management Act.
Road Related Infrastructure	Means infrastructure associated with the road function including pedestrian safety fencing, safety barriers and retaining walls.

Table 1 - Terms & Definitions

3 Legislative Context

3.1 Acts and Regulations

The Monash Road Management Plan has been prepared in accordance with the following Victorian Acts and Regulations:

- Road Management Act, 2004.
- Local Government Act, 1989.

- Road Management (General) Regulations, 2016.
- Road Management (Works and Infrastructure) Regulations, 2015.

In addition, the following related Victorian Acts and Regulations inform the levels of service established in this plan, the risk assessment evaluation and the internal procedures used in the management system:

- Road Safety Act, 1986
- Wrongs Act, 1958

With due consideration of the following Codes of Practice that have been established under the Road Management Act:

- Code of Practice for Operational Responsibility for Public Roads, 2017.
- Code of Practice for Road Management Plans, 2004.
- Code of Practice for Management of Infrastructure in Road Reserves, 2016.

3.2 Council Responsibilities

Council is the coordinating road authority for all municipal roads in the municipality and has a responsibility under the Road Management Act to inspect, maintain and repair the roads specified in the Monash Register of Public Roads. Council performs all the road management functions for these roads and has powers and responsibilities to manage infrastructure and works within the road reserve and to establish standards for construction, maintenance and repair of public roads.

Council is also the responsible road authority for parts of the arterial road network in accordance with the Road Management Act and the Codes of Practice.

3.3 Responsibilities of Road Users

All road users have general responsibilities and obligations. Section 17A of the Road Safety Act 1986 defines these obligations which are summarised as:

- A person who drives a motor vehicle on a highway must drive in a safe manner having regard to all the relevant factors (road conditions, visibility, and traffic).
- A road user other than a person driving a motor vehicle must use a highway in a safe manner having regard to all the factors
- A road user must take reasonable care to avoid any conduct that may endanger the safety or welfare of other road users, infrastructure and the environment.

3.4 Works and Infrastructure Managers

Any person who wants to undertake works in the road reserve must obtain consent from the relevant road authority. For works on local roads a permit must be obtained from Council. For works beside arterial roads, a permit from VicRoads is also required.

Infrastructure Managers with assets within the road are exempt from obtaining consent under emergency conditions as specified in the Road Management (Works and Infrastructure) Regulations, otherwise consent is required from Council.

4 Road Register and Hierarchies

4.1 Road Hierarchy

Roads within the City of Monash are given a classification based on a hierarchy of traffic volume, traffic type and importance. The public road hierarchy as highlighted, is used in the development of the levels of service.

Road Hierarchy	Responsibility	Function
Freeway	VicRoads	Primary arterial, high speed, high volume, controlled access, and principal route for the movement of goods and people from one region to the other.
Arterial	VicRoads	Principal route for the movement of goods and people from one suburb or district to another.
Category 1	Monash	High usage local road providing a route between local roads and the arterial network. Roads within major retail precincts that are subject to high pedestrian traffic
Category 2	Monash	All other local public roads (not category 1 or 3), low speed environment. Provide access to properties. Service roads where Council is the responsible road authority.
Category 3	Monash	Very low usage, low speed roads and lanes. Provides limited or secondary vehicle access to properties
Rights of Way	Monash	Not public roads. Municipal rights of way or lanes not required for public use. Unconstructed or partially constructed. Not required for primary access to properties.
Private Roads	Land owner	Not public roads. Named roads on private land or common property. Access roads in reserves, including

Road Hierarchy	Responsibility	Function
		Council land, or to off-street car parks

Table 2 - Road Hierarchy

4.2 Register of Public Roads

The City of Monash Register of Public Roads is separate to this document and is available as a map based display of the road system within the municipality implemented using the AMIS and the corporate GIS systems. The Register is prepared in accordance with the requirements of Section 19 and Schedule 1 of the Act and includes road authority, road status, classification and physical boundaries. High and Medium sensitivity pathway areas are also shown as well as the nominated Shared Paths that are referenced in this plan. The City of Monash Road Register is available as a tabulated list or map for viewing at Council’s customer service centres during normal business hours or via Council’s website.



Figure 1 - Sample display of the City of Monash Public Road Register map.

4.3 Boundary Roads and Arrangements

The City of Monash shares a number of boundaries with adjacent municipalities, most of which are arterial roads or natural features. Boundary road and other special arrangements with other authorities have been implemented as indicated below:

Arrangement	Authority	Summary
Boundary road	City of Glen Eira	Shared maintenance of Poath Road, Hughesdale from Dandenong Road to North Road.



Boundary road	City of Whitehorse	Shared maintenance of Highbury Road, Glen Waverley east of Springvale Road to end.
Boundary road	City of Greater Dandenong	Maintenance agreement for Police Road, Mulgrave east of Eastlink to end.
Rail Safety Interface Agreement	VicTrack / Metro Trains Melbourne	<ul style="list-style-type: none"> • Hanover Street, Oakleigh, road over rail bridge. • Lawrence Road, Mt Waverley, road over rail bridge • Alvie Road, Mt Waverley, road under rail bridge • Power Avenue, Chadstone, road under rail bridge • Poath Road, Hughesdale, road under rail bridge
Operational Responsibility	VicRoads	<ul style="list-style-type: none"> • Atkinson Street Chadstone, road over freeway bridge • Stanley Avenue, Mt Waverley road over freeway bridge.

Table 3 - Boundary Road and Interface Agreements

4.4 Pathway Hierarchy

The City of Monash has defined four pathway classifications as shown in the table below. The path classifications are defined in the asset register for paths in the Asset Management Information System.

Pathway	Description
High Sensitivity Footpath	Major shopping precincts and other areas of high pedestrian usage
Medium Sensitivity Footpath	Minor shopping centres and other areas of medium pedestrian activity
Low Sensitivity Footpath	All other paths in the road reserve, not including paths in reserves or Council land.
Shared Path	Designated, constructed shared paths. Specific defined routes.

Table 4 - Pathway Hierarchy

5 Road Infrastructure

5.1 Infrastructure covered by this plan

Within a local road reserve, Council is responsible for the following road related infrastructure:



- The constructed road including base, sub-base, sub-surface drainage and wearing surface;
- Traffic management devices, pavement marking, regulatory traffic signs, safety barriers and on-road special devices such as pedestrian crossings and cycle lanes;
- Surface drainage such as kerbs, channels, pits, swales and table drains;
- Constructed footpaths and shared pathways;
- Bridges, major culverts, specified retaining walls, noise and visual barriers;
- Roadside infrastructure such as safety barriers, pedestrian fencing and some bus shelters;
- Council owned streetlights.

5.2 Infrastructure Not Included in this Plan

Within the road reserve, certain infrastructure is maintained by other Infrastructure Managers, for example:

- Off road car parks;
- Pathways in parks and reserves other than designated shared paths;
- Electricity poles, streetlights, pits and other equipment (United Energy);
- Gas supply lines and equipment (Multinet);
- Water supply pipes, sewerage network, access pits, hydrants and other equipment (Yarra Valley Water, Melbourne Water and South East Water);
- Telecommunication underground lines, pits, poles and network equipment (Telstra, Optus, NBN etc.);
- Public transport assets and equipment owned by other transport authorities; and
- Council owned street furniture, artworks or special purpose lighting that may be installed in the road reserve.

5.3 Arterial Roads

VicRoads is the coordinating road authority for all arterial roads in the municipality. The Code of Practice for Operational Responsibility of roads defines the demarcation of responsibility for arterial road reserves as described below:

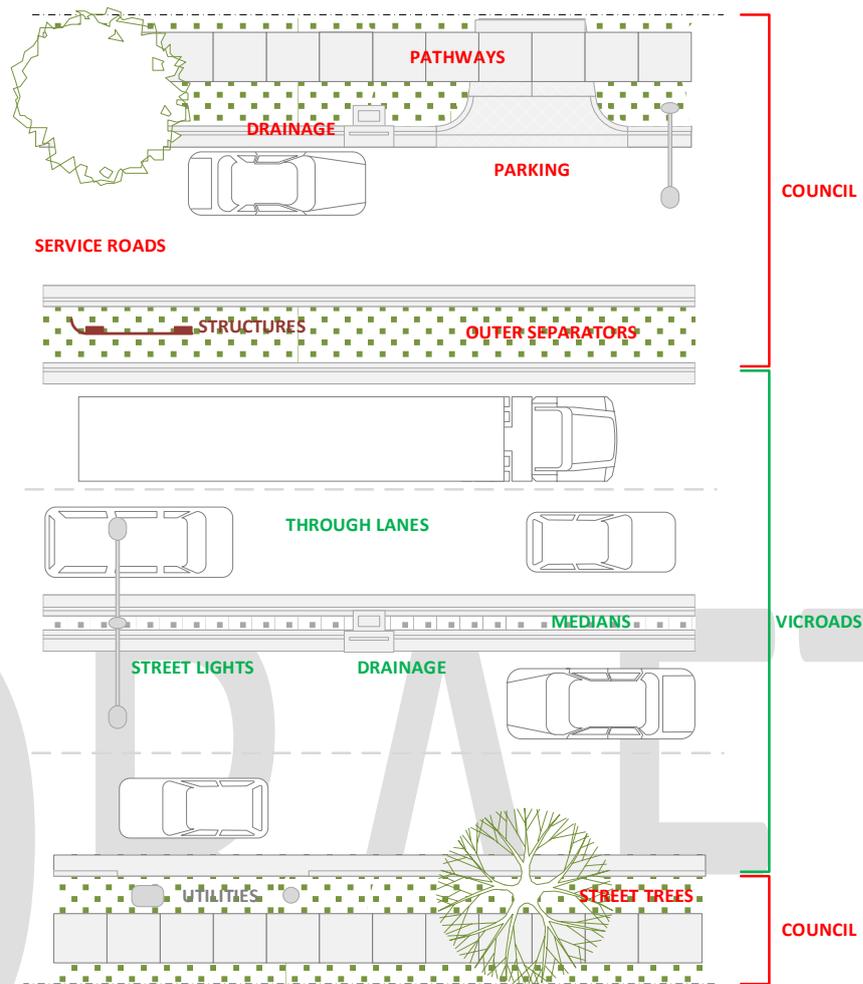


Figure 2 - Typical division of responsibility for Arterial Roads

- Service roads from the back of kerb to the property line – Monash acts as the responsible road authority and manages all road related assets.
- Pathways on arterial road reserves, from the back of kerb to the property line.
- The through lanes, centre medians and related road assets are managed by VicRoads;
- Structures such as retaining walls, crash barriers, pedestrian ramps or platforms associated with bus stops are shared by agreement. Assets managed by Monash are included in the AMIS and managed within the RMP;
- Public transport assets are managed in accordance with the code of practice.
- Stormwater drainage in accordance with the network owner.

5.4 Adjacent Properties

5.4.1 Vehicle Crossovers

Property owners are responsible for the vehicle crossing from their property to the road as shown on the diagram below except for the pathway section which is maintained by Council. If there is no constructed path then the property owner is responsible for the

whole of the crossover. This includes any culvert required to cross on-road drainage or the tray section that replaces the kerb.

A permit from Council is required to site and construct or reconstruct a vehicle crossover which must be constructed to a standard Council design. For properties beside arterial roads, a permit from VicRoads to undertake the works is also required.

The City of Monash Local Law No. 3 requires that the property owner and occupier maintain and keep the vehicle crossing in good condition. Council may direct the repair of or recover costs for Council infrastructure damaged by an owner or occupier.

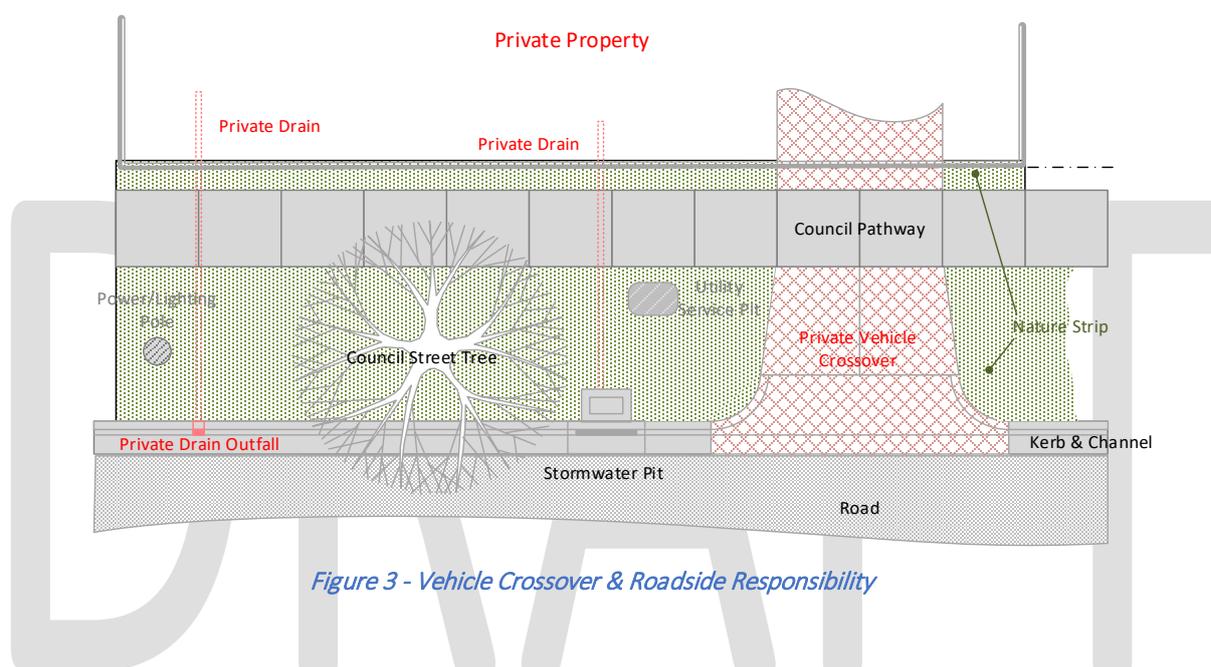


Figure 3 - Vehicle Crossover & Roadside Responsibility

5.4.2 Roadside / Nature strip

The area between the property boundary and the back of kerb provides space for pathways, street trees, fire hydrants and underground utilities. It is important to note Council is not responsible for maintaining all of this area or infrastructure. For example section 107 of the *Road Management Act* does not require Council to inspect maintain or repair the nature strip. Property owners are expected to maintain the nature strip, including the strip between the pathway and fence, and are able to use plantings other than grass within permit guidelines. Property owners must maintain the required clearance over pathways of overhanging branches from trees on their property.

The City of Monash Local Law 3 requires the occupants to keep the pathway clear of vegetation including overhanging branches of trees on the property. Council maintains street trees including the management of overhanging branches. Local Law 3 also requires residents to keep the nature strip grass to a reasonable level and specifies a permit system to carry out works in the road.

5.4.3 Private Stormwater Drainage

The property owner is responsible for the section of private drainage from their property to either a pit in the roadside, direct connection into Council's drain or an outlet on the kerb.

5.4.4 Unconstructed Rights of Way

Council will not maintain unconstructed rights of way to the same standards described in this Plan. Council may undertake grass cutting or weed management on a cyclic preventative maintenance program. All other maintenance will only be undertaken on request.

6 Levels of Service

The levels of service identify the following activities:

- Inspection of Assets
- Intervention Standards
- Management Controls and Response Times

6.1 Policies, Plans and Procedures

In establishing the Levels of Service set out in this RMP, Council has given regard to the objectives and outcomes established in the Council Plan, the Strategic Resource Plan, the road infrastructure asset management plans and applicable Council policies and procedures.

6.2 Levels of Service Review and Update

The levels of service in this plan are periodically reviewed in conjunction with the RMP general review and community consultation. The performance of the levels of service are evaluated by:

- Outcomes of the Community Satisfaction Surveys;
- Management of risk to road users;
- Benchmarking against similar councils;
- Long term road infrastructure condition trends; and
- Available resources both physical and financial.

6.3 Risk Assessment

The standards of construction and maintenance, as outlined in this Plan, have been determined on the basis of a risk assessment undertaken generally in accordance with the principles of the International Standard ISO31000 - 2009. This standard is reflected in the City of Monash's Risk and Opportunity Management Framework.



The standards for intervention for a defect are based on the assessment of risks and consequences created by the defect. The intervention level is set based on this risk assessment. If a defect is found to be beyond the intervention level, officers will determine the level of works required to remediate the risk which may include:

- An immediate long-lasting repair using one or more techniques and material;
- A short lasting repair to be followed by more extensive maintenance or renewal scheduled in accordance with the maintenance or capital works programs; or
- Exclusion of users from around the defect followed by more extensive maintenance or reconstruction scheduled in accordance with the maintenance or capital works programs.

6.4 Exceptional Circumstances

Council will make every effort to meet its commitments under its Road Management Plan. However, there may be situations or circumstances that affect Council's business activities to the extent that it cannot deliver on the service levels of this Plan. These include but are not limited to: natural disasters, such as fires, floods, or storms, a prolonged labour or resource shortage, or due to a need to commit or redeploy Council staff and/or equipment elsewhere.

In some circumstances, the Chief Executive Officer will authorise the temporary suspension of some or all inspection, response or maintenance standards for a period of time. Residents will be advised of how work will be done and prioritised and the period for which it is likely to be affected through Council's website, VicRoads website if required, social media and local media. The Chief Executive Officer will ensure the suspension of standards is minimised in time and scope.

7 Standards

7.1 Inspection Standards

The following table describes the types of inspections that are carried out on road related infrastructure:

Inspection Type	Description	Frequency
Proactive Inspection	Programmed inspection of an asset using documented tools, techniques and procedures to identify defects beyond intervention parameters.	Routine as determined by the asset hierarchy. See Schedule 2 – Proactive Inspection Frequencies
Reactive Inspection	An inspection to investigate a reported defect	Completed within the standards established in Schedule 3 – Standards of Maintenance
Condition Inspection	Programmed inspection of the whole of asset using documented tools, techniques and procedures to establish the overall condition rating of an asset.	Once every four years.

Table 5 - Inspection Types & Standards

If in the course of meeting its obligations under this Plan, Council becomes aware that any infrastructure in the road reserve for which an external infrastructure manager is responsible:

- Is not in the location shown in the relevant records; or
- Appears to be in an unsafe condition; or
- Appears to be in need of repair or maintenance;

then Council will convey that information to the relevant service provider of works and infrastructure or may take action to reduce the hazard.

7.2 Construction Standards, New Works, Upgrading, Rehabilitation

The standards for construction of new local roads and pathways, and for the expansion, upgrading, renewal and refurbishment of existing local roads and pathways will be in accordance with the Civil Engineering Standard Drawings and specifications adopted by Council from time to time.

Standards for construction are generally in accordance with current VicRoads specifications appropriately defined for the City of Monash.

The condition rating of road assets is used to inform the priority of capital works to renew, rehabilitate or upgrade these assets.

7.3 Repair and Maintenance Standards

The standards of repair and maintenance applicable to the road infrastructure subject to this RMP are detailed in Schedule 3 and encompass:

- a) The schedule of inspections to be undertaken at specified intervals;
- b) The circumstances under which intervention action is to be taken with respect to repair or maintenance needs for defects reported or found on inspection; and
- c) Provision, as far as practicable, for the unpredictable, i.e. emergencies, natural disasters.

Council officers often have a number of optional methods and materials to remedy defects and the method chosen is determined through the inspection process.

7.4 Compliance to Inspection and Maintenance Standards

Council will endeavour to meet the nominated inspection and response timeframes but it recognises that from time to time other matters may affect Council's ability to meet them precisely and a 10% margin is allowable.

The Road Management Act says that a duty to inspect, maintain and repair a road asset does not impose a duty to upgrade or maintain to a higher standard than to which the road asset is constructed.

8 Financial Resources

The commitments and obligations specified in the RMP have been used to match the allocation of financial resources. Components of the Long Term Financial Plan relating to the management of roads are directly derived from the management systems implemented at Monash.

8.1 Operational and Capital Works Budgets

Operational budget allocations, staff and physical resources are provided to meet the requirements of the proactive inspection programs and scheduled maintenance activities specified by the levels of service in the RMP. Based on forecast defect rates, resources are provided in the Operational Budget for reactive inspections and repair activities.

Capital Works Budget allocations to road infrastructure is based on the renewal and upgrade requirements determined by asset life modelling in the management system. Individual asset renewal or upgrade projects are developed and prioritised directly from the condition inspection results and are scheduled within the capacity of the Long Term Financial Plan.

Long term trends in asset condition survey results, defect rates or customer satisfaction surveys will influence financial resource allocation priorities from year to year. The current financial resource allocations are considered reasonable having regard to the overall service delivery priorities.

8.2 External Financial Sources

The budgets for road infrastructure is principally sourced from Council but may also be funded from other sources such as:

- Developer contributions through the planning approval process;
- Builder and owner contributions or penalties or full cost recovery from asset protection permits;
- Special Rates and Charges Schemes in accordance with the Local Government Act; and
- State and Federal Government Grants.

9 Management System

In carrying out its responsibilities under the RMP, Council uses a number of related systems to record, process, issue and track the various activities being undertaken.

9.1 Systems

Asset Management Information System (AMIS)

AMIS provides:

- Asset registers for all roads and road related infrastructure including relationships between locations, geospatial location, attributes;
- Inspection schedules and logs of all inspections performed including proactive, reactive and condition schedules;
- Recording of defects found to exceed intervention levels;
- Works management to record defect repair, maintenance or renewal tasks; and
- In conjunction with modelling tools such as the Pavement Management System (PMS), utilise condition data and budget allocations to develop optimum programs for maintenance and renewal.

Accounting Financial System

The Financial System provides budget management, asset financial registers and procurement control.

Performance Management

To manage quarterly and annual reporting of Key Performance Indicators against business targets including road management level of service indicators.

Customer Services Management System

The customer request module of the Pathway Property Management System is used to record and manage requests for service and notification of defects from the community. This system is directly integrated with AMIS.

9.2 General Process

Figure 4 describes the general management system that has been implemented for the RMP.

Defects caused by use or damage are identified by Asset Inspectors performing the specified proactive inspection schedule for that asset or component. The inspection task incorporates a visual inspection and measurement based on the common failure modes of that asset class. For example, vertical displacement between two pavers.

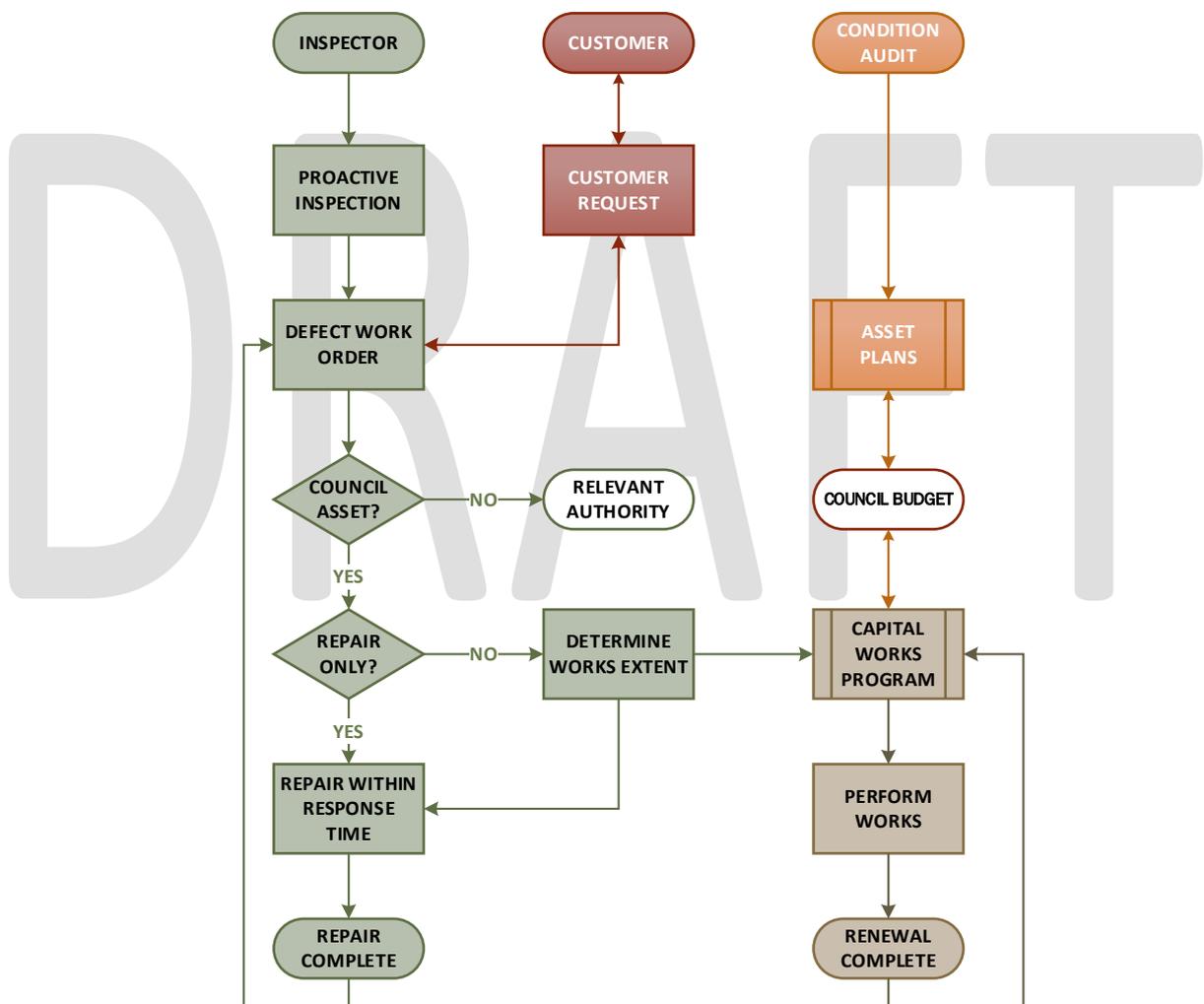


Figure 4 - General View of the RMP Management System

Alternatively, defects may be identified by a customer and reported through the customer request system. Customer reported defects will cause a Reactive Inspection task to be initiated. The Customer is notified when repair action is taken and if follow up major works are required or planned.

In both cases, if the reported defect causes a works order to be created it is recorded in AMIS and allocated to an Infrastructure Maintenance Officer who inspects the defect and determines a repair method within the response time. In many cases a repair is made immediately.

If the defect requires larger scale work to maintain or repair, then the Infrastructure Maintenance Officer will either make an interim repair or supply warning signs to mitigate the hazard. A work request will be initiated to undertake the larger scale maintenance works.

The general condition survey information is used to develop medium to longer term maintenance and renewal programs which are used in the development of the Long Term Financial Plan. Typically the condition survey looks at signs of wear, general deterioration and other minor defects that are below the intervention level set for the proactive inspections to ensure maintenance is targeted on a needs basis. The maintenance and renewal projects are form part of the capital works program adopted by Council.

10 Audit and Review

The RMP will be reviewed following Council elections in accordance with the Road Management (General) Regulations 2016, having regard to:

- Asset performance following delivery of maintenance programs;
- The available financial resources of Council;
- The level of achievement of asset management strategies against the expected benefits to road users, stakeholders and the community; and
- The consideration of any external factors that are likely to influence the contents of this Plan.

Regular internal assessment of performance to standards will be conducted to ensure compliance to the RMP including:

- Ensure that proactive and reactive inspections are carried out in accordance with the RMP levels of service;
- New or changed risks are appropriately assessed;
- Condition assessments are recorded ;and
- The best value maintenance and renewal techniques and processes are used where possible.

11 Summary of Amendments

The amendments between the 2013 Plan and this Plan are summarised in the attached Schedule 4.

12 Schedules

Schedule 1 – Monash Road Network



Table 6 – Schedule 1 – Monash Road Network



Schedule 2 – Proactive Asset Inspection Frequency

In accordance with the inspection standards, Council proactively inspects roads, pathways and road related assets for which it is responsible on a cyclic basis to identify defects which exceed an intervention level.

Asset Type	Asset Hierarchy	Proactive Inspection Frequency
Road	Category 1	Once in a 12 month period
	Category 2	Once in a 24 month period
	Category 3	Once in a 24 month period
Kerb and Channel		As per the road hierarchy
Drainage	All pits, lids, footpath drains and grates	As per road or pathway hierarchy in accordance with location of the asset
Pathway	High Sensitivity	Once in a 3 month period
	Medium Sensitivity	Once in a 6 month period
	Low Sensitivity	As per road category
	Designated Shared Paths	Once in a 12 month period
Regulatory Signs	Regulatory signs excluding parking signs.	As per road hierarchy except where associated with bridges and major culverts.
Road Marking	Regulatory road markings excluding parking bays.	As per the road hierarchy
Traffic Signals	All as per the Traffic Signal Maintenance Agreement with VicRoads	3 weeks

Asset Type	Asset Hierarchy	Proactive Inspection Frequency
Traffic Management Devices		As per the road hierarchy
Streetlights	Category 1, 2 and 3 roads as per Public Lighting Code by United Energy	12 months
Bridges and Major Culverts	As per VicRoads Guidelines. Approach road infrastructure such as safety barriers and signage included.	Level 1 – 12 months Level 2 – 48 months (replaces Level 1 inspection) Level 3 – as required
Safety fencing, guardrails and guideposts	As per the code of practice for operational responsibility	As per road hierarchy except where associated with bridges and major culverts.
Retaining walls, stairs and noise barriers	As per the code of practice for operational responsibility	Once in a 24 month period
Vegetation & Trees	Council responsible trees and vegetation. Clearance to roads and pathways	As per the road hierarchy

Table 7 – Schedule 2 – Proactive Inspection Frequencies



Schedule 3 – Standards of Maintenance

All response times provided in Schedule 3 are in working days. If the issue is above the intervention level following the initial assessment then the target response time commences from the recording of the defect. For example, a pothole defect might take a maximum of 15 days to complete – 5 days maximum to inspect and assess and 10 days to reduce the risk. If there is any further works required to repair the asset, this will be undertaken within timeframes documented within the relevant maintenance procedures.

Description of Hazard	Intervention Standard	Target Response Time - Initial Assessment	Target Response Time - Reduce Risk
Road Pavement/Surface	Potholes >50mm deep in depth and >300mm diameter in trafficable lane	5 days	10 days
Road Pavement/Surface	Potholes >25mm deep and >150mm diameter on designated on-road cycle lane	5 days	10 days
Road Pavement/Surface	Edge break >20mm depth on a designated on road bicycle lane	5 days	10 days
Road Pavement/Surface	Failed area >300mm in diameter and >50mm in depth	5 days	10 days
Road Pavement/Surface	Road surface stripping/ bleeding/ polishing likely to result in loss of skid resistance	5 days	10 days
Road Pavement/Surface	Debris on road surface where there is a danger to traffic	1 day	1 day
Road Pavement/Surface	Substance on road surface where there is a danger to traffic	1 day	1 day
Road Pavement/Surface	Unsealed roads. Potholes >500mm diameter and 150mm deep	5 days	30 days
Road Pavement/Surface	Unsealed roads. Rutting and corrugations exceeding 150mm over a 3m length	5 days	30 days
Pavement Marking	Faded pavement marking (STATCON markings) <50% effective retro reflectivity.	5 days	60 days
Pathways	Cracks > 20 mm wide	5 days	10 days



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Description of Hazard	Intervention Standard	Target Response Time - Initial Assessment	Target Response Time - Reduce Risk
Pathways	Vertical displacement >20mm – Medium and Low Sensitivity Paths	5 days	10 days
Pathways	Vertical displacement > 10mm – High Sensitivity Paths	5 days	10 days
Pathways	Vertical displacement beside Path to adjacent Council assets >100mm (for example tree pits)	5 days	10 days
Pathways	Undulation of greater than 30 mm over a 1 metre straight edge or 20 mm over 100 mm straight edge	5 days	10 days
Pathways	Missing or dislodged pavers with gaps >20mm	5 days	10 days
Stormwater	Water ponding across through lanes to a minimum depth of 50mm affecting trafficable lanes	5 days	10 days
Stormwater	Lintel damaged or deteriorated to the extent that it could be hazardous to pedestrians	5 days	10 days
Stormwater	Drainage Pit Structure reinforcement is exposed	5 days	10 days
Stormwater	Broken frames that no longer support the pit lid	5 days	10 days
Stormwater	Pit Lid & Surrounds reinforcement is exposed	5 days	10 days
Stormwater	Missing pit covers or damaged where structural integrity significantly undermined	1 day	Pits within the road reserve - 1 day Other areas - 5 days
Stormwater	Missing pit grates or damaged where structural integrity significantly undermined	1 day	Pits within the road reserve - 1 day Other areas - 5 days
Stormwater	Pit surrounds damaged to the extent that they are hazardous to road users/ pedestrians	5 days	10 days
Stormwater	Vertical displacement >20mm only if the pit is within a pathway	5 days	10 days
Stormwater	Edge failures >100mm deep at the interface of the constructed path and adjacent ground	5 days	10 days



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Description of Hazard	Intervention Standard	Target Response Time - Initial Assessment	Target Response Time - Reduce Risk
Non-Standard Street Lighting	Non-standard poles/metered light in roadway- hazardous to road users/ pedestrians/ property	5 days	10 days
Non-Standard Street Lighting	Non Standard or metered light in roadway Arms/ masts - hazardous to road users/ pedestrians/ property	5 days	10 days
Non-Standard Street Lighting	Non Standard metered light in roadway Base/supports - hazardous to road users/ pedestrians/property.	5 days	10 days
Furniture	Missing/ Damaged so as to render them ineffective school crossing posts or related infrastructure	5 days	10 days
Furniture	Guideposts missing or damaged so as to render them ineffective on Shared Paths	5 days	10 days
Furniture	Guardrail broken or deformed by >500mm.	5 days	10 days
Furniture	Fencing rotten/ corroded/ broken poses hazard to public	5 days	10 days
Traffic Control Devices	Traffic Signal Failure or obstructed so as to render it ineffective	5 days	10 days
Traffic Control Devices	Traffic signal controller or traffic signal pole knocked down or damaged so as to render it ineffective	5 days	10 days
Kerb & Channel	Hollows & peaks >50mm in 10 m, that may result in holding of stormwater on trafficable areas	5 days	10 days
Kerb & Channel	Edge failures >100mm deep at the interface of the constructed path and Kerb & Channel	5 days	10 days
Signs	Missing sign face- Regulatory Sign	5 days	5 days
Signs	Damaged/ faded signs to an extent that makes them unreadable to road users - Regulatory Sign	5 days	5 days
Signs	Sign posts that are not vertical (>15 degrees from vertical)	5 days	5 days
Signs	Graffiti covering sign face rendering it unreadable	5 days	5 days



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Description of Hazard	Intervention Standard	Target Response Time - Initial Assessment	Target Response Time - Reduce Risk
Bridges/Culverts/Structures	Component damage or deterioration is presenting a hazard to road or path users	5 days	10 days
Vegetation & Trees	Roadway height clearance < 4.5m	Council Vegetation - 5 days Private Vegetation - Local Law #3	Council Vegetation on VicRoads Road - 20 days Council Vegetation - 10 days Private Vegetation - Local Law #3
Vegetation & Trees	Constructed path height clearance < 2.5 m	Council Vegetation - 5 days Private Vegetation - Local Law #3	Council Vegetation on VicRoads Road - 20 days Council Vegetation - 10 days Private Vegetation - Local Law #3
Vegetation & Trees	Encroachment of vegetation onto footpath (footpath envelope – see Local Law #3)	Council Vegetation - 5 days Private Vegetation - Local Law #3	Council Vegetation on VicRoads Road - 20 days Council Vegetation - 10 days Private Vegetation - Local Law #3
Vegetation & Trees	Encroachment onto shared path >-500mm (cyclist envelope)	5 days	10 days
Vegetation & Trees	Roadway lateral clearance < 1m from back edge of shoulder and/or kerb.	Council Vegetation - 5 days Private Vegetation - Local Law #3	Council Vegetation on VicRoads Road - 20 days Council Vegetation - 10 days Private Vegetation - Local Law #3
Vegetation & Trees	Foliage obstructing regulatory and warning signs or view of intersecting traffic.	Council Vegetation - 5 days	Council Vegetation on VicRoads Road - 20



Description of Hazard	Intervention Standard	Target Response Time - Initial Assessment	Target Response Time - Reduce Risk
		Private Vegetation - Local Law #3	days Council Vegetation - 10 days Private Vegetation - Local Law #3
Vegetation & Trees	Fallen limb obstructing pedestrian/ cyclist or vehicular traffic	5 days	5 days
Vegetation & Trees	Fallen tree obstructing pedestrian/ cyclist or vehicular traffic	5 days	5 days

Table 8 – Schedule 3 – Intervention & Response Standards

Schedule 4 – Summary of Amendments

The table below summarises the amendments between the 2018 v5.2 and the 2017 v5.1 Plans.

Item	Section	Amendment
1	General	The entire report has been reformatted and restructured. Numerous new diagrams have been included.
2	2	Terms and Definitions have been updated
3	4	Descriptions in the Monash Road Hierarchy have been updated. The description of the Monash Road Register has been updated to reflect system changes that have been implemented. The table of boundary road arrangements has been expanded to include all interface arrangements with road and transport authorities. The Pathway Hierarchy definitions have been changed to reflect usage rather than material type. A Shared Path category has been added for the first time.
4	5	The description of road infrastructure included or not included in the plan has been clarified. New diagrams have been inserted to explain responsibilities relating to arterial roads and adjacent properties.
5	7	Major review of standards for inspection frequency, intervention standards and response times which are reflected in Schedules 2 and 3.
6	9	Section 9 has been updated to reflect revised management systems and processes.
7	Schedule 2	Proactive Inspection Frequencies table has been simplified. Pathway inspection frequencies have been changed to match similar Councils and a changed risk assessment approach based on usage rather than construction material. Inspection frequency for local roads and footpaths has been reduced. Inspection frequency of High Sensitivity footpaths has been increased.
8	Schedule 3	Standards of Maintenance have been reviewed in detail which has resulted in revisions. <ul style="list-style-type: none"> • Initial Assessment times have been reduced to no more than 5 working days. • Follow up response times have been generally reduced. • Intervention standards have been reviewed and similar defects now have the same intervention standard. • Additional intervention standards have been included for example, roadside infrastructure and on-road cycle lanes

Table 9 – Schedule 4 – Summary of Amendments