

14 COUNCIL'S ROAD MANAGEMENT PLAN

FILE REFERENCE INT1886009

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RECOMMENDATION

That Council:

- revoke the Road Management Plan which it made on 17 August 2009; and
- make the new Road Management Plan (attached)
- publish final Notices in the Government Gazette and Daily newspaper as required by the Road Management Act 2004.

Attachments

1 Road Management Plan 46 Pages

EXECUTIVE SUMMARY

A formal review of the RMP was undertaken in 2017 and at the General Meeting in August 2018 Council resolved to give public notice of its intention to revoke the existing RMP and make a new one. The Public Notices were published in September.

The proposed RMP reflects a shift from traditional reactive road maintenance to a cyclic proactive approach and the associated benefits, in particular the unsealed road network.

The period for receiving Public Submissions on the proposed new Road Management Plan (RMP) closed on 23 October 2018. One submission was received.

The standards for inspection, maintenance and repair of roads, as noted in the attached revision of the RMP, were provided to the community Roads Focus Group for comment. The members of the Roads Focus Group provided their full support for the standards as noted.

It is recommended that Council revoke the Road Management Plan which it made on 17 August 2009 and make the new Road Management Plan.

BACKGROUND

The RMP documents the standards for performing Council's road management functions including inspection, maintenance and repair of the roads and pathways.

A formal review of the RMP was undertaken in 2017 and at the General Meeting in August 2018 Council resolved to give public notice of its intention to revoke the existing RMP and make a new one. The Public Notices were published in September.

The proposed RMP reflects a shift from traditional reactive road maintenance to a cyclic proactive approach and the associated benefits, in particular the unsealed road network. A separate detailed report will be provided to councillors prior to Christmas outlining the future approach regarding the management of the road network.

The proposed RMP was made available at Council Offices and on the Council Website. Members of the public were given four weeks to make a submission if they were aggrieved by the proposed RMP.

One submission was received relating to specifications for unsealed road construction and materials used. While recognising that these are important factors for long-term road management these are specifications that should be included in an Asset Management Plan rather than the RMP which focusses on hazard identification and repair. These points have been noted and will be included in the review of the Asset Management Plan for roads and off-street car parks to be undertaken in 2019/2020.

It is recommended that Council revoke the Road Management Plan which it made on 17 August 2009 and make the new Road Management Plan.

POLICY IMPLICATIONS

Council's Road Management Plan is the means by which the council has enlivened the "policy defence" embodied in section 103 of the Road Management Act. Section 50 explains the purposes of a Road Management Plan to be:

- (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*

The Road Management Plan therefore has the effect of facilitating Council's defence to negligence claims.

RELEVANCE TO COUNCIL PLAN

The relevant section of the Council Plan is "Our Environment" that states:

We will continue to plan and manage the natural and built environment for future generations.

This includes the Key Activity:

Maintain all Council roads in a safe and functional condition in accordance with the Road Management Act 2004.

CONSULTATION/COMMUNICATION

The standards for inspection, maintenance and repair of roads, as noted in the attached revision of the RMP, were provided to the Roads Focus Group for comment. The members of the Roads Focus Group provided their full support for the standards as noted.

FINANCIAL AND RESOURCE IMPLICATIONS

Monitoring and inspection requirements will change across the various assets groups covered with increase to monitoring in some areas as well as reductions in other areas. As we continue to manage the existing extent of assets covered under the Plan, it is expected that these changes will balance out after a phase in period, however increase in growth and expansion of the network will see impacts to resources in the short to medium term.

The standards as set out in the revised RMP are not expected to affect the required maintenance funding for Council's assets compared to provisions forecast in the future long term financial plan.

CONCLUSION

The preferred outcome is for Council to now revoke the existing Road Management Plan and remake the plan in accordance with requirements of the Road Management Act.

Road Management Plan

Prepared in response to Victorian Road Management Act 2004

August 2018

Version control	Details	Date
Version 1.0.0	Adopted by Council	13 December 2004
	Published in Government Gazette on 6 January 2005	6 January 2005
	Reviewed	June 2009
	Revoked	17 August 2009
Version 2	Adopted by Council	17 August 2009
	Reviewed	30 June 2013
	Revoked	#####
Version 3	Adopted by Council	

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Table of Contents

1	Introduction	3
2	Glossary of Terms.....	4
3	Purpose of the plan.....	7
4	Roads for which this plan applies	9
4.1	Vehicle Crossovers/Driveways	10
5	Legislative basis for plan	10
6	Management system.....	11
6.1	Long-Term Decision System:	11
6.2	Long-Term Decision System Process	11
6.3	Day to Day Decision System	11
6.4	Day to Day Decision System Process.....	11
7	Asset repair standards.....	13
8	Hierarchical classification system.....	14
8.1	Road classification	14
8.2	Pathways classification.....	16
8.3	Bridge classification	16
8.4	Drainage classification.....	17
9	Standards of risk and maintenance.....	19
10	Inspections	19
10.1	Reactive Inspections	19
10.2	Pro-active asset inspections.....	20
11	Schedule A – Risk and maintenance standards	24
11.1	Road Service Standards	25
11.2	Footpath Service Standards	37
11.3	Bridge Service Standards	44
11.4	Drainage Service Standards	45

1

Introduction

The Road Management Act 2004 (the Act) in conjunction with its associated Codes of Practice defines legislative principles that road authorities need to conform to in the management of their road infrastructure. The Cardinia Shire is a road authority, as defined in the Act and is responsible for approximately 1,372 km of local roads and 540 km of associated footpath assets.

This Road Management Plan (RMP) has been prepared to document the principles, methods and systems used by the Cardinia Shire in managing the local road system. The Plan has two major components:

1. Schedule of Maintenance Standards – A statement of the levels of service that the Council provides in managing the local road network.
2. Road Management System – A work flow process that provides a sound basis for traceability of inspections, work planning, scheduling and monitoring.

In addition, this RMP refers to Council's Register of Public Roads, a requirement of the Act, which lists all roads for which Council is the designated road authority and deems to be reasonably required for use by the general public.

The Council has prepared the public register on the basis of its complete and fullest knowledge of the existence of relevant road and footpath assets. Council also acknowledges that in managing this infrastructure, it has established and defined a reasonable level of service to meet the expectations of road users and the local community within available budgets and resource levels. The nature of an asset's usage drives the allocation of resources within the systems used to provide this reasonable level of service.

This Plan is a dynamic document that will be reviewed regularly in accordance with the timelines specified in the Act and associated Regulations. It will be 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.

Cardinia Shire Council is committed to ensuring that accessible, quality services and facilities are provided to our community. The Road Management Plan complements the Council's development of Asset Management Plans for Roads, Pathways, Bridges and Drainage, by addressing specific elements of the maintenance and management of the road network, as well as the legislative responsibilities under the Act.

The Assets covered by this Plan include:

- road pavements and surfaces
- pathways
- bridges
- Other infrastructure servicing roadways or pathways such as drainage and signage

Declared Arterial Roads and Freeways within the municipality are managed and maintained by VicRoads with respect to the road pavement, including signage and infrastructure relating to road drainage (kerb and channel and road pits). On some of these roads Council may be responsible for assets behind the kerb such as pathways.¹³

¹³ For a more detailed demarcation between VicRoads and Cardinia Shire Council see the Ministerial Code of Practice "Operational Responsibility For Public Roads"

2 Glossary of Terms

Term	Definition
Arterial roads	Freeways, highways & declared main roads which are managed by the State Government through VicRoads.
Road	Includes a street; right of way; cul de sac; by-pass; bridge or ford; footpath; bicycle path or other land or works forming part of the road.
Road Management Act (the Act)	Road Management Act 2004 (Vic) The Act provides a statutory framework for the management of the road network in Victoria.
Municipal Road	Roads for which the council is the responsible Road Authority.
Pathways	<p>The definition of pathway provided in the Act captures both 'footpaths', 'shared pathways' and dedicated bicycle pathways as outlined below:</p> <p>A footpath, bicycle path or other area constructed or developed by a responsible road authority for use by members of the public other than with a motor vehicle but does not include any path:</p> <p>(a) which has not been constructed by a responsible road authority;</p> <p style="text-align: center;">or</p> <p>(b) which connects to other land.</p>

Term	Definition
Shared Pathways	<p>The below definition of ‘shared pathways’ has been extracted from Reg. 242(2) of the Australian Road Rules:</p> <p>“An area open to the public (except a separated footpath) that is designated for, or has as one of its main uses, use by both the riders of bicycles and pedestrians, and includes a length of path for use by both bicycles and pedestrians beginning at a shared path sign or shared path road marking and ending at the nearest of the following:</p> <ul style="list-style-type: none"> (a) an end shared path sign or end shared path road marking; (b) a no bicycles sign or no bicycles road marking; (c) a bicycle path sign or bicycle path road marking; (d) a road (except a road-related area); (e) the end of the path.”
Road reserve	All of the area of land that is within the boundaries of a road.
Roadside	Any land that is within the boundaries of a road (other than the shoulders of the road) which is not a roadway or a pathway and includes the land on which any vehicle crossing or pathway which connects from a roadway or pathway on a road to other land has been constructed.
Register of Public Roads	List of roads within the Municipality that Council is responsible for inspecting and maintaining. Council is required to keep a register under s.19 of the Act.

Term	Definition
Road Infrastructure	<p>The infrastructure which forms part of a roadway, pathway or shoulder,</p> <p>Including —</p> <ul style="list-style-type: none"> • Structures forming part of the roadway, pathway or shoulder; and the road-related infrastructure; • Materials from which a roadway, pathway or shoulder is made; such as asphalt, bitumen, gravel, lane markers and lines.
Road related infrastructure	<p>Infrastructure which is installed by the relevant road authority for road related purposes to—</p> <ul style="list-style-type: none"> • Facilitate the operation or use of the roadway or pathway; or • Support or protect the roadway or pathway. <p>Examples: Traffic islands, traffic management signage, traffic control sign, traffic light, kerb and channel, a bridge, culvert or ford, road drain or embankment, a noise wall, gate, post or board installed on the road reserve.</p>
Driveway / Crossover	<p>Constructed hard-standing access providing connection from roadway to a property. This excludes any section of a constructed Public Pathway that crosses the driveway.</p>
Proactive Inspections	<p>Inspections performed as part of a scheduled program, according to the classification of roads or pathways for the purpose of identifying defects above intervention and to provide a record that the road has been inspected</p>
Reactive inspections	<p>Inspections performed in response to a customer request or notification about the condition of the road, in order to assess whether the road contains a RMP defect that has reached the relevant intervention level.</p>

Term	Definition
Condition Inspection	Inspections conducted to assess the life of the road and footpath network and to prioritise major works. These inspections do not include identification and measurement of individual defects against intervention levels as this is done via proactive and reactive inspections.
Intervention Level	The size of the defect at which the road authority has determined that the defect will be rectified.
Consent applications	Applications made by other road authorities, utilities companies or residents to perform works on council-managed roads.

3 Purpose of the plan

The purpose of this Road Management Plan is to provide the following to key stakeholders:

- Detail the management systems for the road management functions under the control of Cardinia Shire Council
- Set the relevant standards in relation to the discharge of duties in the performance of those road management functions
- Base the standards on policy and operational objectives within the resources available
- Ensure the provision of a reasonably safe and efficient road network for use by road users and the community.

The key stakeholders in this Plan include:

- The community in general
- Residents and businesses abutting and using the road network
- Pedestrians
- Cyclists
- Utility agencies that use the road reserve for their infrastructure (water, sewerage, gas, electricity, telecommunications)
- Council as the responsible road authority.

Council will make every endeavour to meet all aspects of its Road Management Plan, (RMP). 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 the RMP. These include but are not limited to natural disasters, such as fires, floods, or storm; or, a prolonged labour or resource shortage, due to a need to commit or redeploy council staff and/or equipment elsewhere.

In the event that the Chief Executive Officer (CEO) of council has considered the impact of such an event on the limited financial resources of council and its other conflicting priorities, and determined that the RMP cannot be met, then pursuant to Section 83 of the Wrongs Act, the CEO will write to council's officer in charge of its plan and inform them that some, or all, of the timeframes and responses in council's RMP are to be suspended.

Once the scope of the event/s have been determined, and the resources committed to the event response have been identified, then there will be an ongoing consultation between council's CEO LMI Road Management Guidance Document v3 - Commercial in Confidence 11 and council's officer responsible for the RMP, to determine which parts of council's plan are to be reactivated and when.

Council statements to residents about the suspension or reduction of the services under the RMP will include reference to how the work that will be done has been prioritised, and the period for which it is likely to be affected.

In preparing this Plan, road users are to be reminded of their obligations under the Act.¹⁴

¹⁴ Part 8 (Amendment of Other Acts), Division 2 (Road Safety Act 1986)

Obligation of Road Users

1. A person who drives a motor vehicle on a highway must drive in a safe manner having regard to all the relevant factors including (without limiting the generality) the:

- (a) physical characteristics of the road;
- (b) prevailing weather conditions;
- (c) level of visibility;
- (d) condition of the motor vehicle;
- (e) prevailing traffic conditions;
- (f) relevant road laws and advisory signs; and
- (g) physical and mental condition of the driver.

2. A road user other than a person driving a motor vehicle must use a highway in a safe manner having regard to all the relevant factors by keeping a proper lookout and exercising reasonable care for their own safety.

3. A road user must

- (a) have regard to the rights of other road users and take reasonable care to avoid any conduct that may endanger the safety or welfare of other road users;
- (b) have regard to the rights of the community and infrastructure managers in relation to road infrastructure and non-road infrastructure on the road reserve and take reasonable care to avoid any conduct that may damage road infrastructure and non-road infrastructure on the road reserve; and
- (c) have regard to the rights of the community in relation to the road reserve and take reasonable care to avoid conduct that may harm the environment of the road reserve.

4

Roads for which this plan applies

This Plan applies to all Public Roads for which Council is the coordinating road authority in accordance with Sections 36 and 37 of the Act. These are roads and pathways listed in Council's Register of Public Roads that Council has deemed to be:

- Managed and maintained by Council,; and
- Considered to be reasonably required for general public use.

The register provides a list of the roads for which Council is the Responsible Authority, and includes (where applicable) the following;

- Council Asset ID
- Road name
- Description of road section
- Location
- Classification
- Surface Type (Sealed or Unsealed)
- Length
- Date Road became a Public Road¹⁵
- Date road ceased to be a Public Road
- Ancillary Areas
- Reference to arrangement relating to the transfer of road management functions to or from another road authority or service utility.
- Reference to Plan or Instrument made on or after 1 July 2004 that fixes or varies the boundary of a Public Road

The Register of Public Roads has been adopted by Council and is amended from time to time as required. The Register of Public Roads is also available for inspection at Council offices.

Where applicable, the details of agreements between the Council and other road authorities or service authorities, made pursuant to Section 15 of the Act, are also included in the Register of Public Roads. The demarcation of asset ownership has been defined by the negotiation of demarcation agreements between the Council and other road authorities in accordance with the Act¹⁶. Agreements have been adopted with the following:

- Casey City Council
- Baw Baw Shire Council
- Yarra Ranges Council
- Bass Coast Shire Council
- South Gippsland Shire Council
- VicRoads

The agreements define the extent of boundary roads, private roads, arterial roads, other authority roads and structures.

This Plan does not apply to:

- Any driveway or pathway providing access from private property to a public road, other than the section of driveway/crossover that forms part of the public pathway (see below for further details).
- Fire Access Tracks

¹⁵ Noted only for roads that have been declared as a Public Road on or after 1/7/2004.

¹⁶ Code of Practice

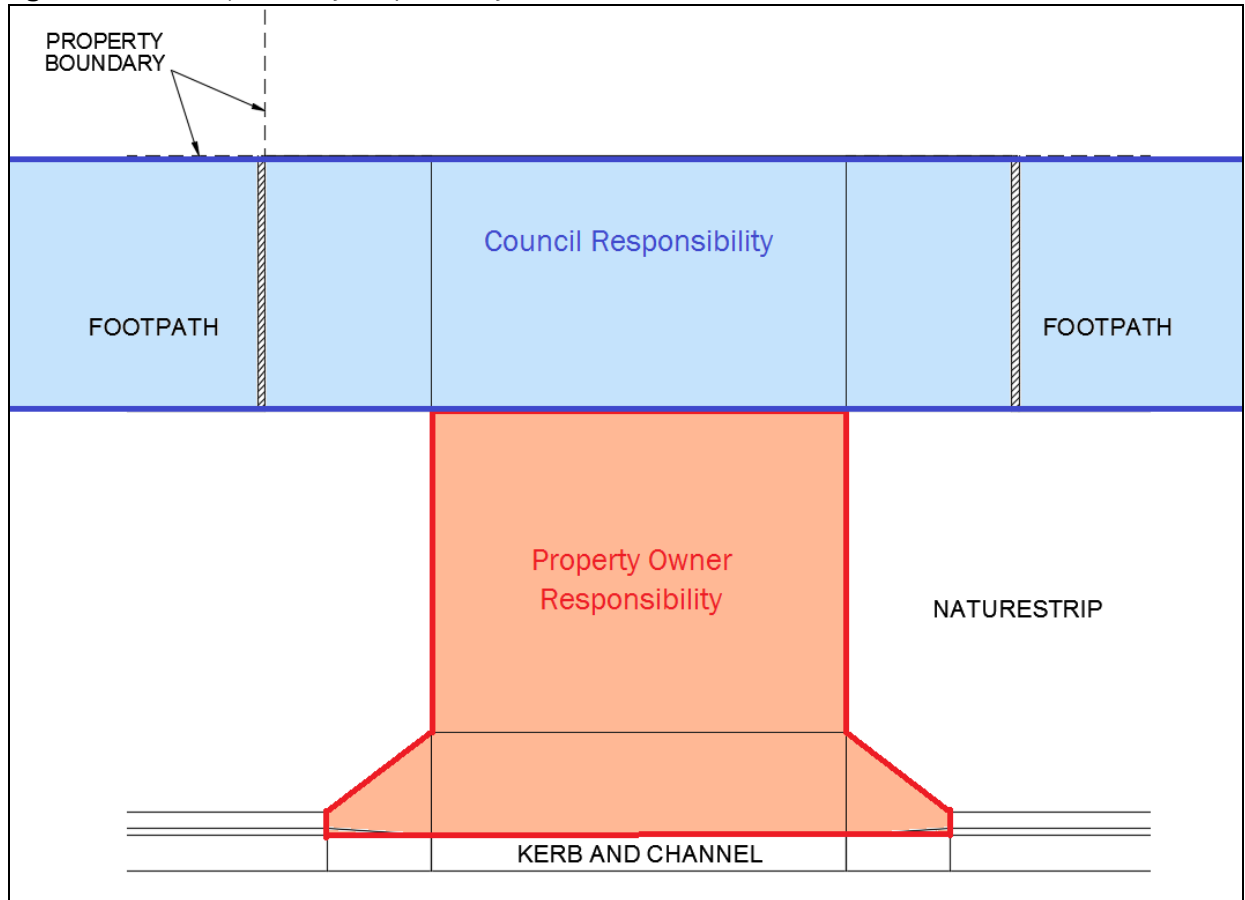
- Non-Road infrastructure as defined by the RMA, including, but not limited to, gas pipes, water and sewerage pipes, cables, electricity poles, bus shelters, rail infrastructure, public telephones, mail boxes, road side furniture and fences erected by utilities or providers of public transport

4.1 Vehicle Crossovers/Driveways

The vehicle crossover refers to the crossing which provides access from the road to the property boundary.

The following diagram illustrates the layout of a typical vehicle cross-over showing the areas of responsibility of Council and that of the Property Owner.

Figure 1 - Crossover/Driveway Responsibility



5 Legislative basis for plan

This Road Management Plan is prepared in accordance with, Division 5 of the Act, and in accordance with Ministerial Code of Practice – Road Management Plans.

In developing the relevant standards detailed in this Plan, Council has had regard to the following Best Value Principles as per the Local Government Act 1989.

All services are to be:

- measured against quality and cost standards;
- responsive to the needs of its community;
- accessible to those members of the community for whom the service is intended;
- subject to continuous improvement;
- linked to a program of regular community consultation; and
- report regularly to the community.

6 Management system

In the context of this Plan, and as per the requirements of the Act, Cardinia Shire Council defines Management System as a process based system which enables Council to make the following decisions in line with community expectations, needs and targets.

6.1 Long-Term Decision System

- Budgetary decisions in terms of funding allocations for capital, renewal and maintenance.
- Prioritisation decisions in terms of reseal programs, rehabilitation programs within provided budgets.
- Long Term Risk Management Strategies.
- Long Term Transportation Management Strategies.

6.2 Long-Term Decision System Process

Council has four Asset Management Plans for assets found in, but not limited to, the Road Reserve – Roads, Footpath, Bridges and Drainage. These are the fundamental documents in detailing the strategic guidelines and identifying maintenance, renewal and upgrade improvements for the road network. The Road Asset Management Plan takes a lifecycle approach to the management of Council's road network and identifies the elements necessary for the long term sustainability of the road asset. It provides details of the particular actions and resources required to manage the road system and provide defensible analyses using road performance models for future funding needs. Council's current funding profile for each asset group to deliver desired services is contained in each of the Asset Management Plans.

6.3 Day to Day Decision System

- Maintenance scheduling and planning in line with maintenance service levels¹⁷, intervention levels and response time frameworks.
- Maintenance prioritisation on the basis of defect guidelines and risk.
- Pro-active inspections based on service levels as per this Road Management Plan.
- Reactive request logging and inspection scheduling.
- In addition to the inspection process for unsealed roads, a cyclic program of maintenance scheduling will be implemented based on historical data to drive regular maintenance and improve overall performance of the unsealed road network.

6.4 Day to Day Decision System Process

The flow chart shown below is essentially Council's day to day decision system process that incorporates the total traceability¹⁸ requirement. This process includes:

- Pro-active inspections based on this RMP.
- Reactive inspections when required.
- Work scheduling and planning as per Council service levels.
- Work prioritisation as per risk and response times.

¹⁷ (refer Schedule A)

¹⁸ As per compliance with the Road Management Act.

Figure 2 - Maintenance process

7

Asset repair standards

Council's road management standards have been developed by taking into account historical information of risk and events, community expectations, industry standards and available resources. Council has set standards on the basis of the following:

- An intervention level which defines the size, shape or nature of an asset deficiency or hazard.
- A response time for repair, calculated in working days from the date the defect is recorded by Council.

Council emphasizes that standards will vary across the road network in line with relevant risk factors such as the nature and volume of traffic using the road, operating speed, location and vicinity, the susceptibility of assets to deterioration, the cost effectiveness of repairs and the competing priorities for funding. Roads, Footpaths, Bridges and Drainage have therefore been classified into hierarchies where each hierarchy has a different standard.

Council's standards for risk, maintenance and repair¹⁹ have been developed to keep current assets reasonably safe and serviceable.

8

¹⁹ Refer section 9

Hierarchical classification system

The classification system has been developed to ensure that appropriate management, engineering standards and planning practices are applied to a road asset based on its function.

The classification system also enables more efficient use of resources by allocating funding to those road assets that are of higher priority and the costs are better justified.

8.1 Road classification

In developing the road classification system the following guiding principles have been used:

- The classification system is based on a combination of intended functionality and existing traffic usage;
- The classification system is risk based – higher usage implies higher potential for a hazard to cause damage.

The network of Public Roads is classified into the following hierarchies (**Note:** The traffic volumes indicated are regarded as a general indication for each category and do not solely determine a road's classification.):

Table 1 - Road Classifications

Classifications	Description	Strategic Value	Urban		Rural	
			Approximate Volume	Strategic Considerations	Approximate Volume	Strategic Considerations
4A - Local Arterial - Road	Caters for major vehicle movements across shire. Provides vital contribution to arterial road network may have limited alternative higher order routes available locally. May have limited direct property access provisions.	Very High	5000+	Focus on through traffic movements. Provides access between major activity centres. Key economic significance for the area.	1000+	Focus on high value strategic connections. Preferred through access routes and heavy vehicle routes. Key economic significance for the surrounding areas.
4B1 - Local Major Collector - Road	Provides connection between local collector/access roads and arterials with low/medium access provisions. Makes major contribution to road network complimenting arterial network. Alternative routes may be available.	High	2500-6000	Provides major connection between estates, arterial network roads and activity centres.	500-1500	Significant strategic connections. Generally providing access between arterial network and/or activity centres. May be a heavy vehicle access route.
4B2 - Local Minor Collector - Road	Provides important connection between local roads and arterials whilst also providing access. Makes minor contribution to road network, generally impacting limited area. Alternative routes will likely be available.	Medium	1000-3000	Provides connection between properties, arterial/collector network and/or activity generators	100-1000	Low volume connections with low strategic significance. May be heavy vehicle access route with limited connections
4C - Local Access - Road	Provides access from properties to the higher order road network. Low strategic value and usually minor contribution to surrounding network.	Low	50-1500	Provides direct access to properties and the "normal" or default classification of a local road.	0-200	Provides access to properties.
4D - Limited Access - Road	Limited to only a handful of properties. Very low use and very little impact on surrounding network.	Very Low	0-100	Short link to provide access to generally only a few properties	Very low volume	Limited use roads, generally no through access.

8.2 Pathways classification

The pathway classification system has been developed based on the expected usage of the network, reflecting risk based on pedestrian traffic nature and volumes. The pathway network including shared paths, pedestrian paths and bicycle paths that fall within the RMP are classified into the following hierarchies:

Hierarchy	Description
High	Areas identified as potential high risk due to the nature and volume of pedestrian traffic associated with particular properties adjacent to Council footpath. These properties may include: malls, major shopping areas, preschools, schools, community buildings (halls, library, health centres,) elderly homes precincts, medical precincts and hospitals.
Medium	Moderately trafficked pedestrian areas such as designated collector footpaths as well as shared bicycle/pedestrian paths.
Low	All other constructed paths for which Council is responsible including residential areas

8.3 Bridge classification

The bridge hierarchy adopted by Council is based on the classification of the road or pathway that it services.

Table 2 - Vehicular Bridge and Major Culvert Hierarchy Classifications

Vehicular Bridge Classification
4A – Local Arterial
4B1 and 4B2 – Local Collector
4C – Local Access
4D – Limited Access

NB: The prefix 4 is related to the Aust Roads National Functional Road Classification categories.

Table 3 - Pedestrian Bridge and Major Culvert Hierarchy Classifications

Pedestrian Bridge Classification
High
Medium

Low

8.4 Drainage classification

Council’s drainage asset hierarchy is illustrated in the following diagram and table below. The asset class is the most general grouping of asset types within the asset category that allows for ease of reporting. The asset type is the lowest level of grouping for similar assets or similar assets that provide similar services.

This Road Management Plan covers only those drainage asset classes and assets specifically relating to road and pathway infrastructure.

Table 4 - Drainage Classification



Table 5 - Drainage Classification Descriptions

Drainage Hierarchy	Service Function Description	Brief Description
Underground Drainage Pipe	Pipes carry rain that falls onto roofs and streets into Melbourne Water main drains or directly to local receiving waterways.	Pipes are located underground within the roadway, nature-strip or property easement. They generally range in size from 150mm in diameter to greater than 1,200mm in diameter, dependent upon the capacity of the stormwater they have been designed to cater for underground.
Underground Drainage Pit	Provides points of entry for stormwater from the above ground drainage system to the underground drainage system.	Pits generally fall into two main categories being entry pits and junction pits. The entry pits are typically located as part of the kerb and channel, table drain or roadway (i.e. in the centre of the road) and are strategically constructed at the lowest point of the roadway to allow for water to take its natural course so that it may freely enter the underground drainage system on its own accord by gravity. Junction pits are constructed to provide for changes in the direction of the pipe, provide for connection of the pipe and/or to allow for a point of entry to inspect and clean the underground drainage system
Underground Drainage Culvert	Culverts carry rain that falls onto roofs and streets to Melbourne Water main drains or directly to local receiving waterways.	Culverts are located underground generally within the roadway.
Aboveground Table Drain	Table drains act as drainage channels, directing stormwater road surface flows into the underground stormwater drainage network via drainage pits or directly into local receiving waterways or Melbourne Water drains.	Table drains can also be of natural construction.

9 Standards of risk and maintenance

Risk and Maintenance Standards have been developed in consultation with internal stakeholders, the community, an assessment of available historical data and industry standards. Standards will vary across the road network in line with relevant risk factors such as the nature and volume of traffic using the road or footpath, operating speed, the susceptibility of assets to deterioration, the cost effectiveness of repairs and the competing priorities for funding. The variation of maintenance standard across the network is reflected in Council's road classification system.

Schedule A provides details of adopted service levels, which are Council's nominated standards.

10 Inspections

10.1 Reactive Inspections

These inspections are undertaken by Council staff in response to a customer request or notification about the condition of the road or road related infrastructure, in order to assess whether it contains a RMP defect that has reached the relevant intervention level.

The following tables detail the time-frames for undertaking these inspections.

10.1.1 Roads

Table 6 - Reactive inspection timeframes for Roads

Classification	Inspection Response Time (Working/Business Days)
4A – Local Arterial	Inspect within 3 days
4B1 - Local Major Collector	Inspect within 3 days
4B2 - Local Minor Collector	Inspect within 3 days
4C – Local Access	Inspect within 3 days
4D – Limited Access	Inspect within 3 days

Table 7 - Reactive inspection timeframes for Roadside Street Furniture

Category	Inspection Response Time (Working/Business Days)
Delineation & Line marking	Inspect within 3 days
Guard fence Maintenance	Inspect within 3 days
Traffic Control Devices & Signs	Inspect within 3 days
Road Retaining Walls	Inspect within 3 days

10.1.2 Footpaths

Table 8 - Reactive inspection timeframes for Footpaths

Classification	Inspection Response Time (Working/Business Days)
High	Inspect within 3 days
Medium	Inspect within 5 days
Low	Inspect within 10 days

10.1.3 Bridges

Table 9 - Reactive inspection timeframes for Bridges

Category	Classifications	Inspection Response Time (Working/Business Days)
Road related structures	All Roads	Inspect within 3 days
Pathway related structures	High	Inspect within 3 days
	Medium	Inspect within 3 days
	Low	Inspect within 3 days

10.1.4 Drainage

Table 10 - Reactive inspection timeframes for Drainage

Category	Inspection Response Time (Working/Business Days)
Roadside Drainage Pits	Inspect within 3 days
Roadside Underground Drains	Inspect within 3 days
Roadside Surface Drains	Inspect within 3 days
Gross Pollutant Traps	Inspect within 3 days
Sediment Pits	Inspect within 3 days

10.2 Pro-active asset inspections

Council inspects all roads, footpaths, and bridges for which it is responsible on a cyclic basis to identify potential safety hazards, and defects which exceed the stated intervention levels. The

inspection program reflects the priority identified in each asset group classification system and appropriate use of resources in accordance with the requirements of the Act. The following are the inspection cycles for each group of assets.

10.2.1 Roads

Roads Hierarchy	Sealed Roads	Unsealed Roads
4A – Local Arterial	Inspect once every 4 months	
4B1 - Local Major Collector	Inspect once every 6 months	
4B2 - Local Minor Collector	Inspect once per year	
4C – Local Access	Inspect once per year	Inspect once per year
4D – Limited Access	Not applicable to sealed roads	Inspect once per year

Road inspections shall incorporate visual inspections of road related furniture including delineation and line marking, safety barriers, traffic control devices, regulatory signage and road related retaining walls.

10.2.2 Footpaths

Footpath Hierarchy	Inspection Frequency
High	All footpaths in this classification will be proactively inspected . Twice a year.
Medium	Each footpath in this classification will be proactively inspected at-least once a year
Low	Each footpath in this classification will be proactively inspected once every two years. This inspection to be combined with Council’s network condition audit. The network condition assessment will identify/select sections that are beyond the intervention level criteria as per the FAMP.
Gravel and Paver Paths	All footpaths in this classification will be proactively inspected twice a year.

10.2.3

Bridges

Council has adopted three levels of inspections as recommended by the VicRoads Bridge Inspection Manual 2000 and the inspection frequencies adopted are considered to be current industry standard and therefore reasonable in the context of Council’s human and financial resources. For further details about the inspection types see Council’s Bridge Asset Management Plan.

Inspection Type	REASON FOR ACTIVITY	INTERVENTION LEVEL	HIERARCHY	FREQUENCY
Level 1 Inspections Regime (for proactive maintenance)	Carried out in conjunction with a Routine or Reactive inspection to check the general serviceability of the structure, particularly the safety of road users, and to identify any emerging problems.	N/A	Concrete Bridges	12 months / or Within 20 working days of floods / natural disasters
			Timber Bridges	6 months/ or Within 20 working days of floods / natural disasters
			Culverts	12 months/ or Within 20 working days of floods / natural disasters
			Pedestrian Bridges	6 months/ or Within 20 working days of floods / natural disasters
			Timber Boardwalks	6 months/ or Within 20 working days of floods / natural disasters
Level 2 and 3 inspections	To assess the structural integrity and capacity of the bridge substructure and superstructure. Inspections will be carried out in accordance with VicRoads Bridge Inspection Manual.	Level 1 inspection report, or frequency as detailed for Level 2 inspections.	Concrete Bridges	48 months
			Timber Bridges	24 months
			Culverts	48 months
			Pedestrian Bridges	24 months
			Timber Boardwalks	24 months
		Level 3 will be triggered by a level 2 inspection if required or by a catastrophic event – fire, flood etc.		

10.2.4 Drainage

Council currently undertakes proactive inspections on a subset of drainage assets that have been identified by maintenance supervisors as having an increased risk of failure as shown by past records of flooding issues. These inspections are undertaken at the same time as the proactive road inspection for the adjacent roads.

Sample inspections of roadside surface drainage will occur during the proactive inspections of road assets

Inspection Type	Inspection Frequency
Roadside Surface Drains	4A – Local Arterial - Inspect once every 4 months, in conjunction with road inspections 4B1 - Local Major Collector - Inspect once every 6 months, in conjunction with road inspections 4B2 - Local Minor Collector - Inspect once per year, in conjunction with road inspections 4C – Local Access – Inspect once every 12 months, in conjunction with road inspections 4D – Limited Access - Inspect once every 12 months, in conjunction with road inspections
Gross Pollutant Traps	Inspect once every - 3 months/ or within 14 working days of floods/ natural disasters
Sediment Pits	Inspect once every - 3 months/ or within 14 working days of floods/ natural disasters

11 SCHEDULE A – RISK AND MAINTENANCE STANDARDS

11.1 Road Service Standards

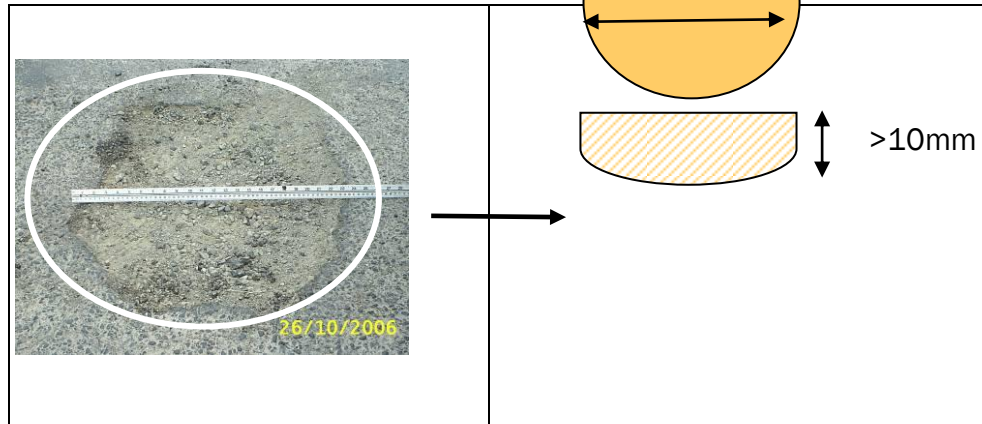
The following standards define the defect intervention points and response times for defects exceeding intervention levels.

Note: If a sealed road is listed on a funded rehabilitation program, then it would be irresponsible to undertake major repair works only to have the pavement reconstructed shortly after. Therefore in these situations warning signage may be used for defects that are outside intervention levels, until the pavement is rehabilitated.

Warning signage and barricading

While council will endeavour to meet the response times as noted in the following tables, if at any time available resources are not sufficient to ensure maintenance works are carried out within the response times then other steps will be undertaken such as warning signage and/or safety barricading will be installed until such time as the work is completed. Warning signage is not seen as a permanent solution and will be utilised for a maximum of 3 months during which time the maintenance work will be undertaken, with the exception roads on the rehabilitation program as defined in the note above.

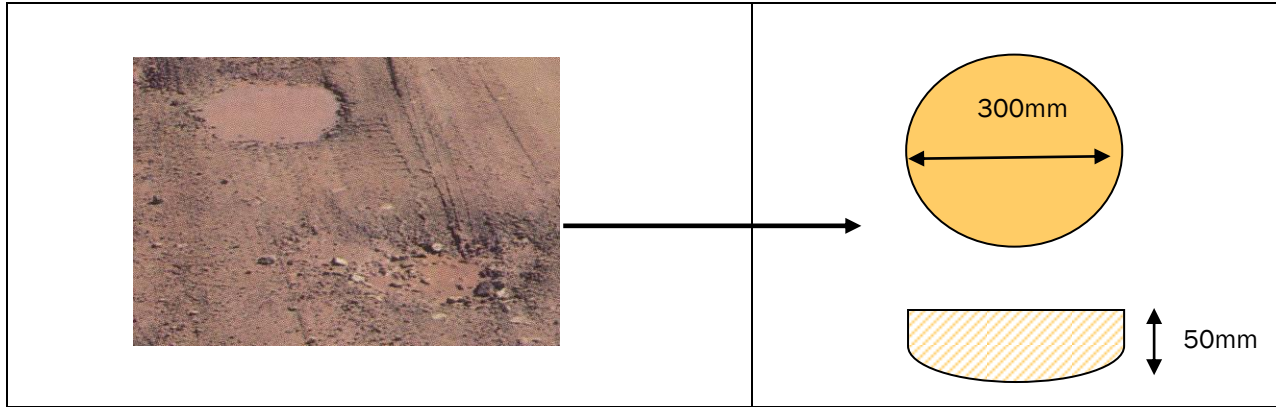
Sealed Road Pot-hole



Intervention Level	Hierarchy	Response Time
Isolated hole in sealed wearing surface and into the granular pavement underneath Excludes loss of surface on edges of sealed surface roadway – See Sealed Edge Break	4A	10 days
	4B1 & 4B2	15 days
	4C	20 days
	4D	60 days

Notes: All times noted in working days.

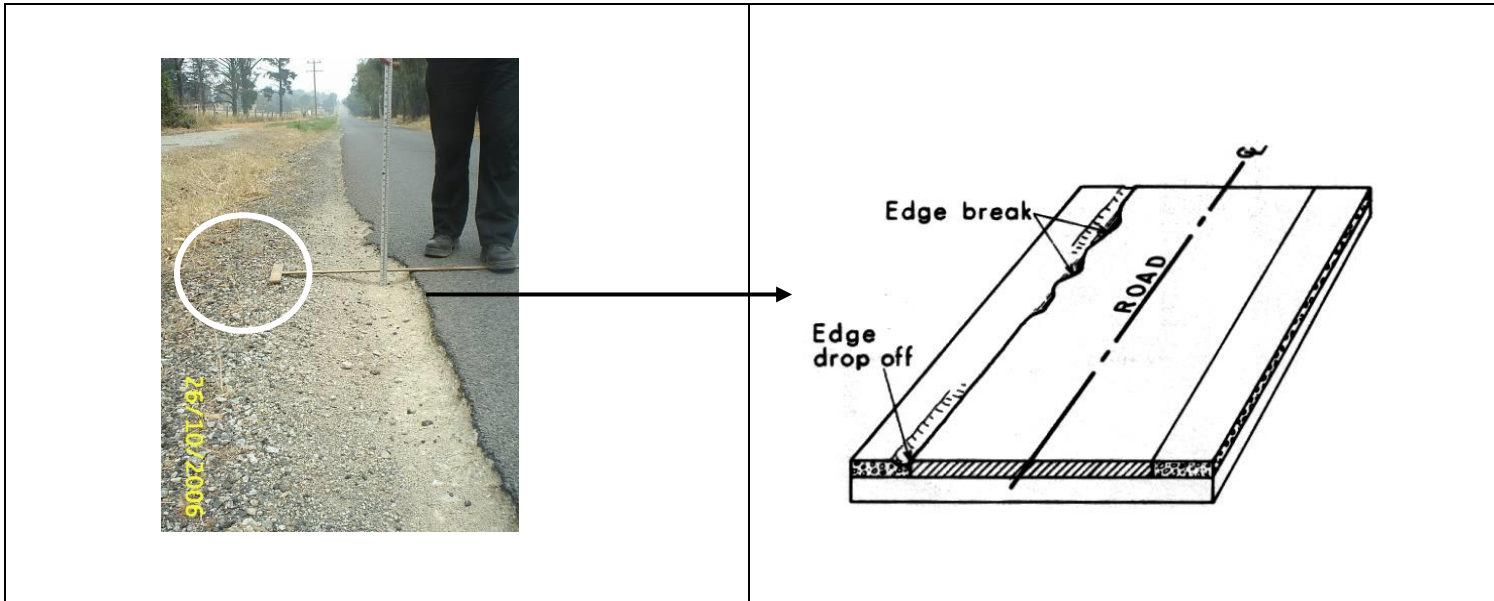
Unsealed Shoulder Pothole



Intervention Level	Hierarchy	Response Time
Greater than 300mm in diameter. and depth is a minimum of 50mm.	4A	30 days
	4B1 & B2	30 days
	4C	60 days
	4D	60 days

Notes: All times noted in working days.

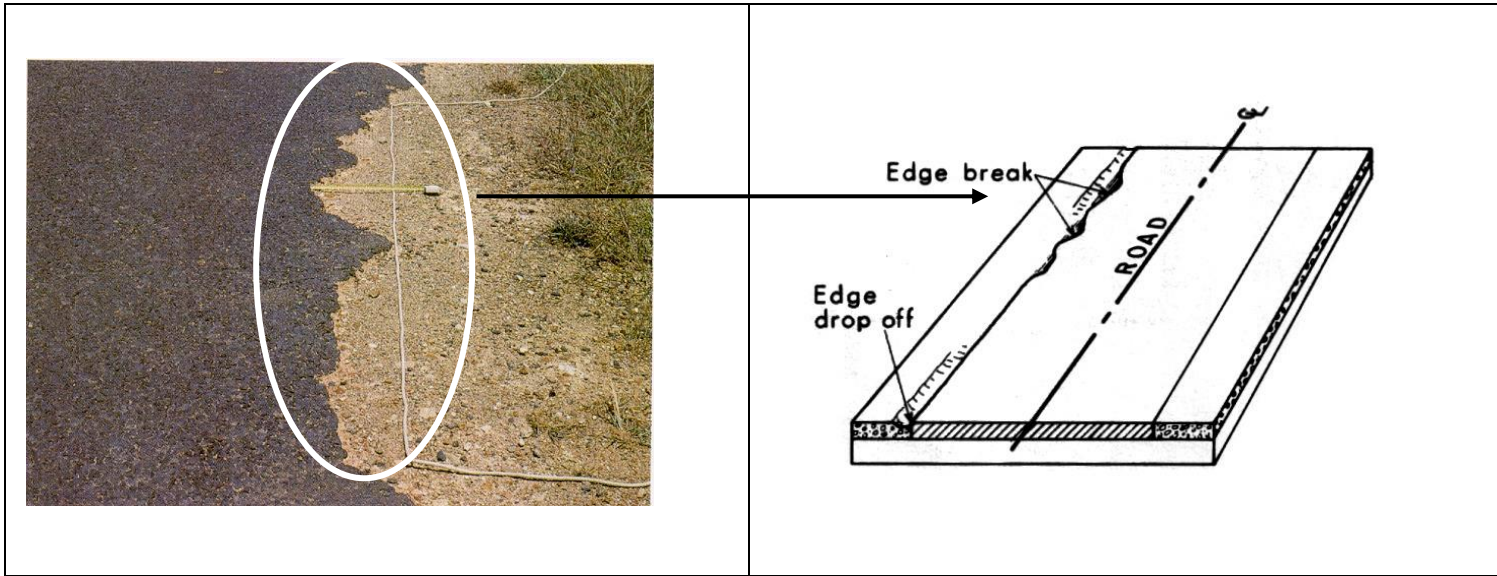
Sealed Road Edge Drop



Intervention Level	Hierarchy	Response Time
Greater than 75mm drop off for a continuous length of 2m or more	4A	30 days
	4B1 & B2	30 days
	4C	60 days
	4D	60 days

Notes: All times noted in working days.

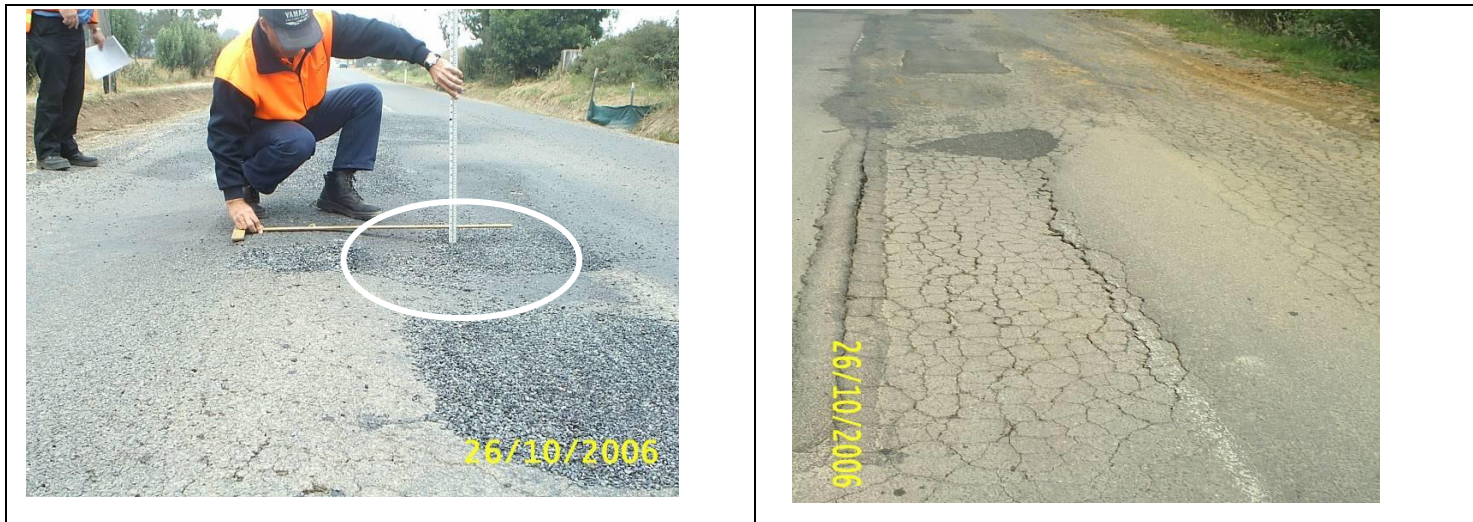
Sealed Edge Break



Intervention Level	Hierarchy	Response Time
Fretting and breaking of sealed edge, greater than 75mm in depth on average within a 2 m section which also has an associated 75mm edge drop off.	4A	15 days
	4B1 & B2	30 days
	4C	60 days
	4D	60 days

Notes: All times noted in working days.

Sealed Road Pavement Deficiency



Intervention Level	Hierarchy	Response Time										
Isolated failed surface or pavement represented by loss of shape or structure and showing deformities.	4A	3 months										
	4B1 & B2	6 months										
	4C	12 months										
Surface area greater than 20 m ² ; and Depth greater than the following based on the minimum average dimension of length or width;	4D	12 months										
<table border="1"> <tr> <td>Dimension (m)</td> <td>>=1</td> <td>>2</td> <td>>3</td> <td>>4</td> <td>>5</td> </tr> <tr> <td>Depth (mm)</td> <td>50</td> <td>75</td> <td>100</td> <td>125</td> <td>150</td> </tr> </table>			Dimension (m)	>=1	>2	>3	>4	>5	Depth (mm)	50	75	100
Dimension (m)	>=1	>2	>3	>4	>5							
Depth (mm)	50	75	100	125	150							
e.g. 3 m x 2m defect must be at least 75mm deep to require treatment because 2m is it's minimum dimension												

Notes: All times noted in working days.

Road Signs Deficiency



Intervention Level	Hierarchy	Response Time
Regulatory sign (AS1742.1) is missing or damaged rendering it illegible.	4A	5 days
	4B1 & B2	5 days
	4C	5 days
	4D	5 days

Notes :

1. All times noted in working days.
2. Applies to regulatory signs only
3. Inspector will only identify missing signs, where it is clearly evident that a pre-existing sign is missing.
4. Inspector is not investigating or assessing the 'need' for signage at any location. The assessment of 'signage needs' is a Traffic Engineering investigation and inspection.

Gravel Road Pot-hole Defect



Intervention Level	Hierarchy	Response Time
A gravel road pothole is defined as isolated depressions caused by loss of pavement from the road Any pothole with depth greater than 150mm and/or greater than 500mm lateral dimension	4A	40 days
	4B1 & B2	40 days
	4C	60 days
	4D	12 mths

Notes: All times noted in working days.

Unsealed Road Grading

Council will maintain an unsealed road grading program.

Defects such as channels scouring, corrugations, rutting, shoving, and soft spots are to be limited to less than 5% of the area directly after grading.

Gravel Road Pavement Deficiency Hazards

Intervention Level	Hierarchy	Response Time												
1. Isolated deformation style defects such as depressions, shape-loss, and soft spots. Surface area less than 60 m ² ; and Depth greater than shown in the following table based on the least dimension of the defect's length or average width; <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Least Dimension (m)</th> <th style="text-align: center;">>=1</th> <th style="text-align: center;">>2</th> <th style="text-align: center;">>3</th> <th style="text-align: center;">>4</th> <th style="text-align: center;">>5</th> </tr> </thead> <tbody> <tr> <th style="text-align: center;">Depth (mm)</th> <td style="text-align: center;">50</td> <td style="text-align: center;">75</td> <td style="text-align: center;">100</td> <td style="text-align: center;">125</td> <td style="text-align: center;">150</td> </tr> </tbody> </table> e.g. 3 m x 2m defect has a least dimension of 2m and therefore must be at least 75mm deep to require treatment ; or 2. Scouring with depth > 100mm	Least Dimension (m)	>=1	>2	>3	>4	>5	Depth (mm)	50	75	100	125	150	4A	30 days
	Least Dimension (m)	>=1	>2	>3	>4	>5								
	Depth (mm)	50	75	100	125	150								
	4B1 & B2	30 days												
4C	60 days													
	4D	6 mths												

Notes: All times noted in working days.

Gravel Road Slippery Surface



Intervention Level	Hierarchy	Response Time
Clayey spots, bare patches, saturated material, lack of material, often after dry spell, exposed sub-grade after rain. Excess loose material on bends in particular (greater than 40mm deep) exceed 20% pavement surface area per km	4A	30 days
	4B1 & B2	30 days
	4C	60 days
	4D	60 days

Notes: All times noted in working days.

Defect Type	Intervention Level	Response Time
Guard and Safety Fence Maintenance	Guard and safety fence with a panel or component affected so as to render ineffective.	3 months
Delineation & Line marking	Line marking segments clearly missing or Pavement Marking >50% not clearly visible in daylight conditions.	15 months all road hierarchies
Road and Footpath Retaining Walls	Road and footpath retaining walls with a panel or component affected so as to render ineffective.	6 months
Kerb and channel	Step or misalignment in kerb and channel >50mm.	3 months

Emergency Response

In addition to the above, the following list of specific hazards that warrant an Emergency Response.

Note: This does not apply to road hierarchy 4E – Fire Access Track



Hazard	Response Time
Hazardous material such as oil, fuel, concrete or dangerous chemicals spilt on traffic lane.	
Isolated section of loose stones greater than 10 m ² on a sealed road surface in roads sealed/resurfaced in the week prior to defect identification.	
Water flowing across at least one of the general wheel paths at a depth of 50mm or greater.	
Road Pavement Deficiency greater than 150mm deep within one square metre	
Any object obstructing ability to travel on the road.	
Significant erosion of road pavement due to culvert failure	
Pit lids missing or where obvious signs of significant loss of structural integrity	



11.2

Footpath Service Standards



Temporary Measures refers to the installation of temporary safety measures such as Safety Barricading and/or signage.



All response times noted below are in working days.


Concrete Footpaths Repair Treatments may include: bay replacement, grinding, ramping.				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
Trip Hazard Vertical displacement of 25mm or greater	Repair within 3 months	Repair within 12 months	Repair within 18 months	
Cracking Crack with an average width > 20mm	Repair within 3 months	Repair within 12 months	Repair within 18 months	



ASPHALT FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
<p>Trip Hazard Height displacement >25mm</p>	Repair within 3 months	Repair within 12 months	Repair within 18 months	
<p>Depression < 1.2m in length and Vertical displacement measured > 50mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center over depression and measure greatest vertical displacement.</p>	Repair within 3 months	Repair within 12 months	Repair within 18 months	
<p>Hump <1.2m in length and Vertical displacement measured > 100mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center on hump and measure greatest vertical displacement at either end.</p>	Repair within 3 months	Repair within 12 months	Repair within 18 months	

ASPHALT FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
Cracking Crack width >20mm	Repair within 3 months	Repair within 12 months	Repair within 18 months	

GRAVEL FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
<p>Potholes / Erosion Vertical displacement > 50mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center over pothole/erosion and measure greatest vertical displacement.</p>	Repair within 3 months	Repair within 12 months	Repair within 18 months	
<p>Hump length < 1.2m and Vertical displacement measured >100mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center on hump and measure greatest vertical displacement at either end.</p>	3 months	Repair within 12 months	Repair within 18 months	
<p>Vegetation Encroaching >25% in width & > 20m in length</p>	Repair within 12 months	Repair within 12 months	Repair within 18 months	

TIMBER FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
Trip Hazard Height displacement >25mm	3 months	Repair within 12 months	Repair within 18 months	
Missing Plank missing plank	5 days	Repair within 5 days	Repair within 5 days	

TIMBER FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
Deformation Over 1.2m and vertical displacement > 50mm	Repair within 3 months	Repair within 12 months	Repair within 18 months	

PAVER FOOTPATHS				
Defect	Response Time by Intervention and Hierarchy***			Typical Photographic Example
	High	Medium	Low	
<p>Trip Hazard Height displacement > 25mm</p> <p>Repair activity: Re-set pavers – Option 1 Replace pavers – Option 2</p>	<p>Make Safe in 3 working days</p> <p>Repair within 3 months</p>	<p>Repair within 12 months</p>	<p>Repair within 18 months</p>	
<p>Hump length < 1.2m and Vertical displacement measured >100mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center on hump and measure greatest vertical displacement at either end.</p>	<p>Repair within 3 months</p>	<p>Repair within 12 months</p>	<p>Repair within 18 months</p>	
<p>Depression < 1.2m in length and Vertical displacement measured > 50mm</p> <p>Measurement Methodology: Place 1.2 m metre straight edge center over depression and measure greatest vertical displacement.</p>	<p>Make Safe in 3 working days</p> <p>Repair within 6 months</p>	<p>Repair within 12 months</p>	<p>Repair within 18 months</p>	

***Response time runs from time Council has recorded the defect.

11.3

Bridge Service Standards

Defect Type	Intervention level	Response Time
Vehicular Bridges & Major Culverts	Visible defects on components likely to affect users or public safety identified as part of the Bridge, Major Culvert, Pedestrian Bridges, Timber Boardwalks and scheduled inspection program.	As per Bridge, Major Culvert, Pedestrian Bridges, Timber Boardwalks and scheduled maintenance program.
Pedestrian Bridges, Timber Boardwalks and Viewing Platforms		

11.4 Drainage Service Standards

1. Response times apply only after a nominated Council inspector has inspected the request or has undertaken a scheduled inspection.
2. Resident is considered responsible for the upstream side of the legal point of discharge including connections to the legal point of discharge, unless it can be proved that council's actions have in the recent past interfered with the residents drains and connections.

Pipes and Pits

Reactive Maintenance - Unplanned Maintenance of Stormwater Pipes and Pits

Sub-Activities	Intervention Level *	Action/Response Times	
Clear Blockages General minor repairs	Blocked line reported by incident or inspected through CCTV.	If flooding roadside	Respond within 48 hours to minimise damage

* Schedule managed by Drainage Supervisor.

* Capacity issues associated with Melbourne Water outfall drains obstructing water flow from council drains will be referred to Melbourne Water for action