LODDON SHIRE COUNCIL

ROAD MANAGEMENT PLAN 2021

LODDON
SHIRE

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This document is available in alternative formats (e.g. larger font) if requested.

CONTENTS

1 PURPOSE

The purpose of this document is to provide details of Council's policies, service standards and actions relating to the management of its road and footpath network, specifically the routine inspection and maintenance of road and footpath related assets.

Part 4, Division 5, section 49 of the Road Management Act 2004 enables Council to produce a Road Management Plan (RMP).

Section 50 of the Road Management Act 2004 states:

"The purposes of a Road Management Plan are having regard to the principal object of road management and the works and infrastructure management principles:

- 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
- to set the relevant standard in relation to the discharge of duties in the performance of those road management functions".

In accordance with Section 39 of the Road Management Act, this plan will be regarded as a policy decision by Council in relation to the performance of its statutory road management function. As a result, it may be used in the defence of any common law proceedings in relation to the exercise of that road management function.

2 BUDGET IMPLICATIONS

The various actions and levels of service identified for delivery under this plan require the provision of both operational (e.g. staff and equipment) and financial resources. In order for Council to achieve full compliance with its RMP, service level, inspection or intervention targets must be appropriately matched to available resources.

Where it is identified that operational capacity may be insufficient to meet the required demands imposed by this plan, allocation of additional resources or alternatively modification of the plans requirements may be necessary to ensure service level targets are achievable and sustainable.

Resources deployed to achieve the objectives and deliverables of the RMP are predominately provided through the Works Department, and subsequently funded under the local road maintenance provisions within Council’s annual budget.

As part of the annual budget development process, each year a review of road maintenance resource demand and distribution is conducted. This review examines a number of factors in determining appropriate resource levels to facilitate achievement of the RMP objectives. Such factors include:

- historical compliance against service targets
- competing resource demands or works commitments e.g. maintenance work vs. capital renewal
- alternative work methodologies, treatments or productivity improvement opportunities
- staff migration or vacancy levels.

A subsequent road maintenance budget bid is prepared annually by the Manager Works and submitted for Council consideration as part of the budget development process.

3 RISK ANALYSIS

Determination of appropriate inspection regimes, intervention timeframes and service levels as specified within the RMP, is largely based upon the identification of risks associated with the existence or operation of various road elements including pavements, trees, level crossings and footpaths.

In assessing the level of risk, consideration is given to the likelihood of road users encountering adverse road conditions, e.g. defects such as potholes or fallen trees, and the likely consequence of such exposure. The combination of identified risk and availability of resources is then used to establish appropriate intervals between routine inspections as well as the determination of acceptable timeframes to undertake necessary repairs or remedial works.

In developing the RMP, Council has given careful consideration to the setting of intervention standards (i.e. at what point Council will undertake repair works, e.g. size and depth of potholes) and response times for rectification of defects (i.e. how long does Council have to undertake the required repair), so as to fulfil general community expectations and control the level of risk to road users.

The plan also provides a mechanism to deal with exceptional circumstances where the requirements of the plan cannot be met, such as during times of natural disaster. In general the plan establishes maintenance standards, inspection regimes and response times which are affordable, deliverable and responsible.

The RMP may provide Council with a defence mechanism against possible litigation in relation to the execution of its road management functions.

4 COSTING AND FUNDING OF ACTIONS

The ability to accurately cost deliverables under the RMP is somewhat compromised by the vast, variable and for the most part unpredictable nature of the road network. To a large extent the overall condition of the road network, including ancillary assets such as footpaths, is accurately known and regularly assessed, however the maintenance effort required across the network is subject to rapid or significant fluctuation.

Problems in estimating required funding to deliver the RMP stem from the variable rate of pavement or asset deterioration due to such contributing factors as:

- weather (drought, flood, rain, seasonal variations)
- topography and geology (e.g. plains vs. hills or clay vs. sand)
- surrounding land use and development
- changing transport trends (e.g. larger trucks and varying transport trends).

Meeting the requirements specified within the RMP will undoubtedly incur significant operational expense. Monitoring of compliance against RMP targets as well as operational expenditure on road maintenance activities is routinely conducted. These measures provide an indication as to how well the targets specified within the RMP match resource availability.

Historical trends are also utilised in setting the annual road maintenance budget as discussed in section 2 above.

5 INTRODUCTION

5.1 Contents of Road Management Plan

A Road Management Plan, under the Ministerial Code of Practice - Road Management Plans should include:

- a description of the types of infrastructure for which a road authority is responsible
- a description of the inspections required for different types of road infrastructure
- the standard or target condition to be achieved in the maintenance and repair of different types or road infrastructure
- details of the management system, which is established or is to be established and and implemented by the road authority to discharge its duty to inspect, maintain and repair infrastructure for which it is responsible.

5.2 Scope of assets included

This plan is applicable to the following assets (as at 30/6/2021), for which Council is the Responsible Road Authority:

954	km	sealed road and street pavements
2577	km	unsealed gravel road and street pavements
1228	km	formed or unformed roads and streets
219	No.	bridges, major culverts and structures
37	km	constructed footpaths
62	km	kerb and channel

These assets are:

- listed in Council's infrastructure asset registers
- located on public roads, listed in the Register of Public Roads, for which Council is the Coordinating Road Authority.

This Plan also applies to road and footpath assets, at other locations where Council is the Responsible Road Authority, as determined by section 37 of the Road Management Act 2004 and the Code of Practice for Operational Responsibility for Public Roads. For the purposes of this code "urban area" is defined in Section 3 - Definitions in the Road Management Act 2004.

This plan is not intended to apply to un-constructed, private or non-Council assets such as foot trodden tracks, private driveways on government road reserves or roads on private land.

This plan does not include other infrastructure on roads as detailed in 7.12 Other infrastructure on roads.

This plan does not include highways, arterial roads and main roads for which VicRoads is the coordinating authority. A list of such roads is detailed in 12.8. However, this plan is applicable to the footpaths in the town within these road reserves.

5.3 Stakeholders

Stakeholders with an interest in the use or management of municipal public roads and road related infrastructure include:

- the general community
- residents and businesses adjoining the road network
- pedestrians, including those with disabilities and the elderly with restricted mobility
- users of a range of miscellaneous smaller, lightweight vehicles such as motorised buggies, wheel chairs, prams and bicycles
- vehicle users such as trucks, buses, commercial vehicles, cars and motor cycles
- tourists and visitors to the area
- emergency authorities such as Police, Fire, Ambulance and SES
- utilities as prescribed in Section 3 of the Road Management Act 2004
- Council as the Responsible Road Authority.

5.4 Duty of the road user

Under the Road Management Act 2004 and the Road Safety Act 1986, road users have an obligation to drive or use roads in a safe manner having regard to the relevant conditions/factors.

Section 17A, Obligation of road users, of the Road Safety Act 1986 specifies that:

1. A person who drives a motor vehicle on a highway must drive in a safe manner having regard to all relevant factors.

2. A road user other than a person driving a motor vehicle must use a public highway in a safe manner having regard to all relevant factors.

The relevant factors include (without limiting the generality):

- the physical characteristics of the road
- the prevailing weather conditions
- the level of visibility
- the condition of any vehicle the person is driving or riding on the highway
- the prevailing traffic conditions
- the relevant road laws and advisory signs
- the physical and mental condition of the driver or road user.

A road user must:

- take reasonable care to avoid any conduct that may endanger the safety or welfare of other road users
- take reasonable care to avoid any conduct that may damage road infrastructure and non-road infrastructure on the road reserve
- take reasonable care to avoid conduct that may harm the environment of the road reserve."

5.5 Property owner obligations

5.5.1 Driveways

The Road Management Act 2004, provides that a road authority is not liable for cost of construction or maintenance of private driveways, on road reserves, that provide access to the public road from adjoining land. Landholders shall be required to obtain consent for construction or reconfiguration of driveways from the Coordinating Road Authority or Council.

Driveways in town areas are the responsibility of the landholders, specifically the:

- slabs or culverts over kerb and channel
- layback through kerb
- driveway between kerb and edge of footpath
- driveway infill between edge of footpath and property line.

In rural areas and in towns where no kerb and channel exists, landholders are responsible for:

- entrance culverts over open drains
- driveway from edge of road pavement to property line (footpath is excluded in town area).
- lengths of driveway which may extend along a government road reserve for the purposes of accessing a preferred property entrance point as opposed to the nearest point to the existing recognised road network.

The landholder is responsible for maintaining the driveway, and the immediate surrounds impacted by the driveway, in a safe condition.

5.6 Terms and definitions

Unless the context otherwise requires, terms used in this Road Management Plan have the same meaning as defined in the Road Management Act 2004.

For the purpose of this plan the following additional terms are defined:

"Defect" is a localised deficiency or fault in a sub-asset e.g. pothole.

"Intervention level" is the point at which it is determined that a defect has deteriorated beyond an acceptable level and requires rectification e.g. nominal depth or diameter of pothole.

"Hazard" is a defect or circumstance:

- which may impact on road user safety or
- has a required response time of 72 hours.

“Inspection frequency” is the period of time between the due dates of successive inspections.

“Patrol area” is a designated area within which the maintenance activities of a specific work group are undertaken. There are four work groups operating within Loddon Shire.

“Inspection areas” are subdivisions of Patrol areas, within which roads are grouped for coordination of proactive inspections.

6 ASSET MANAGEMENT POLICY FRAMEWORK

6.1 Asset Management Policy

Council’s Asset Management Policy outlines a framework for the management of Council's substantial asset base in a sustainable, co-ordinated and structured way.

Council will maximise the potential of infrastructure through efficient and effective asset management practices to meet its responsibilities to provide a level of service to the community that responds to its needs and to provide and maintain community infrastructure in a condition that supports the services provided.

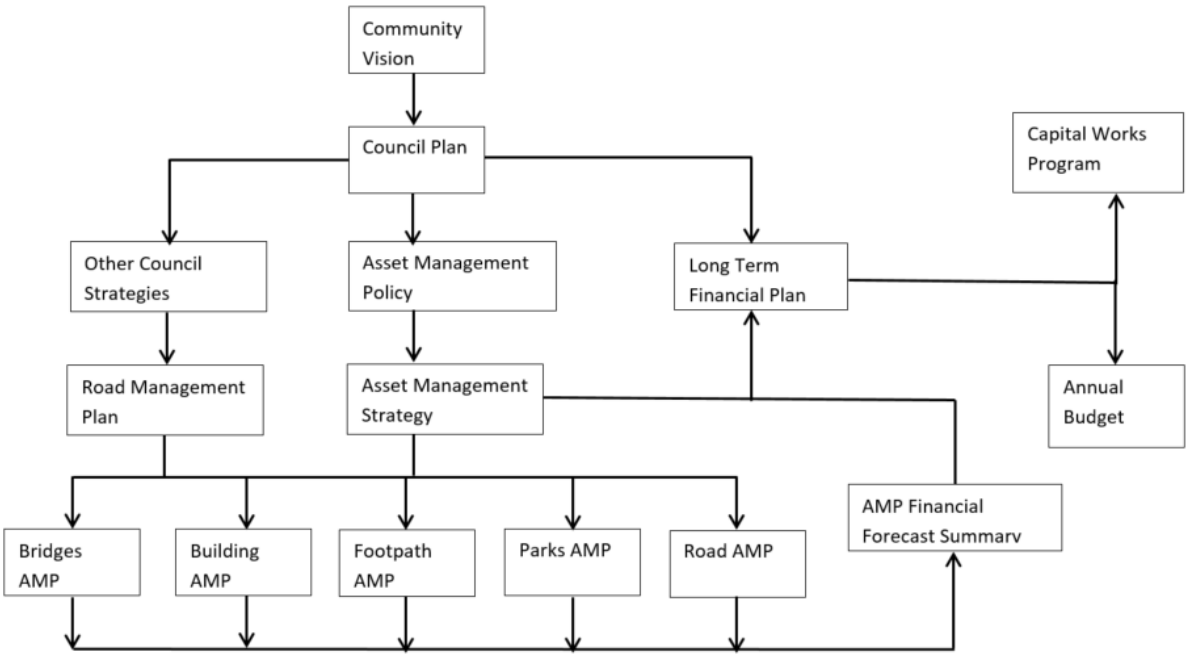
6.2 Council Plan

The Council Plan outlines the Loddon Community Vision and Council mission. The development and implementation of a responsible road management plan is critical in performing the role and achieving the outcome as outlined in the Loddon community vision and Council mission of the Council Plan.

6.3 Relationship with other strategic documents

The Road Management Plan is a key component of Council’s planning and asset management process. Figure 1 below illustrates the relationship between the Road Management Plan and other strategic and operational Council documents.

Figure 1 - Relationship between Road Management Plan and other Council strategic documents.



6.4 Asset management budget and program development

Funding for local road infrastructure competes against a range of other Council services including HACC, Maternal Child Health, Regional Agribusiness, Economic Development, Tourism, Local Law, Urban Drainage, Waste Management, Recreation and Regional Library Services.

Annual funding for the various Council services is based on the Long term Financial Plan, modified in consideration of current priorities, community and other forecast needs.

When developing content for capital infrastructure or road maintenance programs, consideration is given to Council's Risk Management Policy, with priority given to projects which meet one or more of the following criteria:

- address high priority safety risks
- maximise the life of the asset
- reduce operating cost of the asset
- meet agreed service levels
- fit with community plans
- achievable in consideration of Council's resource constraints.

The adopted annual budget provides the financial resources for funding road infrastructure maintenance.

7 REGISTER OF PUBLIC ROADS

7.1 Road and street hierarchy

Council road assets are classified on a functional/surface type basis for Rural Roads and Town Streets.

Local Town Streets change to Rural Roads at the 100kph speed signs, or where no 100km/hr speed sign exists, at the end of the built up area.

See Appendix 12.1 Local Rural Roads and Town Streets Hierarchy

7.2 Footpath hierarchy

Council footpaths are classified on a functional basis.

See Appendix 12.2 Footpath Hierarchy.

7.3 Keeping a road register

The Road Management Act 2004 section 19 requires that "A road authority must keep a register of public roads specifying the roads in respect of which it is the coordinating road authority."

With respect to local roads, The Road Management Act 2004 section 17 (3) requires that "the relevant coordinating road authority must register on its register of public roads a road in respect of which the road authority has made a decision that the road is reasonably required for general public use."

7.4 Availability of Register of Public Roads

The Register of Public Roads is available for inspection, free of charge, during normal business hours at the Shire Office, 41 High St, Wedderburn and on Council's website www.loddon.vic.gov.au.

7.5 Criteria for roads included in Register of Public Roads

Criteria for a road to be included in Council's Register of Public Roads:

- Council must be able to be deemed the Coordinating Road Authority for the particular road, and
- the road is 'reasonably' required for general public use
- roads which are located on crown land other than road reserves, where Council enters into an arrangement with the relevant Committee of Management under section 15 of the Crown Land (Reserves) Act 1975 to transfer responsibility of the road to Council

7.6 Criteria for roads excluded from Register of Public Roads

Roads meeting one or more of the following criteria are excluded from Council's Register of Public Roads:

- sections of road with gates or cross fences
- sections of road occupied under un-used road licence, or the like
- assets not directly associated with a road area, e.g. pathways on crown land, access roads located on land other than a road reserve such as recreation reserves access or off-road trails
- roads which are located on crown land other than road reserves, but which are not transferred to Council for operational responsiblity
- roads not reasonably required for general public use, including road reserves where there is no evidence of regular vehicular use, private roads, etc.

7.7 Contents of Register of Public Roads

The Register of Public Roads contains a list of roads in alphabetic order which includes:

- roads

- streets
- laneways

all of which are limited to the extent identified in Council's asset registers.

The Register of Public Roads contains the following information:

- road name
- location and extent
- date road became a public road
- classification within Road Hierarchy
- any agreements with other authorities regarding responsibility
- details of all changes to the Register and date of any such changes.

The Register of Public Roads is updated from time to time.

7.8 Unused (paper) roads

These are road reserves that are recorded on survey maps. They typically comprise dirt tracks. None of these roads are included in Council's Road Register. Council intends to progressively notify the Department of Environment, Land, Water and Planning (DELWP) that these roads are no longer required for public use and where appropriate recommend control revert back to the Crown Land manager.

7.9 Other authorities' roads within the municipality

State arterial roads including highways are included on VicRoads Register of Public Roads and are listed in 12.8.

DELWP roads and tracks and Parks Victoria roads and tracks will be on the relevant State Authority Register of Public Roads.

For state arterial roads through towns the operational responsibility is shared between VicRoads and Council. Generally through towns, VicRoads has the authority for the through traffic lanes, unobstructed flanks, kerbs and side drains, with the balance of operational responsibility allocated to Council. The Code of Practice for Operational Responsibility for Public Roads provides more detailed demarcation of responsibilities.

For arterial roads in rural areas, VicRoads is both the Coordinating Road Authority and Responsible Road Authority.

7.10 Boundary roads with adjoining municipalities

Boundary Agreements with adjoining municipalities were formulated and adopted in the late 1990s. Because all boundary roads are rural in nature there are no assets, such as footpaths, on the same section of boundary road reserve where operational responsibility needs to be shared. A more practical approach was adopted, with agreements being reached to equitably allot operational responsibility for full road width for specific sections of boundary roads to each municipality.

The sections of boundary roads for which Council is the Responsible Road Authority are included in Council's Register of Public Roads. Those sections for which Council is not the Responsible Road Authority are listed in the adjoining municipality's Register of Public Roads.

The boundary with Northern Grampians Shire is the centre of the Avoca River, over which there are several bridges. Northern Grampians Shire undertakes the operational responsibilities for these bridges, with costs being equally shared with Council.

Part of the boundary with Campaspe Shire is the western bank of the Bendigo Creek and Mount Hope Creek. The bridges over the Bendigo Creek are therefore solely in Campaspe Shire. Thus Campaspe Shire Council is the Coordinating and Responsible Road Authority for those structures.

Council adopted an agreement with City of Greater Bendigo (CoGB) that they have operational responsibility for boundary roads, bridges and culverts from the intersection of Lakeys Road and Douglas Road in Shelbourne up to the intersection of Fitzpatricks Road and Loddon Valley Highway in Campbells Creek. Boundary roads north of this intersection are maintained by Council with an exception of Elmore–Raywood Road which will be maintained by CoGB.

7.11 Railway level crossings

The rail authority is responsible for repair of the road pavement, any lights or boom gates, and all “cross bucks”, regulatory and width marker signs within 3.0m of the outside rail and as detailed in Safety Interface Agreements between road and rail authorities .

Council maintains line marking and advanced warning signs on the approaches to railway level crossings as per AS 1742.7:2007 – Manual of uniform traffic devices Part 7: Railway Crossings and the road surface beyond 3.0m from the outside rail, as detailed in Safety Interface Agreements between the road and rail authorities. Council also maintains intersection sight distance clearance within the road reserve. In some cases VicRoads is responsible for warning signs where arterial roads running parallel and adjacent to the railway line are required to have side road signage. VicRoads are the Coordinating Road Authority for major traffic control devices including regulatory signs on local and arterial roads level crossings.

7.12 Other infrastructure on roads

The following infrastructure may be located on various roads and streets:

1) Utility Authorities’ assets including assets for, town water supply, sewerage, power supply and telecommunications which are dealt with as described in the Road Management Act 2004, the Code of Practice for Management of Infrastructure in Road Reserves, and the Road Management (Works and Infrastructure) Regulations 2005
2) private and company car parks on road reserves
3) car parks and entrances to hospitals, schools, public halls, etc.
4) private weighbridges and access to those facilities
5) other authority’s weighbridges and access to those facilities
6) other private and company assets.

For infrastructure described in items 2, 3, 4, 5, and 6 above the 'owners' of those assets are the responsible authority for those assets and are treated as infrastructure managers or works managers under the Road Management Act 2004.

7.12.1 Other authorities bridges, culverts and channels on road reserves

Across the local road network numerous open channels and drains run parallel to or pass under local roads. These channels and drains are owned or operated by water and irrigation authorities, private owners, or private schemes, generically referred to here as ‘other asset owners’.

The channels and drains are the responsibility of the ‘other asset owner’.

Section 3 Definitions, in the Road Management Act 2004, exclude bridges and culverts over water authorities channels or drains from the definition of road infrastructure, hence relieving Council of responsibility and directing responsibility to the ‘other asset owner’.

In section 48 – Bridges, of the Code of Practice for Operational Responsibility for Public Roads under the Road Management Act 2004, the other authority is the owner of bridges and culverts over its channels and drains.

Under this section Council is responsible for maintenance of the road surface and road related infrastructure.

Table 1- Summary of responsibilities for bridges over water authority channels and drains

Component	Maintenance	Rehabilitation, replacement or improvement
Bridge or culvert	'Other Asset Owner'	'Other Asset Owner'
Structure under road	'Other Asset Owner'	'Other Asset Owner'
Road warning signs	Loddon Shire Council	Loddon Shire Council
Road surface	Loddon Shire Council	Loddon Shire Council
Road pavement	Loddon Shire Council	'Other Asset Owner' - where result of bridge defect. Loddon Shire Council - where extensive pavement upgrade
Bridge railing	Loddon Shire Council	'Other Asset Owner'
Approach guard railing	Loddon Shire Council	'Other Asset Owner'

8 LEVELS OF SERVICE

8.1 Community levels of service

A community satisfaction survey is undertaken annually. This survey provides Council with the community's expectation regarding all the services Council provides including roads and footpaths.

The Community Level of Service table included below is an interpretation of the results of community satisfaction surveys and other various public consultations taking into account affordability and resources available for road maintenance.

Table 2 – Community levels of service for maintenance

Characteristic	Level of service	Level of service target	Strategy
Accessibility	Continuous access available at all reasonable times	Continuous access is available on collector and access roads except during unforeseen incidents or during emergencies.	Comply with specified levels of service within this plan and Council's Road Asset Management Plan.
Road Safety	Safety of road network maintained and improved.	All road assets inspected in accordance with program and faults rectified within tabled response times.	Implement provisions of Road Management Plan.

Characteristic	Level of service	Level of service target	Strategy
Responsiveness	Responses to customer complaints are prompt	Customer complaints and works requests are responded to within target response times in RMP and timeframes in Customer Service Charter	Implement prioritising and recording provisions of Road Management Plan
Quality	Roads maintained to maintenance quality targets.	Roads maintained to standards set in Intervention Standards and Response Times	Maintenance undertaken to targets in Road Management Plan
Affordability	Provide road maintenance in an efficient, cost effective manner.	Road maintenance program delivered within budget.	Monitor Road Management Plan and Budget and review as required.

8.2 Technical levels of service

8.2.1 Maintenance levels of service

The Maintenance Level of Service for the local road network is detailed within:

- inspection regimes
- defect intervention and response tables
- maintenance grading program.

Inspection frequency tables may be found at Appendix 12.3 - Road and Street Inspection Regime and Appendix 12.4 - Footpath Inspection Regime. These tables provide details regarding the following levels of service:

- inspection type
- inspection frequency for particular Road Hierarchies.

Defect intervention and response tables may be found at Appendix 12.6 - Defect Intervention Levels and Response Times for Roads and Bridges and Appendix 12.7 - Defect Intervention Levels and Response Times for Footpaths. These tables provide the following levels of service detail:

- type of defect
- defect intervention level
- rectification response time
- the maintenance grading program (See Section 9.4.3) provides details of grading frequency for individual road hierarchies.

Maintenance is limited to the extent detailed within Table 6 in section 9.

9 MAINTENANCE MANAGEMENT SYSTEM

9.1 Maintenance management system

The Road Management Act 2004 provides for Council 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.

Council's Maintenance Management System involves a process of:

- enquiry
- inspection
  - proactive
  - safety - hazard
  - reactive
- prioritising identified works
- programming maintenance works
- recording
- review

The maintenance management system is summarised in figures 2 and 3, of this plan.

Council uses the application “Reflect” developed by Asset Edge as its Maintenance Management System for roads, bridges, streets and footpaths. Reflect enables:

- scheduling and recording of both programmed and reactive field inspections
- recording of defects
- prioritising of rectification works
- issuing works orders
- signing off on repairs
- reporting on compliance with inspection regimes and repair response times.

9.2 Inspections

Inspections are focused towards identification of:

- defects for inclusion in maintenance programs
- hazards requiring urgent response.

Inspections on roads, streets, bridges and footpaths undertaken include:

- safety/ hazard Inspections
- defect Inspections.

Inspection regimes were determined by reviewing past inspection practices and balancing a responsible approach with affordability.

The specified inspection regimes are considered appropriate as Council’s local sealed rural roads have relatively low traffic volumes which range from less than 100 vehicles per day (vpd) to 500 vpd.

Formed and Unformed Roads are not proactively inspected.

Safety/hazard Inspections are undertaken concurrently with programmed road defect inspections and on a reactive basis in response to customer requests.

Inspection types and inspection frequencies for each road and footpath hierarchy and for bridges are detailed in Appendix 12.3 - Road and street inspection regime and Appendix 12.4 - Footpath inspection regime.

9.2.1 Safety/hazard inspections

Hazards are identified during nominated defect inspection cycles and have 72 hour response time in the defect intervention and response tables as seen within Appendix 12.6 - Defect intervention levels and response times for roads and bridges and Appendix 12.7 - Defect intervention levels and response times for footpaths.

9.2.2 Defect inspections

Defects to be identified during nominal inspections are as listed in the defect intervention level and response tables in appendices 12.6 and 12.7. Defects detected are recorded in the field using “Reflect” application via mobile devices.

9.2.3 Railway interface inspections

Programmed railway crossing inspections of approaches to railway crossings on local roads are undertaken at intervals detailed at Appendix 12.3 - Roads and bridges inspection regime. Inspections confirm that the items that are Council’s responsibility, as detailed in an inventory for railway crossings, are in place, in serviceable condition and compliant with AS 1742.7:2007 – Manual of uniform traffic devices Part 7: Railway Crossings.

9.3 Risk assessment of maintenance works

Levels of risk for maintenance works are assessed based on:

- the likelihood of an incident and
- the associated consequence.

It is a reasonable assumption that defects/hazards on roads with higher usage have a higher likelihood of an incident. In developing the risk matrix for inclusion in the Road Management Plan, traffic volume ranges expected in Victorian municipalities were applied to Council’s Corporate Risk Matrix as per the following table.

Table 3 - Likelihood for traffic ranges

Traffic volume range (vehicles per day)	Likelihood
5000 plus	A (almost certain)
1000-5000	B (likely)
500-1000	C (moderate)
100-500	D (unlikely)
0-100	E (rare)

As road traffic volumes on Council’s local road network are generally below 500 vehicles per day, the lower two rows only of the matrix apply.

Utilising principles listed in the “Risk Management Framework – ISO 31000” under principle 3, the corporate risk matrix has been tailored to suit road maintenance purposes as follows:

- by using the lower two lines of the corporate risk matrix
- by the introduction of additional levels of risk (medium low and very low) to provide a more comprehensive spread of response times.

The Risk Matrix adopted for road maintenance is shown at Appendix 12.5 - Risk matrices for roads, streets and footpaths.

Control actions and response times for each level of risk are as per the action table at appendix 12.5.

All defects associated with road maintenance have been identified for each road hierarchy. A qualitative risk analysis has been carried out to assess the level of risk for all defects, recognising any circumstances that would elevate the level of risk for a particular defect.

Response times for the levels of risk for each defect are included on the defect intervention and response table shown in appendices 12.6 and 12.7.

In the table in appendix 12.6 - Defect intervention levels and response times for roads and bridges, various hierarchies have been grouped to streamline maintenance management practices. Groupings are as shown in table 4.

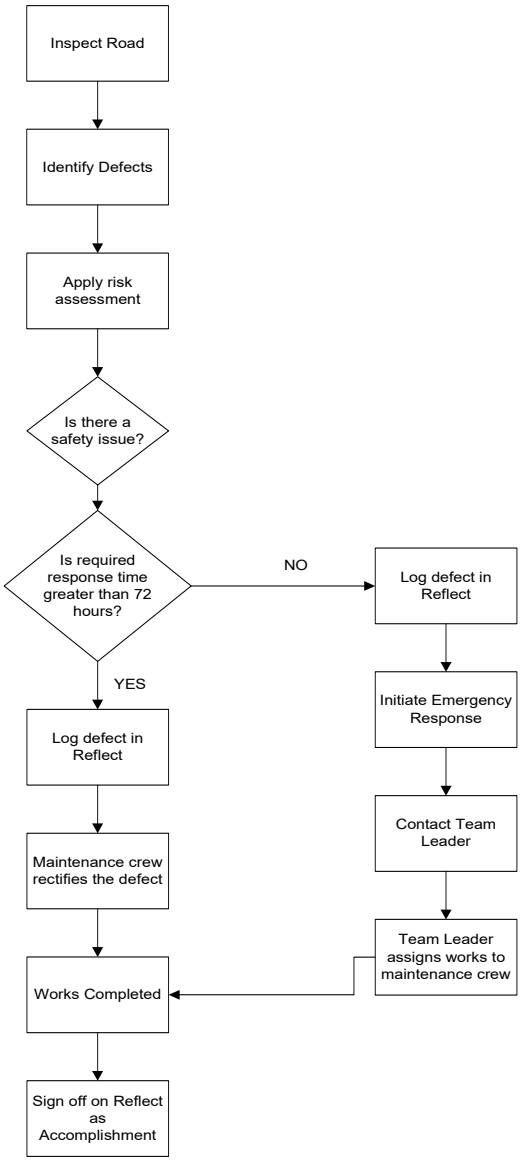
Table 4 - Road hierarchy groupings

Road grouping	Road hierarchies included
Sealed	Rural Sealed Collector (RSC) Rural Sealed Access (RSA) Town Sealed Collector (TSC) Town Sealed Access (TSA)
Gravel collector and access	Rural Gravel Collector (RGCO Rural Gravel Access (RGA) Town Gravel Collector (TGC) Town Gravel Access (TGA)
Gravel minor	Rural Gravel Minor (RGM) Town Gravel Minor (TGM)
Formed	Rural Formed (RF) Town Formed (TF)
Unformed	Rural Unformed (RUF) Town Unformed (TUF)

9.4 Proactive maintenance

Proactive Maintenance is carried out as illustrated in the flow chart below.

Figure 2 - Proactive maintenance



Designated road inspectors undertake formal inspections to identify defects and hazards on rural roads and town streets, at frequencies shown in appendix 12.3 - Road and street inspection regime and in appendix 12.4 - Footpath inspection regime. Inspections are recorded using Reflect on mobile devices.

If the required response time is 72 hours i.e. the defect is a hazard requiring treatment as an emergency response, section 9.4.2 outlines the required emergency response.

On sealed roads the extent of potholes, edge repairs, pavement failures, minor reseals and regulations are painted/marked on the sealed surface at the time of identification.

Where defects or hazards relating to other authority's infrastructure are encountered, the quantity and location is recorded, and the responsible authority is notified.

9.4.1 Defect intervention levels and response times

Tables detailing defect intervention levels and response times are set out in appendix 12.6 - Defect intervention levels and response times for roads and bridges and appendix 12.7 - Defect intervention levels and response times for footpaths.

Response times have been determined in consideration of financial and resource constraints.

Routine maintenance pavement repairs are generally undertaken by Council staff using the patrol truck and road maintenance unit. This is achieved using multiple applications of bituminous emulsion and sealing aggregate.

9.4.2 Emergency response

Emergency response may be activated during proactive safety-hazard inspections or reactive inspections following customer reports.

Public contact for 24 hours emergency response is by telephone on 5494 1200.

Where the defect is a hazard (rectification response time of 72 hours), emergency response is instigated.

In situations where circumstances prevent a hazard being rectified within the time specified in the defect intervention level and response tables, appropriate warning of the hazard is provided until the repair can be completed.

Appropriate interim warning measures may include:

- provision of warning signs or barricades
- traffic control action
- diverting traffic around the site
- installation of a temporary speed limit
- lane closure
- closure of the road to use by certain vehicles (e.g. load limit)
- road closure.

In extreme circumstances such as during times of natural disaster, the nominated response times or interim measures may not be achievable due to resource limitations or lack of accessibility.

9.4.3 Maintenance grading program

The maintenance grading program operates with inspection and grading frequencies for road hierarchies as listed in Table 5.

Table 5 - Maintenance grading frequency

Road hierarchy	Grading frequency
All sealed road shoulders	As identified through road and street inspection regime
Gravel Collector roads	Inspected to confirm if grading is required twice per year
Gravel Access roads	Inspected to confirm if grading is required twice per year
Gravel Minor roads	Inspected to confirm if grading is required once per year
Formed roads	Upon request and as resources permit
Unformed roads	Upon request and as resources permit
Rural Fire Access roads	As per fire access roads grading program or upon request

The maintenance grading program is set up with individual roads listed for grading in nominated quarters of the year. Roads to be graded are grouped by locality within individual inspection areas in each patrol area.

The Works Coordinator sets up, coordinates and monitors progress of the maintenance grading program. Team Leaders allocate roads to be graded to individual grading crews.

Prior to commencing grading on an individual road the road is inspected by the Team Leader or grader driver to confirm that grading is required, based on the intervention standards in appendix 12.6 - Defect intervention levels and response times for roads and bridges.

Completed maintenance grading is recorded Reflect and updated by Works Department. For each individual road the grading crew identify as requiring grading, the date on which grading was undertaken is recorded.

If the inspection demonstrated no grading was currently required and the condition of the road is likely to remain satisfactory through to the next cycle, then the date of the inspection and the inspector's identity is recorded and the treatment shall be deferred.

If a road requires additional maintenance grading outside the maintenance grading program a defect is recorded and programmed in accordance with the defect intervention levels and response times through Reflect and completed works are signed off.

9.5 Reactive maintenance

9.5.1 Safety/hazard inspections

Safety/hazard inspections may also be undertaken on a reactive basis in response to customer requests, as described in 9.4 - Proactive maintenance and 9.2.1 - Safety /hazard inspections.

9.5.2 Routine maintenance and customer requests

Refer to Figure 3 - Reactive maintenance on the following page.

Reactive maintenance may be undertaken in response to reported problems or complaints from the public or Council staff on:

- sealed roads and streets between formal inspections
- gravel roads and streets between formal inspections
- formed and unformed roads and streets, where there is no formal inspection process
- footpaths
- bridges.

Council has implemented "Merit", a Customer Request Management (CRM) system which is utilised to log customers' requests and assign it to the respective Team Leader.

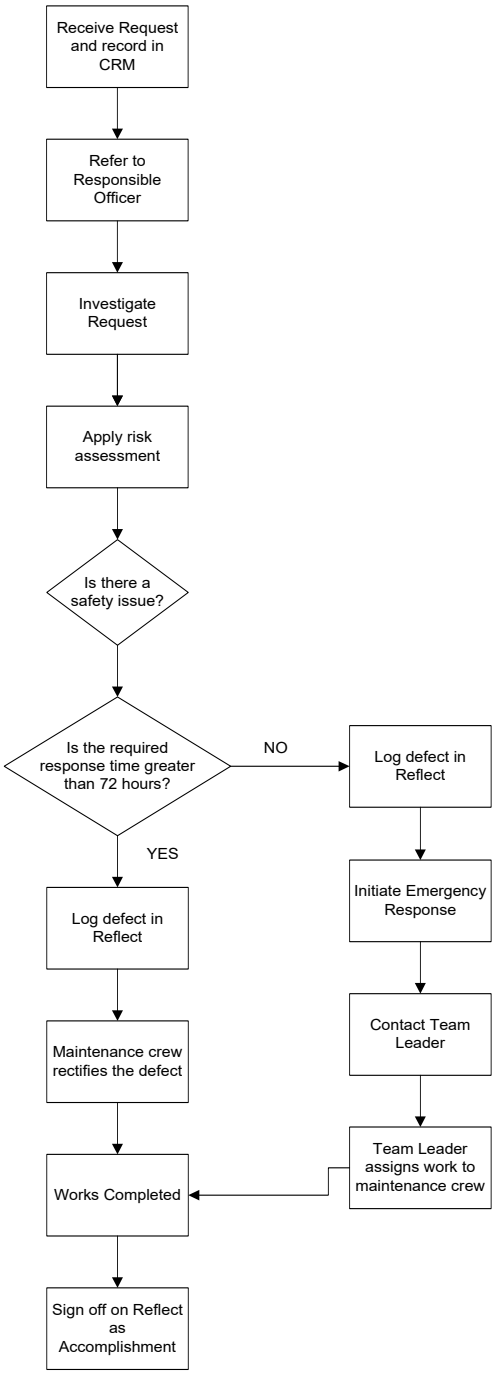
Reported complaints and problems may emanate from:

- customers through:
    - verbal reports
    - letters
    - telephone calls
- inspections by Team Leaders
- observations by other staff

An outline of the reactive complaint process is shown in Figure 3 - Reactive Maintenance.

Where defects or hazards relating to other authorities infrastructure are reported or observed, the quantity and location is recorded, and the responsible authority is notified. Data is stored in the CRM and is available for retrieval as required.

Figure 3 - Reactive maintenance



9.5.3 Reactive maintenance grading of gravel roads

Complaints regarding defects or hazards on gravel roads which are reported between scheduled inspections and the next programmed maintenance grading under the Maintenance Grading Program, are assessed as to whether immediate intervention is required as outlined in the figure 3 “Flow chart 2 Reactive maintenance”.

9.5.4 Reactive maintenance grading of formed and unformed roads

Complaints regarding defects or hazards on formed roads identified between maintenance grading activities under the Maintenance Grading Program will be inspected and graded on a reactive basis as per 9.5.2 “Routine maintenance and customer requests”.

Complaints regarding defects or hazards on unformed roads will be inspected and graded on a reactive basis as per 9.5.2 “Routine maintenance and customer requests”, but works will be limited as detailed in 9.8 “Limitation of maintenance works”.

9.6 Weeds and rabbits

Council has an obligation to manage roadside weeds and rabbits on its local road network. Available funding is directed to treatment aimed at the eradication of Regionally Prohibited Weed infestations and the containment of Regionally Controlled Weeds and rabbits. Council supports community groups and individual landholders as detailed in Council's Roadside Weeds and Pest Program.

Regular inspections are undertaken during the programmed proactive inspections of roads. Reactive inspections are undertaken as in section 9.5 Reactive maintenance.

9.7 Records

Council keeps records specifying details of inspections, defects requiring repairs, location of defects, details of repairs, temporary actions (i.e. signage installation) and date of completed repairs.

9.7.1 Customer works request and reactive maintenance

Customer works request information and outcomes are stored electronically in Council's CRM.

Details of date, road, location and quantity of works activity undertaken are entered into Reflect.

9.7.2 Inspections and proactive maintenance

Programmed inspections undertaken by designated road inspectors are recorded in Reflect. Data captured includes inspector identity and date of inspection as well as specific details of all defects identified for each section of road (road segment) along with a nominated rectification (repair) timeframe.

Completed rectification works are signed off against these entries including what works were undertaken and by whom along with a completion date.

9.7.3 Electronic records

Reflect is a cloud based package and Council and Asset Edge have agreed that Asset Edge will backup the database in Reflect and Council can access whenever required. Information on CRM is backed up daily in Council's internal server.

9.8 Limitation of maintenance works

The level of inspection and maintenance varies depending on the category/classification of individual roads or road related assets. A number of lower category roads e.g. formed, unformed and fire access roads receive limited maintenance. Maintenance limitations for these low priority assets are detailed within table 6 following.

The decision to limit maintenance on low priority roads is driven by the need to prioritise allocation of Council's operational and financial resources. It is considered that the road classifications identified for limited maintenance pose low levels of risk given minimal traffic use and lower significance of functionality.

Council does not undertake any planned or unplanned maintenance or inspections on unused road reserves, nor warrants their safety or accessibility for public use.

Table 6 - Limitation of maintenance works

Hierarchy code	Hierarchy	Limits of maintenance
RF & TF	Formed	No programmed inspections are undertaken. Reactive routine maintenance is undertaken based on “Defect intervention levels and response times for roads and bridges”.
RUF & TUF	Unformed	No programmed inspections or regular routine maintenance is undertaken. Reactive grading may be undertaken. No regular routine tree trimming is undertaken. Limited minor tree trimming may be undertaken to provide clearance for utility type vehicles. Removal to provide greater clearance may be undertaken subject to inspection and demonstrated need.
RFA	Fire Access	No programmed inspections or regular routine maintenance is undertaken. Reactive grading may be undertaken prior to fire season.
IF	Informal Footpaths	No programmed inspection or routine maintenance is undertaken.

9.9 Resources deployed in road management

Routine maintenance is generally undertaken utilising in-house staff and supplemented with contractors if required.

9.10 Exceptional circumstances

Council will make every effort to meet its obligations 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 the Road Management Plan. These include but are not limited to; natural disasters, such as fires, floods, or storms; prolonged labour or resource shortage or 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 determines that for either financial or operational reasons that the requirements of the Road Management Plan cannot be met, then pursuant to Section 83 of the Wrongs Act, the CEO will write to Council’s officer in charge, Manager Assets & Infrastructure (MAI) of its plan and inform the officer that some, or all of the timeframes and responses in Council’s RMP are to be suspended.

As the circumstances which may have led to either the partial or full suspension of the RMP continue, periodic consultation between Council’s CEO and Council’s MAI will occur, to ascertain which parts of Council’s RMP may be reactivated.

Council will endeavour to inform residents of any suspension or reduction of the services outlined under the Road Management Plan, including how any required works shall be prioritised and the period for which the suspension is likely to be in effect.

9.11 Performance measures and targets

Council is provided with a quarterly report detailing compliance against the inspection and defect rectification targets specified within the RMP. The performance measures as listed in table 7 are used to form the basis of this report.

Table 7 - Performance measures

Performance measure	Target
Programmed inspections are carried out as per schedule.	100% as specified
Actual response times for rectification works are as detailed in the Defect intervention levels and response time tables.	100% as specified

10 REVIEW AND REPORTING

Review of this Road Management Plan is due by 30 June 2025 as prescribed in section 301 (1) and (3(b)) of the Road Management (General) Regulations 2005.

The Manager Works reports quarterly to Council on the performance measures in section 9.11 “Performance measures and targets”.

11 REFERENCE DOCUMENTS

Loddon Shire Council Asset Management Policy

Loddon Shire Council Risk Management Policy

Council Plan

Register of Public Roads

Road Management Act 2004

Code of Practice for Operational Responsibility for Public Roads

Road Management (Works and Infrastructure) Regulations 2001

Road Management (General) Regulations 2005

Code of Practice for Road Management Plans
Loddon Shire Council Community Local Law

Loddon Shire Council Roadside Weeds and Pest Program.

12 APPENDICES

12.1 Local rural roads and town streets hierarchy

Local road hierarchy			
Hierarchy code	**Hierarchy**	**Function**	**Comments**
Rural roads (R) & Township Streets (T)			
RSC & TSC	Sealed Collector	Sealed Collector roads distribute traffic between arterials and primary access roads.	Connecting roads traditionally accommodating higher volumes of traffic or providing efficient access or an alternative to the arterial network.
RSA & TSA	Sealed Access	Sealed Access roads provide primary access to residential properties or other developments or provide for service or tourist traffic.	Usually accommodate high to medium traffic volumes and service multiple residential properties.
RGC & TGC	Gravel Collector	Gravel Collector roads distribute traffic between arterials and primary access roads.	Gravel connecting roads generally accommodating moderate traffic volumes.
RGA & TGA	Gravel Access	Gravel Access roads provide primary access to residential properties or other developments or provide for service traffic, tourist traffic, school buses, or milk tanker traffic.	Lower use roads primarily used for access to groups or individual residential properties.
RGM & TGM	Minor Gravel	Minor Gravel roads provide access to rural properties, or alternative access to rural residential properties.	Low use gravel roads providing access to rural properties (non-residential).
RF & TF	Formed	Rural formed roads provide access to rural properties.	Earthen roads only, access is often limited to dry weather conditions.
RUF & TUF	Unformed	Rural unformed roads provide access to rural properties.	No road formation, represented by tracks or worn surfaces only.
RFA	Fire Access	Rural Fire Access roads provide access for firefighting purposes	Generally located on 'unused' and ‘unlicensed’ road reserves.

12.2 Footpath hierarchy

Footpath hierarchy		
Hierarchy code	**Hierarchy**	**Function**
Town street footpaths		
BF	Business Area Footpath	Moderate use fully constructed footpaths in shopping areas and near schools and other pedestrian traffic generators
SF	Strategic Footpath	Moderate use footpath which may be gravel or fully constructed. Includes footpaths to specific locations
RF	Residential Area Footpath	Low use fully constructed footpaths or part constructed gravel footpaths in residential areas.
IF	Informal Footway	Un-constructed footways with little use.

12.3 Road and street inspection regimes

Local road and street inspections						
Inspection type	**Extent**	**Inspection frequency**				
		Road hierarchy				
		Sealed	**Gravel Collector & Access**	**Gravel Minor**	**Formed & RFA**	**Unformed**
		RSC, RSA, TSC & TSA	RGC, RGA & TGA	RGM & TGM	RF, TF & RFA	RUF & TUF
Cyclic inspections						
Maintenance & hazard	Rural Roads & Town Streets	3 mths	2 yrs	2 yrs	Reactive only	Reactive only
Night inspection	Rural Roads & Town Streets	4 yrs	4 yrs	Nil	Nil	Nil
Level 1 local bridges	All Rural & Town Bridges & Major Culverts	6 mths	6 mths	6 mths	6 mths	Nil
Railway crossing inspection	All crossings	3 mths	12 mths	12 mths	12 mths	12 mths
Night railway crossing inspection	Rural Roads & Town Streets	4 yrs	4 yrs	4 yrs	4 yrs	4 yrs
One-off inspections						
Customer requests	As identified in request	As required				
Emergency	Effected area	As required				
Notes						
Nominated inspection frequencies are not precise: a variation of 10% is allowable						
Night inspections are staggered over winter months						

12.4 Footpaths inspection regime

Footpath inspections					
Inspection type	**Extent**	**Footpath hierarchy**			
		Inspection frequency			
		Business Footpath (BF)	**Strategic Footpath (SF)**	**Residential Footpaths (RF)**	**Informal Footways (IF)**
Cyclic inspections					
Maintenance & hazard	Paved, sealed & gravel footpaths in Towns	6 months	6 months	6 months	Nil
Night inspection	Paved, sealed & gravel footpaths in Towns	Nil	Nil	Nil	Nil
One -off inspections					
Customer requests	As identified in request	As required	As required	As required	As required
Emergency	Effected area	As required	As required	As required	As required
Notes					
Nominated inspection frequencies are not precise; a variation of 10% is allowable.					

12.5 Risk matrices for roads, streets and footpaths

Local roads, streets and footpaths						
Levels of risk						
Type or hierarchy	Likelihood	Consequences				
		Insignificant	Minor	Moderate	Major	Catastrophic
Roads						
Sealed	Unlikely	VL	L	ML	M	H
Gravel Collector & Access	Rare	VL	L	ML	M	H
Minor Gravel	Rare	VL	L	ML	ML	M
Formed	Rare	VL	L	L	ML	ML
Unformed	Rare	VL	VL	L	L	L
Footpaths						
Business & Strategic	Unlikely	VL	L	ML	M	H
Residential	Rare	VL	VL	L	ML	M

Action Plan		
Risk Level	**Description**	**Action**
H	High	rectify within 72 hours or provide appropriate warning
M	Medium risk	rectify within 4 working weeks or provide appropriate warning
ML	Medium to low risk	rectify within 3 months or provide appropriate warning
L	Low risk	rectify within 6 months
VL	Very Low risk	rectify within 12 months

This Matrix is applicable to Council's local road and footpath network (including footpaths in Arterial Roads within townships). Refer to the respective Responsible Road Authority Road Management Plan for risk assessment and response times for works relating to other roads.

12.6 Defect intervention levels and response times for roads and bridges

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Pavement cleaning						
Cleaning of pavement to remove materials which are: Slippery substances or a danger to road users or preventing the free flow of drainage water from the pavement area	On traffic lanes causing serious obstacle to traffic	72 hrs	4 wks	4 wks	3 mths	6 mths
	Water ponding > 300 mm deep on traffic lane	72 hrs	4 wks	4 wks	3 mths	6 mths
	Materials in traffic lanes resulting in a slippery surface	72 hrs	4 wks	4 wks	3 mths	6 mths
Sealed pavement and surface						
Potholes	On sealed traffic lane >400 mm dia. and > 100 mm deep	72 hrs	N/A	N/A	N/A	N/A
	>50mm in depth or >300mm wide	3 mths	N/A	N/A	N/A	N/A
Edge breaks	>75 mm in width over 20 m length	6 mths	N/A	N/A	N/A	N/A
Minor sealed surface faults	Stripping > 5 m^2 in area with approximately 50% loss of aggregate.	6 mths	N/A	N/A	N/A	N/A
	“Crocodile” cracking > 1 m^2 in area	6 mths	N/A	N/A	N/A	N/A
	Longitudinal cracking	6 mths	N/A	N/A	N/A	N/A
	When bleeding and seal pick up is occurring or imminent; or seal is flushing and there is evident loss of vehicle traction, for an area > 5 m^2.	6 mths	N/A	N/A	N/A	N/A

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Isolated pavement failures and deformation	On sealed traffic lane > 100 mm under 3 m straight edge	72 hrs	N/A	N/A	N/A	N/A
	All other surface level variations > 2m^2 and > 50 mm deep under a 1.2 m straight edge	12 mths	N/A	N/A	N/A	N/A
Unsealed shoulder - isolated faults	When edge drops onto unsealed shoulder > 100mm in depth under a 1.2 m straight edge	72 hrs	N/A	N/A	N/A	N/A
	When edge drops onto unsealed shoulder >60mm in depth under a 1.2 m straight edge over 20m length	3 mths	N/A	N/A	N/A	N/A
	When shoulder subgrade is exposed or slippery for > 50 m^2	12 mths	N/A	N/A	N/A	N/A
	Potholes, roughness, scouring and > 75mm deep under a 1.2 m straight edge or when holds water	3 mths	N/A	N/A	N/A	N/A
Unsealed pavements						
Potholes unsealed roads	When in traffic lane >500 mm diameter or > 150 mm deep	NA	4 wks	4 wks	N/A	N/A
	Surface scours, potholes or rutting >100 mm in depth > 300 mm diameter	N/A	3 mths	6 mths	N/A	N/A
	Corrugations >50 mm in depth for >200 m of road surface	N/A	6 mths	12 mths	N/A	N/A
	Loose material >50 mm in depth for >200 m of road surface	N/A	6 mths	12 mths	N/A	N/A
	When >100 m^2 and <300 m^2 in 1 km is slippery or bare subgrade exposed	N/A	6 mths	12 mths	N/A	N/A

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Signs and delineation						
Signs - illegible or missing	Bridge load limit signs are ineffective	72 hrs	4 wks	4 wks	3 mths	N/A
	Non-Regulatory Signs Missing signs or signs which are illegible at 150m under low beam of car headlights or in daylight.	12 mths	12 mths	12 mths	12 mths	N/A
	Warning & hazard signs Missing signs or signs which are illegible at 150m under low beam of car headlights or in daylight at curves or intersections or on the approaches to railway level crossings.	3 mths	3 mths	3 mths	6 mths	N/A
	Regulatory signs Missing signs or signs which are illegible at 150m under low beam of car headlights or in daylight at curves & intersections	4 wks	4 wks	3 mths	N/A	N/A
Guide posts or delineators missing or not clearly visible at 150m at night on low beam.	Missing on curves.	4 wks	4 wks	3 mths	N/A	N/A
	When >2 posts in a row are missing	6 mths	6 mths	6 mths	N/A	N/A
	Every missing culvert marker post.	6 mths	6 mths	6 mths	6 mths	N/A
Linemarking and pavement markings - illegible or missing	Linemarking and pavement markings not clearly visible at 50m	12 mths	N/A	N/A	N/A	N/A

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Vegetation						
Roadside vegetation, tree, bushes and grass	Fallen branches/trees on road surface	72 hrs	4 wks	4 wks	3 mths	12 mths
	Fallen branches/trees on road shoulder	4 wks	4 wks	3 mths	N/A	N/A
	Branches, bushes or saplings obstruct safe intersection sight distance or restrict view of regulatory signs	4 wks	4 wks	3 mths	N/A	N/A
	Branches, bushes or saplings obstruct restrict view of warning or hazard signs.	3 mths	3 mths	3 mths	6 mths	N/A
	Roadside vegetation obstructs sight distance at railway level crossings.	4 wks	4 wks	3 mths	3 mths	N/A
	Branches infringe into the vegetation clearance envelope	12 mths	12 mths	12 mths	12 mths	12 mths
	Sight distances obstructed by grass.	4 wks	N/A	N/A	N/A	N/A
	Grass >300mm high on shoulders.	12 mths	N/A	N/A	N/A	N/A

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Drainage						
Road surface drainage and verges	Where ponding of water is adversely affecting the safety aspects for road users or causing identifiable deterioration of the road formation	12 mths	12 mths	12 mths	12 mths	N/A
	When drains are < 75% operating capacity	12 mths	12 mths	12 mths	12 mths	N/A
	When culverts and pits are <75% of operating capacity.	12 mths	12 mths	12 mths	12 mths	N/A
	Culverts and pits become non-functional or creates a danger to public	6 mths	6 mths	6 mths	6 mths	N/A
Bridge maintenance						
Damaged bridge component	When damage affects structural performance. Missing or damaged bridge deck plank. Protruding deck spikes.	72 hrs	4 wks	4 wks	3 mths	N/A
Obstructed deck drainage	Scuppers blocked or partially blocked	6 mths	6 mths	6 mths	6 mths	N/A
Split /cracked deck planks	Defect affects >10% of area of a deck plank.	6 mths	6 mths	6 mths	6 mths	N/A
Settled or damaged running or wearing surface	Settling or depression > 50mm under 1.5m straight edge	6 mths	6 mths	6 mths	6 mths	N/A
Broken, misaligned railing or posts	All visible faults which affect traffic safety	6 mths	6 mths	6 mths	6 mths	N/A
Loose, missing rail connectors	Rail connectors loose or missing	6 mths	6 mths	6 mths	6 mths	N/A
Spalled concrete above deck	Spalling which exposes steel reinforcing	12 mths	12 mths	12 mths	12 mths	N/A

Defect intervention levels and response times for roads and bridges						
Defect	**Intervention level**	**Response time**				
		Sealed roads	**Gravel roads**	**Minor gravel**	**Formed roads**	**Unformed roads**
		RSC,TSC,RSA, TSA	RGC, RGA, TGA	RGM, TGM	RF,TF	RUF,TUF
Obstructed stream flow	>25% blocked	6 mths	6 mths	6 mths	6 mths	N/A
Minor scours in pavement	All scours	6 mths	6 mths	6 mths	6 mths	N/A
Subsidence in abutment fill	Subsidence or pothole in traffic lane >50 mm deep under 1.2m straight edge	4 wks	4 wks	3 mths	3 mths	N/A
Other						
Vandalism, graffiti	All graffiti	12 mths	12 mths	12 mths	12 mths	
Road openings	Reinstate the sealed surface when notified	4 wks	4 wks	3 mths	3 mths	6 mths
Litter control	Deposit of litter or rubbish > $1m^3$	3 mths	3 mths	3 mths	6 mths	6 mths
Roadside weeds and rabbits						
Wheel Cactus	When infestation exceeds greater than 100m in length within a road segment.	ARP	ARP	ARP	ARP	ARP
Patersons Curse	When infestation exceeds greater than 100m in length within a road segment.	ARP	ARP	ARP	ARP	ARP
Rabbit	Any rabbit warren with signs of activity in a road segment.	ARP	ARP	ARP	ARP	ARP

Glossary of terms and definitions	
Weeks	Working weeks.
Hours	Any hours of time.

Mths	Calendar months in a year
Yrs	Years
ARP	As resources permit
Vegetation clearance envelope	Area to a height of 5 metres above the road surface between outside edges of shoulders.

12.7 Defect intervention levels and response times for footpaths

Defect intervention and response times for footpaths				
Defect	**Intervention levels**	**Response times**		
		Business Footpath	**Strategic Footpath**	**Residential Footpaths**
Footpaths				
Subsided, heaved and scoured	Lips or step in path surface levels >30mm	4 wks	4 wks	3 mths
	Lips or step in path surface levels >20mm	3 mths	3 mths	6 mths
	Depressions >300mm diameter and >50mm depth	3 mths	3 mths	6 mths
	Mounding >40mm under 1.2m straight edge	4 wks	4 wks	3 mths
	Mounding >30mm under 1.2m straight edge	3 mths	3 mths	6 mths
Cracking	Longitudinal cracking >20mm wide over 300mm length	6 mths	6 mths	12 mths
Edge breaks and edge drops or lips	Reduction in original footpath width >300mm over a 20m length	6 mths	6 mths	12 mths
	Edge drop > 100mm over 20m length	3 mths	3 mths	6 mths
	Edge lip > 25mm above the footpath surface level	6 mths	6 mths	12 mths
Loose material	Loose material >15mm deep on sealed footpath surface	3 mths	3 mths	6 mths
Vegetation	Foliage < 2.5m above footpath	3 mths	3 mths	6 mths
	Foliage < 150mm from outside edge of path	3 mths	3 mths	6 mths
	Fallen branches/trees on footpath	4 wks	4 wks	3 mths
Notes				
No defect intervention and response time for Informal Footways				
Pedestrian bridges				
Damaged bridge component	When damage affects structural performance. Missing or damaged bridge deck plank.	3 mths	3 mths	3 mths
Obstructed stream flow	>25%	6 mths	6 mths	6 mths

12.8 List of highways, arterial roads and main roads (Managed by Regional Roads Victoria)

Highways, arterial roads and main roads
Road name
Calder Highway
Loddon Valley Highway
Wimmera Highway
Bendigo-Maryborough Rd
Bendigo-Pyramid Rd
Boort-Charlton Rd
Boort-Kerang Rd
Boort-Mitiamo Rd
Boort-Pyramid Rd
Boort-Wedderburn Rd
Boort-Wycheproof Rd
Bridgewater-Dunolly Rd
Bridgewater-Maldon Rd
Bridgewater-Serpentine Rd
Dunolly-Eddington Rd
Echuca-Mitiamo Rd
Leitchville-Pyramid Rd
Logan-Wedderburn Rd
Prairie-Rochester Rd