

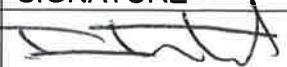



# Road Management Plan

DOCUMENT NUMBER RMP: D-17-23019  
ISSUE: Version 5  
ISSUE DATE: 1 May 2017  
CONTROL STATUS: 12 April 2017 R121/17

This work is the property of City of Ballarat and is protected by copyright. The work and information herein is confidential and may not be copied, used or disclosed except with the current written authority of and in a manner permitted by City of Ballarat.

**APPROVAL**

FUNCTION	POSITION	NAME	SIGNATURE
Prepared by	Coordinator Risk and Compliance	Darren Whitford	
Reviewed by	Executive Manager Infrastructure and Assets	Ross Cowie	
Approved by	Council – 12 April 2017 R121/17		

Notice of adoption in Victorian Government Gazette dated 2 March 2017 & The Courier on 2 March 2017.

## Contents

1. Executive Summary .....	5
1.1 Background.....	5
1.2 Levels of Service .....	6
1.3 Risk Management.....	6
1.4 Plan Improvement and Monitoring .....	6
1.5 Access to Documents .....	6
2. Background .....	7
2.1 General.....	7
2.2 Definitions & Acronyms.....	7
2.3 Key Stakeholders.....	8
2.4 Legal Basis for the Road Management Plan (RMP) .....	8
2.5 Applicability .....	9
2.6 The Integrated Asset Management System (IAMS).....	9
2.7 Demarcation Agreements.....	10
2.8 Exceptional Circumstances.....	10
2.9 Obligation of Road Users .....	10
2.9.1 General Usage.....	10
2.9.2 Incident Claims .....	11
2.9.3 Maintenance and Safety of Assets not Owned by Council .....	11
2.9.4 Nature Strips and Landscaping.....	12
3. Levels of Service .....	13
3.1 Asset Hierarchies.....	13
3.2 Stakeholder Consultation .....	13
3.3 Levels of Service .....	13
4. Risk Management .....	14
4.1 Approach.....	14
4.2 Asset Inspections.....	14
4.2.1 Reactive Inspections.....	14
4.2.2 Proactive Inspection.....	14
4.2.3 Programmed Condition Inspections .....	15
4.3 Intervention Level and Response Times.....	15
4.3.1 Emergency Response .....	15
4.3.2 Temporary Repair Actions .....	15
4.3.3 Programmed Maintenance Standards .....	15

---

4.4 Maintenance Service Level Agreement .....	15
4.5 Customer Tracking and Document Management Systems .....	16
4.6 Work Flow .....	17
5. Plan Improvements and Monitoring Process .....	18
5.1 Performance Measures .....	18
5.2 Internal Auditing of Processes.....	18
5.3 Review Procedures .....	19
6. References .....	19
7. Road Network Hierarchy .....	19
7.1 Fire Access Tracks .....	20
7.2 Footpath and Shared Track Hierarchy .....	21
7.3 Bridge and Major Culvert Hierarchy.....	22
7.4 Inspection Frequencies.....	22
7.5 Intervention Levels and Response Times.....	24
7.5.1 Intervention Levels and Response Times .....	24
7.5.2 Response Time Codes .....	26
7.6. Response Time Extension .....	26

## 1. Executive Summary

This Road Management Plan was prepared in accordance with the requirements of the Road Management Act 2004.

The purpose of the Road Management Act is to reform the law in relation to road management in Victoria. It establishes principles relating to the management of roads by Road Authorities and sets out the rights and duties of road users. The Act imposes several specific obligations on Council as a “Road Authority”. Council is required to establish appropriate asset management practices for its asset portfolio and needs to define and apply targets for asset maintenance. These include:

- Establishing appropriate and affordable condition standards;
- Identifying and assessing needs and setting priorities; and
- Allocating public money to meet those needs and priorities.

These standards and targets may be included in a Road Management Plan and the plan may be used as evidence of the reasonableness of a Road Authority’s position. The intention of this document is to communicate with the community on Council’s responsibility for the management, maintenance and repair of the assets forming the road network, footpath & trail network and related infrastructure.

The plan has been divided into the following sections:

- Background
- Levels of Service
- Risk Management
- Plan Improvements & Monitoring Process
- References
- Road Network Hierarchy
- Schedules for inspection and intervention

### 1.1 Background

The City of Ballarat (Council) is a Road Authority under the Road Management Act 2004. The Road Management Plan is part of Council’s suite of management documents and must be read in conjunction with the following:

- City of Ballarat Transport Asset Management Plan.
- City of Ballarat Tree Management Plan.
- Municipal Road Register.
- Footpath & Trail Register.
- Bridge Register.

In order to manage areas where responsibility may be unclear, Council has Demarcation Agreements with the following organisations:

- VicRoads.
- Moorabool Shire Council.
- Pyrenees Shire Council.
- Hepburn Shire Council.
- Golden Plains Shire Council.

This Plan is applicable to all roads, footpaths & trails, bridges and related infrastructure for which Council is responsible. In addition to Council’s responsibilities, road users have obligations in the way they use and interact with these assets.

## 1.2 Levels of Service

In order to determine the needs of the community, Levels of Service have been developed. The Levels of Service are based on the following characteristics:

- Ease of travel;
- Safety;
- Visual impact;
- Cleanliness;
- Responsiveness; and
- Legislative compliance

## 1.3 Risk Management

A primary reason for asset management is to manage the risks to the community. The Risk Management approach is based on a three-step process:

1. Inspect the asset;
2. Identify anything that exceeds the stated Intervention Level; and
3. Implement the appropriate action within the required Response Time.

## 1.4 Plan Improvement and Monitoring

The Road Management Plan identifies actions for further improvements and monitoring. It must be noted that the Road Management Plan, Municipal Road Register, Footpath & Trail Register and Bridge Register are evolving documents to be reviewed and refined on an on-going basis.

The history of the Road Management Plan is as follows:

<u>Version Number</u>	<u>Date Adopted</u>
1	8 December 2004
2	12 July 2006
3	24 June 2009
4	25 September 2013
5	12 April 2017

The Municipal Road Register and Footpath Register are reviewed and updated annually.

## 1.5 Access to Documents

As required under the Road Management Act, these documents are available to the public at the following locations:

- Online at [www.ballarat.vic.gov.au](http://www.ballarat.vic.gov.au); and
- Customer Service, “Phoenix building”, 25 Armstrong Street South, Ballarat Central.

## 2. Background

### 2.1 General

Council is a Road Authority as defined in Section 37 of the Road Management Act 2004. This Road Management Plan has been created in accordance with the Road Management Act 2004.

Council is responsible for the care and maintenance of public roads within the city that are not the legislated or otherwise accepted responsibility of other Road Authorities. Acting as a Road Authority, Council must ensure that if a road is reasonably required for public use that it is kept open for public use and may, at its discretion, carry out work on the road. Council is under no obligation to do any specific work on any road and in particular, is not obliged to carry out any surface or drainage work on any road, other than specified in the Road Management Plan.

### 2.2 Definitions & Acronyms

**“Arterial Road(s)”** are Freeways, Highways & Declared Main Roads which are managed by the state Government through VicRoads.

**“Ballarat City Council”, “City of Ballarat” or “Council”** means the entity formally created under the provisions of the Local Government Act 1989 and is subject to that Act and any subsequent amendments.

**“Coordinating Road Authority”** is the organisation which has the responsibility to coordinate works. As a general rule, for freeways and arterial roads it is VicRoads, for municipal roads it is Council and for roads in national and state parks it is the Department of Environment, Land, Water and Planning. The Demarcation Agreements will identify which organisation is the Coordinating Road Authority.

**“Demarcation Agreement”** is a formal instrument between Council and another organisation that defines the areas of responsibility where the boundary may not be clearly identifiable.

**“DELWP”** Department of Environment, Land, Water and Planning.

**“Footpath”** is a formed area located on the road reserve used by pedestrians. It can be formed of concrete, pavers, asphalt, stone or similar material.

**“IAMS”** is an acronym for the Integrated Asset Management System. The IAMS is a methodology used for managing the asset portfolio and includes software, hardware, policies, procedures and processes for the sustainable management of all assets.

**“Infrastructure Manager”** is the person or body with responsibility for the provision, installation, maintenance or operation of non-road infrastructure in the road reserve, including Utilities and Providers of Public Transport.

**“Levels of Service” or “LoS”** is a measure of the performance of an asset. Levels of service must be meaningful and must address the issues that stakeholders believe to be important while meeting the technical parameters within Council’s resources. Further details can be found in the Asset Management Strategy and the Asset Management Plans.

**“Municipal Road(s)”** are roads for which Council is the Coordinating Road Authority. The Road Management Act 2004 imposes specific duties on Council with respect to the inspection, repair and maintenance of its municipal roads.

**“Other Road(s)”** include the following

- unused (paper) roads,
- roads in state forests & reserves;
- roads for which another organisation is the responsible road authority; and
- roads on private property.

**“Provider of Public Transport”** includes a rail corporation, a train or tram operator or a person providing a regular passenger service (e.g. a bus operator).

**“Road(s)”** are Municipal Roads as defined by the Road Management Act 2004.

**“RMA”** is the Road Management Act 2004.

**“RMP”** is this Road Management Plan.

**“Shared Track”** any formed area outside the road reserve available for the general public for walking, running, cycling, horse riding or any other similar pursuit. It can be formed of concrete, pavers, asphalt, stone or similar material.

**“Traffic lane”** is a part of a roadway that is designated for use by a single line of vehicles, to control and guide drivers and reduce traffic conflicts. Most public roads have at least two lanes, one for traffic in each direction, separated by lane markings. On multilane roadways and busier two lane roads designations are made with road surface markings

**“Utility” or “Public Utility”** is the entity which provided, or intends to provide water, sewerage, drainage, gas, electricity, telephone, telecommunications or other like service.

**“Working Day”** is Monday to Friday, excluding weekends and public holidays.

**“Works Manager”** is the person or body that is responsible for the conduct of works in, on or under the road. For example, a contractor engaged by a Road Authority, Utility or private person.

**“Road Infrastructure”** is defined in the Act as the infrastructure which forms part of a roadway, pathway or shoulder including structures forming part of the roadway, pathway or shoulder; materials from which a roadway, pathway or shoulder is made.

### 2.3 Key Stakeholders

Our stakeholders include:

- Our community and visitors to our city;
- Our Councillors, Leadership Team, employees and volunteers;
- Contractor and Suppliers;
- Emergency Services;
- Other road authorities;
- The Commonwealth Government; and
- Victorian Government Departments.

### 2.4 Legal Basis for the Road Management Plan (RMP)

The RMP has been prepared pursuant to the requirements of the following legislation:

- Road Management Act 2004;
- Road Management (General) Regulations 2016;
- Road Management (Works and Infrastructure) Regulations 2015.

The RMP also considers the requirements of the following legislation:

- Local Government Act 1989;
- Road Safety Act 1986.

The RMP identifies Council’s responsibilities as a Coordinating Road Authority for roads, footpaths and bridges.

The RMP also identifies responsibilities and obligations which other persons or entities have as a result of legislation and case law.



## 2.5 Applicability

This RMP will be applicable to the following:

- Any formed or unformed road, footpath or shared track open to and intended for use by the public.
- Any bridge or major culvert which incorporates a road, footpath or shared track crossing.
- Any concrete kerb abutting a footpath within the CBD
- Any bluestone guttering, channel or spoon drain associated with a road or footpath.
- Any structure or facility located on the road reserve
- Any facilities or furniture relating to the road, footpath or shared track network including:
  - Safety signs
  - Guideposts
  - Safety barriers and fencing
  - Traffic controls and signals

Excluded from the RMP are the following:

- Any road, footpath or shared track not accessible to the general public;
- Any non-road infrastructure, facilities or furniture;
- Any asset not under control of Council;
- Any private stormwater outlet.
- Nature strips and landscaping in road reserve

## 2.6 The Integrated Asset Management System (IAMS)

To enable Council to effectively monitor and maintain its assets, the inventory of road, footpath & shared track networks and bridge & major culvert assets are kept in the IAMS.

The IAMS categorises the road, footpath & shared track networks into segments. Each segment in the IAMS is uniquely identified and assigned a category in the hierarchy relevant to its function and purpose. Further information relating to the IAMS can be found in the Asset Management Strategy and the relevant Asset Management Plans.

Selected details from the IAMS are extracted into the Municipal Road Register, Footpath Register and Bridge Register respectively.

The Information contained in the registers include:

- Description, Location and Segment;
- Surface Type (sealed, gravel or unformed);
- Hierarchy Category;
- Name of Coordinating Road Authority; and
- Date of responsibility.

## 2.7 Demarcation Agreements

There are a number of roads which form the boundary between City of Ballarat and adjoining Councils. In addition, there are approximately 100 kilometres of Arterial Roads within the municipality.

To formalise the responsibilities between Council and other organisations, Demarcation Agreements have been developed. Council has formal agreements with the following authorities:

- VicRoads;
- Golden Plains Shire;
- Moorabool Shire;
- Pyrenees Shire;
- Hepburn Shire; and
- VLine & VicTrack (Safety Interface Agreement)

The list of roads and responsibility of these assets is documented within the Municipal Road Register.

## 2.8 Exceptional Circumstances

Council will make every endeavour to meet all aspects of its Road Management Plan. However, in the event of natural disasters and other events including, but not limited to, fires, floods, droughts, a lack of Council staff or suitably qualified Contractors and the like, Council reserves the right to suspend compliance with its Road Management Plan pursuant to Section 83 of the Wrongs Act 1958. In such an event the Chief Executive Officer can instruct the relevant Council staff in writing to suspend all or part of timeframes and responses contained in this Plan. Once the events beyond the control of Council have abated, or if the events have partly abated, Council's CEO will advise the Officer responsible for Council's Road Management Plan which sections of Council's Road Management Plan are to be reactivated and when this is to occur.

## 2.9 Obligation of Road Users

### 2.9.1 General Usage

Council is limited in its ability to ensure perfect driving conditions. Therefore it should be understood that road users have a responsibility when driving on a public road.

The Road Safety Act 1986 - Section 17A stipulates the obligations of road users as follows:

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 relevant factors.
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 the 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.
  - 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. In subsection (3), infrastructure manager, non-road infrastructure, road infrastructure and road reserve have the same meanings as in section 3(1) of the Road Management Act 2004.

### **2.9.2 Incident Claims**

If a person proposes to commence a proceeding in a court based on a claim in relation to an incident arising out of the use of a public road or infrastructure, the person must give written notice of the incident to the responsible road authority within the prescribed period (30 days.) of the incident occurring [Road Management Act, 2004 - Section 115(1)].

### **2.9.3 Maintenance and Safety of Assets not Owned by Council**

The public should be aware there are several assets within the road reserve that Council has no obligation to maintain.

For example:

#### **Private Roads**

Council has a role in supervising the construction of private subdivisional works that occur within the city. This ensures that assets are constructed to an appropriate standard and will not be an unreasonable maintenance burden.

Roads which are constructed as part of a subdivision are generally private roads until such time as the Statement of Compliance is finalised at which point they become public roads, pursuant to the Subdivisions Act 1997. There are some roads which remain privately owned and maintained. Private Roads and roads which are not available to the public are excluded from this plan. These roads are identified in the Municipal Road Register. Council has no maintenance obligations regarding these roads.

#### **Vehicle and Pedestrian Crossovers**

A vehicle crossover provides vehicular access to private property from the traffic lane to the property boundary. In the urban area, the crossover may consist of a concrete driveway and layback in the kerb and channel. In the rural area, the crossover may consist of a crushed rock pavement over a reinforced concrete pipe with concrete end walls. Vehicle crossovers are the responsibility of the abutting landowner and are constructed at the landowner's expense. Landowners are responsible for ensuring the cross overs are maintained in a safe condition. Landowners must obtain a permit and comply with Council specifications when constructing vehicle and pedestrian crossovers.

If a footpath is constructed in front of the property, Council is responsible for the section of footpath through the crossover, the landowner retains responsibility for the remainder of the crossover. If there is no constructed footpath, then the landowner is responsible for the entire crossover from the road edge to the property boundary.

### **Private Stormwater Outlets**

Stormwater outlets are constructed to discharge water in the kerb, drain or channel. The stormwater outlet can be constructed from PVC, concrete or steel pipes and generally cross the road reserve at a shallow grade and depth. In all cases, the outlet should be constructed to Council standards and include works to minimise erosion and pollution of the receiving system.

Stormwater outlets are the responsibility of the property owner, on the basis that they are constructed to benefit the property and therefore the maintenance of these outlets including erosion and pollution control is the responsibility of the owner of the property.

### **Other Non-Road Infrastructure**

Public Utilities and Providers of Public Transport also have infrastructure located in the road reserve. These organisations have a responsibility to ensure these assets do not impact the primary function of the road.

### **2.9.4 Nature Strips and Landscaping**

Nature strips are those residual areas between the edge of the road or back of the kerb and the property boundary not occupied by the footpath and crossovers. These are normally sown to grass or, in some instances, the nature strip has been landscaped by the property owner.

Responsibility for maintenance of the nature strip in urban areas is generally left to the property owner. In some instances, urban nature strips not maintained by residents will be slashed by Council for the purpose of visual amenity. In rural areas, the road side slashing may occur for road safety or strategic fire breaks, although in some locations these areas are the responsibility of VicRoads or another Road Authority (as specified in the demarcation agreements).

## 3. Levels of Service

### 3.1 Asset Hierarchies

All assets are classified according to a hierarchy that considers the specific function, types of users and frequency of use. The hierarchy classification is used to assist in prioritizing inspections, intervention responses and works.

The City has developed two hierarchies:

- Road network; and
- Footpath and shared track network.

A summary of each of these hierarchies is provided in Section 7.

### 3.2 Stakeholder Consultation

Wherever practicable, input will be sought by way of stakeholder consultation. It is important that any decisions made are on the basis of what is deemed to be in the best interest of the community overall while not unreasonably disadvantaging any specific groups. In the event that there is a group that is disadvantaged, efforts will be made to recognise and address the deficiencies wherever practicable.

It is however vital that given the resources available, the community does not automatically expect changes to Levels of Service provision. The outcome of any stakeholder consultation is considered in the Transport Asset Management Plan reviews.

### 3.3 Levels of Service

The process of identifying the appropriate Levels of Service has been documented in the Asset Management Strategy. The Levels of Service have been identified and developed from:

- Acquired knowledge of key infrastructure issues;
  - Customer expectations;
  - Council's Policies, Goals and Strategies;
  - Legislative requirements and standards; and
  - Available resources (funding levels, staffing, asset capacity).
- The Levels of Service must be read in conjunction with:
- Relevant Asset Management Plan; and
  - Road Maintenance Service Levels Agreement.

These documents explain the principles behind Levels of Service and the delivery of those targets in the field. Key Levels of Service for the networks, along with strategies to ensure they are achieved are shown below. To deliver these levels of service properly, a detailed set of "technical levels of service" have been developed that describe the standards to which the assets should be designed. Asset performance is measured against these standards, with performance indicators, (KPI's) used for reporting to Council.

## 4. Risk Management

### 4.1 Approach

Council's Risk Management approach to asset management is documented in the Asset Management Strategy. The process of risk assessment is documented in the Transport Asset Management Plan Module 5 – Risk Prioritization.

Council has developed a system for assessing risk through a three step process as follows:

1. Inspect the asset.
2. Identify anything that exceeds the stated Intervention Level.
3. Implement the appropriate action within the required response time.

### 4.2 Asset Inspections

One of the requirements of this approach is that Council regularly undertakes asset inspections to deliver maximum benefit from the capital and maintenance budgets. The frequency of the inspections is defined in section 7.4. The purpose of these inspections is to identify:

1. Existing defects that exceed the stated intervention levels and implement controls to manage the risk created by these hazards. Maintenance work is programmed in accordance with the Service Level Agreement.
2. Other deficiencies in the integrity of the asset that whilst not exceeding the stated intervention levels, may negatively affect the asset life. Capital works are programmed in accordance with the capital prioritisations process.

Based on what has been identified, the appropriate action is undertaken.

Asset inspections and surveys and the resulting information is required for competent management of the assets. Council has three inspection types: reactive; proactive and programmed condition inspections.

#### 4.2.1 Reactive Inspections

These inspections come about after Council is notified of:

1. An incident related to an insurance claim;
2. An unusual event such as:
  - i. Heavy loading of a bridge;
  - ii. Heavy rain for prolonged periods;
  - iii. Special events.
3. A report of an issue by the community; and
4. Identification of an issue by a Council employee whilst undertaking other duties.

**Within one working day of** Council becoming aware of an issue, the appropriate Council officer will carry out an inspection and confirm any defects or issues that exceed the intervention levels and refer these for further action in accordance with sections 4.3 and 7.5.

Night time inspections of roads and off-street parking are conducted to assess the effective reflectiveness of road safety signs, road markings and reflectors.

#### 4.2.2 Proactive Inspection

These inspections are scheduled in accordance with section 7.4 to identify any defects that exceed the stated intervention levels. Any such identified defects will be referred for further action in accordance with section 4.3 and 7.5.

### **4.2.3 Programmed Condition Inspections**

These inspections identify deficiencies in the structural integrity of the assets that whilst not exceeding the stated intervention levels, may negatively affect the asset life. The deficiencies may also impact on short-term level of service as well as the ability of that asset element to perform for the period of its intended life span. This condition information provides lifecycle management information essential to strategic long term planning. Further information on condition rating can be found in the Asset Management Strategy.

### **4.3 Intervention Level and Response Times**

For each asset, there is an approved intervention level and response time for each common defect type. The intervention level is based on the hierarchy and identifies the threshold which, once exceeded, will trigger a response. The intervention levels are summarised in Schedule 7.5 and provided in detail in the Asset Management Plan.

For each defect type, there is also an approved response time. This is the maximum time from the time the defect is recorded to the completion of remediation works. The response times are summarised in Schedule 7.5 and provided in detail in the Asset Management Plan.

There are three levels of intervention/response being:

- Emergency response;
- Temporary repair; and
- Programmed maintenance.

#### **4.3.1 Emergency Response**

Emergency response are works needed to be undertaken outside the programmed works to ensure the immediate safety of road users and the public as a result of an emergency incident. Emergency works include traffic incident management, responses to fires, floods, storms and chemical spillages, and assistance under the Victorian State Emergency Response Plan and Municipal Emergency Management Plan.

#### **4.3.2 Temporary Repair Actions**

Temporary works are undertaken to reduce the risk of an incident until such time as programmed maintenance can be completed. Response times and measures (eg. warning signs, flashing lights, safety barriers or other appropriate temporary measures) are determined based on the risk to safety and the type, volume and nature of road usage.

#### **4.3.3 Programmed Maintenance Standards**

Programmed maintenance is based on agreed asset performance targets, defect intervention levels and response actions (based on risk assessment) for a particular asset element (eg. road, footpath, bridge). Intervention levels, response times and standards vary in line with the hierarchy.

### **4.4 Maintenance Service Level Agreement**

The City of Ballarat internal Road Maintenance Unit, provides maintenance activities as documented in the Road Maintenance Service Levels document. The Levels of Service are necessary to meet Council and community expectations and form an integral component of Council's Road Asset Management Plan.

The tasks generally comprise the activities which are described as routine maintenance of road and street pavements, road furniture and roadsides.

The Road Maintenance Service Levels document also outlines how maintenance risk issues are managed, including risk identification, response priorities, remedial treatments and emergency response. The hierarchy of roads and footpaths is used as the basis for determining the various standards across the road network considering the relevant risk factors, while having regard to the type, volume and nature of network usage.

The Road Maintenance unit operate under the Infrastructure Operations Integrated Management System, ensuring compliance with the three audit criteria of Safety, Quality and Environment and specifically AS/ISO9001:2000, AS4801:2001 and AS/ISO14001:1996.

For roads, the risk assessment is determined by the size of various modes of failure and hierarchy classification of the location. To facilitate this, field inspection information is recorded through an electronic hand held device, which records the various risk factors including the level of risk.

For ancillary areas, the inspection process combines both footpath & road interventions and frequencies, due to the nature of the infrastructure.

Following inspections, a list of prioritised works will be produced for remedial works, while major works will be listed for inclusion on future capital works programs. Any request for urgent maintenance works is forwarded to Road Maintenance Unit to make temporary repairs and/or erect warning signs or barricading on the same day and then referred to works crews for action on the following and/or subsequent workdays.

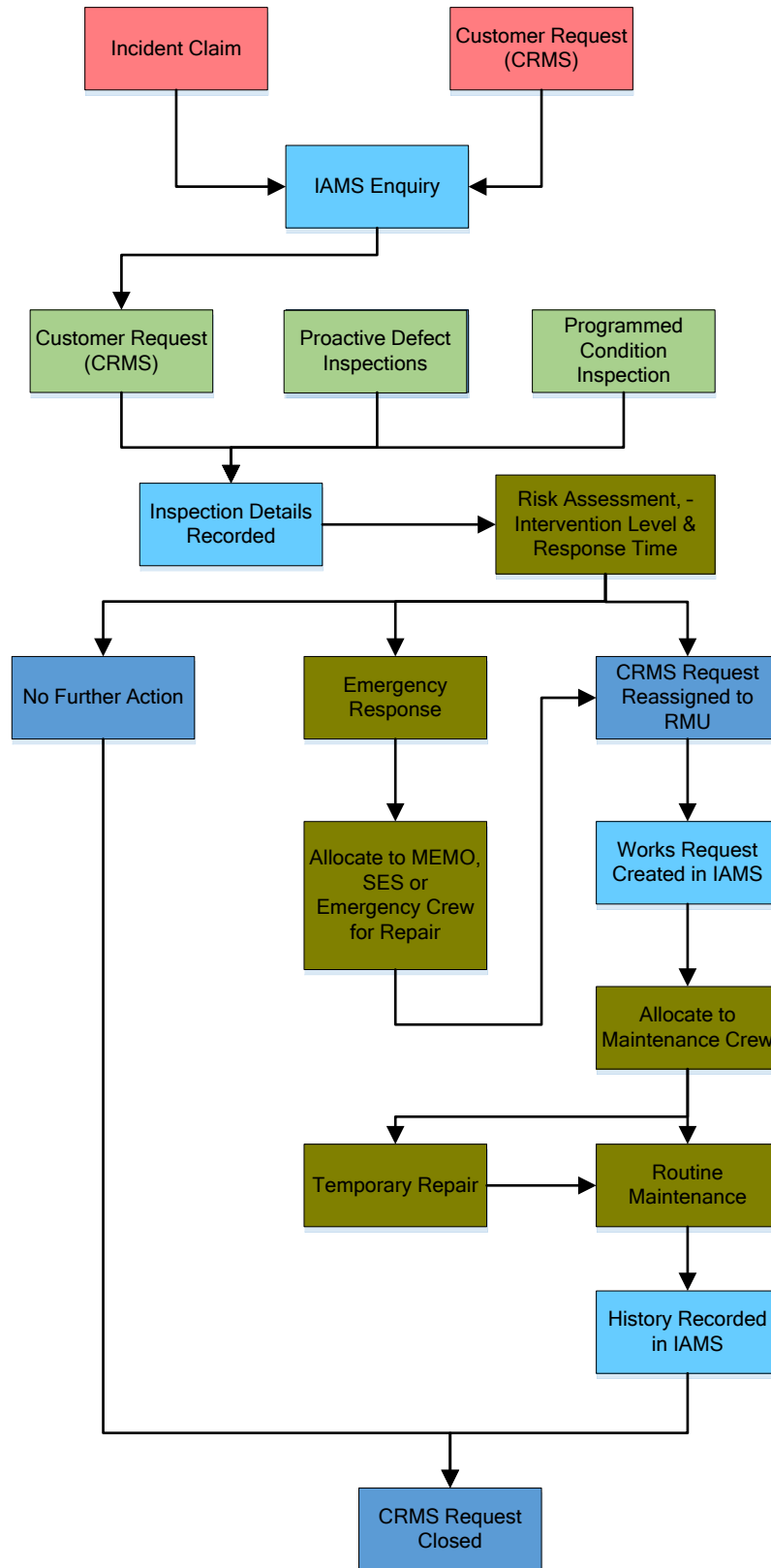
#### **4.5 Customer Tracking and Document Management Systems**

Council utilises a customer tracking system to trace customer requests through the organisation. The tracking system enables the appropriate delegation of maintenance and programming requests to Infrastructure Development or the Road Maintenance Unit.

The customer tracking system and IAMS are linked using the road segment number allowing requests to be cross referenced between the two systems and allowing asset history information to be retained. Council also maintains an electronic document storage and retrieval system to manage all incoming correspondence.



4.6 Work Flow



## 5. Plan Improvements and Monitoring Process

### 5.1 Performance Measures

The following procedures will be undertaken to measure the performance of the plan:

- Inspection frequencies are met within the prescribed schedule;
- Responses to defect requests are met within prescribed time; and
- Annual Maintenance and Renewal Programs are completed as scheduled.

### 5.2 Internal Auditing of Processes

The processes that are to be audited internally per annum are as follows:

- Collection and storage of condition information;
- Recording of complaints/requests in the appropriate database in the manner required;
- Complaint/request is inspected and/or assessed in relation to safety & specified maintenance intervention levels; a sample audit of this process to be undertaken;
- Programmed inspections are carried out as scheduled;
- Relevant inspection reporting & recording mechanisms are in place;
- Reported defects are being properly recorded in the system;
- Where required, appropriate rectification responses are determined and Works Orders issued;
- Where Requests for Service require scheduling of works onto annual maintenance programs or long-term renewal works programs that the required listing takes place;
- Record of maintenance activities is made in the database against the asset, including actual date of completion;
- Record that maintenance works have been delivered as intended (i.e. An appropriate Council Officer has signed off on the satisfactory completion of the work);
- Procedure is in place for collecting and storing information regarding road asset infrastructure condition for developing future maintenance programs;
- Management system in place to record and respond to customer enquiries; and
- Asset handover/update process is being managed as required.

The outcome of the internal audit is to be reported to Council's Audit Committee, while responsibility for overseeing the audit process belongs to the Executive Manager Infrastructure and Assets.

### 5.3 Review Procedures

The Road Management Plan is a 'living' document, updated as and when necessary. There are two basic reasons for update of the Road Management Plan:

1. Election of a new Council (i.e. changes in governance. The Road Management Act requires the plan to be updated no later than 6 months after a Council election).
2. When changes are required to the document.

When changes are made that do not alter the technical aspects of road management (standards and specifications) and seek only to enhance the information provided within the Plan, these changes will be approved by the Chief Executive Officer.

However, if material changes are made to standards and specifications, a report will be presented to Council, along with a brief explanation as to why such changes were necessary, seeking its endorsement to them. Material changes necessitating Council approval will cause a change to the prime number of the specific Road Management Plan Version (e.g. from Version 1.00 to 2.00). Enhancements approved by the Chief Executive Officer will cause a change to the point number of the specific Road Management Plan Version that had previously been endorsed by Council (eg from Version 1.0 to 1.1).

## 6. References

- MAV Asset Management Improvement STEP Program – Road Asset Management Plan Framework 2003.
- International Infrastructure Management Manual (IIMM) 2015, IPWEA.
- CMP Road Reserve Risk Management Statement of Principles 2002.
- Ministerial Code of Practice – Road Management Plans, Sept. 2004.
- Code of Practice for Operational Responsibility for Public Roads Dec. 2004.
- Code of Practice for Management of Infrastructure in Road Reserves Oct. 2008.
- Road Management Act 2004
- Road Management (General) Regulations 2016

## 7. Road Network Hierarchy

The hierarchy of the road network is defined by the classification of the road. This hierarchy applies to:

- Road pavement;
- Road seal;
- Kerb and channel;
- On and off street parking;
- Traffic facilities;
- Road related infrastructure in median areas which cannot be accessed by pedestrians;
- Roadside drains in rural areas; and
- Road related infrastructure in nature strips in rural areas.

State and Arterial Roads are the responsibility of other Road Authorities and are not included in the hierarchy. These roads do not fall within Council's obligations as per the Road Management Act 2004.

Undeclared road reserves are not included in the hierarchy and do not fall within Council's obligations as per the Road Management Act 2004.

Council has adopted nine categories for the road network: -

Hierarchy Category	Classification	Definition	Wearing Course
R1	Link Roads	Roads other than Arterial roads that link significant destinations <sup>1</sup> and are designed for efficient movement of people and goods between and within regions. Also provide property access <sup>2</sup> . Link roads may consist of a number of roads which form a route.	Sealed Roads
R2	Collector Roads	Roads other than arterial or link roads that connect a substantial number of local roads and streets to higher order roads, or to significant destinations, and provide property access and movement of traffic within local areas.	Sealed Roads
R3	Sealed Primary Access Roads	Roads other than arterial, link or collector roads, that provide access to the street address of occupied properties <sup>3</sup> .	Sealed Roads
R4	Unsealed Primary Access Roads		Gravel Roads
R5	Sealed Secondary Access Roads	Roads other than arterial, link, collector or primary access roads that provide access to properties other than to the street address, or access to non-occupied abutting properties <sup>4</sup> .	Sealed Roads
R6	Unsealed secondary Access Roads		Gravel Roads
R7	Ancillary Areas	An area of land owned or managed by the coordinating road authority to be maintained by a responsible road authority as ancillary to a public road; Includes shared pedestrian / vehicle access roads, car parks, res areas, scenic lookouts and car parking areas, and indented bus stop on arterial road that are separated from the carriageway by a kerb.	Sealed Roads
			Gravel Roads
R8	Tracks (Unformed Road)	A road reserve that may have an unconstructed path created by occasional vehicles.	Unformed Road
R9	Unused Road Reserves	Road reserve that is unmade and unused, but not declared.	Unused Road

Notes:

1. Significant destinations include arterial roads, towns, major tourist attractions, and places of significance (usually significant traffic generators i.e. CBD's, universities, major hospitals).
2. Properties mean an area of land with its own title.
3. Occupied property means a property which is occupied for residential purposes or commercial purposes where workers attend for work on a number of days per week.
4. Non-occupied means a property which is not occupied for residential purposes or commercial purposes.

### 7.1 Fire Access Tracks

The road hierarchy classification 'Track' should not be confused with the use of the classification of 'Fire Access Tracks' by other road authorities. Council has no legal obligation to provide and maintain fire access tracks; however if Council decides to maintain a road for the purpose of fire fighting vehicle access as a community service, that particular function will be attached to a road in the asset register and not as a separate hierarchal class.

## 7.2 Footpath and Shared Track Hierarchy

The hierarchy of footpath and shared tracks is defined by usage.

The proximity to shopping, educational, health and community precincts will influence usage. In addition, specific locations used for tourism, training and competition will increase usage. Consideration is also given to network linkages and transitions from one form of transport to another (e.g. in proximity to parking areas and transport hubs).

It is possible to have a different hierarchy for path on either side of the same segment. All footpath and shared tracks are recorded in the IAMS and have been classified in accordance with this system. This hierarchy applies to the:

- Footpath and shared track network;
- Nature strips in urban areas; and
- Median areas with pedestrian access and/or use

Unconstructed trails are not included in the hierarchy and do not fall within Council's obligations as per the Road Management Act 2004.

Council has adopted four categories for the footpath and shared track network:

Hierarchy Category	Classification	Definition
P1	Special Use	As determined by the Footpath Hierarchy. The classification could include footpaths and shared tracks forming: <ul style="list-style-type: none"> <li>• Advertised walking trails;</li> <li>• Running and jogging tracks; and</li> <li>• Cycle-ways identified for training and/or competitions.</li> </ul>
P2	High Use	As determined by the Footpath Hierarchy. The classification could include footpaths and shared tracks forming: <ul style="list-style-type: none"> <li>• Major shopping precincts (10 or more shops);</li> <li>• Community facilities;</li> <li>• Tourist attractions;</li> <li>• Transport hubs; and</li> <li>• Commercial parking areas with a capacity of 100 or more vehicles.</li> </ul> Plus any formally advertised cycle-way not categorised as special use.
P3	Medium Use	As determined by the Footpath Hierarchy. The classification could include footpaths and shared tracks forming: <ul style="list-style-type: none"> <li>• Minor retail and strip shopping areas (3-9 shops);</li> <li>• Universities, schools, kindergartens or childcare facilities;</li> <li>• Health care, pharmacies, aged care and retirement villages;</li> <li>• Community centres;</li> <li>• Sport and recreation areas; and</li> <li>• Commercial parking areas with a capacity up to 100 vehicles.</li> </ul>
P4	Low Use	All other constructed tracks, trails or paths under control of the City of Ballarat.

Where multiple classifications are possible, the higher classification should prevail.

### 7.3 Bridge and Major Culvert Hierarchy

The hierarchy of bridges and major culverts is the hierarchy classification of the road or footpath that traverses it.

### 7.4 Inspection Frequencies

HIERARCHY CATEGORY	PROGRAMMED INSPECTIONS - CONDITION	PROACTIVE INSPECTIONS - DEFECT	INCIDENT INSPECTIONS <sup>1</sup> REACTIVE INSPECTIONS	
<b>Daylight: Roads &amp; Ancillary Area</b>				
R1: Link Roads	3 yearly network coverage	1 inspection every 4 months	Localised inspection after rainfall exceeding: • 50mm on 1 day • 95mm over 3 days Inspection within 3 mths	1 working day
R2: Collector Roads		1 inspection every 4 months		1 working day
R3: Sealed Primary Access Roads		1 Inspection per year	Localised inspection after rainfall exceeding: • 50mm on 1 day • 95mm over 3 days Inspection within 3 mths	1 working day
R4: Unsealed Primary Access Roads		1 Inspection per year		
R5: Sealed Secondary Access Roads		1 Inspection per 2 years		
R6: Unsealed Secondary Access Roads		1 Inspection per 2 years	Localised inspection after rainfall exceeding: • 50mm on 1 day • 95mm over 3 days Inspection within 3 mths	1 working day
R7: Ancillary Areas*	N/A	2 inspections per year	N/A	1 working day
Concrete kerb abutting a sealed footpath within CBD		1 inspection per year	N/A	
Bluestone spoon guttering	4 yearly network coverage	N/A	N/A	1 working day
<b>Night Inspections: Roads and Off Street Parking</b>				
R1: Link Roads	N/A	1 Inspection per 2 years	N/A	1 working day
R2: Collector Roads				
R3: Sealed Access Roads		1 Inspection per 4 years		
R4: Unsealed Access Roads				

R5: Sealed Secondary Access Roads		N/A		
R6: Unsealed Secondary Access Roads				
R7: Ancillary Areas*				

\*Ancillary areas listed in the Road Register. Any other Ancillary areas will be inspected as a reactive inspection upon request.

HIERARCHY CATEGORY	PROGRAMMED INSPECTIONS - CONDITION	PROACTIVE INSPECTIONS - DEFECT	INCIDENT INSPECTIONS'	REACTIVE INSPECTIONS
<b>Footpath and Shared Track Network</b>				
<b>Concrete Kerb and channel abutting a sealed footpath within the CBD</b>				
P1: Lake Wendouree and Victoria Park	3 yearly network coverage	2 inspections every 6 months	Localised inspection after rainfall exceeding: • 50mm on 1 day • 95mm over 3 days Inspection within 3 mths	1 working day
Other shared use tracks		1 inspection per year		
P2: High Use		1 inspections every 4 months	N/A	1 working day
P3: Medium Use		1 Inspection per 2 years		
P4: Low Use		1 Inspection per 3 years		
<b>Bridges and Major Culverts<sup>2</sup></b>				
All	Level 1, 1 Inspection per year Level 2, 1 inspection per 3 years or as determined by Level 1 inspections		Localised inspection after rainfall exceeding: • 50mm on 1 day • 95mm over 3 days Inspection within 3 mths	1 working day

Note 1:

**Level 1 inspections** are designed to check the general serviceability of the structure for the safety of road users. They are normally carried out on a scheduled basis, but should also be carried out immediately after flooding (5 day rainfall exceeding 90mm-B1 or 100mm-B2), accident, fires or other natural disasters.

**Level 2 inspections** are designed to identify significant defects in the structure, and to provide a condition rating for the whole structure. These are detailed inspections, covering all aspects of the structure.

Note 2:

Special inspections will be required when the bridge structure has to carry an abnormally heavy load. These should be carried out before, during and after.

## 7.5 Intervention Levels and Response Times

### 7.5.1 Intervention Levels and Response Times

ROAD NETWORK								
Description	Response Code by Hierarchy							Examples of possible remediation work conducted
	R1	R2	R3	R4	R5	R6	R7	
Debris posing a possible danger to motorists, cyclists within the traffic lane.	A	A	A	B	B	C	C	Remove trees/limbs. Cover spills with suitable material. Remove debris.
Ponding of water >300mm deep within traffic lane.	D	D	E	E	F	F	F	Remove section of basecourse, correct drainage issue and restore pavement. Restore kerb and channel with required longitudinal grade to ensure water flow to side entry pit.
Potholes in traffic lane of a sealed pavement 50 mm deep or greater / or in the traffic lane of an unsealed pavement 75mm deep or greater that are 300mm in diameter or greater. / Potholes in R5 R6 roads 75mm deep or greater that are 600mm in diameter or greater.	B	B	C	C	D	D	D	Clean out and fill with asphalt to a minimum depth of 35mm. Address any local drainage issues. Replace basecourse if needed. Area patching.
Potholes in road shoulder 50 mm deep and greater than 300mm in diameter or greater. Applicable only to category R1 R2 roads.	D	D	F					Grading
Deformations greater than 75mm under a 3m straight edge in traffic lane.	D	D	D	D	E	E	E	Major or minor patch/ grading.
Edge break in excess of 150mm laterally over >5m in length.	D	D	D	-	E	-	E	Restore seal coat. Grade and compact gravel shoulders. Widen pavement.
Edge drop on the unsealed shoulder when drop off is 100mm or > over a 10m length.	D	D	D	-	F	-	F	Grade shoulder. Re-gravelling of shoulder. Improve shoulder material with a higher PI. Widen pavement width.
Indistinguishable line markings or missing or damaged raised reflective pavement markers (RRPMs)	G	G	G	-	G	-	G	Repaint or replace.
Dangerous or missing drainage pit lids, grates	A	A	B	B	B	B	B	Replace pit lid
Trees, shrubs or grasses that	A	A	A	D	E	E	F	Prune or remove



have grown to restrict design sight distance to intersections or restrict viewing of safety signs.								trees and shrubs. Mow grass
Vegetation intruding within an envelope over traffic lane within 4.5m height clearance.	E	E	E	F	F	G	G	Prune or remove vegetation
Bluestone spoon guttering – step > 100mm or missing bluestone.	D	D	E	E	E	F	F	Repair or replace
Defect with a step greater than 25mm in concrete kerb abutting a sealed footpath within the CBD.	D	D	D					Concrete patching

ROADSIDE FURNITURE & STRUCTURES								
Description of Hazard	Response Code by Hierarchy							Typical remediation work conducted
	R1	R2	R3	R4	R5	R6	R7	
Safety Signs missing, illegible or damaged making them substantially ineffective.	A	A	A	B	B	C	D	Replace or repair sign
Safety Barriers and Fencing missing or damaged at a critical location– making them substantially ineffective.	D	D	D	E	F	G	G	Replace or repair safety barrier / fencing – make safe
Guideposts missing or damaged at a critical location* - making them substantially ineffective.	D	D	D	E	F	G	G	Replace or repair guideposts
Traffic Signal faults.	A	A	A	A	A	A		Replace/ repair

FOOTPATH AND SHARED TRAIL NETWORK					
Description of Hazard	Response Code by Hierarchy				Typical remediation work conducted
	P1	P2	P3	P4	
Defect with a step greater than 25mm on sealed and concrete path.	C	C	C	F	Footpath grinding, Tree root pruning and barrier installation, replacement of raised panel.
Tripping hazard greater than 50mm on unsealed paths.	B	N/A	C	F	Various
Vegetation which presents a physical hazard to the Public intruding into a minimum of 2.1m height clearance above path.	D	D	E	F	Removal or pruning of vegetation
Dangerous or missing pit lids, surrounds, grates or similar in pedestrian areas.	A	A	B	C	Replacement of pit lid
Safety signs missing, illegible or damaged making them substantially ineffective.	C	C	D	D	Repair or replacement
Fencing missing or damaged at critical location* – making them substantially ineffective	D	D	F	F	Repair or replacement
Longitudinal cracking in excess of 20mm wide over a length of 1m –shared paths	C	D	E	F	Crack seal with bitumen emulsion. Mill out affected area and re-asphalt. Rehabilitate affected base and re-asphalt.

\*Critical location – a location where the road alignment and/or pavement width and/or geometry are identified by additional markings or furniture to guide the travelling public.

### 7.5.2 Response Time Codes

RESPONSE TIME CODE	NOTIFICATION SOURCE*	NOTIFICATION TO ROAD MAINTENANCE UNIT	RECTIFICATION RESPONSE TIME**
A	Asset Inspection Officer	Notification within 1 working day – phone call	Within 2 working days of inspection
	Customer/Other Officer	Notification within 1 working day – phone call	
B	Asset Inspection Officer	Same day	Within 5 working days of inspection
	Customer/Other Officer	Pathway/IAMS workflow	
C	Asset Inspection Officer	Same day	Within 10 working days of inspection
	Customer/Other Officer	Pathway/IAMS workflow	
D	Asset Inspection Officer	Same day	Within 1 month of inspection
	Customer/Other Officer	Pathway/IAMS workflow	
E	Asset Inspection Officer	Within 1 working day	Within 2 months of inspection
	Customer/Other Officer	Pathway/IAMS workflow	
F	Asset Inspection Officer	Within 3 working days	Within 3 months of inspection
	Customer/Other Officer	Pathway/IAMS workflow	
G	Asset Inspection Officer	Within 3 working days	Within 18 months of inspection

\* Asset Inspection Officer, performing Programmed Inspections will provide Response Time to Road Maintenance Unit (RMU). Notification to RMU from other sources (Customers / Other Officers) will result in an inspection and determination of appropriate response time by Road Maintenance Unit Works Supervisor.

\*\* Road Maintenance Unit to rectify issue as soon as practicable. Where it is not possible to rectify within time frames, temporary measures to be undertaken as per section 7.6.

### 7.6. Response Time Extension

If for any reason a repair is unable to be undertaken in the response time as per table 7.5.1 an appropriate warning of the hazard is to be provided within 4 hours of inspection. Temporary repairs to make the area safe must be undertaken within 2 days of inspection. Appropriate Warnings could include:

- Provision and erection of warning signs;
- Barricading and fencing of the site;
- Traffic control action;
- Diversion around the site;
- Temporary speed limit signage;
- Lane closures;
- Restrict use (e.g. a load limit); and
- Full closure.