Pyrenees Shire Council Municipal Road Management Plan

(Adopted by Council 13 June 2017)

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Schedule of Changes & Amendments

Version	Date	Changes/Amendments
Draft		**Draft prepared 13 September 2004 by Design & Asset Manager and Council officers.**
V1.00	**21/09/2004**	**Endorsed by Council at its meeting 21 August 2004**
V2.00	**11/12/2007**	**Review undertaken September 2007 and adopted by Council.**
V3.00	**19/06/2009**	**Review undertaken June 2009 and adopted by Council.**
V4.00	**19/07/2011**	**Review undertaken in June 2011 and adopted by Council.**
V5.00	**20/08/2013**	**Review undertaken in June 2013 and adopted by Council**
V6.00	**28/04/2017**	**Review undertaken April 2017 and presented to Council 13 June 2017**

NB: 1. Primary number changes to Versions (eg V1.00 to V2.00) will be made when the document undergoes its regular review and when significant changes are made to standards and guidelines for inspections, intervention levels or work

2. Secondary number changes (V1.00 to V1.01) will apply to minor amendments that do not materially impact the document and are intended only to clarify or update issues.

Road Management Plan - Contents

1. Executive Summary

As a road authority, Council has a duty of care to road users and the community to maintain all public roads for which it is responsible, in a safe condition and to specified maintenance standards that meet community expectations having regard to relevant government transport and other policies, and available funds.

The Shire is custodian of an extensive range of community assets that it provides to facilitate delivery of services to the community. Specifically for road assets, it has responsibility for 2,048.90 kilometres of roads varying from sealed roads to access tracks and fire-tracks, 291 bridges and major culverts; 45.394 kilometres of kerb and channel and 18.659 kilometres of footpaths.

Typical Council infrastructure assets are found in:

- The road and street network, including footpaths, kerb and channel, culverts, bridges, traffic facilities, guard rails, street furniture, bus shelters, street lighting, street name and regulatory signs, and car parks both on and off-street.
- Flood protection and stormwater drainage systems.
- Waste management facilities, including landfills and waste transfer stations.
- Buildings and facilities of various types that provide a focus for services, such as administrative facilities, child care centres, health centres, youth centre, kindergartens, community halls, etc.
- Parks and recreation facilities, including active and passive recreation areas, sport centres, lighting, etc.
- Plant and equipment, including workshop and depot facilities to undertake specific services.
- Information technology networks, including computer and telecommunication systems.

As for all levels of Governments, there is increasing demand for resources to provide the various services for which it has a statutory responsibility as well as those services, which its community expects it to provide. At the same time, the ability to adequately fund these assets and services is becoming increasingly difficult due to competing demands.

Strategic directions may be implemented whereby service levels may be increased or decreased depending on the competing priorities of Council and the expectations of the community. Council achieves the delivery of such strategies through the process of service planning.

The Road Management Plan, with its supporting documents, has been developed to establish a management system for the public road functions that are the responsibility of the Council. The management system is based on policy and operational objectives and at the same time recognises resource limitations in undertaking the necessary levels of service and performance standards outlined in the plan.

2. Introduction

2.1 Legal; Basis for the Road Management Plan

The Road Management Plan (referred to hereafter as the 'Plan') has been prepared pursuant to the requirements of the following legislation:-

- Road Management Act, 2004
- Road Management (General) Regulations 2005
- Road Management (Works and Infrastructure) Regulations 2005
- The Road Management Plan also considers the requirements of the following legislation:-
- Local Government Act, 1989
- Road Safety Act 1986

The Pyrenees Shire Council is the designated 'Co-ordinating Road Authority' for municipal roads within the Shire and is responsible for their care and management.

Council must ensure that if a road is required for public traffic, it is kept open for public use, and may carry out work on the road. The Council is not obliged to do any specific work on the road and in particular, is not obliged to carry out any surface or drainage work on an unmade road.

2.2 Purpose of the Plan

The purpose of the Municipal Road Management Plan is to establish a management system for Council to inspect, maintain and repair its public roads based on policy and operational objectives having regard to available resources.

Through supporting documents it also sets the relevant standards in relation to discharge of duties in the performance of those road management functions.

The key elements of the Plan include:

- The Register of Public Local Roads for which Council is responsible.
- The system and approach that Council uses to manage maintenance and renewals of its public road network.
- Schedules of maintenance standards and processes used by Council.

The physical condition of and asset is affected by the maintenance of the asset, the operation and aspects of the use (Level of Service) of the asset. All three are required to be managed to ensure effectiveness of the Service.

To complement the Municipal Road Management Plan, a Road Asset Management Plan has also been developed to outline the key elements involved in managing that asset. It combines management, financial, engineering and technical practices to ensure that the level of service required by user groups is provided at the lowest long term cost to the community within the limits of any fiscal constraints that may be imposed by Council. (See reference 11.3 - The Road Asset Management Plan.)

Attachment 6 - Schedules of Assets in the Road Reserve summarises the various asset types included in the Council road network within the road reserve. It is not practical at this juncture to develop asset management plans for all components of the road asset. Consideration will be given to their development in the future.

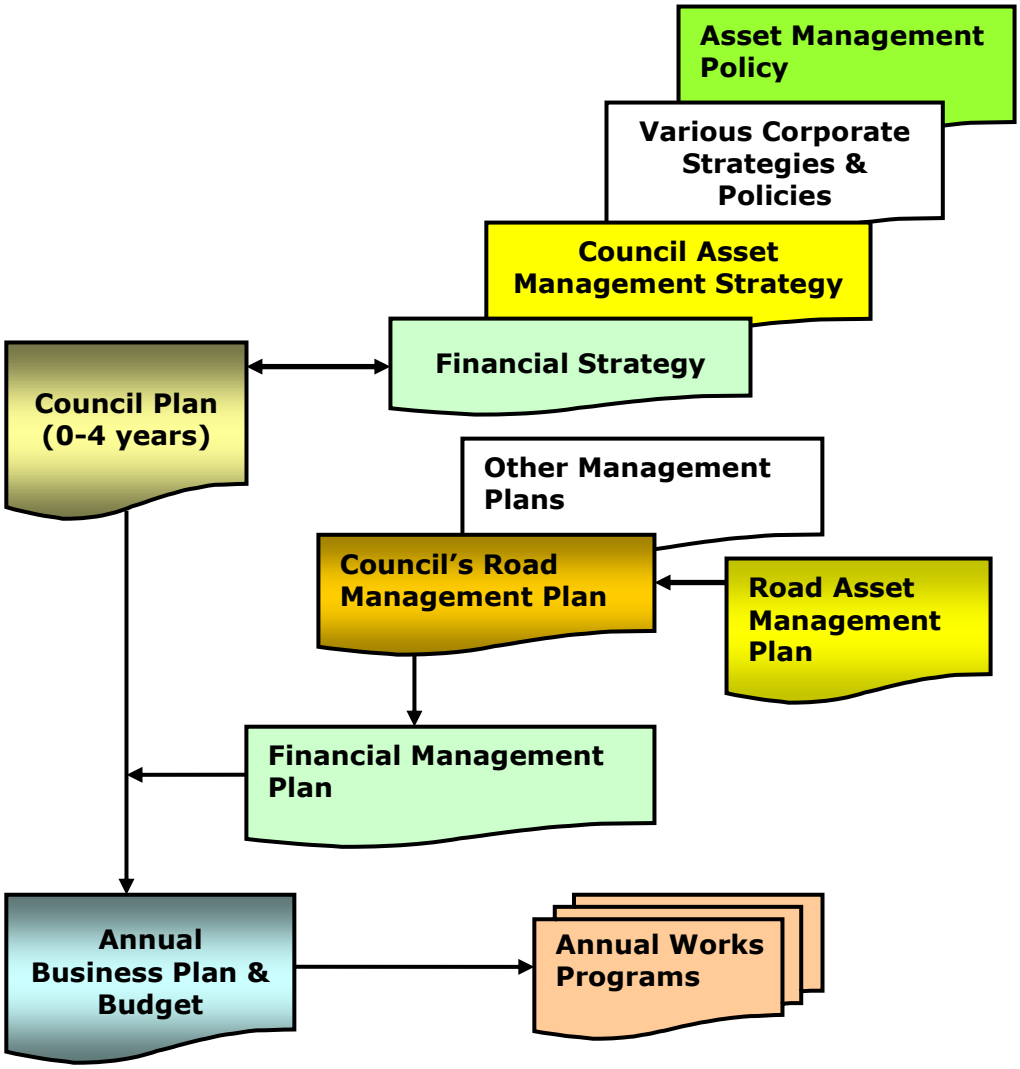
2.3 Council's Strategic Planning Process - Linkages

The following chart outlines the linkages between the various components involved in Council's strategic planning process.

The Asset Management Strategy provides guidance to Council's Financial Strategy and to the Council Plan. The Road Asset Management Plan in turn provides input to the Road Management Plan, Financial Management Plan and the Annual Business Plan and Budget. From this the Annual Works Programs for infrastructure maintenance and renewals are developed.

The Road Asset Management Plan provides more information on Council's Asset Management Policy Framework and the linkages to key corporate strategies, plans and system.

In terms of relationship with the annual budget decision making process, a three year capital roads expenditure program has been developed and is reviewed annually. Works are prioritised on a basis of road category, traffic type and volume, road condition and associated risk.



3. Public Roads, User Rights and Responsibilities

3.1 Public Roads

A "road" by definition in the Local Government Act 1989 includes a street; right of way; cul de sac; by-pass; bridge or ford; footpath, bicycle path or nature strip; any culvert or kerbing or other land or works forming part of the road.

"Arterial Roads" are Freeways, Highways and declared Main Roads which are managed by the State Government through VicRoads.

"Municipal Roads" are roads for which the municipal council is the responsible Road Authority. The Road Management Act imposes specific duties on a Council with respect to the inspection, repair and maintenance of its Municipal public roads which are those that are reasonably required for general public use.

"Other Roads" include roads in State forests and reserves, and roads on private property. The municipal council is not responsible for the care and maintenance of these.

3.2 Key Stakeholders

The key stakeholder groups of the community who are both users of the road network and/or are affected by it include:

- The community in general (for recreation, sport, leisure and business);
- Residents and businesses adjoining the road network;
- Pedestrians (including the very young, those with disabilities, and the elderly with somewhat limited mobility);
- Users of a range of miscellaneous smaller and lightweight vehicles such as pedal cyclists, motorised buggies, wheel chairs, prams, etc.
- Vehicle users using motorised vehicles such as trucks, buses, commercial vehicles, cars and motor cyclists;
- Wine Producers, Farmers (Crops and Livestock), Timber Production;
- Tourists and visitors to the area;
- Emergency agencies (Police, Fire, Ambulance, VICSES);
- Traffic and transportation managers;
- Managers of the asset that is the road network;
- Construction and maintenance personnel who build and maintain asset components;
- Utility agencies that utilise the road reserve for their infrastructure (Water, sewerage, gas, electricity, telecommunications);
- Council as custodian of the asset;
- State and Federal Government that periodically provide support funding to assist with management of the network.

3.3 Obligations of road users

3.3.1 General Usage

The Road Management Act 2004 requires that:

(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 —

- physical characteristics of the road;
- prevailing weather conditions;
- level of visibility;
- condition of the motor vehicle;
- prevailing traffic conditions;
- relevant road laws and advisory signs;
- physical and mental condition of the driver.

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

(3) A road user must—

- have regard to the rights of other road users and take reasonable care to avoid any conduct that may endanger the safety or welfare of other road users;
- 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;
- 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.

3.3.2 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 condition of a public road or infrastructure, the person must give written notice of the incident to the responsible road authority within the prescribed period of the incident occurring [clause 115(1) of the Road Management Act].

3.3.3 Council Road Opening/Crossing Permit

Council requires permits where a member of the public or organisation proposes to undertake activities within the road reserve that may in any way impede access by the public or interfere with road infrastructure.

3.3.4 Obligation to Maintain and Keep Safe

In relation to provision of access to the road reserve from adjoining properties, there are several assets within the road reserve that council does not have an obligation to maintain. These include:

(1) **Vehicle driveways** where the portion of a vehicle crossing located between the carriageway and the property boundary is the responsibility of the adjoining property owner to maintain.

(2) **Nature strips and infill areas** within urban areas which 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 private road crossings. These are normally sown to grass with responsibility for maintenance of the grass generally being left to the property owner. Street trees however are controlled by Council.

(3) **Single property stormwater drains** that are constructed within the reserve from the property boundary to a discharge outlet in the kerb or into the drain. They are there to benefit the property and as such are the responsibility of the owner of the property being served to maintain.

Regardless of its maintenance obligations, Council has a duty of care to ensure that these assets are in a safe condition for the public in general and may serve a notice on the property owner to have defects repaired. They will be inspected as part of Council's formal inspection process.

4. Register of Public Roads

4.1 Road Asset Components and the Register

The **Municipal Public Road Register** details the local roads council has a management responsibility for and details roads within the shire that are managed by other road authorities (eg. shire boundary roads).

Assets within the Public Road Network for which Council is responsible include the following component groupings:

- Road pavement (base material)
- Road surface (bitumen or asphalt seal)
- Footpath
- Kerb and channel
- Bridges and major culverts
- Street trees
- Furniture such as traffic facilities (roundabouts, traffic humps, etc) guard rails and signs.

4.2 Municipal Road Map

The **Municipal Road Map** (Reference 11.1) shows the location of all the Municipal roads listed in the Council's Register of Public Roads and is stored on Council's Geographic Information System, MapInfo. It shows the following:

- Road names;
- Hierarchy classifications;

4.3 Availability of and Updating the Register and Map

A hard-copy of both the Public Road Register and Municipal Road Map is available for inspection at each of the Council's Customer Service Centres.

Updating the Municipal Public Road Register and Road Map will be effected in the following manner within 30 days of notification of any changes:

a) The necessary amendment will be made to the asset databases from which the Register and Map are derived.

b) Each hard-copy of the Register available at Customer Service Centres will have a loose leaf insertion applied to it for the balance of the year showing any changes made during the year.

c) Annually a new hard-copy of the Register and Map will be provided to each Customer Service Centre.

Currently Council have a number of Roads and Lanes which will be renamed in the near future following the appropriate process through public consultation and Council approval. These roads which need to be changed are indicated on the road register.

4.4 Maintenance Demarcation Agreements

Where there are maintenance demarcation agreements defining limits of responsibility on municipal roads between Pyrenees Shire Council and other Road Authorities or any private organisation, the schedule of roads affected and details of these agreements are listed in the Road Register. Details are also contained in the **Road Asset Management Plan**.

The agreements with the following Authorities, currently under review, include:

- VicRoads
- Rural City of Ararat
- Northern Grampians Shire
- Central Goldfields Shire
- Hepburn Shire
- Greater City of Ballarat
- Golden Plains Shire
- Corangamite Shire
- State Rail Authority
- Department of Sustainability & Environment

Issues relating to VicRoads are outlined in general in the Ministerial Code for Operational responsibilities for declared freeways and arterial roads and for specific arrangements with Pyrenees Shire and VicRoads, in the Instrument of Delegation between VicRoads and Council.

Typical demarcation issues where council is often thought to have sole responsibility are listed in the following table:

Issue	Agreement with	Responsibilities
Street Lighting	Electricity Supply Authority	Asset owned by the Authority; Council pays annual charge.
Municipal Roadside Vegetation	Department Environment Land Water and Planning (DELWP)	Remnant vegetation controlled by DELWP not Council.

Council has reviewed the network of railway crossings through the establishment of ALCAM agreements with the State Rail Authorities. These agreements or Memorandums of Understanding document the responsibility of both Council and the Rail authorities where road reserves cross railway lines.

While Council have a Memorandum of Understanding with the Department of Environment Land Water and Planning regarding maintenance safety works on roads under its control, any programmed works for rehabilitation will need to be assessed for environmental sensitivity by an appropriately qualified person and the information regarding the site be reported to the Manager. The appropriate action relative to Federal and State Law will need to be incorporated into design and construction methods. Areas of National Environmental Significance will be identified and dealt with as the highest priority.

The DELWP MOU Managing Native Vegetation on Roadsides provides Council exemptions for removal of vegetation within the road envelope under outlined benchmarks for safety and maintenance works. Document link:

http://www.dse.vic.gov.au/__data/assets/pdf_file/0007/102310/Managing_native_vegetation_on_roadsides.pdf

4.5 Non-Council Assets on the Road Reserve

Non-council assets on the road reserve (eg rail crossings, telecommunications structures, street lighting, etc) will need to be identified along with the name of the responsible body as information becomes available. This is an ongoing process.

5. Management of Municipal Road Assets

5.1 Road Hierarchy Categories

Hierarchy categories were developed during 2003 for the key road network assets of urban roads, rural roads and footpaths. Categories within the hierarchy have been based on the specific function of that category, the user types and numbers, and location.

The purpose of developing hierarchy categories is to enable works to be prioritised and programmed in a rational manner when undertaking maintenance and defect remedial work. It provides a framework in which data is collected, information reported, and decisions made.

5.1.1 Road Hierarchy Categories

In the case of roads, the hierarchy has been divided into five prime categories four of which are Council's responsibility. Within these categories there are some sub-categories.

Road Hierarchy

Road Category	Function
Arterial	VicRoads Arterials – Function is to carry the heaviest volumes of traffic, including commercial vehicles, and provides the principal routes for traffic flows in and around the municipality. These come under the jurisdiction of VicRoads and as such are not the responsibility of Council for maintenance of the road pavement and surface.
Category 1: Link	These provide the linkage between centres and they are supplementary to the arterial road system within the Shire. They generally have a relatively high truck count and provide access to major industries.
Category 2: Collector (Sealed and Gravel Pavements)	Carry moderate volumes of traffic and provide access to local areas. They should have limited through non-local traffic (this is not promoted or encouraged).
Category 3:Local Access 1	Primary function is to provide access to residential properties and they cater for relatively short distance travel to higher level roads.
Category 4: Local Access 2	Primary function is to provide access to farm properties, forest reserves and fire access tracks. They cater for relatively short distance travel to higher level roads.
Fire Access Tracks	Not intended as property access routes other than for emergency fire purposes
Non-Council Roads	These are private and crown roads not maintained by Council.

Note: For the footpath hierarchy pedestrian traffic is the basis of usage volume.
Attachment 1 details the Road Hierarchy for the Shire.

5.1.2 Footpath Hierarchy Categories

The Footpath hierarchy is divided into three categories, with Category 3 being the highest ranked as it has the highest user profile.

Footpath Hierarchy

Category	Function
Category 1 **High and Commercial Use Areas**	These are footpaths within rural town and village centres where public footpaths have been constructed. Included in this category is any footpath specifically constructed as access to a school.
Category 2 **Infrequently used**	These are in residential areas and have less use than Category 1 footpaths.
Category 3 **Gravel constructed / Informal**	These include formed paths and tracks that are known to be regularly used by pedestrians.

5.2 Complaints/Action Process and Tracking System

Pyrenees Shire records all incoming customer requests or complaints using its Record Management Software, Recfind Version 5.0.

The process is as follows:

- The Customer Action Request (CAR) is fed into Recfind by the person receiving the request;
- The CAR is given a Unique Identifier and then placed within Recfind;
- It is recorded by name, date, type of request, officer actioning the request and a description of request/actions to be taken;
- This is then printed off and work flowed manually around the organisation;
- A letter of receipt is sent out to the customer stating a time frame of works, if and when it may take place;
- When the CAR workflow is signed off and all action has been completed it is then sent to Corporate Records to be filed.

5.3 Suspension of the Road Management Plan

Council will make every endeavour to meet all aspects of its Road Management Plan. However in the event of natural disasters and other emergency events including but not limited to, fires, drought, floods, and the like, together with human factors, including but not limited to lack of Council staff or suitably qualified contractors, because of Section 83 of the Victorian Wrongs Act, 1958, as amended, Council reserves the right to suspend compliance with its Road Management Plan.

In the event that the Chief Executive Officer of Council, has to, pursuant to Section 83 of the said Act, consider the limited financial resources of Council and its other conflicting priorities, meaning Council's Plan cannot be met, they will write to Council's officer in charge of its Plan and inform them that some, or all of the timeframes and responses in Council's Plan, are to be suspended. Once the events beyond the control of Council have abated, or if the events have partly abated, Council's Chief Executive officer will write to Council's officer responsible for Council's Plan and inform them which parts of Council's Plan are to be reactivated and when.

6. Road Maintenance Management

The Maintenance Management System for the municipal public road network within Pyrenees Shire is a combination of standards, codes, guidelines and data management systems. Key components are outlined as follows:

6.1 Technical Levels of Service

The technical levels of service covering road function, design target and construction parameters are outlined in **Attachment 1 – Road Hierarchy**. It should be noted that many roads are not at the target level however, the intention is that when they are reconstructed, it will be to the target level.

6.2 Maintenance Levels of Service (listed as INTERVENTION LEVELS)

The Maintenance Level of Service (LOS) set out in the **Attachment 4** specifies the requirements for management of the municipal public road asset. The Maintenance LOS takes into account:

- Community views and values
- Industry standards
- The need to provide a road network that is safe for all users
- Ability of Council to fund maintenance activities.

The following matters have been taken into account with the development of the maintenance standards:

(a) **Road condition surveys** – periodic surveys to monitor road pavement, road surfacing, structure, and condition at specified intervals depending on the asset, its condition at the previous survey, the hierarchy, and any risk to safety.

(b) **Routine maintenance inspections** – regular inspections, as part of the day-to-day maintenance of the road network, to monitor asset condition against intervention standards and asset safety. Inspection intervals have been determined having regard to the particular road asset element, the type, volume and nature of road usage, and the resources available.

(c) **Routine maintenance standards** – routine maintenance and repair functions and standards, based on agreed asset performance targets, and intervention standards and actions (based on risk assessment) for a particular asset element (eg. road, footpath, bridge) and road type. Standards vary across the road network in line with the designated road hierarchy and relevant risk factors such as traffic volumes, composition of traffic, operating speed, the susceptibility of assets to deterioration, the cost effectiveness of repairs, and competing priorities for funding.

(d) **Repair and maintenance works** – routine maintenance and repair works are undertaken within a specified reasonable period of time having regard to intervention action priorities, and to specified standards.

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

(f) **Emergency works** – works required to be undertaken immediately outside routine works programs to ensure the safety of road users and the public as a result of emergency incidents. Emergency works include traffic incident management, responses to fires, floods, storms and spillages, and assistance under the Victorian State Emergency Response Plan and Municipal Emergency Management Plan.

The **Road Asset Management Plan**, having regard to the matters (a) to (f) above, establishes schedules of asset condition intervention levels for assets which Council has operational and/or maintenance responsibility.

The hierarchy of roads and footpaths is used as the basis for determining the various standards across the road network in line with relevant risk factors, while having regard to the type, volume and nature of road usage.

Where there has been under-funding of maintenance and it continues for any length of time, it will result in more rapid deterioration of the asset therefore reducing its intended life-span. This will bring forward the need to fund replacement or renewal. Generally the unit cost of replacement or renewal of an asset is considerably more expensive than the cost to maintain it. This will place greater demand on Council's financial resources or alternatively Council will need to reduce the level of service.

6.3 Asset Inspection Process

Survey and inspection processes are required for competent management of the road network assets. A four-tier inspection regime has been implemented covering safety, incidents, defects and condition.

Reactive/Safety Inspections – identify defects outside the tolerable level and likely to create danger or serious inconvenience to users of the network or the wider community. They are ad hoc by nature and are undertaken following notification to council by members of the community through the Public Request Service or by council employees while undertaking their normal work duties. These notifications are of defects and safety deficiencies. The subsequent inspection will be conducted by an appropriate council representative.

Programmed Inspections – determine if the road asset complies with the levels of service in terms of being within tolerable level of defects as specified in the Asset Management Plan and Road Asset Inspection Frequencies.

Maintenance Inspections – used internally to determine maintenance programs. These are typically undertaken to coincide with program inspections for category 1 roads, and at more regular intervals than programmed inspections for category 2 and 3 roads (refer Attachment 3). These inspections will not be investigating defects beyond intervention levels and do not replace road management plan program inspections.

Condition Inspections - identify deficiencies in the structural integrity of the road infrastructure assets which if untreated, are likely to adversely affect network values. The deficiencies may well impact short-term serviceability as well as the ability of the component to continue to perform for the duration of its intended life span.

Programmed and Condition Inspections are undertaken by way of a formal timetable. Condition inspections are taken at a lesser frequency than programmed inspections that are designed to find defects due for rectification works.

Safety issues may be detected either as the result of the programmed defect inspection or by observation followed by notification to council by members of the community or council employees while undertaking their normal work duties. A subsequent safety inspection will then be conducted by an appropriate council officer.

In determining the frequency of programmed inspections Council has taken into account the functional hierarchy classification of the road or footpath and its construction type. As a further degree of protection, the ad hoc safety inspections will be arranged when they are reported for defects that may occur outside the programmed schedule timeframe.

Attachments 2 and 3 list the inspection requirements in detail and also their frequencies.

6.4 Risk Assessment and Prioritisation of Remedial Works

An inspection process has been developed to enable detection of those defects that have reached the point at which they are no longer "tolerable" require intervention. This will result in remedial work being undertaken on a risk prioritisation basis.

The process of risk assessment follows principles outlined in the 2002 document from Civic Mutual Plus **"Road Reserve Risk Management – Statement of Principles"**. This document utilises principles established in the Australian & New Zealand **Risk Management Standard AS/NZS 31000:2009.**

For footpaths, the risk assessment is determined by size of tripping hazards, slipperiness, unevenness and the location of the defect in terms of its asset hierarchy classification. Hierarchy itself is determined by function, types of users and user numbers. For roads, the risk assessment is determined by the size of various modes of failure and hierarchy classification of the location.

Priority works from inspections are reviewed and the program of remedial works is developed and passed on to the relevant works crews.

6.5 Condition Standards

The Asset Management Plan details the requirements for determining and recording structural integrity condition of each of the road asset components.

This includes the following:

- Physical description of the actual data being recorded;
- Background and/or qualification, where relevant to the data;
- Differentiating between maintenance and capital renewals;
- Backlog of works where under-funding has occurred in recent years;
- Development of the annual works replacement program

The annual review of the strategic asset renewal/replacement needs utilising this condition information on the various asset components, undertaken through the Asset Management Plan, provides the input for the development of the annual capital renewal/replacement works program for consideration with the annual budget.

6.6 Roadside Management Plan

The Roadside Management Plan is a reference document divided into sections to guide Council environmental decision making and on-ground processes.

The sections include:

- Management, framework and legislation
- Council responsibilities
- Functional issues
- Farming and associated activities
- Roadside management – operations and works

The strategic objective in developing the Roadside Management plan was for council to put a process in place for sustainable environmental roadside management including to:

- Integrate management of native vegetation into roadside planning
- Identify and protect significant plant and animal communities and their roadside habitat
- Integrate improved water quality values into unsealed road planning and maintenance
- Maintain the road formation to ensure safe function
- Minimise the risk and impact from fire

Legislation designating management responsibilities is outlined for Council, community and contractor processes to increase awareness of roadside vegetation values and promote best practice standards for Council and service providers. (Pyrenees Shire Roadside Management Plan 2011.)

7. Road Renewal/Rehabilitation Management

A Renewal/Rehabilitation Management Plan, which is part of the **Road Asset Management Plan**, supports the Municipal Road Management Plan.

The Road Renewal Management Plan covers the general requirements for development of long term asset renewal programs and their funding requirements.

8. Technical References

Key standards, manuals and guidelines include:

- International Infrastructure Management Manual (IIMM) 2006, IPWEA.
- Sustaining Local Assets – Policy Statement 2003, DVC
- Accounting for Infrastructure Assets – Guidelines 2003, DVC
- Risk Management Standard, AS/NZS 4360:1999 & 2004 Editions
- Ministerial Code of Practice – Road Management Plans, June 2004.

9. Council Documents, Policies and Procedures

Relevant Council engineering drawings and standards for design and construction are listed in the appropriate Asset Management Plan.

Other relevant Council documents, Policies and Procedures include:

(a) Council Plan 2017-21

(b) Asset Management Policy

(c) Asset Management Strategy

(d) Risk Management Strategy

(e) Road Asset Management Plan

(f) Roadside Management Strategy

10. References

Note:

The references listed are separate documents and are available for public inspection at the Council Offices located at 5 Lawrence Street, Beaufort.

10.1: Municipal Road Map

10.2: Road Asset Management Plan

11. Attachments

The attachments are support documents that provide a more detailed explanation of points made within the Road Management Plan.

Attachment 1: - Road Hierarchy

Road Hierarchy Categories	Sub-Categories for Pyrenees Shire	Description of Categories	Target Design Standards
Arterial **VicRoads Responsibility**			
Category 1: **Link Roads** (Currently named: 'Strategic Routes')	**Link**	• These provide the linkage between centres and they are supplementary to the arterial road system within the Shire. They generally have a relatively high truck count and provide access to major industries. • Generally > 100 vpd	• 6.2m wide seal; • 1.5m wide shoulders; • Pavement designed in accordance with VicRoads Guide to Pavement Design, Technical Bulletin No.37
Category 2: **Collector Roads**	**Collector – Sealed**	• Carry moderate volumes of traffic and provide access by linking local areas to link and arterial roads. They also provide links between the various collector roads. • Non continuous connector (do not cross arterial roads) • Limited through traffic (not promoted or encouraged)	• 3.8m. wide seal; • Rehabilitation to existing standard; • Pavement depth in accordance with Technical Bulletin No.37
	Collector – Gravel	• Function as above but generally lesser traffic volumes and require higher level of maintenance than lesser gravel categories.	• 5.0m width pavement; • Pavement depth 100 mm
Category 3: **Local Access 1 Roads**	**Sealed Road**	• Relatively short distance travel to higher level roads • Their primary function is to provide access to private properties.	• 3.8m wide seal; • Rehabilitation to existing standard; • Pavement depth in accordance with Technical Bulletin No.37
	Gravel Road Class 1	• Their primary function is to provide access to private properties.	• 2.5m width pavement; • Pavement depth 75 mm
Category 4: **Local Access 2 Roads**	**Gravel Road Class 2**	• Their primary function is to provide access to private properties but they have less traffic than Gravel Roads Class 1 (typically serving 3 dwellings or less); • Maintained infrequently (less than annual); • Single vehicle access and low speed, generally 30 kph	• No design as road follows natural formation; • Minimal gravel pavement; • Maintenance simply to facilitate low speed access only.
	Fire Track	• Only maintained by Council where Council has agreed to do so as a community emergency service; • Each road so designated will be agreed by Council decision and listed in a schedule on the Road Register as a Council maintained fire track	• Design as per CFA Guidelines where practical - tracks follow natural formation; • Not intended as property access routes other than for emergency fire purposes
Others – Not a Council Responsibility **Paper Roads**	**Fire Track & Crown Roads**	• In Crown or private ownership, not a Council responsibility.	
	Private Roads & Lanes	• In private ownership/control, not a Council responsibility.	
	No Constructed Road	• These are reserved roads that have not been constructed, not a Council management responsibility.	

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Attachment 2: - Inspection Requirements

Reference sources for descriptions:
- *Road Management Act 2004*
- *International Infrastructure Management Manual – Australia/NZ Edition 2002*
- *UK Highway Code of Practice for Maintenance Management 2001*

Inspection Type	Purpose	Inspection Performed by & Reporting Requirements
Reactive/Safety Inspection	▪ Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community. ▪ Safety issues may be detected as the result of: (a) formal programmed defect inspection; or (b) observation followed by notification to council by members of the community or council employees while undertaking their normal work duties with a subsequent safety inspection to be conducted by an appropriate council officer.	▪ Council representative with some knowledge of road maintenance techniques who may then call in a higher level of expertise if necessary. ▪ Recording to identify specific safety defect, time first reported, time inspected & by whom, subsequent action & time of completion.
Programmed Inspection	▪ Inspection undertaken in accordance with a formal programmed inspection schedule to determine if the road asset complies with the levels of service as specified in the Maintenance Service Agreement; ▪ A record of each street/road is to be completed detailing the name of the inspector, the inspection date and street/road name and a description of any defects found that are at the specified intervention levels defined in the Maintenance Service Agreement; ▪ In addition, a notation must to be recorded of any street/road inspected where no defect was apparent under the specific rigour of the inspection.	▪ Engineer or technical officer with knowledge of road maintenance techniques; ▪ A record of the inspection is to be signed by the inspector for placing on council's asset database for reference purposes (NB: this may include insurance or litigation requirements).
Condition Inspection	▪ An inspection specifically to identify deficiencies in the structural integrity of the various components of the road infrastructure assets which if untreated, are likely to adversely affect network values. The deficiencies may well impact short-term serviceability as well as the ability of the component to continue to perform for the duration of its intended life span; ▪ The condition inspection process must also meet the requirements for accounting regulations and asset management; ▪ Regular or periodic assessment, measurement and interpretation of the resulting condition data is required so as to determine the need for any preventive or remedial action then development of relevant programs of rehabilitation or renewal works.	▪ Inspection undertaken under the direction of a qualified engineer or experienced technical officer with extensive knowledge and experience in road construction and maintenance practices; ▪ Specific data to be recorded is determined by requirements of the Maintenance Service Agreement & the Asset Information System used to assess asset component needs.

Attachment 3: - Road Asset Inspection Frequencies

Asset Group Category		Inspection Interval		
Hierarchy Category	**Sub-Category**	**Condition Inspections (for Structural & Physical Integrity)**	**Programmed Inspections**	**Maintenance Inspection**
Roads				
	Primary Arterial	VicRoads responsibility	VicRoads responsibility	VicRoads responsibility
Category 1:	Link Roads	3 Years for all categories	12 weeks	12 Weeks
Category 2:	Collector Road – Sealed		24 weeks	12 Weeks
	Collector Road – Gravel		24 weeks	12 Weeks
Category 3:	Local Access Road – Sealed		48 weeks	24 Weeks
	Local Access Road – Gravel 1		48 weeks	24 Weeks
Category 4:	Local Access Road – Gravel 2		No inspection, respond to complaints only	No inspection, respond to complaints only
	Limited Access Track		No inspection, respond to complaints only	No inspection, respond to complaints only
	Fire Track		No inspection, respond to complaints only	No inspection, respond to complaints only
Footpaths				
Category 1:	Concrete/sealed constructed	5 Years for categories 1 & 2	12 months	6 months
Category 2:	Gravel constructed		24 months	12 months
Category 3:	Informal/ unconstructed/trail	No structure to inspect.	No inspection, respond to complaints only	No inspection, respond to complaints only
Kerb & Channel				
Category 1 Roads:	Link Roads	5 Years for all categories	Included in road inspections	Included in road inspections
Category 2 Roads:	Collector		Included in road inspections	Included in road inspections
Category 3&4 Roads:	Local Access Roads		Included in road inspections	Included in road inspections
Bridges/Major Culverts				

Category 1 Roads:	Link Roads	Maximum 5 years for all categories	No inspection, respond to requests only	No inspection, respond to requests only
Category 2 Roads:	Collector Roads			
Category 3 Roads:	Local Access Roads			
Category 4 Roads:	Limited Access Tracks			

Attachment 4: - Defect Tolerance Levels

Service Code	Item	Defect Levels when Intervention is Required	Cat.	Target Response Time
R	**Rubbish**	Free road carriageway of all domestic, commercial rubbish, waste, animal carcasses.	1	5 working days
			2	5 working days
			3	5 working days
			4	4 weeks
CC	**Culverts**	Waterway to be free, water build up less 50mm below obverts level.	1	12 weeks
			2	24 weeks
			3	48 weeks
			4	48 weeks
TDR	**Table, Mitre & Open Drains**	Covers all unlined open drains, catch drains, spoon drains, table drains and waterways that contribute to the structural integrity of the roadway. No build up of debris - free to drain.	1	48 weeks
			2	48 weeks
			3	48 weeks
			4	48 weeks
WL	**Weed & sucker Control**	Weeds & suckers obstructing vision of motorists at intersections and curves to be removed.	1	6 weeks
			2	12 weeks
			3	12 weeks
			4	24 weeks
E	**Emergency**	When any call is received which reports public safety in jeopardy. Includes all work arising from emergency incidents including flood, fires, storms, traffic accidents to ensure the safety of the public and protection of the asset.	1	24 hours
			2	24 hours
			3	24 hours
			4	24 hours
B	**Bridges**	Damage affecting its structural integrity or creating a hazard to the public.	1	24 hours
			2	24 hours
			3	24 hours
			4	24 hours

Attachment 4 – Defect Tolerance Levels continued

Service Code	Item	Defect Levels when Intervention is Required	Cat.	Target Response Time
WR	Wheel Rutting	Rutting concentration for a length of road & average depth not exceeding 75mm for 10% of road area in any 100m length.	1	12 weeks
			2	24 weeks
			3	48 weeks
			4	48 weeks
PL	Pit Lids	Severely damaged or missing pit lids or surrounds.	1	24 hours
			2	24 hours
			3	24 hours
			4	24 hours
S	Signage	Regulatory, warning and hazard signs missing, illegible or damaged, making them substantially ineffective.	1	6 weeks
			2	6 weeks
			3	6 weeks
			4	6 weeks
GP	Guide Posts	Existing guide posts missing or damaged at critical locations making them substantially ineffective.	1	6 weeks
			2	6 weeks
			3	6 weeks
			4	6 weeks
GR	Guard Rail	Any damaged or defective guardrail making it substantially ineffective	1	12 weeks
			2	24 weeks
			3	48 weeks
			4	48 weeks
TT	Tree Trimming	Any trees or branches within a 4.9m (Cat 1) or 4.0m (Cat 2/3) canopy above the traffic lane and within 2.4m (Cat 1) or 1.0m (Cat 2/3) of a traffic lane and is causing a hazard.	1	When and if resources available.
			2	
			3	
			4	

Attachment 4 – Defect Tolerance Levels continued

Service Code	Item	Defect Levels when Intervention is Required	Cat.	Target Response Time
PH	**Pothole Patching**	Repair if hole >75mm deep or 450mm diam.	1	4 weeks
			2	4 weeks
			3	6 weeks
			4	No sealed Category 4
ER	**Edge Repair**	Repair Edge of break >150mm from formed edge of seal over a length > 1.0m.	1	12 weeks
			2	24 weeks
			3	24 weeks
			4	No sealed Category 4
PM	**Pavement Markings**	When existing pavement markings are damaged, or unserviceable at a critical location.	1	48 weeks
			2	48 weeks
			3	48 weeks
			4	No sealed Category 4
BLB	**Bleeding**	When “bleeding” bitumen is viscous (sticky).	1	24 hours
			2	24 hours
			3	24 hours
			4	No sealed Category 4
SW	**Loose Stones**	Any area > 40m² that has loose stone build up that is visible in the travel path and/or is a potential hazard to vehicles or pedestrians.	1	12 weeks
			2	24 weeks
			3	24 weeks
			4	No sealed Category 4

Attachment 4 – Defect Tolerance Levels continued

Service Code	Item	Defect Levels when Intervention is Required	Cat.	Target Response Time
DP	Depressions	Regulate if >75mm deep and area > 24m²	1	12 weeks
			2	24 weeks
			3	24 weeks
			4	No sealed Category 4
PF	Pavement Failure (Digouts)	When an area is cracked and deformed and likely to deteriorate. Areas <25m² and >75mm deep.	1	12 weeks
			2	24 weeks
			3	24 weeks
			4	No sealed Category 4
USS	Unsealed Shoulders	Drop off from edges of seal to unsealed shoulder > 100mm over 2m length	1	24 weeks
			2	48 weeks
			3	48 weeks
			4	No sealed Category 4
SP	Shoulder Potholes	Repair if hole >100mm deep or 450mm diam.	1	12 weeks
			2	24 weeks
			3	24 weeks
			4	No sealed Category 4

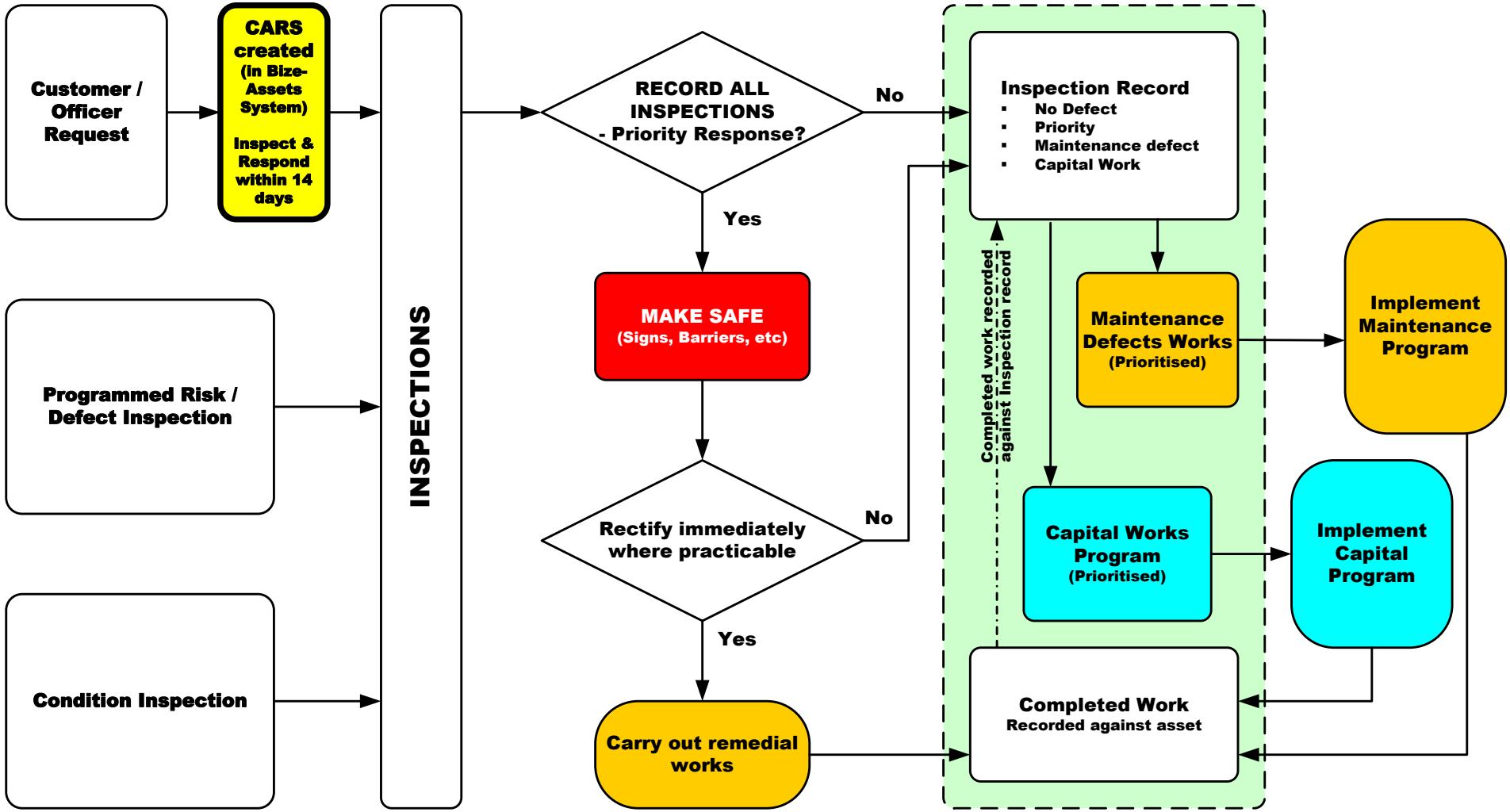
Attachment 4 – Defect Tolerance Levels continued

INTERVENTION LEVELS –UNSEALED ROADS				
Service Code	**Item**	**Defect Levels when Intervention is Required**	**Cat.**	**Target Response Time**
GPP	**Pot Holes**	Holes 100mm deep or 450mm diameter	1	No gravel Category 1
			2	24 weeks
			3	48 weeks
			4	48 weeks
FD	**Foundation Defects**	Heaving or settlement of road surface area >100mm deep or high for 10m²	1	No gravel Category 1
			2	24 weeks
			3	48 weeks
			4	48 weeks
C	**Corrugations**	Corrugation concentration for a length of road & average depth not exceeding 75mm for >40m or within 30m of an intersection	1	No gravel Category 1
			2	24 weeks
			3	48 weeks
			4	48 weeks
SC	**Surface Scour on pavement**	If scouring exceeds 75mm depth	1	No gravel Category 1
			2	24 weeks
			3	48 weeks
			4	48 weeks

Attachment 4 – Defect Tolerance Levels continued

INTERVENTION LEVELS – CONCRETE				
Service Code	**Item**	**Defect Levels when Intervention is Required**	**Cat.**	**Target Response Time**
KC	**Kerb and Channel**	Where kerb and channel can hold water > 75mm deep or where kerb adjacent to a traffic lane has a horizontal deviation from alignment > 250mm	1	When and if resources are available
			2	
			3	
			4	
FP	**Footpath**	Footpath lips or trip hazards > 30mm in height. Mounds or depressions > 100mm from adjacent footpath pavement. Cross fall steeper than 1 in 5.	1	12 weeks
			2	24 weeks
			3	48 weeks

Attachment 5: Inspection Management System



Attachment 6: - Schedules of Assets in the Road Reserve

Table 1: – Summary of Council Assets

Asset Type	Quantity	Included in the current RM Plan
Pavements – Sealed Roads	738km	Yes
Pavements – Gravel Roads	1228km	Yes
Footpaths including shared paths	18km	Yes
Kerb & Channel	49km	Yes
Bridges & Major Culverts	293 No.	Yes
Traffic Management facilities (include road humps, speed cushions, roundabouts, medians and traffic islands)	N/A	Yes
Signage (includes a range of regulatory, warning, street, direction, tourist & services, and information signs)	N/A	Yes
Public street lighting (only where owned by Council)	N/A	No
Road & Street Furniture – Bus Shelters	N/A	No
Road & Street Furniture - Other (includes litter bins, benches/seats, tables, bicycle racks and planter boxes)	N/A	No
Guard rails & safety fences	N/A	Yes
Car Parks – Off Street / On Street	N/A	No
Roadside Vegetation	N/A	Yes
Street Trees	N/A	Yes
School Crossings	2	No

NB: N/A means that detailed information is not currently available

Table 2: – Summary of Specific VicRoads Assets Maintained by Council

Asset Type	Maintenance Responsibility
Median Reserves (townships only)	Vegetation maintenance
Road Reserves (townships only)	Vegetation maintenance

Table 3: – Summary of Non-Council Assets on the Road Reserve

Asset Type	Responsible Infrastructure Manager
Street Lights	Powercor
Traffic Signal Installations – VicRoads assets	VicRoads
Telecommunications infrastructure Assets	Telstra & Optus
Water & Sewerage infrastructure assets	Central Highlands Water
Electricity infrastructure assets	SP Ausnet & Powercor
Gas infrastructure assets	Authorised Gas Supplier
Rail Crossings	VicTrack