

**HOBSONS**  
**BAY CITY**  
COUNCIL



# Road Asset Management Plan 2019

Prepared by:

Asset Planning Department

## **Acknowledgements**

Council acknowledges all language groups of the Kulin Nation as the traditional owners of these municipal lands. We recognise the first people's relationship to this land and offer our respect to their elders past and present.

Council acknowledges the legal responsibility to comply with the Charter of Human Rights and Responsibilities Act 2006 and the Equal Opportunity Act 2010. The Charter of Human Rights and Responsibilities Act 2006 is designed to protect the fundamental rights and freedoms of citizens. The Charter gives legal protection to 20 fundamental human rights under four key values that include freedom, respect, equality and dignity.

For further information, or to receive a copy of this document in an alternate format, contact Council on (03) 9932 1000.

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# 1.0 Executive Summary

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This Road Asset Management Plan (RAMP) has been developed to manage Hobsons Bay municipal road system, taking into consideration the important links provided by the State road network.

Road assets are all roads owned by Council that have been declared as public roads on the road register. Sealed roads are those that have a bituminous surface to them. Unsealed roads have a gravel or unformed surface.

The RAMP combines management, financial, engineering and technical practices to ensure the level of service required by customers is provided at the most economical cost to the community and the environment.

## The Road Network

The definitions for each of the asset types that make up the roads asset group are:

- **Road Pavements:** Road pavements include the road base and surface for sealed, and the base for unsealed roads. This also includes the pavements for on and off street carparks.
- **Carparks –** Road pavements on street classified as carparks (indented parking bays) and pavements off street classified as carparks located in open spaces, sports pavilions, community halls, libraries etc.
- **Kerb and Channel:** Road drainage whether barrier, blue stone with channel, edge strip, mountable, semi mountable, and spoon drain.
- **Streetscapes and Traffic Management:** Furniture and signage found alongside the road such as bus shelters, bins, seats, bollards, public lighting, traffic signs, miscellaneous signs, parking signs and street name signs. Traffic Management Devices including road humps, roundabouts, slow points, splitter islands, school crossings, pedestrian operated signals and crossings and traffic signals.

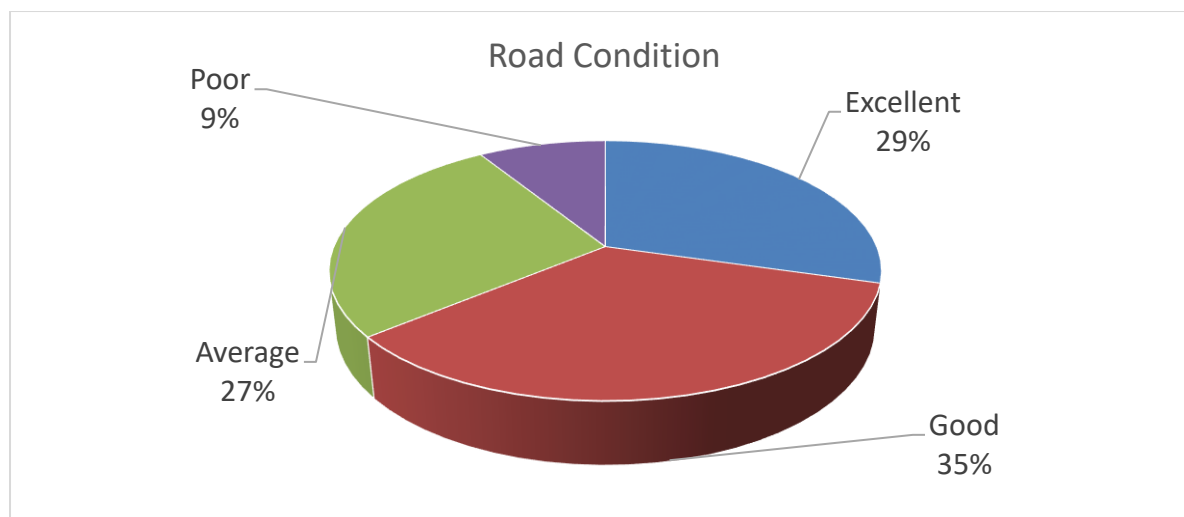
The road infrastructure is summarised in the Table below.

| ASSET GROUP <sup>1</sup> | ASSET TYPE | UNITS          | QUANTITY OF ROAD ASSETS | LENGTH of ROAD (km) |
|--------------------------|------------|----------------|-------------------------|---------------------|
|                          | Pavement   | m <sup>2</sup> | 3,422,974               | <b>433</b>          |

| ASSET GROUP <sup>1</sup>                   | ASSET TYPE  | UNITS          | QUANTITY OF ROAD ASSETS | LENGTH of ROAD (km) |
|--|---|----------------|-------------------------|---------------------|
| <b>Road Pavement</b>                       | Surface   | m <sup>2</sup> | 3,302,827               | <b>415</b>          |
| <b>Carparks</b>                            | Asphalt   | m <sup>2</sup> | 118,284                 | -                   |
|  | Concrete  | m <sup>2</sup> | 1,716                   | -                   |
|  | Paver   | m <sup>2</sup> | 2,013                   | -                   |
|  | Crushed Rock  | m <sup>2</sup> | 50,963                  | -                   |
|  | Gravel/Dirt   | m <sup>2</sup> | 20,502                  | -                   |
| <b>Kerb and Channel</b>                    | Kerb and Channel  | km             | N/A                     | <b>771</b>          |
| <b>Streetscapes and Traffic Management</b> | Mid-Block Slow Point  | No.            | 22                      | -                   |
|  | Mid-Block Threshold   | No.            | 15                      | -                   |
|  | Ped X Flashing Lights   | No.            | 15                      | -                   |
|  | Pedestrian crossing with Traffic Lights                         | No.            | 1                       | -                   |
|  | Pedestrian Crossing no Lights                                   | No.            | 29                      | -                   |
|  | Roundabout - Large >= 30 m Dia                                  | No.            | 46                      | -                   |
|  | Roundabout - Small 10 - 30 m Dia                                | No.            | 26                      | -                   |
|  | Roundabout - Small < 10 m Dia                                   | No.            | 4                       | -                   |
|  | Splitter Island - Generally at T - Intersection                 | No.            | 399                     | -                   |
|  | School Crossing - Basic   | No.            | 42                      | -                   |
|  | Speed Hump - Combined with Splitters generally at Intersections | No.            | 24                      | -                   |
|  | Speed Hump - Flat Top   | No.            | 257                     | -                   |
|  | Speed Hump - Watts Profile                                      | No.            | 145                     | -                   |
|  | Threshold Entry   | No.            | 177                     | -                   |
|  | Threshold combined with splitter                                | No.            | 10                      | -                   |

### Road Network Condition

The chart below presents the current overall condition of Councils Road network which is an average condition of all the individual components that make up each road i.e. road pavement, road surface and kerb and channel.



The majority (64%) of the road network is in excellent and good condition with 9% in poor condition. There is 27% of the road network that is in average condition and will need attention over the next few years along with the roads currently in poor condition.

### Demand Impact on Assets

Demand will be placed on existing road infrastructure to cope with the increasing traffic generated from all land developments and population growth throughout the municipality. This impact will be arising from both traffic volumes and increased frequency of freight traffic accessing both industrial and other precincts within the general road network. The consequence of which is reduced remaining life and increased deterioration of road pavements.

### New Infrastructure

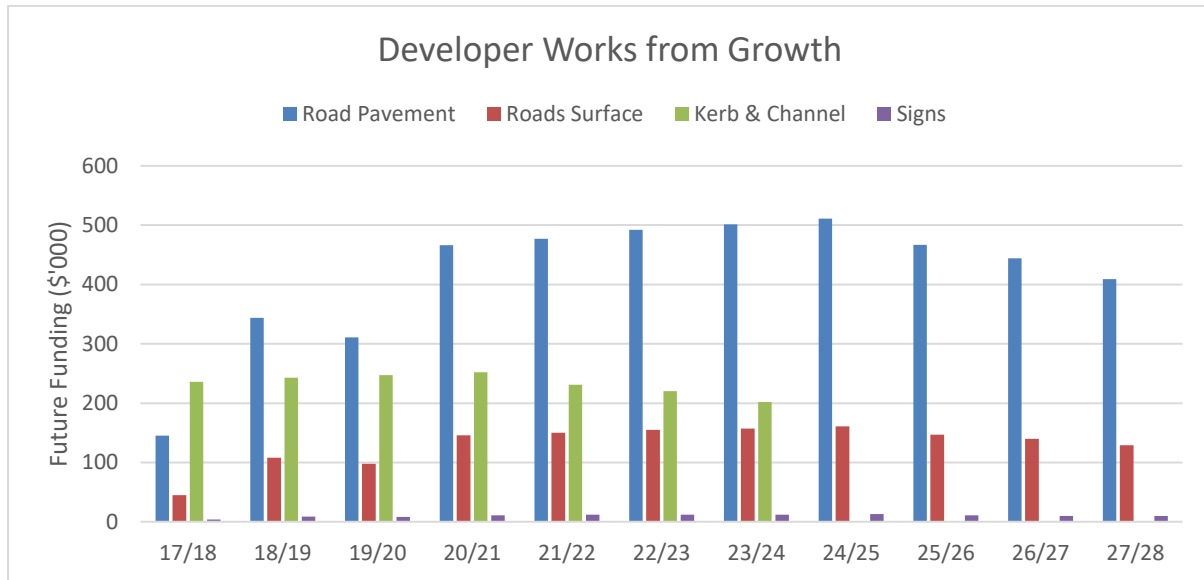
Based on the development applications identified in Table 16 of this plan, the impacts on new road infrastructure such as pavement, surfaces and kerb and channel can be estimated from 2017 to 2037.

The following table presents the forecasted new assets to be created by new developments.

| Asset Type              | Existing Assets | New Assets | Total Assets | Total Replacement Value |
|-------------------------|-----------------|------------|--------------|-------------------------|
| <b>Pavement</b>         | 433 km          | 23 km      | 456 km       | \$273,560,809           |
| <b>Surface</b>          | 415 km          | 23 km      | 438 km       | \$58,421,026            |
| <b>Kerb and Channel</b> | 771 km          | 46 km      | 817 km       | \$83,235,811            |
| <b>Signs</b>            | Unknown         | 461        | Unknown      | \$230,500               |
| <b>Bus Stops</b>        | Unknown         | 58         | Unknown      | \$58,000                |



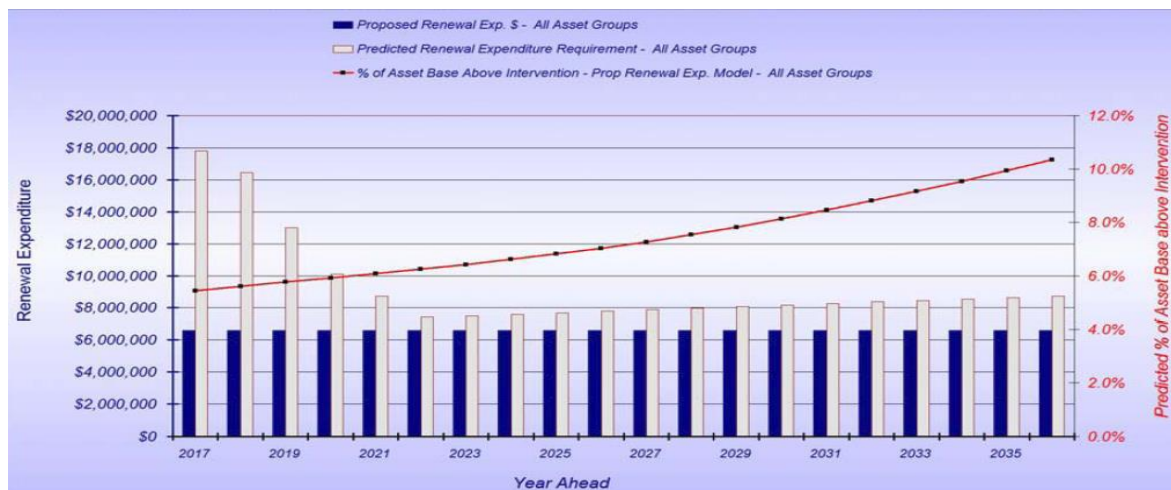
The following chart presents the value of the asset types created as a result of the demand.



**Value of New Assets by Asset Type**

**“Required” Renewal Expenditure**

The chart below presents the predicted future asset condition (red line expressed as the predicted % of the asset base above or beyond the selected intervention level) based on the continuation of the current level of renewal expenditure (Blue Bars). The grey bars represent the **“required”** expenditure profile to treat all assets that reach intervention. The percentage backlog of roads above intervention level will increase from 5.5% to over 10% in 20 years if there is no increase in the current funding, i.e. \$6,500,000 in 2017/18. Although in the past years the roads budget has been increased from \$2,400,000 in 2011/12 to \$6,500,000 in 2017/18 this level of funding has not met the required renewal demand and consequently has adversely impacted the overall condition of the road network. The chart below presents the required renewal demand of \$11m per annum (average over the next 10 years) and \$8M per annum the following 10 years.



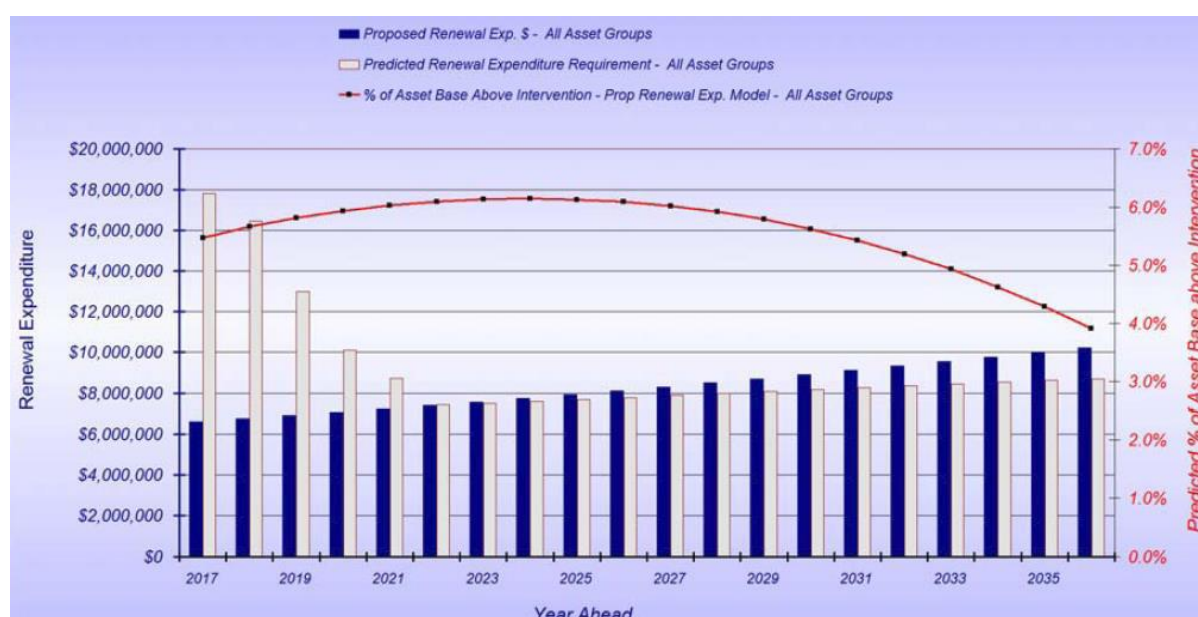
**Future Condition and Required Renewal**

### “Recommended” Renewal Expenditure

The chart below presents the recommended budget or renewal expenditure to improve the overall condition of the network and achieve a desired condition outcome within a designated period of time.

The recommended funding level aims at delivering a 25% reduction in the extent of “above” intervention assets after 20 years (from 5.5% to 3.9% above intervention – reduced backlog of poor condition assets). An annual compounding increase of 3.8% was found to be required with a year one starting expenditure of \$6,500,000 in 17/18.

It is recommended that a budget of \$7.0m be allocated in 20/21 with an annual increase of 3.8%.

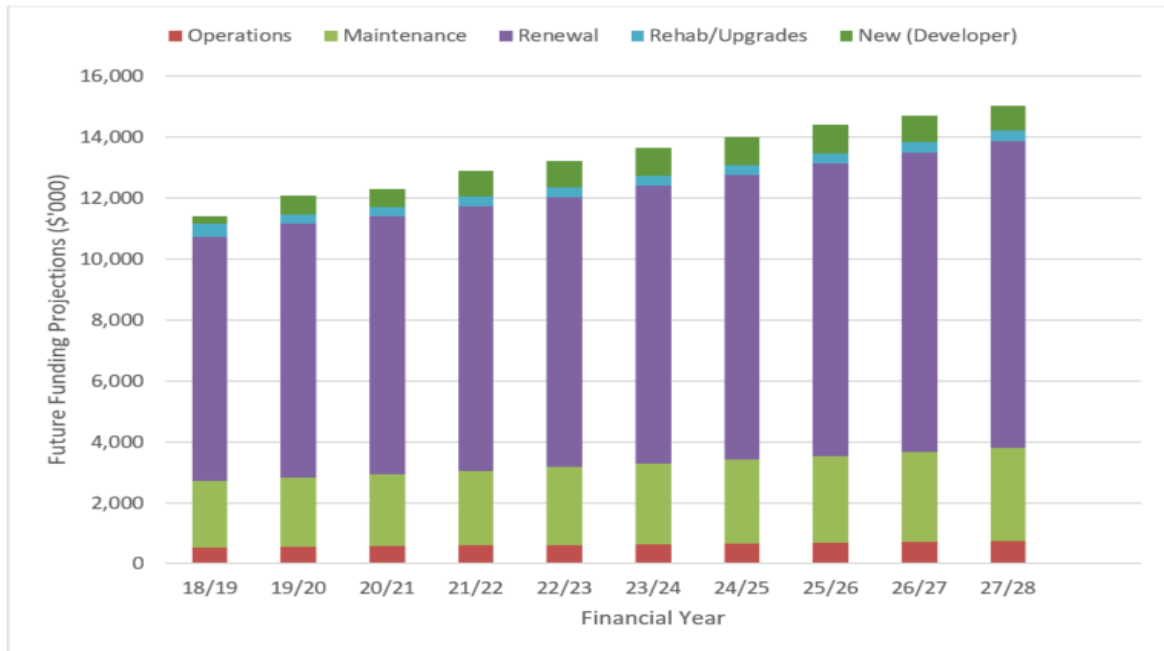


**Recommended Renewal Expenditure**

### 10 Year Financial Forecasts

The chart below summarises the 10 year financial forecasts for HBCC’s roads. This level of funding will improve the overall condition of the road network by increased renewal investment annually and also maintain the road network including the new roads to be constructed through developer activities. The forecasts are presented in the following works categories:

- Operations;
- Maintenance (Programmed and Reactive);
- Renewals (Rehabilitation and Replacement Works);
- Upgrade / Expansion works; and
- New Works by Developers.



**Ten Year Financial Projections**

## 2.0 Introduction

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The Hobsons Bay City Council (HBCC) is custodian of an extensive range of community assets that it provides to facilitate delivery of its services to the community. This includes the roads for which it has responsibility under the Road Management Act 2004.

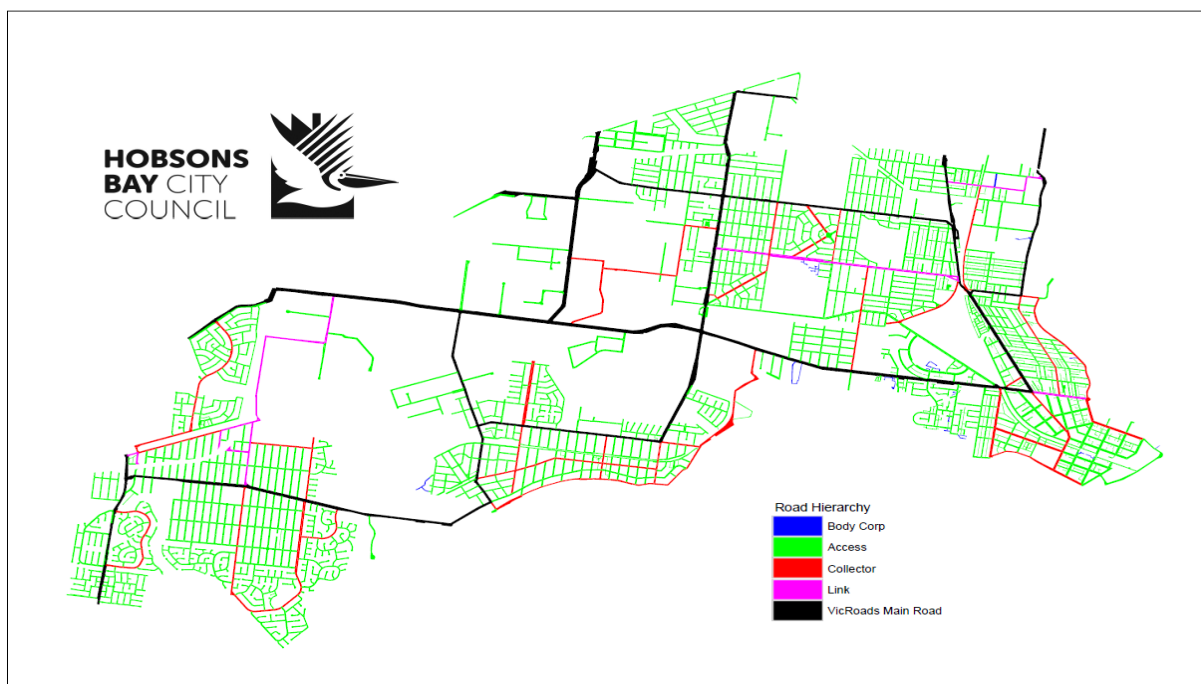
The HBCC “*Register of Public Roads*” provides additional details of each of the roads for which Council is responsible; however the Register is not an “incorporated document” in this Plan.

This Road Asset Management Plan has been developed to manage HBCC’s municipal road system, taking into consideration the important links provided by the State road network.

Road assets are all roads owned by Council that have been declared as public roads on the road register. Sealed roads are those that have a bituminous surface to them. Unsealed roads have a gravel or unformed surface. The road network in HBCC consists of approximately:

- 433 km of roads;
- 771 km’s of kerb and channels;
- 1,212 Traffic Management Devices; and
- 193,478 m<sup>2</sup> of car parks.

The road network is shown in Figure 1 below.



**Figure 1 Road Network**

## 2.1 The Asset Management Plan

The Asset Management (AM) Plan translates broad strategic goals and plans into specific goals and objectives which are relevant to a particular activity for the organisation.

The AM plan combines management, financial, engineering and technical practices to ensure the level of service required by customers is provided at the most economical cost to the community and the environment.

## 2.2 Purpose of the Plan

Implementation of this Road Asset Management Plan (RAMP) achieves the objectives of the following strategic documents:

### Hobsons Bay 2030 Community Vision

The following Hobsons Bay 2030 vision was developed *by* the community *for* the community and will guide Council's work until 2030.

*"By 2030, embracing our heritage, environment and diversity, we – the community of Hobsons Bay – will be an inclusive, empowered, sustainable and visionary community led and supported by a progressive Council of excellence."*

### Council Plan 2017- 2021

The goals of the Council Plan are aligned with the six key priority areas of the Hobsons Bay 2030 community vision and were developed based on Councillor, community and Council staff feedback; and consist of 20 strategic objectives that are framed around the following four goal areas:

- 1. An inclusive and healthy community** - enhancing the health and quality of life of the community through the equitable provision of quality services and opportunities for greater wellbeing.
- 2. A great place** - ensure Hobsons Bay is a vibrant place to live, work and visit.
- 3. A well designed, maintained and environmentally sustainable place** - manage future growth and development to ensure it is well designed and accessible whilst protecting our natural and built environments.
- 4. A Council of Excellence** - be a leading and skilled Council that is responsible, innovative and engaging in order to deliver excellence in all we do.

The delivery of each objective is supported by initiatives and major initiatives identified through the annual budget, performance indicators and the Strategic Resource Plan.

In this context the specific objectives of this RAMP are to:

- Demonstrate responsible stewardship;
- Translate the Council Strategic Goals into road strategies and action plans;
- Determine the services to be provided, the target service standards that HBCC aims to achieve, and the measures used to monitor the performance of the road network;
- Manage risk of asset failure;
- Achieve savings by optimising whole of life costs; and
- Support long term financial planning.

This AM Plan covers a period of 10 years commencing 1 July 2018. It will be regularly reviewed to ensure its continued relevance.

### 2.3 Asset Management Plan Format

This RAMP contains nine sections, each of which are explained below in Table 1:

| SECTION                      | SUBJECT MATTER  |
|------------------------------|---|
| <b>Introduction</b>          | Introduction to AM, outlines the purpose, scope and format of the plan, identifies key stakeholders and legislative requirements, and describes the relationship with other plans including the rationale for asset ownership.  |
| <b>Asset Portfolio</b>       | Outlines Councils portfolio of assets including quantity and value.   |
| <b>Strategic Environment</b> | Identifies the current working environment, the strategic and corporate goals with a summary of the documents that support the environment.   |
| <b>Levels of Service</b>     | Outlines the levels of service required based on the research of customer expectations, statutory requirements, and strategic and corporate goals. It also contains tables detailing expected and current performance measures. |
| <b>Demand Forecast</b>       | Details the future growth trends, the impact of these trends on infrastructure and demand management strategies to deal with the projected growth.  |

| <b>SECTION</b>                                     | <b>SUBJECT MATTER</b>  |
|--|--|
| <b>Risk Management</b>                             | Outlines Council’s risk management framework. It also contains tables of risk events with their severity and consequence.  |
| <b>Lifecycle Management Plan</b>                   | Gives an overview of the whole of life management concerning each asset type. For each type it details (where applicable) its current performance, operations plan, maintenance plan, renewal/replacement plan, upgrade/enhancement plan, creation/new works plan and disposal plan. |
| <b>Financial Summary</b>                           | Details the 20-year financial forecast with its associated assumptions and discussion. It contains an asset valuation for each asset type and their associated confidence levels. It also outlines the Council’s funding strategy.   |
| <b>Asset Management Improvement and Monitoring</b> | Deals with methods of monitoring performance by detailing AM processes, systems and data. It outlines a 2-year AM improvement plan. It also details procedures for monitoring and reviewing this AM Plan.  |

**Table 1: AM Plan Format**

Note: All Asset Management Plans are based on the framework recommended in the Institute of Public Works Engineering Australia’s International Infrastructure Management Manual (Australia / New Zealand Edition), and the Essential Services Commission “Local Government Performance Monitoring Framework” objectives.

## **2.4 Relationship with Key Corporate Plans**

AM plans are a key component of the Council planning process, linking with the following plans and documents:

**Council Plan 2017 - 2021:** The strategic plan is a long-term plan which sets out the broad strategic direction for the development of HBCC over the next four years. The Council Plan includes the Annual Action Plan, providing an overview of the actions for the financial year.

**Annual Report:** The Annual Report for the previous financial year supports the Council Plan and the details for the relevant year including:

- Highlights, challenges and the year ahead under each Goal;
- Projects for the year;
- Council's governance practices; and
- Council's financial performance during the previous financial year.

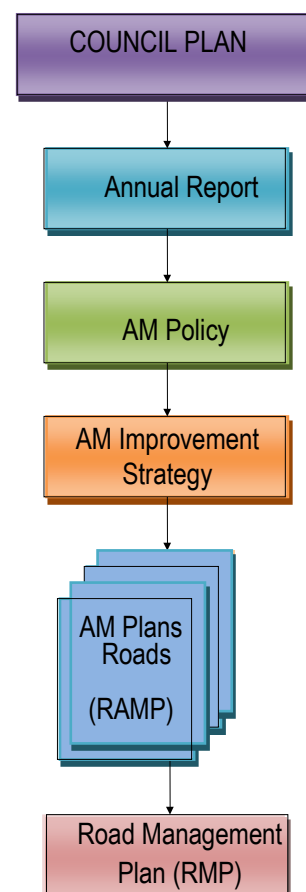
**HBCC Policies:** The policies are needed to provide direction for AM tactics. Policies that apply to the management of road assets include:

- Asset Management Policy 2017;
- Universal Design Policy 2017;
- Risk Management Policy 2015-2018 ;
- Provision of New Pathways Policy 2017;
- Integrated Transport Plan 2017; and
- Heritage Streets and Laneway Policy.

**AM Improvement Strategy:** Outlines the processes to manage the long-term sustainability of existing and future infrastructure and continuously improve our asset management practices. This strategy is updated every 4 years and sets a clear vision and direction for Council.

**Road Management Plan (RMP):** Is a major component of council's Corporate Risk Management Framework. The implementation of the plan provides a high level of protection with respect to common law for council's infrastructure assets. It also provides a framework for the operational management of road infrastructure assets including the inspection regime, response system and treatments to rectify defects.

The flow diagram above depicts the links and information flows between the Council Plan and the Asset Management Plans.





## 2.5 Rationale for Ownership

Local Authorities exist principally to supply core services that meet the needs of their communities. The services, and how they are provided, depend on the level of service required by the community.

Transportation is generally regarded as the most essential activity associated with enhancing the economy and accessibility. According to the Local Government Act 1989 the purposes of a Council are to:

- a) Provide for the peace, order and good government of its municipal district;
- b) Facilitate and encourage appropriate development of its municipal district in the best interests of the community;
- c) Provide equitable and appropriate services and facilities for the community and to ensure that those services and facilities are managed efficiently and effectively; and
- d) Manage, improve and develop the resources of its district efficiently and effectively.

Table 2 presents the ownership rationale and powers of Council under the LG Act.

### OWNERSHIP RATIONALE

Schedule 10 of the Act outlines the powers of Council over roads under the headings of:

- Power to construct and maintain roads;
- Power to deviate roads;
- Power to discontinue roads;
- Power to take road-making materials;
- Power to name roads, erect signs and require premises to be numbered;
- Power to fix road alignment;
- Power to narrow or widen roads;
- Power to provide for temporary roads;
- Powers concerning fences, gates and by-passes;
- Powers concerning holes and other dangers; and
- Powers concerning crossings over footpaths and channels.

Schedule 11 of the Act outlines the powers of Council over traffic under the headings of:

- Powers concerning parking;
- Power to issue special parking permits;
- Power to remove unregistered or abandoned vehicles;
- Power to move obstructing vehicles;
- Power to move other obstructions;
- Power to restrict traffic near a construction site;
- Power to close road on seasonal basis;
- Power to erect and remove works and structures;
- Power to place obstructions or barriers on a road permanently and temporarily ;
- Powers concerning shopping malls;
- Power to restrict use of road by vehicles of a certain size etc.;
- Power to determine speed limits; and

**OWNERSHIP RATIONALE**

- Power to prohibit traffic on unsafe roads.

**Disability Discrimination Act 1992 - The Transport Standards**

The Transport Standards came into effect in October 2002 and place certain requirements on the providers and maintainers of public transport infrastructure to do certain things. This Standard includes access paths to bus stops and taxi stands. The Transport Act 1983 places the responsibility of public transport infrastructure on the Public Transport Corporation. Maintenance responsibilities of public transport infrastructure need to be clarified.

**Transport (Highway Rule) Act 2002**

This Act has changed the allocation of risk to be managed by Council's in response to a number of Court decisions in relation to accidents on infrastructure assets that are the responsibility of Local Government.

**Table 2: Rationale for Ownership**

## 3.0 Asset Portfolio

### 3.1 Our Road Network

The definitions for each of the asset types in the asset portfolio are:

- **Road Pavements:** Road pavements include the road base and surface for sealed, and the base for unsealed roads. This also includes the pavements for on and off street carparks.
- **Kerb and Channel:** Road drainage whether barrier, blue stone with channel, edge strip, mountable, semi mountable, and spoon drain.
- **Streetscapes and Traffic Management:** Furniture and signage found alongside the road such as bus shelters, bins, seats, bollards, public lighting, traffic signs, miscellaneous signs, parking signs and street name signs. Traffic Management Devices including road humps, roundabouts, slow points, splitter islands, school crossings, pedestrian operated signals and crossings and traffic signals.

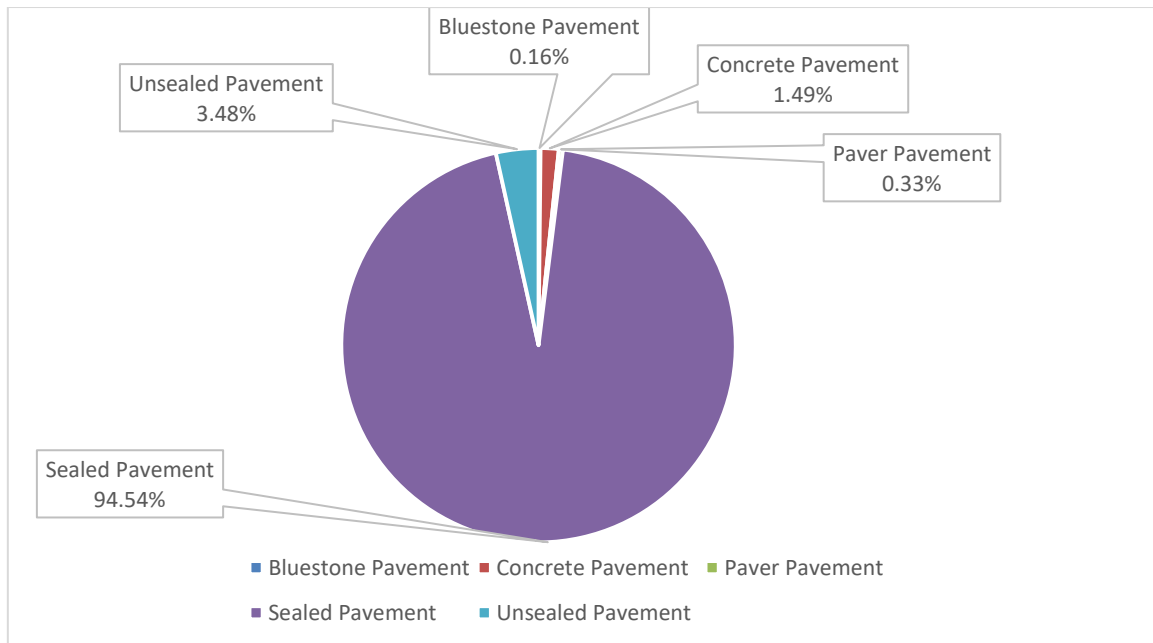
The road infrastructure is summarised in the Table 3.

| ASSET GROUP <sup>2</sup> | ASSET TYPE           | UNITS          | QUANTITY OF ROAD ASSETS | LENGTH of ROAD (km) |
|--------------------------|----------------------|----------------|-------------------------|---------------------|
| <b>Road Pavement</b>     | Pavement             | m <sup>2</sup> | 3,422,974               | <b>433</b>          |
|                          | Surface              | m <sup>2</sup> | 3,302,827               | <b>415</b>          |
| <b>Carparks</b>          | Asphalt              | m <sup>2</sup> | 118,284                 | -                   |
|                          | Concrete             | m <sup>2</sup> | 1,716                   | -                   |
|                          | Paver                | m <sup>2</sup> | 2,013                   | -                   |
|                          | Crushed Rock         | m <sup>2</sup> | 50,963                  | -                   |
|                          | Gravel/Dirt          | m <sup>2</sup> | 20,502                  | -                   |
| <b>Kerb and Channel</b>  | Kerb and Channel     | km             | N/A                     | <b>771</b>          |
|                          | Mid-Block Slow Point | No.            | 22                      | -                   |
|                          | Mid-Block Threshold  | No.            | 15                      | -                   |

| ASSET GROUP <sup>2</sup>                   | ASSET TYPE  | UNITS | QUANTITY OF ROAD ASSETS | LENGTH of ROAD (km) |
|--|---|-------|-------------------------|---------------------|
| <b>Streetscapes and Traffic Management</b> | Ped X Flashing Lights   | No.   | 15                      | -                   |
|  | Pedestrian crossing with Traffic Lights                         | No.   | 1                       | -                   |
|  | Pedestrian Crossing no Lights                                   | No.   | 29                      | -                   |
|  | Roundabout - Large $\geq$ 30 m Dia                              | No.   | 46                      | -                   |
|  | Roundabout - Small 10 - 30 m Dia                                | No.   | 26                      | -                   |
|  | Roundabout - Small $<$ 10 m Dia                                 | No.   | 4                       | -                   |
|  | Splitter Island - Generally at T - Intersection                 | No.   | 399                     | -                   |
|  | School Crossing - Basic   | No.   | 42                      | -                   |
|  | Speed Hump - Combined with Splitters generally at Intersections | No.   | 24                      | -                   |
|  | Speed Hump - Flat Top   | No.   | 257                     | -                   |
|  | Speed Hump - Watts Profile                                      | No.   | 145                     | -                   |
|  | Threshold Entry   | No.   | 177                     | -                   |
|  | Threshold combined with splitter                                | No.   | 10                      | -                   |

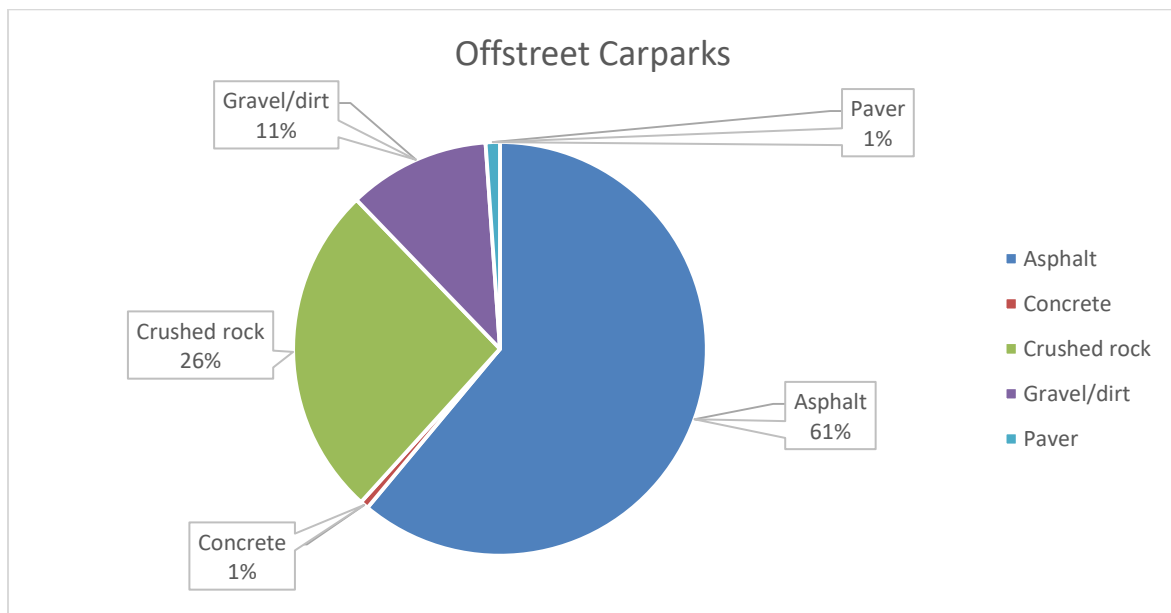
**Table 3. Summary of Road Asset Portfolio**

Figure 2 represents the road pavements apportioned by pavement type.



**Figure 2: HBCC Road Pavements by Pavement Area**

Figure 3 represents the carparks apportioned by material type.

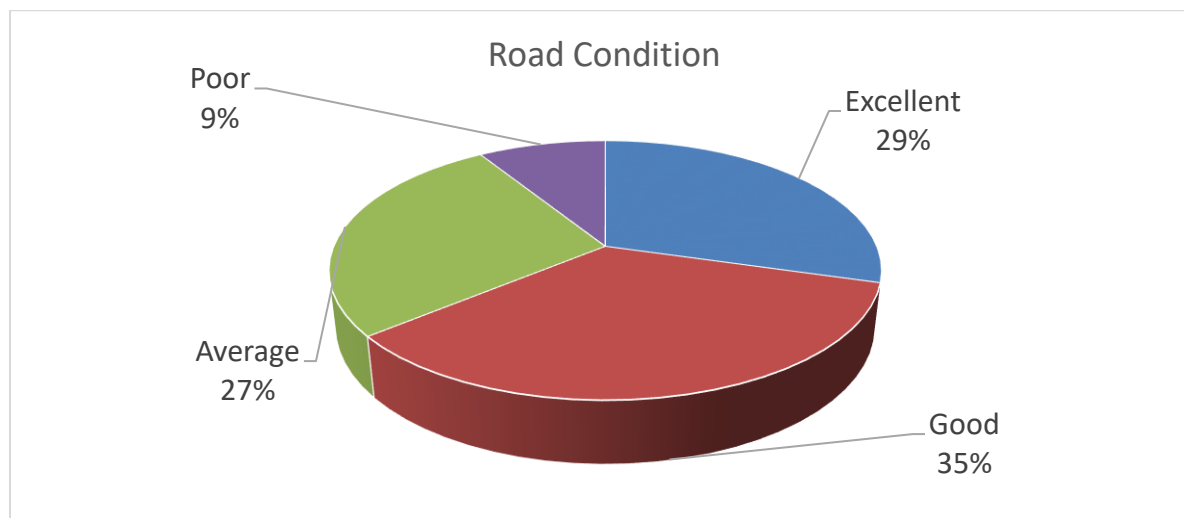


**Figure 3: HBCC Off Street Carparks by Material Area**

For further details and breakdown of the asset quantities refer to Appendix B.

### 3.2 Asset Condition

Figure 4 below presents the current overall condition of Councils Road network which is an average condition of all the individual components that make up each road i.e. road pavement, road surface and kerb and channel.



**Figure 4: HBCC Road Condition**

The majority (64%) of the road network is in excellent and good condition with 9% in poor condition. There is 27% of the road network that is in average condition and will need attention over the next few years along with the roads currently in poor condition.

### 3.3 Road Functional Hierarchy

The road hierarchy is key in the management of the road assets as the road classification that is assigned to each segment of road is used to determine the inspection frequencies, maintenance regimes and standards for new construction.

The road classifications specify each road or ancillary area by road use function, reflects the perceived risk associated with the vehicle and pedestrian usage of each road type and are used to differentiate service levels and maintenance standards.

Table 4 presents the HBCC road network functional hierarchy.

| Classification |           | Definition   |
|----------------|-----------|--|
| Urban          | Link      | Provides link between arterial roads and/ or significant residential, Industrial and commercial nodes.                       |
| Urban          | Collector | Provides route between and through residential, industrial and commercial areas and convey traffic to link or arterial roads |

|       |                     |  |
|-------|---------------------|--|
| Urban | Access              | Provides direct access to abutting residential, industrial and commercial properties with minimal to no through traffic. |
| Urban | VicRoads Main Roads | Roads that are the responsibility of VicRoads.   |
| Urban | Body Corp           | Roads that are part of body corporate developments.  |

**Table 4: HBCC Functional Road Hierarchy**

The length of roads maintained by Council by classification are provided in Table 5 excluding VicRoads and Body Corporate roads which are not maintained by Council.

| ROAD CLASSIFICATION | LENGTH (km) |
|---------------------|-------------|
| Link Roads          | 15          |
| Collector           | 49          |
| Access Roads        | 369         |

**Table 5: HBCC Maintained Roads**

## 4.0 Strategic Environment

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It is essential that the AM plan and associated tactics align with the future strategic direction identified by Council.

### 4.1 Corporate Vision

#### Hobsons Bay 2030 Community Vision

The following Hobsons Bay 2030 vision was developed *by* the community *for* the community and will guide Council's work until 2030.

*"By 2030, embracing our heritage, environment and diversity, we – the community of Hobsons Bay – will be an inclusive, empowered, sustainable and visionary community led and supported by a progressive Council of excellence."*

### 4.2 Strategic and Corporate Goals related to Road Infrastructure

There are a number of strategic goals that Council works towards. The most relevant to road assets are:

#### Council Plan 2017- 2021

The goals of the Council Plan are aligned with the six key priority areas of the Hobsons Bay 2030 community vision and were developed based on Councillor, community and Council staff feedback; and consist of 20 strategic objectives that are framed around the following four goal areas:

- 1. An inclusive and healthy community** - enhancing the health and quality of life of the community through the equitable provision of quality services and opportunities for greater wellbeing.
- 2. A great place** - ensure Hobsons Bay is a vibrant place to live, work and visit.
- 3. A well designed, maintained and environmentally sustainable place** - manage future growth and development to ensure it is well designed and accessible whilst protecting our natural and built environments.
- 4. A Council of Excellence** - be a leading and skilled Council that is responsible, innovative and engaging in order to deliver excellence in all we do.

The delivery of each objective is supported by initiatives and major initiatives identified through the annual budget, performance indicators and the Strategic Resource Plan.



The objectives of relevance to this AM plan include:

- 2.5 Work with all levels of government and other stakeholders to improve our transport network and to address gaps and capacity in public transport, our roads, foot paths and cycle routes
- 3.2 Deliver and maintain well-designed, accessible and environmentally sustainable community assets

Progress against these objectives will be measured by community satisfaction with:

- Traffic management;
- Provision of parking facilities; and
- Road maintenance and repairs.

#### 4.2.1 Annual Budget

Table 6 presents the services provided to manage the lifecycle of the road network.

| BUSINESS AREA <sup>3</sup>                           | DESCRIPTION OF SERVICES PROVIDED  |
|--|---|
| <p><b>Cleansing, Utilities, Roads and Drains</b></p> | <p>Roads and Drainage maintenance team and City Cleansing.</p> <p>This service provides for the ongoing maintenance of the Council’s roads, drains, footpaths. It also provides street cleaning, leaf collection, weed removal, drainage pit cleaning and street litter bins throughout Council.</p>  |
| <p><b>Capital Works and Assets</b></p>               | <p>Asset Planning, Capital works and Traffic Management.</p> <p>This service facilitates the smooth flow of traffic and parking throughout the municipality through the provision of line marking, signage, traffic signals, crossings, bicycle facilities and road safety education. This service also undertakes design, tendering, contract management and supervision of various major civil and building works within the Council’s capital works program as well as managing the corporate asset management system and Geographical Information System (GIS).</p> |

**Table 6: Council Road Management Services**

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<sup>3</sup> Annual Budget 2016-17

Key initiatives associated with the road network include:

- Further develop an integrated approach to asset management including roads, drains, footpaths, building and open space that is consistent with National Asset Management frameworks;
- Deliver the Capital Works program including the Roads, Drainage and Footpath program; and
- Implement the 2017 Integrated Transport Strategy.

The service performance outcome indicator will be the community satisfaction rating out of 100 with how Council has performed on the condition of sealed local roads.

#### **4.2.2 AM Policy 2017**

This policy acknowledges that management of the community's \$1.0Billion worth of infrastructure assets is a core function of the Council and that sound asset management is essential to enable the Council to meet its responsibilities for:

- Delivering high quality services to current and future communities;
- Providing and maintaining community infrastructure;
- Ensuring financial sustainability; and
- Encouraging and supporting the economic and social development of the municipality.

Key goals of the policy include:

- To provide affordable assets that best meet the communities' current and future needs and expectations;
- To make asset investment decisions based on a long term focused, integrated decision making process informed by strategic plans, asset and service strategies, service plans and asset management plans;
- To make informed/fact based decisions about the management of our assets incorporating social, economic and environmental factors which influence the health and wellbeing of our community;
- To maintain assets throughout their lifecycle to enable the delivery of appropriate levels of service and optimise in a sustainable way the use of available resources;
- To ensure that funding for the maintenance, operation and renewal of existing assets is prioritised above the funding of new assets;
- To ensure asset investment decisions consider all benefit cost options including provision of new assets by retirement, disposal, rationalisation and consolidation of existing assets to reduce life-cycle costs;
- To ensure compliance with the statutory, mandated and community requirements & obligations;
- To implement best practice asset management in compliance with the Australian Standards ISO55000 and National AM Frameworks

### 4.3 Key Stakeholders

Table 7 presents the key stakeholders of the Hobson Bay road network.

| External   | Internal              |
|--|-----------------------|
| The HBCC community, including residents and traders, road users and ratepayers | Councillors           |
| Pedestrians  | Executive             |
| Government agencies  | Managers              |
| Developers   | Personnel             |
| Contractors/suppliers  | Asset Planners        |
| Utility Providers  | City Services (Works) |
| Insurers   | Business Units        |
| Special Interest Groups  |                       |
| Tourists and Visitors  |                       |
| Emergency Services   |                       |

**Table 7: HBCC Stakeholders (Industry Knowledge)**

This plan will demonstrate to the various stakeholders that Council is managing its road assets responsibly. The above list does not exclude the role and interest of other stakeholders.

## 5.0 Levels of Service

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This section defines the service levels or performance standards that are required and the basis of the decision behind their selection. The service levels support Council's strategic goals and are based on customer expectations and statutory requirements.

### 5.1 Background

One of the objectives of this AM plan is to match the level of service (LOS) provided by the asset with the expectations of customers. This requires a clear understanding of customers' needs and preferences. The levels of service defined in this Section will be used:

- To inform customers of the characteristics of; and level of service to be offered;
- As a focus for the AM strategy developed to deliver the required level of service;
- As a measure of the effectiveness of this AM plan;
- To identify the costs and benefits of the services offered; and
- To enable customers to assess suitability, affordability and equity of the services offered.

The adopted levels of service for assets are based on staff knowledge and:

- **Customer Research and Expectations:** Information gathered from customers on expected quality and cost of services.
- **Customer Focus Strategy:** A customer focus strategy provides council with a framework and a plan to deliver excellent customer service.
- **Strategic and Corporate Goals:** Provides guidelines for the scope of current and future services offered, the manner of service delivery and define specific levels of service which the organisation wishes to achieve. (Refer to Section 3.0 - Strategic Environment).
- **Statutory Requirements:** Environmental standards, Regulations, Acts and Council Policies that impact on the way assets are managed i.e. building regulations, health and safety legislation. These requirements set the minimum level of service that must be provided. For further information refer to Section 3.0 - Strategic Environment.

## 5.2 Customer Research and Expectations

### 5.2.1 Customer Research

Customer research is carried out through a number of formal and informal processes within the organisation. Many opportunities exist for the community to provide valuable feedback on current asset levels of service. Either by face-to-face contact or by telephone, letters, or e-mail etc.

Table 8 presents a number of council programs in place where the community is invited to submit their feedback or views about specific issues or to be involved in the development of the municipality.

| TOOLS                           | DESCRIPTION  |
|---------------------------------|--|
| <b>Annual Community Surveys</b> | Council conducts annual surveys to measure community satisfaction with a range of services and facilities. Surveyed customers rated Council’s courtesy of service, access to the right advice, and provision of information as “very good”. Speed of service rated slightly lower as good. |
| <b>Snap Send Solve</b>          | Snap Send Solve is a free smart phone app that allows users to send photographs and GPS coordinates to report an issue to Council.   |

**Table 8: Community Tools**

### 5.2.2 Council’s Annual Community Survey

The annual community survey has been designed to measure community satisfaction with a range of Council services and facilities as well as to measure community sentiment across a range of additional issues of concern in the municipality.

The Annual Community Survey comprises the following core components:

- Satisfaction with Council’s overall performance and change in performance
- Satisfaction with aspects of governance and leadership
- Importance of and satisfaction with a range of Council services and facilities
- Issues of importance for Council to address in the coming year
- Community perception of safety in public areas of Hobsons Bay
- Involvement in and satisfaction with aspects of planning approvals process
- Satisfaction with Council customer service
- Respondent profile.

The annual community survey has been designed to provide Council with a wide range of information covering community satisfaction, community sentiment and community feel and involvement. The survey meets the requirements of the Department of Transport Planning and Local Infrastructure (DTPLI) *Annual Satisfaction Survey* by providing importance and satisfaction ratings for the major Council services and facilities as well as scores for satisfaction with Council overall.

Table 9 identifies some of the results achieved by HBCC from 2013/14 to 2016/17.

| PERFORMANCE MEASURES                    | Customer Survey Results | Customer Survey Results | Customer Survey Results | Customer Survey Results | Satisfaction Category |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-----------------------|
|   | 2013/14                 | 2014/15                 | 2015/16                 | 2016/17                 |                       |
| <b>Councils Overall Performance</b>     | 66                      | 68                      | 70                      | 66                      | Satisfied             |
| <b>Traffic Management</b>               | 63                      | 63                      | 69                      | 68                      | Satisfied             |
| <b>Parking Facilities</b>               | 62                      | 63                      | 69                      | 66                      | Satisfied             |
| <b>Footpath maintenance and repairs</b> | 60                      | 61                      | 68                      | 65                      | Satisfied             |
| <b>Drains maintenance and repairs</b>   | 66                      | 67                      | 73                      | 69                      | Satisfied             |
| <b>Bike paths</b>                       | 76                      | 73                      | 79                      | 68                      | Satisfied             |
| <b>Road maintenance and repairs</b>     | 63                      | 64                      | 70                      | 69                      | Satisfied             |

**Table 9: Annual Community Survey Results**

| Category       | Index Value |
|----------------|-------------|
| Very Satisfied | 80-100      |
| Satisfied      | 60-79       |
| Neutral        | 40-59       |
| Dissatisfied   | 0-39        |

**Table 10: Satisfaction Scoring Category**

Some of the key issues related to road infrastructure identified by the community and require increased investment include:

- Traffic Management;
- Maintenance and repairs of sealed local roads;
- Maintenance and repairs of footpaths and improved maintenance standards; and
- Provision of parking facilities.

### 5.3 Level of Service Tables

The service levels are divided into two types:

## Levels of Service

- Community based; and
- Technical based.

HBCC have defined their community and technical Levels of Service in this plan. Setting key performance indicators allows Council to monitor progress and measure performance.

Community based levels of service relate to the function of the service provided and need to be in line with what our customers expect as part of service delivery. The key performance indicators relating to road assets are included in the Table 11 below:

| Community Service Levels |
|--------------------------|
| Performance              |
| Customer Satisfaction    |
| Service Cost             |

**Table 11: Community Key Performance Indicators**

Technical based levels of service are also defined using key performance indicators (KPI's) however the KPI's identified as technical are often in support of those customer KPI's. It is the technical duties and activities that take place to ensure that customers are satisfied.

The technical levels of service support the processes engaged to meet community expectations. Key performance indicators that may apply to technical measures for roads are as follows in Table 12:

| Technical Service Levels |
|--------------------------|
| Compliance               |
| Utilisation              |
| Condition                |

**Table 12: Technical Key Performance Indicators (Levels of Service Workshop)**

The levels of service in the Table 13 below are currently in draft form. HBCC plans to consistently measure and test these levels of service before consulting with the community. By monitoring the level of service for a period of time before starting community consultation HBCC will be able to assess if the targets are achievable and the performance is measurable.

Although no community consultation has been carried out yet, HBCC have developed the following levels of service with community expectations in mind.





## 5.4 Target Levels of Service

| KEY PERFORMANCE INDICATOR          | CUSTOMER / TECHNICAL | SERVICE LEVEL CHARACTERISTIC   | PERFORMANCE MEASUREMENT PROCESS  | TARGET PERFORMANCE | CURRENT PERFORMANCE                     | ACTIONS TO MEET PERFORMANCE TARGET                        |
|------------------------------------|----------------------|--|--|--------------------|---|---|
| <b>Community Levels of Service</b> |                      |  |  |                    |   |   |
| Performance                        | COMMUNITY            | Users will have a smooth ride when travelling on Council Roads                 | No. of requests recorded annually regarding the damage of vehicles from road use                   | < 20               | 15                                      | Monitor only  |
| Customer Satisfaction              | COMMUNITY            | Road Maintenance and Repairs   | Community satisfaction rating out of 100   | 75                 | 69                                      | Implement 2018 road management plan                       |
| Customer Satisfaction              | COMMUNITY            | Traffic management   | Community satisfaction rating out of 100   | 75                 | 68                                      | Develop and implement local area traffic management plans |
| <b>Technical Levels of Service</b> |                      |  |  |                    |   |   |
| Compliance                         | TECHNICAL            | All road infrastructure maintained in accordance with the Road Management Plan | Compliance recorded through RMP audits of the contractors work. Score determined through the audit | 100%               | To be determined under the new 2018 RMP | Monitor only  |
| Utilisation                        | TECHNICAL            | Length of road network exceeding capacity                                      | Identified through traffic counts  | <2km roads         | <2km roads                              | Monitor only  |

Levels of Service

| KEY PERFORMANCE INDICATOR | CUSTOMER / TECHNICAL | SERVICE LEVEL CHARACTERISTIC                | PERFORMANCE MEASUREMENT PROCESS   | TARGET PERFORMANCE   | CURRENT PERFORMANCE                                  | ACTIONS TO MEET PERFORMANCE TARGET   |
|---------------------------|----------------------|---|---|--|--|--|
| Condition                 | TECHNICAL            | To manage the roads in a sustainable manner | The percentage of the road network for pavement under 8/10 and for surface under 7.5/10 condition framework | >96% below intervention or 3.9% above intervention in 20 years | >94.5% below intervention or 5.5% above intervention | Reduce above intervention assets from 5.5% to 3.9% by funding \$6.7m in 18/19 and an annual increase of 3.8% beyond 18/19. |

**Table 13: Level of Service – Roads**

**5.4.1 Service Level Trends**

| PERFORMANCE INDICATOR | CUSTOMER / TECHNICAL | SERVICE LEVEL CHARACTERISTIC         | PERFORMANCE MEASUREMENT PROCESS  | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | TREND | COMMENTS |
|-----------------------|----------------------|--------------------------------------|--|---------|---------|---------|---------|---------|-------|----------|
| Customer Satisfaction | COMMUNITY            | Traffic Management                   | Community satisfaction rating out of 100   | 53      | 63      | 63      | 69      | 68      | ↑     | OK       |
| Customer Satisfaction | COMMUNITY            | Parking Facilities                   | Community satisfaction rating out of 100   | 55      | 62      | 63      | 69      | 66      | ↑     | OK       |
| Customer Satisfaction | COMMUNITY            | Road Maintenance and Repairs         | Community satisfaction rating out of 100   | 53      | 63      | 64      | 70      | 69      | ↑     | OK       |
| Customer Satisfaction | COMMUNITY            | Satisfaction with sealed local roads | [Community satisfaction rating out of 100 with how Council has performed on the condition of sealed local roads] | -       | -       | 64      | 70      | 69      | ↑     | OK       |

Levels of Service

| PERFORMANCE INDICATOR | CUSTOMER / TECHNICAL | SERVICE LEVEL CHARACTERISTIC                | PERFORMANCE MEASUREMENT PROCESS   | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | TREND | COMMENTS   |
|-----------------------|----------------------|---|---|---------|---------|---------|---------|---------|-------|--|
| Customer Satisfaction | COMMUNITY            | Sealed local road requests                  | [Number of sealed local road requests / kilometres of sealed local roads] x 100   | -       | -       | 122     | 117     | 149     | ↑     | In 2016/17, enquiries increased by 20% due to 100% increase in potholes reported, typically over the winter wet months. Likewise a 50% increase in reports of roads holding water. |
| Condition             | TECHNICAL            | Sealed local roads below intervention level | [Number of kilometres of sealed local roads below the renewal intervention level set by Council / kilometres of sealed local roads] | -       | -       | 98%     | 98%     | 94.5%   | ↓     | The latest road condition audit 16/17 indicates a decrease in the number of kms below intervention. Increased renewal investment required to improve the overall condition         |

Levels of Service

| PERFORMANCE INDICATOR | CUSTOMER / TECHNICAL | SERVICE LEVEL CHARACTERISTIC             | PERFORMANCE MEASUREMENT PROCESS   | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17  | TREND | COMMENTS   |
|-----------------------|----------------------|--|---|---------|---------|---------|---------|----------|-------|--|
| Service Cost          | COMMUNITY            | Cost of sealed local road reconstruction | [Direct cost of sealed local road reconstruction / square metres of sealed local roads reconstructed] | -       | -       | \$43.86 | \$71.50 | \$134.72 | ↑     | In 2016/17 a large increase in cost caused by reconstruction of laneways with bluestone to stay in theme with the historical areas. On site contamination discovered at several sites that incurred considerable expense to treat. |
| Service Cost          | COMMUNITY            | Cost of sealed local road resealing      | [Direct cost of sealed local road resealing / square metres of sealed local roads resealed]           | -       | -       | \$12.17 | \$15.89 | \$18.62  | ↑     | In 2016/17 a slight increase in resurfacing rates as expected in line with CPI.  |

**Table 14: Level of Service – Trends**

For details of the intervention levels and response times supporting the above levels of service refer to the Road Management Plan.

## 6.0 Demand Forecast

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Council's fundamental role is to provide services to the community and its road assets are a means to support this. Consequently, future demand for road and associated road assets are tied to the demand for Council's services and this is a more complex consideration than population growth.

Issues such as changing demands for particular services, changing mixes in the balance between public and private service provisions and changing community expectations of service levels, all affect the need for road assets.

### 6.1 Demand Drivers

Demographic factors that may influence the need for new or improved road infrastructure include:

- Changes to existing Residential, Commercial and Industrial areas;
- Future Development;
- Future Dwelling Numbers;
- Current and Proposed Township Development Programs;
- Parking Demands;
- Regulatory Changes;
- Higher Volumes of Industrial Freight Traffic;
- Changes in Technology; and
- Inadequate Public Transport Infrastructure
- Communities inability to change their travel behaviour due to lack of alternative reliable options
- New infrastructure projects.

Specific government projects that will impact on Council's road infrastructure in the future include:

- Western Transport Strategy;
- West Gate Tunnel Project; and
- Level Crossing Grade Separation; and
- Council's Integrated Transport Strategy;

## 6.2 Demand Forecast

Table 15 presents the forecasted population growth in Hobsons Bay by suburb.

| Area                                | Population 2011 | Population 2036 | Change in Population | Ave./annual Population Change |
|-------------------------------------|-----------------|-----------------|----------------------|-------------------------------|
| <b>Altona – Seaholme</b>            | 12,260          | 15,809          | 3,459                | 1.0%                          |
| <b>Altona Meadows</b>               | 19,565          | 20,174          | 609                  | 0.1%                          |
| <b>Altona North</b>                 | 11,975          | 21,208          | 9,233                | 2.3%                          |
| <b>Brooklyn</b>                     | 1,705           | 2,219           | 514                  | 1.1%                          |
| <b>Laverton</b>                     | 4,637           | 7,442           | 2,806                | 1.9%                          |
| <b>Newport East</b>                 | 4,324           | 4,463           | 138                  | 0.1%                          |
| <b>Newport West</b>                 | 7,900           | 9,831           | 1,931                | 0.9%                          |
| <b>Seabrook</b>                     | 5,219           | 4,839           | -380                 | -0.3%                         |
| <b>Spotswood – South Kingsville</b> | 4,337           | 8,828           | 4,491                | 2.9%                          |
| <b>Williamstown</b>                 | 11,037          | 13,630          | 2,593                | 0.8%                          |
| <b>Williamstown North</b>           | 4,432           | 5,005           | 573                  | 0.5%                          |
| <b>Hobsons Bay City</b>             | 87,391          | 113,448         | 25,057               | 1.0%                          |

**Table 15. Population Forecasts**

The development areas at the time of this plan are identified in Appendix C **Error! Reference source not found.** The areas in conjunction with the status of the development areas are identified in Appendix C **Error! Reference source not found.** Using this information the impacts on existing and new infrastructure can be identified and discussed further in Demand Impact on Assets.

## 6.3 Demand Impact on Assets

Demand will be placed on existing road infrastructure to cope with the increasing traffic generated from all land developments. This impact will be arising from both traffic volumes and increased frequency of freight traffic accessing both industrial and other precincts within the general road network. The consequence of which is reduced remaining life and increased deterioration of road pavements.

## 6.4 Impact of Trends on Infrastructure

## New Infrastructure

Based on the development applications identified in Appendix C, the impacts on new road infrastructure such as pavement, surfaces and kerb and channel can be estimated from 2017 to 2037. Knowing the number of new developments and making the following assumptions the future growth annually can be projected. The assumptions are:

- Each new property constructed will have a street frontage of 15 metres;
- There will be properties on both sides of the road;
- The length of new kerb and channel is twice that of new roads built;
- There are 20 new road signs per new km of road; and
- There will be a bus stop every 400m of road with bus route

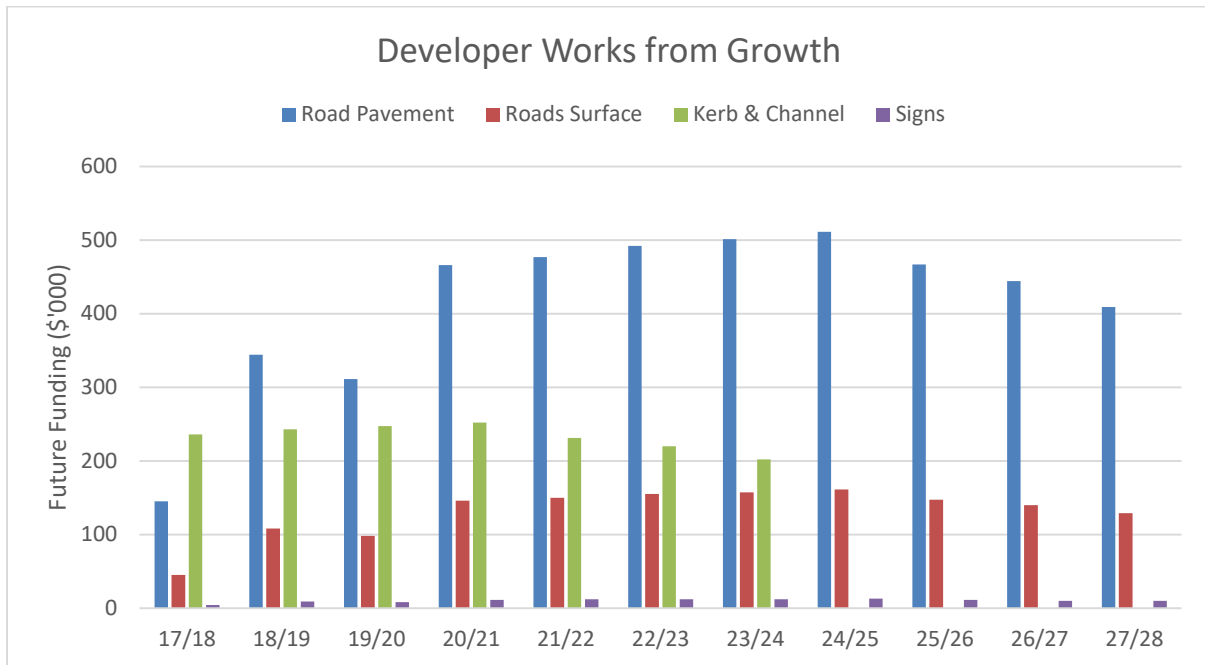
Table 17 presents the new assets created by new developments using the above assumptions:

| Asset Type              | Existing Assets | New Assets | Total Assets | Total Replacement Value |
|-------------------------|-----------------|------------|--------------|-------------------------|
| <b>Pavement</b>         | 433 km          | 23 km      | 456 km       | \$273,560,809           |
| <b>Surface</b>          | 415 km          | 23 km      | 438 km       | \$58,421,026            |
| <b>Kerb and Channel</b> | 771 km          | 46 km      | 817 km       | \$83,235,811            |
| <b>Signs</b>            | Unknown         | 461        | Unknown      | \$230,500               |
| <b>Bus Stops</b>        | Unknown         | 58         | Unknown      | \$58,000                |

**Table 17: New Infrastructure**

Figure 6 represents the value of the asset types created as a result of the demand.





**Figure 6: Value of New Assets by Asset Type**

### Existing Road Infrastructure

At this time Council perceives that there is no need to upgrade or widen existing local roads. However, laneways have been identified for rehabilitation and upgrade in the next ten years.

### Integrated Transport Plan 2017-2030

Improving transport is a key priority in Hobsons Bay. In fact, consultation on the Hobsons Bay 2030 Community Vision identified 'improved transport options' as the most important priority for the next decade.

Council's Integrated Transport Plan 2017-30 establishes a long-term vision for integrated transport in Hobsons Bay. Integrated transport brings different travel methods together, providing safe and sustainable ways for people and goods to get around their neighbourhood or across town.

The plan will guide Council's transport and roads planning, programs, investment and operations, and provide a strong platform for continued advocacy and collaboration.

### Western Transport Strategy, August 2012 (under review)

The transport strategy was developed to address the extensive future growth of the western region of Melbourne. It was developed to outline the future needs of the community including activity centres and transport infrastructure services.

The demographic forecast for the Region shows high growth in the older 60+ age brackets, coupled with strong population growth overall. The projection indicates the Western Region community is expected to have a balanced demographic profile, with similar populations in

most of the age brackets. Population growth is the major driver of urban expansion; unlike some areas the average household size over the same period is expected to remain largely stable.

Population growth is leading to major increases in traffic volumes across the Region. VicRoads data shows that the volume of:

- Overall traffic and traffic on arterial roads is growing at 4 to 8 percent per year;
- Total truck traffic and traffic on freeways is growing twice as fast, at 7 to 16 percent a year; and
- Truck volumes on arterial roads are growing much faster than truck volumes on freeways (40 to 55 percent a year on arterials compared to 5 to 10 percent a year on freeways).

These trends show the effect of rapid urban growth with population and housing construction demand key drivers of increasing traffic volumes. To address the rapid growth rate the transport strategy identifies the following strategic directions:

- Accelerate delivery of the arterial road network;
- East West Link (Western section);
- Managed motorways on the Region's freeway system;
- Growth area arterial roads – corridor upgrades; and
- Activity Centre arterial road / rail grade separations.

#### **The West Gate Tunnel Project (Western Distributor)<sup>4</sup>**

The West Gate Tunnel Project addresses a number of critical challenges in relation to traffic, growth and liveability across Melbourne. The West Gate Tunnel Project will provide an alternative to the West Gate Bridge, a second river crossing, and direct access to the Port.

The scope of the West Gate Tunnel Project includes:

- A new road and tunnel under Yarraville connecting the West Gate Freeway with the Port of Melbourne, CityLink and the CBD;
- Ramps between West Gate Freeway and Hyde Street for trucks carrying dangerous goods;
- Two additional lanes in each direction on the West Gate Freeway between the M80 Ring Road and Williamstown Road;
- A new bridge over the Maribyrnong River joining an elevated freeway above Footscray Road;
- Improved access to the Port of Melbourne with links to Appleton Dock Road, McKenzie Road and Dock Link Road;
- Extra lanes and upgraded smart technology on the Monash Freeway between Warrigal Road and Koo Wee Rup Road;

- A new flatter, longer ramp from Cook Street to the Bolte Bridge to help reduce truck roll-overs; and
- Major new cycling and walking paths.

In response to the project the key concerns raised pertaining to roads by Council<sup>4</sup> are:

- Reinforces to the Project team that existing traffic congestion on Hyde Street and Douglas Parade will be exacerbated by two new ramp connections onto Hyde Street and innovative traffic solutions at these intersections as part of the Project is essential to keep local traffic moving.
- Advocates on behalf of local industry and urges the Project team to reconsider the use of Simcock Avenue given the significant potential access and egress issues for current business and including the potential for traffic conflict with on-ramp traffic.
- Seeks as part of the Project, an additional north south connection across the freeway corridor between the existing freeway interchanges, to reduce demand on already congested routes specifically Williamstown/Melbourne Road, Millers Road and Grieve Parade.
- Seeks as a part of the Project to implement truck bans on Blackshaws Road, Hudsons Road, High Street, Mason Street and Kororoit Creek Road (east of Millers Road) with the purpose to mitigate toll avoidance in the truck only tolled section of the Westgate Freeway from Grieve Parade to Melbourne/Williamstown Road. Noting that local businesses with a destination point within these areas would be exempt from these truck bans.
- Seeks as a part of the Project to exempt trucks travelling to and from the Spotswood Industrial Precinct, from the proposed Francis Street truck ban so that they can continue to access the freeway ramps at Melbourne/Williamstown Road.
- Reinforces to the Project team that the existing freeway interchanges at Melbourne/Williamstown Road, Millers Road and Grieve Parade are already congested and the Project must consider improvements to capacity and access for all vehicles entering and exiting the freeway at these interchanges and other key points.
- Advocates to the Project team to include freeway access ramps at the intersection of Dohertys Road to allow: west bound access to the freeway from Dohertys Road; north bound access to the Western Ring Road from Dohertys Road and south bound access to Dohertys Road from the Western Ring Road, and finding from Cumulative Traffic Assessment July 2016 that looks at the capacity of the road networks

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<sup>4</sup> Council's adopted position and recommendations – Western Distributor Project, August 2016

## Level Crossing Grade Separation

On 5 May 2015 the Victorian Government allocated \$2.4 billion in its 2015-16 budget to remove at least 20 level crossings across Melbourne by 2018.

A long-term strategic plan has been developed to remove 50 level crossings across Victoria by 2022. The implementation of this plan is overseen by the Level Crossing Removal Authority (LXRA). The primary objectives of the project according to the LXRA are to improve congestion and safety.

There are 15 level crossings in Hobsons Bay of which the State Government has selected three for level crossing removal (grade separation). Figure 7 presents the sites:

- Aviation Road, Laverton (adjacent to Aircraft Train Station)
- Ferguson Street, Williamstown North (adjacent to North Williamstown Train Station)
- Kororoit Creek Road, Altona (adjacent to Mobil)

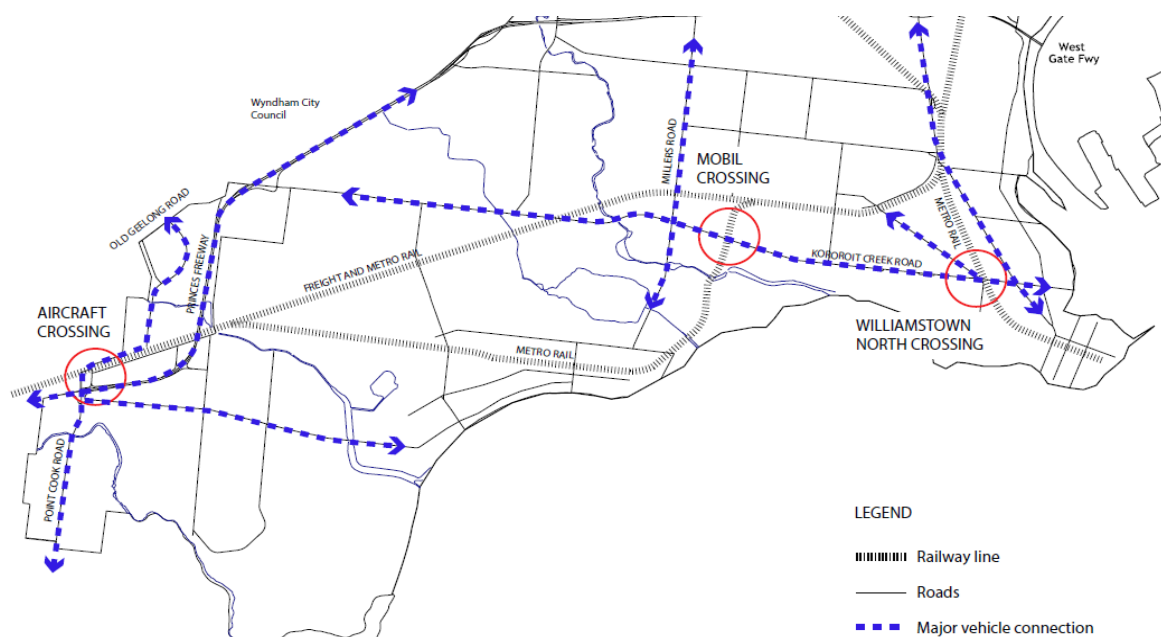


Figure7: Rail Grade Separation projects<sup>5</sup>

## 6.5 Demand Management Strategies

Demand management strategies provide alternatives to the creation of new assets in order to meet demand and look at ways of modifying customer demands in order that the utilisation of existing assets is maximised and the need for new assets is deferred or reduced. Non-asset solutions include:

<sup>5</sup> Hobsons Bay Grade Separation Principles, March 2016

- **Transportation strategies:** The Council will promote alternative forms of transport and review the road hierarchy and linkages to allow the road network to develop in an efficient manner.
- **Traffic controls:** The increased development of urban areas may create the need to implement traffic control strategies. Traffic control strategies include the installation of traffic treatments that help to control traffic flows within urban areas and the intersections.

In addition to the development of the road network due to growth, council could implement the above demand management strategies to modify demand for traffic services and minimise the need for capital road infrastructure improvements.

## 7.0 Risk Management

This section outlines HBCC's risk management framework and will form the basis of decision making for works associated with operations, maintenance and capital expenditures. The infrastructure risk register is in the process of being implemented. This section of the plan identifies the results of the initial analysis. It is envisaged that the infrastructure risk analysis will continue to be implemented and any newly identified risks will be documented in future versions of this plan.

### 7.1 Corporate Risk

Council is subject to risks at corporate, strategic/tactical and operational levels as illustrated in Figure 8:



**Figure 8: Risks within Council**

HBCC is committed to ensuring that all risks inherent in Council's service delivery are effectively managed. Risk Management is an integral part of good management practice. Council has in place the following risk documentation, data and systems:

- Risk Management Policy, 2015 - 2018;
- The Risk Management Strategy 2015 - 2018;
- Risk Assessment Tool;
- Emergency Management Plan.

The Risk Management philosophy fits closely with the continuous improvement initiatives identified in HBCC's Annual Plan.

#### **Risk Management Policy, 2015 - 2018**

*'Hobsons Bay City Council ("the Council") is committed to effectively managing all risks inherent in Council's service strategy and delivery.'*

Council recognises that risk exists in all aspects of its business. Risk management is an integral part of Council's strategic management and planning process. Council is committed to managing risk in order to achieve its vision, mission and strategic goals.

### **Risk Management Strategy, 2015 - 2018**

The aim of the strategy is to assist Council to manage and/or minimise the adverse effects of pure risks from its strategies and operations and maximise the benefits from any opportunities revealed. Council's Risk Management Strategy aims at meeting the objectives set out in Council's Risk Management Policy.

The Council bases its risk management practices and system on the current Australia/New Zealand Standard for Risk Management (AS/NZS ISO 31000:2009) as published in November 2009.

The Risk Management Strategy Implementation Program is a three year program to be reviewed in June 2018. The program incorporates activities that require review and/or establishment.

The program is not all encompassing as it is recognised that other Council based programs and existing arrangements cater for a range of broad risks, e.g. Municipal Disaster Plan, Business Continuity Plan, Occupational Health and Safety.

It is anticipated that the strategy and implementation will be continually refined to reflect current knowledge of the Council's risk exposure.

### **Risk Management Framework**

The risk management framework provides the foundations and organizational arrangements for the development, implementation, monitoring, reviewing and continually improving risk management throughout the Hobsons Bay City Council.

The risk management framework and strategy assists the Council to manage risks effectively and also ensures that information about risk from within the risk management process is adequately reported and used as a basis for decision making and accountability at all relevant levels across the Council.

The Council bases its risk management practices and system on the current Australia/New Zealand Standard for Risk Management (AS/NZS ISO 31000:2009) as published in November 2009.

### **Emergency Management**

To ensure that emergency management planning and training is provided throughout Council work locations, an emergency Procedures Manual is provided for the Civic Centre and a large number of Emergency Wardens have nominated and are appointed across all areas of the Civic Centre. In addition, there are three leadership positions i.e. Chief Warden, Deputy Chief Warden and Second Deputy Chief Warden who provide direct assistance to the emergency services and emergency wardens as required.

## 7.2 Risk Management Structure

The Risk Management Structure below demonstrates Council's commitment in the implementation of the Risk Management Strategy. The Councillors, executives, managers and staff of HBCC are committed to the identification and management of all risks, in association with the performance and delivery of council functions and services. The corporate risk management process schematic is shown in Figure 9.

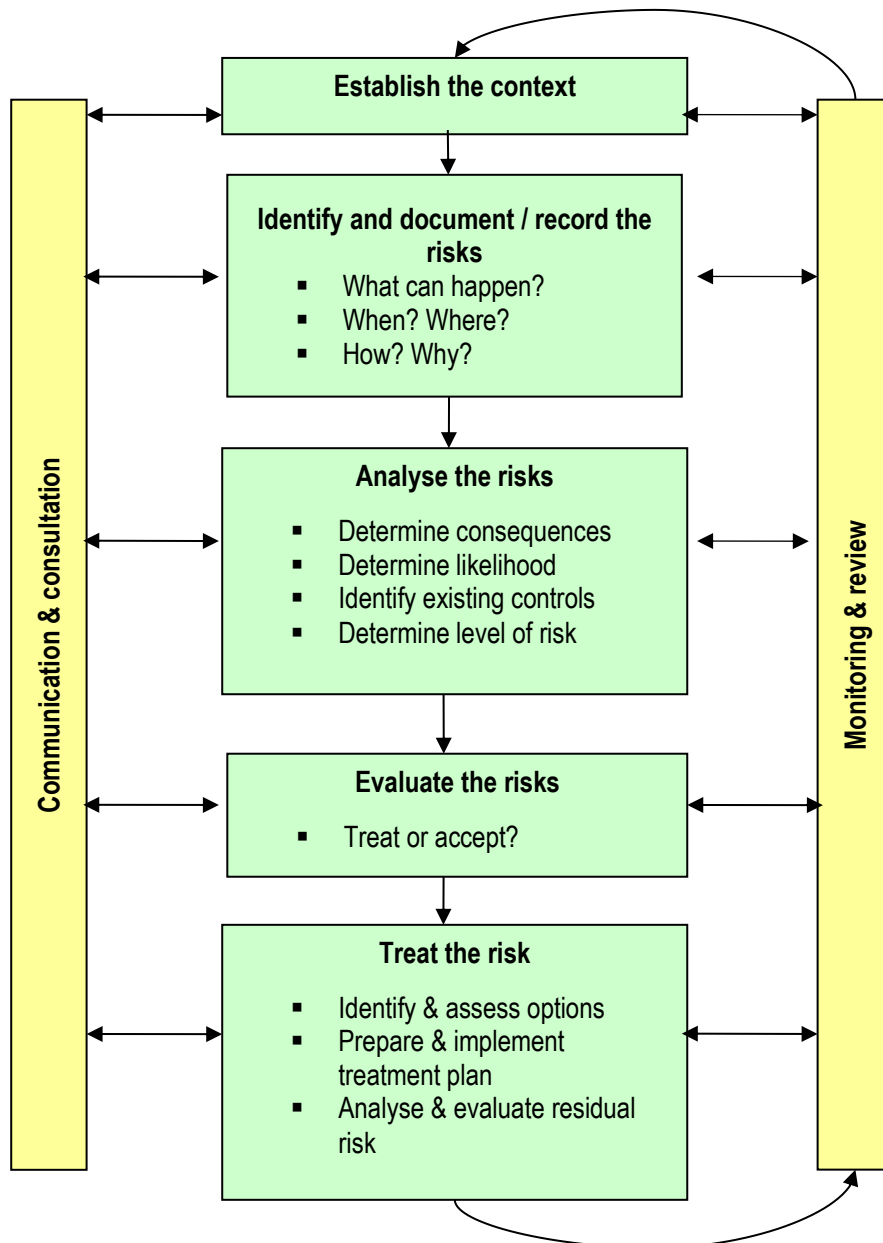


Figure 9: Risk Management Process Schematic



### 7.3 Strategic Risks

In establishing a strategic environment in which Council can operate to achieve its objectives, there are inherent risks that need to be monitored and mitigated. These risks include:

- Inability to fund required activities such as major projects;
- Misalignment between corporate direction and infrastructure provision;
- Managing stakeholder expectations;
- Competing demands;
- Lack of internal consultation;
- Poor systems and processes;
- Inability to deliver services;
- Entrepreneurial activities; and
- Inadequate resources.

### 7.4 Road Criticality

Criticality is used to identify the roads that carry the most consequences to Council should a failure occur. A criticality assessment has been completed by Council with the following identifying the roads being classified as Extreme criticality.

- Bell Avenue - Crofts Crt To Kookaburra St;
- Blyth Street;
- Cobham Street – Somers Parade to Bell Avenue;
- Esplanade;
- Kookaburra Street - Somers Parade to Bell Avenue;
- Millers Road – Civic Pde to Railway St North;
- Sargood Street – Blythe St to Railway St North; and
- Somers Parade – Maidstone St to Kookaburra St.

Knowing this information council is in a position to modify their response to the Road Management Act based on critical and non-critical roads. In conjunction with condition council will be in a position to prioritise their works based on risk.

The full road network identifying the criticality for each road is provided in Appendix F.

### 7.5 Road Risks

Table 18 identifies the road related risks as identified in the corporate risk register.

| Risk Date  | Risk Consequence Category   | Risk Description  | Current Risk Rating | Risk Treatment Plan   | Status                                  |
|------------|---|---|---------------------|---|---|
| 2/12/2016  | Environment & Public Health, Financial Loss, OHS/Public Liability, Property & Infrastructure, Reputation                      | Asset failure constituting a risk to the community and adversely impacting service delivery | Moderate            | Close gaps in asset information and continue implementation of the condition assessment program | Roads AM Plan completed - this document |
|            |   |   |                     | roads 2015/16 last audit, next roads audit 19/20  |   |
|            |   |   |                     | Complete Road AM Plan   | Bridges AM Plan completed               |
| 19/05/2017 | Contractual & Legal, Environment & Public Health, Financial Loss, OHS/Public Liability, Property & Infrastructure, Reputation | Failure to comply with the requirements of the Council's Road Management Plan.              | Low                 | Review the Road Management Plan including service levels  | Completed- Adopted 10 April 2018        |

**Table 18: Road Related Risks (Corporate Risk Register)**

Council should endeavour to complete a road and related infrastructure risk register which identifies the specific risks related to road infrastructure as well as assess the current controls, further actions required and funding allocations needed to reduce the risk elements identified.

Current infrastructure risks for road infrastructure include:

- Flooding of road pavements, footpaths and nature strips at various locations

A flood modelling and mapping project has recently been completed to better understand all the risks associated with flood inundation of the road reserve to inform the development of a

risk based priority drainage upgrade program. Drainage requirements will be capture in the drainage asset management plan.

## **7.6 Operational Risks**

All construction and maintenance work on local roads and pathways are undertaken in accordance with the relevant occupational, health and safety legislation, Code of Practice for Worksite Safety – Traffic Management and Council’s adopted Safety Procedures.

Supervisory staff ensure sure road maintenance staff are aware and fully trained to ensure all rectification works comply with the above.

Operational risks associated with the management of road infrastructure have been identified as:

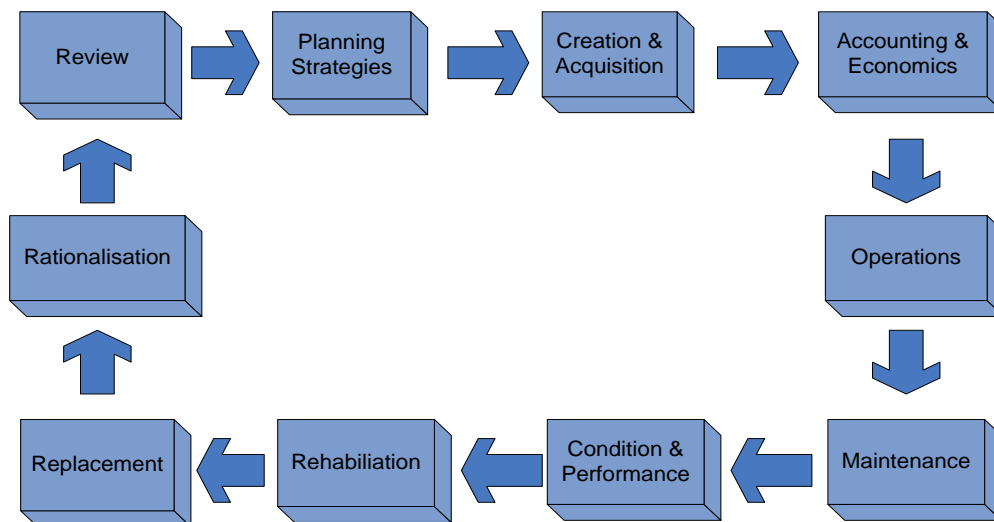
- OH&S;
- Public safety;
- Traffic management; and
- Poorly lit areas.

## 8.0 Lifecycle Management Plans

This section presents asset condition and performance information and considers the risk management described in Section 7 to develop the broad strategies and specific work programmes required to achieve the goals and standards outlined in Section 4 and 5.

### 8.1 Overview

Council must ensure that it manages all assets on a life cycle basis, with full knowledge of the social, environmental and financial costs, benefits and risks associated with the asset. The life cycle model must give proper consideration to each phase of an asset's life from inception through to disposal. This life cycle model is illustrated in figure 10 below:



**Figure 10: Lifecycle for Asset Management**

#### 8.1.1 Lifecycle Activities

The asset treatment definitions or work categories used for the lifecycle plans are defined in Table 19 below.

| TREATMENT         | DEFINITION  |
|-------------------|---|
| <b>Operations</b> | An activity that has no direct effect on asset condition, consumes resources and is necessary to keep the asset functioning. The operations expenditure is not distinguished from maintenance expenditure in the Council's financial systems. |

| TREATMENT                           | DEFINITION   |
|-------------------------------------|--|
|                                     | <p>Typical operational activities include path condition surveys, Bridge load testing, and power costs for traffic signals and streetlights.</p>   |
| <p><b>Maintenance</b></p>           | <p>An activity that will retain / maintain the asset's current condition or performance level. Routine maintenance is the day to day work required to keep assets operating at required service levels, and falls into two broad categories:</p> <ul style="list-style-type: none"> <li>• Planned (proactive) Maintenance: Proactive inspection and maintenance works planned to prevent asset failure; and</li> <li>• Unplanned (reactive) Maintenance: Reactive action to correct asset malfunctions and failures on an as required basis (i.e. emergency repairs).</li> </ul> <p>Maintenance is defined in each section of the lifecycle plan, and includes all repairs and maintenance that are not classified as renewals (see (3) below).</p> <p>A key element of AM planning is determining the most cost-effective blend of planned and unplanned maintenance.</p> |
| <p><b>Renewal / Replacement</b></p> | <p>An activity that replaces an asset with one that meets contemporary functional requirements. These works are defined as being the:</p> <ul style="list-style-type: none"> <li>• Renewal and rehabilitation of existing assets to their original size and capacity, or,</li> <li>• Replacement of the entire component of the asset with the equivalent size or capacity, or,</li> </ul> <p>Examples of renewals expenditure include:</p> <ul style="list-style-type: none"> <li>• Asphalt overlays; or</li> <li>• Road rehabilitation (involving replacement of existing pavement and surfacing with an equivalent structure)</li> </ul>  |
| <p><b>Upgrades</b></p>              | <p>Upgrade work is related to the extension or augmentation of an asset in response to growth or an increase in the defined levels of service.</p> <p>Upgrades are defined as assets either being:</p> <ul style="list-style-type: none"> <li>• Works which improves an asset beyond its original size or capacity; or</li> <li>• Works which increase the capacity of an asset; or</li> <li>• Works designed to produce an improvement in the standard and operation of the asset beyond its original capacity.</li> </ul> <p>Upgrade activities may include:</p> <ul style="list-style-type: none"> <li>• Widening of sealed or unsealed roads;</li> <li>• Converting a spray sealed road to an asphalt surface;</li> <li>• Upgrading shoulders; and</li> <li>• Sealing an unsealed road (may be part of a special charge scheme).</li> </ul>                            |

| TREATMENT        | DEFINITION   |
|------------------|--|
| <b>New Works</b> | <p>Acquisition, purchase or inheritance of an asset. Projects (including land purchase) for the extension or upgrading of assets required to cater for growth or additional levels of service, including:</p> <ul style="list-style-type: none"> <li>• Works which create an asset that did not exist in any shape or form,</li> </ul> <p>New assets required for growth are distinguished from those required for improvements to levels of service, because of differences in how these assets can be funded. Growth related works can also be separated into those that are Council funded (including those funded by developer contributions), and those that are vested in the Council as a condition of development.</p> |
| <b>Disposal</b>  | <ul style="list-style-type: none"> <li>• Sale, removal or decommissioning of an asset.</li> </ul>  |

**Table 19: Asset Treatment Definitions**

### 8.1.2 Coordination with Other Organisations

There are various assets within the road reserve for which Council is either wholly or partially responsible or not responsible at all in relation to their inspection and maintenance.

#### Roads on Municipal Boundaries

There are a number of roads which form the municipal boundary with adjoining municipalities. These municipalities' and roads include:

##### Municipal Boundary Roads

1. Wyndham City Council
  - a. Dunnings Road
  - b. Point Cook Road (Vic Roads)
  - c. Aviation Road
  - d. Maher Road
  - e. Old Geelong Road (Vic Roads)
  - f. Fitzgerald Road
  - g. Kororoit Creek Road
  
2. Brimbank City Council
  - a. Geelong Road (Vic Roads)
  
3. Maribyrnong City Council
  - a. Hardie Road
  - b. Cemetary Road
  - c. Hyde Street
  - d. Geelong Road (Vic Roads)

#### Declared Arterial Roads

VicRoads is the Co-ordinating Road Authority for Declared Arterial Roads and is responsible for all components and facilities on the through carriageway between back of kerbs in urban areas or outside the line of table drains in rural areas including intersections.

## **Rail**

All assets associated with the operation of train services are the responsibility of the relevant rail authority. Where a road crosses a railway line the relevant rail authority is responsible for the road pavement on which the tracks are situated and for a distance of 2.135 metres from the outside tracks.

Safety Interface Agreements for Level Crossings and Grade Separated Interfaces located within Hobsons Bay are being developed between the rail authority VicTrack, Hobsons Bay Council and VicRoads.

## **Utilities**

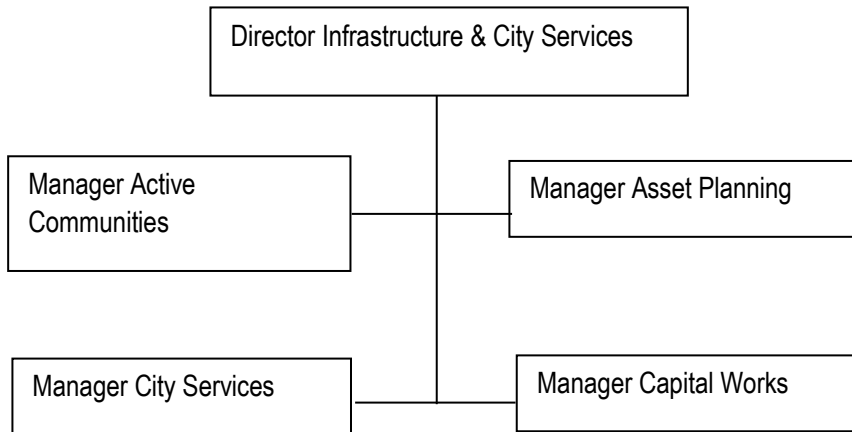
All infrastructure including manholes, valves, or other fixtures required to deliver utility services such as gas, water, telecommunications, electricity, and street lighting is the responsibility of the relevant company, agency or authority to maintain.

The principal organisations which own utility infrastructure in HBCC include:

- Gas: SP Ausnet; Tennix
- Water/Sewerage: City West Water;
- Electricity/street lighting: Powercor Australia, Jemena;
- Telecommunications: Telstra, Optus;
- Major Drains: Melbourne Water; and
- Petrochemical infrastructure and pipelines

### 8.1.3 Asset Management Leadership Team

The asset management leadership team established by Council for managing the lifecycle of its road infrastructure is identified in Figure 11. This team is responsible for developing and implementing strategies for the renewal, upgrade, maintenance and disposal of road assets. The team engage and collaborate collectively to develop long term renewal programs coordinated together with new and upgrade works.



**Figure11: Management Structure**

### 8.1.4 Corporate Road Management Lifecycle Responsibilities Matrix

Table 20 presents the Road Management Lifecycle Responsibilities Matrix. It identifies the service manager, asset manager, project delivery and ongoing maintenance roles and responsibilities in the organisation for the management of the road network. This matrix should be the first reference point for all responsibility issues/problems that arise from day to day activities.

The service manager is responsible for the development of the asset strategy recommending new, upgrades, disposals. They work with Asset Manager to coordinate and schedule renewal works.

The asset manager is responsible for maintaining the asset register and undertakes condition assessments, data collection, defect inspections. They develop renewal and maintenance programs, asset management plans. They administer, develop and maintain the asset management system.

The project delivery manager is responsible for design management, tendering, construction, project management, project delivery, project handover and project cost breakdown against assets.

The operations and maintenance manager is responsible for the delivery of operations and maintenance services, emergency management and road opening and occupation permit management.



| <b>Assets</b>                        | <b>Service Manager</b>                                    | <b>Asset Manager</b>   | <b>Project Delivery/Management</b> | <b>Operations and Maintenance</b> |
|--------------------------------------|---|------------------------|------------------------------------|-----------------------------------|
| <b>Roads</b>                         |   |                        |                                    |                                   |
| Road Pavements                       | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Kerb and Channel                     | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Nature Strips                        | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| LATMS Traffic Management Devices     | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Street Furniture - bins, seats       | Manager City Services                                     | Manager City Services  | Manager Capital Works              | Manager City Services             |
| Bollards (Road Reserve)              | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Bus Stops / Shelters (Council Owned) | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Street Lighting (Council Owned)      | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Council Traffic Signals              | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Signage, Road Name Plates etc.       | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Ticket Machines / Parking Meters     | Manager Governance and Local Laws / Manager Capital Works | Manager Asset Planning | Manager Governance and Local Laws  | Manager Governance and Local Laws |
| <b>Carparks</b>                      |   |                        |                                    |                                   |
| Carparks (off road)                  | Various Facility Service Managers                         | Manager Asset Planning | Manager Capital Works              | Manager City Services             |
| Carparks (on road)                   | Manager Capital Works                                     | Manager Asset Planning | Manager Capital Works              | Manager City Services             |

**Table 20: Road Management Lifecycle Responsibilities Matrix**

## 8.2 Key Issues

The key issues related to the management of HBCC road infrastructure are identified in the Table 21.

| ASSET  | KEY ISSUES  |
|--|---|
| <b>Roads</b>   | <ul style="list-style-type: none"> <li>• Road deterioration such as potholes being identified through increasing number of customer requests</li> <li>• Narrow roads providing traffic flow issues;</li> <li>• Poor workmanship by utility providers. Works completed are of poor quality and Council is left to make work sites safe after utility providers have completed works;</li> <li>• Black spots within the road network; and</li> <li>• Speeding.</li> </ul> |
| <b>Kerb and Channel</b>  | <ul style="list-style-type: none"> <li>• Tree roots intrusion causing displacement between kerb lengths; and</li> <li>• Pooling on road from lack of drainage or not enough pits</li> </ul>   |
| <b>Streetscapes and Traffic Management (includes street furniture)</b> | The key issue related to the management of HBCC streetscapes and traffic management infrastructure is the inaccuracy of the data.   |

**Table 21: Issues related to Road Infrastructure**

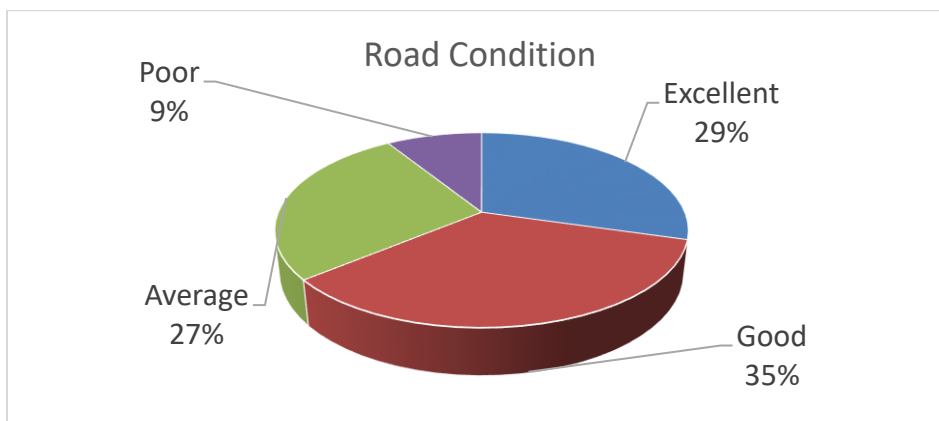
### 8.3 Asset Performance

HBCC continually monitors and models the condition of the asphalt roads using the Confirm system and plans are currently in place to undertake a data collection exercise in 2018/19 for the entire road network.

Performance monitoring of the road pavement includes:

- Condition;
- Customer request analysis
- Traffic surveys

The chart below presents the majority (64%) of the road network is in excellent and good condition with 9% in poor condition. There is 27% of the road network that is in average condition and will need attention over the next few years along with the roads currently in poor condition.



### 8.3.1 Asset Condition Assessment

Table 22 identifies the type of assessments undertaken for each asset type.

| ASSET TYPE                                 | CONDITION ASSESSMENT TYPE   | DESCRIPTION  |
|--|---|--|
| <b>Roads</b>                               | Asset condition is collected for all asphalt roads within the municipality.   | <p>The Pavement Condition Index or PCI is calculated using a series of parameters as identified below:</p> <ul style="list-style-type: none"> <li>• Road classification</li> <li>• Traffic Counts;</li> <li>• Cracking;</li> <li>• Potholes;</li> <li>• Rutting; and</li> <li>• Stripping.</li> </ul> <p>Every initialised block in the network has a PCI assigned to it as a general indicator of its condition. A general rule of thumb, is that a PCI between:</p> <ul style="list-style-type: none"> <li>• 9-10 is Very Poor;</li> <li>• 7-8 is Poor;</li> <li>• 5-6 is Fair;</li> <li>• 3-4 is Good; and</li> <li>• 0-2 is Excellent</li> </ul> <p>Appendix D refers to the description and photo of each condition rating.</p> |
| <b>Kerb and Channel</b>                    | Asset condition is collected for all Kerb and Channel within the municipality.  | Kerb and channel condition assessments are gathered with the roads. Kerb and channel works are part of the rehabilitation program.   |
| <b>Streetscapes and Traffic Management</b> | Asset condition is collected for all Traffic management devices within the municipality. Street furniture condition is captured under the open space asset management plan. | Defects for traffic management assets are recorded during inspections. The assessment is used to rectify defects, damaged and missing assets.  |

| ASSET TYPE | CONDITION ASSESSMENT TYPE | DESCRIPTION |
|------------|---------------------------|-------------|
|            |                           |             |

**Table 22: Condition Assessment Activities used by HBCC**

### 8.3.2 Customer Requests

Customer requests can be used as a measure of asset performance. Road infrastructure related customer requests received over the past five years are included in Table 23.

| ASSET TYPES                       | REQUEST TYPE                | 2013/2014  | 2014/2015  | 2015/2016   | 2016/2017   | 2017/2018   | TOTAL NO.s  |
|-----------------------------------|-----------------------------|------------|------------|-------------|-------------|-------------|-------------|
| Roads                             | Damaged                     | 68         | 59         | 82          | 84          | 74          | 240         |
|                                   | Dangerous/Hazardous         | 29         | 39         | 40          | 43          | 44          | 127         |
|                                   | Dip/Depression              | 58         | 44         | 36          | 52          | 44          | 132         |
|                                   | Pot Holes                   | 173        | 161        | 136         | 265         | 220         | 621         |
|                                   | Line Marking (New)          | 81         | 67         | 111         | 113         | 109         | 333         |
|                                   | Line Marking (Renewal)      | 0          | 0          | 0           | 0           | 7           | 7           |
|                                   | Oil Spills                  | 10         | 5          | 10          | 5           | 8           | 23          |
|                                   | Street Sweeping (Road)      | 217        | 333        | 394         | 435         | 567         | 1396        |
| Kerb & Channel                    | Damaged                     | 46         | 61         | 60          | 78          | 68          | 206         |
|                                   | Dangerous/Hazardous         | 9          | 15         | 17          | 13          | 16          | 46          |
|                                   | Holding Water/Sunk/Subsided | 46         | 34         | 47          | 41          | 42          | 130         |
|                                   | Renewal                     | 0          | 0          | 7           | 9           | 1           | 17          |
| Street Scene & Traffic Management | Pedestrian Crossing         | 18         | 32         | 25          | 27          | 47          | 99          |
|                                   | Speed Hump                  | 54         | 69         | 65          | 66          | 78          | 209         |
|                                   | Roundabouts Planting        | 9          | 12         | 7           | 14          | 21          | 42          |
|                                   | Roundabouts Enquiry         | 9          | 2          | 10          | 9           | 11          | 30          |
|                                   | Guard Rails                 | 0          | 5          | 3           | 2           | 1           | 6           |
|                                   | Speed Problem               | 8          | 8          | 13          | 10          | 10          | 33          |
|                                   | <b>Totals</b>               | <b>835</b> | <b>946</b> | <b>1063</b> | <b>1266</b> | <b>1368</b> | <b>3697</b> |

**Table 23: Road Infrastructure Related Customer Requests**

It can be observed from the above table that requests have increased since 2013/2014 across the roads, kerb and channel and traffic management indicating increased investment is required to:

- repair damage kerb and channel,
- resurface and renew road pavements and
- install traffic calming devices

## 8.4 Historical Expenditure

Historical expenditure for the local road network, including pavement base and pavement surface is detailed in Table 24. The table illustrates the considerable investment Council makes towards its local road network.

|                    | 2013/2014        | 2014/2015        | 2015/2016        | 2016/2017        | 2017/2018        | 5 YEAR TOTAL      |
|--------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| <b>Maintenance</b> | Not Available    | 1,377,555        | 1,604,187        | 1,863,896        | 1,590,324        | <b>6,435,962</b>  |
| <b>Renewal</b>     | 2,264,199        | 5,231,522        | 5,263,975        | 5,558,106        | 5,682,771        | <b>24,000,573</b> |
| <b>Upgrade</b>     | 515,019          | 502,983          | 168,696          | 0                | 0                | <b>1,186,698</b>  |
| <b>New Works</b>   | 121,819          | 731,883          | 260,969          | 0                | 0                | <b>1,114,671</b>  |
| <b>Total</b>       | <b>2,901,037</b> | <b>6,466,388</b> | <b>5,693,640</b> | <b>5,558,106</b> | <b>5,682,771</b> | <b>26,301,942</b> |

**Table 24: Roads Historical Expenditure**

## 8.5 Works Identification and Prioritisation

### **Rationale for capital renewal**

The road renewal program consists of road rehabilitation and road resurfacing projects. The priorities have been established using the latest condition assessment data collected in 2016 using a risk based approach.

The condition audit is based on a 10 point scale; the higher the score, the poorer the condition of the road. For asset management planning purposes, Council has adopted different condition intervention levels for different components of the road which means once the condition level is reached the road is considered for renewal. The intervention level for road resurfacing is condition 7.5 and the intervention level for road rehabilitation (pavement base) is condition 8.

The 2016 condition data has been analysed to develop the long term renewal program. The current condition, remaining useful life and the optimal time of intervention (treatment year) for each road was determined.

The roads have been ranked by condition and further prioritised using a risk based approach. For example roads that are in poor condition with higher traffic volumes and greater consequences to Council should they fail have been given higher priority than roads that are in poor condition with minimal traffic and low utilisation.

Consideration has also been given to the different deterioration rates between surface and the base of the road. Some surfaces were found to be in average condition and not requiring immediate attention, whereas the base was found to be in poor condition and in need of replacement. Where this was the case the resurfacing has been brought forward or expedited to be coordinated together with the base replacement works so that the entire pavement (surface and base) is replaced at the same time as a total road rehabilitation project.

In addition where roads are programmed for renewal the footpaths and drainage are also considered and where they need replacement they are planned and coordinated together with the road works as a total road rehabilitation project.

### **Prioritisation of road maintenance works**

Road maintenance works are prioritized based on road criticality, severity and extent of defects as outlined in the Road Management Plan 2018.

Road Criticality is calculated on each road segment using the following parameters:

- Proximity to facilities and services
- Speed Limit
- Bus route

Road criticality is then used to identify the inspection frequencies, response times and proposed actions. It is defined as Low, Medium and High.

## **8.6 Inspections**

Defect inspections are being undertaken in compliance with the road management plan (RMP) on a regular basis to ensure the road network is maintained in a safe state by timely repair to identified defects. Additional inspections and investigations are conducted in response to customer requests for road repairs. Defect inspections are currently being carried out by the contractor, however, under the new maintenance contract to commence in September 2018, defect inspections will no longer be part of the scope of works. Defect inspections will be undertaken by Council’s Asset Planning Team including the reporting of defects to the contractor to repair.

Inspections are also undertaken on a regular basis to inform the capital works renewal program. Every 4 years a condition assessment is undertaken of the entire road network to determine the remaining useful life, optimum time for intervention or renewal and whether intervention levels are being met.

Additional inspections are also conducted as deemed necessary:

- To investigate customer requests; and
- After emergency events.

## **8.7 Operations and Maintenance Plan**

Table 25 presents the operational activities involved in the ownership and management of council road infrastructure.

| ASSET TYPE | ACTIVITIES  |
|------------|---|
| Roads      | <ul style="list-style-type: none"> <li>• Street sweeping;</li> <li>• Inspections;</li> <li>• Roadside mowing;</li> <li>• Litter removal; and</li> <li>• Debris clearing.</li> </ul> |

| ASSET TYPE                                 | ACTIVITIES   |
|--|--|
| <b>Kerb and Channel</b>                    | <ul style="list-style-type: none"> <li>• Street sweeping;</li> <li>• Inspections; and</li> <li>• Day to day staff management.</li> </ul>                                       |
| <b>Streetscapes and Traffic Management</b> | <ul style="list-style-type: none"> <li>• Daily and annual cleaning;</li> <li>• Rubbish removal;</li> <li>• Inspections; and</li> <li>• Day to day staff management.</li> </ul> |

**Table 25: Operations Activities**

Table 26 presents the road maintenance activities within HBCC and are both proactive and reactive.

| ASSET TYPE                                 | OBJECTIVES  | ACTIVITIES  |
|--|---|---|
| <b>Roads</b>                               | <ul style="list-style-type: none"> <li>• Provide safe roads that meet user satisfaction and expectations; and</li> <li>• Retain connectivity between Council and neighbouring road networks.</li> </ul> | <ul style="list-style-type: none"> <li>• Major patching;</li> <li>• Minor patching;</li> <li>• Pavement markings and line-marking;</li> <li>• Provide local shape correction;</li> <li>• Repair Potholes;</li> <li>• Repair sealed pavement cracks;</li> <li>• Treat minor surface defects; and</li> <li>• Grade unsealed road surfaces.</li> </ul>   |
| <b>Kerb and Channel</b>                    | <ul style="list-style-type: none"> <li>• Maintain the flow of water upon a rain event;</li> <li>• Prevent pooling of water; and</li> <li>• Meet service level requirements.</li> </ul>                  | <ul style="list-style-type: none"> <li>• Repairs to damaged sections of kerb and channel.</li> </ul>  |
| <b>Streetscapes and Traffic Management</b> | <ul style="list-style-type: none"> <li>• Maintain the aesthetics;</li> <li>• Meet service level requirements;</li> <li>• Rectify defects; and</li> <li>• Maintain a safe environment.</li> </ul>        | <ul style="list-style-type: none"> <li>• Installation of new signs;</li> <li>• Maintenance of regulatory, warning and standard signs;</li> <li>• Maintenance of fencing and handrails;</li> <li>• Maintenance of school crossing posts;</li> <li>• Maintenance of various traffic control device, street furniture items; and</li> <li>• Traffic signals are maintained under separate contract.</li> </ul> |

**Table 26: Maintenance Activities**

Asset defect inspections are coordinated and managed by the Asset Planning Department. Operations and maintenance activities are coordinated by the City Services Department utilising the inspection information collected. For details of the works activities undertaken refer to the Road Management Plan 2018.

## 8.8 Renewal Plan

Table 27 presents the renewal activities for road assets.

| ASSET TYPE                                 | ACTIVITIES  |
|--|---|
| <b>Roads</b>                               | <ul style="list-style-type: none"> <li>• Profile and dispose of existing wearing course,</li> <li>• Resurfacing</li> <li>• Rehabilitation / replacement/ reconstruction of road pavement</li> <li>• Drainage renewal is considered in the drainage asset plan</li> </ul>  |
| <b>Kerb and Channel</b>                    | <ul style="list-style-type: none"> <li>• Realignment, rehabilitation / replacement / reconstruction of major / entire road segments. These activities typically occur in parallel with road renewals</li> </ul>   |
| <b>Streetscapes and Traffic Management</b> | <ul style="list-style-type: none"> <li>• Renewal works are undertaken on a reactive basis in response to customer requests and include the replacement of existing street furniture, signage, traffic management devices or traffic controls.</li> <li>• The development of municipal wide LATM's local area traffic management plans have commenced and will inform the future renewal and upgrade works for the City</li> </ul> |

**Table 27: Renewal Activities**

### Funding the Renewal Gap for Road Assets

The condition of the roads is assessed based on a 10 point scale; the higher the score, the poorer the condition of the road. For asset management planning purposes, Council has adopted different condition intervention levels for different components of the road (surface and base pavement) and kerb and channel as indicated in Table 28 which means once the condition level is reached the road assets are considered for renewal.

| ASSET TYPE           | USEFUL LIFE | INTERVENTION<br>CONDITION LEVEL<br>(OUT OF 10) |
|----------------------|-------------|--|
| <b>Base Pavement</b> | 70          | 8  |



| ASSET TYPE       | USEFUL LIFE | INTERVENTION<br>CONDITION LEVEL<br>(OUT OF 10) |
|------------------|-------------|--|
| Surface          | 30          | 7.5  |
| Kerb and Channel | 70          | 8  |

**Table 28: Intervention Levels**

In order to develop the long term road renewal program, a rationalisation and prioritisation process is undertaken.

From the results of 2016/17 condition audit, the remaining useful life, the optimal time of intervention or treatment year for each road can be determined. The roads are ranked by condition and further prioritised using a risk based approach. For example roads that are in poor condition with higher traffic volumes and greater consequences to council should they fail are given higher priority than roads that were in poor condition but have minimal traffic and low utilisation.

Consideration was also given to the different deterioration rates between surface and the base of the road. Some surfaces were found to be in average condition and not requiring immediate attention, whereas the base was found to be in poor condition and in need of replacement. Where this was the case the resurfacing has been brought forward or expedited to be coordinated together with the base replacement works so that the entire pavement (surface and base) is replaced at the same time.

Where roads are programmed for renewal the footpaths and drainage are also considered and where they need replacement they are planned and coordinated together with the road works as a total street reconstruction.

### **“Required” Renewal Expenditure**

Figure 12 presents the predicted future asset condition (red line expressed as the predicted % of the asset base above or beyond the selected intervention level) based on the continuation of the current level of renewal expenditure (Blue Bars). The grey bars represent the **“required”** expenditure profile to treat all assets that reach intervention. The percentage backlog of roads above intervention level will increase from 5.5% to over 10% in 20 years if there is no increase in the current funding, i.e. \$6,500,000 in 2017/18. Although in the past years the roads budget has been increased from \$2,400,000 in 2011/12 to \$6,500,000 in 2017/18 this level of funding has not met the required renewal demand and consequently has adversely impacted the overall condition of the road network. The chart below Figure 8.2 presents the required renewal demand of \$11m per annum (average over the next 10 years) and \$8M per annum the following 10 years.

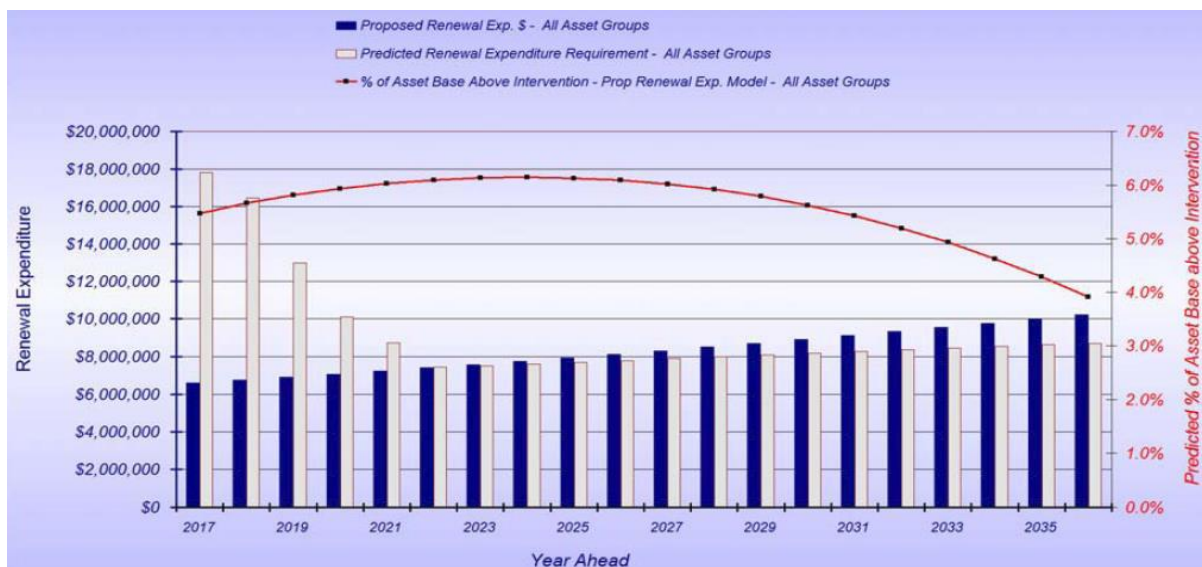


**Figure 12. Future Condition and Required Renewal**

**“Recommended” Renewal Expenditure**

The chart below Figure 13 presents the recommended budget or renewal expenditure to improve the overall condition of the network and achieve a desired condition outcome within a designated period of time.

The recommended funding level aims at delivering a 25% reduction in the extent of “above” intervention assets after 20 years (from 5.5% to 3.9% above intervention – reduced backlog of poor condition assets). An annual compounding increase of 3.8% was found to be required with a year one starting expenditure of \$6,500,000 in 17/18.



**Figure 11 Recommended Renewal Expenditure**

It is recommended that a budget of \$7.0m be allocated in 20/21 and an annual increase of 3.8%.

## 8.9 Upgrade Plan

Table 29 identifies the drivers for upgrading road assets.

| ASSET TYPE                                | DRIVERS FOR UPGRADE WORKS   |
|---|---|
| <b>Roads</b>                              | <ul style="list-style-type: none"> <li>• Demand projections;</li> <li>• Traffic management and congestion requirements;</li> <li>• Subdivision development; and</li> <li>• Risk and safety issues commonly identified through safety audits.</li> </ul> |
| <b>Kerb and channel</b>                   | <ul style="list-style-type: none"> <li>• Improvement projects are undertaken in line with road and/or kerb and channel works.</li> </ul>  |
| <b>Streetscape and traffic management</b> | <ul style="list-style-type: none"> <li>• Planning and future development;</li> <li>• Traffic management;</li> <li>• Road safety audits; and</li> <li>• Risk and safety issues commonly identified through safety audits</li> </ul>                      |

**Table 29: Drivers for Upgrade Works for Road Assets**

Many of the upgrade works planned for the next five years are the result of upgrades to Laneways. The development of municipal wide LATM's local area traffic management plans have commenced and will inform the future upgrade works for the City.

## 8.10 New Works Plan

New road assets are commonly identified in response to:

- Growth (demand);
- Risk;
- Safety Audits;
- Car Park Audits; and
- Recommendations identified in planning and strategy documents.

Major development plans such as identified in **Error! Reference source not found.** will be responsible for the new assets as identified in Table .

### **Kerb and Channel**

New kerb and channel assets are commonly identified in response to:

- Growth (demand);
- Risk;
- Safety Audits; and
- Recommendations identified in planning and strategy documents.

New works plans for kerb and channel form part of the Developers work and included in road improvements. Forecast expenditure predictions are included in the financial section of this plan.

### **Streetscapes and Traffic Management**

Currently, there is no long term plan available for the construction of new street furniture. The development of municipal wide LATM's local area traffic management plans have commenced and will inform new works for the City.

### **8.11 Disposal Plan**

There is currently no plan to dispose of disused / occupied road reserves / easements. This will be linked to Property Strategy and disposal of assets.

## 9.0 Financial Summary

This section outlines the long-term financial requirements for the operation, maintenance, renewal and development of road assets based on the long-term strategies outlined earlier in the plan. Funding issues are discussed and key assumptions made in preparing financial forecasts. These forecasts are an indication of funding requirements over the next 10 years and are recommended for inclusion in HBCC's Long Term Financial Plan (LTFP).

### 9.1 10 Year Financial Forecast

Appendix E summarises the 10 year financial forecast for HBCC's roads and includes a breakup of the works activities. This level of funding will improve the overall condition of the road network by increased renewal investment annually and also maintain the road network including the new roads to be constructed through developer activities. Figure 14 presents the financial projections shown in dollar values current as at 1 July 2018 under the following work activity headings:

- Operations;
- Maintenance (Programmed and Reactive);
- Renewals (Rehabilitation and Replacement Works);
- Upgrade / Expansion works; and
- New Works by Developers.

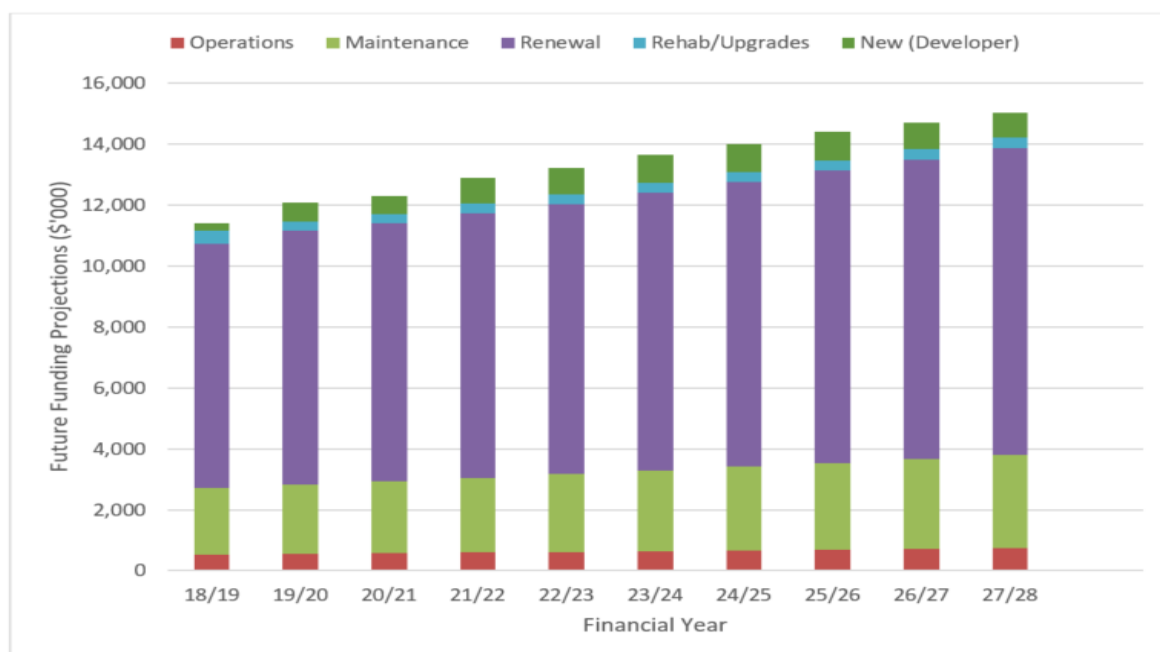


Figure 14. Ten Year Financial Projections

Table 30 summarise the 10 year financial projections.

| COST CATEGORY                  | TOTAL FINANCIAL PROJECTIONS |                      |
|--------------------------------|-----------------------------|----------------------|
|                                | 1-5 Years                   | 1-10 years           |
| <b>Operations</b>              | \$2,871,000                 | \$6,328,000          |
| <b>Maintenance</b>             | \$11,851,000                | \$26,114,000         |
| <b>Renewals</b>                | \$42,326,000                | \$90,283,000         |
| <b>Upgrades/Expansion</b>      | \$1,665,000                 | \$3,360,000          |
| <b>New Works by Developers</b> | \$3,196,000                 | \$7,622,000          |
| <b>TOTAL</b>                   | <b>\$61,909,000</b>         | <b>\$133,708,000</b> |

**Table 30 : 10 Year Financial Projections**

Expenditure identified within the financial forecasts was obtained from the following sources:

- Asset Condition Report
- Long Term Capital Works Program
- 2016 State of the Assets Report;
- Strategic Resource Plan;
- Roads and Drainage 2017/18 budget;
- Annual budget for Operational & Maintenance Budgets; and
- Demand Forecasting refer Section 6 of this plan.

## 9.2 Financial Forecast Assumptions

The basis for the financial forecasts is explained in the lifecycle management plan. The following general assumptions have been made in preparing the 10-year expenditure forecasts:

1. All expenditure is stated in dollar values as at 30/06/2018 with an allowance made for inflation of 3.8% over the 10-year planning period;
2. CPI increase of 3.8% for operations and maintenance costs;
3. 23 km new roads and supporting road infrastructure will be constructed by developers over the next 10 years, i.e.: an average of 2.3 km per annum;
4. Greenfield unit rate for roads infrastructure (i.e.: pavements, surfaces, kerb and channel, footpaths, street furniture and traffic management devices) have been applied for infrastructure constructed by developers; and
5. Ongoing operations and maintenance costs for new works is assumed to be 0.78% of original capital costs (included under the operations and maintenance cost categories for sake of simplicity)

### 9.3 Asset Valuation

The asset register for roads indicates a replacement value (excluding land) of approximately \$408M.

In valuing the road infrastructure assets the following approach was adopted in accordance with the Australian Accounting Standards for Financial reporting purposes. All assets are rated at the appropriate life for the material and assessed in terms of their quantity applying the 'Fair Value' principle:

- Asset values have been based on asset data currently held in valuation system;
- Replacement values have been determined from current contract rates on the basis of the cost of replacing the asset with suitable materials (including recycling products) that provide the equivalent service in terms of capacity to the user;
- All valuations and asset counts have been fully documented to provide a clear audit trail that is evident through to the accounting entries in the general Ledger.

Table 31 identifies the June 2018 financial valuation of the road portfolio.

| ASSET GROUPS        | Quantity (No) | Length (km) | Area (m2)        | Repl. Value (\$)   | Accumulated Depreciation (\$) | Written Down Value (\$) |
|---------------------|---------------|-------------|------------------|--------------------|-------------------------------|-------------------------|
| Road Pavement       |               | 433         | 3,422,974        | 259,762,786        | 118,936,890                   | 140,825,896             |
| Road Surface        |               | 415         | 3,302,827        | 55,353,256         | 30,558,306                    | 24,794,950              |
| Kerb and Channel    |               | 771         | -                | 78,549,340         | 36,642,432                    | 41,906,907              |
| Off Street Car Park |               | N/A         | 193,478          | 7,280,826          | 859,887                       | 6,420,940               |
| Traffic Management  | 1212          |             |                  | 6,437,230          | 1,707,601                     | 4,729,628               |
| <b>Grand Total</b>  | <b>1212</b>   | <b>1619</b> | <b>6,919,279</b> | <b>407,383,437</b> | <b>188,705,115</b>            | <b>218,678,321</b>      |

**Table 31: Asset Portfolio Valuation June 2018**

### 9.4 Funding Strategy

A major issue concerning road infrastructure management is the question of who pays for needed works e.g.:

- The community through special rates;
- The developer through development contributions, or
- The consumer through recurrent charges.

To overcome this problem there should be available a range of funding options including:

- General municipal rates;
- Special municipal rates or charges schemes;

- Development contributions; and
- Available grants, e.g. special purpose State Government grants.

Council relies on grant income for delivering a range of services to the diverse community of the city. Hobsons Bay has a large migrant population, from a wide socio economic spectrum which places significant demands on Council in the delivery of services in language, literacy and social integration.

The Strategic Resource Plan has also budgeted for the Roads to Recovery Grant over the next four years but there remains considerable uncertainty in regard to the future of this program beyond that point.

The amount of grants Council receives for the road portfolio is shown in the Table 32:

| <b>OPERATING GRANTS</b> | <b>2016/17</b> | <b>2017/18</b> | <b>2018/19</b> | <b>2019/20</b> |
|-------------------------|----------------|----------------|----------------|----------------|
|                         | <b>\$'000</b>  | <b>\$'000</b>  | <b>\$'000</b>  | <b>\$'000</b>  |
| <b>Roads</b>            | 770            | 667            | 667            | 380            |

**Table 32: Grants received for Roads**

## 9.5 Confidence Levels

Using the matrix in the Table 33 below the data availability has been given a rating of 4 which is described as “Primary data located across HBCC in electronic format available to most staff” and the data completeness a rating of 4 which is described as “Primary data for most assets”. This means that there is a Very Good level of confidence in the plan outputs nominally quantified at 64%.



|                   |   | Data Availability  |   |  |  |  |                 |
|-------------------|---|--|---|--|--|--|-----------------|
|                   |   | 1  | 2   | 3  | 4  | 5  |                 |
|                   |   | Primary data located across HBCC in hardcopy format available to a few staff | Primary data located across HBCC in hardcopy and electronic format available to a few staff | Primary data located across HBCC in electronic format available to a few staff | Primary data recorded in electronic format throughout HBCC available to most staff | Primary data recorded in a computer system available to all relevant staff |                 |
| Data Completeness | 1 | Primary data for limited number of assets                                    | POOR (4)  | POOR (8)   | POOR (12)  | POOR (16)  | POOR (20)       |
|                   | 2 | Primary data for limited number of major and minor assets                    | POOR (8)  | POOR (16)  | FAIR (24)  | FAIR (32)  | FAIR (40)       |
|                   | 3 | Primary data for some assets   | POOR (12)   | FAIR (24)  | FAIR (36)  | GOOD (48)  | GOOD (60)       |
|                   | 4 | Primary data for most assets   | POOR (16)   | FAIR (32)  | GOOD (48)  | VERY GOOD (64)   | VERY GOOD (80)  |
|                   | 5 | Complete data sets for all assets  | POOR (20)   | FAIR (40)  | GOOD (60)  | VERY GOOD (80)   | EXCELLENT (100) |

**Table 33: Data Confidence Table**

Improvement projects have been outlined in Section 10 that are intended to result in greater confidence in the 10 year forecasts and appropriateness of target levels of service.

## 10.0 Plan Improvement and Monitoring

This section provides AM improvement tasks that will be carried out over the next 4 years that will improve the level of confidence in this AM plan. Also included is a programme for revising this AM plan.

### 10.1 Asset Management Improvement Programme

The AM tasks identified in the summary programme below are considered to be the most important to enable HBCC to meet its asset management objectives. The programme reflects the overall aim of improving asset management practices, which is to deliver the right level of service at lowest long-term cost to HBCC's customers. Table 34 identifies the primary improvements identified for asset management processes, systems and data.

| AM PROCESS         | IMPROVEMENT ACTIVITIES   | TIMEFRAME<br>(over 4 Years) |
|--------------------|--|-----------------------------|
| Data Management    | Improve the capture of data for traffic management devices and monitor condition   | Year 1                      |
| Asset Valuation    | Collect the data and complete the valuations for traffic management devices, carparks and laneways   | Year 2                      |
| Risk Register      | Complete the identification of the infrastructure risk register for Council's roads, traffic management devices, car parks and kerb and channel, considering current controls, actions and funding required to decrease risk levels. | Year 1                      |
| Asset Performance  | Undertake ongoing analysis of future renewal requirements using the condition data collected during the period of the second Road AM Plan.   | Year 2                      |
| Asset Performance  | Analyse the customer request results to address problem areas and maintain performance.  | Year 2                      |
| Asset Performance  | Collect and monitor defect histories to identify trends in performance of asset types.   | Year 2                      |
| Risk Register      | Monitor the infrastructure risk register and report outcomes. Update annually.   | Year 1                      |
| Levels of Service  | Confirm target service levels, monitor and report outcomes.  | Annually                    |
| Asset Planning     | Use demand projections coupled with other knowledge e.g. risk to develop 20 year forecast projections of upgrade works and new works.  | Years 2 - 3                 |
| Demand Management  | Examine the impacts of government funding on the lifecycle cost requirements over the long term.   | Year 3                      |
| Financial Planning | Incorporate the findings of the 20 year forecast into the LTFP.  | Year 3                      |

## Table 34: Improvement Programme

### 10.2 Monitoring and Review Procedures

#### 10.2.1 AM Plan Review

The AM plan is a living document which is relevant and integral to daily AM activity. To ensure the plan remains useful and relevant the following on-going process of AM plan monitoring and review activity will be undertaken.

- Formal adoption of the plan by Council;
- Identify and formally adopt levels of service;
- Revise AM plan every three years to incorporate outcome of service level review and new knowledge resulting from the AM improvement programme;
- Audits of AM information to ensure the integrity and cost effectiveness of data collected; and
- Peer review: Annual internal audits to be undertaken to assess the effectiveness with which the AM plan meets corporate objectives. Periodic internal audits to be undertaken to assess the adequacy of AM processes, systems and data and external audits to be undertaken to measure AM performance against 'best practice' i.e. gap analysis.

# Appendix A - Glossary Of Terms

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The following terms and acronyms are used in this AM plan.

|                                 |   |
|---------------------------------|---|
| Activity                        | An activity is the work undertaken on an asset or group of assets to achieve a desired outcome.   |
| Advanced Asset Management       | Asset management which employs predictive modelling, risk management and optimised renewal decision-making techniques to establish asset lifecycle treatment options and related long term cashflow predictions. (See Basic Asset Management).  |
| Asset                           | A physical component of a facility which has value, enables services to be provided and has an economic life of greater than 12 months.   |
| Asset Management (AM)           | The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.   |
| Asset Management Plan (AM Plan) | A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost effective manner to provide a specified level of service. A significant component of the plan is a long term cashflow projection for the activities.   |
| Asset Management Policy         | Provides an overall policy framework to guide the strategic management of Council's infrastructure assets.  |
| Asset Management System (AMS)   | A system (usually computerised) for collecting analysing and reporting data on the utilisation, performance, lifecycle management and funding of existing assets.   |
| Asset Register                  | A record of asset information considered worthy of separate identification including inventory, historical, financial, condition, construction, technical and financial information about each.   |
| Basic Asset Management          | Asset management which relies primarily on the use of an asset register, maintenance management systems, job/resource management, inventory control, condition assessment and defined levels of service, in order to establish alternative treatment options and long term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than risk analysis and optimised renewal decision making). |
| Capital Expenditure (CAPEX)     | Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of an asset.   |
| Cash Flow                       | The stream of costs and/or benefits over time resulting from a project investment or ownership of an asset.   |
| Components                      | Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.   |

|                                     |   |
|-------------------------------------|---|
| Condition Monitoring                | Continuous or periodic inspection, assessment, measurement and interpretation of resulting data, to indicate the condition of a specific component so as to determine the need for some preventive or remedial action   |
| Critical Assets                     | Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than non-critical assets.   |
| Current Replacement Cost            | The cost of replacing the service potential of an existing asset, by reference to some measure of capacity, with an appropriate modern equivalent asset.  |
| Deferred Maintenance                | The shortfall in rehabilitation work required to maintain the service potential of an asset.  |
| Demand Management                   | The active intervention in the market to influence demand for services and assets with forecast consequences, usually to avoid or defer CAPEX expenditure. Demand management is based on the notion that as needs are satisfied expectations rise automatically and almost every action taken to satisfy demand will stimulate further demand.                            |
| Depreciated Replacement Cost (DRC)  | The replacement cost of an existing asset after deducting an allowance for wear or consumption to reflect the remaining economic life of the existing asset.  |
| Depreciation                        | The wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted for by the allocation of the historical cost (or revalued amount) of the asset less its residual value over its useful life.  |
| Design Life                         | The theoretical life of an asset assumed in its design.   |
| Disposal                            | Activities necessary to dispose of decommissioned assets.   |
| Economic Life                       | The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service. The economic life is at the maximum when equal to the physical life however obsolescence will often ensure that the economic life is less than the physical life. |
| Road                                | A complex comprising many assets (e.g. a park, recreation complex, airport etc.) which represents a single management unit for financial, operational, maintenance or other purposes.   |
| Geographic Information System (GIS) | Software that provides a means of spatially viewing, searching, manipulating, and analysing an electronic database.   |
| Infrastructure Assets               | Stationary systems forming a network and serving whole communities, where the system as a whole is intended to be maintained indefinitely at a particular level of service potential by the continued replacement and refurbishment of its components. The network may include normally recognised 'ordinary' assets as components.                                       |
| Level Of Service (LOS)              | The defined service quality for a particular activity or service area (i.e. interior) against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, regulatory & environmental acceptability and cost.  |
| Life                                | A measure of the anticipated life of an asset or component; such as time, number of cycles, distance intervals etc.   |

|  |  |
|--|--|
| Life Cycle                               | <p>Life cycle has two meanings:</p> <ul style="list-style-type: none"> <li>(a) The cycle of activities that an asset (or facility) goes through while it retains an identity as a particular asset, i.e., from planning and design to decommissioning or disposal.</li> <li>(b) The period of time between a selected date and the last year over which the criteria (e.g. costs) relating to a decision or alternative under study will be assessed.</li> </ul> |
| Life Cycle Cost                          | The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.   |
| Maintenance                              | All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.  |
| Objective                                | An objective is a general statement of intention relating to a specific output or activity. They are generally longer-term aims and are not necessarily outcomes that managers can control.  |
| Operation                                | The active process of utilising an asset that will consume resources such as manpower, energy, cleaning products and materials. Operation costs are part of the life cycle costs of an asset.  |
| Optimised Renewal Decision Making (ORDM) | An optimisation process for considering and prioritising all options to rectify performance failures of assets. The process encompasses net present value analysis and risk assessment.  |
| Performance Measure                      | A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.   |
| Performance Monitoring                   | Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.   |
| Physical Life                            | The actual life of an asset.   |
| Rehabilitation                           | Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally involves repairing the asset using available techniques and standards to deliver its original level of service (i.e. Re-roofing, replacing doors etc.) without resorting to significant upgrading or replacement.  |
| Renewal                                  | Works to upgrade, refurbish, rehabilitate or replace existing facilities with facilities of equivalent capacity or performance capability.   |
| Repair                                   | Action to restore an item to its previous condition after failure or damage.   |
| Replacement                              | The complete replacement of an asset that has reached the end of its life, so as to provide a similar or agreed alternative, level of service.   |
| Replacement Value                        | The prevailing market cost of supply and installation of an asset delivering an equivalent service, making no allowance for depreciation of the asset.   |
| Risk Management                          | The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.   |
| Service Potential                        | The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset.   |

|                         |   |
|-------------------------|---|
| Strategic Plan          | Strategic planning involves making decisions about the long term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long term survival, value and growth of the organisation. |
| Scheduled Maintenance   | Work carried out to a predetermined schedule e.g. air cooler service or programmed as a result of identified needs e.g. repairing a cracked wall.   |
| Unscheduled Maintenance | Work carried out in response to reported problems of defects e.g. cleaning up vandalism.  |
| Upgrading               | The replacement of an asset or addition/ replacement of an asset component which materially improves the original service potential of the asset.   |
| User Cost               | Cost borne by the public when using the road.   |
| Valuation               | Estimated asset value which may depend on the purpose for which the valuation is required, i.e. replacement value for determining lifecycle costing or insurance valuation.   |

## Appendix B – Asset Quantities

### Asset Quantities by Traffic Device

| CODE               | DESCRIPTION   | VALUE<br>(per item) | QUANTITY     | REPLACEMENT<br>COST<br>(\$) |
|--------------------|---|---------------------|--------------|-----------------------------|
| <b>MBSP</b>        | Mid-Block Slow Point  | 2,500               | 22           | 55,000                      |
| <b>MBT</b>         | Mid-Block Threshold   | 2,000               | 15           | 30,000                      |
| <b>PCFL</b>        | Ped X Flashing Lights   | 40,000              | 15           | 600,000                     |
| <b>PCTL</b>        | Pedestrian crossing with Traffic Lights                         | 60,000              | 1            | 60,000                      |
| <b>PED</b>         | Pedestrian Crossing no Lights                                   | 1,500               | 29           | 43,500                      |
| <b>R/L</b>         | Roundabout - Large >= 30 m Dia                                  | 250,000             | 46           | 11,500,000                  |
| <b>R/M</b>         | Roundabout - Small 10 - 30 m Dia                                | 150,000             | 26           | 3,900,000                   |
| <b>R/S</b>         | Roundabout - Small < 10 m Dia                                   | 25,000              | 4            | 100,000                     |
| <b>S</b>           | Splitter Island - Generally at T - Intersection                 | 8,000               | 399          | 3,192,000                   |
| <b>SC</b>          | School Crossing - Basic   | 2,500               | 42           | 105,000                     |
| <b>SCTL</b>        | School Crossing - With Traffic Lights                           | 60,000              | 0            | -                           |
| <b>SH/S</b>        | Speed Hump - Combined with Splitters generally at Intersections | 10,000              | 24           | 240,000                     |
| <b>SHF</b>         | Speed Hump - Flat Top   | 4,000               | 257          | 1,028,000                   |
| <b>SHW</b>         | Speed Hump - Watts Profile                                      | 4,000               | 145          | 580,000                     |
| <b>T</b>           | Threshold Entry   | 2,500               | 177          | 442,500                     |
| <b>T/S</b>         | Threshold combined with splitter                                | 4,000               | 10           | 40,000                      |
| <b>GRAND TOTAL</b> |   |                     | <b>1,212</b> | <b>21,916,000</b>           |

### **Overall Traffic Control Codes including Quantities and Value**

### Asset Quantities by Off Street Car Park

| Material            | Sum of Area (m2) |
|---------------------|------------------|
| <b>Asphalt</b>      | 118,284          |
| <b>Concrete</b>     | 1,716            |
| <b>Crushed rock</b> | 50,963           |
| <b>Gravel/dirt</b>  | 20,502           |
| <b>Paver</b>        | 2,013            |
| <b>Total</b>        | <b>193,478</b>   |

### **Carparks by Material**



Asset Quantities by Roads, Kerb and Channel

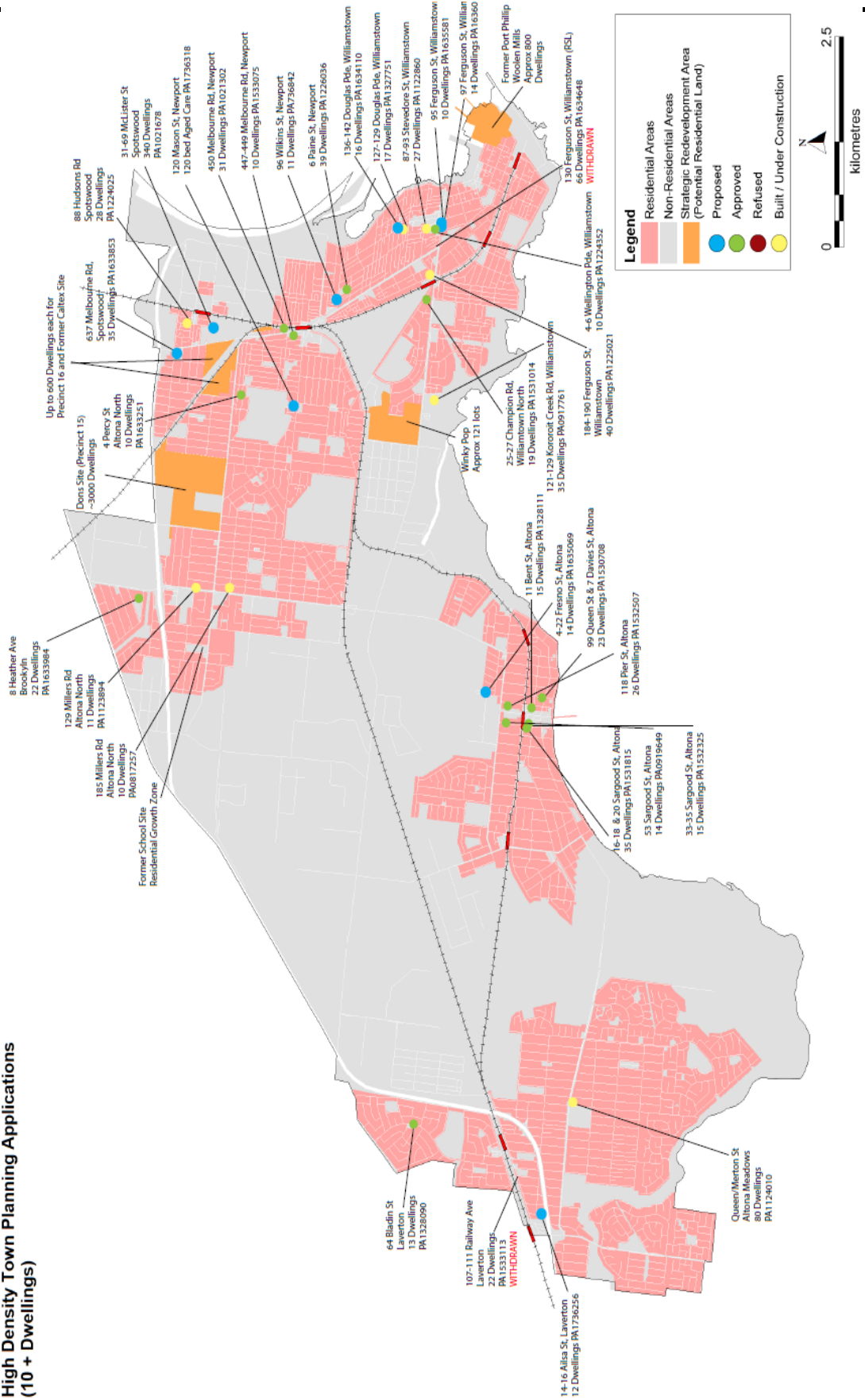
| ASSET GROUP <sup>6</sup> | ASSET TYPE       | UNITS          | QUANTITY OF ROAD ASSETS | LENGTH of ROAD (km) |
|--------------------------|------------------|----------------|-------------------------|---------------------|
| <b>Road Pavement</b>     | Pavement         | m <sup>2</sup> | 3,422,974               | <b>433</b>          |
|                          | Surface          | m <sup>2</sup> | 3,302,827               | <b>415</b>          |
| <b>Kerb and Channel</b>  | Kerb and Channel | km             | N/A                     | <b>771</b>          |

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<sup>6</sup> 2017 Asset Quantities, Confirm AMS

# Appendix C – Figure 5 Recent Developments

## High Density Town Planning Applications (10 + Dwellings)



## Appendix C – Table 16 Status of Developments

Development that will result in the need for new or upgraded roads and related infrastructure are listed below:

| Development Area   | Year Start | Year Finish | Dwellings | People | Vehicles | Status type                   |
|--|------------|-------------|-----------|--------|----------|-------------------------------|
| 11 Bent St, Altona 15 Dwellings<br>PA1328111                   | 2017       | 2017        | 15        | 36     | 29       | Approved                      |
| 53 Sargood St, Altona 14<br>Dwellings PA0919649                | 2017       | 2017        | 14        | 34     | 27       | Approved                      |
| 6 Paine St, Newport 39 Dwellings<br>PA1226036                  | 2018       | 2018        | 39        | 94     | 74       | Approved                      |
| 129 Millers Rd Altona North 11<br>Dwellings PA1123894          | 2018       | 2018        | 11        | 26     | 21       | Built / Under<br>Construction |
| 127-129 Douglas Pde,<br>Williamstown 17 Dwellings<br>PA1327751 | 2018       | 2018        | 17        | 41     | 32       | Built / Under<br>Construction |
| 447-449 Melbourne Rd, Newport<br>10 Dwellings PA1533075        | 2018       | 2019        | 10        | 24     | 19       | Approved                      |
| 16-18 & 20 Sargood St, Altona<br>35 Dwellings PA1531815        | 2019       | 2019        | 33        | 79     | 63       | Approved                      |
| 33-35 Sargood St, Altona 15<br>Dwellings PA1532325             | 2019       | 2019        | 15        | 36     | 29       | Approved                      |
| 136-142 Douglas Pde,<br>Williamstown 16 Dwellings<br>PA1634110 | 2020       | 2020        | 16        | 38     | 30       | Proposed                      |
| 95 Ferguson St, Williamstown 10<br>Dwellings PA1635581         | 2020       | 2020        | 10        | 24     | 19       | Proposed                      |
| 97 Ferguson St, Williamstown 14<br>Dwellings PA1636033         | 2020       | 2020        | 14        | 34     | 27       | Proposed                      |
| 8 Heather Ave Brooklyn 22<br>Dwellings PA1633984               | 2019       | 2020        | 22        | 53     | 42       | Approved                      |
| 4-6 Wellington Pde, Williamstown<br>10 Dwellings PA1224352     | 2020       | 2020        | 10        | 24     | 19       | Approved                      |
| 64 Bladin St Laverton 13<br>Dwellings PA1328090                | 2020       | 2020        | 13        | 31     | 25       | Approved                      |





| Development Area  | Year Start | Year Finish | Dwellings | People | Vehicles | Status type                  |
|---|------------|-------------|-----------|--------|----------|------------------------------|
| 10-12 Bradley Street Newport 22 Dwellings PA1328102                                 | 2018       | 2020        | 22        |        |          | Not Identified               |
| 120 Mason St, Newport 120 bed Aged Care PA1736318                                   | 2020       | 2021        | 1         | 120    | 20       | Proposed                     |
| 25-27 Champion Rd, Williamstown North 30 Dwellings PA1531014                        | 2020       | 2021        | 30        | 67     | 53       | Approved                     |
| 118 Pier St, Altona 26 Dwellings PA1532507  | 2021       | 2021        | 26        | 62     | 49       | Approved                     |
| 107-111 Railway Ave Laverton 22 Dwellings PA1533113                                 | 2021       | 2021        | 22        | 53     | 42       | WITHDRAWN                    |
| Former Altona Gate Primary School 430 – 436 blackshaws Site Residential Growth Zone | 2019       | 2021        | 127       | 305    | 241      | Unknown                      |
| 450 Melbourne Rd, Newport 31 Dwellings PA1021302                                    | 2021       | 2022        | 31        | 74     | 59       | Approved                     |
| 99 Queen St & 7 Davies St, Altona 23 Dwellings PA1530708                            | 2022       | 2022        | 24        | 58     | 46       | Approved                     |
| 637 Melbourne Rd, Spotswood 35 Dwellings PA1633853                                  | 2022       | 2023        | 35        | 84     | 67       | Proposed                     |
| 121-129 Kororoit Creek Rd, Williamstown 35 Dwellings PA0917761                      | 2021       | 2023        | 35        | 84     | 67       | Built / Under Construction   |
| Former Port Phillip Woollen Mills Approx. 800 Dwellings                             | 2017       | 2026        | 800       | 1920   | 1520     | Strategic Redevelopment Area |
| 31-69 McLister St Spotswood 340 Dwellings PA1021678                                 | 2022       | 2027        | 340       | 816    | 646      | Proposed                     |
| 130 Ferguson St, Williamstown (RSL) 66 Dwellings PA1634648                          | 2025       | 2027        | 66        | 158    | 125      | WITHDRAWN                    |
| Dons Site (Precinct 15) ~3000 Dwellings   | 2023       | 2036        | 3000      | 7200   | 5700     | Strategic Redevelopment Area |
| Up to 600 Dwellings for Precinct 16   | 2027       | 2037        | 300       | 720    | 570      | Strategic Redevelopment Area |

| Development Area                                | Year Start | Year Finish      | Dwellings | People | Vehicles | Status type                  |
|---|------------|------------------|-----------|--------|----------|------------------------------|
| Up to 600 Dwellings for Former Caltex Site      | 2027       | 2037             | 420       | 1008   | 798      | Strategic Redevelopment Area |
| Winky Pop Approx 121 lots                       | 2027       | TBC <sup>7</sup> | TBC       | TBC    | TBC      | Strategic Redevelopment Area |
| 96 Wilkins St, Newport 11 Dwellings PA736842    | TBC        | TBC              | 11        | 26     | 21       | Proposed                     |
| 4-22 Fresno St, Altona 14 Dwellings PA1635069   | TBC        | TBC              | 14        | 34     | 27       | Proposed                     |
| 14-16 Ailsa St, Laverton 12 Dwellings PA1736256 | TBC        | TBC              | 12        | 29     | 23       | Proposed                     |
| Epson Street Laverton                           | TBC        | TBC              | TBC       | TBC    | TBC      | Unknown                      |

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<sup>7</sup> TBC – To be Confirmed

# Appendix D – Condition Rating

| Condition Rating | Description   | Example   |
|------------------|---|---|
| 0 - 2            | <p><b>A near new asset with no visible signs of deterioration often moved to condition 1 based upon the time since construction rather than observed condition decline.</b></p>   |    |
| 3 - 4            | <p><b>An asset in good overall condition but with some early stages of deterioration evident, but the deterioration still minor in nature and causing no serviceability problems.</b></p>   |   |
| 5 - 6            | <p><b>An asset in fair (average) overall condition deterioration in condition would be obvious and there would be some serviceability loss.</b></p>   |  |
| 7 - 8            | <p><b>An asset in poor overall condition with serviceability now being heavily impacted upon by the poor condition. Maintenance cost would be very high and the asset would at a point where it needed to be rehabilitated.</b></p> |  |

9 - 10

**An asset in very poor condition with severe serviceability problems and needing rehabilitation immediately. There would be an extreme risk in leaving the asset in service.**



# Appendix E – Relevant Council Documents

## Relationships with Other Council Plans and Documents

The strategic goals and key performance indicators that are relevant to the management of road assets are included in the following documents:

| DOCUMENT  | DESCRIPTION  |
|---|--|
| <b>Hobsons Bay 2030 Community Vision</b>                                      | <p>Hobsons Bay 2030 was developed by the community for the community and will guide Council's work until 2030.</p> <p>It provides the first long term community vision for the municipality, along with six priorities for achieving that vision. It is based on evidence of current and future community needs and has been developed following an in depth community consultation and engagement process.</p>  |
| <b>Hobsons Bay Council Plan 2017-21</b>                                       | <p>Goal 1: An inclusive and healthy community<br/>           Goal 2: A great place<br/>           Goal 3: A well designed, maintained and environmentally sustainable place<br/>           Goal 4: A Council of excellence</p>   |
| <b>Register of Public Roads</b>   | <p>Under the requirements of the Road Management Act 2004, council must publish a register of public roads of which it is the coordinating road authority.</p> <p>The Register of Public Roads published by the Hobsons Bay City Council will only contain the names of public roads that are under the care and maintenance of the Hobsons Bay City Council. Freeways or arterial roads which are the responsibility of VicRoads will not be listed in councils register.</p> <p>This council has produced an electronic register which is available for inspection at the customer service centre.</p> |
| <b>Truck Routes – B-Double and Higher Mass Limit Vehicle Operation Policy</b> | <p>The policy was established to control the operation of B-Double and Higher Mass Limits heavy commercial vehicles within the municipality of Hobsons Bay as well as provide a consistent approach to the approval of B-Double and Higher Mass Limits vehicle operation on local roads.</p>   |
| <b>Road Safety Strategy, 2011-2013</b>  | <p>The Road Safety Strategic Plan emphasises the need for an all-of-Council approach to road safety that involves the community in an ongoing and iterative process. The Strategic Plan encourages community participation in the process of making our City safer. The Plan also encourages Council staff from every department to take road safety issues into consideration when issuing permits for new developments, setting up lane closures for road works and the like. Council staff should lead by example, driving cautiously and courteously at all times.</p>                               |
| <b>Strategic Bicycle Plan 2013 - 2017</b>                                     | <p>The revised bicycle plan (Hobsons Bay Strategic Bicycle Plan 2013-2017) builds on the recommendations of the previous plan, the Hobsons Bay Integrated Transport Strategy and the Council Plan 2009-2013.</p>   |



| DOCUMENT   | DESCRIPTION   |
|--|---|
|  | This plan seeks to further build on the existing bicycle network to develop a highly connective bicycle network.  |
| <b>Strategic Resource Plan 2016/17 – 2019/20</b> | <p>The key objective, which underlines the development of the SRP, is financial sustainability in the medium to long term, while still achieving Council's strategic objectives as specified in the Council Plan. The key financial objectives, which underpin the SRP are:</p> <ul style="list-style-type: none"> <li>· generally maintaining existing service levels</li> <li>· achieve operational surpluses each year</li> <li>· maintain a robust capital works program with a focus on asset renewal</li> <li>· generally achieve a balanced financial (rate determination) result</li> <li>· increases are required to cash reserves to take into account increasing future commitments</li> </ul> |

### Legislative Requirements and Local Laws

The following is a list of legislation (but not limited to) that is relevant for the management of roads in the State of Victoria:

| REFERENCE                | DETAILS   |
|--------------------------|---|
| Road Management Act 2004 | <p>The principles of the Act include:</p> <ul style="list-style-type: none"> <li>• Set out the powers, duties and functions of highway authorities in relation to the inspection, maintenance and repair of roads</li> <li>• Establish the legal framework for the management of roads and define the rights, powers and duties of road authorities and other persons and bodies (such as utilities) which install, maintain or operate infrastructure on roads or carry out such works on roads</li> <li>• Enable authorities to develop and publish management plans to incorporating the performance of their duties in relation to the inspection, maintenance and repair of roads, having regard to the type of road, the resources available to the authority and its budgetary and policy priorities.</li> </ul> |
| Transport Act 1983       | <ul style="list-style-type: none"> <li>• Provides for Council to be responsible for main roads within its municipal district. (Clause 5(4) of Schedule 5)</li> <li>• Empowers Council to carry out 'permanent works', which shall be to the satisfaction of VicRoads. (Clause 16 of Schedule 5)</li> </ul>  |

| REFERENCE                 | DETAILS  |
|---------------------------|--|
| Road Safety Act 1986      | <ul style="list-style-type: none"> <li>• Provides Council with the power to erect major traffic control items (MTCI's) on roads other than declared main roads and the power to erect minor traffic control items on minor roads. (Section 91).</li> <li>• Empowers Council with regard to parking.</li> </ul>   |
| Local Government Act 1989 | <p>Section 6 outlines the purposes of a Council. The purposes of a Council are:</p> <ul style="list-style-type: none"> <li>• To provide equitable and appropriate services and facilities for the community and to ensure that those services and facilities are managed efficiently and effectively.; and</li> <li>• To manage, improve and develop the resources of its district efficiently and effectively.</li> </ul> <p>Section 7 outlines the objectives of Council to seek its purposes.</p> <p>In seeking to achieve its purposes, a Council has the following objectives:</p> <ul style="list-style-type: none"> <li>• To facilitate the involvement of members of the community, users of facilities and services and Council staff in the development, improvement and co-ordination of local government;</li> <li>• To co-ordinate with other public bodies to ensure that services and facilities are provided and resources are used effectively and efficiently;</li> <li>• To ensure adequate planning for the future of its municipal district;</li> <li>• To represent and promote the interests of the community and to be responsive to the needs of the community;</li> <li>• To formulate comprehensive policies and set performance targets; and</li> <li>• To develop, implement and monitor its strategic plans and budgets.</li> </ul> <p>Section 205 outlines Councils care and management, however this has changed with the new Road Management Act 2004 which will place a duty of care on Council with regard to its role as a road authority.</p> |

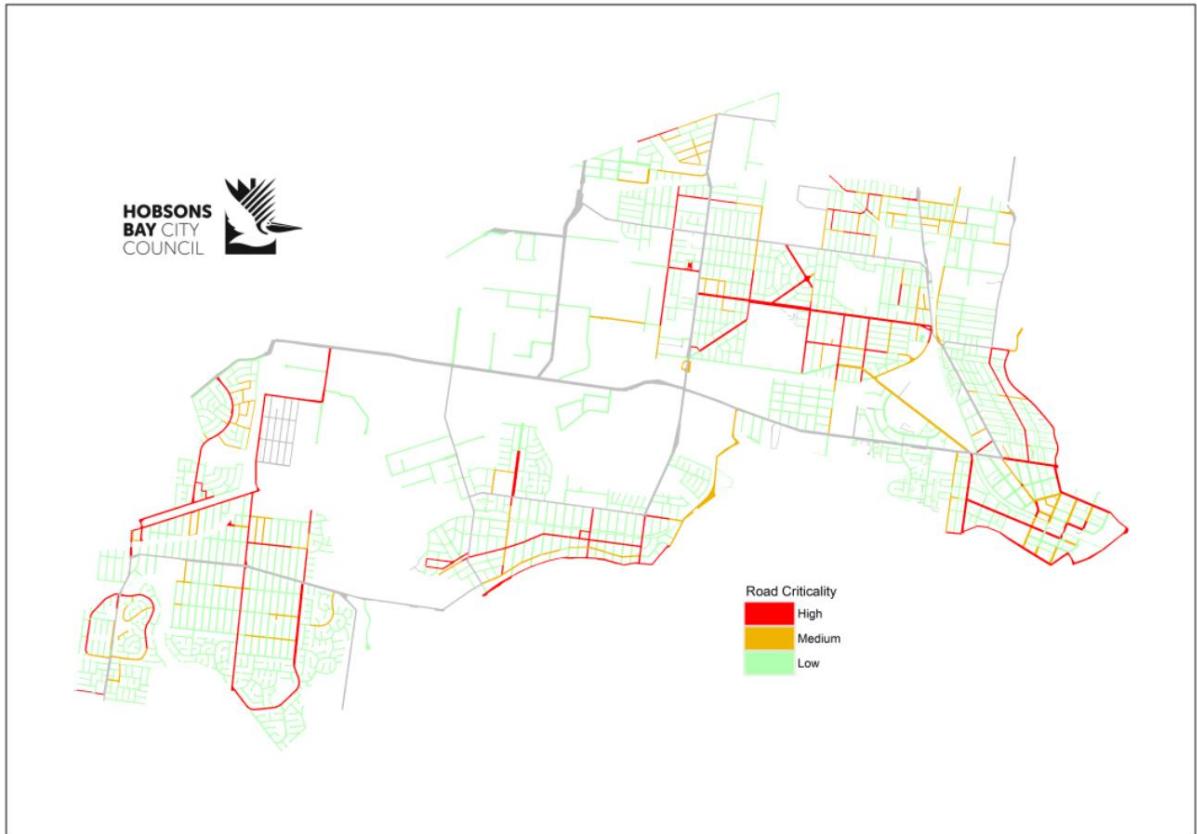
| REFERENCE  | DETAILS   |
|--|---|
| Environment Protection Act 1970  | The legislative framework for the protection of the environment in Victoria. Legal requirements in relation to stormwater quality from building and construction work sites.  |
| Occupational Health and Safety Act 1985  | <p>Legal requirements for employers/employees in relation to workplace safety.</p> <p>Requirements on those who design, manufacture, import or supply any plant for use in the workplace.</p>   |
| Subdivisions Act 1988  | Provides for engineering plans to be provided for developments in accordance with relevant standards.   |
| No. S267, Road Management Act 2004, Codes of Practice, Operational Responsibility for Public Roads | <p>The purpose of this Code is:</p> <ul style="list-style-type: none"> <li>• To provide practical guidance by clarifying or determining how the operational responsibility for different parts or elements of a road reserve is to be allocated between road authorities; and</li> <li>• To establish principles giving practical guidance for determining the boundary between a “roadway”, “pathway” or “shoulder” in any particular case and for determining which road authority is responsible for road-related infrastructure.</li> </ul> <p>This Code is intended to:</p> <ul style="list-style-type: none"> <li>• Support responsible road authorities in the performance of their road management functions with respect to the provision of a safe and efficient road network for use by road users and the community; and</li> <li>• Recognise that VicRoads, other State road authorities and local government are partners in managing Victoria’s road network.</li> </ul> |
| No. S269, Road Management Act, Code of Practice, Management of Infrastructure in Road Reserves     | The purpose of this Code is to provide practical guidance and identify benchmarks of good practice for utilities and road authorities, who are expected to work together cooperatively to facilitate the installation, maintenance and operation of road and non-road infrastructure within road reserves.  |

| REFERENCE                                   | DETAILS   |
|---|---|
| Australian Human Rights Commission Act 1986 | <p>The Australian Human Rights Commission Act 1986 established the Human Rights and Equal Opportunity Commission (now known as the Australian Human Rights Commission) and gives it functions in relation to the following international instruments:</p> <ul style="list-style-type: none"> <li>• International Covenant on Civil and Political Rights (ICCPR)</li> <li>• Convention Concerning Discrimination in Respect of Employment and Occupation (ILO 111)</li> <li>• Convention on the Rights of Persons with Disabilities</li> <li>• Convention on the Rights of the Child</li> <li>• Declaration of the Rights of the Child</li> <li>• Declaration on the Rights of Disabled Persons</li> <li>• Declaration on the Rights of Mentally Retarded Persons, and</li> <li>• Declaration on the Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief.</li> </ul> |

| REFERENCE                        | DETAILS   |
|----------------------------------|---|
| Rail Safety Act 2006             | <p>The Act addresses:</p> <p>Safety interface assessment by relevant road manager of public roadway or pathway:</p> <ul style="list-style-type: none"> <li>• A relevant road manager in relation to a public roadway or public pathway must: <ul style="list-style-type: none"> <li>- Identify and assess, so far as is reasonably practicable, risks to safety that may arise from the existence or use of any rail or road crossing that is part of the road infrastructure of that public roadway or that is a public pathway because of, or partly because of, rail infrastructure operations;</li> <li>- Determine measures to manage, so far as is reasonably practicable, any risks identified and assessed.</li> </ul> </li> <li>• A relevant road manager must have regard to: <ul style="list-style-type: none"> <li>- The principal object of road management; and</li> <li>- The works and infrastructure management principles; and</li> <li>- The functions, powers and duties of infrastructure managers under the Road Management Act 2004 -</li> </ul> </li> </ul> <p>When determining measures to manage risks identified under subsection (1).</p> <ul style="list-style-type: none"> <li>• A relevant road manager must seek to enter into a safety interface agreement with any rail infrastructure manager whose rail infrastructure operations are identified as contributing to a risk identified under subsection (1) for the purposes of managing that risk.</li> </ul> |
| Austroads Road Design Guidelines | Design guidelines published by the Australasian Association of Road and Traffic Authorities.  |
| VicRoads Standards               | <p>Engineering standards are based on VicRoads standards and modified where required to suit the needs of Council.</p> <p>Road Design Standards:</p> <ul style="list-style-type: none"> <li>• Traffic Engineering Manual Vol.1 Traffic Management;</li> <li>• Traffic Engineering Manual Vol.2. Signs and Markings;</li> <li>• VicRoads Worksite Traffic Management (Roadworks Signing). Code of Practice; and</li> <li>• VicRoads Road Design Guidelines Parts 1 – 12.</li> </ul>  |

# Appendix F – Road Network Criticality

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# Appendix G – 10 Year Financial Forecast

| CPI = 3.8%         |   | 17/18        | 18/19        | 19/20        | 20/21        | 21/22        | 22/23        | 23/24        | 24/25        | 25/26        | 26/27        | 27/28        | TOTAL         |
|--------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| <b>OPERATIONS</b>  |   |              |              |              |              |              |              |              |              |              |              |              |               |
|                    | Administration  | 478          | 496          | 515          | 535          | 555          | 576          | 598          | 621          | 644          | 669          | 694          | 6,381         |
|                    | Out of hours Call out                                   | 26           | 26           | 27           | 28           | 29           | 30           | 31           | 32           | 33           | 35           | 36           | 333           |
|                    | Growth in administration due to demand for developments | 29           | 30           | 31           | 33           | 34           | 35           | 36           | 38           | 39           | 41           | 42           | 388           |
|                    | <b>Total Operations</b>                                 | <b>533</b>   | <b>552</b>   | <b>573</b>   | <b>596</b>   | <b>618</b>   | <b>641</b>   | <b>665</b>   | <b>691</b>   | <b>716</b>   | <b>745</b>   | <b>772</b>   | <b>7,102</b>  |
| <b>MAINTENANCE</b> |   |              |              |              |              |              |              |              |              |              |              |              |               |
|                    | <b>Local Roads Maintenance</b>                          |              |              |              |              |              |              |              |              |              |              |              |               |
|                    | Materials and services                                  | 179          | 186          | 193          | 200          | 208          | 216          | 224          | 232          | 241          | 250          | 260          | 2,389         |
|                    | Fire plug Maintenance                                   | 25           | 24           | 25           | 26           | 26           | 26           | 27           | 27           | 27           | 28           | 29           | 290           |
|                    | 2468. Contracts - Right of Way Maintenance              | 104          | 108          | 112          | 116          | 121          | 125          | 130          | 135          | 140          | 145          | 151          | 1,387         |
|                    | 2548. Contracts - Reactive                              | 1,234        | 1,281        | 1,330        | 1,380        | 1,433        | 1,487        | 1,543        | 1,602        | 1,663        | 1,726        | 1,791        | 16,470        |
|                    | 2549. Contracts - Lump Sum                              | 536          | 556          | 578          | 600          | 622          | 646          | 671          | 696          | 722          | 750          | 779          | 7,156         |
|                    | Growth in maintenance due to demand for developments    | 121          | 125          | 130          | 135          | 140          | 145          | 151          | 156          | 162          | 168          | 175          | 1,608         |
|                    | <b>Total Maintenance</b>                                | <b>2,199</b> | <b>2,280</b> | <b>2,368</b> | <b>2,457</b> | <b>2,550</b> | <b>2,645</b> | <b>2,746</b> | <b>2,848</b> | <b>2,955</b> | <b>3,067</b> | <b>3,185</b> | <b>29,300</b> |

| CPI = 3.8%                                 |  | 17/18         | 18/19         | 19/20         | 20/21         | 21/22         | 22/23         | 23/24         | 24/25         | 25/26         | 26/27         | 27/28         | TOTAL          |
|--|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| <b>CAPITAL WORKS</b>                       |  |               |               |               |               |               |               |               |               |               |               |               |                |
| Renewal                                    | Resurfacing  | 2,300         | 2,583         | 2,538         | 2,551         | 2,541         | 2,541         | 2,541         | 2,541         | 2,541         | 2,541         | 2,541         | 27,759         |
| Renewal                                    | Rehabilitation Minor Capital   | 350           | 250           | 250           | 250           | 250           | 300           | 300           | 300           | 300           | 300           | 300           | 3,150          |
| Renewal                                    | Rehabilitation Civil Design and Specifications                             | 100           | 100           | 100           | 100           | 100           | 100           | 100           | 100           | 100           | 100           | 100           | 1,100          |
| Renewal                                    | Difference in Renewals to make up Recommendation in State of Assets Report | 4,200         | 4,360         | 4,525         | 4,697         | 4,876         | 5,061         | 5,253         | 5,453         | 5,660         | 5,875         | 6,098         | 56,058         |
| Upgrades                                   | Rehabilitation of Laneways   | 420           | 300           | 310           | 315           | 320           | 325           | 330           | 340           | 350           | 350           | 350           | 3,710          |
| New  | Developer Funded   | 266           | 631           | 571           | 853           | 875           | 902           | 917           | 937           | 856           | 814           | 750           | 8,372          |
| Renewal                                    | Off Street Car Parks   | 1050          | 1025          | 1050          | 1080          | 1100          | 1130          | 1160          | 1190          | 1220          | 1250          | 1280          | 12535          |
|  | <b>Total Capital Works</b>   | <b>8,686</b>  | <b>9,249</b>  | <b>9,344</b>  | <b>9,846</b>  | <b>10,062</b> | <b>10,359</b> | <b>10,601</b> | <b>10,861</b> | <b>11,027</b> | <b>11,230</b> | <b>11,419</b> | <b>112,684</b> |
|  | <b>Operations</b>  | 533           | 552           | 573           | 596           | 618           | 641           | 665           | 691           | 716           | 745           | 772           | 7102           |
|  | <b>Maintenance</b>   | 2,199         | 2,280         | 2,368         | 2,457         | 2,550         | 2,645         | 2,746         | 2,848         | 2,955         | 3,067         | 3,185         | 29,300         |
|  | <b>Capital Works</b>   | 8,686         | 9,249         | 9,344         | 9,846         | 10,062        | 10,359        | 10,601        | 10,861        | 11,027        | 11,230        | 11,419        | 112,684        |
| <b>TOTAL EXPENDITURE ON COUNCIL ASSETS</b> |  | <b>11,418</b> | <b>12,081</b> | <b>12,285</b> | <b>12,899</b> | <b>13,230</b> | <b>13,645</b> | <b>14,012</b> | <b>14,400</b> | <b>14,698</b> | <b>15,042</b> | <b>15,376</b> | <b>149,086</b> |