

HOBSONS
BAY CITY
COUNCIL



Bridge 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

This Bridge Asset Management Plan (BAMP) has been developed to manage Hobsons Bay municipal bridge system. Bridge assets are all bridges owned by Council including foot bridges and road bridges.

The BAMP 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 assets managed in the Bridges network are identified in the table below.

ASSET GROUP	ASSET TYPE	UNITS	QUANTITY OF BRIDGE ASSETS	LENGTH OF BRIDGE (M)
Bridges and Major Culverts	Road Bridges	No.	14	403
	Foot Bridges	No.	37	932
			Total	1,335

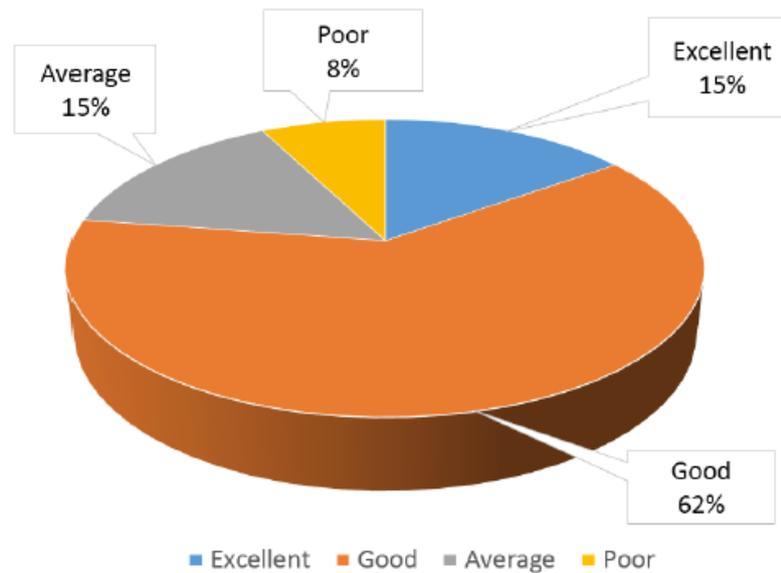
Asset Valuation

In 2015 a bridge asset register developed and subsequent condition audit in accordance with the VicRoads Road Structures Inspection Manual was completed. The Table below identifies the June 2018 financial valuation of the Bridges portfolio, with a replacement value of approximately \$25.3M.

Asset Type	Replacement Value (\$)
Foot Bridge	\$ 4,339,182
Road Bridge	\$ 20,974,836
TOTALS	\$25,314,018

Bridge Network Condition

The chart below presents the current overall condition of Council bridges (2015 condition assessment data) which is an average condition of all the individual components that make up each bridge i.e. foundations, deck, beams, railings etc.



The majority (77%) of the bridges are in excellent and good condition with only 8% in poor condition. There is 15% of the bridges in average condition and will need attention over the next few years along with those bridges currently in poor condition.

Overall the majority of the bridges are in reasonable structural condition but there is a backlog of maintenance and minor renewal works required. The priority renewal works will address risk and safety issues such as replacement of missing or damaged hand rails, guards and timber decking.

It is best practice to undertake bridge audits every 5 years. The funding proposal as outlined in this report will address current known renewal issues and a further audit to be undertaken in 2020 will provide further detailed assessment of the bridges to guide future budget requirements for 2020-2025.

Demand Impact on Assets

Despite the current drivers for development and improvements to the western corridor there is no need for additional bridges within the municipality. Existing bridges will be upgraded in the future as the demand is developed.

Renewal Plan

The renewal plan was developed using the 2015 condition assessment data collected. The bridges were ranked by condition and renewal works and further prioritised using a risk based approach. Higher priority was given to bridges in poor condition with high utilisation, and access to other facilities, reserves, parks, playgrounds and other assets.

Required Renewal Expenditure

The 2016 backlog value of poor condition bridge assets was \$2.0M which represents 8% of the bridge asset base.

In order to eliminate the current backlog over the next 10 years and keep up with the annual rate of deterioration an amount of \$350,000 per annum is required.

10 Year Financial Expenditure

The chart below summarises the 10 year financial forecasts for HBCC's bridges. This level of funding will improve the overall condition of the bridge network by increased renewal investment annually and also maintain the bridge network.



2.0 Introduction

Hobsons Bay City Council's (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 bridges for which it has responsibility under the Road Management Act 2004.

This Bridges Asset Management Plan has been developed to manage HBCC's Bridge system.

The Bridge network in HBCC's consists of:

- 37 Footbridges; and
- 14 Vehicle bridges

The Bridge network is shown in Figure 1 below.



Figure 1: Bridge 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 Bridge Asset Management Plan (BAMP) 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 BAMP 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

The BAMP plan contains nine sections, each of which are explained below in Table 1:

SECTION	SUBJECT MATTER
Introduction	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.
Asset Portfolio	Outlines Councils portfolio of assets including quantity and value.
Strategic Environment	Identifies the current working environment, the strategic and corporate goals with a summary of the documents that support the environment.
Levels of Service	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.
Demand Forecast	Details the future growth trends, the impact of these trends on infrastructure and demand management strategies to deal with the projected growth.
Risk Management	Outlines Council's risk management framework. It also contains tables of risk events with their severity and consequence.
Lifecycle Management Plan	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.
Financial Summary	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.
Asset Management Improvement and Monitoring	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.

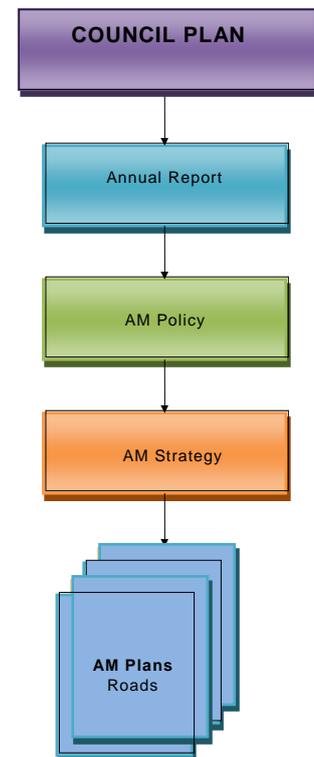
HBCC Policies: The policies are needed to provide direction for AM tactics. Policies that apply to the management of road assets include:

- 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
<p>Schedule 10 of the Act outlines the powers of Council over roads under the headings of:</p> <ul style="list-style-type: none"> • 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 establish survey marks; • 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.
<p>Schedule 11 of the Act outlines the powers of Council over traffic under the headings of:</p> <ul style="list-style-type: none"> • 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; • Power to place obstructions or barriers on a road 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 Bridge Network

The assets managed in the Bridges network are identified in the Table 3 below.

ASSET GROUP	ASSET TYPE	UNITS	QUANTITY OF BRIDGE ASSETS	LENGTH OF BRIDGE (M)
Bridges and Major Culverts	Road Bridges	No.	14	403
	Foot Bridges	No.	37	932
			Total	1,335

Table 3: Bridge Infrastructure

3.2 Asset Condition

The Figure 2 below presents the current overall condition of Council bridges (2015 condition assessment data) which is an average condition of all the individual components that make up each bridge i.e. foundations, deck, beams, railings etc.

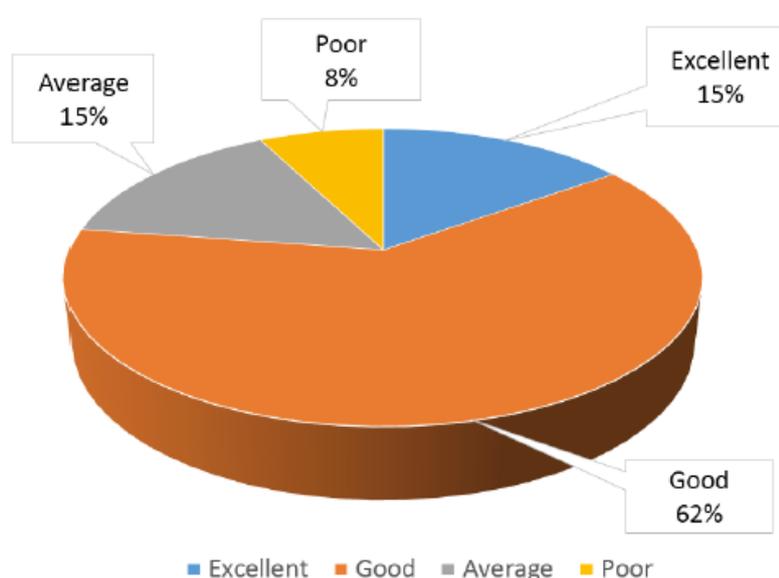


Figure 2: Bridge Condition

The majority (77%) of the bridges are in excellent and good condition with only 8% in poor condition. There is 15% of the bridges in average condition and will need attention over the next few years along with those bridges currently in poor condition.

Overall the majority of the bridges are in reasonable structural condition but there is a backlog of maintenance and minor renewal works required. The priority renewal works will address risk and safety issues such as replacement of missing or damaged hand rails, guards and timber decking.

It is best practice to undertake bridge audits every 5 years. The funding proposal as outlined in this report will address current known renewal issues and a further audit to be undertaken

in 2020 will provide further detailed assessment of the bridges to guide future budget requirements for 2020-2025.

4.0 Strategic Environment

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 Bridge Infrastructure

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

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.
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- 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 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 4 presents the key stakeholders of the Hobsons Bay bridge 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 4: HBCC Stakeholders (Industry Knowledge)

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

5.0 Levels of Service

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

TOOLS	DESCRIPTION
Annual Community Surveys	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.
Snap Send Solve	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 5: 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 6 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	
Councils Overall Performance	66	68	70	66	Satisfied
Traffic Management	63	63	69	68	Satisfied
Parking Facilities	62	63	69	66	Satisfied
Footpath maintenance and repairs	60	61	68	65	Satisfied
Drains maintenance and repairs	66	67	73	69	Satisfied
Bike paths	76	73	79	68	Satisfied
Road maintenance and repairs	63	64	70	69	Satisfied

Table 6: Annual Community Survey Results

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

Table 7: Annual Community Survey Results

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:

- 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 Bridge assets are included in the Table 8 below:

Community Service Levels
Performance
Customer Satisfaction
Service Cost

Table 8: 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 Bridges are as follows in Table 9:

Technical Service Levels
Compliance
Condition

Table 9: Technical Key Performance Indicators (Levels of Service Workshop)

The levels of service in the Table 10 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
Community Levels of Service						
Performance	COMMUNITY	Users will have a smooth ride when travelling on Council Roads (Bridges)	No. of requests recorded annually regarding the damage of vehicles from road(bridge) use	< 20	15	Monitor only
Customer Satisfaction	COMMUNITY	Road(Bridge) Maintenance and Repairs	Community satisfaction rating out of 100	75	69	Implement 2018 road management plan
Technical Levels of Service						
Compliance	TECHNICAL	All road(bridge) 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
Condition	TECHNICAL	To manage the roads (bridges) in a sustainable manner	All bridges will be in average and above condition in 10 years	100%	92% of bridge in average and above condition	Funding average \$350,000 per annum for the next 10 years

Table 10: Level of Service - Bridge

6.0 Demand Forecast

Council's fundamental role is to provide services to the community and its Bridge assets are a means to support this. Consequently, future demand for Bridges and associated Bridge 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 Bridge assets.

6.1 Demand Drivers

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

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

Specific government projects that will impact on Council's Bridge 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 11 below presents the forecasted population growth in Hobsons Bay by suburb.

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

Table 11: Population Forecasts

The development areas at the time of this plan are identified in Appendix C. The areas in conjunction with the status of the development areas are also identified in Appendix C. Using this information, impacts on existing and new infrastructure can be identified and discussed further in Demand Impact on Assets

6.3 Demand Impact on Assets

Despite the current drivers for development and improvements to the western corridor there is no need for additional bridges within the municipality. Existing bridges will be upgraded in the future as the demand is developed. For detailed information on demand refer to Appendix C.

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 3:



Figure 3: 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 4.

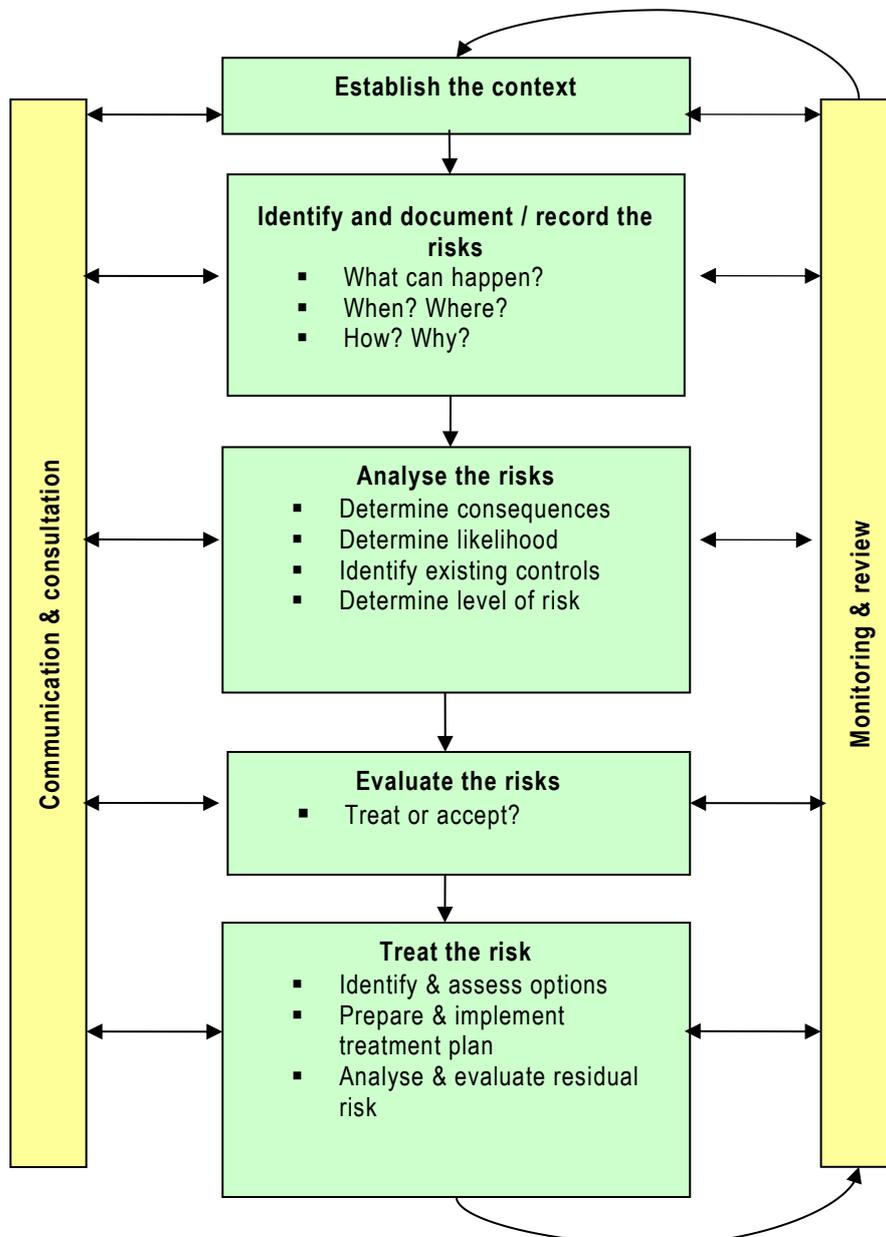


Figure 4: Risk Management Process Schematic

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 Bridge Criticality

A criticality assessment has been completed by Council with the following Table 12 identifying the bridges being classified as most critical (High to Extreme).

ridge	Bridge Id	Structure Type	Criticality Rating	Criticality Category
Cherry Lake Reserve	241793	Footbridge	86.7	Extreme
Cherry Lake Reserve	241800	Footbridge	86.7	Extreme
Truganina Park	241812	Footbridge	80.0	High
Truganina Park	241801	Footbridge	76.7	High
Jawbone Reserve	241808	Footbridge	76.7	High
Jawbone Reserve	241809	Footbridge	76.7	High
Cresser, W.G. Reserve	241795	Footbridge	76.7	High
Truganina Park	241818	Footbridge	76.7	High
Truganina Park	241814	Footbridge	73.3	High
Altona Boat	241796	Footbridge	73.3	High

Ramp Reserve				
Cherry Lake Reserve	241784	Footbridge	73.3	High
Newport Lakes	Unknown 1	Footbridge	73.3	High
Truganina Park	Unknown 2	Footbridge	73.3	High
Jawbone Reserve	241805	Footbridge	73.3	High
Jawbone Reserve	241806	Footbridge	73.3	High
Jawbone Reserve	241807	Footbridge	73.3	High

Table 12: Bridges with the highest Criticality

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

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

7.5 Bridge Risks

The following Table 13 identifies the top ten highest risk bridges.

Bridge	Bridge Id	Structure Type	Risk Rating	Risk Category
Cherry Lake Reserve	241799	Footbridge	52.6	Medium
Truganina Park	241812	Footbridge	51.4	Medium
Truganina Park	241801	Footbridge	48.7	Medium
Cherry Lake Reserve	241793	Footbridge	46.4	Medium
Newport Lakes	241792	Footbridge	46.3	Medium
Jawbone Reserve	241808	Footbridge	38.7	Medium
Jawbone Reserve	241809	Footbridge	38.1	Medium
Truganina Park	241814	Footbridge	35.5	Medium
Altona Boat Ramp Reserve	241796	Footbridge	32.7	Medium

Bridge	Bridge Id	Structure Type	Risk Rating	Risk Category
Cresser, W.G. Reserve	241795	Footbridge	32.1	Medium

Table 13: Bridges with the highest Risk

As can be seen from the above table, the bridges are only at medium risk, as a result of the bridges being in good condition.

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 bridge infrastructure have been identified as:

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

8.0 Lifecycle Management Plans

This section presents asset condition and performance information and considers the risk management described in Section 6 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 the Figure 5 below:

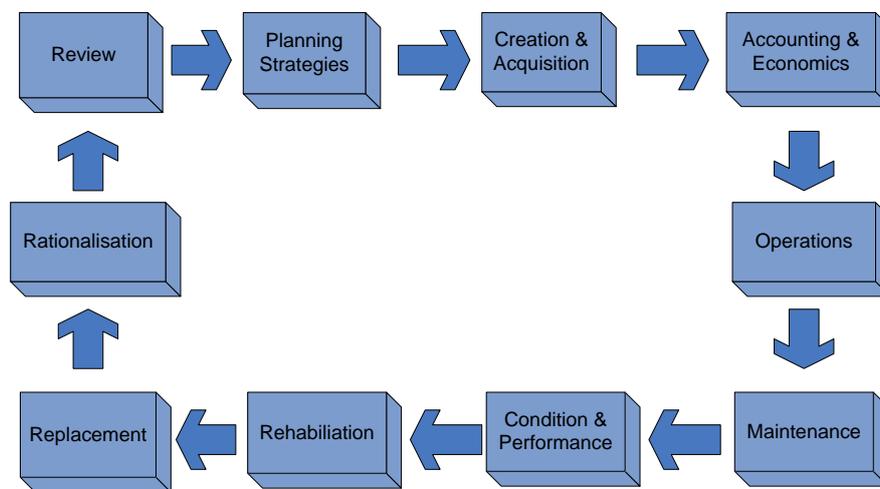


Figure 5: Lifecycle for Asset Management

8.1.1 Lifecycle Activities

The work categories used for the lifecycle plans are defined in Table 14 below.

TREATMENT	DEFINITION
Operations	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. Typical operational activities include path condition surveys, Bridge load testing, and power costs for traffic signals and streetlights.
Maintenance	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:

TREATMENT	DEFINITION
	<ul style="list-style-type: none"> • Planned (proactive) Maintenance: Proactive inspection and maintenance works planned to prevent asset failure; and • Unplanned (reactive) Maintenance: Reactive action to correct asset malfunctions and failures on an as required basis (i.e. emergency repairs). <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). A key element of AM planning is determining the most cost-effective blend of planned and unplanned maintenance.</p>
<p>Renewal Replacement</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"> • Renewal and rehabilitation of existing assets to their original size and capacity, or, • Replacement of the entire component of the asset with the equivalent size or capacity, or, • Replacement component of the capital works which increase the capacity of the assets (that portion of the work which restores the assets to their original size and capacity). <p>Examples of renewals expenditure include:</p> <ul style="list-style-type: none"> • Asphalt overlays; or • Road rehabilitation (involving replacement of existing pavement and surfacing with an equivalent structure)
<p>Upgrades</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. Upgrades are defined as assets either being:</p> <ul style="list-style-type: none"> • Works which improves an asset beyond its original size or capacity; or • Works which increase the capacity of an asset; or • Works designed to produce an improvement in the standard and operation of the asset beyond its original capacity. <p>Upgrade activities may include:</p> <ul style="list-style-type: none"> • Widening of sealed or unsealed roads; • Converting a spray sealed road to an asphalt surface; • Upgrading shoulders; and • Sealing an unsealed road (may be part of a special charge scheme).
<p>New Works</p>	<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"> • Works which create an asset that did not exist in any shape or form, or • Works which improves an asset beyond its original size or capacity, or • Upgrade works which increase the capacity of an asset, or • Works designed to produce an improvement in the standard and operation of the asset beyond its original capacity.

TREATMENT	DEFINITION
	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.
Disposal	<ul style="list-style-type: none"> • Sale, removal or decommissioning of an asset.

Table 14: 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.

A Safety Interface Agreement for Level Crossing and Grade Separated Interfaces located within the City of Greater Dandenong has been established between Metro Trains, HBCC, 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 (as per Clause 4.4.6) 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;
- Water/Sewerage: City West Water, Melbourne 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 management structure established by Council for managing the lifecycle of its bridge infrastructure is identified in the Figure 6. 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.

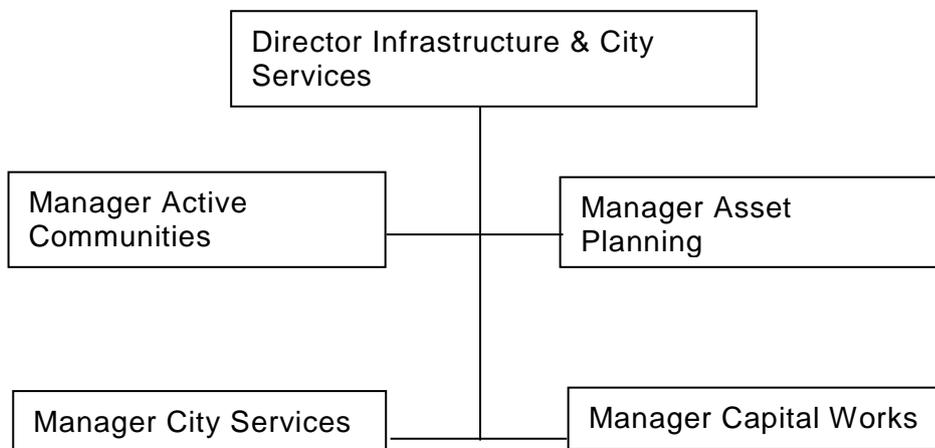


Figure 6: Management Structure

8.1.4 Corporate Road Management Lifecycle Responsibilities Matrix

Table 15 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.

Assets	Service Manager	Asset Manager	Project Delivery/Management	Operations and Maintenance
Roads				
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
Carparks				
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

Table15: Road Management Lifecycle Responsibilities Matrix

8.2 Key Issues

The key issues related to the management of HBCC bridge infrastructure are identified in Table 16.

ASSET	KEY ISSUES
Bridges	<ul style="list-style-type: none"> • Cracking of Asphalt/Surface; • Surface rust; • Missing guard rails; and • Pooling on Bridges from lack of drainage or not enough pits

Table 16: Issues related to Bridge Infrastructure

8.3 Asset Performance

HBCC continually monitors and models the condition of its Bridges.

Performance monitoring of the Bridges includes:

- Condition; and
- Customer Requests.

The majority (77%) of the bridges are in excellent and good condition with only 8% in poor condition. There is 15% of the bridges in average condition and will need attention over the next few years along with those bridges currently in poor condition.

8.4 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 October 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.

8.5 Operations and Maintenance Plan

The operational activities involved in the ownership and management of council bridge infrastructure are as shown in Table 17.

ASSET TYPE	ACTIVITIES
Bridges and Major Culverts	<ul style="list-style-type: none"> • Inspections; and • Graffiti removal

Table17: Operations Activities

Maintenance activities related to bridges and major culverts and there components are identified through Level 1 Bridge inspections. Typical maintenance includes:

- Application of protective paint;
- Concrete patch repair;
- Repair of bridge components;
- Anti-pesticide treatment for timber bridges;
- Epoxy injection in cracks in structure;
- Recasting of concrete sections;
- Replacement of bridge components;
- Resurfacing of bridge deck;
- Application of rock beaching;
- Refasten loose hand rails/posts; and
- Reinstallation of joint seals.

The above work is focussed on maintaining the structural integrity of the bridges and culverts including the maintenance of the surrounding environment.

8.6 Renewal Plan

The renewal plan was developed using the 2015 condition assessment data collected. The bridges were ranked by condition and renewal works and further prioritised using a risk based approach. Higher priority was given to bridges in poor condition with high utilisation, and access to other facilities, reserves, parks, playgrounds and other assets.

Required Renewal Expenditure

The 2016 backlog value of poor condition bridge assets was \$2.0M which represents 8% of the bridge asset base.

In order to eliminate the current backlog over the next 10 years and keep up with the annual rate of deterioration an amount of average \$350,000 per annum is required.

8.7 Upgrade Plan

Table 18 identifies the drivers for upgrading bridge assets.

ASSET TYPE	DRIVERS FOR UPGRADE WORKS
Bridges	<ul style="list-style-type: none"> • Upgrade works relate to demand projections such as future vehicle movements including heavy haulage vehicles.

Table 18: Drivers for Upgrade Works for Bridges

There are no upgrade works planned for the next ten years for bridges.

8.8 Disposal Plan

There is currently no plan to dispose of disused / occupied Bridges.

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 Council's bridges. The reasons for the expenditure are identified for the bridges in Section 8. Figure 7 presents the financial projections shown in dollar values as at 1 July 2018 under the headings of:

- Operations;
- Maintenance (Programmed and Reactive); and
- Renewals (Rehabilitation and Replacement Works).

The required renewal expenditure is an average of \$350,000 per annum. The total expenditure is an average of \$410,000 per annum.

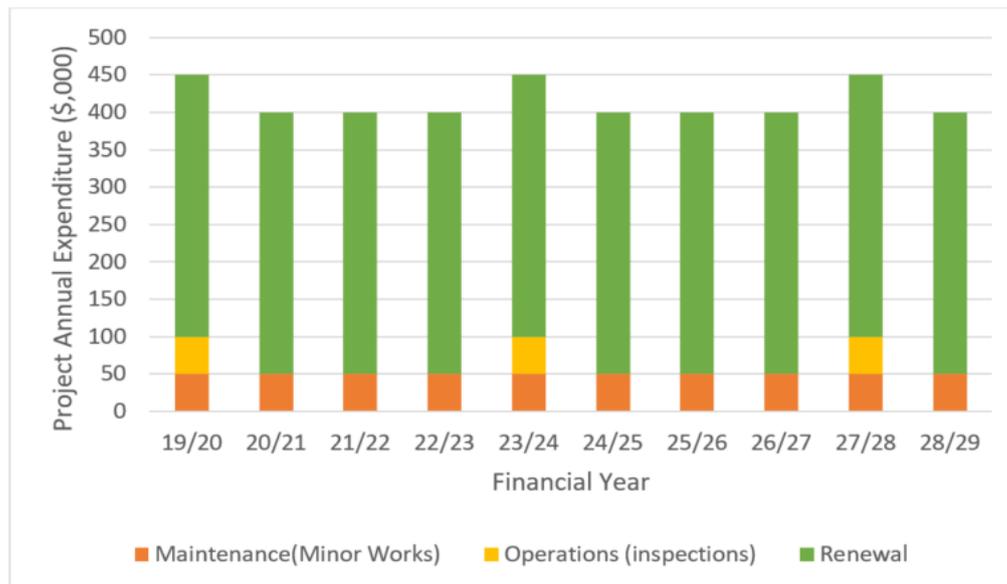


Figure 7: Financial Expenditure for Bridges

9.2 Asset Valuation

In 2015 a bridge asset register developed and subsequent condition audit in accordance with the VicRoads Road Structures Inspection Manual was completed.

The Table 19 below identifies the June 2018 financial valuation of the Bridges portfolio, with a replacement value of approximately \$25.3M.

Asset Type	Replacement Value (\$)
Foot Bridge	\$ 4,339,182
Road Bridge	\$ 20,974,836
TOTALS	\$25,314,018

Table 19: Asset Replacement value June 2018

9.3 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 is 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.

Council does not receive any external funding currently for bridge renewal works.

9.4 Confidence Levels

Using the matrix in the Table 20 below the data availability has been given a rating of 3 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 20: 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.

The following table identifies the primary improvements identified for asset management processes, systems and data:

Table 21: Improvement Program

AM PROCESS	IMPROVEMENT ACTIVITIES	TIMEFRAME (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 LTFFP.	Year 3

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

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 cash flow 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, and 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 cash flow 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, and 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 cash flow 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	Life cycle has two meanings: <ul style="list-style-type: none"> (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. (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.
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 – 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
Hobsons Bay 2030 Community Vision	<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>
Hobsons Bay Council Plan 2017-21	<p>Goal 1: An inclusive and healthy community</p> <p>Goal 2: A great place</p> <p>Goal 3: A well designed, maintained and environmentally sustainable place</p> <p>Goal 4: A Council of excellence</p>
Register of Public Roads	<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>
Truck Routes – B-Double and Higher Mass Limit Vehicle Operation Policy	<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>
Road Safety Strategy, 2011-2013	<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>
Strategic Bicycle Plan 2013 - 2017	<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> <p>This plan seeks to further build on the existing bicycle network to develop a highly connective bicycle network.</p>

DOCUMENT	DESCRIPTION
Strategic Resource Plan 2016/17 – 2019/20	<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> <ol style="list-style-type: none"> generally maintaining existing service levels achieve operational surpluses each year maintain a robust capital works program with a focus on asset renewal generally achieve a balanced financial (rate determination) result increases are required to cash reserves to take into account increasing future commitments

Legislative Requirements and Local Laws

The following is a list of legislation 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"> Set out the powers, duties and functions of highway authorities in relation to the inspection, maintenance and repair of roads 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 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.
Transport Act 1983	<ul style="list-style-type: none"> Provides for Council to be responsible for main roads within its municipal district. (Clause 5(4) of Schedule 5) Empowers Council to carry out 'permanent works', which shall be to the satisfaction of VicRoads. (Clause 16 of Schedule 5)

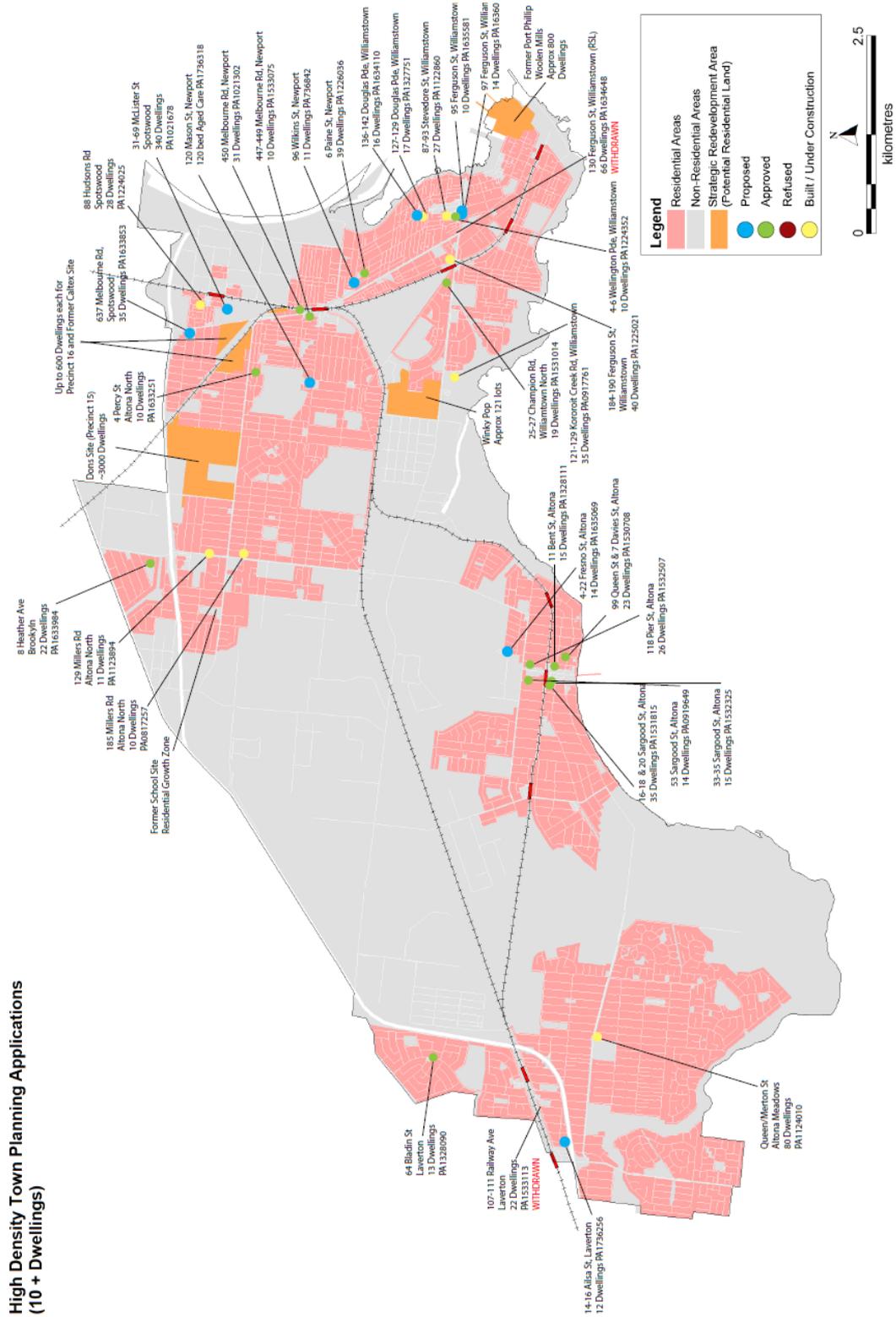
REFERENCE	DETAILS
Road Safety Act 1986	<ul style="list-style-type: none"> • Provides Council with the power to erect major traffic control items (MTCI's) on roads other than declared main roads and the power to erect minor traffic control items on minor roads. (Section 91). • Empowers Council with regard to parking.
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"> • 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 • To manage, improve and develop the resources of its district efficiently and effectively. <p>Section 7 outlines the objectives of Council to seek its purposes. In seeking to achieve its purposes, a Council has the following objectives:</p> <ul style="list-style-type: none"> • 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; • To co-ordinate with other public bodies to ensure that services and facilities are provided and resources are used effectively and efficiently; • To ensure adequate planning for the future of its municipal district; • To represent and promote the interests of the community and to be responsive to the needs of the community; • To formulate comprehensive policies and set performance targets; and • To develop, implement and monitor its strategic plans and budgets. <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>
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	Legal requirements for employers/employees in relation to workplace safety. Requirements on those who design, manufacture, import or supply any plant for use in the workplace.
Subdivisions Act 1988	Provides for engineering plans to be provided for developments in accordance with relevant standards.

REFERENCE	DETAILS
<p>No. S267, Road Management Act 2004, Codes of Practice, Operational Responsibility for Public Roads</p>	<p>The purpose of this Code is:</p> <ul style="list-style-type: none"> • 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 • 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. <p>This Code is intended to:</p> <ul style="list-style-type: none"> • 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 • Recognise that VicRoads, other State road authorities and local government are partners in managing Victoria’s road network.
<p>No. S269, Road Management Act, Code of Practice, Management of Infrastructure in Road Reserves</p>	<p>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.</p>
<p>Australian Human Rights Commission Act 1986</p>	<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"> • International Covenant on Civil and Political Rights (ICCPR) • Convention Concerning Discrimination in Respect of Employment and Occupation (ILO 111) • Convention on the Rights of Persons with Disabilities • Convention on the Rights of the Child • Declaration of the Rights of the Child • Declaration on the Rights of Disabled Persons • Declaration on the Rights of Mentally Retarded Persons, and • Declaration on the Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief.

REFERENCE	DETAILS
Rail Safety Act 2006	<p>The Act addresses: Safety interface assessment by relevant road manager of public roadway or pathway:</p> <ul style="list-style-type: none"> • A relevant road manager in relation to a public roadway or public pathway must: <ul style="list-style-type: none"> - 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; - Determine measures to manage, so far as is reasonably practicable, any risks identified and assessed. • A relevant road manager must have regard to: <ul style="list-style-type: none"> - The principal object of road management; and - The works and infrastructure management principles; and - The functions, powers and duties of infrastructure managers under the Road Management Act 2004 - <p>When determining measures to manage risks identified under subsection (1).</p> <ul style="list-style-type: none"> • 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.
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"> • Traffic Engineering Manual Vol.1 Traffic Management; • Traffic Engineering Manual Vol.2. Signs and Markings; • VicRoads Worksite Traffic Management (Roadworks Signing). Code of Practice; and • VicRoads Road Design Guidelines Parts 1 – 12.

Appendix C – Demand Impacts

High Density Town Planning Applications (10 + Dwellings)



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

Development Area	Year Start	Year Finish	Dwellings	People	Vehicles	Status type
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
Up to 600 Dwellings for Former Caltex Site	2027	2037	420	1008	798	Strategic Redevelopment Area

Development Area	Year Start	Year Finish	Dwellings	People	Vehicles	Status type
Winky Pop Approx 121 lots	2027	TBC ¹	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

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;

¹ TBC – To be Confirmed

- 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.

West Gate Tunnel Project (Western Distributor)²

The West Gate Tunnel Project addresses a number of critical challenges in relation to traffic, growth and livability 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.

² Source – Transurban web site

In response to the project the key concerns raised pertaining to roads by Council³ 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.

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.

³ Council's adopted position and recommendations – Western Distributor Project, August 2016

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). The sites are:

- 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)

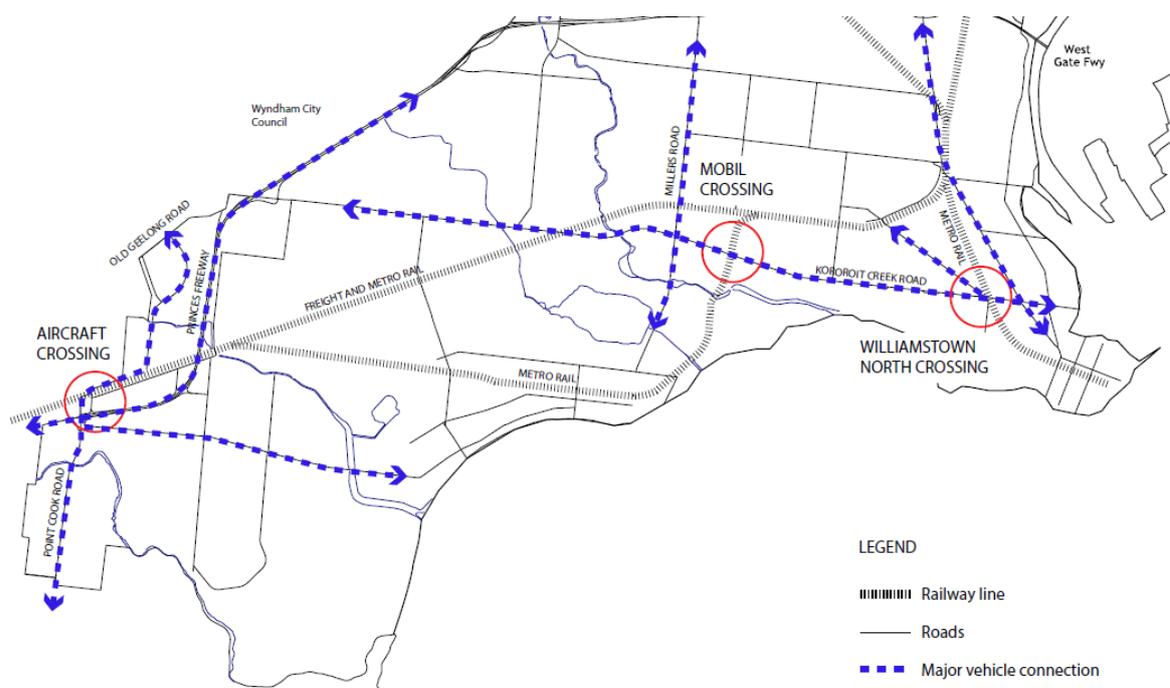


Figure 10-1: Rail Grade Separation projects⁴

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:

- **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

⁴ Hobsons Bay Grade Separation Principles, March 2016

the installation of traffic treatments that help to control traffic flows within urban areas and the intersections.

- **Traffic bylaws:** Council has not as yet needed to introduce any traffic bylaws as a direct result of demand/growth, however, this is a strategy that may be considered in future.

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.

Appendix D – Bridge Network Criticality and Risk

Criticality Table

Bridge	Bridge Id	Structure Type	Criticality Rating	Criticality Category
Cherry Lake Reserve	241793	Foot Bridge	86.7	Extreme
Cherry Lake Reserve	241800	Foot Bridge	86.7	Extreme
Truganina Park	241812	Foot Bridge	80.0	Major
Truganina Park	241801	Foot Bridge	76.7	Major
Jawbone Reserve	241808	Foot Bridge	76.7	Major
Jawbone Reserve	241809	Foot Bridge	76.7	Major
Cresser, W.G. Reserve	241795	Foot Bridge	76.7	Major
Truganina Park	241818	Foot Bridge	76.7	Major
Truganina Park	241814	Foot Bridge	73.3	Major
Altona Boat Ramp Reserve	241796	Foot Bridge	73.3	Major
Cherry Lake Reserve	241784	Foot Bridge	73.3	Major
Newport Lakes	Unknown 1	Foot Bridge	73.3	Major
Truganina Park	Unknown 2	Foot Bridge	73.3	Major
Jawbone Reserve	241805	Foot Bridge	73.3	Major
Jawbone Reserve	241806	Foot Bridge	73.3	Major
Jawbone Reserve	241807	Foot Bridge	73.3	Major
Altona Lakes Public Golf Course	241785	Foot Bridge	70.0	Major
Altona Lakes Public Golf Course	241794	Foot Bridge	70.0	Major
Cheetham Wetlands	241781	Foot Bridge	66.7	Moderate
Newport Lakes	241792	Foot Bridge	66.7	Moderate
Barnes Road	50874	Road Bridge	64.44	Moderate
Cherry Lake Reserve	241778	Foot Bridge	63.3	Moderate
Cherry Lake Reserve	241799	Foot Bridge	63.3	Moderate
Truganina Park	241815	Foot Bridge	63.3	Moderate
Truganina Park	241816	Foot Bridge	63.3	Moderate
Truganina Park	241817	Foot Bridge	63.3	Moderate
Truganina Park	241836	Foot Bridge	63.3	Moderate
Truganina Park	Unknown 3	Foot Bridge	63.3	Moderate

Bridge	Bridge Id	Structure Type	Criticality Rating	Criticality Category
Bladin Street	241822	Road Bridge	61.11	Moderate
Burns Road	241827	Road Bridge	61.11	Moderate
Jawbone Reserve	241780	Foot Bridge	53.3	Moderate
Cherry Lake Reserve	241790	Foot Bridge	53.3	Moderate
Point Gellibrand Coastal Heritage Park	241811	Foot Bridge	53.3	Moderate
Skeleton Creek Linear Parkland	241813	Foot Bridge	53.3	Moderate
McCormack Park	241788	Foot Bridge	50.0	Moderate
McCormack Park	241803	Foot Bridge	50.0	Moderate
McCormack Park	241804	Foot Bridge	50.0	Moderate
Cole Street	241824	Road Bridge	47.78	Low
Thompson Street	241831	Road Bridge	47.78	Low
Truganina Swamp	241779	Foot Bridge	46.7	Low
Maddox Road	241821	Road Bridge	44.44	Low
Altona Road	241828	Road Bridge	44.44	Low
Truganina Park	241830	Road Bridge	44.44	Low
Tennyson Street	241820	Road Bridge	34.44	Low
Macaulay Street	241823	Road Bridge	34.44	Low
Churchill Street	241825	Road Bridge	34.44	Low
Chelmsford Street	241826	Road Bridge	34.44	Low
Orange Street	241829	Road Bridge	34.44	Low
Hosken, G.J. Reserve	241876	Road Bridge	34.44	Low
Modal Place	241819	Road Bridge	31.11	Low
Historical Bridge Reserve	241787	Foot Bridge	26.7	Low
Newport Lakes	241810	Foot Bridge	26.7	Low

Bridge Risk Table

Bridge	Bridge Id	Structure Type	Risk Rating	Risk Category
Cherry Lake Reserve	241799	Foot Bridge	52.6	Medium
Cherry Lake Reserve	241812	Foot Bridge	51.4	Medium
Truganina Park	241801	Foot Bridge	48.7	Medium
Cresser, W.G. Reserve	241793	Foot Bridge	46.4	Medium
Truganina Park	241792	Foot Bridge	46.3	Medium
Jawbone Reserve	241808	Foot Bridge	38.7	Medium
Jawbone Reserve	241809	Foot Bridge	38.1	Medium
Truganina Park	241814	Foot Bridge	35.5	Medium
Cherry Lake Reserve	241796	Foot Bridge	32.7	Medium
Altona Boat Ramp Reserve	241795	Foot Bridge	32.1	Medium
Jawbone Reserve	241805	Foot Bridge	32.0	Medium
Jawbone Reserve	241806	Foot Bridge	32.0	Low
Jawbone Reserve	241807	Foot Bridge	30.6	Low
Truganina Park	241814	Foot Bridge	30.6	Low
Newport Lakes	Unknown 1	Foot Bridge	30.6	Low
Truganina Park	Unknown 2	Foot Bridge	30.6	Low
Altona Lakes Public Golf Course	241785	Foot Bridge	30.6	Low
Altona Lakes Public Golf Course	241794	Foot Bridge	29.1	Low
Cheetham Wetlands	241781	Foot Bridge	28.0	Low
Newport Lakes	241792	Foot Bridge	27.6	Low
Barnes Road	50874	Road Bridge	27.4	Low
Cherry Lake Reserve	241778	Foot Bridge	26.4	Low
Cherry Lake Reserve	241799	Foot Bridge	26.0	Low
Truganina Park	241815	Foot Bridge	24.8	Low
Truganina Park	241816	Foot Bridge	24.5	Low
Truganina Park	241817	Foot Bridge	23.2	Low
Truganina Park	241836	Foot Bridge	22.5	Low
Truganina Park	Unknown 3	Foot Bridge	21.8	Low
Bladin Street	241822	Road Bridge	21.0	Low
Burns Road	241827	Road Bridge	21.0	Low
Jawbone Reserve	241780	Foot Bridge	21.0	Low
Cherry Lake Reserve	241790	Foot Bridge	20.1	Low
Point Gellibrand Coastal Heritage Park	241811	Foot Bridge	20.0	Low
Skeleton Creek Linear Parkland	241813	Foot Bridge	16.8	Low
McCormack Park	241788	Foot Bridge	15.0	Low

McCormack Park	241803	Foot Bridge	15.0	Low
McCormack Park	241804	Foot Bridge	10.9	Very Low
Cole Street	241824	Road Bridge	10.8	Very Low
Thompson Street	241831	Road Bridge	10.2	Very Low
Truganina Swamp	241779	Foot Bridge	5.9	Very Low
Maddox Road	241821	Road Bridge	5.5	Very Low
Altona Road	241828	Road Bridge	4.7	Very Low
Truganina Park	241830	Road Bridge	4.6	Very Low
Tennyson Street	241820	Road Bridge	3.2	Very Low
Macaulay Street	241823	Road Bridge	3.0	Very Low
Churchill Street	241825	Road Bridge	2.7	Very Low
Chelmsford Street	241826	Road Bridge	2.5	Very Low
Orange Street	241829	Road Bridge	2.5	Very Low
Hosken, G.J. Reserve	241876	Road Bridge	2.5	Very Low
Modal Place	241819	Road Bridge	2.5	Very Low
Historical Bridge Reserve	241787	Foot Bridge	2.4	Very Low
Newport Lakes	241810	Foot Bridge	2.1	Very Low

Appendix E – 10 Year Financial Forecast

	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29
Operations (Inspections)	50	-	-	-	50	-	-	-	50	-
Maintenance (Minor Works)	50	50	50	50	50	50	50	50	50	50
Renewals	350	350	350	350	350	350	350	350	350	350
Upgrades	-	-	-	-	-	-	-	-	-	-
New	-	-	-	-	-	-	-	-	-	-
Total	450	400	400	400	450	400	400	400	450	400