Tasman Council

Transport

Long-Term Asset Management Plan (Concise)

Version 1.2

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NAMS.PLUS Asset Management Plan Templates

NAMS.Plus offers two Asset Management Plan templates – 'Concise' and 'Comprehensive'.

The Concise template is appropriate for those entities who wish to present their data and information clearly and in as few words as possible whilst complying with the ISO 55000 Standards approach and guidance contained in the International Infrastructure Management Manual.

The Comprehensive template is appropriate for those entities who wish to present their asset management plan and information in a more detailed manner.

The entity can choose either template to write/update their plan regardless of their level of asset management maturity and in some cases may even choose to use only the Executive Summary.

The illustrated content is suggested only and users should feel free to omit content as preferred (e.g. where info not currently available).

The concise Asset Management Plan may be used as a supporting document to inform an overarching Strategic Asset Management Plan.

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TABLE OF CONTENTS

1 EXECUTIVE SUMMARY 1
1.1 The Purpose of the Plan 1
1.2 Asset Description 1
1.3 Levels of Service 1
1.4 Future Demand 1
1.5 Lifecycle Management Plan 1
1.6 Financial Summary 1
1.7 Asset Management Practices 2
1.8 Monitoring and Improvement Program 2
2. INTRODUCTION 2
2.1 Background 2
2.2 Goals and Objectives of Asset Ownership 2
2.3 Core and Advanced Asset Management 3
3. LEVELS OF SERVICE 3
3.1 Customer Research and Expectations 3
3.2 Strategic and Corporate Goals 3
3.3 Legislative Requirements 4
3.4 Customer Levels of Service 4
3.5 Technical Levels of Service 5
4. FUTURE DEMAND 6
4.1 Demand Drivers 6
4.2 Demand Forecasts 6
4.3 Demand Impact on Assets 6
4.4 Demand Management Plan 7
4.5 Asset Programs to meet Demand 8
5. LIFECYCLE MANAGEMENT PLAN 8
5.1 Background Data 8
5.2 Operations and Maintenance Plan 9
5.3 Renewal/Replacement Plan 11
5.4 Creation/Acquisition/Upgrade Plan 13
5.5 Disposal Plan 15
6. RISK MANAGEMENT PLAN 16
6.1 Critical Assets 16
6.2 Risk Assessment 16
6.3 Infrastructure Resilience Approach 18
6.4 Service and Risk Trade-Offs ..... **Error! Bookmark not defined.**18
7. FINANCIAL SUMMARY 18
7.1 Financial Statements and Projections 18
7.2 Funding Strategy 21
7.3 Valuation Forecasts 21
7.4 Key Assumptions Made in Financial Forecasts 21
7.5 Forecast Reliability and Confidence 22
8. PLAN IMPROVEMENT AND MONITORING 22
8.1 Status of Asset Management Practices 23
8.2 Improvement Plan 23
8.3 Monitoring and Review Procedures 23
8.4 Performance Measures 23
9. REFERENCES 24
10. APPENDICES 24
Appendix A Projected 10-year Capital Renewal and Replacement Works Program 25
Appendix B Projected Upgrade/Exp/New 10-year Capital Works Program 32
Appendix C Budgeted Expenditures Accommodated in LTFP 33

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1 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

This asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services over a 20-year planning period.

This plan covers the infrastructure assets that provide Transport.

1.2 Asset Description

These assets include:

The Transport network comprises:

- Roads (207 km)
- Bridges – incl. Jetties and Boat Ramps (66)
- Footpaths (3.2 km)
- Kerbs (12.7 km)

These infrastructure assets have significant value estimated at $66,211,000.

1.3 Levels of Service

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

1.4 Future Demand

The main demands for new services are created by:

- Tourism
- Population Growth
- Development

These will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

- Maintain condition monitoring at regular frequency to detect accelerated changes.
- Communicate options and capacity for funding service improvements to the community.

1.5 Lifecycle Management Plan

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10-year planning period is $23,473,000 or $2,347,000 on average per year.

1.6 Financial Summary

What we will do

Estimated available funding for this period is $24,903,000 or $2,490,000 on average per year as per the long term financial plan or budget forecast. This is 109% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the long term financial plan can be provided. The emphasis of the Asset Management Plan is to communicate the consequences that this will have on the service provided and risks, so that decision making is “informed”.

The allocated funding leaves a surplus of $143,000 on average per year of the projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan. This is shown in the figure below.

Projected Operating and Capital Expenditure

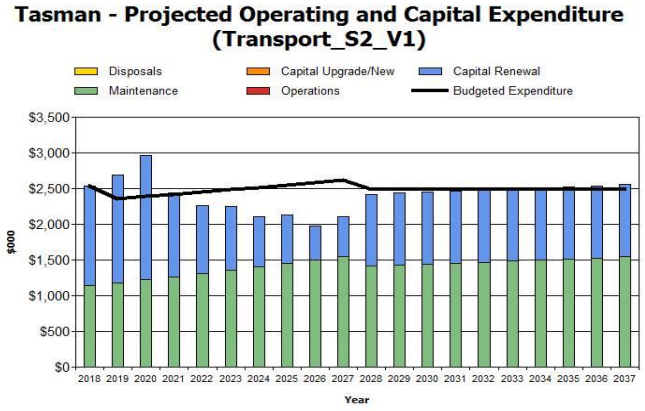


Figure Values are in current (real) dollars.

We plan to provide Transport services for the following:

- Operation, maintenance, renewal and upgrade of Roads, Bridges, Footpaths and Kerbs to meet service levels set by in annual budgets.

What we cannot do

We currently do not allocate enough funding to sustain these services at the desired standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- Current funding levels restrict the construction of new and upgraded infrastructure.
- There is an anticipated reduction in the council's capacity to address renewals beyond the 10 year planning period as the infrastructure asset stock ages.

Managing the Risks

Our present funding levels are sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Crash incidents associated with poor road surfaces
- Accelerated decline in asset condition
- Increased maintenance costs
- Coastal inundation resulting from climate change

We will endeavour to manage these risks within available funding by:

- Develop NHVR vehicle class networks for publishing on Notices for Heavy Vehicle routes.
- Perform assessment for at risk roads using coastal inundation flood map predictions.
- Maintain frequent network inspections, prioritising high volume and critical routes.

1.7 Asset Management Practices

Our systems to manage assets include:

- Xero Financial Software
- Assetic Asset Management Software

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year; or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems); or
- Method 3 uses a combination of average network renewals plus defect repairs in the Renewal Plan and Defect Repair Plan worksheets on the 'Expenditure template'.

Method 2 was used for this asset management plan.

1.8 Monitoring and Improvement Program

The next steps resulting from this asset management plan to improve asset management practices are:

- Determine community service level expectations
- Acquire cash flow projections for asset disposals
- Review maintenance schedule for critical assets
- Develop agreed sustainable position for LOS
- Review network map for NHVR
- Assess coastal roads for risk of inundation

2. INTRODUCTION

2.1 Background

This asset management plan communicates the actions required for the responsive management of assets (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required levels of service over a 20-year planning period.

The asset management plan is to be read with the Tasman Council planning documents. This should include the Asset Management Policy and Asset Management Strategy where these have been developed along with other key planning documents:

- Tasman Council Asset Management Policy C 020
- Tasman Council Strategic Plan 2015-2025

The infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide transport and connectivity services.

Table 2.1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
Road Surfaces	207 km	$7,426,794
Road Bases		$11,189,796
Road Sub-Bases		$17,523,590
Road Formations		$17,622,328
Bridges	65	$11,531,898
Footpaths	3.2 km	$24,850
Kerbs	12.7 km	$891,660
TOTAL		**$66,210,916**

2.2 Goals and Objectives of Asset Ownership

Our goal in managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a long-term financial plan which identifies required, affordable expenditure and how it will be allocated.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 [1]
- ISO 55000[2]

[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13

[2] ISO 55000 Overview, principles and terminology

2.3 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual[3]. Core asset management is a 'top down' approach where analysis is applied at the system or network level. An 'advanced' asset management approach uses a 'bottom up' approach for gathering detailed asset information for individual assets.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

This 'core' asset management plan is prepared to facilitate consultation prior to adoption by the Tasman Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Tasman Council and stakeholders in matching the level of service required, service risks and consequences with the community's ability and willingness to pay for the service.

We currently have no research on customer expectations. This will be investigated for future updates of the asset management plan.

3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the Tasman Council Strategic Plan 2015-2025 Vision and Key Focus Areas.

Our vision (relevant to the AM Plan) is to:

- Make Tasman an inspirational place to live and visit.
- Improve cultural and recreational opportunities for everyone.
- Maximise the attributes of the region.
- Provide the opportunity for sustainable growth.
- Diversify and increase our revenue base.
- Provide for the ageing population.

Our key focus areas are:

- Develop productive advocacy, alliance and engagement partnerships;
- Continue to develop and maintain supportive relationships with the community;
- Manage the opportunities and challenges associated with increased visitation to the area;
- Strive for a balance between development, environment and lifestyle and retain natural, heritage and social values;
- Identify funding needs and revenue opportunities.

[3] IPWEA, 2015, IIMM.

Relevant goals and objectives and how these are addressed in this asset management plan are:

Table 3.2: Goals and how these are addressed in this Plan

Goal/Objective	How Goals/Objectives are addressed in AM Plan
Improve the standard of maintenance and safety of council roads	Identifying issues within the road network for address to ensure the safety of members of the community.
Maintenance and improvement of the standard and safety of bridges in the municipality	Analysis of bridges within the network to identify high risk assets.
Maintenance and improvement of the standard and safety of pedestrian areas	Analysis of kerb and footpaths within the network to identify poor condition assets.
Ensure the ongoing maintenance and safety of council's jetties and boat ramps in the municipality	Analysis of jetties within the network to identify priority/poor condition assets.
Increase the number and yield from visitors to the municipality	Development of plans to address issues within the transport network and ensure the safety of visitors to the municipality.

The Tasman Council will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 6.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. These include:

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Local Government (Highways) Act	Sets out role, purpose, responsibilities and powers of local governments in relation to Highways and Roads.
Roads and Jetties Act	Sets out role, purpose, responsibilities and powers of local governments in relation to Highways and Roads.
Traffic (Road Rules) Regulations	Sets out role, purpose, responsibilities and powers of road users

3.4 Customer Levels of Service

Service levels are defined service levels in two terms, customer levels of service and technical levels of service. These are supplemented by organisational measures.

Customer Levels of Service measure how the customer receives the service and whether value to the customer is provided.

Customer levels of service measures used in the asset management plan are:

Quality How good is the service … *what is the condition or quality of the service?*

Function Is it suitable for its intended purpose …. *Is it the right service?*

Capacity/Use Is the service over or under used … *do we need more or less of these assets?*

The current and expected customer service levels are detailed in Tables 3.4 and 3.5. Table 3.4 shows the expected levels of service based on resource levels in the current long-term financial plan.

Organisational measures are measures of fact related to the service delivery outcome e.g. number of occasions when service is not available, condition %'s of Very Poor, Poor/Average/Good, Very good.

These Organisational/Organizational measures provide a balance in comparison to the customer perception that may be more subjective.

Table 3.4: Customer Level of Service

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
COMMUNITY LEVELS OF SERVICE				
Quality	Provide quality transport network services	Number of complaints per year	61	40 - 45
		Organisational measure. % of assets in very good/good (1,2) and poor/very poor (4, 5) condition and confidence level	51% very good/good 9.5% poor/very poor Confidence Level Medium - High	Steady
Function	Ensure transport network meets users' needs	Number of complaints per year	9	5
Capacity/ Utilisation	Ensure network provides for usage demands	Number of complaints per year	1	5

3.5 Technical Levels of Service

Technical Levels of Service - Supporting the customer service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- Operations – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs).
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- Upgrade/New – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.[4]

Table 3.5 shows the technical levels of service expected to be provided under this AM Plan. The 'Desired' position in the table documents the position being recommended in this AM Plan.

[4] IPWEA, 2015, IIMM, p 2|28.

Table 3.5: Technical Levels of Service

Service Attribute	Service Objective	Activity Measure Process	Current Performance *	Desired for Optimum Lifecycle Cost **	Agreed Sustainable Position ***
TECHNICAL LEVELS OF SERVICE					
Maintenance	Network is maintained to meet community needs	Service requests	Unknown	Respond to 95% of all service requests within 10 Days	To be developed in future revisions of this plan
		Budget	$1,140,000	$1,140,000	To be developed in future revisions of this plan
Renewal	Network is renewed to meet community needs	% of transport assets in poor/very poor (4, 5) condition	9.5%	5-10%	Maintain <10% transport assets poor/very poor (4, 5) condition rating
		Budget	$1,393,000 (Current FY)	$1,307,000 (Long Term)	To be developed in future revisions of this plan
Upgrade/New	Network meets usage demands of community				-
		Budget	$0	Unknown	

Note: * Current activities and costs (currently funded).
** Desired activities and costs to sustain current service levels and achieve minimum life cycle costs (not currently funded)

It is important to monitor the service levels provided regularly as these will change. The current performance is influenced by work efficiencies and technology, and customer priorities will change over time. Review and establishment of the agreed position which achieves the best balance between service, risk and cost is essential.

4. FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets were identified and are documented in Table 4.3.

4.3 Demand Impact on Assets

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Table 4.3: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Tourism & visitation	Approximately 14% of the population employed in industry	Increasing tourism, recreation visitation	Increase in traffic volumes and wear on network & expectation in asset facilities.
Population	2400	Minor, however, community expectations growing for asset types & condition	To be developed in future revisions of this plan
Community Consultation	To be developed in future revisions of this plan	To be developed in future revisions of this plan	To be developed in future revisions of this plan

4.4 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.4: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Tourism growth	Increasing wear on assets	Maintain condition monitoring at regular frequency to detect accelerated changes
Population growth	Increasing wear on assets	Maintain condition monitoring at regular frequency to detect accelerated changes
Community consultation to discuss current position for funding works	Understand and continue to monitor community expectations with regard to services. Balance this against the current capacity to fund services.	Communicate options and capacity for funding service improvements to the community

4.5 Asset Programs to meet Demand

The new assets required to meet demand can be acquired, donated or constructed. Additional assets are discussed in Section 5.5. The summary of the cumulative value of additional asset is shown in Figure 1.

Figure 1: Upgrade and New Assets to meet Demand – (Cumulative)

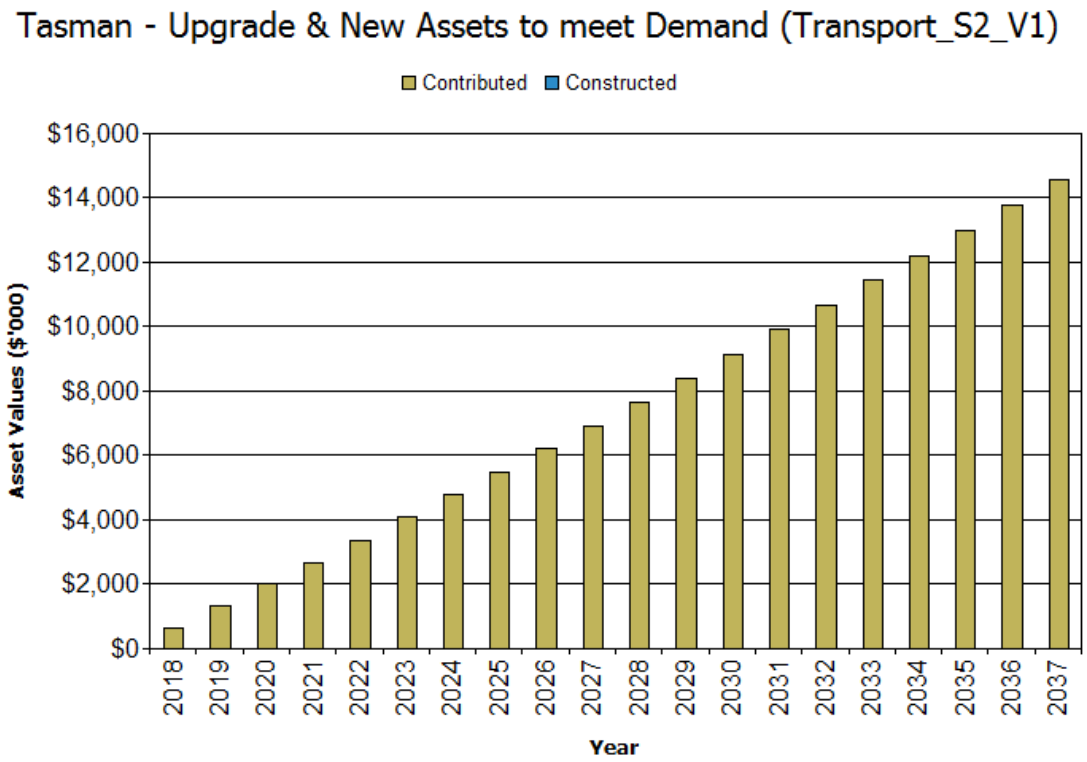


Figure Values are in current (real) dollars.

Additional assets are based upon a 1% growth rate of population and subsequent development to accommodate this increase. These increases may not be realised and if this were the case, the donated asset values would vary accordingly.

Acquiring these new assets will commit ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long term financial plan further in Section 5.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Tasman Council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

A large number of assets were identified and brought into the asset register in 2017. It is known that this is not the actual age of these assets, however, the benefit from determining accurate ages could not be justified and was deemed to be an ineffective use of resources.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available.

Locations where current deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Old Jetty Road	Surface failures
Saltwater River Road	Surface failures
Blowhole Road	Surface failures
White Beach Road	Surface failures

The above service deficiencies were identified from a combination of condition survey and consultation with council staff.

5.1.3 Asset condition

Condition of roads is monitored on a programmed hierarchy basis by works staff. After significant weather events, effort is made to assess the condition early on the following day to identify and address issues arising. Council have also recently employed ARRB methodology and engaged consultants to provide condition assessments for the road Network.

Condition monitoring of bridges is completed on a scheduled basis by AusSpan Pty Ltd.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

Condition Grading	Description of Condition
1	**Very Good**: only planned maintenance required
2	**Good**: minor maintenance required plus planned maintenance
3	**Fair**: significant maintenance required
4	**Poor**: significant renewal/rehabilitation required
5	**Very Poor**: physically unsound and/or beyond rehabilitation

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, e.g. cleaning, street sweeping, utilities costs and street lighting.

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again, e.g. road patching.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating.

Maintenance expenditure is shown in Table 5.2.1.

Table 5.2.1: Maintenance Expenditure Trends

Year	Maintenance Budget $
2018	$1,140,000
2019	$1,169,000
2020	$1,198,000

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that they will result in a lesser level of service, the service consequences and service risks have been identified and as highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2017 dollar values (i.e. real values).

Figure 4: Projected Operations and Maintenance Expenditure

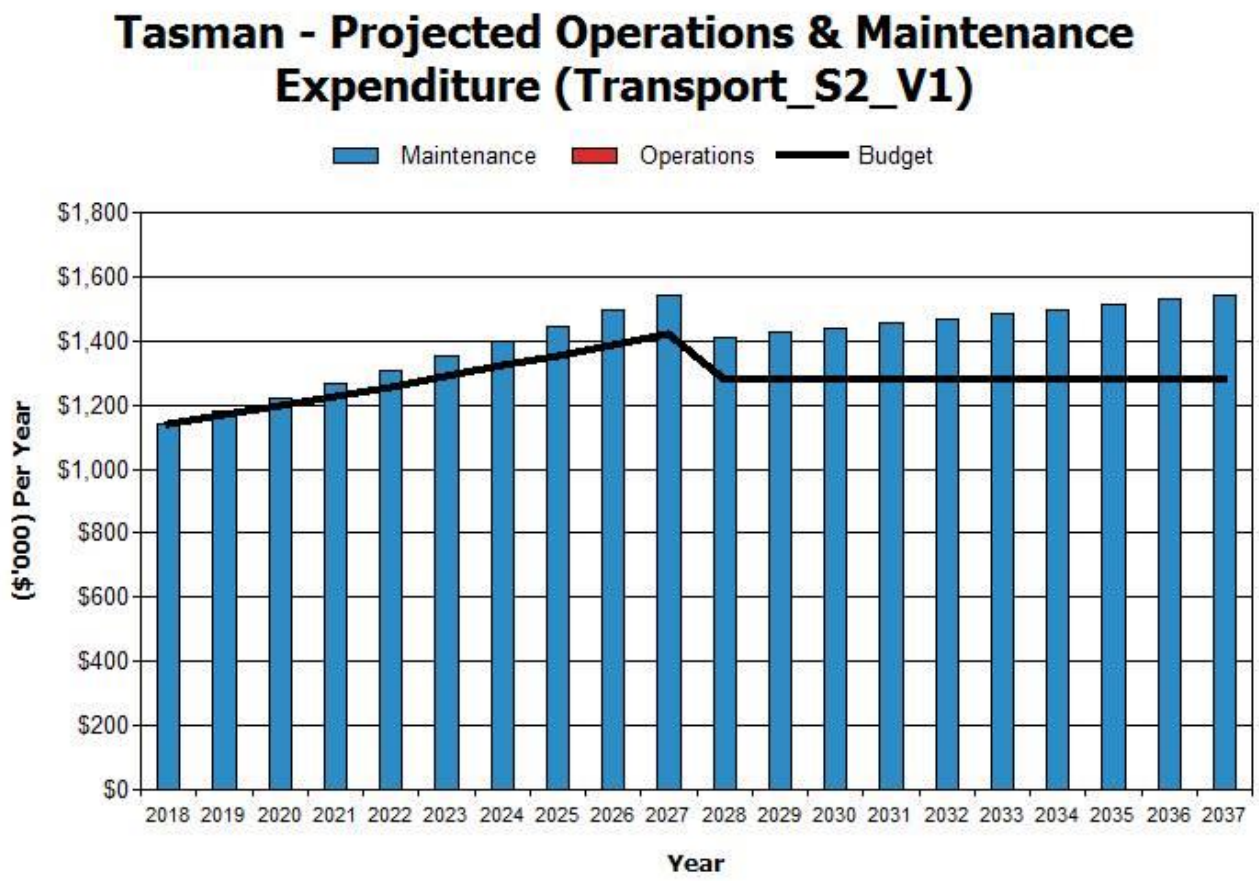


Figure Values are in current (real) dollars.

Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 7.

5.3 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an upgrade/expansion or new work expenditure resulting in additional future operations and maintenance costs.

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average network renewals plus defect repairs in the Renewal Plan and Defect Repair Plan worksheets on the 'Expenditure template'.

Method 2 was used for this asset management plan.

5.3.1 Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. roughness of a road).[6]

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be greatest,
- Have a total value representing the greatest net value,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Have replacement with a modern equivalent asset that would provide the equivalent service at a savings.[7]

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.3.1.

Table 5.3.1: Renewal and Replacement Priority Ranking Criteria

Criteria	Weighting
Corporate planning	No weighting criteria adopted at present
Present usage	No weighting criteria adopted at present
Safety	No weighting criteria adopted at present
Cost	No weighting criteria adopted at present
Total	**100%**

5.3.2 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time when the asset stock increases. The expenditure is required is shown in Fig 5. Note that all amounts are shown in current (real) dollars.

The projected capital renewal and replacement program is shown in Appendix B.

[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Fig 5: Projected Capital Renewal and Replacement Expenditure

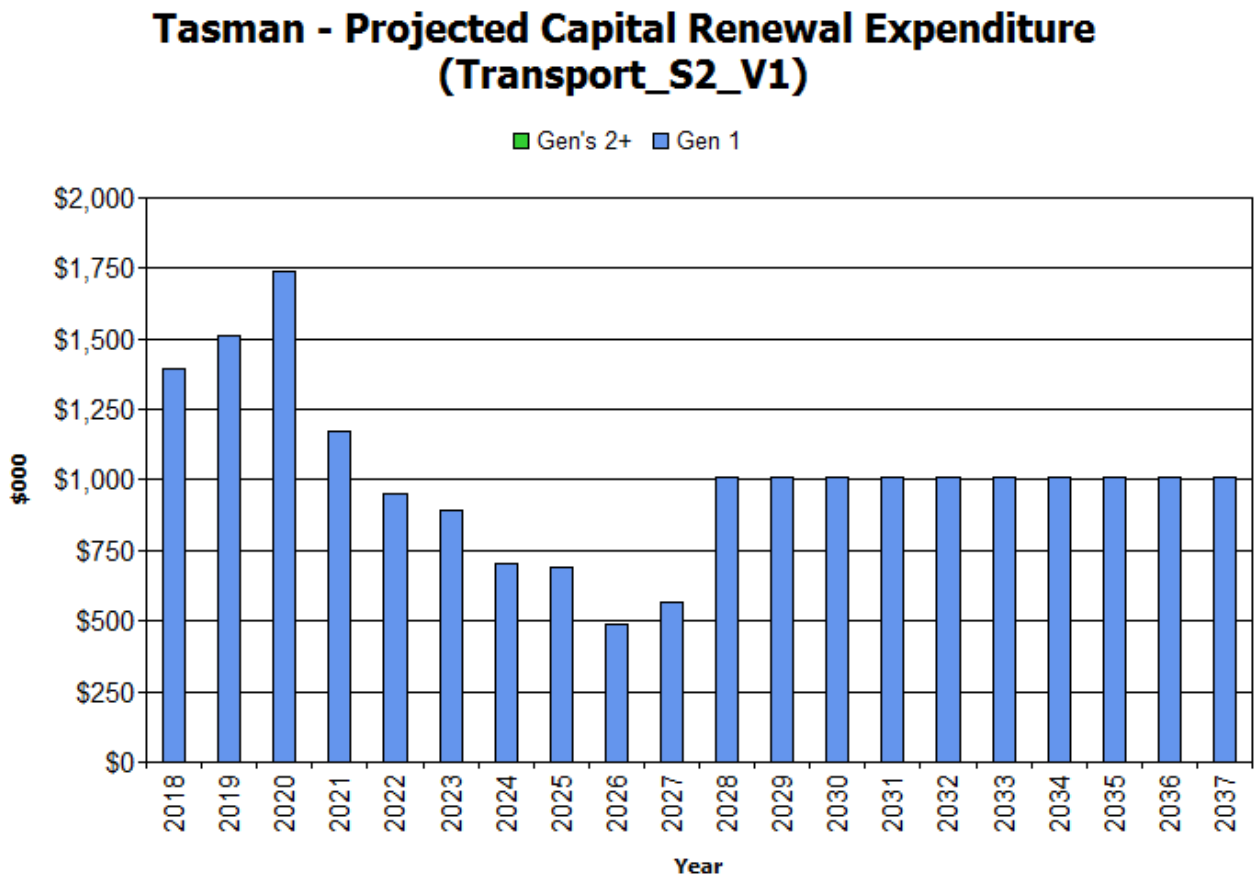


Figure Values are in current (real) dollars.

Deferred renewal and replacement, i.e. those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the capital works program will be accommodated in the long term financial plan. This is further discussed in Section 7.

5.4 Creation/Acquisition/Upgrade Plan

New works are those that create a new asset that did not previously exist, or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost. These additional assets are considered in Section 4.4.

5.4.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.4.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Corporate planning	No weighting criteria adopted at present
Present usage	No weighting criteria adopted at present
Safety	No weighting criteria adopted at present
Cost	No weighting criteria adopted at present
Total	**100%**

5.4.2 Summary of future upgrade/new assets expenditure

There are currently no new capital works programed in the short term. When these works are planned, the projected upgrade/new asset expenditures will be summarised in Fig 6.

Fig 6: Projected Capital Upgrade/New Asset Expenditure

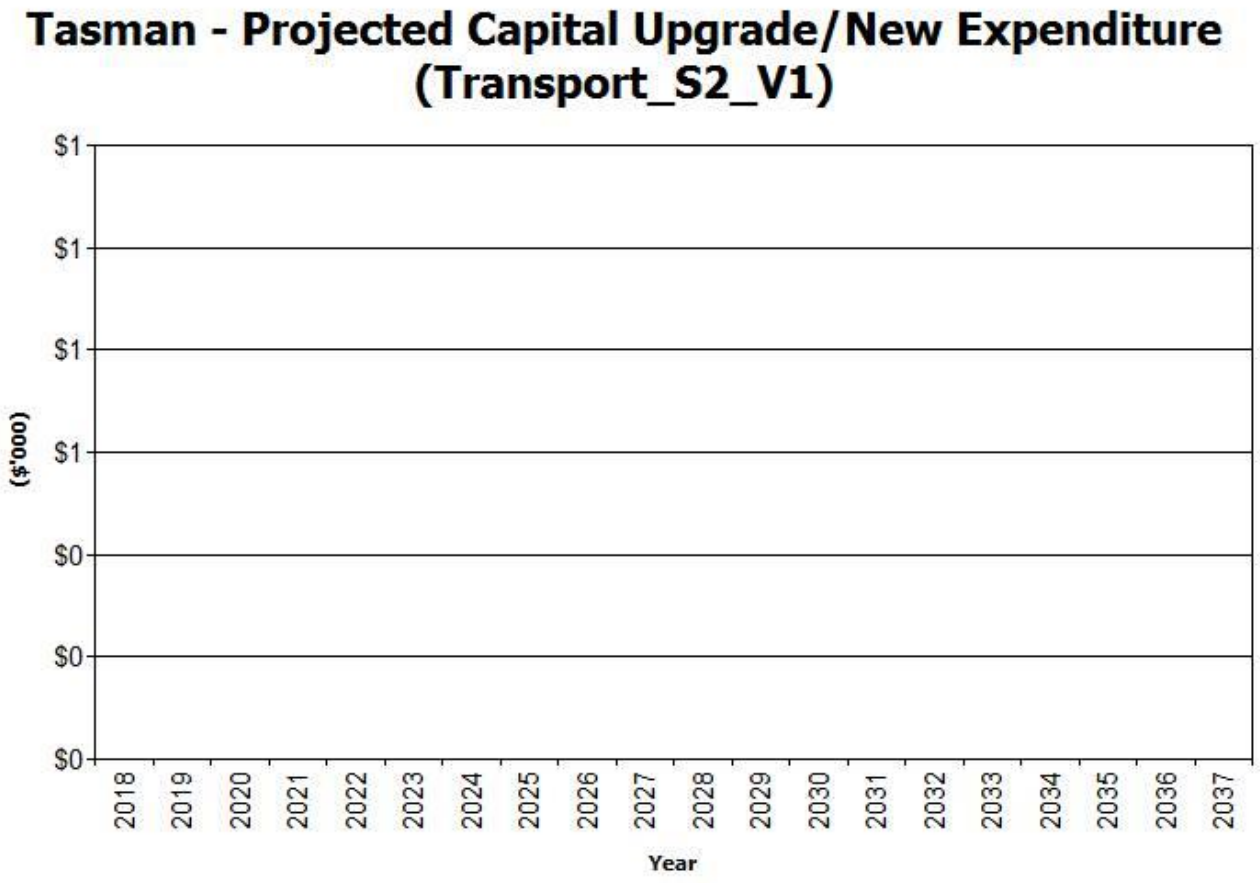


Figure Values are in current (real) dollars.

Expenditure on new assets and services in the capital works program will be accommodated in the long term financial plan but only to the extent of the available funds.

Acquisition of new assets will require the commitment to funding of ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required.

5.4.3 Summary of asset expenditure requirements

The financial projections from this asset plan are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

The bars in the graphs represent the anticipated budget needs required to achieve lowest lifecycle costs, the budget line indicates what is currently available. The gap between these informs the discussion on achieving the balance between services, costs and risk to achieve the best value outcome.

Fig 7: Projected Operating and Capital Expenditure

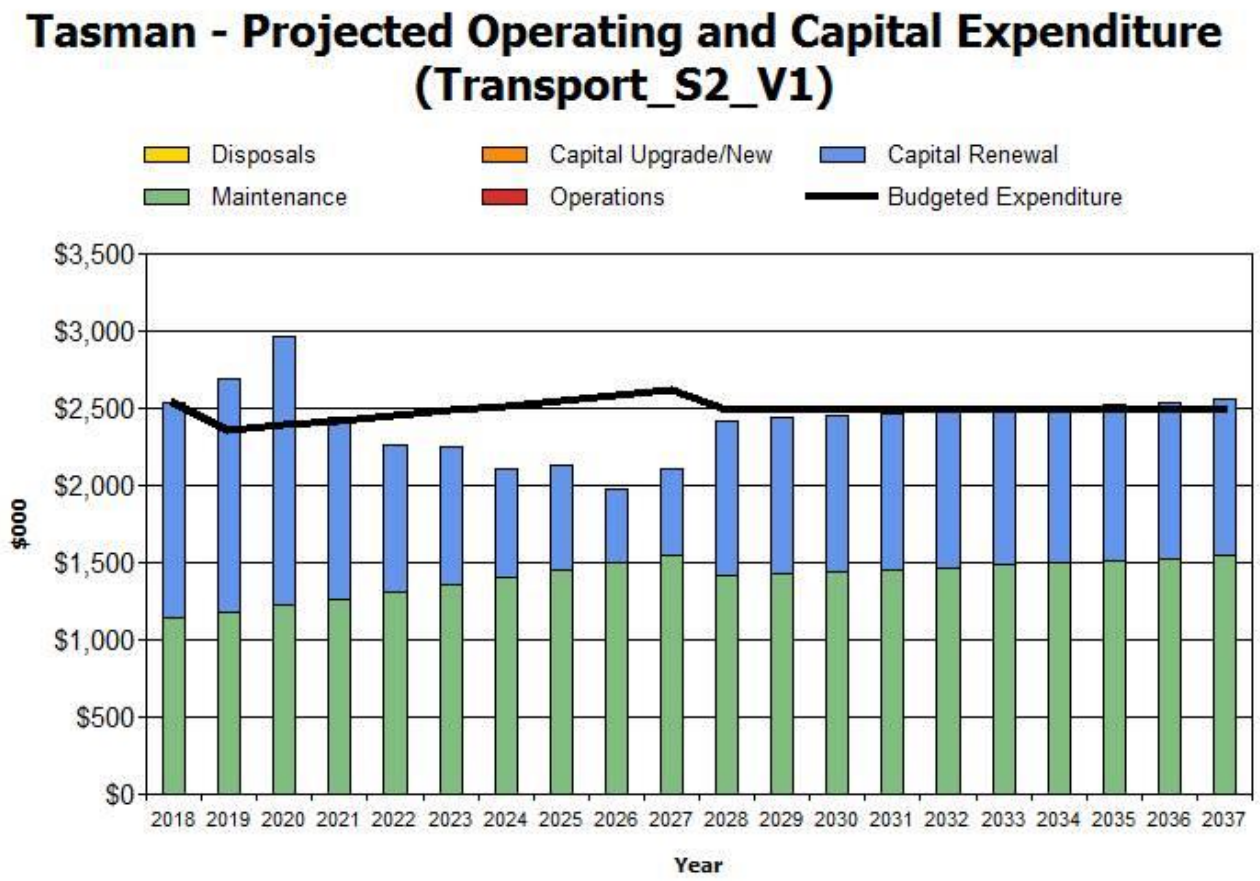


Figure Values are in current (real) dollars.

5.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.5, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any costs or revenue gained from asset disposals is accommodated in the long term financial plan.

6. RISK MANAGEMENT PLAN

The purpose of infrastructure risk management is to document the results and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2009 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2009 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock'. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences.

Critical assets have been identified and their typical failure mode and the impact on service delivery are as follows:

Table 6.1 Critical Assets

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Nubeena Road	Surface or Pavement Failure	Frequent inspections and quick address of minor issues to prevent shortening of asset life. More to be developed in future revisions of this plan
Saltwater River Road	Surface or Pavement Failure	Frequent inspections and quick address of minor issues to prevent shortening of asset life. More to be developed in future revisions of this plan
Stormlea Road	Surface or Pavement Failure	Frequent inspections and quick address of minor issues to prevent shortening of asset life. More to be developed in future revisions of this plan

By identifying critical assets and failure modes investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas.

6.2 Risk Assessment

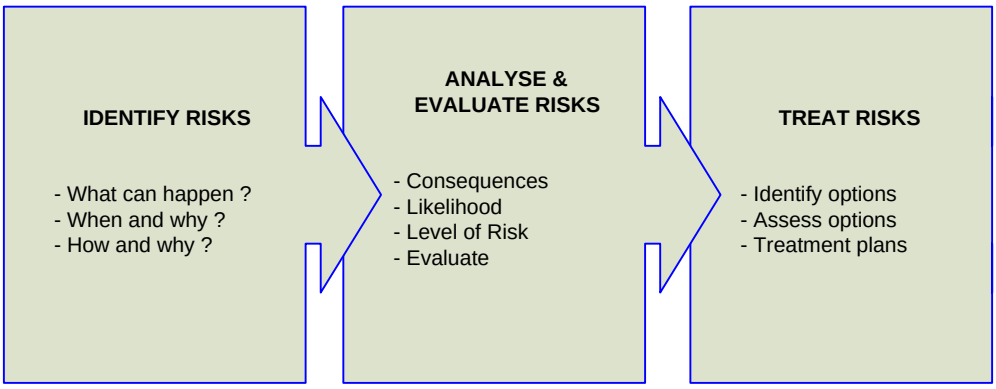
The risk management process used in this project is shown in Figure 6.2 below.

It is an analysis and problem solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of the ISO risk assessment standard ISO 31000:2009.

[8] ISO 31000:2009, p 2

Fig 6.2 Risk Management Process – Abridged



The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery from infrastructure assets has identified the critical risks that will result in significant loss, 'financial shock' or a reduction in service.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Risk Management Plan. The residual risk and treatment cost after the selected treatment plan is implemented is shown in Table 6.2. These risks and costs are reported to management and Tasman Council.

Table 6.2: Critical Risks and Treatment Plans

RISK IDENTIFICATION							RISK TREATMENT			RISK TREATMENT PLAN
Risk No.	Asset at Risk	What can happen?	When can it occur?	Possible cause	Existing controls	Is risk credible?	Treatment option(s)	Residual risk	Risk treatment plan	Cost
1	Coastal Roads	Coastal Inundation	Within 20 years	Global Warming	-	Yes	Assess climate change flood maps to determine roads at risk	Uncertain	Assess climate change flood maps to determine roads at risk	Staff Hours
2	All Roads	Damange from Heavy Vehicles	Within 10 years	Heavy Vehicles Issued Permits for Inappropriate Routes	-	Yes	Develop Network Hierarchy	Low	Assess and submit routes for various vehicle classes to NHVR to be published on network notices	Staff Hours
3	High Use Roads	Damage from accelerated wear	Within 5 years	Increase in Traffic Volumes due to Tourism and Population Increase	-	Yes	Maintain Frequent Inspections of High Volume Routes	Low	Maintain Frequent Inspections of High Volume Routes	Staff Hours
4	Bridges	Bushfire	Within 1 year	Uncontrolled Bushfire	-	Yes	Develop Emergency Management Plan for Bushfire Incidents	Medium	Develop Emergency Management Plan for Bushfire Incidents	Staff Hours

Note * The residual risk is the risk remaining after the selected risk treatment plan is operational.

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to our customers and the services we provide. To adapt to changing conditions and grow over time we need to understand our capacity to respond to possible disruptions and be positioned to absorb disturbance and act effectively in a crisis to ensure continuity of service.

Resilience is built on aspects such as response and recovery planning, financial capacity and crisis leadership.

Our current measure of resilience is shown in Table 6.4 which includes the type of threats and hazards, resilience assessment and identified improvements and/or interventions.

Table 6.4: Resilience

Threat / Hazard	Resilience LMH	Improvements / Interventions
Resilience assessments will be incorporated into further revisions of this plan	Resilience assessments will be incorporated into further revisions of this plan	Resilience assessments will be incorporated into further revisions of this plan

7. FINANCIAL SUMMARY

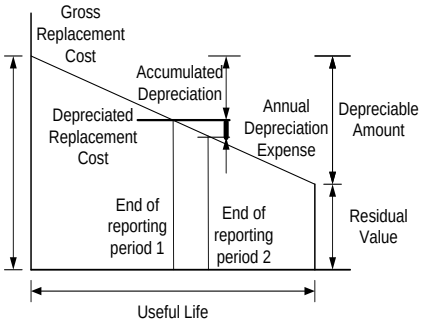
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

7.1 Financial Statements and Projections

7.1.1 Asset valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. Assets are valued at fair value at cost to replace service capacity.

Gross Replacement Cost	$66,211,000
Depreciable Amount	$48,589,000
Depreciated Replacement Cost[9]	$40,810,000
Annual Average Asset Consumption	$1,111,000



7.1.1 Sustainability of service delivery

Two key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the:

- asset renewal funding ratio, and
- medium term budgeted expenditures/projected expenditure (over 10 years of the planning period).

[9] Also reported as Written Down Value, Carrying or Net Book Value.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[10] 116%

The Asset Renewal Funding Ratio is the most important indicator and indicates that over the next 10 years of the forecasting that we expect to have 116% of the funds required for the optimal renewal and replacement of assets.

Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is $2,347,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $2,490,000 on average per year giving a 10 year funding surplus of $143,000 per year. This indicates 106% of the projected expenditures needed to provide the services documented in the asset management plan. This excludes upgrade/new assets.

Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 1.0 for the first years of the asset management plan and ideally over a 10-year life span of the 20-year Long Term Financial Plan.

[10] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

7.1.2 Projected expenditures for long term financial plan

Table 7.1.2 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in 2018 real values.

Table 7.1.2: Projected Expenditures for Long Term Financial Plan ($000)

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2018	$0	$1,140	$1,393	$0	$0
2019	$0	$1,182	$1,499	$0	$0
2020	$0	$1,234	$1,727	$0	$0
2021	$0	$1,267	$1,160	$0	$0
2022	$0	$1,310	$942	$0	$0
2023	$0	$1,355	$894	$0	$0
2024	$0	$1,401	$706	$0	$0
2025	$0	$1,447	$688	$0	$0
2026	$0	$1,495	$486	$0	$0
2027	$0	$1,544	$565	$0	$0
2028	$0	$1,411	$1,006	$0	$0
2029	$0	$1,425	$1,006	$0	$0
2030	$0	$1,439	$1,006	$0	$0
2031	$0	$1,454	$1,006	$0	$0
2032	$0	$1,468	$1,006	$0	$0
2033	$0	$1,483	$1,006	$0	$0
2034	$0	$1,498	$1,006	$0	$0
2035	$0	$1,513	$1,006	$0	$0
2036	$0	$1,528	$1,006	$0	$0
2037	$0	$1,543	$1,006	$0	$0

7.2 Funding Strategy

Funding for assets is provided from the budget and long term financial plan.

The financial strategy of the entity determines how funding will be provided, whereas the asset management plan communicates how and when this will be spent, along with the service and risk consequences of differing options.

7.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to service.

Additional assets will generally add to the operations and maintenance needs in the longer term, as well as the need for future renewal. Additional assets will also add to future depreciation forecasts.

7.4 Key Assumptions Made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this asset management plan. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this asset management plan are:

Table 7.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
1% Population Growth	Likely to change. Unlikely however to be statistically significant enough to alter the outcome of this AMP other than with regard to increasing community expectations.
Increasing tourism and visitor numbers	Likely to sustain increasing numbers from private and state funded tourism infrastructure based on existing and forecast data.

7.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale[11] in accordance with Table 7.5.

Table 7.5: Data Confidence Grading System

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%
C Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy ± 40%
E Unknown	None or very little data held.

Data	Confidence Assessment	Comment
Demand drivers	B	Extrapolated from ABS data
Growth projections	B	Extrapolated from ABS data
Operations expenditures	A	Data obtained from current figures and consultation
Maintenance expenditures	A	Data obtained from current figures and consultation
Projected Renewal exps. - Asset values	A	Data obtained from current figures and consultation
- Asset residual values	A	Determined from asset register
- Asset useful lives	B	Lives based on current standards for asset category
- Condition modelling	B	Condition modelling dependent upon accuracy of asset register
- Network renewals	A	Data obtained from current figures and consultation
- Defect repairs	B+	Estimates based on network performance from previous years.
Upgrade/New expenditures	C	Future predictions based on previous years but this may change
Disposal expenditures	A	Not at all likely to dispose of assets in the foreseeable future

Over all data sources the data confidence is assessed as being Reliable (B) for data used in the preparation of this AM Plan.

[11] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

8. PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices[12]

8.1.1 Accounting and financial data sources

Xero is used as the accounting and finance software.

8.1.2 Asset management data sources

Tasman Council's asset management program is myData, a proprietary product of Assetic. This program is used to issue works tickets, record failures and stores the asset register.

8.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.1.

Table 8.1: Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Engage in community consultation to determine customer service level expectations.	Community Liaison	Staff hours	12 Months
2	Acquire cash flow projections for disposals		Staff Hours	12 Months
3	Develop weighting criteria for asset renewals/replacements	Asset Management	Staff Hours	12 Months
4	Define maintenance schedule for critical assets	Works Manager	Staff Hours	12 Months
5	Develop agreed sustainable position for LOS	SMT	Staff Hours	12 Months
6	Develop NHVR vehicle class networks	Asset Management	Staff Hours	6 Months
7	Assess coastal roads for risk of inundation	Asset Management	Staff Hours	12 Months

8.3 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget planning processes and amended to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the long term financial plan.

The AM Plan has a life of 4 years and is due for complete revision and updating within 2 years of each Council election.

8.4 Performance Measures

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into the long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and corporate structures take into account the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 1.0.

[12] ISO 55000 Refers to this the Asset Management System

9. REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2012 LTFP Practice Note 6 PN Long Term Financial Plan, Institute of Public Works Engineering Australasia, Sydney
- Tasman Council Strategic Plan 2015-2025

10. APPENDICES

Appendix A Projected 10 year Capital Renewal and Replacement Works Program

Appendix B Projected 10 year Capital Upgrade/New Works Program

Appendix C LTFP Budgeted Expenditures Accommodated in AM Plan

Appendix A Projected 10-year Capital Renewal and Replacement Works Program

Tasman - Report 6 - Appendix 10 year Renewal & Replacement Program (Transport_S1_V1)

Asset ID	Sub Category	Asset Name	From	To	Rem Life (Years)	Planned Renewal Year	Renewal Cost ($)	Useful Life (Years)
	Sub Structure	Cripps Ck	Wades Rd		-32	1986	$10,898	3
	Super Structure	Cripps Ck	Wades Rd		-15	2003	$79,307	20
	Sub Structure	Cripps Crk	Off White Beach Rd		-14	2004	$94,738	20
	Super Structure	Cripps Crk	Off White Beach Rd		-14	2004	$160,600	20
	Sub Structure	Unknown	Information Shed Nubeena		-8	2010	$918	20
BR4556SP	Super Structure	Saltwater Rv	Hurdle Rd		-4	2014	$67,963	20
RD035010RS	Sealed	Annie Street	010 - Arthur Highway to End of Seal	Road Surface	-1	2017	$600	15
RD116010RB	Sealed	Camp Road	010 - Arthur Highway to End of Seal	Road Base	-1	2017	$10,640	60
RD116010RSB	Sealed	Camp Road	010 - Arthur Highway to End of Seal	Road Sub-Base	-1	2017	$8,512	240
RD116010RS	Sealed	Camp Road	010 - Arthur Highway to End of Seal	Road Surface	-1	2017	$2,294	15
RD117010RB	Sealed	Caribbean Court	010 - Blowhole Road to End	Road Base	-1	2017	$10,988	80
RD117010RSB	Sealed	Caribbean Court	010 - Blowhole Road to End	Road Sub-Base	-1	2017	$8,790	13
RD117010RS	Sealed	Caribbean Court	010 - Blowhole Road to End	Road Surface	-1	2017	$3,956	13
RD118010RS	Sealed	Cartela Court	010 - Roaring Beach Road to End	Road Surface	-1	2017	$17,580	20
RD118020RS	Sealed	Cartela Court	020 - Cartela Court to End	Road Surface	-1	2017	$3,000	20
RD155010RS	Sealed	Coolstore Road	010 - Nubeena Road to End of Seal	Road Surface	-1	2017	$1,200	15
RD170010RS	Sealed	Dam Road	010 - Saltwater River Road to End of Seal	Road Surface	-1	2017	$1,100	15
RD195010RB	Sealed	Ferntree Road	010 - Arthur Highway to End	Road Base	-1	2017	$54,670	60
RD195010RSB	Sealed	Ferntree Road	010 - Arthur Highway to End	Road Sub-Base	-1	2017	$43,736	240
RD200010RS	Sealed	Fire Tower Road	010 - Nubeena Road to End of Seal	Road Surface	-1	2017	$2,000	15
RD215030RB	Sealed	Free Street	030 - Stacey Street to White Beach Road	Road Base	-1	2017	$23,600	80
RD215030RSB	Sealed	Free Street	030 - Stacey Street to White Beach Road	Road Sub-Base	-1	2017	$18,880	240
RD215030RS	Sealed	Free Street	030 - Stacey Street to White Beach Road	Road Surface	-1	2017	$10,370	20
RD240010RB	Sealed	Gourlay Road	010 - Arthur Highway to End	Road Base	-1	2017	$20,400	70
RD240010RSB	Sealed	Gourlay Road	010 - Arthur Highway to End	Road Sub-Base	-1	2017	$16,320	240
RD240010RS	Sealed	Gourlay Road	010 - Arthur Highway to End	Road Surface	-1	2017	$7,975	15
RD400020RB	Sealed	Lagoon Road	020 - Lagoon Road T Junction to End	Road Base	-1	2017	$19,080	60
RD400020RSB	Sealed	Lagoon Road	020 - Lagoon Road T Junction to End	Road Sub-Base	-1	2017	$15,264	240
RD495010RS	Sealed	Noyes Road	010 - White Beach Road to End of Seal	Road Surface	-1	2017	$11,228	15
RD505010RB	Sealed	Nubeena Road	010 - Littles Road to Coopers Road	Road Base	-1	2017	$146,200	80
RD505010RSB	Sealed	Nubeena Road	010 - Littles Road to Coopers Road	Road Sub-Base	-1	2017	$116,960	240
RD505110RB	Sealed	Nubeena Road	110 - Stormlea Road to Plummers Road	Road Base	-1	2017	$283,840	80
RD505110RSB	Sealed	Nubeena Road	110 - Stormlea Road to Plummers Road	Road Sub-Base	-1	2017	$227,072	240
RD520010RS	Sealed	Old Jetty Road	010 - Arthur Highway to House #74	Road Surface	-1	2017	$47,738	15
RD550010RB	Sealed	Peace Street	010 - Nubeena Road to End	Road Base	-1	2017	$40,800	80
RD550010RSB	Sealed	Peace Street	010 - Nubeena Road to End	Road Sub-Base	-1	2017	$32,640	240
RD615010RB	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Base	-1	2017	$6,000	60
RD615010RSB	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Sub-Base	-1	2017	$4,800	3
RD615010RS	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Surface	-1	2017	$2,313	15
RD645010RB	Sealed	Roaring Beach Road	010 - Nubeena Road to Stinking Creek	Road Base	-1	2017	$84,110	80
RD645010RSB	Sealed	Roaring Beach Road	010 - Nubeena Road to Stinking Creek	Road Sub-Base	-1	2017	$67,288	240
RD645010RS	Sealed	Roaring Beach Road	010 - Nubeena Road to Stinking Creek	Road Surface	-1	2017	$33,554	15
RD650020RB	Sealed	Robinsons Road	020 - End of Seal 1 to End of Seal 2	Road Base	-1	2017	$16,500	60
RD650020RSB	Sealed	Robinsons Road	020 - End of Seal 1 to End of Seal 2	Road Sub-Base	-1	2017	$13,200	240

RD650020RS	Sealed	Robinsons Road	020 - End of Seal 1 to End of Seal 2	Road Surface	-1	2017	$6,382	15
RD660040RB	Sealed	Safety Cove Road	040 - Point Puer Road to Frerks Creek	Road Base	-1	2017	$201,280	60
RD660040RSB	Sealed	Safety Cove Road	040 - Point Puer Road to Frerks Creek	Road Sub-Base	-1	2017	$161,024	240
RD660040RS	Sealed	Safety Cove Road	040 - Point Puer Road to Frerks Creek	Road Surface	-1	2017	$63,228	15
RD665010RS	Sealed	Saltwater River Road	010 - Nubeena Road to Prices Bay Tributary	Road Surface	-1	2017	$109,231	15
RD665020RS	Sealed	Saltwater River Road	020 - Prices Bay Tributary to Littles Road	Road Surface	-1	2017	$44,616	15
RD680010RB	Sealed	Skeggs Avenue	010 - White Beach Road to End	Road Base	-1	2017	$141,400	80
RD680010RSB	Sealed	Skeggs Avenue	010 - White Beach Road to End	Road Sub-Base	-1	2017	$113,120	240
RD680010RS	Sealed	Skeggs Avenue	010 - White Beach Road to End	Road Surface	-1	2017	$48,010	20
RD700060RB	Sealed	Sommers Bay Road	060 - Duck Creek Bridge to End of Seal 1	Road Base	-1	2017	$29,700	80
RD700060RSB	Sealed	Sommers Bay Road	060 - Duck Creek Bridge to End of Seal 1	Road Sub-Base	-1	2017	$23,760	240
RD700060RS	Sealed	Sommers Bay Road	060 - Duck Creek Bridge to End of Seal 1	Road Surface	-1	2017	$12,593	20
RD815010RS	Sealed	Wedge Avenue	010 - White Beach Road to Skeggs Avenue	Road Surface	-1	2017	$16,043	20
RD825010RS	Sealed	Wencks Road	010 - Safety Cove Road to End of Seal	Road Surface	-1	2017	$500	20
RD830080RB	Sealed	White Beach Road	080 - Stacey Street to Wedge Avenue	Road Base	-1	2017	$68,880	60
RD830080RSB	Sealed	White Beach Road	080 - Stacey Street to Wedge Avenue	Road Sub-Base	-1	2017	$55,104	240
RD830080RS	Sealed	White Beach Road	080 - Stacey Street to Wedge Avenue	Road Surface	-1	2017	$28,598	15
RD385010RS	UnSealed	Kingstons Road	010 - Newmans Creek Road to End	Road Surface	-1	2017	$5,460	10
RD060010RS	Sealed	Bayview Street	010 - Arthur Highway to End of Seal	Road Surface	0	2018	$900	15
RD105010RS	Sealed	Brians Lane	010 - Nubeena Road to End	Road Surface	0	2018	$3,990	15
RD300010RS	Sealed	Henry Street	010 - Nubeena Road to End of Seal	Road Surface	0	2018	$300	15
RD373010RS	Sealed	Kerstan Court	010 - White Beach Road to End	Road Surface	0	2018	$11,842	8.78963631
RD430010RS	Sealed	Lyndal Drive	010 - Pirates Bay Drive to End	Road Surface	0	2018	$11,794	9.16628506
RD205010RS	Sealed	Mcmanus Road	010 - Arthur Highway to End of Seal	Road Surface	0	2018	$900	15
RD485010RS	Sealed	Nichols Road	010 - Nubeena Road to End of Seal	Road Surface	0	2018	$1,850	15
RD490010RS	Sealed	North Street	010 - Arthur Highway to End of Seal	Road Surface	0	2018	$595	15
RD545010RS	Sealed	Parsons Bay Road	010 - White Beach Road to End of Seal	Road Surface	0	2018	$720	15
RD570010RSB	Sealed	Pirates Bay Drive	010 - Arthur Highway to Lookout	Road Sub-Base	0	2018	$87,360	4.7534343
RD575010RS	Sealed	Pirates Road	010 - Arthur Highway to End of Seal	Road Surface	0	2018	$765	15
RD715030RS	Sealed	South Street	030 - Arthur Highway to End of Seal	Road Surface	0	2018	$900	15
RD725010RS	Sealed	Spaulding Street	010 - White Beach Road to Batchelor Street	Road Surface	0	2018	$7,712	6.87155669
RD730010RS	Sealed	Stacey Street	010 - White Beach Road to Free Street	Road Surface	0	2018	$4,510	15
RD830070RS	Sealed	White Beach Road	070 - Noyes Road to Stacey Street	Road Surface	0	2018	$37,107	15
RD365020RS	UnSealed	Jones Road	020 - End of Road to End	Road Surface	0	2018	$23,373	10
RD375020RS	UnSealed	Kestie Avenue	020 - End of Seal to End	Road Surface	0	2018	$4,365	10
RD650010RS	UnSealed	Robinsons Road	010 - Stormlea Road to End of Seal 1	Road Surface	0	2018	$33,840	10
						Subtotal	$3,211,374	
RD090020RSB	Sealed	Blowhole Road	020 - Albert Street to Waterfall Bay Road	Road Sub-Base	1	2019	$188,237	6.45826223
RD185010RS	Sealed	Eagle View Road	010 - Nubeena Road to End	Road Surface	1	2019	$11,018	15
RD373010RSB	Sealed	Kerstan Court	010 - White Beach Road to End	Road Sub-Base	1	2019	$28,672	10.4568996
RD430010RSB	Sealed	Lyndal Drive	010 - Pirates Bay Drive to End	Road Sub-Base	1	2019	$24,200	9.55275126
RD500010RS	Sealed	Nubeena Back Road	010 - Nubeena Road to North School Boundary	Road Surface	1	2019	$14,142	15
RD510010RS	Sealed	Olsons Road	010 - Penzance Road to Waterfall Bay Road	Road Surface	1	2019	$11,477	15
RD555030RS	Sealed	Penzance Road	030 - Ohlsens Road to Blowhole Road	Road Surface	1	2019	$13,252	15
RD612010RSB	Sealed	Protheroe Court	010 - Jennings Crescent to End	Road Sub-Base	1	2019	$6,000	10.708866
RD665010RB	Sealed	Saltwater River Road	010 - Nubeena Road to Prices Bay Tributary	Road Base	1	2019	$324,160	60
RD355020RS	UnSealed	Jetty Road, Nubeena	020 - End of Seal to Nubeena Road	Road Surface	1	2019	$3,816	10
RD370010RS	UnSealed	Kellets Road	010 - Sloping Main Drive to End	Road Surface	1	2019	$69,000	10
RD380010RS	UnSealed	Kingsley Court	010 - Free Street to End	Road Surface	1	2019	$1,080	10

RD500030RS	UnSealed	Nubeena Back Road	030 - Tip Road to End of Seal	Road Surface	1	2019	$262,740	10
RD615030RS	UnSealed	Radnor Road	030 - End of Seal 2 to End of Seal 3	Road Surface	1	2019	$9,765	10
RD650030RS	UnSealed	Robinsons Road	030 - End of Seal 2 to End	Road Surface	1	2019	$18,270	10
RD685010RS	UnSealed	Sloping Main Drive	010 - Kellets Road to End	Road Surface	1	2019	$50,655	10
RD695010RS	UnSealed	Smiths Road	010 - Stormlea Road to End	Road Surface	1	2019	$2,400	10
RD715040RS	UnSealed	South Street	040 - End of Seal to End	Road Surface	1	2019	$5,952	10
						Subtotal	$1,032,578	
RD055010RS	Sealed	Batchelor Street	010 - White Beach Road to End of Seal 1	Road Surface	2	2020	$1,020	20
RD245010RS	Sealed	Greatbatch Drive	010 - Fox Avenue to End	Road Surface	2	2020	$10,047	20
RD251010RS	Sealed	Gwandalan Road	010 - Saltwater River Road to End of Seal	Road Surface	2	2020	$1,435	15
RD325010RS	Sealed	Hylands Road	010 - Arthur Highway to End of Seal	Road Surface	2	2020	$800	20
RD355010RS	Sealed	Jetty Road, Nubeena	010 - Nubeena Road to End of Seal	Road Surface	2	2020	$550	20
RD360010RS	Sealed	Johnsons Road	010 - Nubeena Rd to End of Seal	Road Surface	2	2020	$490	20
RD365010RS	Sealed	Jones Road	010 - Nubeena Road to End of Seal	Road Surface	2	2020	$1,200	20
RD395010RS	Sealed	Kruvale Road	010 - Nubeena Road to End of Seal	Road Surface	2	2020	$675	20
RD145010RS	Sealed	Lodge Crescent	010 - Arthur Highway to End of seal 1	Road Surface	2	2020	$750	20
RD440010RS	Sealed	Macdonalds Road	010 - Nubeena Road to End of Seal	Road Surface	2	2020	$625	20
RD500040RS	Sealed	Nubeena Back Road	040 - End of Seal to Nubeena Road	Road Surface	2	2020	$765	20
RD520010RB	Sealed	Old Jetty Road	010 - Arthur Highway to House #74	Road Base	2	2020	$105,600	60
RD620010RSB	Sealed	Reef View Road	010 - Sommers Bay Road to boundary 19/21	Road Sub-Base	2	2020	$19,200	4.04094828
RD665050RS	Sealed	Saltwater River Road	050 - Hurdle Road to Coal Mine Road	Road Surface	2	2020	$162,229	15
RD675010RS	Sealed	Shelly Beach Road	010 - Nubeena Road to End of Seal	Road Surface	2	2020	$315	20
RD700120RSB	Sealed	Sommers Bay Road	120 - Chronical Point Road to Sommers Beach Road	Road Sub-Base	2	2020	$48,192	3.54296747
RD715010RS	Sealed	South Street	010 - Arthur Highway to End of Seal	Road Surface	2	2020	$1,300	20
RD750010RS	Sealed	Suckling Street	010 - Nubeena Road to End	Road Surface	2	2020	$4,045	20
RD765020RS	Sealed	Tasmans Arch Road	020 - house #31 southern boundary to end	Road Surface	2	2020	$34,909	15
BR993SB	Sub Structure	Stinking Ck	Roaring Beach Rd		2	2020	$10,561	20
BR1770SP	Super Structure	Duck Ck	Sommers Bay Rd		2	2020	$58,400	20
BR993SP	Super Structure	Stinking Ck	Roaring Beach Rd		2	2020	$79,564	20
	Super Structure	Unknown	Information Shed Nubeena		2	2020	$9,082	30
RD035020RS	UnSealed	Annie Street	020 - End of Seal to End	Road Surface	2	2020	$1,800	10
RD040020RS	UnSealed	Apex Point Road	020 - End of Seal to End	Road Surface	2	2020	$21,960	10
RD055020RS	UnSealed	Batchelor Street	020 - End of Seal 1 to End of Seal 2	Road Surface	2	2020	$11,688	10
RD060020RS	UnSealed	Bayview Street	020 - End of Seal to End	Road Surface	2	2020	$6,660	10
RD065010RS	UnSealed	Beach Street	010 - Apex Point Road to End	Road Surface	2	2020	$12,600	10
RD070010RS	UnSealed	Berrys Court	010 - Peace Street to End	Road Surface	2	2020	$2,100	10
RD255010RS	UnSealed	Gwen Road	010 - Palmers Lookout Road to End	Road Surface	2	2020	$9,240	10
RD300020RS	UnSealed	Henry Street	020 - End of Seal to End	Road Surface	2	2020	$1,350	10
RD330010RS	UnSealed	Illawong Drive	010 - Stewarts Bay Road to End	Road Surface	2	2020	$3,900	10
RD340010RS	UnSealed	Jenkins Road	010 - Saltwater River Road to End	Road Surface	2	2020	$7,650	10
RD395020RS	UnSealed	Kruvale Road	020 - End of Seal to End	Road Surface	2	2020	$3,645	10
RD400030RS	UnSealed	Lagoon Road	030 - End of Seal to End	Road Surface	2	2020	$1,896	10
RD475010RS	UnSealed	Moate Lane	010 - Parsons Bay Road to End	Road Surface	2	2020	$3,240	10
RD480010RS	UnSealed	Newmans Creek Road	010 - Nubeena Road to End	Road Surface	2	2020	$107,280	10
RD485020RS	UnSealed	Nichols Road	020 - End of Seal to End	Road Surface	2	2020	$16,632	10
RD490020RS	UnSealed	North Street	020 - End of Seal to End	Road Surface	2	2020	$18,414	10
RD495020RS	UnSealed	Noyes Road	020 - End of Seal to Mola Court	Road Surface	2	2020	$7,200	10
RD495030RS	UnSealed	Noyes Road	030 - Mola Court to End	Road Surface	2	2020	$66,168	10
RD515010RS	UnSealed	Old Hospital Road	010 - Nubeena Road to End	Road Surface	2	2020	$1,620	10

RD520030RS	UnSealed	Old Jetty Road	020 - End of Seal to End	Road Surface	2	2020	$30,240	10
RD535020RS	UnSealed	Palmers Lookout Road	020 - End of Seal 1 to End of Seal 2	Road Surface	2	2020	$12,390	10
RD535040RS	UnSealed	Palmers Lookout Road	040 - End of Seal 3 to End	Road Surface	2	2020	$58,725	10
RD540010RS	UnSealed	Parkers Beach Road	010 - Nubeena Road to End	Road Surface	2	2020	$8,910	10
RD640010RS	UnSealed	Riley Street	010 - Sommers Bay Road to End	Road Surface	2	2020	$1,725	10
RD645020RS	UnSealed	Roaring Beach Road	020 - Stinking Creek to End	Road Surface	2	2020	$246,960	10
RD655010RS	UnSealed	Rocky Drive	010 - Coal Mine Road to End	Road Surface	2	2020	$3,375	10
RD675020RS	UnSealed	Shelly Beach Road	020 - End of Seal to End	Road Surface	2	2020	$9,648	10
RD700070RS	UnSealed	Sommers Bay Road	070 - End of Seal 2 to End of Seal 3	Road Surface	2	2020	$19,872	10
RD700110RS	UnSealed	Sommers Bay Road	110 - End of Seal 6 to End of Seal 7	Road Surface	2	2020	$19,044	10
RD710010RS	UnSealed	Sommers Beach Road	010 - Sommers Bay Road to End	Road Surface	2	2020	$4,875	10
						Subtotal	$1,260,302	
RD100010RB	Sealed	Boons Place	010 - Penzance Road to End	Road Base	3	2021	$6,000	10.8479195
RD100010RS	Sealed	Boons Place	010 - Penzance Road to End	Road Surface	3	2021	$2,342	15
RD460010RS	Sealed	Masons Point Road	010 - Arthur Highway to End	Road Surface	3	2021	$36,854	15
RD615010RSB	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Sub-Base	3	2021	$4,800	3
	Sub Structure	Cripps Ck	Wades Rd		3	2021	$10,898	3
BR4092SP	Super Structure	Unknown	Andersons Rd		3	2021	$46,465	20
RD030010RS	UnSealed	Andrews Road	010 - Sommers Bay Road to End	Road Surface	3	2021	$4,935	10
RD075010RS	UnSealed	Black Jack Road	010 - Gwandalan Road to End	Road Surface	3	2021	$30,600	10
RD080010RS	UnSealed	Blackman Bay Road	010 - Arthur Highway to End	Road Surface	3	2021	$98,100	10
RD205020RS	UnSealed	Fortescue Road	020 - End of Seal to End	Road Surface	3	2021	$11,400	10
RD220020RS	UnSealed	George Street	020 - Jennings Crescent to Mundy Court	Road Surface	3	2021	$6,390	10
RD250010RS	UnSealed	Grooms Hill Road	010 - Nubeena Back Road to End	Road Surface	3	2021	$27,090	10
RD251020RS	UnSealed	Gwandalan Road	020 - End of Seal to Black Jack Road	Road Surface	3	2021	$138,168	10
RD260010RS	UnSealed	Halls Road	010 - Stormlea Road to End	Road Surface	3	2021	$11,700	10
RD265010RS	UnSealed	Hansens Road	010 - Stormlea Road to End	Road Surface	3	2021	$3,780	10
RD290010RS	UnSealed	Hawker Street South	010 - Arthur Highway to End	Road Surface	3	2021	$4,200	10
RD315010RS	UnSealed	Hurdle Road	010 - Saltwater River Road to End	Road Surface	3	2021	$113,760	10
RD325020RS	UnSealed	Hylands Road	020 - End of Seal to End	Road Surface	3	2021	$21,120	10
RD440020RS	UnSealed	Macdonalds Road	020 - End of Seal to End	Road Surface	3	2021	$17,190	10
RD555020RS	UnSealed	Penzance Road	020 - End of Seal to Ohlsens Road	Road Surface	3	2021	$3,456	10
RD700090RS	UnSealed	Sommers Bay Road	090 - End of Seal 4 to End of Seal 5	Road Surface	3	2021	$7,560	10
RD715020RS	UnSealed	South Street	020 - End of Seal to End	Road Surface	3	2021	$3,780	10
RD775010RS	UnSealed	Thorntons Road	010 - Stormlea Road to End	Road Surface	3	2021	$72,933	10
RD780020RS	UnSealed	Tip Road	020 - End of Seal to End	Road Surface	3	2021	$11,760	10
RD790010RS	UnSealed	Turners Road	010 - Coal Mine Road to End	Road Surface	3	2021	$10,080	10
						Subtotal	$693,102	
RD085010RB	Sealed	Blackwood Court	010 - White Beach Road to End of Seal	Road Base	4	2022	$14,240	10.7950214
RD090020RS	Sealed	Blowhole Road	020 - Albert Street to Waterfall Bay Road	Road Surface	4	2022	$89,338	15
RD150010RS	Sealed	Cooks Road	010 - Nubeena Back Road to End of Seal	Road Surface	4	2022	$1,366	15
RD612010RS	Sealed	Protheroe Court	010 - Jennings Crescent to End	Road Surface	4	2022	$3,018	14.2538714
RD805010RS	Sealed	Waterfall Bay Road	010 - Blowhole Road to Ohlsens Road	Road Surface	4	2022	$11,168	15
RD085020RS	UnSealed	Blackwood Court	020 - End of Seal to End	Road Surface	4	2022	$4,152	10
RD170020RS	UnSealed	Dam Road	020 - End of Seal to End	Road Surface	4	2022	$180,960	10
RD225020RS	UnSealed	George Street	020 - End of Seal to Lillian Street	Road Surface	4	2022	$7,350	10
RD235010RS	UnSealed	Gillies Road	010 - Nubeena Back Road to End	Road Surface	4	2022	$3,060	10

RD285010RS	UnSealed	Hawker Street	010 - Sommers Bay Road to End	Road Surface	4	2022	$9,600	10
RD310010RS	UnSealed	Huberts Road	010 - Stormlea Road to End	Road Surface	4	2022	$2,400	10
RD320010RS	UnSealed	Hyatts Crescent	010 - Nubeena Back Road to Nubeena Back Road	Road Surface	4	2022	$3,000	10
RD410010RS	UnSealed	Lillian Street	010 - George Street to End	Road Surface	4	2022	$15,624	10
RD425020RS	UnSealed	Littles Road	020 - End of Seal to Saltwater River Road	Road Surface	4	2022	$76,464	10
RD435010RS	UnSealed	Lyne Street	010 - Blowhole Road to End	Road Surface	4	2022	$3,900	10
RD440030RS	UnSealed	Macdonalds Road	030 - Nubeena Back Road to End	Road Surface	4	2022	$7,200	10
RD470010RS	UnSealed	Mitchells Road	010 - Duck Creek Road to End	Road Surface	4	2022	$4,140	10
RD545020RS	UnSealed	Parsons Bay Road	020 - End of Seal to End	Road Surface	4	2022	$27,408	10
RD635010RS	UnSealed	Rifle Range Road	010 - Alfred Street to End	Road Surface	4	2022	$11,520	10
RD725020RS	UnSealed	Spaulding Street	020 - Batchelor Street to End	Road Surface	4	2022	$4,746	10
RD755010RS	UnSealed	Sweets Road	010 - Stormlea Road to End	Road Surface	4	2022	$4,500	10
						Subtotal	$475,192	
RD066010RS	Sealed	Bellettes Place	010 - Safety Cove Road to End	Road Surface	5	2023	$3,672	15
RD390010RS	Sealed	Kormos Drive	010 - Nubeena Road to End	Road Surface	5	2023	$7,782	15
RD570010RSB	Sealed	Pirates Bay Drive	010 - Arthur Highway to Lookout	Road Sub-Base	5	2023	$87,360	4.7534343
RD570020RSB	Sealed	Pirates Bay Drive	020 - Lookout to Osprey Road	Road Sub-Base	5	2023	$182,560	9.01046975
RD590010RS	Sealed	Point Puer Road	010 - Safety Cove Road to End of Seal	Road Surface	5	2023	$1,335	20
RD700100RSB	Sealed	Sommers Bay Road	100 - From house #416 to Chronical Point Road	Road Sub-Base	5	2023	$49,720	7.32421875
RD700120RSB	Sealed	Sommers Bay Road	120 - Chronical Point Road to Sommers Beach Road	Road Sub-Base	5	2023	$48,192	3.54296747
RD760010RS	Sealed	Tasman Street	010 - McCormicks Drive to End	Road Surface	5	2023	$13,821	15
RD025010RS	UnSealed	Andersons Road	010 - Fortescue Road to End	Road Surface	5	2023	$28,416	10
RD095010RS	UnSealed	Bond Street	010 - Sommers Bay Road to End	Road Surface	5	2023	$1,620	10
RD165010RS	UnSealed	Coppings Road	010 - Macdonalds Road to End	Road Surface	5	2023	$9,450	10
RD173010RS	UnSealed	Dodge Street	010 - Clarke Street to End	Road Surface	5	2023	$720	10
RD175010RS	UnSealed	Dog Bark Road	010 - Safety Cove Road to End	Road Surface	5	2023	$11,340	10
RD180010RS	UnSealed	Duck Creek Road	010 - Sommers Bay Road to Mitchells Road	Road Surface	5	2023	$11,640	10
RD200020RS	UnSealed	Fire Tower Road	020 - End of Seal to End	Road Surface	5	2023	$113,496	10
RD205000RS	UnSealed	Flinders Bay Road	000 - Highlands Road to House No. 117	Road Surface	5	2023	$42,900	10
RD275010RS	UnSealed	Harwoods Road	010 - Nubeena Back Road to End	Road Surface	5	2023	$6,360	10
RD420010RS	UnSealed	Littles Place	010 - Cliffords Road to End	Road Surface	5	2023	$1,440	10
RD450010RS	UnSealed	Martin Court	010 - White Beach Road to End	Road Surface	5	2023	$1,920	10
RD465020RS	UnSealed	McCormicks Drive	020 - End of Seal to End	Road Surface	5	2023	$4,140	10
RD560010RS	UnSealed	Peppermint Drive	010 - Beach Street to End	Road Surface	5	2023	$7,200	10
RD605010RS	UnSealed	Prices Flats Road	010 - Saltwater River Road to End	Road Surface	5	2023	$4,275	10
RD615040RS	UnSealed	Radnor Road	040 - End of Seal 3 to End	Road Surface	5	2023	$22,365	10
RD745020RS	UnSealed	Stormlea Road	020 - End of Seal to Thorntons Road	Road Surface	5	2023	$196,429	10
RD745040RS	UnSealed	Stormlea Road	040 - House No. 840 to House No 890	Road Surface	5	2023	$18,810	10
RD800010RS	UnSealed	Wades Road	010 - White Beach Road to End	Road Surface	5	2023	$2,340	10
RD825020RS	UnSealed	Wencks Road	020 - End of Seal to End	Road Surface	5	2023	$14,580	10
						Subtotal	$893,883	
RD055030RS	Sealed	Batchelor Street	030 - End of Seal 2 to Spaulding Street	Road Surface	6	2024	$1,080	13.3333333
RD155010RB	Sealed	Coolstore Road	010 - Nubeena Road to End of Seal	Road Base	6	2024	$2,400	60
RD510010RSB	Sealed	Olsons Road	010 - Penzance Road to Waterfall Bay Road	Road Sub-Base	6	2024	$14,080	11.978593
RD530010RS	Sealed	Osprey Road	010 - Pirates Bay Drive to End	Road Surface	6	2024	$7,590	20
RD570010RS	Sealed	Pirates Bay Drive	010 - Arthur Highway to Lookout	Road Surface	6	2024	$38,585	20
RD615010RSB	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Sub-Base	6	2024	$4,800	3
RD620010RSB	Sealed	Reef View Road	010 - Sommers Bay Road to boundary 19/21	Road Sub-Base	6	2024	$19,200	4.04094828

RD665010RSB	Sealed	Saltwater River Road	010 - Nubeena Road to Prices Bay Tributary	Road Sub-Base	6	2024	$259,328	240
RD700130RSB	Sealed	Sommers Bay Road	130 - Sommers Beach Road to Reef View Road	Road Sub-Base	6	2024	$32,760	8.34946757
RD830110RS	Sealed	White Beach Road	110 - White Beach Road to Wades Road	Road Surface	6	2024	$9,525	20
	Sub Structure	Cripps Ck	Wades Rd		6	2024	$10,898	3
RD010010RS	UnSealed	Albert Street	010 - Blowhole Road to End	Road Surface	6	2024	$2,376	10
RD015020RS	UnSealed	Alfred Street	020 - End of Seal to End	Road Surface	6	2024	$21,750	10
RD020010RS	UnSealed	Amy Street	010 - House No.1 to Gourlay Road	Road Surface	6	2024	$3,060	10
RD020020RS	UnSealed	Amy Street	020 - Gourlay Road to House No. 31	Road Surface	6	2024	$2,070	10
RD110010RS	UnSealed	Briggs Road	010 - Safety Cove Road to End	Road Surface	6	2024	$6,240	10
RD116020RS	UnSealed	Camp Road	020 - End of Seal to	Road Surface	6	2024	$1,344	10
RD160010RS	UnSealed	Coopers Road	010 - Nubeena Road to End	Road Surface	6	2024	$13,650	10
RD237010RS	UnSealed	Golf Club Road	010 - Point Puer Road to End	Road Surface	6	2024	$12,015	10
RD267010RS	UnSealed	Hardwicks Road	010 - Stormlea Road to End	Road Surface	6	2024	$6,930	10
RD280010RS	UnSealed	Havelock Road	010 - Ferntree Road to End	Road Surface	6	2024	$6,300	10
RD360020RS	UnSealed	Johnsons Road	020 - End of Seal to End	Road Surface	6	2024	$2,088	10
RD385010RSB	UnSealed	Kingstons Road	010 - Newmans Creek Road to End	Road Sub-Base	6	2024	$14,560	240
RD445010RS	UnSealed	Marsh Road	010 - Nubeena Road to End	Road Surface	6	2024	$42,000	10
RD455010RS	UnSealed	Marys Road	010 - Roaring Beach Road to End	Road Surface	6	2024	$17,220	10
RD600010RS	UnSealed	Premaydena Point Road	010 - Nubeena Road to End	Road Surface	6	2024	$8,250	10
RD745030RS	UnSealed	Stormlea Road	030 - Thorntons Road to House No. 840	Road Surface	6	2024	$58,422	10
RD820010RS	UnSealed	Wellard Court	010 - Illawong Drive to End	Road Surface	6	2024	$3,000	10
RD835010RS	UnSealed	Wiggins Road	010 - Saltwater River Road to End	Road Surface	6	2024	$84,960	10
						Subtotal	$706,481	
RD005010RS	Sealed	Abel Avenue	010 - McCormicks Drive to Pitman Avenue	Road Surface	7	2025	$12,203	15
RD190010RB	Sealed	Edward Street	010 - George Street to End	Road Base	7	2025	$14,000	60
RD476010RS	Sealed	Mola Court	010 - Noyes Road to End	Road Surface	7	2025	$8,814	15
RD527010RS	Sealed	O'Neil Court	010 - Sommers Bay Road to End	Road Surface	7	2025	$4,534	20
RD535010RS	Sealed	Palmers Lookout Road	010 - Safety Cove Road to End of Seal 1	Road Surface	7	2025	$1,779	20
RD570020RS	Sealed	Pirates Bay Drive	020 - Lookout to Osprey Road	Road Surface	7	2025	$90,207	15
RD620020RS	Sealed	Reef View Road	020 - Boundary 19/21l to End	Road Surface	7	2025	$10,374	15
RD665020RB	Sealed	Saltwater River Road	020 - Prices Bay Tributary to Littles Road	Road Base	7	2025	$137,440	60
RD725010RS	Sealed	Spaulding Street	010 - White Beach Road to Batchelor Street	Road Surface	7	2025	$7,712	6.87155669
RD745010RB	Sealed	Stormlea Road	010 - Nubeena Road to End of Seal	Road Base	7	2025	$89,600	80
RD765010RSB	Sealed	Tasmans Arch Road	010 - Blowhole Road to house #31 southern boundary	Road Sub-Base	7	2025	$40,704	10.7950214
RD765020RB	Sealed	Tasmans Arch Road	020 - house #31 southern boundary to end	Road Base	7	2025	$102,480	60
RD805010RSB	Sealed	Waterfall Bay Road	010 - Blowhole Road to Ohlsens Road	Road Sub-Base	7	2025	$29,160	10.8479195
RD830010RS	Sealed	White Beach Road	010 - Nubeena Road to House No. 41	Road Surface	7	2025	$23,556	20
RD830100RS	Sealed	White Beach Road	100 - Access to No. 600 to End of Road	Road Surface	7	2025	$7,537	20
RD115010RS	UnSealed	Burdens Road	010 - Nubeena Back Road to End	Road Surface	7	2025	$17,100	10
RD130010RS	UnSealed	Clarks Road	010 - Stormlea Road to End	Road Surface	7	2025	$1,440	10
RD155020RS	UnSealed	Coolstore Road	020 - End of Seal to Nubeena Road	Road Surface	7	2025	$11,466	10
RD305010RS	UnSealed	Heywards Road	010 - Nubeena Road to End	Road Surface	7	2025	$14,292	10
RD376010RS	UnSealed	King George Court	010 - Chronicle Point Road to End	Road Surface	7	2025	$5,214	10
RD145020RS	UnSealed	Lodge Crescent	020 - End of Seal to Arthur Highway	Road Surface	7	2025	$4,440	10
RD565010RS	UnSealed	Pine Rise Road	010 - Stormlea Road to End	Road Surface	7	2025	$5,670	10
RD575020RS	UnSealed	Pirates Road	020 - End of Seal to End	Road Surface	7	2025	$15,741	10
RD595010RS	UnSealed	Premaydena Cemetery Road	010 - Saltwater River Road to End	Road Surface	7	2025	$5,250	10
RD615020RS	UnSealed	Radnor Road	020 - End of Seal 1 to End of Seal 2	Road Surface	7	2025	$15,015	10
RD805020RS	UnSealed	Waterfall Bay Road	020 - Ohlsens Road to End	Road Surface	7	2025	$12,312	10
						Subtotal	$688,039	

RD015010RB	Sealed	Alfred Street	010 - Nubeena Road to End of Seal	Road Base	8	2026	$7,560	60
RD090020RSB	Sealed	Blowhole Road	020 - Albert Street to Waterfall Bay Road	Road Sub-Base	8	2026	$188,237	6.45826223
RD140010RS	Sealed	Coal Mine Road	010 - Saltwater River Road to End of seal	Road Surface	8	2026	$95,399	20
RD225010RS	Sealed	George Street	010 - Arthur Highway to End of Seal	Road Surface	8	2026	$2,500	15
RD266010RS	Sealed	Hardys Court	010 - White Beach Road to End	Road Surface	8	2026	$10,526	20
RD750010RB	Sealed	Suckling Street	010 - Nubeena Road to End	Road Base	8	2026	$16,500	60
RD830070RB	Sealed	White Beach Road	070 - Noyes Road to Stacey Street	Road Base	8	2026	$89,600	60
RD830120RS	Sealed	White Beach Road	120 - White Beach Road to House No. 365	Road Surface	8	2026	$8,482	20
RD120010RS	UnSealed	Chronicle Point Road	010 - Sommers Bay Road to End	Road Surface	8	2026	$3,510	10
RD135010RS	UnSealed	Cliffords Road	010 - Turners Road to Rocky Drive	Road Surface	8	2026	$5,040	10
RD150020RS	UnSealed	Cooks Road	020 - End of Seal to End	Road Surface	8	2026	$46,512	10
RD585020RS	UnSealed	Plummers Road	020 - End of Seal to End	Road Surface	8	2026	$11,790	10
						Subtotal	$485,656	
RD002001RS		Minor Works - Testing	Pavement Testing	Road Surface	9	2027	$27,023	10
RD005020RS	Sealed	Abel Avenue	020 - Pitman Avenue to End	Road Surface	9	2027	$8,024	15
RD185010RB	Sealed	Eagle View Road	010 - Nubeena Road to End	Road Base	9	2027	$36,400	60
RD210010RS	Sealed	Fox Avenue	010 - Wedge Avenue to End	Road Surface	9	2027	$19,272	15
RD373010RS	Sealed	Kerstan Court	010 - White Beach Road to End	Road Surface	9	2027	$11,842	8.78963631
RD430010RB	Sealed	Lyndal Drive	010 - Pirates Bay Drive to End	Road Base	9	2027	$30,250	60
RD430010RS	Sealed	Lyndal Drive	010 - Pirates Bay Drive to End	Road Surface	9	2027	$11,794	9.16628506
RD520010RSB	Sealed	Old Jetty Road	010 - Arthur Highway to House #74	Road Sub-Base	9	2027	$84,480	240
RD555010RB	Sealed	Penzance Road	010 - Blowhole Road to End of Seal	Road Base	9	2027	$4,800	60
RD590010RB	Sealed	Point Puer Road	010 - Safety Cove Road to End of Seal	Road Base	9	2027	$3,000	60
RD615010RSB	Sealed	Radnor Road	010 - Nubeena Road to End of Seal 1	Road Sub-Base	9	2027	$4,800	3
RD660050RS	Sealed	Safety Cove Road	050 - Frerks Creek to Dog Bark Road	Road Surface	9	2027	$42,037	15
RD700030RB	Sealed	Sommers Bay Road	030 - Boat Ramp to House No. 171	Road Base	9	2027	$73,700	60
RD700120RSB	Sealed	Sommers Bay Road	120 - Chronical Point Road to Sommers Beach Road	Road Sub-Base	9	2027	$48,192	3.54296747
RD700140RS	Sealed	Sommers Bay Road	140 - Reef View Road to End	Road Surface	9	2027	$37,178	15
RD730010RB	Sealed	Stacey Street	010 - White Beach Road to Free Street	Road Base	9	2027	$12,600	80
RD795010RS	Sealed	Turvey Avenue	010 - Edward Street to End	Road Surface	9	2027	$6,708	15
	Sub Structure	Cripps Ck	Wades Rd		9	2027	$10,898	3
BR3603SP	Super Structure	Norfolk Bay Trib	Slopen Main Drive		9	2027	$54,750	20
RD590020RS	UnSealed	Point Puer Road	020 - End of Seal to End	Road Surface	9	2027	$21,840	10
RD630010RS	UnSealed	Richardsons Drive	010 - Ohlsens Road to End	Road Surface	9	2027	$12,960	10
RD840000RS	UnSealed	White Beach Boat Ramp Carpark	White Beach Boat Ramp Carpark	Road Surface	9	2027	$2,491	10
						Subtotal	$565,039	
						Program Total	$10,060,674	

Appendix B Projected Upgrade/Exp/New 10-year Capital Works Program

There are currently no items in the Projected Upgrade/Exp/New 10-year Capital Works Program. Funding has been allocated based upon requirements from past financial records. This will change with further revisions of this document.

Appendix C Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS3 Asset Management **Tasman**

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Transport_S2_V1 **Asset Management Plan**

IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA JRA

First year of expenditure projections **2018** (financial yr ending)

Transport

Asset values at start of planning period

Current replacement cost	$66,211	(000)	Calc CRC from Asset Register $0 (000)
Depreciable amount	$48,589	(000)	This is a check for you.
Depreciated replacement cost	$40,810	(000)	
Annual depreciation expense	$1,111	(000)	

Operations and Maintenance Costs for New Assets

	% of asset value
Additional operations costs	0.00%
Additional maintenance	1.93%
Additional depreciation	2.29%

Planned renewal budget (information only)

You may use these values calculated from your data or overwrite the links.

Planned Expenditures from LTFP

20 Year Expenditure Projections Note: Enter all values in current **2018** values

Financial year ending	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Expenditure Outlays included in Long Term Financial Plan (in current $ values)										
Operations										
Operations **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Management **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
AM systems **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance										
Reactive maintenance **budget**	$1,140	$1,169	$1,198	$1,228	$1,258	$1,290	$1,322	$1,355	$1,389	$1,424
Planned maintenance **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Specific maintenance items **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$1,140	$1,169	$1,198	$1,228	$1,258	$1,290	$1,322	$1,355	$1,389	$1,424
Capital										
Planned renewal **budget**	$1,393	$1,193	$1,193	$1,193	$1,193	$1,193	$1,193	$1,193	$1,193	$1,193
Planned upgrade/new **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-growth contributed asset value	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Asset Disposals										
Est Cost to dispose of assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Carrying value (DRC) of disposed assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)										
Additional Expenditure Outlays required and not included above	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000	2026 $000	2027 $000
Operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Renewal	to be incorporated into Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 or 3 is used)									
Capital Upgrade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #2										

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)										
	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000	2026 $000	2027 $000
Forecast Capital Renewal from Forms 2A & 2B	$1,393	$1,499	$1,727	$1,160	$942	$894	$706	$688	$486	$565
Forecast Capital Upgrade from Form 2C	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0