

KANGAROO
ISLAND
COUNCIL

Infrastructure and Asset Management Plan 2023-2033

Chapter 8 Roads

Document Control

Synergy Record R2024/12

Rev No	Date	Revision Details	Author	Reviewer(s)	Approver
1	21 Nov 2023	Annual review and update to next year	CAS	MO ¹	MO
2	7 Dec 2023	Consultation version – track changes removed	CAS	Full Council	Full Council
3	5 Feb 2024	Post consultation version presented to Council for adoption	CAS	Full Council	Full Council
4	13 Feb 2024	Adopted version - Track changes removed	CAS	Full Council	Full Council

¹ Manager Operations

Contents

1. EXECUTIVE SUMMARY.....	1	5.6 Disposal Plan.....	22
1.1 The Purpose of the Plan	1	6 FINANCIAL SUMMARY	23
1.2 Asset Description.....	1	6.1 Financial Statements and Projections.....	23
1.3 What Does it Cost?	1	6.2 Funding Strategy	24
1.4 Plans for the Future	1	6.3 Valuation Forecasts	24
1.5 Measuring our Performance	2	6.4 Key Assumptions made in Financial Forecasts.....	24
1.5 The Next Steps	2	7 ASSET MANAGEMENT PRACTICES.....	26
2. INTRODUCTION	3	7.1 Accounting/Financial Systems	26
2.1 Background.....	3	7.2 Asset Information System.....	26
2.2 Goals and Objectives of Asset Management	3	7.3 Information Flow Requirements and Processes.....	26
2.3 Plan Framework	3	7.4 Standards and Guidelines	26
3. LEVELS OF SERVICE.....	4	8 PLAN IMPROVEMENT AND MONITORING.....	27
3.1 Customer Research and Expectations.....	4	8.1 Performance Measures	27
3.2 Strategic and Corporate Goals.....	4	8.2 Improvement Plan	27
3.3 Legislative Requirements	2	8.3 Monitoring and Review Procedures	27
3.4 Levels of Service	2	9 REFERENCES	29
4. FUTURE DEMAND.....	10	APPENDIX A – Roads Planned operating, capital renewal and capital upgrade expenditure	30
4.1 Demand Drivers and Forecast.....	10	APPENDIX B – Buildings and Complexes Rules for Finance and Asset Finda.....	31
4.2 Climate Change.....	10	APPENDIX C – Strategic Document Recommendations	33
4.3 Legislation change.....	10	APPENDIX D – Road Classification Maps.....	36
4.4 Changes in Technology	10	APPENDIX E – Road Cross Section Standard Drawings	37
4.5 Demand Management Plan	10	APPENDIX F – Renewal Priorities	40
4.6 New Assets from Growth.....	10	APPENDIX G – Upgrade Priorities.....	45
5. LIFECYCLE MANAGEMENT PLAN.....	12	APPENDIX H – Road Action Plan	48
5.1 Background Data	12	APPENDIX I – Defect Types and Repair Timeframes.....	53
5.2 Risk Management Plan	17	APPENDIX J – Defect Notification and Resolution Process.....	54
5.3 Maintenance Plan.....	19		
5.4 Renewal Plan.....	20		
5.5 New and Upgrade Plan.....	22		

Tables

Table 1: Lifecycle Costs	1
Table 2: Planned Maintenance and Renewal Expenditure.....	1
Table 3: Assets Covered by the IAMP – Roads	3
Table 4: Strategic Goals and how they are addressed in this IAMP	2
Table 5: Customer Values.....	2
Table 6: Community Levels of Service.....	6
Table 7: Technical Levels of Service.....	8
Table 8: Climate Change Adaptation Plan Actions	11
Table 9: Demand Management Plan	11
Table 10: Physical Parameters, including age profile.....	12
Table 11: Roads Asset Service Hierarchy	13
Table 12: Service Deficiencies.....	14
Table 13: Valuation Summary as at 30 June 2023	16
Table 14: Risk Assessment Summary	17
Table 15: Historic Maintenance Expenditure.....	19
Table 16: Renewal Priority Ranking Criteria – Roads	20
Table 17: Renewal Priority Ranking Criteria – Footpaths	20
Table 18: Lifecycle Costs	23
Table 19: Accumulative Renewal Funding Gap.....	24
Table 20: Improvement Plan	27

Figures

Figure 1: Visitor satisfaction with quality of road signage	4
Figure 2: Visitor satisfaction with quality of roads	4
Figure 3: Asset Condition – Sealed Roads.....	14
Figure 4: Asset Condition – Sheeted Roads	15
Figure 5: Asset Condition – Carparks.....	15
Figure 6: Asset Condition – Footpaths.....	15
Figure 7: Maintenance Expenditure Projections.....	20
Figure 8: Projected Renewal Expenditure.....	21
Figure 9: New and Upgrade Forecast.....	22
Figure 10: Financial Projections – Operating, Capital Upgrade and Capital Renewal.....	23
Figure 11: Projected Asset Renewals – Including \$2m DPTI funding.....	23
Figure 12: Current Replacement Cost Forecast.....	24
Figure 13: Depreciation Forecast	24
Figure 14: Depreciated Replacement Cost Forecast	24

1. EXECUTIVE SUMMARY

This IAMP, Chapter 8, is to be read with IAMP Chapter 1 – General Statements.

1.1 The Purpose of the Plan

Refer Chapter 1 – General Statements.

This chapter covers the infrastructure assets that comprise a Roads network to enable safe and efficient travel on Kangaroo Island.

1.2 Asset Description

Assets included in this IAMP – Chapter 8, Roads are:

- Roads (Township, Rural and Access Roads)
 - Road Surfaces:
 - Sealed, Pavement, Sub-Pavement, Formation
 - Sheeted, Sub-Sheeted, Formation
- Carparks
- Footpaths
- Guard Rail fencing
- Pram ramps
- Signs
- Walking Trails/Shared Use Paths

The Roads network has a total replacement value of \$393,268,606.

1.3 What Does it Cost?

The key indicators of cost in providing levels of service used in this IAMP are lifecycle costs and maintenance and renewal expenditure.

1.3.1 Lifecycle Costs (Long Terms costs)

Lifecycle costs are the average costs that are required to sustain the service levels for the longest asset life. Lifecycle costs include maintenance and asset consumption (depreciation expense). Lifecycle expenditure is maintenance plus capital renewal expenditure.

Table 1: Lifecycle Costs

Asset Category	Roads
Average Annual Lifecycle Cost	\$9,778,696
Average Lifecycle Expenditure	\$7,593,519
Life Cycle Gap	\$2,185,177
Sustainability Index	78%

1.3.2 Planned Maintenance and Renewal Expenditure (Medium term costs)

The projected maintenance and capital renewal expenditure to deliver existing service levels for the period 2023 to 2033 versus Council's planned maintenance and capital renewal expenditure is shown in the table below. Council currently receives \$2,000,000 annually (\$3,500,000 indexed for the next 4 years) from DPTI for the renewal of high traffic volume unsealed roads as well as funding through Roads to Recovery (amount varies each year but maximum is \$500,000). It is anticipated that this will continue until it is no longer required and as such this plan has been written assuming the funding will continue for the length of the plan. If this does not continue, the condition of the roads will deteriorate as funding from Council rates is not sufficient to maintain the entire network.

For further information on financial indicators, refer to Section 6 of this Chapter of the Infrastructure and Asset Management Plan.

Table 2: Planned Maintenance and Renewal Expenditure

Asset Category	Roads
Total 10 Year Maintenance & Capital Expenditure	\$75,935,188
Average 10 Year Maintenance & Capital Renewal	\$7,593,519
Planned Maintenance & Capital Renewal Expenditure (2023-24)	\$8,776,234
Average 10 Year Planned Maintenance & Capital Renewal Expenditure	\$7,491,330
Sustainability Index	116%

1.4 Plans for the Future

Refer Chapter 1 – General Statements.

In addition, Council plans to operate and maintain the Roads network to achieve the following strategic outcome and objective from the Kangaroo Island Council Strategic Plan 2020-2024 (Kangaroo Island Council, 2020):

- Infrastructure: A built environment focused on essential and community service
 - 1.1 Road and Assets: Develop and maintain our roads and physical assets to acceptable standards

For further information on strategic actions, refer to section 3.2 of this Chapter of the Infrastructure Asset Management Plan.

1.5 Measuring our Performance

Refer Chapter 1 – General Statements.

1.5 The Next Steps

Refer Chapter 1 – General Statements.

2. INTRODUCTION

2.1 Background

This IAMP, Chapter 8, is to be read with IAMP Chapter 1 – General Statements.

This Chapter covers the assets involved with the Roads network on Kangaroo Island and represents the asset base as at 30 June 2023.

2.1.1 Strategic Linkages

In addition to the documents listed in Chapter 1 – General Statements, this infrastructure and asset management plan has considered and is aligned with the following strategic and planning documents:-

- 2020 Transport Plan (Southern & Hills Local Government Association, 2015)
- Inquiry Into the National Road Safety Strategy 2011-2020 (NRSS Inquiry Panel, 2018)
- Kangaroo Island Council Roadside Vegetation Management Plan 2007 (Kangaroo Island Council, 2007)
- Kangaroo Island Regional Transport Strategy (KI Regional Transport Strategy Steering Group, 2007)
- Road Classification Guidelines In South Australia (Local Roads Advisory Committee for the Determination of Road Classification in South Australia, 2018)
- Road Network Extension Policy (Kangaroo Island Council, 2014)

2.1.2 Infrastructure and Assets included in the plan

This infrastructure and asset management plan the infrastructure assets in Table 3.

2.2 Goals and Objectives of Asset Management

Refer Chapter 1 – General Statements.

Table 3: Assets Covered by the IAMP – Roads

Asset Category	Dimension	Replacement Value (\$)
Roads	1342 km	\$382,386,956
Sealed	273 km	
Unsealed	1070 km	
Carparks	49	\$2,862,413
Footpaths	13953	\$3,536,673
Guardrails	8603.5	\$1,816,550
Walking Trails	18038	\$1,144,584
Pram Ramps	192	\$201,600
Signs	3863	\$1,319,831
TOTAL		\$393,268,606

2.3 Plan Framework

The key elements of this IAMP are:-

- Levels of service
specifies the services and levels of service to be provided by Council.
- Future demand
how this will impact on future service delivery and how this is to be met.
- Life cycle management
how Council will manage its existing and future assets to provide the required services.
- Financial Summary
what funds are required to provide the services.
- Asset Management Practices
what systems, standards and guidelines are utilised to maintain and further develop asset management practices.
- Plan Improvement and Monitoring
how the plan will be assessed to ensure it is meeting Council's objectives.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Through the asset management survey conducted in December 2023 and January 2024, the respondents provided feedback on how satisfied they are with a number of Road Asset.

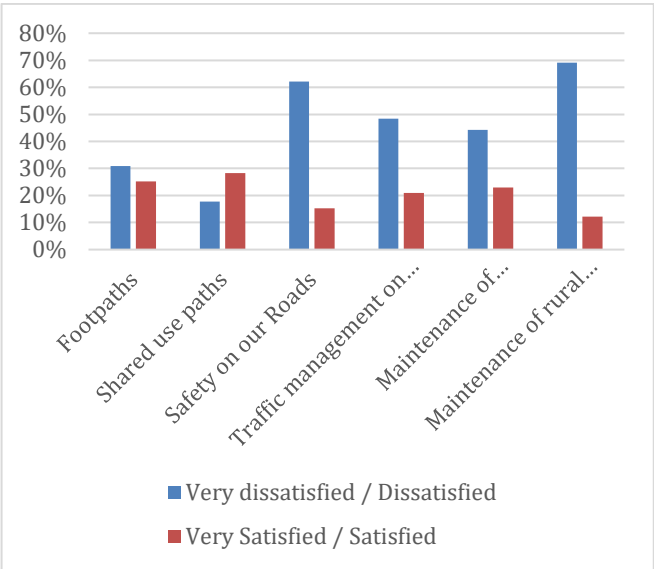


Figure 1: Community satisfaction with Roads Assets

Figure 1 shows that overall respondents were more dissatisfied than satisfied with Roads assets with the exception of shared used paths. This is consistent with the results of the prioritisation of capital projects where Road actions were listed as the highest priority. Road related projects were also the most commonly listed when respondents were asked for the three projects they would like to see on Kangaroo Island.

This response demonstrates that the community would still like improvements in this area.

Refer Chapter 1 – General Statements.

Of all Council’s assets, roads are considered the resident’s highest priority. This is reflected by the Residents Infrastructure priorities indicated through the resident surveys run by TOMM Kangaroo Island Committee and shown in Chapter 1 – General Statements.

The following figures show responses to the surveys run by TOMM Kangaroo Island Committee (TOMM Kangaroo Island Committee, 2019) that are specifically relevant to Roads.

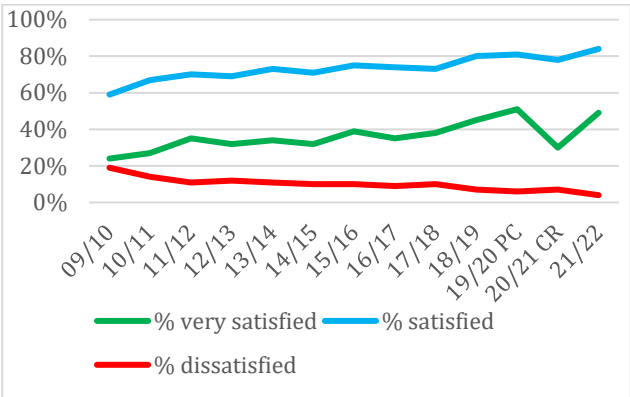


Figure 2: Visitor satisfaction with quality of road signage

Figure 2 indicates a gradual improvement in visitor satisfaction with road signage, indicating that Council is generally doing well with road signage. The decrease in 20/21 is consistent with all satisfaction levels during Covid Recovery.

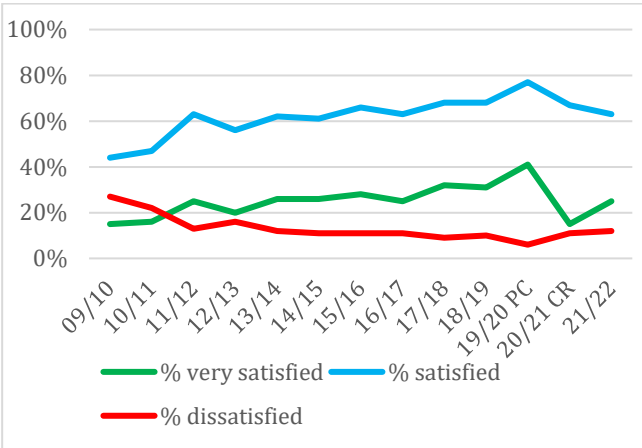


Figure 3: Visitor satisfaction with quality of roads

Figure 3 shows that overall there has been an improvement with visitor satisfaction with the quality of roads, although there was a decrease in satisfaction in the latest two surveys. It demonstrates that Council is heading in the right direction with the work done over the past 10 years however this work needs to continue to ensure the ongoing improvement of our roads.

3.2 Strategic and Corporate Goals

Refer Chapter 1 – General Statements.

Council’s Strategic objectives and how these are addressed in this IAMP are summarised in Table 4.

In addition, Council's Vision and Mission are addressed in this infrastructure and asset management plan by:

- Road classifications and priority given to tourism and freight routes for capital renewal and programmed maintenance.
- Road upgrades to be done in line with Levels of Service and road classification criteria.
- Undertake regular asset valuations, updates and annual review of depreciation rates. Annually review service levels of assets and condition ratings for each asset category.

3.3 Legislative Requirements

Refer Chapter 1 – General Statements.

3.4 Levels of Service

Refer Chapter 1 – General Statements.

3.4.1 Customer Values

Council's Customer Values for Roads are set out in Table 5.

3.4.2 Community Levels of Service

Council's Community Levels of Service for Roads are set out in Table 6.

3.4.3 Technical Levels of Service

Council's Technical Levels of Service for Roads are set out in Table 7.

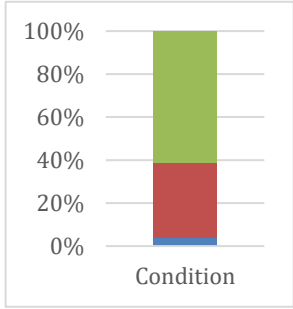
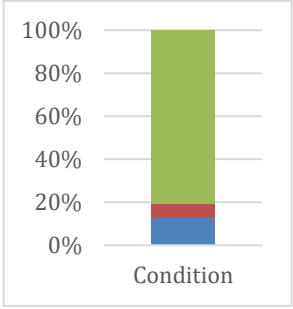
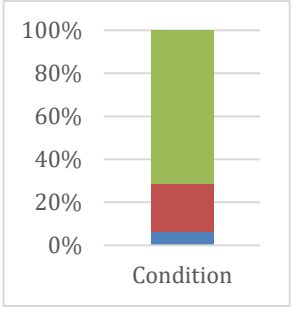
Table 4: Strategic Goals and how they are addressed in this IAMP

Goal	Objective	How Goal and Objectives are addressed in this IAMP
A built environment focussed on essential and Community services	Develop and maintain our roads and physical assets to acceptable standards	<p>1.1.2 Secure at least \$2M per annum Local Road Sustainability funding— included in the Improvement Plan.</p> <p>1.1.3 Develop joint asset management plans with government agencies for roads and marine infrastructure.— included in the Improvement Plan.</p> <p>1.1.4 Obtain funding to undertake a road safety audit and plan – to achieve national safety standards (including signage for all island roads).— included in the Improvement Plan.</p>
Our environment is maintained, enhanced and protected	Statutory requirements are met for animal, land and vegetation management.	4.3.2 Review and revise Council's Roadside Vegetation Management Plan— included in the Improvement Plan.

Table 5: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Roads – Safe and smooth driving experience	Customer Complaints and TOMM survey	Significant number of complaints about road surfaces	Not anticipated to significantly change
Roads – Appropriate of sight	Customer Complaints	Minimal number of complaints on roadside vegetation	Not anticipated to significantly change
Roads – Clear and accurate signage	Customer Complaints	Minimal number of complaints on signs and line markings	Not anticipated to significantly change
Footpaths clear	Customer Complaints	Moderate number of complaints about hazards on footpaths and walking trails	Not anticipated to significantly change
Sufficient pram/kerb ramps	Customer Complaints	Minimal complaints relating to pram/kerb ramps	Not anticipated to significantly change
Sufficient carparking	Customer Complaints	Minimal complaints relating to quantity of carparks	Not anticipated to significantly change

Table 6: Community Levels of Service

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Sealed Roads – Provide smooth ride and appropriate line of sight	Percentage of sealed roads in good or fair condition (per km) ²	96% of sealed roads have a condition rating of fair or better	The planned budget/LTFP is likely to result in a gradual increase in the condition of assets
	<i>Confidence levels</i>		 <p>High</p>	Medium
	Sheeted Roads - Provide smooth ride and appropriate line of sight	Percentage of sheeted roads in good or fair condition (per km) ^a	89% of sheeted roads have a condition rating of fair or better	The planned budget/LTFP is likely to result in a gradual increase in the condition of assets
	<i>Confidence levels</i>		 <p>High</p>	Medium
	Footpaths and walking trails – Provide even surface with no tripping hazards	Percentage of footpaths and walking trails in good or fair condition (per m)	94% of footpaths have a condition rating of fair or better	The planned budget/LTFP is likely to result in an increase in the number of assets but the overall deterioration of existing assets.
	<i>Confidence levels</i>		 <p>High</p>	Medium

² Roads in good or fair condition are those that have a condition of 1, 2 or 3 based on the 'Condition assessment and asset guidelines', 2015 and assessment conditions conducted as part of the valuation in 2020.

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Function	Road Signage – Signs are clear and able to be read	Percentage of signs that are replaced as required	Signs are replaced as required ³	No change expected
	<i>Confidence levels</i>		Low	Low
	Sealed Roads – Roads are built to the standard suitable for that road class	% of rural high use and township roads that are sealed	94% (by length) of rural high use and township roads that are sealed	Expected to gradually increase
	<i>Confidence levels</i>		High	Medium
	Sheeted Roads – Roads are built to the standard suitable for that road class	% of sheeted roads that have appropriate material ⁴	90% (by length) of sheeted roads have appropriate material	Expected to gradually increase
	<i>Confidence levels</i>		Medium	Medium
Capacity	Footpaths and walking trails – Separated from vehicle traffic	% of township footpaths separated from vehicle traffic	Majority of footpaths and walking trails are separate from vehicle traffic	No change expected
	<i>Confidence levels</i>		Low	Low
	Roads – Roads are classified correctly	Road usage categories are accurate	Majority of roads are correctly classified	Ongoing traffic counts will allow for ongoing improvement of the road classifications
	<i>Confidence levels</i>		Low	Medium
	Footpaths and walking trails – Footpaths are provided in areas of high pedestrian usage	% of Kingscote township that has cement, paved or spray seal footpaths	20% (by length) of Kingscote township that has cement, paved or spray seal footpaths	Expected to gradually increase
	<i>Confidence levels</i>		Medium	Low

³ Approximately 10% of signs have been replaced as a result of the fires however there are more within the fire scar that need replacing.

⁴ Minimum 150mm sheet/pavement remaining for Rural – Medium Use roads and minimum 100mm sheet/pavement remaining for Rural – Low or Very Low Use roads

Table 7: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance ⁵	Recommended Performance
Acquisition	Seal Township ⁶ Roads	Budget allocation and forecast time	Budget / LTFP allocation of \$174,000 ⁷ per year after first year.	Ideally these roads should be sealed within 15 years – resulting in \$482,000 ⁸ per year however plan has been set for an average \$174,000 per year (plus CPI)
	Seal Rural High Use Roads	Budget allocation and forecast time	Upgrade of Ten Trees Lagoon Road with grant funding	No intention to seal remaining roads at this point without external funding
	Sheet existing roads that are unsheeted	Budget allocation and forecast time	No budget currently allocated	No budget unless Council position changes.
	Town Centres to have footpaths on both sides of the road, remainder of towns ⁹ to have footpath on one side of the road	Budget allocation and forecast time	Budget allocation of \$290,000 annually	\$290,000 per year (plus CPI) means it will take 29 years to complete ¹⁰
Budget			\$11,865,888 Total (10 years)	\$11,865,888 Total (10 years) ¹¹
Operation and maintenance	Streets are clean	Street sweeping frequency	Monthly for Dauncey Street and Middle Terrace 4 times/year for Kingscote Town Centre 2 times a year for other township roads	No change
	Vegetation clearance	Vegetation clearance maintained as per Roadside Vegetation Management Plan	Budget is sufficient to cover current vegetation clearing requirements but no data to ensure this	Develop vegetation condition assessment process to allow for better scheduling of vegetation clearance. Once off cost.
	Sheeted roads maintained in suitable condition	Frequency of grading roads	Medium use roads – 4 times per year	Review grading schedule to suit the road material and condition.

⁵ Current activities related to Planned Budget.

⁶ Township roads covers existing made roads within Kingscote, Parndana, Penneshaw and American River.

⁷ \$25,000 of this is allocated per year for kerbing. This needs to be moved to the Stormwater AMP in a future revision.

⁸ This cost does not include stormwater kerbing and pipes.

⁹ Kingscote, Parndana, American River, Penneshaw and Emu Bay

¹⁰ This is for all concrete paths, if spray seal used instead this shortens the timeframe

¹¹ Note: This includes grant funding the upgrade of Springs Road that has not been incorporated into the budget or LTFP

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance ⁵	Recommended Performance
Renewal			Low use roads – 3 times per year Very Low use roads ¹² – once per year Grading schedule developed – only roads in the schedule are graded	No change to budget at this stage.
	Roads – Existing infrastructure maintained to suitable condition	Reactive service requests are assessed and completed within adopted timeframes	As no timeframes adopted, unable to accurately monitor current performance	Develop standard for responding to reactive service requests. No change to budget at this stage.
	Footpaths and walking trails have clear access.	Frequency of routine maintenance (vegetation clearance – 2.5m height clearance for width of path, ant treatment, erosion, grass clearance)	Maintenance currently conducted in response to customer requests or staff observations	Quarterly inspections with scheduled maintenance.
		Budget	\$24,383,884 Total (10 years)	\$33,077,351 Total (10 years)
	Sealed roads	Sealed roads are renewed as due	Resealing budget / LTFP set based on average 20 years between reseals	Resealing should occur when due (average 20 years between reseals)
	Sealed Roads	Pavement renewed as due	Resealing renewal budget set to allow for this to start occurring	Renewal of pavement should occur when due to avoid need for complete road reconstruction if left too long.
	Sheeted Roads	Sealed roads are renewed as due	Resheeting 25km of road annually, means over 40 years between resheets. Low use roads not being renewed.	Renewal should occur when due (average 25 years between resheeting)
	Footpaths	Footpaths renewed as required	\$50,000 budget currently allocated for renewal of footpaths annually	Renewal should occur when due – average of \$50,000 per year (plus CPI)
	Guardrails	Guardrails renewed as required	Minimal budget currently allocated for renewal of guardrails	Renewal should occur when due
		Budget	\$41,835,950 Total (10 years)	\$42,857,837 Total (10 years)
Disposal	Disposal of assets no longer in use	Disposal of assets as per the IAMP	No disposals planned	No disposals planned
		Budget	\$0 Total (10 years)	\$0 Total (10 years)

¹² Formed only roads may be graded at a maximum of once per year where possible.

4. FUTURE DEMAND

4.1 Demand Drivers and Forecast

Refer Chapter 1 – General Statements.

4.2 Climate Change

Refer Chapter 1 – General Statements.

The Climate Change Adaptation Plan (Resilient Hills and Coasts, 2016) also had a number of adaptation options that related specifically to transport and roads.

A review has been conducted to identify roads assets that are at risk of high tide and storm surges currently, by 2050 and by 2100. Those at risk include roads, carparks, walking trails and guardrails. It is not necessary to relocate any of these assets at the moment however they will be monitored to determine if this changes.

4.3 Legislation change

There are no anticipated legislation changes that will impact on road assets at the present time.

4.4 Changes in Technology

Technology changes are forecast to have little impact on the delivery of services covered by this Roads Infrastructure and Asset Management Plan.

Some of the potential technology changes include:

- Greater use of in-situ recycling of pavement materials
- Greater use of recycled materials
- Introduction of synthetic binders for road surfacing treatment, as a result of crude oil shortages and bitumen products

Council previously contracted Tonkins to complete a study on pavement material and stabilisations. At this stage, resheeting is the most cost effective method for maintaining roads.

4.5 Demand Management Plan

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

Demand impacts and opportunities identified to date for demand management are shown in Table 9.

4.6 New Assets from Growth

The new assets required to meet growth and community expectations will be acquired from land developments and constructed by Council.

As per Council's Road Network Extension Policy "Council will not develop and construct new road nor upgrade an existing road unless the associated construction or upgrade costs are fully borne by the Applicant/s – or – the construction or upgrade is undertaken with the assistance of a significant financial co-contribution provided by the Applicant/s, they having proven the construction or upgrade is warranted within the Kangaroo Island Strategic Management Plan and, subsequently, having any related costs included in the current budget."

Based on the recommended technical levels of service the following new assets are considered in the forecast costs:

- Seal of Township¹³ roads within 15 years
- Seal Rural High Use roads within 10 years
- Kingscote Town Centre to have Concrete/Paved footpaths within 10 years and remainder of Kingscote to have bitumen sealed footpaths

The costs associated with these projects and the comparison to the proposed budget are discussed in section 5.5.

¹³ Township roads covers existing made roads within Kingscote, Parndana, Penneshaw and American River.

Table 8: Climate Change Adaptation Plan Actions

Adaptation Options	Timeframe	Council comment/action
Management of the condition of sealed and unsealed roads in the face of altered climate change conditions such as increasing rainfall intensity and seal level rise, as well as increasing use		
Identify points of vulnerability in the road network	Now – 2026	The mapping tool from the Coastal Hazards Mapping Project has been used to assist with this identification. Flood mapping has not been scheduled at this stage.
Investigate internal capacity building regarding the impacts of climate change on assets and procurement	Now – ongoing	Council currently investigating this through a Climate Change Adaptation Governance Assessment.
Incorporate design allowances for increases in extreme events	2021 – ongoing	When road upgrades or renewals occur, designs will need to give consideration to factors such as increased rainfall and storm surges to determine if raised road levels, increased drainage or stormwater management are required. Any increase in costs to complete these works will result in less upgrades occurring for the allocated budget.
Seal currently unsealed roads to protect against stormwater damage	2021 – ongoing	The extent to which this is done is limited by budget restraints. Refer to the Technical Levels of Service for more information.
More frequent bitumen resealing and use of alternate road sealing surfaces	2026 – ongoing	The extent to which this is done is limited by budget restraints. Refer to the Technical Levels of Service for more information.
Develop strategic water and freight points across the Island	2026 – ongoing	The prioritisation of rural road upgrades relates to the road classifications, traffic counts and knowledge of freight routes with the aim to create traffic corridors around the Island.
Develop alternate entry and exit points on farms	2026 – ongoing	This would be led by farm owners however should be done in consultation with Council to ensure consideration is given to the road classifications.

Table 9: Demand Management Plan

Demand factor	Projection	Impact on services	Demand Management Plan
Aging population	Increase in median age (currently 46)	Increase in need for good quality roads and footpaths in townships to allow for elderly mobility	Continue with staged upgrades of township roads and upgrade of footpaths within Kingscote that are controlled and not reactive in accordance with Council's Levels of Service and Council's road classification criteria and Council's Pedestrian Generator Plan for Townships. Develop Pedestrian Generator Plan for townships to assist with prioritisation of footpaths.
Population density	Increase in people wanting to live in remote areas	Increase in requests for unsealed roads to be upgraded and unmade road reserves to be opened up due to sale of land zoned for rural living/housing.	Monitor road usage and review use classifications and road prioritisation Application of the Road Network Extension Policy
Agricultural practices	Growth in bulk production and potential for new sectors (ie timber, potatoes)	Potential for shift in the major routes used and increase in use of B-double configuration freight vehicles / request for upgrade of existing rural roads to meet increased traffic volumes and/or change in usage (ie Freight Route).	Monitor agricultural practises and road usage through ongoing traffic counts Continue to review road use classifications and roads prioritised for upgrade Application of the Road Network Extension Policy
Changes to tourism as a result of the 2019/20 bushfires	Increase in tourists visiting the Eastern End of island	Increase in requests to upgrade roads on Eastern End of the Island	Continue to review road use classifications and roads prioritised for upgrade

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed service levels while optimising lifecycle costs.

5.1 Background Data

5.1.1 Physical Parameters

The assets covered by this infrastructure asset management plan are shown in Table 10: Physical Parameters, including age profile.

5.1.1.1 Service level hierarchy

An initial road hierarchy was established in 2010 based on Managing Unsealed Roads in South Australia (TRB, 1993). Road reclassification projects were undertaken in 2015 and 2019.

According to the Road Classification Guidelines in South Australia, all roads on Kangaroo Island would be considered Rural Roads, with the potential for them being either Rural Arterial Roads or Rural Local Roads. Rural Arterial Roads are those roads

- That have a main function of forming the principal avenue of connection for movements:
 - Between Capital Cities, key towns and Important Centres or
 - The National Land transport network, Major traffic routes or Freight Routes or Major Local Freight Routes
 - Currently classed as Class 1 and Class 2 Roads
 - To major tourist locations
- That facilitate A-Double, B-Double, Performance Based Standards (PBS) or General Access heavy vehicle movements, with volumes in the order of 50 or more vehicles per day, not local in nature (ie through traffic)
- That carry in the order of 300 vehicles or more per day (Annual Average Daily Traffic) of which a significant proportion are not local in nature (ie through traffic)

This means that the majority of roads on Kangaroo Island would be classed as Rural Local Roads. This does not sufficiently distinguish between the different types of roads on Kangaroo Island.

The table below outlines the road classifications, the criteria for determining the classification and the service level objective.

Table 10: Physical Parameters, including age profile

Asset	Quantity and Unit	Useful Life (years)	Average Condition (years)
Roads	1342		
Formation Earthworks	1342	250	N/A
Sub Surface	1296	250	N/A
Sheeted Surface	1070	15-30	Good
Sealed Surface	273		
Pavement	273	18-40	Average
Seal	273	80-100	Good
Carparks			
Formation Earthworks		400	N/A
Sheeted Surface	35	20	Average
Sealed Surface	14		
Pavement	14	30	Average
Seal	14	100	Good
Footpaths	13953		
Concrete	6609	50	Good
Paved	3309	50	Good
Spray Seal	3950	25	Average
Mixed surface	83	50	Good
Guard Rails	8603.5	50	
Box Beam	25	50	N/A
Steel Tube	380		N/A
W-Beam	8198.5	50	N/A
Walking Trails	18038		
Base Course	18038	100	Excellent
Spray Seal	12134	30	Excellent
Pram Ramps	192		
Standard Design	120	50	Excellent
Narrow design	72	50	Good
Signs (regulatory)	3863	20	Good

Service hierarchy for assets other than roads have not yet been developed.

Note: The Government Agencies Fire Liaison Committee (GAFLC) also has Fire Access Tracks (Major, Standard, Minor and Service). Although these tracks may be located on road reserves they are not maintained by Council. Similarly, driveways that have been, with Council approval,

constructed to a GALFC standard (State Bushfire Coordination Committee, 2015) on a road reserve will not be maintained by Council. These may be listed on the asset register as unmade – accessible.

In some circumstances, a road may have been built to a standard higher than the minimum standard. In these cases, maintenance of these roads will generally be reflective of its actual service level objective.

There may also be roads within a classification that currently do not meet the service level objective. These roads will be monitored for vehicle counts to confirm classification and if warranted, included on the plan for future upgrades.

The asset database reflects the actual construction of the road rather than the service level objective and includes roads that are formed only¹⁴, access roads or unmade/natural formation¹⁵ – accessible or inaccessible.

For more information refer to the Appendices:

- Appendix B for Roads Rules for Finance and AssetFinda
- Appendix D for Maps showing the Road Classifications and the Road Surfaces
- Appendix E for road classifications cross section standard drawings

5.1.1.2 Traffic Counters

Traffic counters are used to capture actual traffic count numbers, speed and vehicle class types (i.e. Class 1 standard short vehicles or cars through to Class 10 B-

Double or heavy truck and trailer). They can be used to trigger a reclassification if the actual traffic count is higher or lower than previously thought.

Table 11: Roads Asset Service Hierarchy

Service Hierarchy	Description	Service Level Objective
Township Roads¹⁶		
High use	>800 vpd ¹⁷	Sealed ¹⁸ with kerbing ¹⁹
Medium use	100-800 vpd	Sealed with kerbing
Low use	<100 vpd	Sealed with kerbing
Rural Roads		
High use	>100vpd or >10 heavy vpd	Sealed ²⁰
Medium use	50-100 vpd or 5-10 heavy vpd	Sheeted ²¹ - 100mm base course, 150mm sub-base, graded 4 times per year ²²
Low use	25-50 vpd	Sheeted - 100mm base course, 100mm sub-base, graded 3 times per year
Very low use	<25 vpd	Sheeted - 150mm compacted quarry rubble, graded once per year
Footpaths, walking trails, guardrails, carparks and pram/kerb ramps	To be developed in future iterations of this IAMP	

¹⁴ Roads that have earthworks to form the sub grade with no additional material on top but the road corridor may have been widened, vegetation cleared and the road formed to shape.

¹⁵ Existing natural land and vegetation

¹⁶ This only includes Kingscote, Penneshaw, Parndana and American River Roads – all others are counted as rural roads. Some roads that are outside the Kingscote Township boundary have been counted as Township roads.

¹⁷ The vehicle counts provide an indication of the appropriate usage category however seasonal change in traffic counts can make this difficult. Council will take other factors into consideration when determining final road usage categories. For example creating travel corridors.

¹⁸ Roads that have earthworks to form the sub grade, topped with pavement (preferably 2 layers of crushed /processed road making base material) and sealed with spray seal, ac hot mix seal or brick paving. Some older roads may only have 1 layer of pavement.

¹⁹ Aim is for all township roads to eventually be sealed with kerbing, however priority is given to higher use roads.

²⁰ "As a rough guide, it may be difficult to economically justify sealing a road carrying less than 100 vpd, whereas if it is carrying over 250 vpd it will probably be justified. In between these values is the 'grey area' where an economic assessment should be carried out to help make the decision when to seal (McLean 1997). When social benefits are taken into account, such as reducing dust emissions, these threshold traffic levels could be much lower." (ARRB (Australian Road Research Board), 2009).

²¹ Roads that have earthworks to form the sub grade, a pavement layer and are topped with a sheeted surface (same material as that used for a pavement in Sealed roads). Some older roads may not have a layer of pavement. Also referred to as Unsealed Roads.

²² The quality and thickness of the material used for the sheeting, pavement and sealing is determined based on a number of factors including predicted usage and the geotechnical qualities of the sub grade and proposed sheet/pavement.

5.1.2 Asset Capacity and Performance

Council's services are generally provided to meet design standards where these are available.

Asset components where deficiencies in service performance are known are detailed in Table 12.

The service deficiencies have been identified through the data collection process, review of notifications and discussions with Council Staff.

5.1.3 Asset Condition

Refer to Chapter 1 – General Statements for Asset Condition Rating System.

Roads Assets are replaced based on condition rather than age. The condition of roads assets are currently monitored every five years based on the following criteria:

- Sealed Roads and carparks: overall visual seal condition score with consideration given to oxidation, stripping and flushing and overall visual pavement condition score with consideration given to rutting, crocodile cracking and shape.
- Sheeted roads and carparks: depth score and visual score with consideration given to corrugations, potholes and loss of material
- Footpaths and walking trails: overall visual condition score with consideration given to trip hazards, service development trenches and gaps
- Guardrails: overall visual condition score
- Pram/kerb ramps and Signs: no condition assessment.

Figure 4 to Figure 7 show condition of roads assets inspected during the last revaluation.

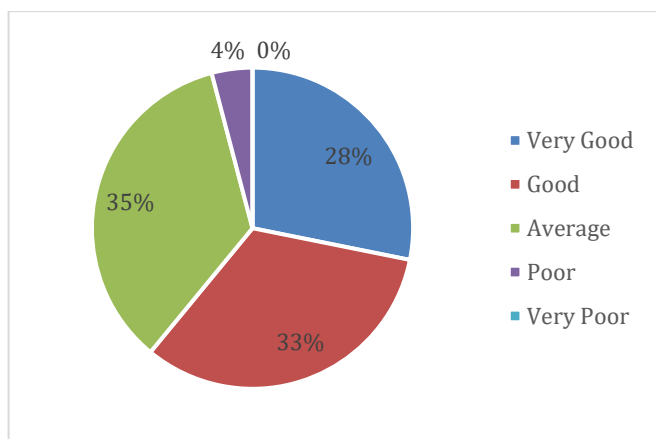


Figure 4: Asset Condition – Sealed Roads

Table 12: Service Deficiencies

Asset component	Service Deficiency	Council Comment
Footpaths in Kingscote	Poor footpath surface conditions with old spray seals and crusher dust footpaths providing uneven surfaces with little traction.	This IAMP outlines an ongoing program for the upgrade of footpaths focussing on high use areas within townships. The plan also includes a forecast of renewals due.
Road pavement	Older township roads were built with minimum pavement, not consistent with current standards	With the current traffic volumes the roads are still operational. If the road were to fail or the road upgraded for another reason, it would be built to standard.
Road intersections	Intersections between Sheeted and Sealed roads, sheeted road spilling gravel onto sealed carriageway which may result in vehicles losing control.	Council has been sealing the 30m approach of sheeted roads when they intersect with sealed roads. This will continue as funding is available.
Road surface	Approaches to bridges and on gullies, the surfacing is potholing	Council will consider sealing over bridges as would also protect the bridge deck. The cost for this has not been included within this IAMP.
Road corridor	Roadside vegetation encroaching on road carriageways limiting line of site and providing no visibility of wildlife and/or driveways	This is addressed through the ongoing vegetation management program.

The average useful life for pavements is between 80 to 100 years with seals lasting between 18 to 40 years in depending on traffic volumes. As such roads would be re-sealed two to three times before the pavement needs to be renewed with a new seal.

As can be seen from the charts above, seals are generally in good condition however this is an area that will require work during this IAMP as many will be due for renewal at a similar time.

In addition, the renewal of pavements will be an upcoming significant cost however it falls outside the forecast for this infrastructure and asset management plan.

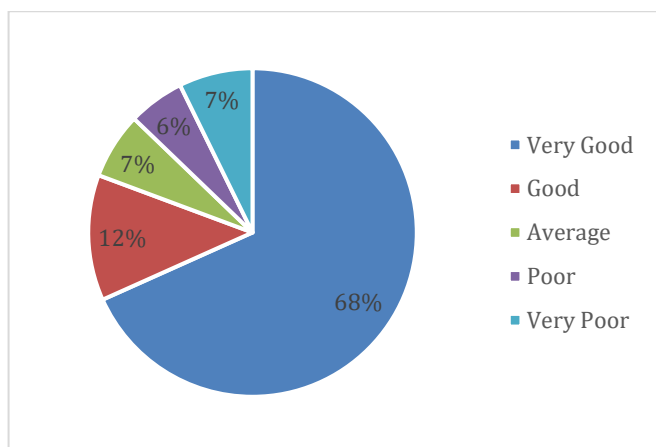


Figure 5: Asset Condition - Sheeted Roads

The condition of sheeted roads is generally very good due to the DPTI \$2 million. Provided this continues, sheeted roads will continue to maintain their standard.

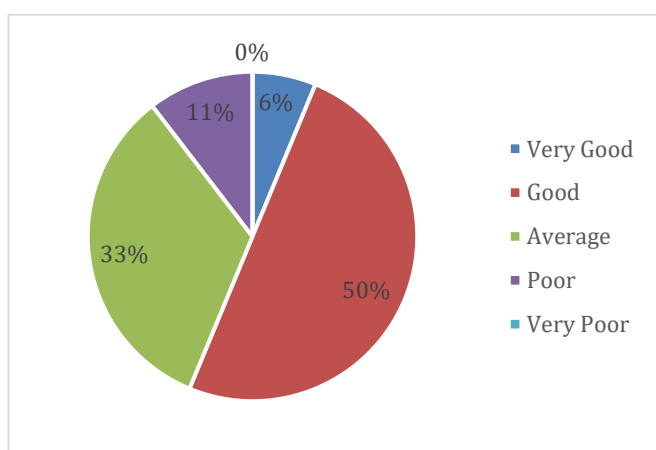


Figure 6: Asset Condition - Carparks

Carparks are generally in good condition with reasonable maintenance required to ensure they meet their intended useful life.

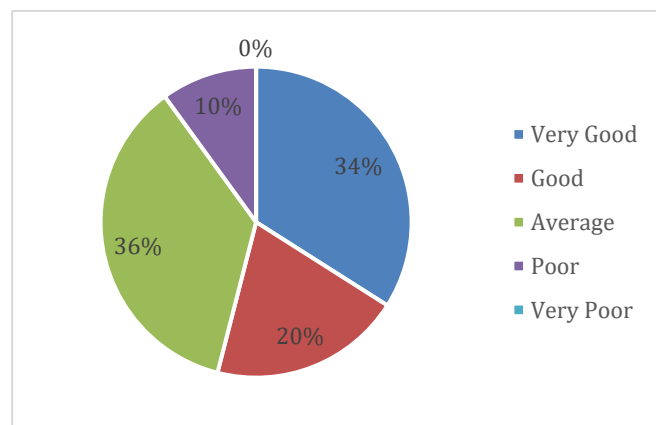


Figure 7: Asset Condition - Footpaths

Footpaths are generally in good condition with reasonable maintenance required to ensure they meet their intended useful life.

Walking trails were not inspected as these are all relatively new and known to be in good to very good condition. Age of the guardrails is currently used for determining replacement as unless there is an accident, it is a good indication of condition.

5.1.4 Asset Valuation

The value of Roads assets as at 30 June 2023 covered by this infrastructure and asset management plan is summarised below in Table 13. Assets are valued at brownfield rates.

5.1.5 Measures of asset consumption, renewal and upgrade

Asset Sustainability Ratio

	Including DPTI funding
Capital Renewal Expenditure 2023/24 =	\$ 5,503,950
Depreciation Expense 2023/24 =	\$ 2,116,672
Therefore Asset Sustainability Ratio =	260%

Council's target is that this ratio should be greater than 90% and less than 110% over a rolling 3 year period. The high ratio relates to a carry over of funds from the previous year.

Table 13: Valuation Summary as at 30 June 2023

Asset Class	Current Replacement Cost (CRC)	Depreciable Amount	Accumulated Depreciation	Carrying Amount (WDV)	Annual Depreciation
Roads					
Formation Earthworks	\$281,516,402	\$0	\$0	\$281,516,402	\$0
Sub-Pavement / Sub-Sheet	\$45,980,029	\$0	\$0	\$45,980,029	\$0
Pavement (under seal)	\$11,194,077	\$11,194,077	\$3,386,747	\$7,807,329	\$135,491
Sheeted Road	\$29,834,482	\$29,834,482	\$10,482,444	\$19,352,038	\$1,164,818
Brick Paved Road	\$9,671	\$9,671	\$1,934	\$7,736	\$484
Sealed Road	\$13,780,948	\$13,780,948	\$6,542,342	\$7,238,606	\$620,808
Linemarking	\$71,348	\$71,348	\$10,220	\$61,127	\$3,567
Roads Total	\$382,386,956	\$54,890,525	\$20,423,688	\$361,963,267	\$1,925,169
Carparks					
Formation Earthworks	\$1,227,593	\$0	\$0	\$1,227,593	\$0
Pavement (under seal)	\$495,084	\$495,084	\$143,431	\$351,653	\$4,801
Sheeted Surface	\$880,705	\$880,705	\$618,148	\$262,557	\$43,895
Sealed Surface	\$259,031	\$259,031	\$123,414	\$135,618	\$7,886
Carparks Total	\$2,862,413	\$1,634,820	\$884,993	\$1,977,420	\$56,583
Footpaths					
Concrete	\$1,425,238	\$1,425,238	\$409,075	\$1,016,163	\$22,944
Paved	\$1,600,190	\$1,600,190	\$239,686	\$1,360,504	\$14,145
Spray Seal	\$474,602	\$474,602	\$365,406	\$109,196	\$17,388
Mixed surface	\$36,643	\$36,643	\$17,222	\$19,421	\$733
Footpaths Total	\$3,536,673	\$3,536,673	\$1,031,389	\$2,505,284	\$55,209
Guardrails					
Box Beam	\$25,000	\$25,000	\$1,542	\$23,458	\$500
Steel Tube	\$76,000	\$76,000	\$72,616	\$3,384	\$168
W-Beam	\$1,715,550	\$2,224,991	\$628,803	\$1,596,187	\$37,280
Guardrails Total	\$1,816,550	\$2,325,991	\$702,961	\$1,623,030	\$37,948
Walking Trails					
Base Course	\$901,900	\$901,900	\$207,437	\$694,463	\$9,019
Spray Seal	\$242,684	\$242,684	\$78,872	\$163,812	\$8,089
Walking Trails Total	\$1,144,584	\$1,144,584	\$286,309	\$858,275	\$17,108
Pram Ramps Trails					
Standard Design	\$144,000	\$0	\$0	\$144,000	\$0
Narrow Design	\$57,600	\$0	\$0	\$57,600	\$0
Pram Ramps Total	\$201,600	\$0	\$0	\$201,600	\$0
Signs	\$1,319,831	\$0	\$0	\$1,319,831	\$0
Roads Asset Total	\$393,268,606	\$63,532,593	\$23,329,340	\$370,448,707	\$2,092,018

Asset Consumption Ratio

Depreciated Replacement Cost 23/24 = \$ 373,021,923
 Current Replacement Cost 23/43 = \$ 397,958,494
 Therefore Asset Consumption Ratio = 94%

Council's target is that this ratio should be greater than 40% and less than 80%. This ratio is indicative of the significant amount of lower layers not being depreciated.

Asset Renewal Funding Ratio

IAMP projected 10 year expenditure = \$ 42,857,837
 LTFP projected 10 year expenditure = \$ 41,835,950
 Therefore Asset Renewal Funding Ratio = 98%

This indicates that there is general alignment with the total budgets of this IAMP and the LTFP however further work needs to be done to more accurately align the costs with the correct asset categories and take into account any restrictions on the use of grant funding.

5.2 Risk Management Plan

Refer Chapter 1 – General Statements.

Risk management assessments in previous plans identified a number of critical risks. Work has been undertaken to address some/all of these risks as summarised in Table 14.

Table 14: Risk Assessment Summary

Service or at Risk	What can happen	Risk Rating	Risk Treatment Plan	Residual risk	Cost of Risk Treatment Plan
Road Funding	Insufficient funding to maintain / renew / upgrade the existing road network (due to total kms of road vs number of ratepayers).	High	Continue to lobby to get \$2-2.5 million annual funding. Develop more robust asset management plan for roads that clearly shows how road would need to be managed both with and without the \$2-2.5 million annual funding. Review road classifications and service levels (can they be lowered/reduced).	Medium High ²³ High ²³	To be completed within existing salaries
Road infrastructure	Increase in frequency and intensity of climate change events - ie rainfall resulting in flooding of roads/washing roads away; storm surges damaging coastal roads, fire damaging roads.	High	Identify areas at risk of flooding/storm surge and determine if levee banks or road design change required. Construct levee banks and upgrade roads as identified through research. Maintain stormwater cross drains/ensure suitable capacity.	High ²⁴ Medium Medium	\$15,000 Unknown Included in Stormwater IAMP
Road Surface – Unsealed Roads	Surface degradation and decreased level of service (ie loose material and corrugations that can cause loss of traction and/or tyre blow outs) due to insufficient grading or poor quality material.	High	Ensure regular patrol grading undertaken and review grading actually occurring and road surfaces to better plan/schedule future grading requirements. Ensure new unsealed roads or renewal of roads constructed to our standards (including material used meets quality assurance standards and road cross section meets design criteria). Prioritise and schedule renewals based on condition and road classification	Medium if all implemented	Within existing salaries Unknown but incorporated into road costs
Road surface and signage	Accidents due to visitors not being familiar with local conditions, driving on wrong side of road, multiple signs with	High	Continue working with the Road Safety Committee on signage around the island.	High ²⁵	Within existing salaries

²³ While these do not reduce the risk rating due to the amount of money involved, they are still important to action to assist with both Council understanding of the impacts and demonstrating the need for the funding to the Government.

²⁴ Doesn't reduce risk but needs to be done prior to implementing the action which would reduce the risk.

²⁵ Risk will always be high due to potential for fatality in consequence however these actions will lower the likelihood.

Service or Asset at Risk	What can happen	Risk Rating	Risk Treatment Plan	Residual risk	Cost of Risk Treatment Plan
	varying designs and drivers not being able to read English		Continue working with Sealink on driver education for tourists not used to unsealed roads. Ensure signage meets Australian Standards - ongoing signage review.		Within existing salaries
Road signage	Warning signage not meeting with Australian Standards due to age of infrastructure and not having been replaced/upgraded	High	Rolling capital replacement program.	Medium	Within existing maintenance budget
Roads	Complaints from residents and visitors as to the quality of the roads	High	Ongoing communication with residents as to which roads upgraded, why not grading in summer, road use classifications, cost of upgrades. As above re: Road safety Committee and Sealink	Medium	Within existing salaries and communication budget
Road Surface - Unsealed Roads	Accident due to newly constructed road has slippery surface due to weather, poor drainage and suitability of materials used in construction	High	Ensure new unsealed roads or renewal of roads constructed to our standards (including material used meets quality assurance standards and road cross section meets design criteria).	High ²⁵	Unknown but incorporated into road costs
Road Surface - Unsealed Roads	Accident due to newly constructed road has slippery surface due to weather, poor drainage and suitability of materials used in construction	High	Ensure new unsealed roads or renewal of roads constructed to our standards (including material used meets quality assurance standards and road cross section meets design criteria).	High ²⁵	Unknown but incorporated into road costs
Roadside vegetation	Accident resulting from overgrowth of vegetation reduces width of transport corridor and decreases line of sight	High	Manage roadside vegetation as per approved Roadside Vegetation Management Plan	High ²⁵	\$290,000 annually (within existing maintenance budget)
Footpaths and Walking Trails	Tripping due to uneven surface, presence of weeds	High	Implement maintenance plan including spraying. Respond to and action customer complaints re: hazards. Undertake condition inspections on footpaths (every 5 years)	Medium if all implemented	Within existing maintenance budget. Within existing maintenance budget. Within 5 yearly roads revaluation.
Guardrails	Vehicles falling from road	High	Undertake condition assessment on guardrails (every 5 years). Prioritise and schedule guardrail renewal based on the condition assessment.	High ²⁵	Included in roads revaluation every 5 years. To build into renewal and capital works based on outcome of assessment.
Roads - Sealed roads	Vehicle accidents due to road surface conditions	High	Undertake condition assessments on roads (every 5 years). Prepare and implement 5-10 year road renewal program. Prioritise and schedule renewals based on condition and road classification	High ²⁵	Within 5 yearly roads revaluation. Existing salaries Existing salaries
Renewals	Delay in renewals results in additional deterioration of sub layers (ie pavement under seal)	High	Reassess condition of assets. Investigate options for funding renewal of assets that this may impact on.	Medium	Within existing budget Existing salaries

5.3 Maintenance Plan

5.3.1 Maintenance Types

Refer Chapter 1 – General Statements.

Typical reactive road maintenance activities include pothole repair, repair of edge breaks, reinstatement and repair of large sealed pavement failure, crack sealing, repair of seal failure in pavement, removal of loose gravel, fixing faded or missing lines, vegetation maintenance, roadside furniture, repair of broken kerb and shoulder maintenance.

Typical programmed road maintenance include road grading and linemarking which are both undertaken on a cyclic basis.

5.3.2 Maintenance Arrangements

The following is a summary of maintenance arrangements:

- Council uses its own workforce in conjunction with contractors to undertake the necessary works on the road and footpath network

- Street cleaning will be completed by contractors.
- Council uses the defects list and action timeframes as shown in Appendix I and the defect notification/resolution process shown in Appendix J.
- Council uses the Grader schedule to program when roads are graded.

5.3.3 Standards and Specifications

Maintenance work is undertaken in accordance with the following Standards and Specifications:

- Training Certificate III in Civil Construction
- Pipe Laying in accordance with Cement & Concrete Association Standards
- Signage in accordance with AS1742
- ARRB Sealed and Unsealed Local Roads Manuals

5.3.4 Maintenance Expenditure Patterns

Previous Maintenance expenditure is shown in Table 15 and exclude depreciation and finance costs (ie interest on loans).²⁶

Table 15: Historic Maintenance Expenditure

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24 Budget
Car Parks	\$24,486	\$19,954	\$25,910	\$24,011	\$19,526	\$19,526
Footpaths & Walking Trails	\$25,781	\$49,036	\$39,856	\$77,889	\$59,235	\$59,235
Roads – sealed	\$328,104	\$345,426	\$396,297	\$454,358	\$482,444	\$482,444
Roads – unsealed	\$673,526	\$770,092	\$726,718	\$966,603	\$1,203,622	\$1,203,622
Roads – vegetation	\$248,757	\$230,399	\$345,399	\$407,988	\$362,585	\$362,585
Roads – patrol grading	\$639,342	\$636,779	\$646,078	\$745,806	\$866,555	\$901,321
Street Cleaning	\$12,909	\$11,413	\$17,379	\$3,283	\$17,969	\$17,969
Traffic Control (signage)	\$86,190	\$97,020	\$77,549	\$80,676	\$110,642	\$110,642
TOTAL	\$2,039,095	\$2,160,119	\$2,275,186	\$2,760,614	\$3,122,578	\$3,157,344

²⁶ Note: In the previous iteration of this document, full cost allocation was also excluded. This has now been included.

5.3.5 Future Maintenance Expenditure

Maintenance expenditure projections for the next ten years are detailed in Figure 8.

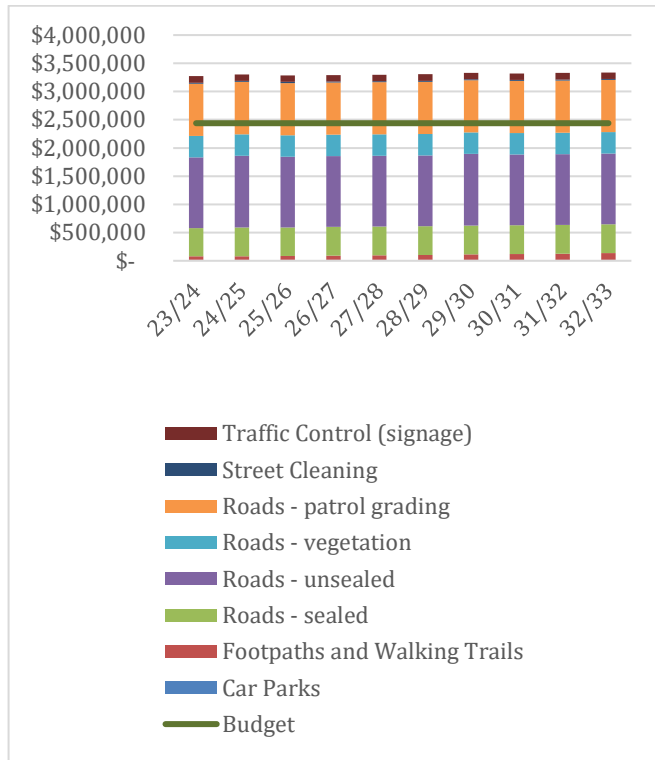


Figure 8: Maintenance Expenditure Projections

5.4 Renewal Plan

Refer Chapter 1 – General Statements.

5.4.1 Renewal Priority

Refer Chapter 1 – General Statements.

The priority ranking criteria for roads is detailed in Table 16 and the priority ranking criteria for footpaths is detailed in Table 17.

Table 16: Renewal Priority Ranking Criteria - Roads

Criteria	Weighting
Condition	No weighting ²⁷

²⁷ Initial review of assets for renewal based on renewal date which is based on condition. This approach is used due to the significant number of roads assets due for renewal that fall into this category.

Criteria	Weighting
Hierarchy Classification	50%
High use	5
Medium use	4
Low use	3
Very low use	2
Function Classification ²⁸	20%
Freight	
Regional Freight Route	5
Local Freight Route	3
Seasonal Freight Route	1
Tourism	
Regional Tourism Route	5
Local Tourism Route	3
Seasonal Tourism Route	1
Local Access	
Very high access (links townships)	5
High access (greater than 10 dwellings)	4
Medium access (between 5 – 10 dwellings)	3
Low access (between 2- 5 dwellings)	2
Very Low access (less than 2 dwellings)	1
School Bus Route	3
Risk Management & Safety	20%
Very High Risk	5
High Risk	4
Medium risk	2
Low risk	0
Economic Development Priority	10%
Future development planned	5
Medium development potential	3
Low development potential	2
No development potential	0
TOTAL	100%

Table 17: Renewal Priority Ranking Criteria - Footpaths

Criteria	Weighting
Enhances public safety	30%
Significantly	5
Moderately	3
Minimally	1
Provides links to other paths	20%
Multiple paths	5

²⁸ Sum of each category

Criteria	Weighting
Some paths	3
No paths	1
Provides access to public facilities	20%
Very high access	5
High access	4
Medium access	3
Low access	2
Very low access	1
Close proximity to pedestrian generating facilities	20%
Very close to multiple facilities	5
Close to multiple facilities	3
Not close	1
Visual Impact	10%
Very high	5
High	4
Medium	3
Low	2
Very low	1
TOTAL	100%

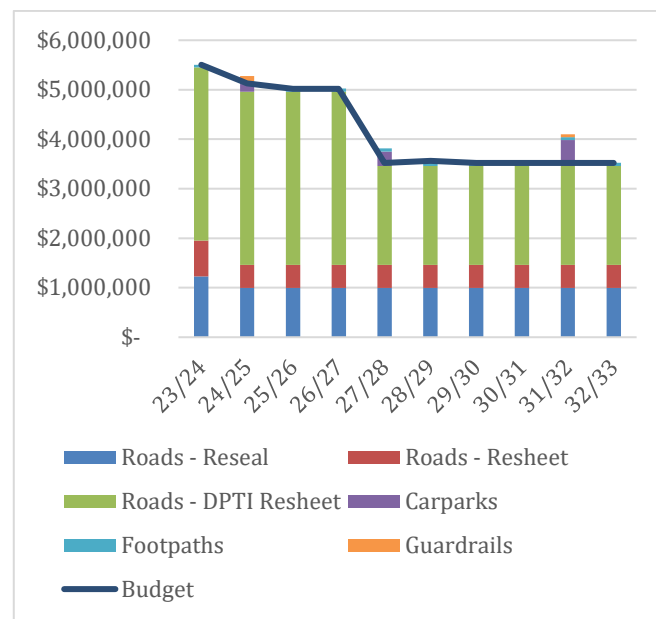


Figure 9: Projected Renewal Expenditure

5.4.2 Renewal Standards

Renewal work is carried out in accordance with the following Standards and Specifications:

- Training Certificate III in Civil Construction
- Pipe Laying in accordance with Cement & Concrete Association Standards
- Signage in accordance with AS1742
- ARRB Sealed and Unsealed Local Roads Manuals
- Footpath Construction Policy

5.4.3 Summary of future renewal expenditure

Projected future renewal expenditure is summarised in Figure 9.

5.4.4 Renewal Projection

A detailed listing of roads renewals is provided in Appendix F. Due to the significant peaks in expenses, an average cost of renewal of roads has been allocated per year - \$861,590 (plus CPI) for sealed roads and \$400,000 (plus CPI) for sheeted roads – and an average cost of \$50,962 (plus CPI) per year for footpath renewals. Any other renewals due during the timeframe of this IAMP have then been included in the relevant year. In setting the plan, the following things have been taken into consideration:

- Road segments (approximately 2km in length) will be identified as requiring renewal in the asset data however it is not always practical and cost effective to only do segments across the island. Instead a whole of road of approach is preferred when looking at the road network strategically over the next 10 years.
- The DPTI \$2million per annum program (\$3.5million for the first four years) has prioritised roads based on their classification with higher use roads upgraded first.
- A review of the classification of roads based on their vehicle per day counts undertaken in 2023 (based on counts from 2022 and 2023)

5.5 New and Upgrade Plan

5.5.1 Selection Criteria

Refer Chapter 1 – General Statements.

The priority ranking criteria for New and upgrade of Roads assets is the same as for renewal and detailed in Table 16.

5.5.2 Standards and Specifications

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2. Consideration is also given to items from the Inquiry into the National Road Safety Strategy 2011-2020 in relation to infrastructure design and improvement

5.5.3 Future upgrades/new assets expenditure

Projected new and upgrade expenditure is summaries in Figure 10. The aim to upgrade township roads to seal has been factored into the upgrades however based on current budget, this will take more than 50 years. Upgrade of township footpaths has also been included however this will again take more than 50 years at the current amount proposed.

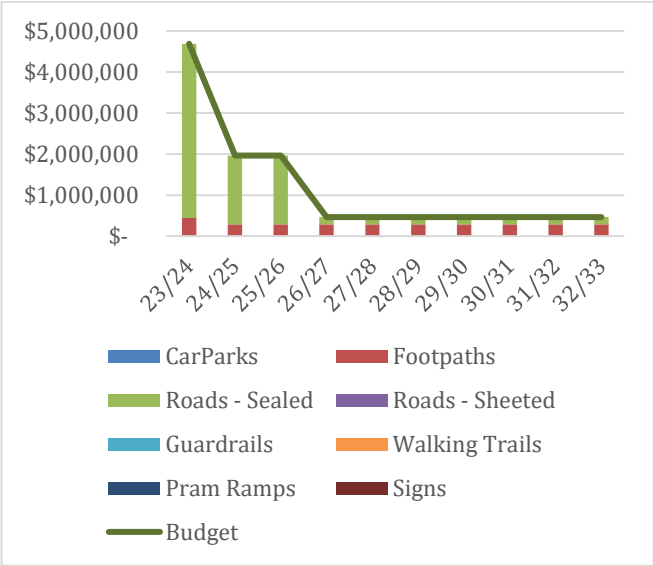


Figure 10: New and Upgrade Forecast

Upgraded assets and services will be funded from Council’s capital works program and grants where available.

A detailed listing of roads upgrades is provided in Appendix G. In addition Council has developed a Road Action Plan which details potential additional upgrades if additional grant funding becomes available. The action plan is based on major Freight, Tourism and Community usage as well as Strategic Fire Barriers and is available in Appendix H. it also feeds into the 2030 Regional Plan (Southern and Hills Local Government Association, 2021).

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation.

At the time of writing this Infrastructure and Asset Management Plan, Council are considering the possible hand back of the rural sealed road network to be under State Government care and control. As this is only a consideration and there are no active discussions, this Infrastructure and Asset Management Plan has not identified any Roads assets to be disposed of.

6 FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this infrastructure and asset management plan.

6.1 Financial Statements and Projections

The financial projections shown in Figure 11 are for operating (reactive and planned maintenance), capital renewal expenditure and capital upgrade expenditure²⁹. Appendix B shows the actual figures used to obtain this graph.

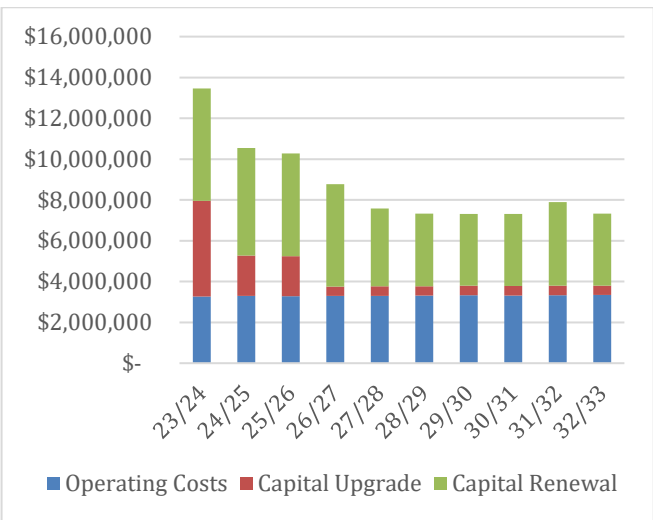


Figure 11: Financial Projections - Operating, Capital Upgrade and Capital Renewal

6.1.1 Sustainability of Service Delivery

Refer to Chapter 1 – General Statements for discussion on key indicators for financial sustainability.

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium term costs over the 10 year financial planning period.

²⁹ Note: due to the large scale of potential upgrades, the proposed capital upgrade expenditure has been rationalised.

Long Term – Life Cycle Cost

Table 18: Lifecycle Costs

Asset Category	Roads
Average Annual Lifecycle Cost	\$9,778,696
Average Lifecycle Expenditure	\$7,593,519
Life Cycle Gap	\$2,185,177
Sustainability Index	78%

Medium term – 10 year financial planning period

The projected asset renewals versus the planned renewal expenditure in the capital works program in the 10 year planning period is shown in Figure 12.

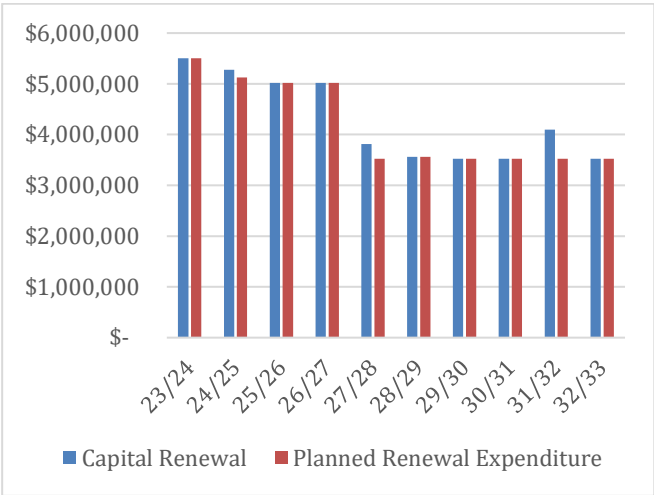


Figure 12: Projected Asset Renewals – Including \$2m DPTI funding

Table 19 shows the annual and cumulative funding gap between projected and planned renewals for Roads assets. Note: this does not allow for renewal of rural, very low use roads.

Table 19: Accumulative Renewal Funding Gap

Year	Planned Renewals (including \$2m DIT funding)	Projected Renewals	Renewal Funding Gap	Cumulative Gap
23/24	\$5,503,950	\$5,503,950	\$0	\$0
24/25	\$5,125,000	\$5,275,842	-\$150,842	-\$150,842
25/26	\$5,021,000	\$5,021,292	-\$292	-\$151,134
26/27	\$5,021,000	\$5,021,292	-\$292	-\$151,425
27/28	\$3,521,000	\$3,812,265	-\$291,265	-\$442,690
28/29	\$3,560,000	\$3,559,887	\$113	-\$442,576
29/30	\$3,521,000	\$3,521,292	-\$292	-\$442,868
30/31	\$3,521,000	\$3,521,292	-\$292	-\$443,160
31/32	\$3,521,000	\$4,099,435	-\$578,435	-\$1,021,595
32/33	\$3,521,000	\$3,521,292	-\$292	-\$1,021,887

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

The main variation occurs in the last three years and is reflective of LTFP currently ending with year 2029/2030 and being extrapolated in a straight line for the remaining 3 years of the IAMP.

6.2 Funding Strategy

Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in the Council's 10 year long term financial plan.

To achieve the financial strategy Council will require:-

- \$2m from DPTI.
- Continued revision of road classifications.
- Continued revision of valuation and forecasting parameters, including condition end values.
- Continued revision of levels of service, including grading patterns, roadside vegetation management and sealed road renewals.

6.3 Valuation Forecasts

Asset values are forecast to increase due to new assets created when township streets are sealed with kerbs, roads upgraded from construction and from assets constructed by land developers and others and donated to Council. The Current Replacement Forecast is shown in Figure 13.

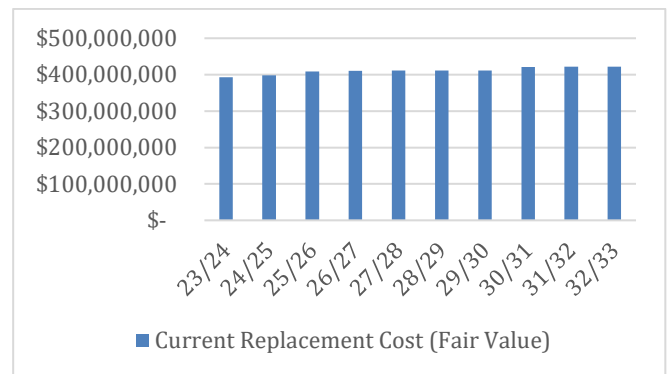


Figure 13: Current Replacement Cost Forecast

Depreciation expense values are forecast in line with asset values as shown in Figure 14.

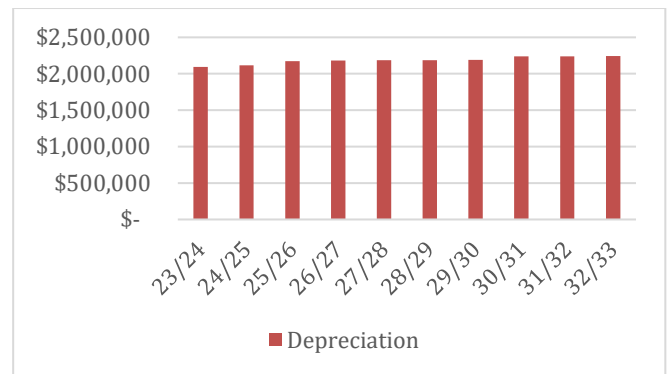


Figure 14: Depreciation Forecast

The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets as shown below in Figure 15.

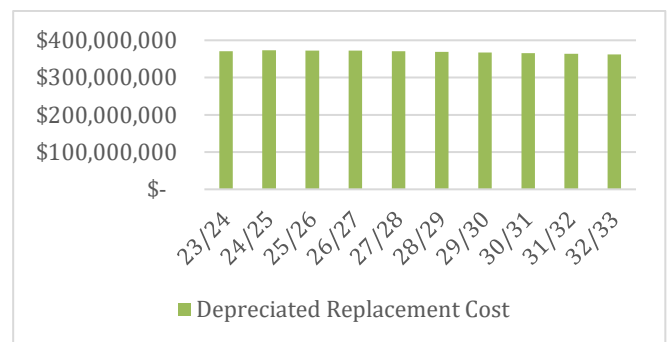


Figure 15: Depreciated Replacement Cost Forecast

6.4 Key Assumptions made in Financial Forecasts

Refer section 1.

Key assumptions made specific to this infrastructure and asset management plan are:

- Asset data for Roads assets was collected by Kangaroo Island Council staff in 2019/20 and the information in this IAMP incorporates the latest data.

- The useful life and replacement costs of the assets were determined by PPP (Public Private Property) in June 2020.

Purchase cost rather than replacement cost is used for assets acquired after this date

7 ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

Refer Chapter 1 – General Statements.

7.2 Asset Information System

Refer Chapter 1 – General Statements.

7.3 Information Flow Requirements and Processes

Refer Chapter 1 – General Statements.

7.4 Standards and Guidelines

Refer Chapter 1 – General Statements.



8 PLAN IMPROVEMENT AND MONITORING

8.1 Performance Measures

Refer Chapter 1 – General Statements.

8.2 Improvement Plan

Refer Chapter 1 – General Statements.

The asset management improvement plan generated from this infrastructure and asset management plan is shown in Table 20Error! Reference source not found..

8.3 Monitoring and Review Procedures

Refer Chapter 1 – General Statements.

Table 20: Improvement Plan

Task No	Task	Update	Proposed Timeline	Estimated Cost	Area
1	Borrow Pit Management Plan for existing and future pits to be developed, including pit remediation and sourcing of material to secure suitable road building materials in various locations for the long term.	Task amended to clarify the management plan is not just for existing pits but also for future pits and includes the future sourcing of material / rubble linking with the roads scheduled for works.	Dec 2024		-
2	Finalisation of the Pedestrian Generator Plan for townships		Dec 2025	Within existing salaries	Maintenance
3	Develop more detailed 3, 10 and 20 year forward plans for renewal, in particular for roads, specifying road renewal priorities	Road priorities have been determined however are currently based on a per segment basis. Additional work is needed to create specific plans. New process to be implemented over the next 18 months to assist with this.	Oct 2025	Within current budget	
4	Develop standard for responding to reactive service requests	Defects and Timeframes have been developed and are provided in Appendix I	Complete	-	-
5	Develop joint asset management plans with government agencies for road and marine infrastructure	From strategic plan. Progress reporting done through the Quarterly Strategic Plan report to Council.	Dec 2023	Within current budget	
6	Obtain funding to undertake a road safety audit and plan – to achieve national safety standards (including signage) for all Island roads		Jun 2024	Within current budget	
7	Develop a more sophisticated Asset Management Plan that more clearly shows the division of costs between asset types and how the roads network would be impacted without the external funding. Include consideration of sealing over bridges		Jun 2024	Within current budget	
8	Roads Revaluation – 2024/2025		Jun 2025	\$20,000	Maintenance

Task No	Task	Update	Proposed Timeline	Estimated Cost	Area
9	Develop condition assessment process for vegetation to be completed during valuations to allow for better scheduling of vegetation clearance		Jun 2025	\$5,000	Maintenance
10	Roads Revaluation – 2029/2030		Jun 2030	\$20,000	Maintenance
11	Review grading schedule plan	In progress	Jun 2024	Within current budget	
12	Undertake a review of availability of accessible car park spaces within all Council areas.	From Disability Access and Inclusion Plan. Delayed, assessment of access to buildings occurring first	Jun 2023	\$10,000	Capital
13	Update the footpath program to be a 5 year to be a rolling 5 year program	In progress, draft included within this IAMP	Dec 2023	Within current budget	
14	Undertake a review of the pedestrian crossings and school pick up zones in Kingscote	New	Dec 2025	Within current budget	Maintenance

9 REFERENCES

- GAFLC. (2005). *Guidelines for State Government Agencies: Firebreaks & Fire Access Tracks*.
- Government of South Australia. (2011). *Kangaroo Island Plan*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/plans/kiplan>
- JAC Comrie Pty Ltd. (2008). *Local Government on Kangaroo Island Today and Tomorrow*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/publications/kireports>
- Kangaroo Island Council. (2007). *Roadside Vegetation Management Plan*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/plans/vegetation>
- Kangaroo Island Council. (2014). *Road Network Extension Policy*.
- Kangaroo Island Council. (2017). *Business Continuity Plan*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/publications/continuityplan>
- Kangaroo Island Council. (2020). *Kangaroo Island Council Strategic Plan 2020-2024*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/plans/strategic-management-plan-2020-24>
- KI Regional Transport Strategy Steering Group. (2007). *Kangaroo Island Regional Transport Strategy*.
- Local Roads Advisory Committee for the Determination of Road Classification in South Australia. (2018). *Road Classification Guidelines in South Australia*.
- NRSS Inquiry Panel. (2018). *Inquiry into the National Road Safety Strategy 2011-2020*.
- Resilient Hills and Coasts. (2016). *The Climate Change Adaptation Plan for the Adelaide Hills, Fleurieu Peninsula and Kangaroo Island*. Retrieved from <https://www.kangarooisland.sa.gov.au/community/rhc>
- SAEDB. (2011). *Paradise, Girt by Sea*. Retrieved from <https://www.kangarooisland.sa.gov.au/council/publications/kireports>
- Southern & Hills Local Government Association. (2015). *2020 Transport Plan, 2015 Update*.
- Southern and Hills LGA. (2022). *Southern and Hills LGA Regional Public Health and Wellbeing Plan 2022-27*.
- Southern and Hills Local Government Association. (2021). *2030 Regional Transport Plan*.
- TOMM Kangaroo Island Committee. (2019). *Visitor Exit Survey 2018/2019*. Retrieved from <https://www.tourkangarooisland.com.au/>
- Tonkin. (2022). *KI Condition Audit - Transport and Structures*.
- TRB. (1993). *Managing Unsealed Roads in South Australia*.

APPENDIX A – Roads Planned operating, capital renewal and capital upgrade expenditure

Asset Category	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32
Car Parks	\$19,968	\$20,185	\$19,968	\$19,968	\$19,968	\$19,968	\$20,185	\$19,968	\$19,968	\$19,968
Footpaths/ Trails	\$61,440	\$62,110	\$66,533	\$71,989	\$77,892	\$84,279	\$91,860	\$98,722	\$106,817	\$115,575
Roads - sealed	\$498,201	\$509,172	\$505,967	\$508,182	\$508,414	\$508,645	\$514,310	\$509,110	\$509,342	\$509,574
Roads - unsealed	\$1,254,083	\$1,267,762	\$1,254,083	\$1,254,083	\$1,254,083	\$1,254,083	\$1,267,762	\$1,254,083	\$1,254,083	\$1,254,083
Roads - vegetation	\$379,436	\$384,436	\$379,436	\$379,436	\$379,436	\$379,436	\$379,436	\$379,436	\$379,436	\$379,436
Roads - patrol grading	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458	\$925,458
Street Cleaning	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701	\$18,701
Traffic Control	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996	\$114,996
Operating	\$3,272,284	\$3,302,821	\$3,285,143	\$3,292,814	\$3,298,948	\$3,305,566	\$3,332,708	\$3,320,475	\$3,328,801	\$3,337,792
Roads - Reseal	\$1,226,010	\$998,583	\$998,583	\$998,583	\$998,583	\$998,583	\$998,583	\$998,583	\$998,583	\$998,583
Roads - Resheet	\$726,940	\$463,600	\$463,600	\$463,600	\$463,600	\$463,600	\$463,600	\$463,600	\$463,600	\$463,600
Roads - DPTI Resheet	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Car Parks	\$0	\$150,500	\$0	\$0	\$290,973	\$0	\$0	\$0	\$521,120	\$0
Footpaths	\$51,000	\$59,109	\$59,109	\$59,109	\$59,109	\$59,109	\$59,109	\$59,109	\$59,109	\$59,109
Guardrails	\$0	\$104,050	\$0	\$0	\$0	\$38,595	\$0	\$0	\$57,023	\$0
Capital Renewal	\$5,503,950	\$5,275,842	\$5,021,292	\$5,021,292	\$3,812,265	\$3,559,887	\$3,521,292	\$3,521,292	\$4,099,435	\$3,521,292
Footpaths	\$439,888	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000	\$290,000
Roads - Sealed	\$4,250,000	\$1,674,000	\$1,674,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000	\$174,000
Capital Upgrade	\$4,689,888	\$1,964,000	\$1,964,000	\$464,000	\$464,000	\$464,000	\$464,000	\$464,000	\$464,000	\$464,000
TOTAL COSTS	\$13,351,182	\$10,011,346	\$9,935,075	\$8,489,707	\$7,043,762	\$7,134,490	\$7,180,021	\$7,220,336	\$7,331,272	\$7,346,313

APPENDIX B – Buildings and Complexes Rules for Finance and Asset Finda

The following sub-department have been included in all finance calculations:

- 004 Car Parks
- 021 Kerbs and Paths (halve costs)
- 041 Roads – sealed
- 042 Roads – unsealed
- 043 Roads – vegn
- 045 Roads – patrol grading
- 049 Street Cleaning
- 052 Traffic control (linemarking)
- 053 Traffic Control (signage)

The following expenses have been excluded from all finance calculations:

- Depreciation
- Bank charges
- General Interest Expenses
- Capital Cost Allocation

Asset Finda:

The following rules have been applied when entering data into Asset Finda:

- Communities
Assets are allocated to the community based on their location and the Communities used are consistent with the Departments used in finance
 - Township:
 - American River
 - Baudin Beach
 - Emu Bay
 - Island Beach
 - Kingscote/Brownlow
 - Nepean Bay
 - Penneshaw
 - Parndana
 - Vivonne Bay
 - Rural:
 - Dudley
 - MacGillivray
 - Redbanks
 - Stokes

- Vivonne
- Wisanger
- Western Districts

- Asset
Classes:
Assets are divided into 7 asset classes (Roads, Carparks, Footpaths, Guardrails, Pram Ramps, Signs, Walking Trails) with the following asset Types and numbers (refer to table on next page)
- Categories:
Assets are allocated to the category based on which asset class they are in:
 - Roads – Township Roads or Rural Roads (based on their location)
 - Carparks – Carparks
 - Footpaths – American River Footpaths, Emu Bay Footpaths, Kingscote Footpaths, Parndana Footpaths, Penneshaw Footpaths
 - Guardrails – Guardrails
 - Pram Ramps – American River Pram Ramps, Kingscote Pram Ramps, Parndana Pram Ramps, Penneshaw Pram Ramps
 - Signs – Guide Sign, Hazard Sign, Regulatory Sign, Warning Sign, Other Sign
 - Walking Trails – American River Walking Trails, Kingscote Walking Trails, Penneshaw Walking Trails
- Notes:
 - Contract IDs are the finance GL code
 - Condition rating criteria as per 2020 Revaluation

Asset Class	Asset Finda Template	Examples of Asset Types	Asset Numbers
Roads	Transport	Formation, Pavement, Sheeted Surface, Sealed Surface Asset number – based on road ID, segment number and layer	RRRRRSSS_X
Carparks	Transport	Formation, pavement, sheeted surface or sealed surface Asset number – based on the ID of the land the carpark is located on.	AX_X.XX

Asset Class	Asset Finda Template	Examples of Asset Types	Asset Numbers
Footpaths	Transport	Footpaths	FPXXX
Guardrails	Transport	Guardrails	GRXXXX
Pram Ramps	Transport	Narrow or Standard design	BRXX
Signs	Transport	Road signs	SNXXXXXX
Walking Trails	Transport	Base Course and sealed surface Asset number – based on the ID of the land the walking trail is located on.	AX_X.XX

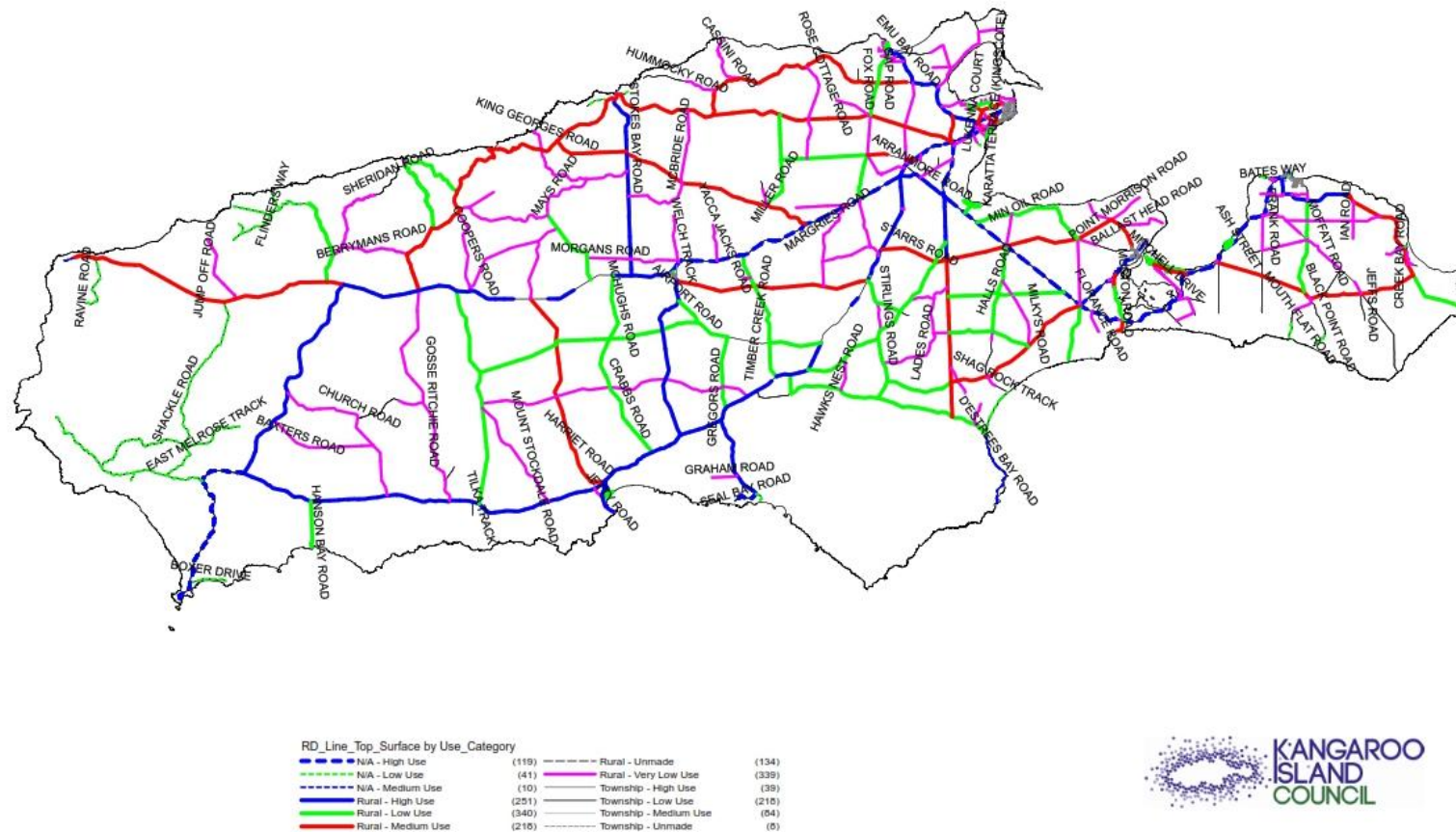
APPENDIX C – Strategic Document Recommendations

Strategic Document	Note/Recommendations	Council Comments
Business Continuity Plan (Kangaroo Island Council, 2017)	Road access and serviceability (Arterial & Collector) - Max Acceptable Outage = 4 hours Consider developing map which highlights roads most critical in terms of impact if not available and alternate routes to be used in BC scenarios (Nov 2018)	Council's procedure is to inspect the road and either repair or install a detour until road is again accessible. There are too many potential scenarios to develop a map. Procedure above of adding detour signs specific to the location of the issue is considered sufficient..
Kangaroo Island Plan (Government of South Australia, 2011)	Develop fit-for-purpose road and port facilities to support the export of woodchips and grain. Upgrade tourism roads on Kangaroo Island.	Council would be involved in discussions with proponents on this. This is ongoing. The prioritisation criteria for the upgrade and renewal of roads includes a factor for tourism.
Paradise Girt By Sea (SAEDB, 2011)	Either designate the sealed road loop a 'state road' or provide State funding assistance of equivalent value to Council. KIFA and KI Council to review local road network; define 3 categories for local road; KIFA and KI Council in conjunction with DTEI investigate options to reduce the maintenance costs of the unsealed road network on KI and improve road quality.	Council are in discussions on the future maintenance of the state roads. Road classifications process complete and the upgrade of Sheeted Roads to a better standard should result in lower maintenance costs in regards to grading frequency required.
Local government on Kangaroo Island Today and Tomorrow (JAC Comrie Pty Ltd, 2008)	3) Council engage with State Government to express its concern over the particular impact on kangaroo Island of the vegetation management requirements of the native <i>Vegetation Act 1991</i> as they apply to road reserves. 6) Council seek the support of its regional LGA (Southern and Hills LGA) to apply for funding assistance through the Special Local Roads Program to upgrade tourist roads on Kangaroo Island 7) Council closely monitor usage and the destination of users of the South Coast Road and the West End Highway over time and its own expenses association with the ongoing necessary maintenance and upgrade of these key local roads. This will assist Council's case in any future dialogue with the State about the classification of these roads.	Council are currently in discussions with Native Vegetation Council about updating the Roadside Vegetation Management Plan. Council currently has funding to upgrade Wedgewood Road and Hickmans Road. Once this project is finished, Council will consider other roads that could potentially be upgraded via this funding. This is not currently a priority for Council.
LGA – Risk Evaluation Guidance	2c) Council must develop and adopt an infrastructure and asset management plan for a period of at least 10 years that covers the management and maintenance of roads and footpaths. The plan should include identification of the assets, assessment and prioritisation of the assets for inspection, repair and maintenance (this should consider asset and infrastructure use, traffic or visitation levels, condition, safety, and other legislative requirements, etc) An issue log or register should be in place that tracks identified issues that arise over time with the specific piece of infrastructure or asset and this should link back to the asset plan in terms of whether an adjustment is	This IAMP starts this process, the improvement plan allows for the development of a more sophisticated plan over time.

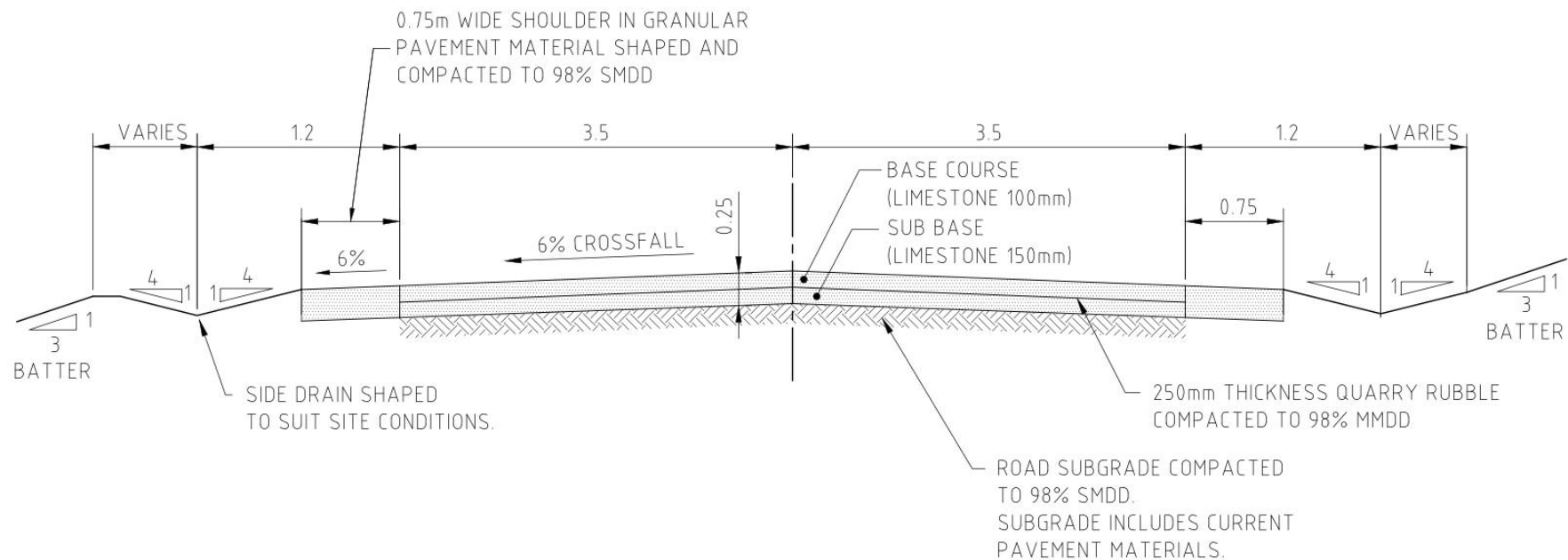
Strategic Document	Note/Recommendations	Council Comments
	<p>required to the current assessment and prioritisation level.</p> <p>2d) The inspection and maintenance priorities and timeframes [for inspection of roads and footpaths] should be identified in the asset management plan and/or within the issue log as a corrective action. This should be supported by a process at workgroup level to guide them in relation to what is to be inspected, what timeframes are for this and who is responsible for doing this. The workers responsible should have documentation and training to enable them to make a consistent assessment of the road or footpath, covering all the required criteria, including documenting any changes to the road (e.g. alteration or reinstatement of the road).</p> <p>2e) The inspection and maintenance priorities and timeframes [for roads] should be identified in the asset management plan and/or within the issue log as a corrective action. A maintenance and repair schedule should be developed, which takes into consideration the inspection findings (as per previous question), reported issues or faults, the use of the road (including traffic volumes, proximity to public areas, use by vulnerable groups or those with special needs) and also any other identified issues with the road (e.g. original design issues, reported issues or incidents in the same location, etc.) This should be supported by a process at workgroup level to guide them in relation to what is to be maintained or repaired, what the timeframes are for this and who is responsible for doing this. The workers responsible should have documentation and training to enable them to conduct the appropriate maintenance and/or repair activities. There should be a process to update the asset management plan with any changes once the repair/maintenance has been completed.</p> <p>2f) The inspection and maintenance priorities and timeframes [for footpaths] should be identified in the asset management plan and/or within the issue log as a corrective action. A maintenance and repair schedule should be developed, which takes into consideration the inspection findings (as per previous question), reported issues or faults, the use of the footpath (including traffic volumes, proximity to public areas, use by vulnerable groups or those with special needs) and also any other identified issues with the footpath (e.g. original design issues, numerous reported issues or incidents, etc.) This should be supported by a process at workgroup level to guide them in relation to what is to be maintained or repaired, what the timeframes are for this and who is responsible for doing this. The workers responsible should have documentation and training to enable them to conduct the appropriate maintenance and/or repair activities. There should be a process to update the asset management plan with any</p>	<p>This IAMP starts this process, the improvement plan allows for the development of a more sophisticated plan over time.</p> <p>This IAMP starts this process, the improvement plan allows for the development of a more sophisticated plan over time.</p> <p>In addition, Council are in the process of rolling out the mobile version of AssetFinda which, once set up, will have the capability of documenting issues as found and potentially then scheduling future works.</p> <p>This IAMP starts this process, the improvement plan allows for the development of a more sophisticated plan over time.</p> <p>In addition, Council are in the process of rolling out the mobile version of AssetFinda which, once set up, will have the capability of documenting issues as found and potentially then scheduling future works.</p>

Strategic Document	Note/Recommendations	Council Comments
	changes once the repair/maintenance has been completed.	
Kangaroo Island Regional Transport Strategy (KI Regional Transport Strategy Steering Group, 2007)	The minimum scope required under this strategy is to establish the freight corridor along Playford Road [Highway], Arranmore Road, Hog Head Road [Hog Bay Road] and Redbanks Road, at Ballast Head. However, consideration must be given to the overall quality of the road freight network and feeder roads, and port infrastructure and investment to efficiently handling up to 600,000 tonnes per annum. Addressing the quality of important tourist roads is also proposed under this strategy.	This plan related to moving forestry through Ballast Head. It was replaced by the 2010 Regional Plan, then the 2020 Regional Plan and most recently the 2030 Regional Plan

APPENDIX D – Road Classification Maps

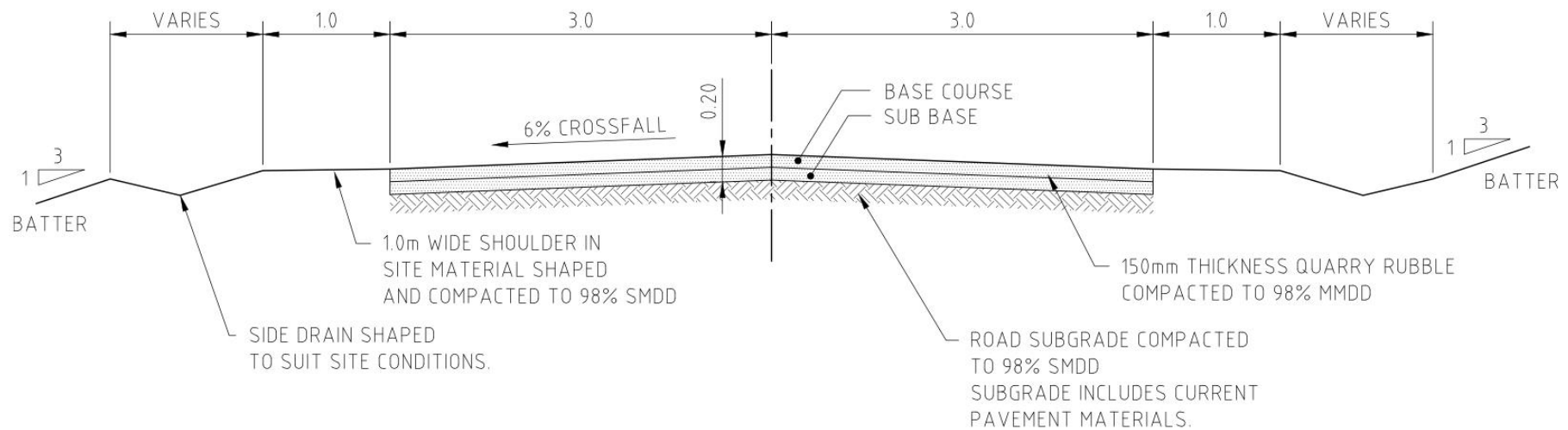


APPENDIX E – Road Cross Section Standard Drawings



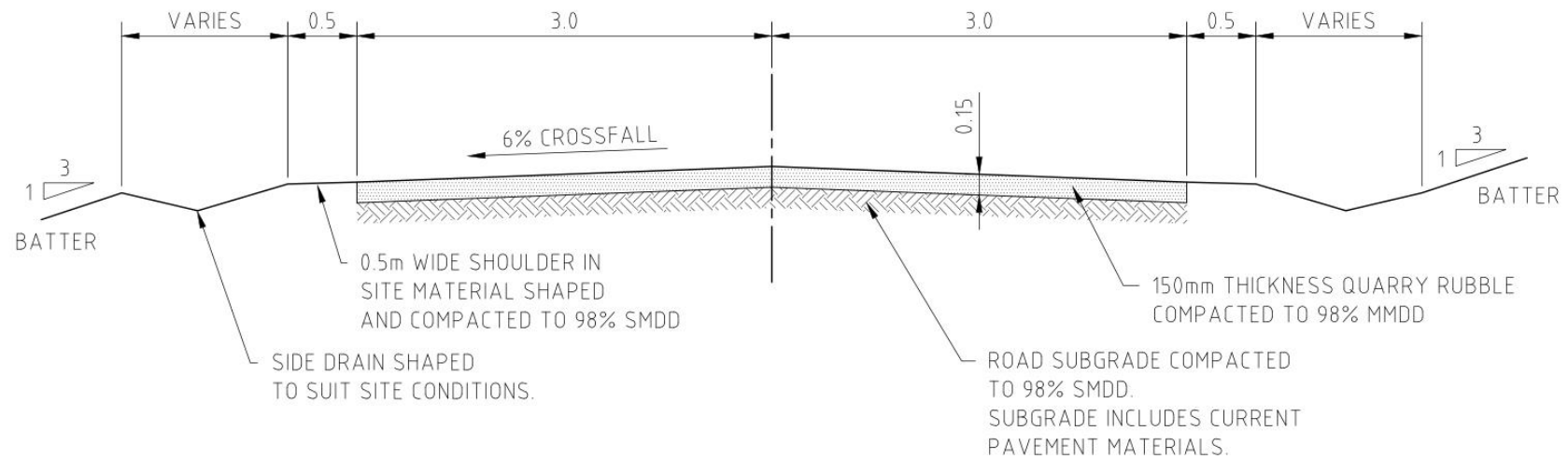
NOTE: VEGETATION CLEARANCE TO EXTEND TO A MINIMUM OF 1.0m PAST THE NON-ROAD SIDE OF THE DRAIN INVERT

RURAL SHEETED ROAD – TYPICAL CROSS SECTION – MEDIUM USE ROAD



NOTE: VEGETATION CLEARANCE TO EXTEND TO A MINIMUM OF 1.0m PAST THE NON-ROAD SIDE OF THE DRAIN INVERT

RURAL SHEETED ROAD – TYPICAL CROSS SECTION –LOW USE ROAD



NOTE: VEGETATION CLEARANCE TO EXTEND TO A MINIMUM OF 1.0m PAST THE NON-ROAD SIDE OF THE DRAIN INVERT

RURAL SHEETED ROAD – TYPICAL CROSS SECTION – VERY LOW USE ROAD

APPENDIX F – Renewal Priorities

Asset Category	Year	Amount	Details
Sealed Roads (Council Funding)	23/24	\$1,226,010	<p>Township:</p> <ul style="list-style-type: none"> Esplanade, Kingscote (Buller to McLaren) Rawson St, Kingscote (Centenary to Giles) Centenary Ave, Kingscote (Todd to Rawson) Addison St, Kingscote (Karatta to End) Dauncey St, Kingscote (Cygnets to Wheaton) Commercial St, Kingscote (intersection) Brownlow Ave, Kingscote (Brownlow Rd to Lovering St) Africaine Tce, Kingscote (Brownlow Ave to Rapid Rise) Franklin St, Kingscote (Cygnets to Wheaton) Plover Pl, American River (Sea Eagle to End) Kestrel Cl, American River (Sea Eagle to End) Osprey Cl, American River (Sea Eagle to End) Sea Eagle Way, American River (Kestrel to End) Heron Ct, American River (Sea Eagle to End) Egret Pl, American River (Sea Eagle to Buick) Ibis Wk, American River (Sea Eagle to End) Bessell Drive, Baudin Beach (Hog Bay Rd to Esplanade) Sea Eagle Way Development Preparation repairs, American River Christmas Cove Boat ramp Access, Penneshaw (Hog Bay Rd to end) <p>Rural:</p> <ul style="list-style-type: none"> North Coast Road, Wisanger (North Cape Rd to Emu Bay Rd) Emu Bay Rd, Wisanger (North Coast Rd to 700m North) Wedgewood Rd, Seddon (Rowland Hill Highway to Airport Rd) South Coast Road (Green Slopes), Karatta
	24/25 – 32/33	\$861,590 per annum (plus CPI)	<p>Program to be based on Priorities and Road usages outlined in table below entitled Sealed Road Renewals which is based on KI Condition Audit – Transport and Structures (Tonkin, 2022).</p> <p>Order of renewals will factor in both Priority and Usage (ie High Use Priority C may be done before Very Low Use Priority A).</p>
Sheeted Roads (Council Funding)	23/24	\$726,940	<p>Rural:</p> <ul style="list-style-type: none"> East West One (Timber Creek Rd to Gregors Rd) Crabbs (East West One to East West Two) Gregors Rd (East West One to East West Two) Airport Rd (Wedgewood Rd to East West One) Cape Willoughby Rd (Allen Lashmar Rd to 900m North)
	24/25 – 32/33	\$400,000 per annum (plus CPI)	<p>Road Renewals which is based on KI Condition Audit – Transport and Structures (Tonkin, 2022).</p> <p>Order of renewals will factor in both Priority and Usage (ie High Use Priority C may be done before Low Use Priority A).</p> <p>Although very low use roads are not included within the renewal plan, if there are any funds remaining through capital or maintenance, these roads will then be considered for renewal.</p>
DPTI Funding	23/24	\$3,500,000	<p>Seagers Road (11.2km)</p> <p>Millers Road (10km)</p> <p>Hanson Bay Road (5km)</p>

Asset Category	Year	Amount	Details
	24/25	\$3,500,000	Seagers Road (7.9km) Boxer Road (8.4km) Gap Road (10.5km)
	25/26	\$3,500,000	Ropers Road (4.3km) Moores Road (11.7km) Mount Taylor Road (10.7km)
	26/27	\$3,500,000	Mount Taylor Road (11.3km) Timber Creek Road (13km)
	27/28	\$2,000,000	East West One Highway (16.5km)
	28/29	\$2,000,000	East West One Highway (8.8km) Halls Road (8.7km)
	29/30	\$2,000,000	Crabbs Road (13km) East West Two Highway (8.8km)
	30/31	\$2,000,000	East West Two Highway (18.9km)
	31/32	\$2,000,000	Jews Road (2.2km) Blue Gums Road (5.4km) Doug Road (4.6km) Moffatt Road (7.8km)
	32/33	\$2,000,000	Coopers Road (8.5km)
	23/24	\$50,962	Kingscote: Osmond St crossover, Lions Park access to ensure DDA compliance Penneshaw: Middle Terrace access to IGA and Seafront
Footpaths	24/25 – 32/33	\$50,962 per annum (plus CPI)	Kingscote Spray Seal Footpaths – Wheelton St, Commercial St, Franklin St, Centenary Ave, Kingscote Esplanade, Cygnet Rd, Giles St, Telegraph Rd, Grenfell St, Murray St, Drew St, Dauncey St, Osmond St, Giles St, Kohinoor Rd American River Concrete Footpath – Scenic Dr Penneshaw Concrete and Spray Seal Footpaths – Thomas Willson St and Middle Tce
Guardrails	24/25	\$104,850	Replacement of 30 guardrails totalling 464m, Stokes bay, Wisanger, Newland, Macgilivray, Dudley, Penneshaw and Kingscote (note half of these will be moved to 2023/24)
	28/29	\$33,300	Replacement of 7 guardrails totalling 111m, MacGillivray and Dudley)
Carparks	24/25	\$150,500	Carparks at Kingscote Tidal Pool, Hanson bay, Kingscote Information Bay, Airport Corner and Parndana Town Hall
	27/28	\$251,055	Carparks at Kingscote Cemetery, Windmill Monument, Western River, Reeves Point, Point Ellen: Note: Condition of these will be assessed closer to this date.
	31/32	\$521,120	Carpark formation layers Note: Condition of these will be assessed closer to this date.

The order of these may vary based on ongoing assessment of condition of the assets.

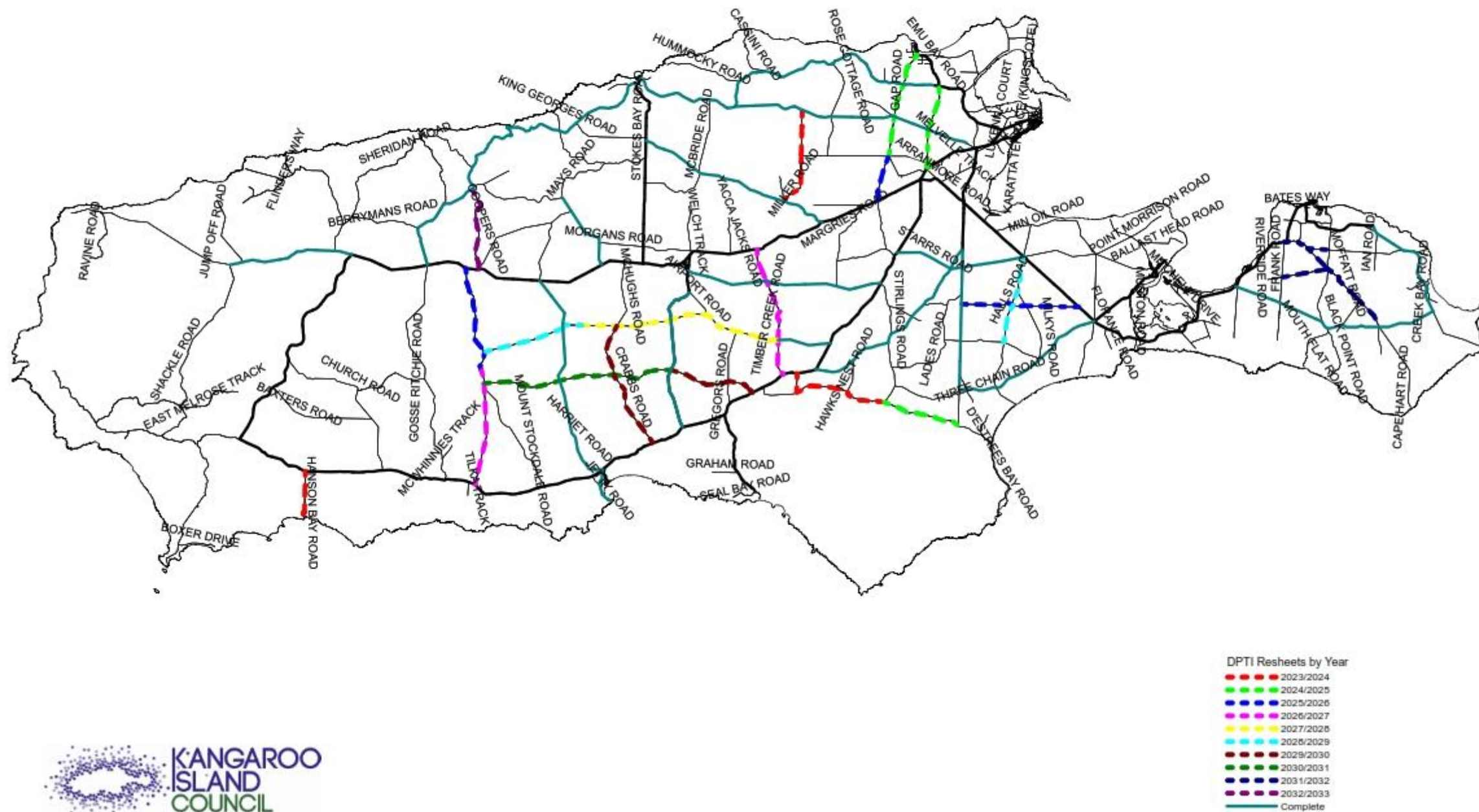
Chapter 8 – Roads



KANGAROO
ISLAND
COUNCIL

Sheeted Road Renewals										
	Medium Use			Low Use		Rural				
					High Use		Medium Use		Low Use	
Priority A	Karatta Tce (seg 15)	\$ 7,117	Access Road - Old KI Yacht Club	\$ 2,392					Timber Creek Rd (seg 25)	\$ 80,257
			Thomas Rd (seg 20)	\$ 2,791					Gregors Rd (seg 20, 25)	\$ 175,696
			Cheopis Street (South) (seg 10)	\$ 13,243					East West One Hwy (seg 65, 70, 95, 110)	\$ 230,233
			Wright Rd (seg 20)	\$ 3,602					Mount Taylor Rd (seg 15, 55, 65)	\$ 199,395
			Mansell St (seg 10)	\$ 3,112					Barretts Rd (seg 15,20, 25)	\$ 166,400
			Access Road - Flagstaff Hill	\$ 8,942					Moores Rd (seg 5)	\$ 46,776
			Wheaton St, Parndana (seg 10, 15)	\$ 4,622					Snug Cove Rd (seg 20, 25)	\$ 100,722
			Access Road - Wedgewood Road	\$ 2,209						
		\$ 7,117		\$ 40,913	\$ -			\$ -		\$ 999,478
Priority B			Pioneer St (seg 35)	\$ 4,034					Mount Taylor Rd (seg 25)	\$ 38,349.5
			Access Road - Rowland Hill Highway)	\$ 4,441					Miller Rd (seg 15)	\$ 69,142.8
									Seagers Rd (seg 10)	\$ 62,627.0
									Nepean Esplanade (seg 15)	\$ 4,022.3
									North Cape Rd (seg 30)	\$ 23,120
				\$ 8,476						\$ 197,262
Priority C			Cheopis St (South) (seg 5)	\$ 3,634					Airport Rd (seg 5)	\$ 84,415
			Wheaton St, Parndana (seg 5)	\$ 1,191					Gregors Rd (seg 15)	\$ 48,347
									Crabbs Rd (seg 5, 10)	\$ 138,718
									Mount Taylor Rd (seg 10, 20)	\$ 132,616
									Western River Rd (seg 10)	\$ 50,637
									Miller Rd (seg 5, 10)	\$ 110,922
									Gap Rd (seg 40)	\$ 51,944
									Ocean View Dr (seg 5)	\$ 4,639
		\$ -		\$ 4,825	\$ -			\$ -		\$ 622,239
Priority D			Pioneer St (seg 10, 30)	\$ 5,764			Rowland Hill Hwy (seg 25)	\$ 81,928	Airport Rd (seg 10)	\$ 44,636
							North Coast Rd (seg 260)	\$ 63,390	East West One Hwy (seg 75, 105)	\$ 130,210
									Crabbs Rd (seg 15)	\$ 42,985
									Mount Taylor Rd (seg 35)	\$ 43,554
									Western River Rd (seg 35)	\$ 62,291
									Ropers Rd (seg 10)	\$ 56,647
									Coopers Rd (seg 5)	\$ 11,616
									Wetheralls Rd (seg 5)	\$ 6,027
		\$ -		\$ 5,764	\$ -			\$ 145,317		\$ 397,968
Priority E	Karatta Tce, Kingscote (2648.448	Lierich Dr (seg 5)	\$ 8,443			Rowland Hill Hwy (seg 30, 35)	\$ 169,459	East West One Hwy (seg 25, 30, 100)	\$ 231,340
			Investigator Tce (seg 10)	\$ 969					Crabbs Rd (seg 25)	\$ 71,449
			Warrawee Tce (seg 20)	\$ 3,775					Ropers Rd (seg 15)	\$ 62,256
			Kangaroo Tce (seg 5)	\$ 5,083					Nepean Esplanade (seg 5)	\$ 10,578
			Pioneer St (seg 25)	\$ 2,806					Coopers Rd (seg 25)	\$ 67,013
		\$ 2,648		\$ 21,076	\$ -			\$ 169,459		\$ 442,635
Priority F	The Lane (seg 15)	\$ 11,675	Stokes Cres (seg 5)	\$ 1,481			Redbanks Rd (seg 5)	\$ 88,884	Timber Creek Rd (seg 15)	\$ 39,622
			Access Road - American River Campground	\$ 3,666			Tinsmith Rd (seg 10)	\$ 9,018	East West One Hwy (seg 50, 90)	\$ 79,195
			Cheopis St (South) (seg 15)	\$ 1,578			Hanson Bay Rd (seg 5)	\$ 74,582	Mount Taylor Rd (seg 40, 45)	\$ 83,888
			Access Road - Parndana Sports Ground	\$ 19,178					Western River Rd (seg 40)	\$ 49,753
			Pioneer St (seg 5)	\$ 1,023					Miller Rd (seg 25)	\$ 76,102
			Settlers Lane (seg 10)	\$ 3,972					Ocean View Dr (seg 15)	\$ 6,309
			Progress Place (seg 5)	\$ 5,995					Koala St (seg 5)	\$ 2,530
									Johncock Rd (seg 15)	\$ 63,020
									Wetheralls Rd (seg 10)	\$ 29,912
		\$ 11,675		\$ 36,893	\$ -			\$ 172,484		\$ 430,330
Priority G	The Lane (seg 10)	\$ 12,954	Cassini St (seg 5)	\$ 2,848			Pratts Rd (seg 25)	\$ 28,794	Timber Creek Rd (seg 40, 45)	\$ 151,890
			German Row (seg 10)	\$ 9,888			North Coast Rd (seg 270)	\$ 82,288	East West One Hwy (seg 85)	\$ 65,932
			Currawong Ave (seg 5)	\$ 4,913			Cape Willoughby Rd (seg 100)	\$ 20,024	Mount Taylor Rd (seg 30, 60)	\$ 136,064
			Settlers Lane (seg 5)	\$ 4,468			Hanson Bay Rd (seg 10)	\$ 74,783	Halls Rd (seg 10)	\$ 59,305
			Access Road - Playford Highway, Parndana	\$ 3,823					D'Estrees Bay Rd (seg 5)	\$ 74,020
									Seagers Rd (seg 15)	\$ 74,450
									Nepean Esplanade (seg 10, 25)	\$ 21,849
									Bay View Rd, Nepean Bay (seg 5)	\$ 2,780
									Ocean View Dr (seg 10)	\$ 6,265
									Thirld St, Brownlow (seg 25)	\$ 2,503
									Cygnnet St (seg 5)	\$ 5,138
									Johncock Rd (seg 5)	\$ 39,558
									Coopers Rd (seg 10)	\$ 10,563
		\$ 12,954		\$ 25,940	\$ -			\$ 205,889		\$ 650,316

Planned DPTI Resheets - 2023/24 Onwards



APPENDIX G – Upgrade Priorities

Asset Class	New/Upgrades	Cost Estimate	Scheduled Year
Roads – Sealed	Ten Trees Lagoon Road	\$2,000,000	23/24
	Springs Road	\$2,100,000	23/24
		\$1,500,000	24/25
		\$1,500,000	25/26
	Penneshaw – Mary Seymour Lane	\$150,000	23/24
	Penneshaw – Mary Seymour Lane	\$155,000	24/25
	Penneshaw – Mary Seymour Lane	\$160,000	25/26
	Penneshaw – Mary Seymour Lane	\$165,000	26/27
	Kingscote – Torrens Street, Stokes Court, Access Road – KI Yacht Club Access	\$170,000	27/28
	Kingscote – Access Road – KI Yacht Club Access, Karatta Terrace	\$176,000	28/29
	Kingscote – Karatta Tce (Kohinoor to Campbell)	\$182,000	29/30
	Kingscote – Karatta Tce (Kohinoor to Campbell), American River-Old School House Street	\$188,000	30/31
	American River – Thomas Road	\$194,000	31/32
	Parndana – Wheaton St	\$200,000	32/33
	Sealing of unsealed High Use Rural Roads – Elsegood Road, Dune Road, Jetty Road, Bullock Track, Dover Farm Road (part), Pennington Bay Road, Lovers Lane, Western Cove Road, Island Beach Road and Springs Road (part) ³⁰	Unknown	Not yet scheduled
	Sealing of unsealed Rural Roads listed in Appendix H ³¹	Unknown	Not yet scheduled
Roads – Sheeted	Open end of Allen Lashmar Road to get access to Antechamber Beach ³²	Unknown	Not yet scheduled
	Open ends of other roads to give beach access where the road reserve continues to the beach ³²	Unknown	Not yet scheduled
Roads – Safety	Road safety upgrades including sealing road shoulders, improving intersections, turning lanes ³³	Unknown	Not yet scheduled
CarParks	No specific upgrades planned at this time	-	-
Footpaths	Kingscote – Centenary Ave, Franklin St, Telegraph Rd, Dauncey St	\$439,888	23/24
	Parndana – Anzac St, Smith St, Daw St		
	Refer Footpath priorities on page 47	\$290,000	24/25
Guardrails	Ongoing as part of road upgrades	Included in road upgrade cost	Ongoing
	Parndana walking trail	To be determined	Not yet scheduled

³⁰ Council recognises that these projects are required to bring these roads to standard however priority is being given to the sealing of township roads and there is no intention to seal these roads at this point unless significant funding opportunities arise.

³¹ Council recognises the benefits of these projects however priority is being given to the sealing of township roads and unless significant funding opportunities arise there is no intention to seal these roads at this point.

³² Council recognises this as a potential however is not committed to progressing this at the moment.

³³ Council recognises the benefits of this however would require grant funding to progress

Asset Class	New/Upgrades	Cost Estimate	Scheduled Year
Walking Trails ³⁴	Penneshaw Foreshore Walking Trail	To be determined	Not yet scheduled
Pram Ramps	No specific upgrades planned at this time	-	-
Signs	No specific upgrades planned at this time	-	-

³⁴ Council recognises that the walking trails are great projects however will not be able to implement without obtaining grant funding. Should funding become available, Council would consider contributing at this time.



Rolling Footpath Program Priorities

- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Priority 6
- Priority 7
- Priority 8
- Priority 9
- Priority 10
- Priority 11
- Concrete
- Paved
- Mixed

APPENDIX H – Road Action Plan

Road	Segment Description	Regional Routes (F/T/C) ³⁵	Segment Length ³⁶	Speed Environment	Dimensions	Geometry	Strength / Durability	Action Plan ³⁷	Cost ³⁸	Comment
Wedgewood / Hickmans –Seddon / Parndana	South of Playford Hwy- End of seal to South Coast Road	T/C	14.8	Compliant	Minor	Major	Major	1	\$2.90	Upgraded to seal. Final stage completed 2021/22.
Mary Seymour Lane - Penneshaw	Middle Tce to Cheopis Street	F	1	Compliance	Major	Major	Major	1	\$0.8	Upgrade to seal. Coupling/Decoupling area for truck, secondary access and by-pass for the Eastern areas of Penneshaw township in case of emergency.
Ten Trees Lagoon Road	Playford Highway to North Coast Road	F	3.5	Compliant	Major	Major	Major	1	\$1.3	Upgrade to seal - >50,000 tonnes (quarry product and FRWA waste) annually transported on this road. Minimum 15 year life cycle of quarrying predicted. Scheduled for 2023/24.
Cape Borda Road	West End Highway to end of Council owned road	t	28.2	Major	Minor	Major	Minor	1	\$1.3	Upgrade standard of sheeted road. Tourist route.. Completed 2022/23
Jetty Road	South Coast Road to end	t	3.8	Compliant	Major	Major	Minor	1	\$0.1	Upgrade standard of sheeted road. Tourist route. Completed 2022/23
Birchmore Road	Playford Highway to Rowland Hill Highway	F/T/C	11.3	Compliant	Major	Minor	Minor	2		Shoulder Sealing Required, road is non compliant for B- Double route
Birchmore Road	Rowland Hill Highway to South Coast Road	T/C	10.8	Compliant	Major	Minor	Minor	2		Shoulder Sealing Required, road is non compliant for B- Double route
Arranmore Road	Playford Highway to Hog Bay Road	F/T/C	5.2	Compliant	Major	Minor	Minor	2		Full length shoulder seal, grain bunker and airport intersection, Playford Hwy intersection (turning lanes, edges and inside corners).
Mount Taylor Road	Playford Highway to South Coast Road	F	21.9	Compliant	Major	Minor	Minor	2		Flagged forestry area, upgrade standard depended on the volumes to be transported
Timber Creek Road	Playford Highway to Rowland Hill Highway	F	3	Compliant	Major	Minor	Major	2		Upgrade standard of sheeted road, Potatoes and increased Grain haulage- to be followed by propsed Timber Pellet Mill 3-5 years.
North Coast Road	Boxer Road/end of seal to Stokes Bay	T	35.2	Compliant	Minor	Minor	Minor	2		Upgrade to seal, major tourist route
Boxer Road	North Coast Road South to quarry	F	2.3	Compliant	Minor	Minor	Major	2		Upgrade to seal, transport of quarry materials
Davies Road/Cathers Road	Hog Bay Road to golf course	T	~3	Major	Major	Major	Major	2		Major upgrade from track to sheeted, tourist route for planned golf course
Playford Highway	Parndana to Gosse Richie Road	F/T/C	25.8	Compliant	Minor	Minor	Minor	3		Full length shoulder seal, all N/S intersections, (upgrade seal turning lanes, edges, inside corners and intersections). Currently main route for Freight, tourism & community (with KIPT plans could become Freight major). Freight increases for forestry will require curve widening and sealing plus intersection upgrades. Scheduled for 2022/23.
Playford Highway	Gosse Richie Road to West End Highway	T	7.7	Compliant	Minor	Minor	Minor	3		Full length shoulder seal, all N/S intersections, (upgrade seal turning lanes, edges, inside corners and intersections). Currently main route for tourism. Scheduled for 2022/23.
South Coast Road	Birchmore Road to West End Highway	T/C	61.7	Compliant	Minor	Minor	Minor	3		Full length reseal, shoulder seal, all N/S intersections, (upgrade seal turning lanes, edges, inside corners and intersections). Road is non compliant for B- Double route (and potential Forestry Route) KIC to determine if this road should be gazetted as B Double- Technical Route assessment should be undertaken first. B Doubles must make individual application at present to use this route.
Stokes Bay Road	Playford Highway to Stokes Bay	T/C	18.3	Compliant	Minor	Minor	Minor	3		Section may become core forestry. Advise against this as pavement design was not applied to allow for increased heavy loads when road was upgraded (only 7 vpd considered at the time). Recommend using Playford Hwy route to Ropers Rd for forestry.
Cape Willoughby Road	End of seal to lighthouse	t	18.6	Compliant	Major	Major	Major	3		Consider unsealed road resheet to a higher standard. Significant increase in cruise ship bus tourist and light vehicles.

³⁵ F – Regionally significant Freight Route, T – Primary Tourism Route, C – Regionally Significant Community Access Route, t – Secondary Tourism Route

³⁶ To nearest 0.1km

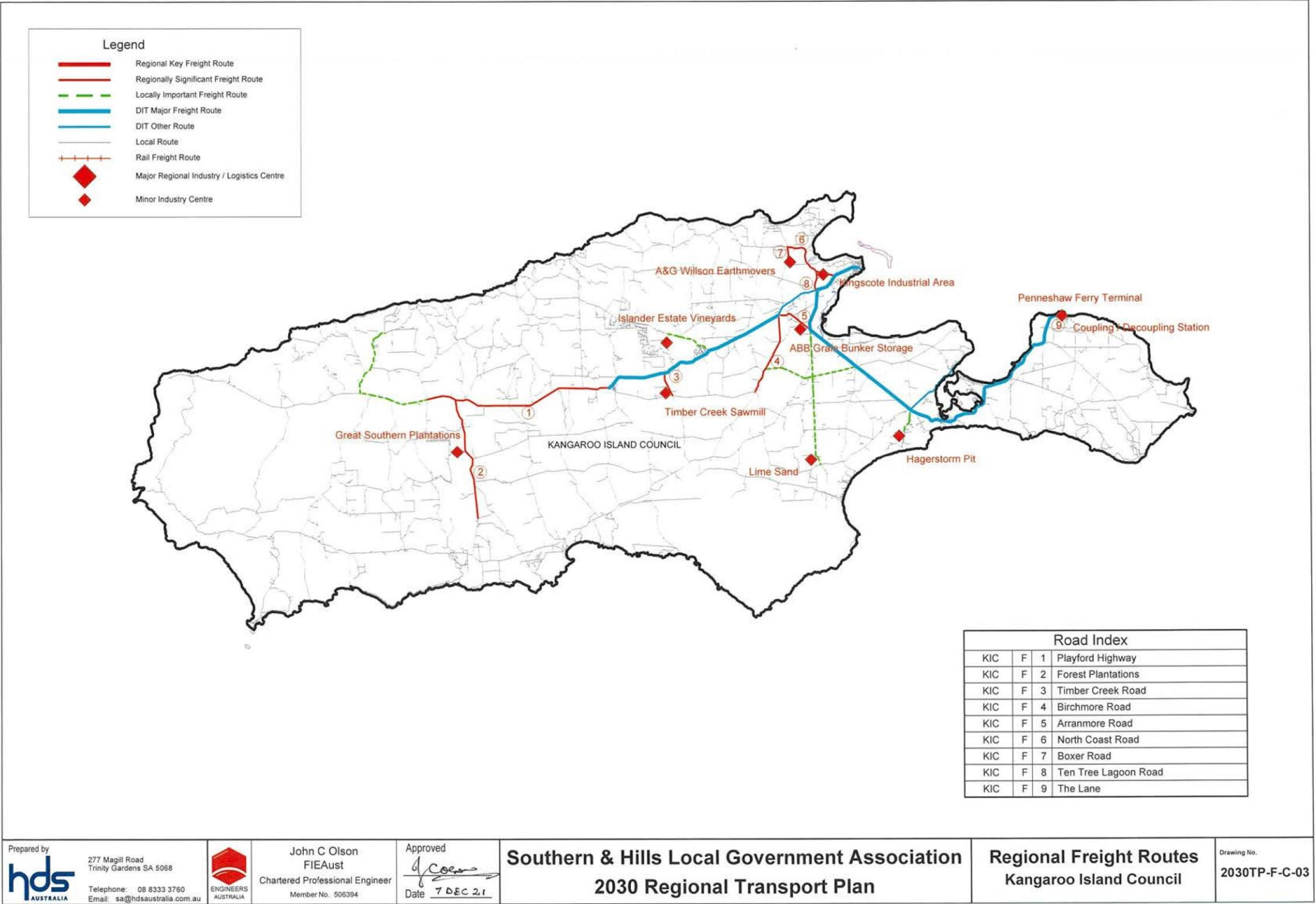
³⁷ Action Plan 1 – Immediate Priority (0 to 5 years), Action Plan 2 – Medium Term priority (6 to 10 years), Action Plan 3 – Long Term Priority (11 years and Beyond), C – Compliant / Fit For Purpose

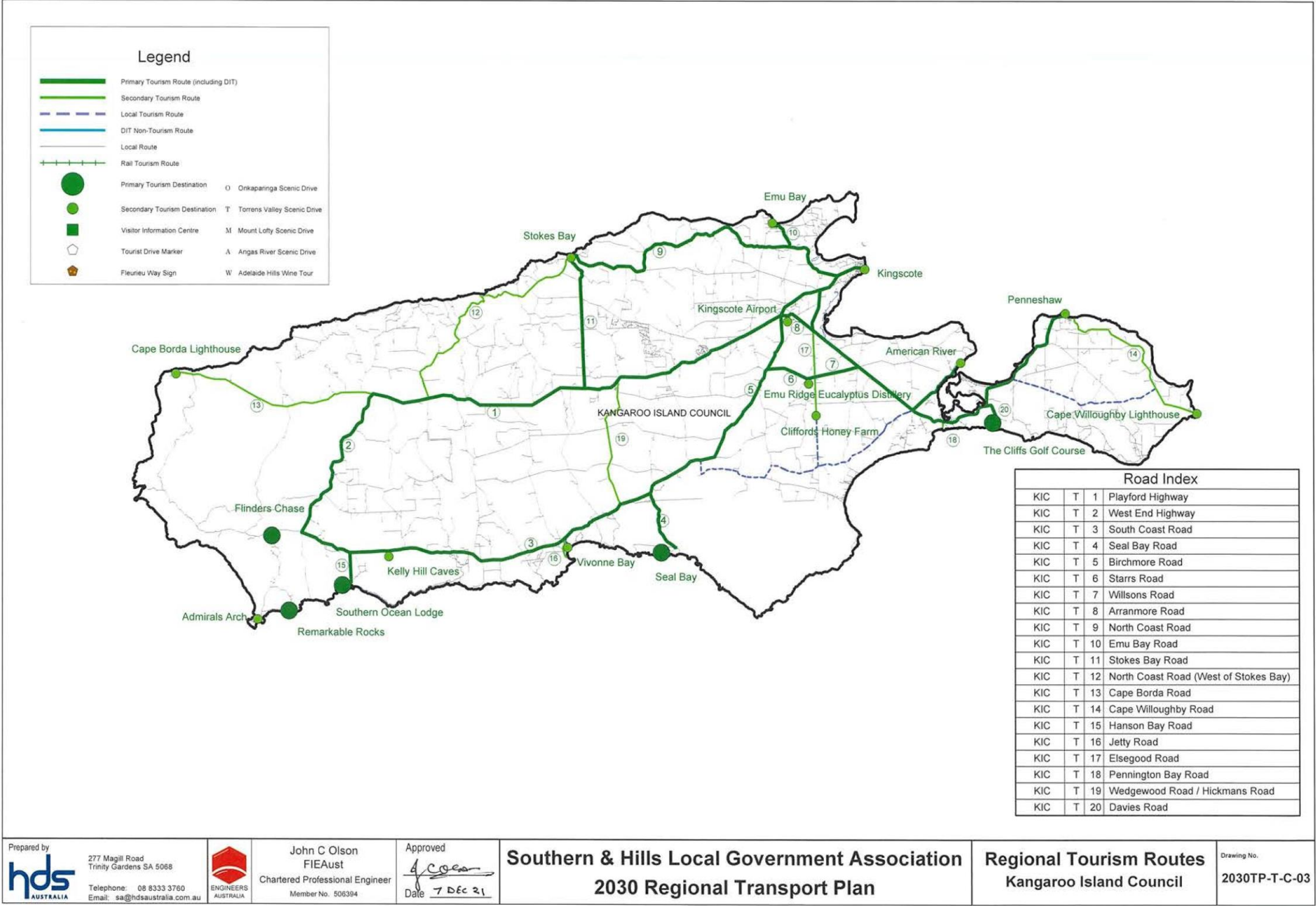
³⁸ Action Plan 1 only, to nearest \$0.1m

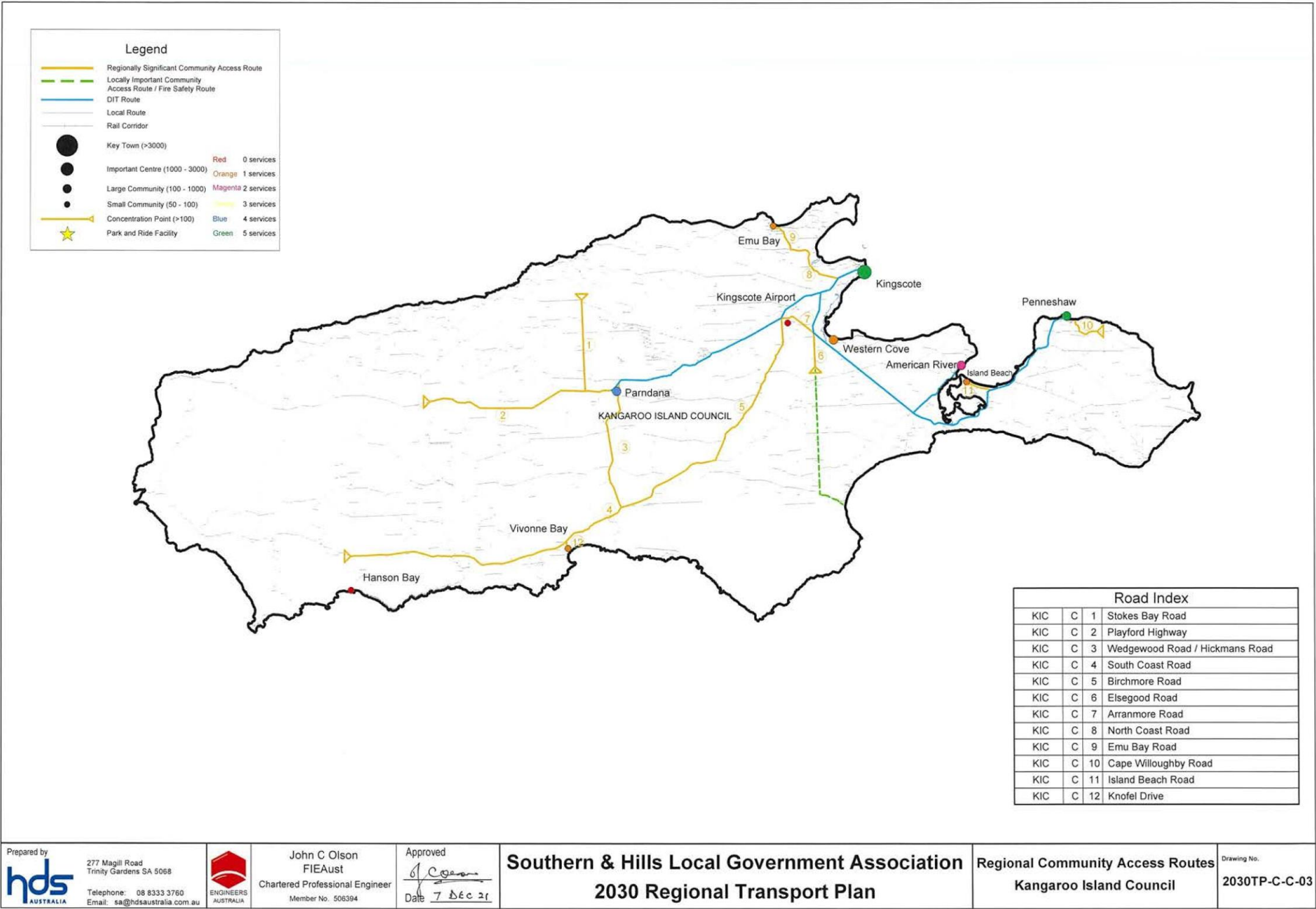
Infrastructure and Asset Management Plan 2023–2033

Chapter 8 – Roads

Road	Segment Description	Regional Routes (F/T/C) ³⁵	Segment Length ³⁶	Speed Environment	Dimensions	Geometry	Strength / Durability	Action Plan ³⁷	Cost ³⁸	Comment
Cape Willoughby Road	Hog Bay Road to end of seal	t/C	8.9	Compliant	Compliant	Compliant	Compliant	C		
Island Beach Road	Hog Bay Road to end	C	3.3	Compliant	Compliant	Compliant	Compliant	C		
Starrs Road	Birchmore Road to South Coast Road	T	5.6	Compliant	Compliant	Compliant	Compliant	C		Section may become core forestry. Need to monitor- generally has sound pavement from Renewal of Unsealed Roads Program.
Willsons Road	South Coast Road to Hog Bay Road	T	7.3	Compliant	Compliant	Compliant	Compliant	C		
Elsegood Road	Hog Bay Road to change in surface	t/C	4.6	Compliant	Compliant	Compliant	Compliant	C		Potential for review with expected 20,000 ton Limesand per year from a new Seagers Rd pit starting in 22/23
Elsegood Road	Change in surface to Honey Farm	t	6.9	Compliant	Compliant	Compliant	Compliant	C		Potential for review with expected 20,000 ton Limesand per year from a new Seagers Rd pit starting in 22/23
Emu Bay Road	North Coast Road to end	T/C	1.2	Compliant	Compliant	Compliant	Compliant	C		
Hanson Bay Road	South Coast Road to end	T	4.7	Compliant	Compliant	Compliant	Compliant	C		Potential for review if accommodation rebuilt
North Coast Road	Playford Highway to Boxer Road/end of seal	F/T/C	11	Compliant	Compliant	Compliant	Compliant	C		
Seal Bay Road	South Coast Road to end	T	8.8	Compliant	Compliant	Compliant	Compliant	C		
West End Highway	Playford Highway to South Coast Road	T	23.8	Compliant	Compliant	Compliant	Compliant	C		Potential to consider full length shoulder seal, 2 x intersection upgrades, curve sealing and/or edge linemarking on curves.
North Coast Road	West of Stokes Bay to Playford Highway	t	28.5	Compliant	Compliant	Compliant	Compliant	C		
Pennington Bay Road	Hog Bay Road to end	t	1.4	Compliant	Compliant	Compliant	Compliant	C		
Knofel Drive	South Coast Road to end	C	1	Compliant	Compliant	Compliant	Compliant	C		
Mc Hughs Road	Playford Highway to Grading		4	Compliant	Minor	Minor	Major	2		5,000 ton per year potatoes on haulage top a grading shed and centre pivot. (Not deemed regionally significant - Possible F)
Old Salt Lake Road	Hog Bay Rd to Hagerstrom Pit		3.8	Compliant	Major	Minor	Major	2		50,000+ ton per year sand for Desalination pipeline project in 21/22 plus ongoing projects. (Not deemed regionally significant - Possible F)
Elsegood Road	Honey farm to Three Chain Road		10.3	Compliant	Major	Minor	Major	2		Expect 20,000 ton Limesand per year from a new Seagers Rd pit starting in 22/23. (Not deemed regionally significant - Possible F)
Bullock Track	Playford Hwy to Cordes Rd		3.3	Compliant	Minor	Minor	Minor	2		Significant community use. (Not deemed regionally significant - Possible C)
East West One Hwy	East Harriet Rd to Birchmore Rd		27.5	Compliant	Major	Minor	Major	2-3		Major social route to Parndana, interface with Wedgewood/Hickmans. (Not deemed regionally significant - Possible C)
Governor Drive	Reeves Pt to Cordes Rd		1.2	Minor	Major	Major	Minor	2		Upgrade to Seal for Tourism Drive. (Not deemed regionally significant - Possible T)
Bark Hut rd	Playford Hwy- Stokes Bay Rd (west)		19.7	Compliant	Compliant	Compliant	Compliant	C		May change if KIPT chose the route for core forestry (Not deemed regionally significant - Potential F/C)
East West Rd	East Hog Bay Rd to Willson River Rd		9.1	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Harriet Rd	South Playford Hwy to South Coast Rd		21.3	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Rowland Hill Hwy	Wedgewood to Birchmore		19.3	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
South Coast Rd	Wilson Road to end of seal		20.2	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Springs Rd	Playford Hwy to North Coast Rd		24.5	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Three Chain Rd	Elsegood to Hog Bay Rd		15.7	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Wilson River Rd	East West Rd to Cape Willoughby Rd		21.1	Compliant	Compliant	Compliant	Compliant	C		(Not deemed regionally significant - Potential F/C)
Redbanks/Ballast Head Road	Hog Bay Rd to end		19.1	Compliant	Compliant	Compliant	Compliant	C		Increased grain haulage option for local growers PLUS new tourist venture access to east end of MinOil Rd. Potential for review if Ballast Head selected as port chosen by KIPT. (Not deemed regionally significant - Potential F)







APPENDIX I – Defect Types and Repair Timeframes

Asset Class and Type	Defect Type	Severities	Repair Timeframes		
			High Priority	Medium Priority	Low Priority
Roads – All Roads	Guardrail	Missing or hazardous guardrail	1 month	3 months	12 months
	Guideposts	Missing; Bent or damaged	1 month	3 months	3 months
	Holding Water	25%, 50%, 75% or 100% road covered	1 month	3 months	3 months
	Open Drains	>50% of drain capacity is reduced	3 months	3 months	3 months
	Roadside Vegetation	<6m high clearance over traffic lanes; <2m from travel way; Obscures line of sight or signs	1 month	12 months	12 months
	Signage/Delineation (Regulatory)	Missing or >50% illegible; Post damaged	3 month	3 month	3 month
	Signage/Delineation (Regulatory)	Missing or >50% illegible; Obscured by vegetation; Faded / Non reflective; Post damaged	1 month	1 month	1 month
	Signage/Delineation (Traffic Advisory Signs)	Missing or >50% illegible; Obscured by vegetation; Faded / Non reflective; Post damaged	2 months	2 months	2 months
Roads – Sealed	Edge Breaks	>300mm over 20 l/m; >100mm over 10 l/m	1 month	2 months	2 months
	Edge Drop Off	>100mm (d) over 100 l/m; >100mm (d) over 10 l/m	1 month	2 months	2 months
	Kerb and Channel	>50mm dislodgement alignment and <3 l/m; >50mm dislodgement alignment and >3 l/m	12 months	12 months	12 months
	Linemarking	50-75% faded line; >75% faded line	12 months	12 months	12 months
	Pavement or Seal Failure	<75m ² ; 75-150m ² ; >150m ²	12 months	12 months	12 months
	Potholes	>300mm (w) and >75mm (d); <300mm (w) and/or <75mm (d)	2 weeks	1 month	1 month
Roads – Unsealed	Corrugations	>100mm (d) and over 50 l/m	1 month	3 months	3 months
	Potholes	>500mm (w) and >100mm (d)	1 month	3 months	3 months
	Protruding Rocks in Surface	>150mm (d) and over 25 l/m	1 month	3 months	3 months
	Road Scouring (Longitudinal Rutting)	>150mm (d) and over 25 l/m	1 month	3 months	3 months
	Road Scouring (Traverse Rutting)	>150mm (w) and >200mm (d)	1 month	3 months	3 months
	Slippery / clay patches	>25l/m			
Footpaths	Cracking	<1m; 1-2m; >2m	1 month	2 months	3 months
	Overhanging Vegetation	Below 2.5m above footpath or shared pathway; More than 2.5m above footpath or shared pathway	1 month	2 months	3 months
	Trip Hazard	Minor tripping hazard; Medium tripping hazard; Major tripping hazard	1 month	2 months	3 months
	Undulations, heave, subsidence of asphalt or paved pathway	Exceeding 40mm over a 1.2m straight edge; Not exceeding 40mm over a 1.2m straight edge	3 months	6 months	12 months
	Vertical imperfection	<25mm; 25-50mm; >50mm	3 months	6 months	12 months

APPENDIX J – Defect Notification and Resolution Process

