Draft Transport Asset Management Plan

Purpose

To update the Auckland Transport Board on progress with respect to the Asset Management Plan (AMP).

To seek approval to submit a draft of the AMP to Audit NZ for review.

Executive Summary

Transport assets and services play a crucial role in enabling Auckland Transport to deliver on its strategic outcomes and to meet the needs of the community and ratepayers. Auckland Transport is required to manage its assets and services in a robust and transparent manner. Asset management planning provides the basis for this. Through the AMP, Auckland Transport can demonstrate that it is optimally managing its assets and resources and that the LTP is developed using auditable and accurate information.

The first AMP draft has now been published and is based on inherited information, levels of service (LOS) and investment levels that have been consolidated from previous legacy organisations. The Auckland Transport AMP spans across all roading and public transport (PT) asset classes. The initial focus of the Auckland Transport AMP is on meeting Local Government Act requirements and to ensure Auckland Transport meets its statutory obligations. The intention is to now further develop the draft prior to publication in June 2012.

Future publications will build on this first AMP to include the overarching strategic framework for managing and setting investment levels for each asset class and relating investment specifically to the achievement of levels of service and strategic outcomes. To achieve these aspirations of continuous development an Improvement Plan is being prepared highlighting areas of focus.

This paper presents the draft AMP, introduces the Improvement Plan and recommends a formal review by Audit NZ as a means of identifying specific areas for consideration within the Improvement Plan.

Why an AMP?

The production of the plan is a statutory function. The Local Government Act (LGA) 2002 is the primary governing legislation for developing Asset Management Plans to ensure effective long term asset stewardship.

The AMP is a decision support tool that will be used across the whole of Auckland Transport to address five core questions:

1) What is the current state of the physical assets?
2) What are the levels of service required to meet the organisations strategic outcomes?
3) Which assets are critical to sustained performance?
4) What are the optimum investment strategies for operations, maintenance, renewals and improvement?
5) What is the optimum long term investment and funding strategy?

Where the AMP Fits In

The role of the AMP within the existing wider strategic planning context is illustrated in Figure 1. The AMP links with other strategic planning documents internally at Auckland Transport and externally with New Zealand Transport Agency (NZTA) and Auckland Council. As an underpinning element of the Integrated Transport Plan (not yet fully developed) the AMP informs and is aligned with both the LTP and Regional Land Transport Programme.

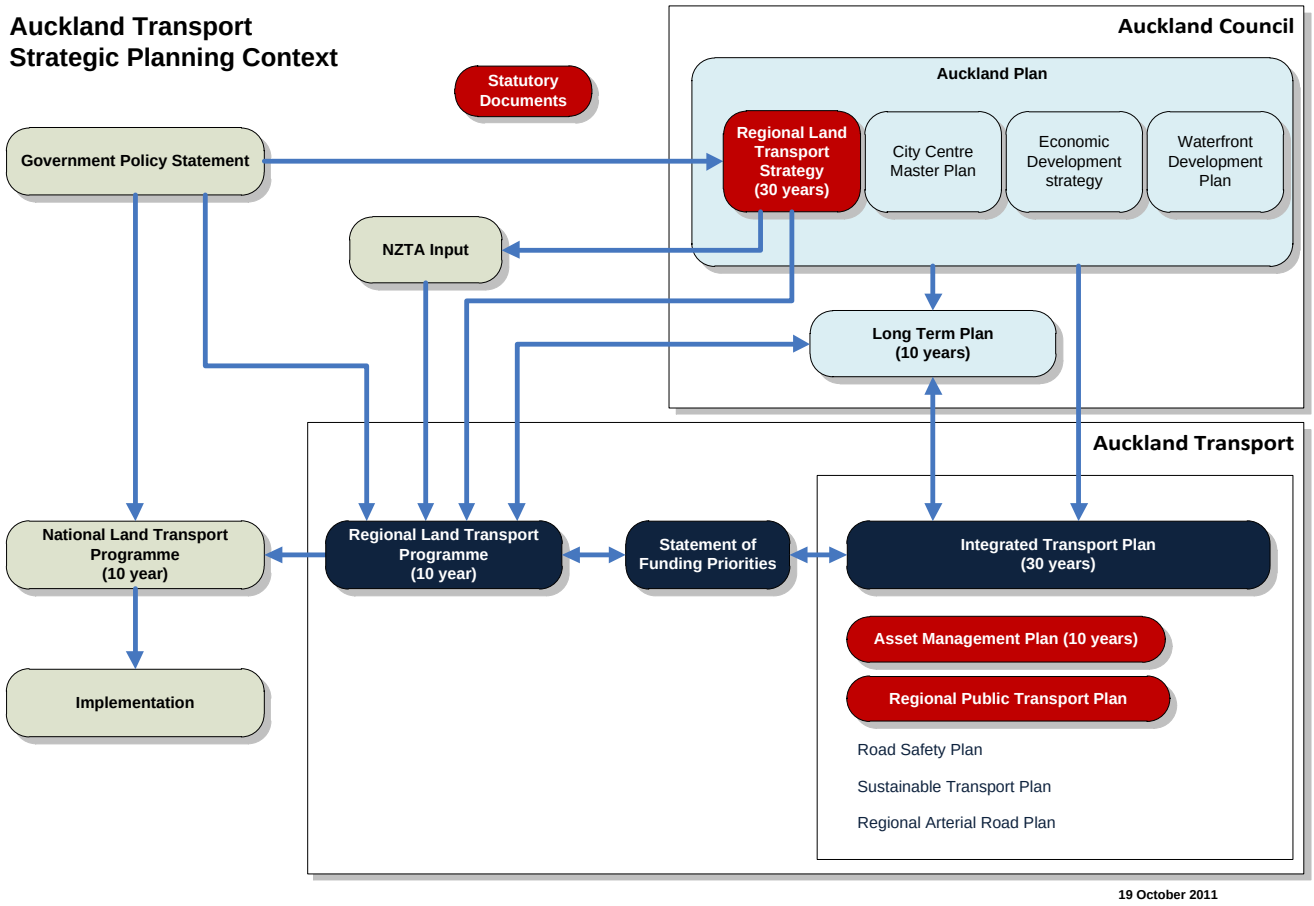


Figure 1- Strategic Planning Context

Draft AMP Progress

The Board meeting held on 27 April 2011 endorsed an Asset Management Framework and a level of service framework, which established the principles from which the AMP has been developed.

A stocktake of the asset management planning processes and outcomes inherited from the legacy organisations has been completed. This process has been used to align levels of service and previous LTP renewal and maintenance programmes, consolidate asset databases and form a base from which region wide asset management practices can be developed.

A discussion document was completed in June 2011. Consultation was undertaken internally and with staff from the NZTA and Auckland Council to obtain feedback and to ensure alignment with emerging plans including the Auckland Plan.

The first draft of the AMP was released on 31 August 2011 comprising a summary document supported by two tactical plans; one for roading based activities including footpaths and cycleways, and the other for public transport activities. This document is currently being peer

reviewed for technical compliance. The Draft AMP is a substantial document which will be provided to the Board once it has been finalised.

In addition, Auckland Council require a formal review by Audit NZ to test compliance with published guidelines from the National Asset Management Steering Group (NAMS). Informal advice has been received from Audit NZ but Board approval is requested to release a draft of the AMP to Audit NZ for the purpose of a formal review.

Draft AMP Interim Conclusions

There are a number of interim conclusions that can be drawn from the first draft of the AMP which are proposed to inform the Long Term Plan.

1) Overall the condition of the transport network, both across PT and Roading is generally considered to be fair to good as shown diagrammatically in Attachment 1. The condition information for wharves, retaining walls and sea walls are incomplete making assessment difficult and an area for improvement.

2) The asset inventory database for Roading is relatively complete, but there exists considerable differences in the quality and completeness of data inherited from legacy organisations. It therefore requires data rationalisation and auditing to be fully effective to assist decision making.

3) The asset inventory database for PT is in its infancy. It requires considerable development to be used as an effective tool to assist decision making.

4)

   (a) In order to maintain levels of service and the current level of asset integrity for roading an average annual expenditure over the next 10 years of $212m for renewals and $193m for operations and maintenance is required. This compares to the current budgeted expenditure of $185m and $167m respectively for 2011/12 indicating a historical under investment in roading which if continued could deplete the asset and levels of service. In future AMPs this will be an area of focus to ensure the optimal investment regime is in place.

   (b) For public transport, there is too much uncertainty around the quality of the available condition and other data to confirm whether or not the current budgeted level of expenditure for 2011/12 of $15m for renewals and $271m for operations and maintenance is sufficient to maintain the current asset integrity and levels of service. A summary of the annual expenditure forecast is provided in Attachment 2.

   It should be noted that the figures above have been generated based on sound asset management principles and on the recommended levels of investment to maintain asset integrity and desired levels of service. These figures should however be read independently of those in the Long Term Budget paper submitted separately to the Board. While originally based on the AMP figures the Long Term Budget figures have been adjusted slightly in response to funding signals already provided by the Mayor's Office.

5) Capital investment has been targeted at approximately $330m per annum (excluding renewals). This figure has been developed from historical investment levels across the legacy organisations as indicative of that investment required to maintain current safety, capacity, reliability and availability, levels of service and to cater for growth. A substantial amount of further work is needed to link capital investment, more specifically to levels of service and growth areas identified in the Auckland Plan, to better inform and optimise capital investment strategies.

The renewal, operations and maintenance investment requirements identified in the AMP have been developed in life cycle management plans for each asset class. Additional investment has been identified as being needed to maintain the current asset condition and level of service over a ten year time period. This totals an average annual additional investment of $28m. This additional investment results from a lifecycle renewal backlog caused by legacy organisations deferring renewal funding, and also from asset classes where no or inadequate budgets have been identified as being mapped to Auckland Transport.

The 10 year renewal, operations and maintenance investment identified through the current life cycle management plans are detailed in Attachment 2. These investment levels are still being finalised.

Improvement Plan

The Asset Management team has undertaken significant work to date in consolidating the asset information from the legacy organisations. This has put in place the fundamental base technical data that will support future decision making. Work now has to continue on refining and improving the inherited data and setting the strategic context and framework to develop a robust optimised decision making tool.

The asset knowledge and processes inherited from legacy organisations do not always reflect best practice asset management and there are a number of areas where further improvement is required. These areas are identified through the AMP Improvement Plan and include:

- Establish links between asset condition, levels of service, investment levels and the optimised decision making process.
- Refine and develop growth levels for lifecycle management plans.
- Linking capital investment proposals to growth and demand.
- Development of robust renewal programmes based on refined and updated condition data.
- Develop the asset management risk management process including criticality, vulnerability and resilience requirements.
- Develop financial modelling to allow financial scenario planning.
- Develop spatially based mapping to report asset condition

Next Steps / Key Issues

The draft AMP is continually being updated and refined as the team work towards a final published version required at the end of June 2012. Further drafts of the AMP are proposed to be published in December 2011 and March 2012. A formal review of the draft AMP is proposed to be undertaken by Audit NZ early in December 2011.

A further update on the progress of the AMP will be presented to the Board early in 2012, and Board approval of the final AMP will be sought in April or May 2012 prior to publication.

Recommendation

That the Auckland Transport Board

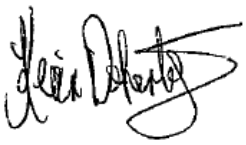
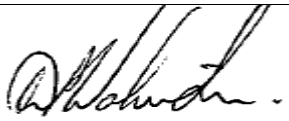
i). Receives this report

ii). Approves the submission of a draft AMP for formal review by Audit NZ early in December 2011.

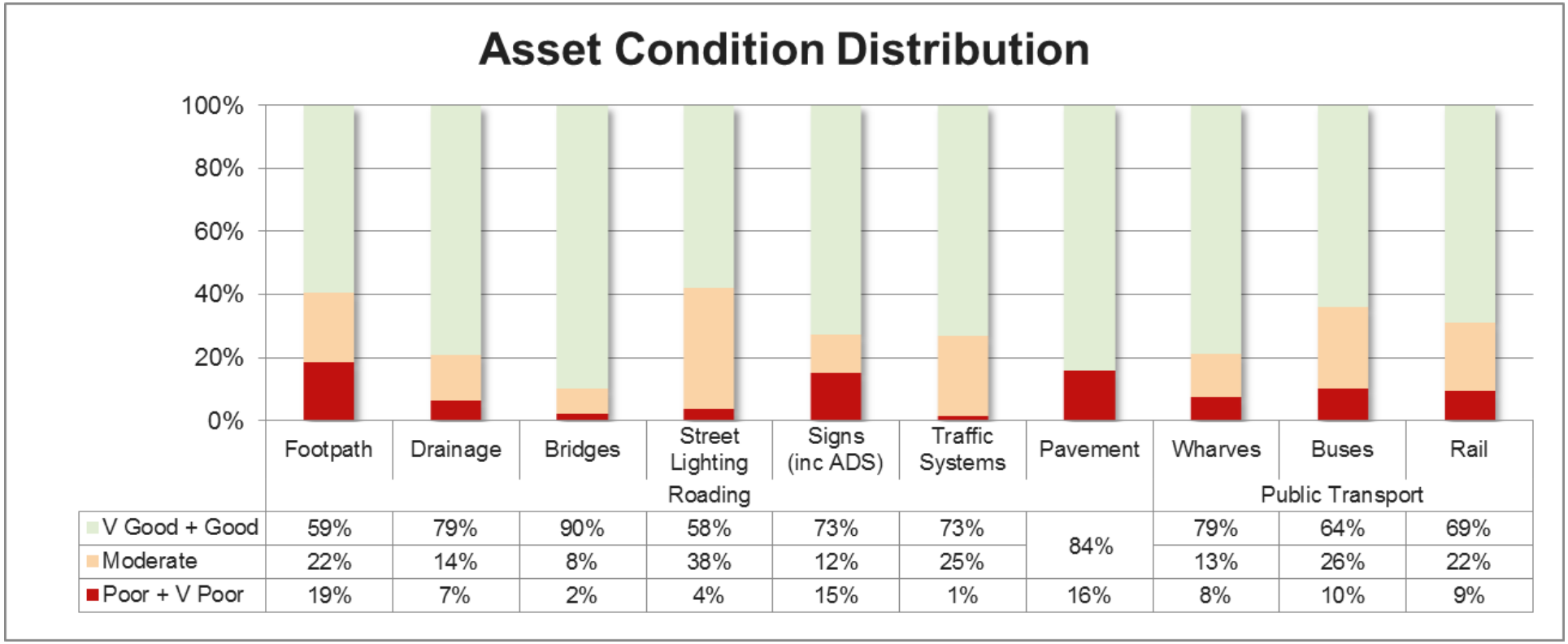
Attachments

Attachment 1: Condition of the Transport Network

Attachment 2: Indicative 10 Year Renewal, Operations and Maintenance Investment

WRITTEN BY	Andy Finch **Manager Asset Management & Programming**	
RECOMMENDED by	Dr Kevin Doherty **Chief Infrastructure Officer**	
APPROVED FOR SUBMISSION by	David Warburton **Chief Executive**	

Condition of the Transport Network



	Footpath	Drainage	Bridges	Street Lighting	Signs (inc ADS)	Traffic Systems	Pavement	Wharves	Buses	Rail
	Roading							Public Transport		
V Good + Good	59%	79%	90%	58%	73%	73%	84%	79%	64%	69%
Moderate	22%	14%	8%	38%	12%	25%		13%	26%	22%
Poor + V Poor	19%	7%	2%	4%	15%	1%	16%	8%	10%	9%

ATTACHMENT 1

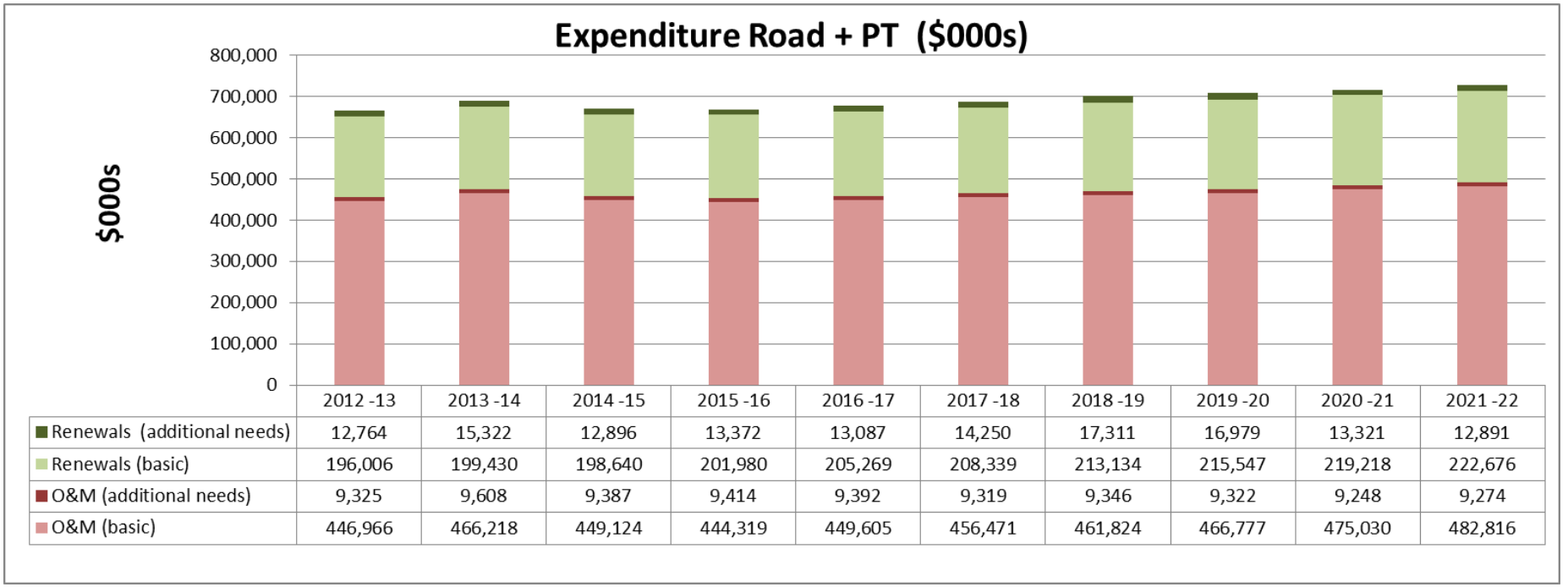
Indicative 10 Year Renewal, Operations and Maintenance Investment

Proposed Expenditure Summaries by Service Area *(Subject to Review)*

All Expenditure O&M & Renewals ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
Road	378,245	385,915	388,198	394,584	400,303	407,457	416,766	422,731	425,421	431,542	4,051,162
PT	286,816	304,662	281,849	274,502	277,050	280,922	284,850	285,893	291,395	296,115	2,864,055
TOTAL ($000s)	**665,061**	**690,577**	**670,047**	**669,085**	**677,353**	**688,379**	**701,616**	**708,624**	**716,817**	**727,657**	**6,915,216**

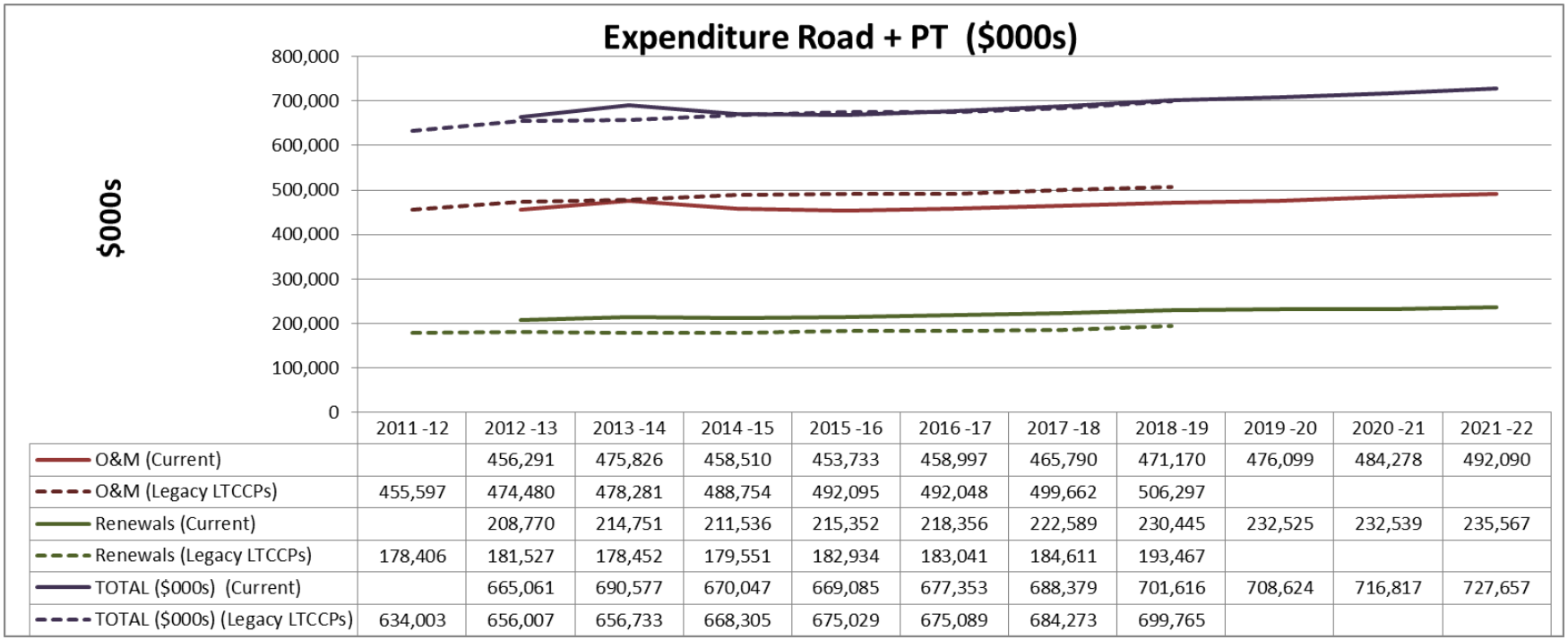
All Expenditure Road + PT ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
O&M (basic)	446,966	466,218	449,124	444,319	449,605	456,471	461,824	466,777	475,030	482,816	4,506,123
O&M (additional needs)	9,325	9,608	9,387	9,414	9,392	9,319	9,346	9,322	9,248	9,274	186,661
Renewals (basic)	196,006	199,430	198,640	201,980	205,269	208,339	213,134	215,547	219,218	222,676	2,119,959
Renewals (additional needs)	12,764	15,322	12,896	13,372	13,087	14,250	17,311	16,979	13,321	12,891	102,473
TOTAL ($000s)	**665,061**	**690,577**	**670,047**	**669,085**	**677,353**	**688,379**	**701,616**	**708,624**	**716,817**	**727,657**	**6,915,216**

ATTACHMENT 2



	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22
Renewals (additional needs)	12,764	15,322	12,896	13,372	13,087	14,250	17,311	16,979	13,321	12,891
Renewals (basic)	196,006	199,430	198,640	201,980	205,269	208,339	213,134	215,547	219,218	222,676
O&M (additional needs)	9,325	9,608	9,387	9,414	9,392	9,319	9,346	9,322	9,248	9,274
O&M (basic)	446,966	466,218	449,124	444,319	449,605	456,471	461,824	466,777	475,030	482,816

A Comparison of Current O & M and Renewal Forecasts with legacy LTCCP Forecasts:



	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22
O&M (Current)		456,291	475,826	458,510	453,733	458,997	465,790	471,170	476,099	484,278	492,090
O&M (Legacy LTCCPs)	455,597	474,480	478,281	488,754	492,095	492,048	499,662	506,297			
Renewals (Current)		208,770	214,751	211,536	215,352	218,356	222,589	230,445	232,525	232,539	235,567
Renewals (Legacy LTCCPs)	178,406	181,527	178,452	179,551	182,934	183,041	184,611	193,467			
TOTAL ($000s) (Current)		665,061	690,577	670,047	669,085	677,353	688,379	701,616	708,624	716,817	727,657
TOTAL ($000s) (Legacy LTCCPs)	634,003	656,007	656,733	668,305	675,029	675,089	684,273	699,765			

Roads O&M and Renewal Forecast:

Roads Expenditure type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
O & M	179,827	182,920	185,562	188,356	191,195	193,969	196,949	199,927	202,901	206,025	**1,927,629**
Renewals	198,419	202,995	202,636	206,228	209,108	213,488	219,817	222,805	222,520	225,517	**2,123,532**
TOTAL ($000s)	**378,245**	**385,915**	**388,198**	**394,584**	**400,303**	**407,457**	**416,766**	**422,731**	**425,421**	**431,542**	**4,051,162**

Road O&M by activity type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
Commercial Areas	238	242	246	250	254	258	262	266	271	275	**2,563**
Demand mgt & Community safety	12,990	13,280	13,583	13,747	13,966	14,127	14,352	14,581	14,814	15,050	**140,490**
Parking Off-street Carparks	9,300	9,448	9,599	9,753	9,909	10,068	10,229	10,392	10,559	10,728	**99,985**
Parking On-street	12,874	13,080	13,289	13,501	13,718	13,937	14,160	14,387	14,617	14,851	**138,412**
Road Bridges, Culverts & Structures	2,727	2,771	2,815	2,860	2,906	2,952	2,999	3,047	3,096	3,146	**29,319**
Road Carriageway (base & surface)	36,460	37,037	37,622	38,218	38,822	39,437	40,061	40,695	41,339	41,994	**391,684**
Road Drainage kerbs, channels & catchpits	12,659	12,856	13,055	13,257	13,463	13,672	13,884	14,100	14,319	14,542	**135,808**
Road Signs	6,635	6,741	6,849	6,958	7,070	7,183	7,298	7,414	7,533	7,653	**71,333**
Road Street Furniture	1,372	1,394	1,416	1,439	1,462	1,485	1,509	1,533	1,558	1,582	**14,749**
Road Network – All activities	746	758	770	783	795	808	821	834	847	861	**8,023**
Road Street lighting	17,797	18,082	18,371	18,665	18,963	19,267	19,575	19,888	20,207	20,530	**191,345**
Road Marking	4,778	4,855	4,932	5,011	5,092	5,173	5,256	5,340	5,425	5,512	**51,375**
Road Vegetation Management	9,072	9,217	9,365	9,515	9,667	9,821	9,979	10,138	10,300	10,465	**97,539**
Road Cycleways	235	239	243	247	251	255	259	263	267	272	**2,532**
Road Footpaths	5,803	5,896	5,990	6,086	6,183	6,282	6,383	6,485	6,589	6,694	**62,390**
Road Traffic Systems & Operations	27,108	27,703	27,797	28,146	28,450	28,709	29,072	29,391	29,664	30,043	**286,083**
NM planning & systems	19,032	19,324	19,619	19,920	20,225	20,536	20,851	21,171	21,497	21,827	**204,003**
Grand Total	**179,827**	**182,920**	**185,562**	**188,356**	**191,195**	**193,969**	**196,949**	**199,927**	**202,901**	**206,025**	**1,927,629**

Road Renewals by activity type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
Commercial Areas	190	193	196	199	202	205	209	212	215	219	**2,040**
Parking Off-street Carparks	1,555	4,275	2,076	2,072	2,097	2,043	2,089	2,055	2,061	2,108	**22,432**
Parking On-street	654	497	276	762	457	1,680	4,701	4,409	751	281	**14,468**
Road Bridges, Culverts & Structures	13,121	13,315	13,512	13,712	13,915	14,122	14,332	14,545	14,762	14,982	**140,318**
Road Carriageway (base & surface)	122,357	123,219	124,110	126,032	127,984	129,968	131,984	134,031	136,112	138,226	**1,294,022**
Road Drainage kerbs, channels & catchpits	13,698	13,909	14,124	14,342	14,563	14,788	15,017	15,249	15,485	15,725	**146,903**
Road Signs	454	461	469	476	484	491	499	507	515	524	**4,880**
Road Street Furniture	227	230	234	238	242	245	249	253	257	262	**2,438**
Road Street lighting	7,026	7,139	7,253	7,369	7,487	7,607	7,728	7,852	7,978	8,105	**75,544**
Road Marking	1,564	1,583	1,602	1,621	1,640	1,660	1,680	1,701	1,722	1,743	**16,516**
Road Cycleways	115	117	119	121	122	124	126	128	131	133	**1,236**
Road Footpaths	31,218	31,717	32,225	32,740	33,264	33,796	34,337	34,886	35,445	36,012	**335,639**
Road Traffic Systems & Operations	6,241	6,341	6,442	6,545	6,650	6,756	6,864	6,974	7,086	7,199	**67,098**
Total renewals ($000s)	**198,419**	**202,995**	**202,636**	**206,228**	**209,108**	**213,488**	**219,817**	**222,805**	**222,520**	**225,517**	**2,123,532**

Public Transport (PT) O & M and Renewal Forecast:

PT Expenditure type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
O & M	276,464	292,906	272,949	265,377	267,802	271,821	274,221	276,172	281,377	286,065	**2,765,155**
Renewals	10,352	11,756	8,900	9,125	9,248	9,101	10,629	9,721	10,019	10,050	**98,900**
TOTAL ($000s)	**286,816**	**304,662**	**281,849**	**274,502**	**277,050**	**280,922**	**284,850**	**285,893**	**291,395**	**296,115**	**2,864,055**

PT O&M by mode type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
Bus	134,235	144,651	150,941	153,829	158,363	161,172	162,714	163,733	164,780	165,856	**1,560,275**
Rail	10,546	11,533	12,302	12,921	13,331	13,779	14,273	14,787	15,291	15,911	**134,673**
Ferry	93,812	98,619	71,613	60,000	57,596	57,901	58,231	58,399	61,583	64,529	**682,283**
All modes	37,871	38,103	38,093	38,627	38,513	38,969	39,003	39,254	39,723	39,769	**387,923**
TOTAL ($000s)	**276,464**	**292,906**	**272,949**	**265,377**	**267,802**	**271,821**	**274,221**	**276,172**	**281,377**	**286,065**	**2,765,155**

PT Renewals by mode type ($000s)	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020 -21	2021 -22	10 Year Total 2013-22
Bus	878	880	882	884	886	888	890	893	895	897	**8,872**
Rail	1,800	2,720	4,000	4,000	4,800	4,800	4,800	4,800	4,800	4,800	**41,320**
Ferry	7,674	8,157	4,019	4,241	3,562	3,413	4,938	4,028	4,324	4,353	**48,708**
TOTAL ($000s)	**10,352**	**11,756**	**8,900**	**9,125**	**9,248**	**9,101**	**10,629**	**9,721**	**10,019**	**10,050**	**98,900**