7. Appendix 1: Transport system state, significance and policy response

Transport System	Comment	Significance (risk & consequence)	System state	Evidence	Policy Response
Passenger rail level of service	Rolling stock **overdue** for replacement	★★★★	👎👎👎	First delivered 1949 over 5 year period with a design life of 30 years. 20 years overdue for replacement	4.1 (a) Maintain urban rail as an arterial priority (b) Upgrade passenger rail level of service with regard to rolling stock and line conditions (k) Support ongoing development of new and existing park and ride facilities 4.2 (f) Encourage increased use of passenger transport 4.3 (b) Advocate for necessary rail investment
	Current rail network not optimal nor rolling stock quantity sufficient to expand capacity	★★★	👎	Line constraints and narrow tunnels at Pukerua Bay 1.82% patronage growth 2001 – 2002 4.4% decline in 2002 – 2003 Indicative figures show increasing patronage to date (2004)	
Road traffic level of service	Poor travel time reliability	★★★	👎👎	AM peak travel time variance increased from 16% to 28% in the year to November 2003	4.1 (c) Complete an agreed set of priority road packages, ensuring appropriate cycling, pedestrian and bus provisions 4.2 (a) Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use, and for short trips (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities (c) Encourage development of travel plans for key institutions and educational facilities (d) Advocate for government policy to allow road pricing (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips (f) Encourage increased use of passenger transport 4.3 (a) Advocate for increased transport funding 4.4 (a) Continuously improve the level of regional road safety based on a firmly established safety culture
	More commuter peak congestion	★★★	👎	AM peak travel time delay increased 78% in the year to November 2003 VKT increased 36% between 1990 – 2000, and is projected to grow by 34% from 2001 to 2026	
	More weekend congestion	★★	👎	Similar to the weekday peak situation, but with a different demand pattern	
	Adequate road maintenance	★	👍	Continual minor improvements, smoother surfaces, better lighting levels, signs and markings	4.1 (j) Sustain current road maintenance investment

Transport System		Comment	Significance (risk & consequence)	System state	Evidence	Policy Response
Freight	Road	Congestion delay	★★★		Same measures as peak period commuter congestion used	4.1 (c) Complete an agreed set of priority road packages, ensuring appropriate cycling, pedestrian and bus provisions (h) Support rail freight initiatives where benefits exceed those of road freight (i) Identify and mitigate network security risks 4.2 (a) Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use, and for short trips (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities (d) Advocate for government policy to allow road pricing (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips (f) Encourage increased use of passenger transport 4.3 (a) Advocate for increased transport funding (b) Advocate for necessary rail investment (c) Support start-up funding for viable 'alternative to road' initiatives
	Rail	Rolling stock reduced/ relocated	★★		TranzRail relocated freight wagons to Gisborne	
		Commercial viability, reduced demand for rail freight service	★★		General pricing issue, no government rail freight policy, i.e. no start up subsidy available	
		Physical line constraints and time delays	★★		Gracefield spur line removed. Narrow tunnels prohibit large containers, no access to Porirua. Single line sections, Waterloo Quay at grade	
Passenger buses level of service		More services and better facilities	★★★		Bus service kilometres increased 8.4% between 2001 and 2003 An average of 5 new shelters/year built in each TA. Adshel programme in Wellington and Hutt cities Lambton Interchange & Petone Station completed. Priority lanes along Golden Mile	4.1 (d) Continuously review and improve bus services (e) Support the use of trolley buses and their continual upgrade in Wellington City (k) Support ongoing development of new and existing park and ride facilities 4.2 (c) Encourage development of travel plans for key institutions and educational facilities (f) Encourage increased use of passenger transport 4.3 (a) Advocate for increased transport funding
		Continual fleet replacement and refurbishment. Trolley buses need replacing	★★		* see Appendix 1	

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Environmental considerations	Non-renewable energy use projected to increase	★★★	👎👎	Fuel use projected to increase with VKT (34% between 2001 and 2026)	4.2 (a) Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use, and for short trips (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities (c) Encourage development of travel plans for key institutions and educational facilities (d) Advocate for government policy to allow road pricing (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips (f) Encourage increased use of passenger transport 4.5 (b) Continuously improve bus emission standards via fleet upgrade programmes (c) Support government investigations into alternative fuel options and eco-efficient vehicles
	Green house gas emissions increasing	★★★	👎👎	Fuel use and hence CO_2 forecast to increase, which moves further away from Kyoto target emissions level	
	Transport's contribution to air pollutants reducing with greater fleet efficiency.	★	👍	NO_x remains static and CO emissions from transport projected at $^1/_2$ 2001 levels by 2026	
	Land use – Infill and densification	★★	👍	Densification & infill in Wellington central. Infill in Hutt City, especially around rail corridor.	4.1 (f) Continuously develop the accessibility and integration of cycling networks (g) Continuously develop the accessibility and integration of pedestrian networks 4.2 (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips
	Land use – satellite development	★★	👎	Marginal sprawl with satellite suburbs in northern Wellington, Porirua East and Upper Hutt. Significant infill and densification in Paraparaumu.	
	Runoff increasing due to increased VKT	★	👎	No regional data available	4.5 (a) Support high environmental design standards to reduce the immediate impacts of transport projects on the environment
	Noise continuing to increase with growth in VKT	★	👎	Only one data set for 2002. Anecdotal.	

Transport System	Comment	Significance (risk & consequence)	System state	Evidence	Policy Response
Network security	Being continually improved	★★★		General roading upgrades, bridge strengthening, Thorndon seismic strengthening	4.1 (i) Identify and mitigate network security risks (j) Sustain current road maintenance investment
Road Safety	Static to increasing casualty trend, potential gains lost	★★		Significant decreases in the 1990s (halved) Low point 2001 (1023) 2002 (1097) 2003 (1096)	4.2 (a) Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use, and for short trips (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips (f) Encourage increased use of passenger transport 4.4 (a) Continuously improve the level of regional road safety based on a firmly established safety culture (b) Improve the safety of pedestrians from risks posed by traffic, the physical environment and crime (c) Improve cycling safety from risks posed by other traffic
Social considerations	Personal security acceptable	★★		Theft ex car increasing, other indicators static but variable Perception of personal security good in Wellington City	4.1 (g) Continuously develop the accessibility and integration of pedestrian networks 4.2 (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities 4.4 (b) Improve the safety of pedestrians from risks posed by traffic, the physical environment and crime

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Public health (see also environmental section - air quality)	Increasing pedestrian activity in Wellington City	★★	👣👣	Journey to work census 1986 - 2001 11.9% → 13.5%	4.1 (c) Complete an agreed set of priority road packages, ensuring appropriate cycling, pedestrian and bus provisions (g) Continuously develop the accessibility and integration of pedestrian networks 4.2 (b) Encourage high quality and appropriately located land development, particularly around current or proposed transport facilities (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips (f) Encourage increased use of passenger transport 4.4 (b) Improve the safety of pedestrians from risks posed by traffic, the physical environment and crime
	Declining pedestrian activity in the rest of the region	★	👣	Journey to work census 1986 - 2001 9.1% → 7.2% → 7.5% → 8.1% (last increase driven by Wgtn City)	
	Increasing cycling activity in Wellington City	★	👣👣	Journey to work census 1986 – 2001 1.5% → 2.1%	4.1 (c) Complete an agreed set of priority road packages, ensuring appropriate cycling, pedestrian and bus provisions (f) Continuously develop the accessibility and integration of cycling networks 4.2 (e) Encourage the uptake of cycling and pedestrian travel, particularly for short trips 4.4 (c) Improve cycling safety from risks posed by other traffic
	Declining cycling activity in the rest of the region	★	👣	Journey to work census 1986 - 2001 2.7% → 1.9%	