ISBN: 0-478-28992-8

Land Transport NZ
Ikiiki Whenua Aotearoa

land transport road assets

Western Bay of Plenty District
Bay of Plenty Region

Information as at June 2006

Purpose of this publication

Land Transport New Zealand annually publishes comparative information on the maintenance of local authority roads. The information in this publication is based on financial assistance claimed from Land Transport NZ in 2005/06 and on the annual achievement returns from each territorial authority RAMM database.

This enables a comparison to be made between local authorities and their peers. It is also useful as a benchmark for auditing and for reviewing of maintenance funding allocations.

This publication is also available on our website under *Performance of Land Transport* (www.landtransport.govt.nz/information-for/local-transport-authorities.html).

Enquiries

For further information please contact Colin Tubb at Land Transport NZ's National office in Wellington, ph 04 916 4283 or email colin.tubb@landtransport.govt.nz

Feedback

We are keen to receive your feedback so that improvements can continue to be made. Please contact the manager of performance information at your local Land Transport NZ office.

Northern Region	09 969 9800
Midland Region	07 958 8740
Central Region	04 931 8900
Southern Region	03 964 2866

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Definition of terms

Approved Organisation (AO)

Transit New Zealand, the Auckland Regional Transport Authority (ARTA), a regional council, a territorial authority, or any other approved public organisation.

Condition Index (CI)

Condition Index is a combined index, a 'weighted sum', of the surface faults in sealed road surfaces. CI combines alligator cracking, scabbing, potholes, pothole patches and flushing.

100 - CI ensures that the higher the number, the better the condition.

CI and the routine for calculating it using the RAMM software, were introduced in the 2002/03 year.

Pavement Integrity Index (PII)

Pavement Integrity Index is a combined index of the pavement faults in sealed road surfaces. It is a 'weighted sum' of the pavement defects divided by total lane length. PII combines surface faults (CI) with rutting and shoving.

100 - PII ensures that the higher the number the greater the pavement integrity.

Pavement integrity index (PII) and the routine for calculating it using the RAMM software, was introduced in the 2003/04 year.

Road Roughness : >150 NAASRA counts

Road roughness is measured by a system developed by the former National Association of Australian State Roading Authorities (NAASRA). Values are obtained by a special-purpose vehicle travelling down both the outside lanes of length of road. The rougher the road, the higher the NAASRA counts per lane kilometre.

Approved organisations define acceptable levels of service for roughness on their networks. The graph provided in this document has used a threshold of 150 NAASRA. A NAASRA count of greater than 150 typically indicates a road which is becoming a concern in terms of its roughness and the number of complaints likely to be generated.

Smooth Travel Exposure (STE)

Smooth Travel Exposure measures the proportion (%) of vehicle kilometres travelled in a year (VKT) that occurs on 'smooth' sealed roads and indicates the ride quality experienced by motorists.

A 'smooth' road is one smoother than a predetermined NAASRA roughness threshold. The thresholds used vary with traffic density and road location. Heavily trafficked roads have a lower (smoother) threshold. High volume urban roads have lower roughness thresholds than low volume rural roads.

Structural Maintenance

Structural maintenance activity deals with the repair of the road (pavement and surface) and includes the following work categories: pavement maintenance; area-wide pavement treatment; major drainage control; maintenance chip seals; thin asphaltic surfacing; and seal widening.

Vehicle Kilometres Travelled (VKT)

VKT is the total annual vehicle kilometres travelled in an area. This is calculated from the number of vehicles crossing a point in both directions in a 24 hour period, times the length of the road being travelled. Individual road VKT is added to give a value for the whole road network in that area.

Work Category

Claims for funding from Land Transport New Zealand are made within work categories. Some work categories are explained on page four. For further explanation of individual work categories please refer to the Land Transport New Zealand 'Programme and Funding Manual' on our website
http://www.landtransport.govt.nz/funding/programme-and-funding-manual/

Definition of terms (contd)

Area-wide Pavement Treatment (work category 2)

Area Wide Pavement Treatments are structural pavement treatments applied to substantial lengths of roads, including large areas requiring digout and replace, or recycling.

Pavement Smoothing (work category 40)

This work category covers the smoothing of pavements for the benefit of road users. Examples include: thin asphaltic overlays or grader-laid asphaltic material; unbound granular overlays; treatments involving ripping and/or reshaping, including stabilisation of the existing pavement material; certain urban treatments, where this is the most cost-effective option for pavement smoothing, including replacement of the kerb, removal and replacement of the existing pavement material.

Road Reconstruction (work category 39)

This involves the reconstruction of existing pavements within the existing or widened road reserve or deviations onto a new road reserve where the original road is closed. Examples include: realignment, re-grading, widening, intersection improvements.

New Roads and Bridges (work category 38)

This covers the construction of a new road which is additional to the existing roading system and may include new bridges.

Bridge Renewals (work category 35)

Work category 35 covers the following work: replacement of a structurally inadequate bridge; replacing a bridge for non-structural reasons, such as inadequate width or waterway; structurally modifying an existing bridge to increase its structural capacity to a level higher than originally provided; widening an existing bridge.

Seal Extensions (work category 42)

Seal extensions involve sealing existing unsealed roads, including any reconstruction.

Construction projects

Construction projects cover the following work categories: traffic management; crash reduction studies; bridge renewals; new roads and bridges; road reconstruction; pavement smoothing; seal extension; transportations studies; strategy studies.

Physical road statistics for 2006

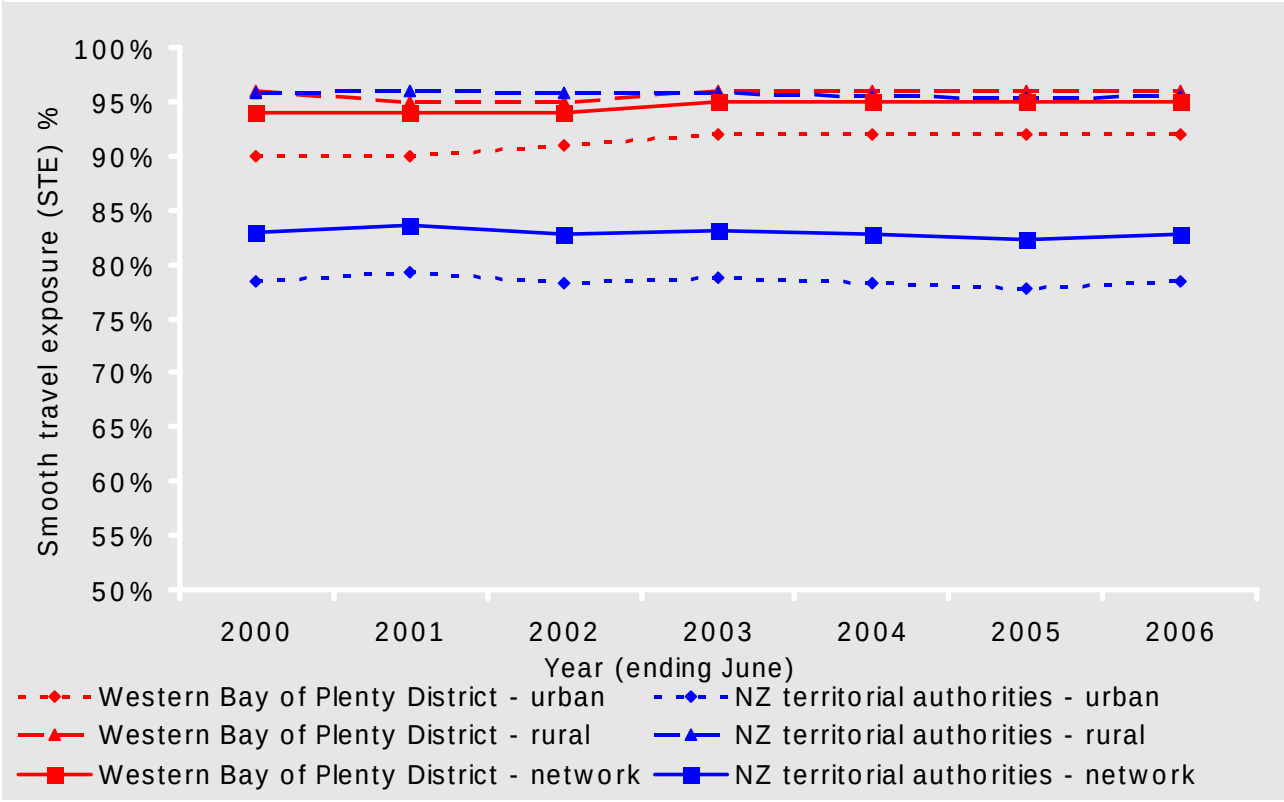
Western Bay of Plenty District
Bay of Plenty Region

		Territorial authority (TA)	Region	Nation
Total road network (km)	State Highway		745	10,895
	Local	1,029	3,862	82,565
Sealed road network (km)	State Highway		745	10,838
	Local	749	2,924	49,811
Motorways (km)	State Highway		-	171
	Local	-	-	
Cycleways (km)	State Highway		-	
	Local	-	12	302
Total bridges (#)	State Highway		225	3,983
	Local	106	427	13,589
Total bridges (length m)	State Highway		6,813	138,937
	Local	1,298	2,924	236,386
Single lane bridges (#)	State Highway		6	175
	Local	65	249	7,337
Single lane bridges (length m)	State Highway		768	12,885
	Local	908	4,366	141,372
Speed restricted bridges (#)	State Highway		2	12
	Local	2	3	137
Speed restricted bridges (length m)	State Highway		222	948
	Local	27	83	4,197
Weight restricted bridges (#)	State Highway		-	3
	Local	3	10	491
Weight restricted bridges (length m)	State Highway		-	324
	Local	35	188	12,055
Timber bridges (#)	State Highway		3	15
	Local	2	21	914
Timber bridges (length m)	State Highway		408	843
	Local	15	294	11,355

Source: Territorial authorities and Transit NZ.
Note 1: All lengths rounded to whole metres.
Note 2: Regional and national figures include Department of Conservation and Waitangi Trust roads.

Road condition

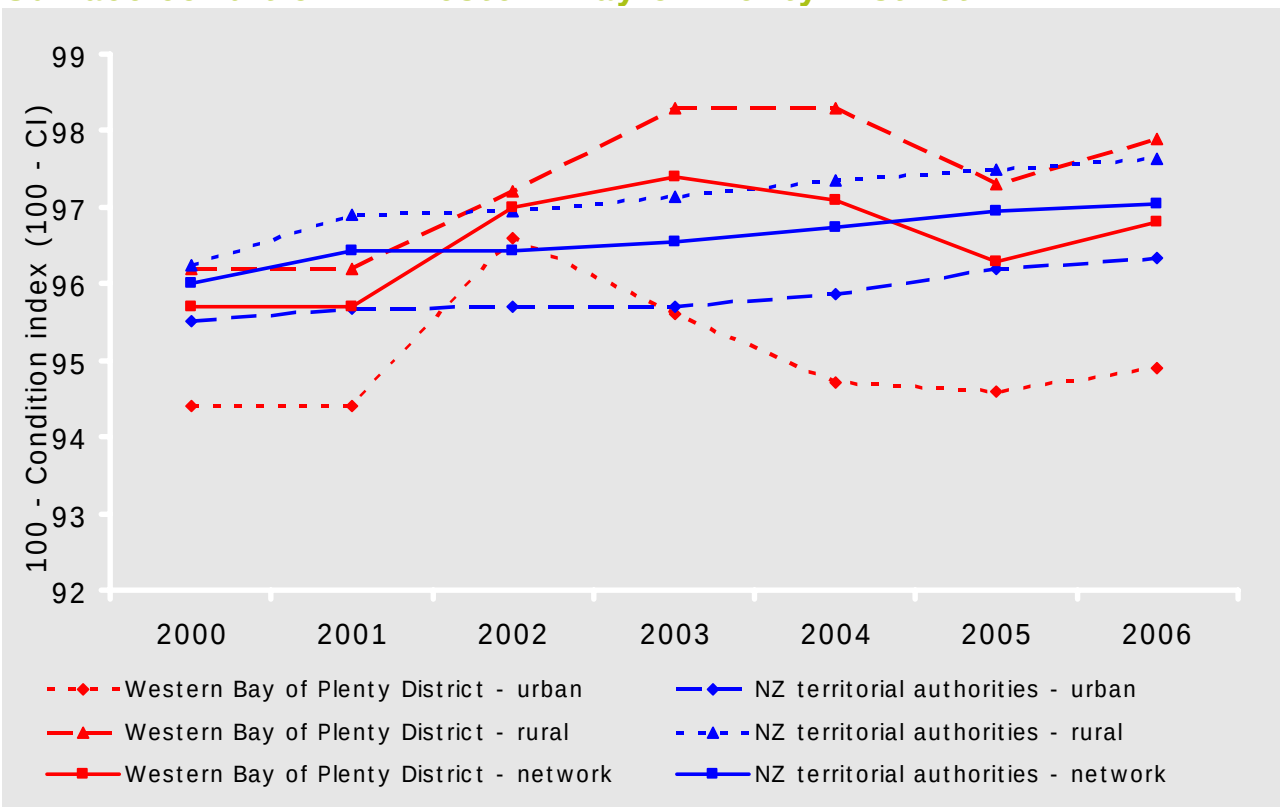
Smooth travel exposure for all sealed roads in Western Bay of Plenty District



Note: the higher the smooth travel exposure (STE) % the smoother the network.

Source: RAMM information from Territorial authorities (does not include Transit NZ data).

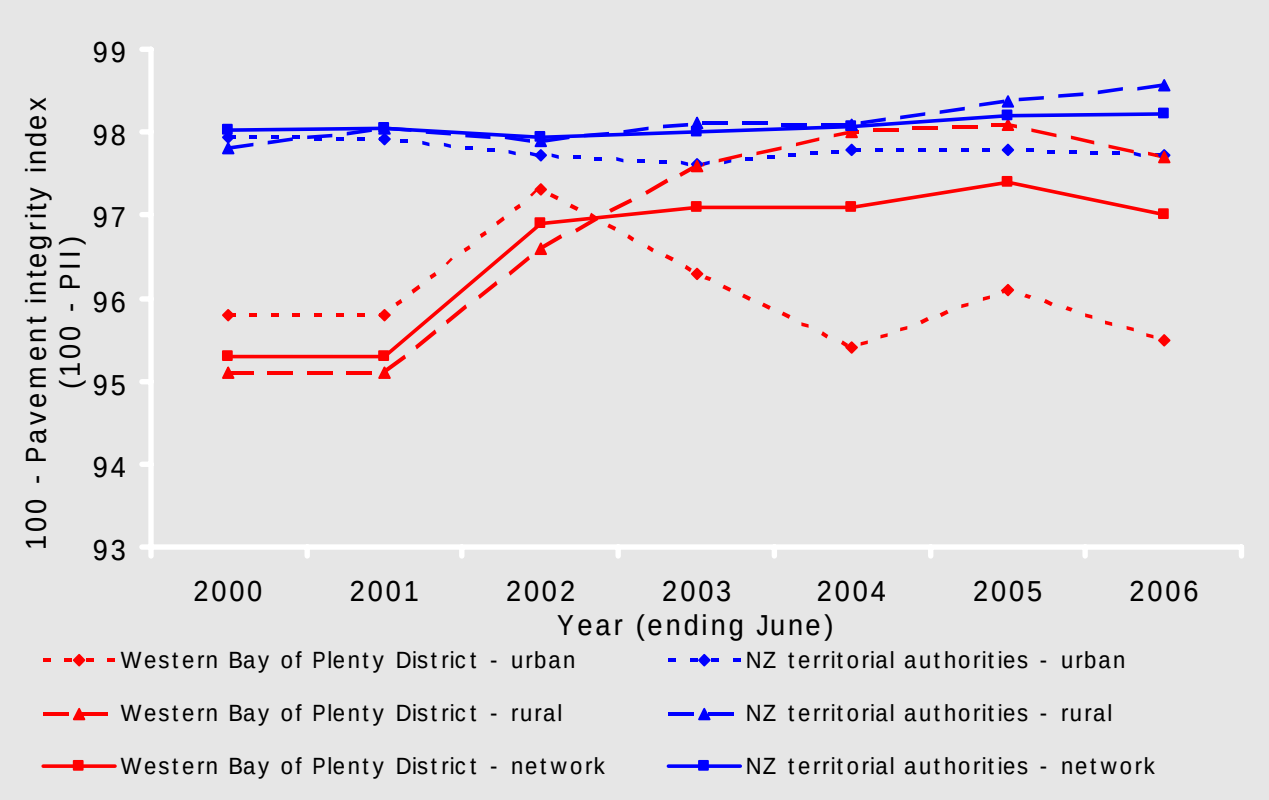
Surface condition in Western Bay of Plenty District



Notes: the higher the value of 100 - condition index (CI), the fewer the defects in the sealed road surface. CI and the routine for calculating it using the RAMM software, were introduced in the 2002/03 year.

Source: RAMM information from Territorial authorities (does not include Transit NZ data).

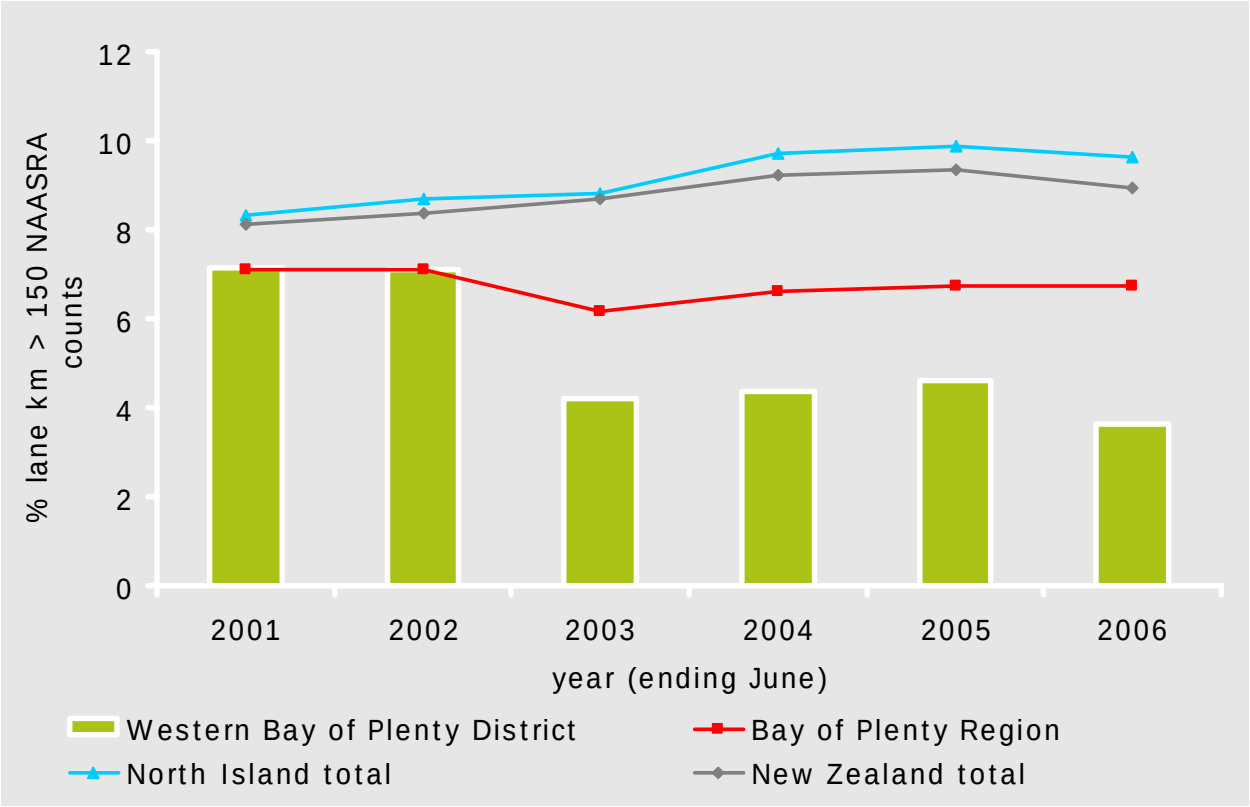
Pavement condition for all sealed roads in Western Bay of Plenty District



Notes: the higher the 100 - pavement integrity index (PII) value the better the pavement structural condition. Pavement integrity index (PII) and the routine for calculating it using the RAMM software, was introduced in the 2003/04 year.

Source: RAMM information from Territorial authorities (does not include Transit NZ data).

Road roughness for Western Bay of Plenty District

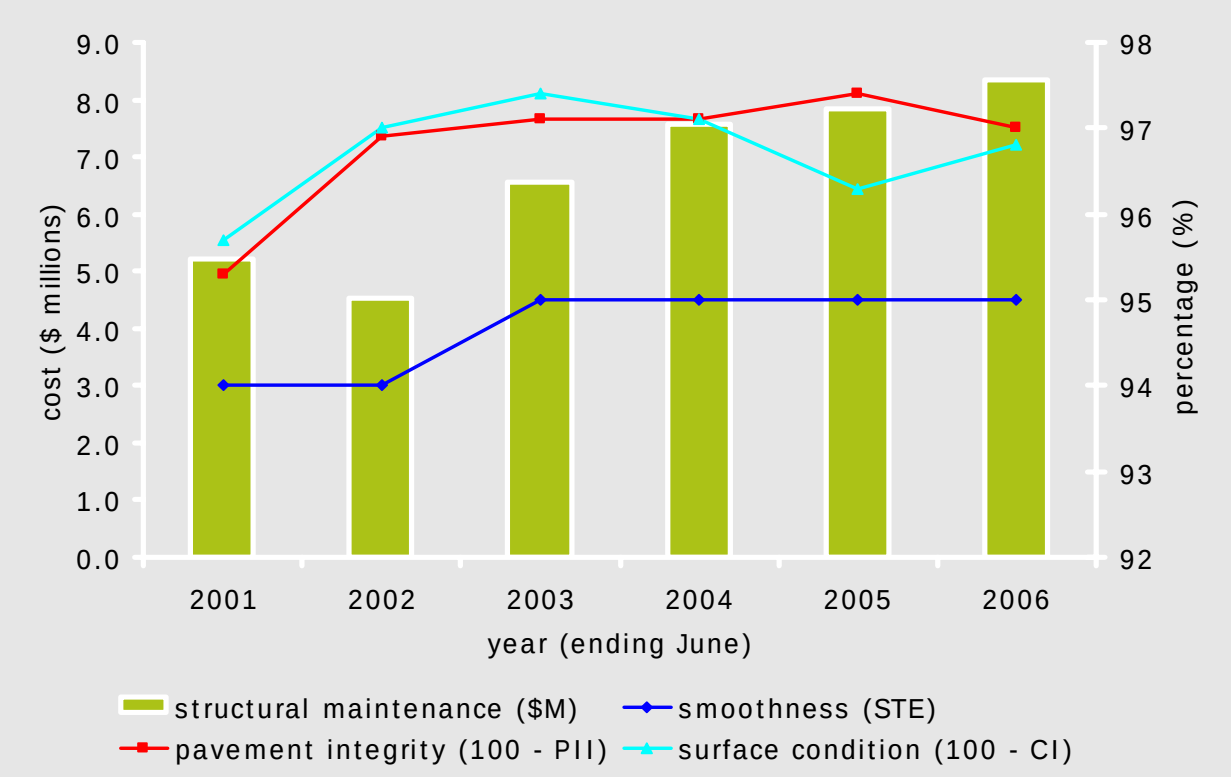


Note: the higher the percentage the rougher the network

Source: RAMM information from Territorial authorities (does not include Transit NZ data).

Maintenance costs

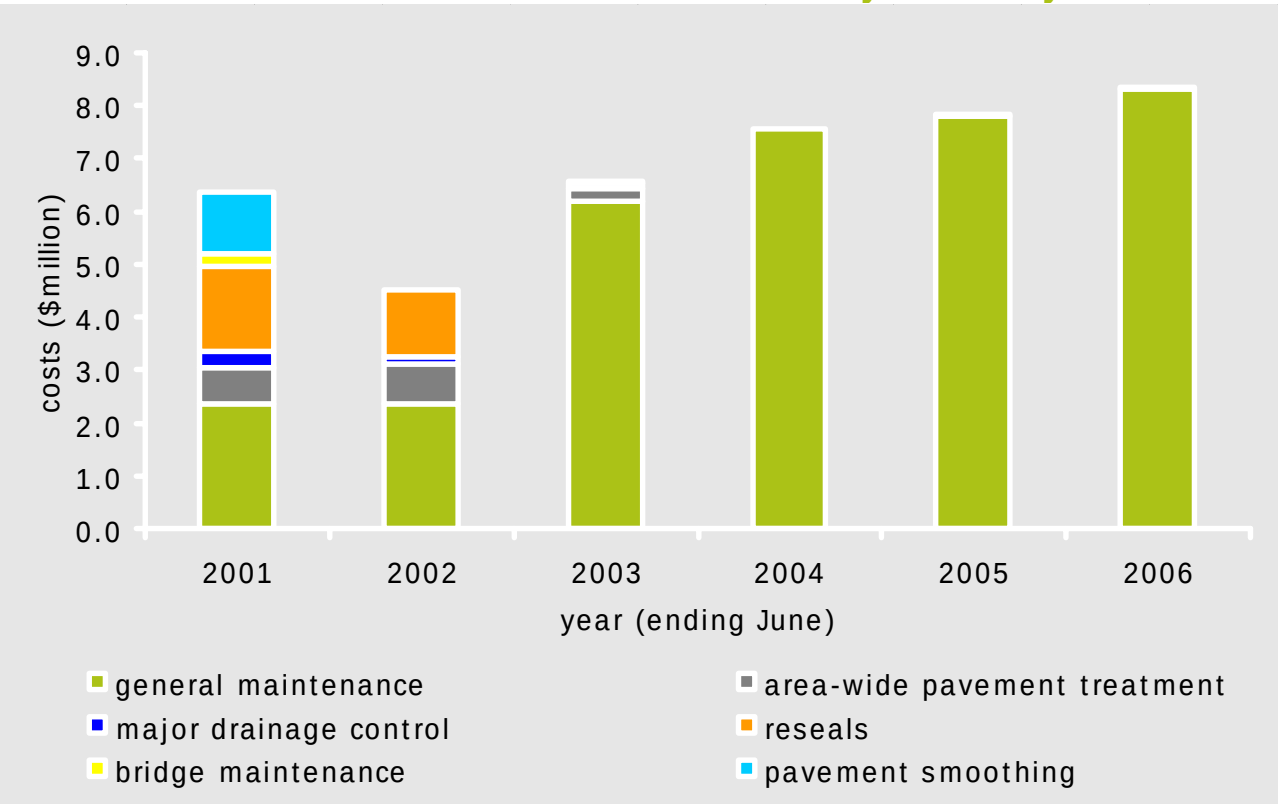
Trends in road condition and structural maintenance spend for Western Bay of Plenty District *



Notes: the higher the percentage (%) the better the network condition.
* for maintenance funded through Land Transport NZ only. Land Transport NZ and Approved Organisation share.

Source: Land Transport New Zealand

Structural maintenance costs for Western Bay of Plenty District*

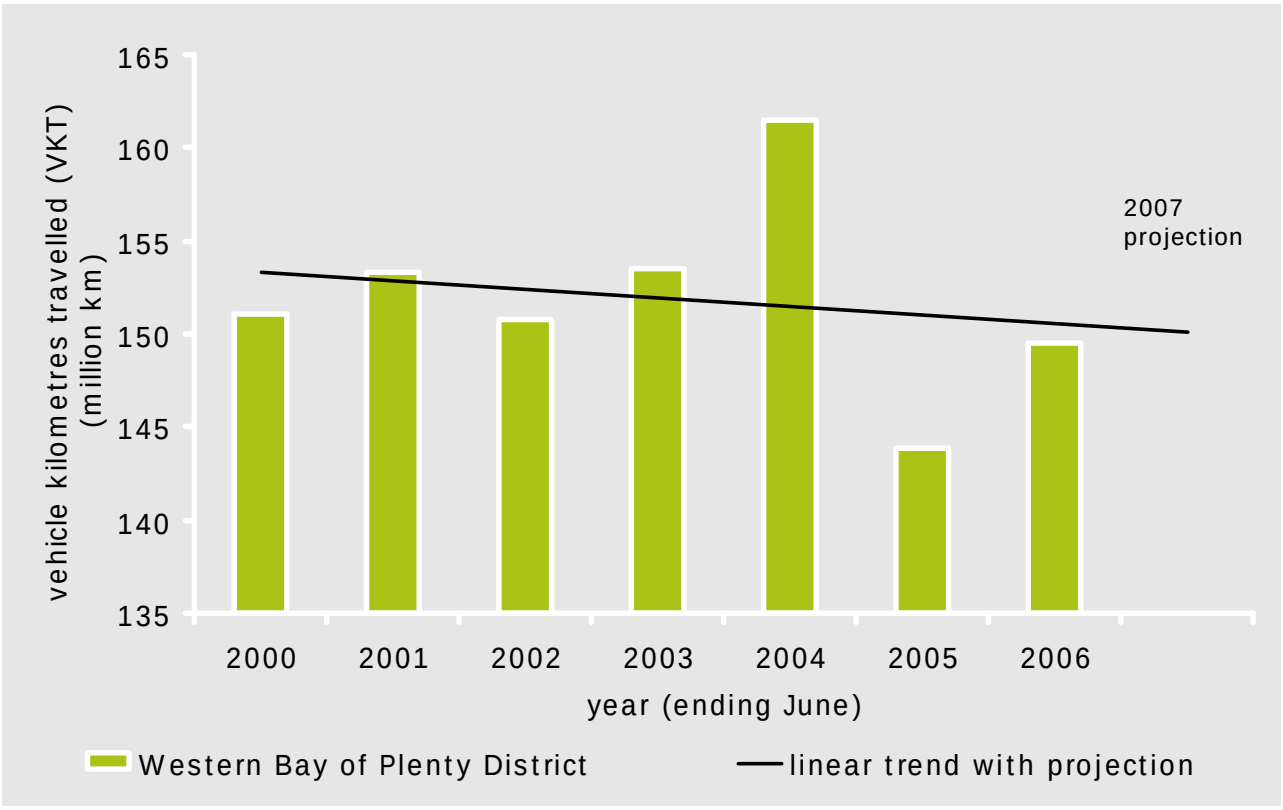


Note: Regional Council and Transit NZ costs are excluded.
* for maintenance funded through Land Transport NZ only. Land Transport NZ and Approved Organisation share.

Source: Land Transport New Zealand

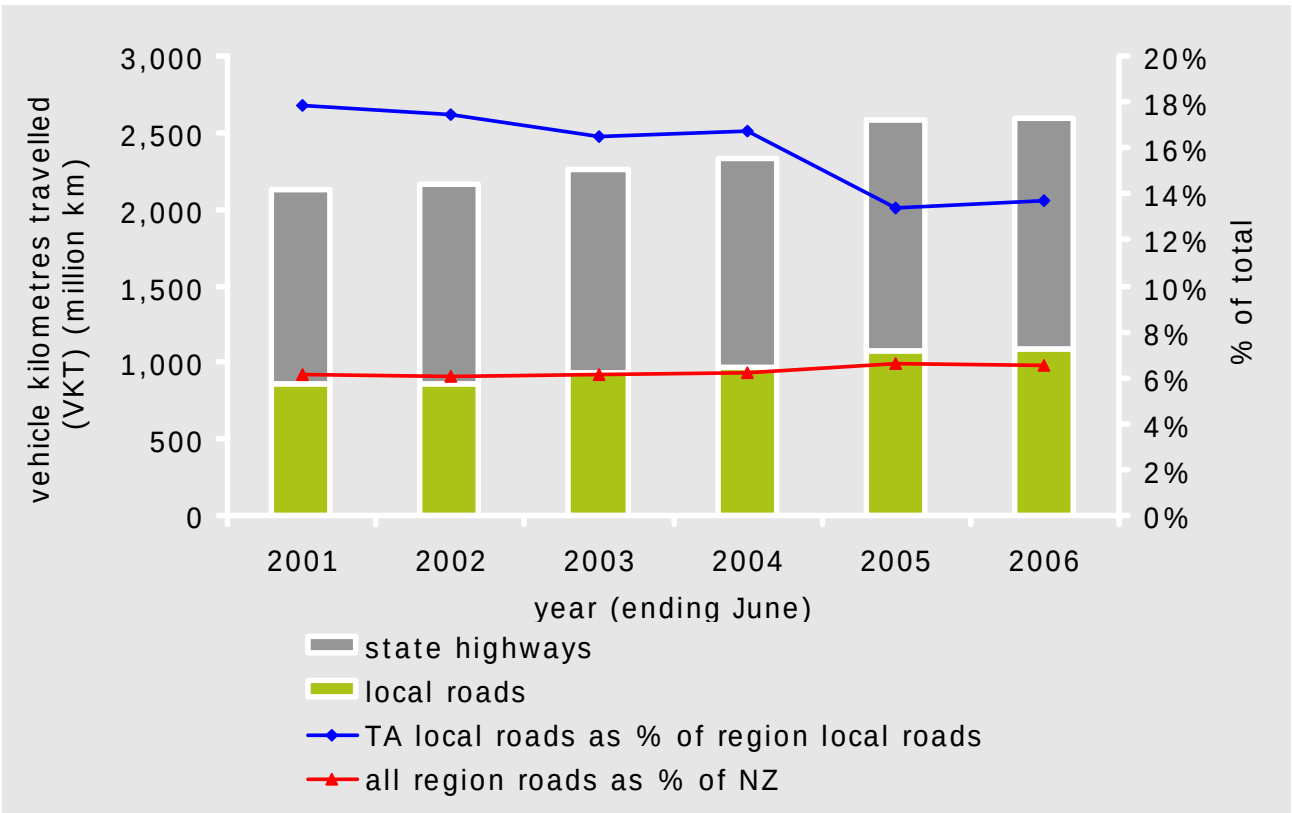
Asset use

Western Bay of Plenty District vehicle kilometres travelled on local roads



Source: Territorial authorities (does not include Transit NZ data).

Bay of Plenty Region vehicle kilometres travelled



Source: Territorial authorities (TAs) and Transit NZ

Work completed in 2005/06 (June year)

Western Bay of Plenty District
Bay of Plenty Region

			Territorial authority (TA)	Region	Nation
Reseals	State Highway	lane kms		85.2	1,184.9
	Local	lane kms	131.6	361.5	5,447.8
Pavement Smoothing	State Highway	lane kms		2.7	6.7
	Local	lane kms	3.7	4.6	248.3
Road Reconstruction	State Highway	lane kms		4.7	82.5
	Local	lane kms	15.2	15.8	281.2
Area Wide Pavement Treatment	State Highway	lane kms		16.9	170.3
	Local	lane kms	9.6	21.8	738.3
New Roads & Bridges	State Highway	lane kms		-	3.6
	Local	lane kms	13.4	18.4	144.8
Bridge Renewals	State Highway	No.		-	4
	Local	No.	-	4	35
	Local	lane metres	-	40.3	491.6
Seal Extension	State Highway	No.		-	-
	State Highway	lane kms		-	-
	Local	No.	7	8	88
	Local	lane kms	8.3	11.2	208.8
Construction Projects Completed	State Highway	No.		5	63
	Local	No.	-	6	205

Source: Territorial authorities and Transit NZ.


WORKS END