Western Bay of Plenty District Council

WESTERN BAY OF PLENTY DISTRICT COUNCIL

Performance Based Contract (PBC-01)

2002-2012 – 10 years

Contract Model

PBC-01 - Performance Based Contract

Lump sum monthly payments

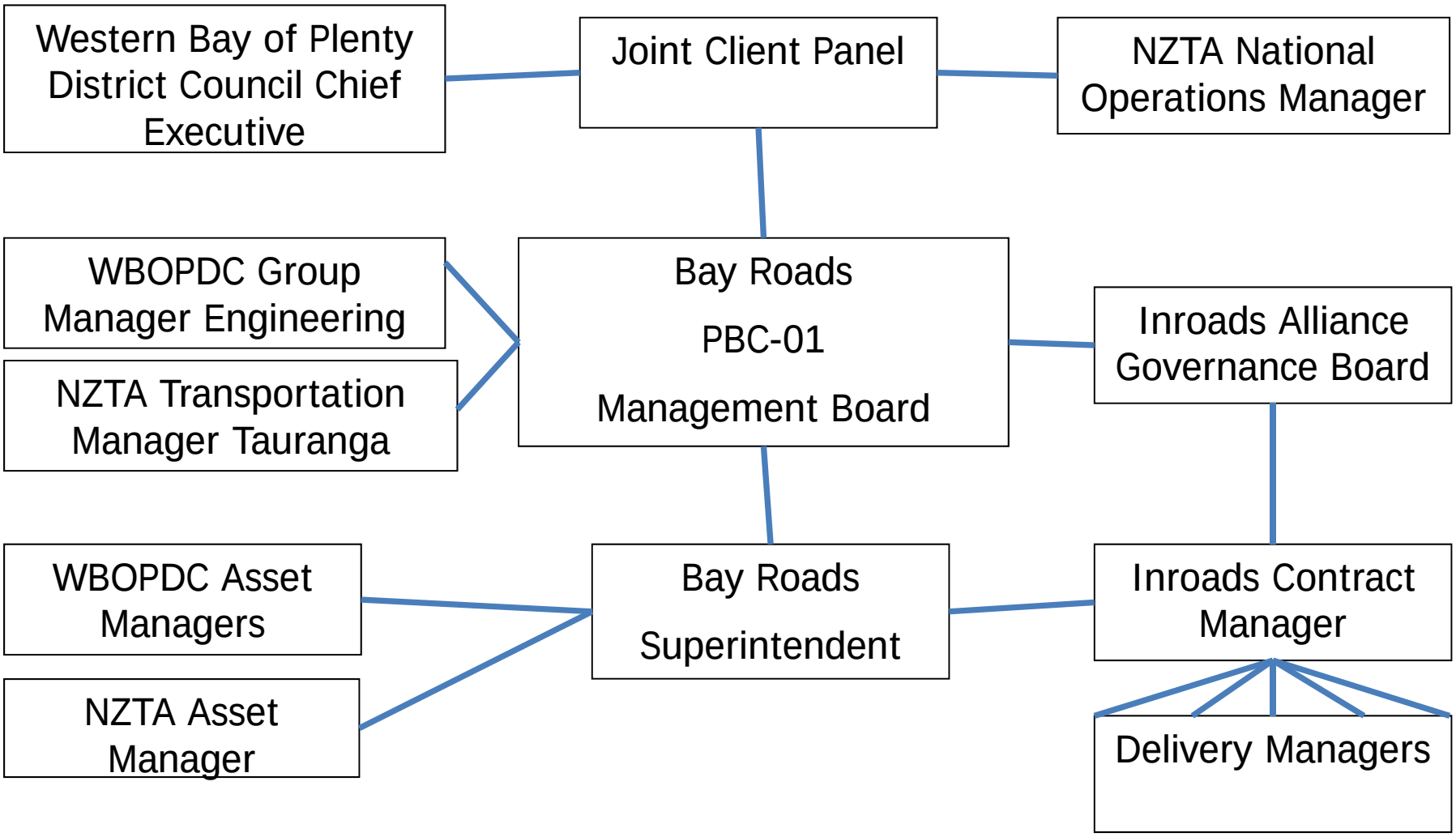
Monthly payments adjusted annually for escalation

Outcomes specified delivery

Single contract compared to multiple 1:10

A “package” of service delivery ?

Governance Structure



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WBOPDC Component

Estimate	$140m	(2002)
Tender	$107m	(2002)
10 year savings	$ 33m	(2002)

Council set a 93% award hurdle

Savings versus perceived risk trade off

Cost certainty but with some escalation (inflation) uncertainty

Councils Transportation Expenditure 2010/2011

- $35 million - 34% of Council's annual expenditure
- PBC-01 $25m
  - » $13m subsidy at 45% FAR and 55% roading rates
  - » $12m non-subsidised, roading rates and developer
- Other procurement $3m
  - » roading rate and developer contributions

    eg. Strategic Roading

    Community Development Works

Structure Plan Improvements and Community Development

PBC-01 Contractor
Opus International Consultants

Branded as Inroads under a Contractors Alliancing Agreement between:

- Opus International Consultants
- Downer
- Transfield Services (formerly McBreen Jenkins)

Inroads also use a number of other sub contractors and suppliers.

PBC-01 Contract Scope

- Network operations and management
- Network Maintenance
- Renewals
- Capital Improvements
  - Street lighting, footpaths, seal widening, seal extensions
- Safety Improvements
  - Road group 3 visibility improvements

Other contract activities

- Service request management 300 per month
- Emergency response on call 24hrs * 7 days
- Storm damage repairs up to annual risk cap $800,000 pa
- Joint Road Safety delivery (Western Bay of Plenty, Tauranga City, NZTA, Regional Council, NZ Police, ACC)
- Road opening notice processing
- Resource consent application evaluation
- Media release co-ordination
- Community consultation for capital works
- Annual RAMM data audit and validation
- Speed limit rule activity
- Governance reporting
- Variations

Katikati Pedestrian Bridge Replacement

Data Collection Requirements

- Initially stand alone contract tendered to market for a five year period
- Now included as a contract variation for the second five year period
- Utilizes specialist third party contractors and consultants
- Removes subjective issues around compliance

Data Collection

- High Speed data
- Falling Weight Deflectometer
- Unsealed pavement characteristic
- High speed streetlight LUX survey
- RAMM rating survey
- Routine traffic counting
- Roadside safety performance
- Forward visibility surveys

Network Details

- 1025km local roads (28% length unsealed)

  - optimised replacement cost $590m

  Percentage of total local road value

    - sealed pavements (80%)
    - unsealed pavements (5%)
    - bridges (4%)
    - traffic services, etc. (11%)

  - 162 million vehicle kilometers travelled per year (vkt)

- 150km state highways 29, 2, 33, 36

  - 468 million vkt

Network Classification by Traffic Volume

Road Group	Average Daily Traffic (ADT)
1	Nominated sections SH2, SH29
2	Nominated sections SH2, SH33, SH36
3	ADT >= 500 (>500, >1000, >2500)
4	<=200 ADT <500
5	<=100 ADT <200
6	<=30 ADT <100
7	<=30

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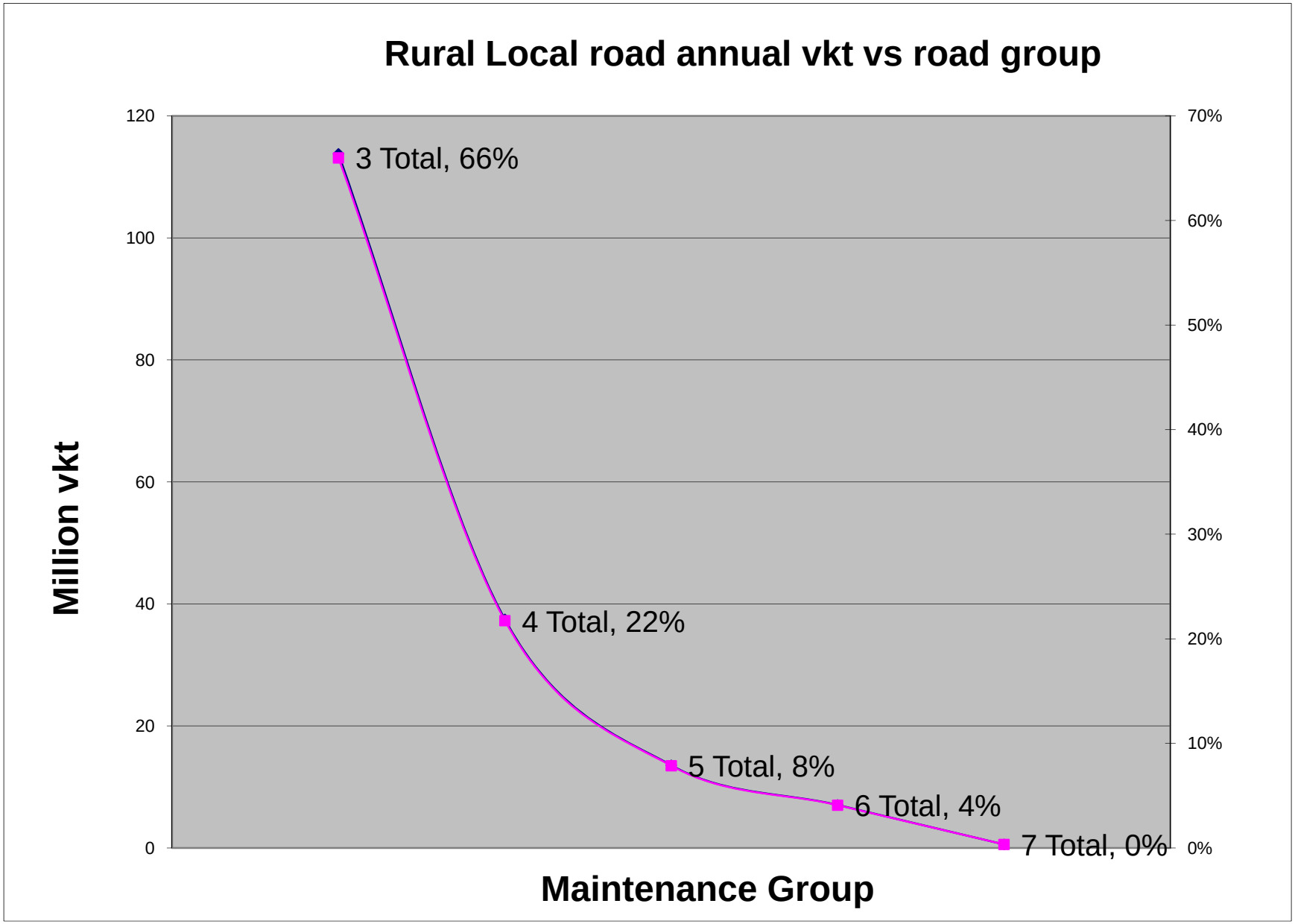
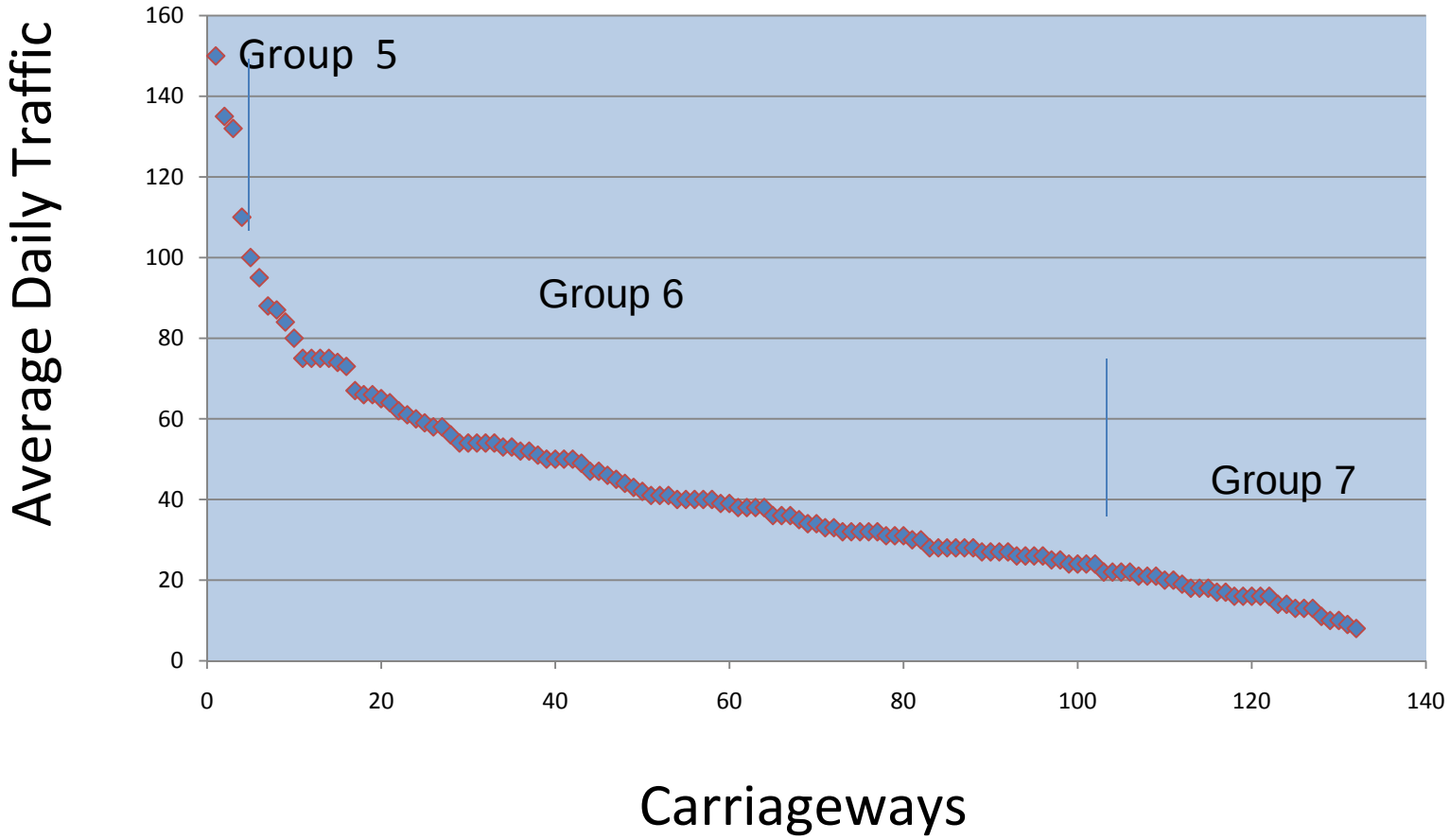

Rural Local road annual vkt vs road group
Million vkt
120
100
80
60
40
20
0
70%
60%
50%
40%
30%
20%
10%
0%
3 Total, 66%
4 Total, 22%
5 Total, 8%
6 Total, 4%
7 Total, 0%
Maintenance Group

Average daily traffic versus unsealed carriageways



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Levels of Service and Transportation Achievements

- BCTR1 - Transport networks support and promote economic development
- BCTR2 - Transport systems minimise adverse effects on the environment
- BCTR3 - Transport systems enable healthy activity and reduce transport related public health risks
- BCTR 4 - Transport systems improve access and mobility

Asset Management Plan Levels of service

Transport Objective BCTR1 - Transport networks support and promote economic development

- Disruptions are managed to ensure traffic flows are not unduly affected
- Road users can navigate the network easily and conveniently
- Traffic signs and markings are easy to see and understand
- The services are affordable
- The services are managed at the lowest possible cost for the required level of service
- The community is involved in all significant decisions
- etc.

Contract Performance Measures

- Managemement Performance Measures (MPM)
- Key Performance Measures (KPM)
- Operational Performance Measures (OPM)

Contract Performance Measures

- Management Performance Measures (MPM)
  - 8 headings
  - 24 functional requirements
- Key Performance Measures (KPM)
  - 43 basic types
  - 216 for road group levels of service
- Operational Performance Measures (OPM)
  - 54 basic types
  - 170 for road group levels of service

Contract Performance KPM

Contract Definition :

Key Performance Measures – “reflect the overall condition of both the primary (pavement) and secondary (bridges, drainage, minor structures, lighting, rural bus shelters and footpaths) assets and the overall safety performance of the maintained network.”

Key Performance Measures

- KPM – longer term
  - benchmarked
  - annual measures
  - trends based indexes (KPI)
  - asset integrity and values maintained

Example: Average measured road roughness is maintained over time, by road group

Mean NAASRA
Contract Standard - Table 3.3.1 sets out the Contract Standard required

Table 3.3.1: Roughness – Mean NAASRA											
Road Group	Sub-group	Year 0	Contract Standard – Maximum Mean NAASRA									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	All	70	67	67	67	67	67	67	67	67	67	67
2	All	66	67	67	67	67	67	67	67	67	67	67
3	urban	98	98	98	98	98	98	98	98	98	98	98
3	rural	80	80	80	80	80	80	80	80	80	80	80
4 & 5	urban	98	N/A	98	N/A	98	N/A	98	N/A	98	N/A	98
4 & 5	rural	85	N/A	85	N/A	85	N/A	85	N/A	85	N/A	85
6 & 7	urban	105	N/A	105	N/A	105	N/A	105	N/A	105	N/A	105
6 & 7	rural	87	N/A	87	N/A	87	N/A	87	N/A	87	N/A	87

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Key Performance Measures

Roughness
Texture
Skid Resistance
Rutting
Surfacing and Pavement Defects
Surfacing
Structural Condition (Sealed)
Structural Condition (Unsealed)
Dust
Bridge Structure Maintenance
Drainage Structure Maintenance
Minor Structure Maintenance

Carriageway Lighting
Rural Flag Lighting
Rural Bus Shelter
Footpath development
Safety Performance
Accidents
Visibility
Urban Trees
Carriageway Width
Seal widening
Seal extension

KPM – Seal Extension Development

KPM – Smoothing with widening

KPM – Seal Widening

KPM – Footpath development

Safety Performance Index (Sealed)

Contract Standard - Table 3.19.1 sets out the Contract Standard required

Table 3.19.1: Safety Performance Index (Sealed)											
Road Group	Sub-group	Year 0	Contract Standard – Maximum Safety Performance Index (Sealed Network)									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
3	Rural	3.26	3.13	3.01	2.88	2.76	2.63	2.50	2.38	2.25	2.13	2.00
4 & 5	Rural	3.62	N/A	3.30	N/A	2.97	N/A	2.65	N/A	2.32	N/A	2.00
6 & 7	Rural	4.14	N/A	N/A	N/A	3.07	N/A	N/A	N/A	2.00	N/A	N/A

Road side hazards affecting the driving environment are rated, 300m eg. Horizontal geometry, non frangibles, signs and markings, carriageway width and defects, intersections, guardrails and traffic services

Roadside Hazards

Contract Performance OPM

Contract Definition:

Operational Performance Measures –

“reflect the road users expectation about the networks day to day serviceability.”

Operational Performance

- OPM - shorter term
  - operational
  - asset defect definitions and response times are specified

Example – pothole levels of service defects are maintained within specified response time frames determined by road group

Operational Performance Measures

Table 4.2.1 sets out the Contract Standards and Response Times required

Table 4.2.1: Operational Performance Measures - Pavement			
Contract Standard	**Defect**	**Road Group / Sub-group**	**Response Time**
Potholes – Sealed Pavement			
A minimum of 97% of the total number of 100m section shall be without defect:	**Potholes >100mm in diameter**	**1 & 2**	**24 hrs**
	Potholes >250mm in diameter or identified by public complaint		**4 hrs**
	Pothole	**3 & 4**	**1 month**
		5 to 7 Urban	**6 weeks**
		5 to 7 Rural	**12 weeks**
Potholes – Unsealed Pavement			
	>5 potholes per 100m	**3 & 4**	**5 days**
	>10 potholes per 100m	**5**	
	>15 potholes per 100m	**6**	
	>20 potholes per 100m	**7**	

OPM - Potholes

Operational Performance Measures

Pavement

Shoulders

Detritus

Routine Bridge Maintenance

Routine Draining Structure Maintenance

Routine Minor Structure Maintenance

Vegetation Control & Maintenance

Signs

Edge Marker Posts

Sight Rails

Barriers

Pavement Lines and Markings

Carriageway and Pedestrian Lighting

Rest Area Furniture

Litter Area Furniture

Litter Removal – Rural

Litter Control – Urban

Street Cleaning

Recreation & Pedestrian Facilities Maintenance

Foothpaths

Incident Response

Compliance Monitoring

Objectives -

- Benchmark Condition of Assets
- Compliance Monitoring of MPM, KPM, and OPM delivery
- Reporting
- Non-Compliance System

National Standards and Guidelines

- Austroads Design Guides
- Australian and New Zealand Standards
- Manual of Signs and Markings
- Code of Practice for Temporary Traffic Management
- Speed Limit Rule
- High Productivity Motor Vehicle Rule
- Working in the Road

Some utilize traffic volume for determining levels of service

Councils Development Code

Table 2: Rural Roads

The table sets out the requirements for carriageway and road reserve widths for all classifications of "rural" roads (all Rural 1, 2, 3 and Rural Residential zones in Western Bay of Plenty District Council District).

Maintenance Group Category	Traffic Volume (PCE)	Road Reserve (m)	Carriageway width (m) Excl kerb and channel	Maximum Length	Maximum Gradient - %
7, 6	< 100	20	5	< 2km	12.5
7, 6	< 100	20	5.5	> 2km	12.5
5	100 - 200	20	5.5		12.5
4	201 - 500	20	6.5		12.5
3	501 - 1000	20	7.5		12.5
3	1001 - 2500	20	8.5		12.5
3	> 2500	20	Specific Design		

Before

After

Contract Escalation

NZS 3910 type cost fluctuation formula

Labour	46%
Bitumen	6%
Construction	21%
Transport & Storage	5%
Road Transport	5%
Farm Fuel	11%
Non metallic minerals	11%
TOTAL	**100%**

1.40 escalation index by June 2010

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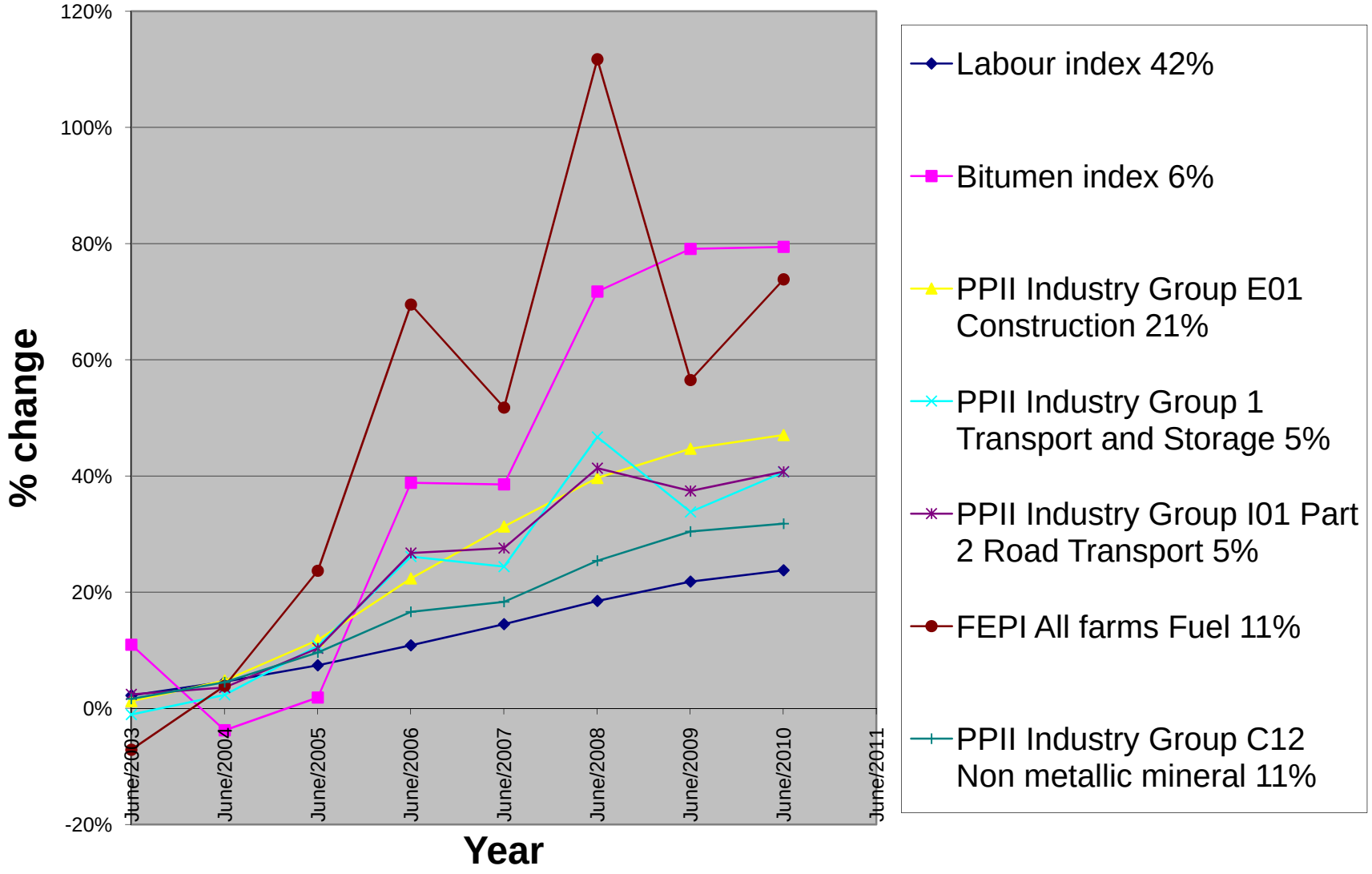
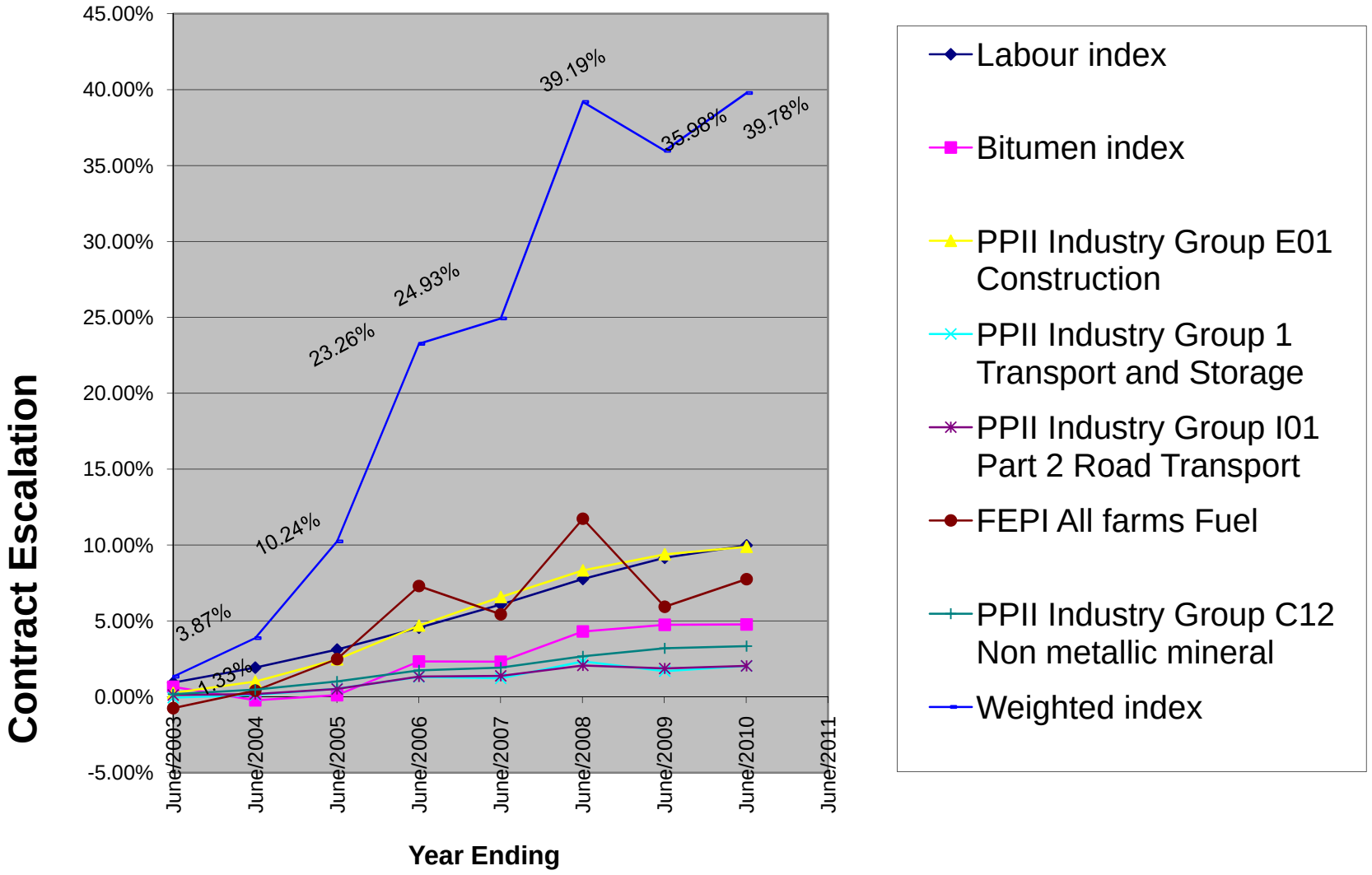
PBC-01 Escalation Index Components % Change



PBC-01 Escalation Weighted Index by Year



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Overview of Performance Based Contract Requirements

- Performance Based delivers outcomes
- Requires a partnering environment
- Risk sharing between client and provider
- Requires longer term funding commitment
- Levels of service are specified
- Outputs are measured, reported and independently audited
- Governance and delegations set

Overview of Performance Based Contract Delivery

- Generally KPMs and OPMs are being met
- Facilitates collaboration between joint clients
- Stable work force and continuous work flows
- Provides improved and consistent customer service over time
- Maintenance savings have been redirected into capital improvements
- Supports an innovative delivery environment through financial incentive from the lump sum

Matakana Island Access

Thank you

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