

# NZTA Procedural and Technical Audit

Whakatāne District Councils Experience



# What are we covering?

1. **Pre Audit**
2. Audit Process
3. Post Audit

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3. Post Audit

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1. Pre Audit
2. Audit Process
- 3. Post Audit**

# Pre Audit

## The letter...

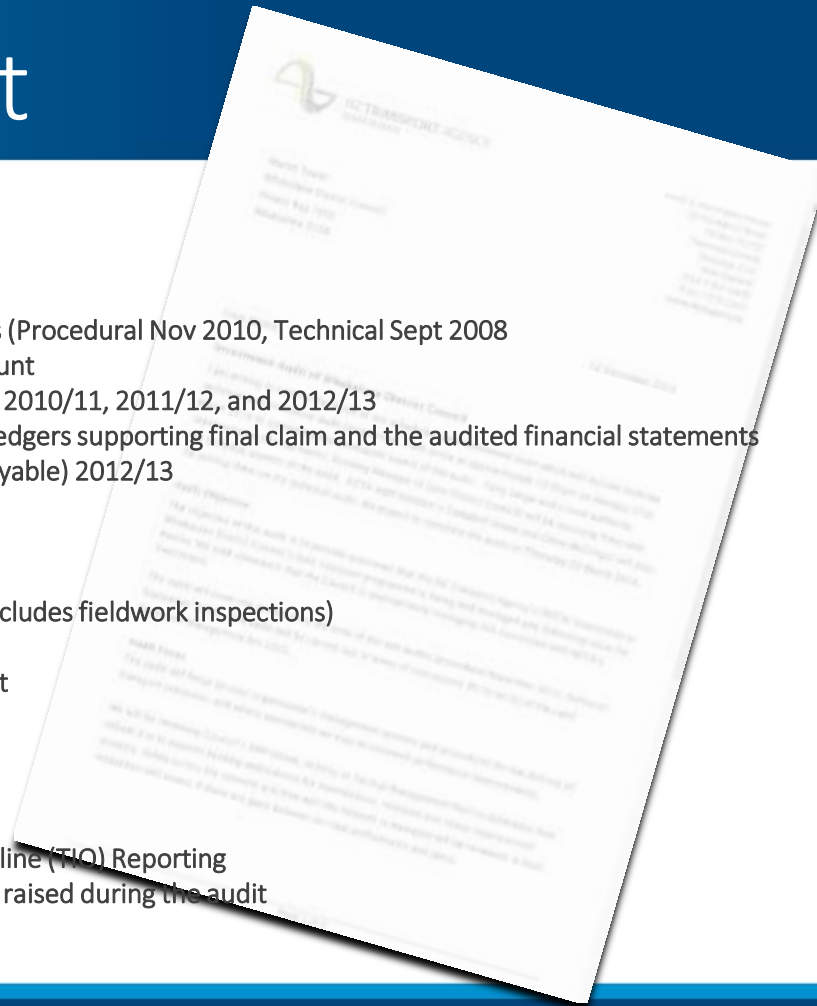
- ...confirming our scheduled joint investment audit
- ...include both the technical and procedural audit programme.
- ...arrive 10.00am on Monday 17 March 2014
- ...expect to complete by Thursday 22 March
- ...objective is to provide assurance that NZTA's investment in Whakatane's land transport programme is being well managed
- ...will cover the period from the last audits (procedural Nov. 2010, technical Sept 2008)
- ...focus on your organisations management systems and procedures for delivery of transport outcomes.
- ...reviewing AMP against NAMS best Practice
- ...reviewing safety across the network and how it's being managed
- ...field inspection will assess if there are gaps between plans and on-road performance
- ...reviewing RAMM database,
- ...comparison with other local authorities

# Pre Audit

## The letter...

### Audit Programme

1. Previous Audit Outcomes (Procedural Nov 2010, Technical Sept 2008)
2. Land Disbursement Account
3. Final Claims for 2009/10, 2010/11, 2011/12, and 2012/13
4. Reconciliation between ledgers supporting final claim and the audited financial statements
5. Transactions (account payable) 2012/13
6. Retentions Account
7. Procurement Procedures
8. Contract Variations
9. Roading Maintenance (includes fieldwork inspections)
10. Roading Renewals
11. Road Safety Management
12. Contract Management
13. Asset Management
14. Professional Services
15. Multi Party Agreements
16. Transport Investment Online (TIO) Reporting
17. Other issues that may be raised during the audit
18. Close out meeting



# Pre Audit

## The letter...

Procedural Audit – Documentation to be provided by Council

1. Latest Audit Management Report (Audit NZ)
2. Copies of final claims for 2009/10, 2010/11, 2011/12, and 2012/13
3. List of General Ledger codes that make up Councils Land Transport Disbursement Account
4. Printout of contract retentions account, with financially assisted projects separately identified
5. List of all NZTA financially assisted contracts let over past two years, including let values and total costs
6. Copy of endorsed procurement strategy
7. Organisation Charts including asset management structure and PSBU if appropriate
8. For PSBU; copy of most recent budget, ledger printouts showing revenue and expenditure, and a copy of the service level agreement
9. Copy of most recent Annual Plan and Annual Report and Delegations Register

# Pre Audit

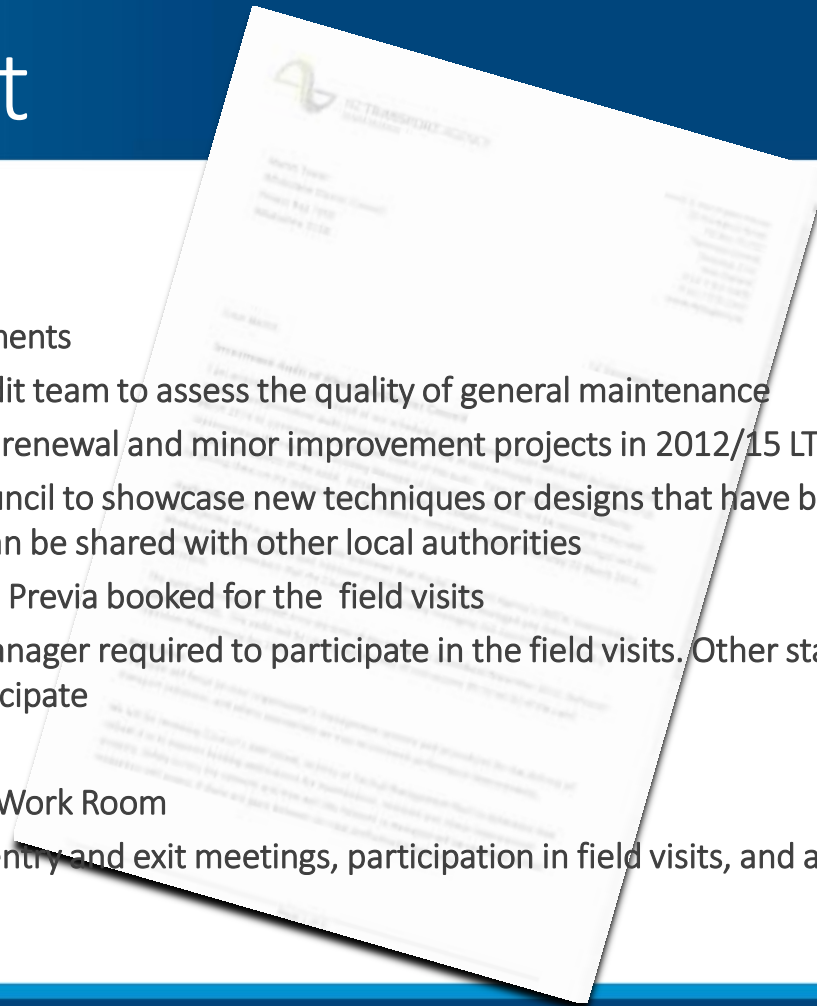
## The letter...

### Technical Audit Requirements

1. Opportunity for Audit team to assess the quality of general maintenance
2. Inspect a sample of renewal and minor improvement projects in 2012/15 LTP
3. Opportunity for Council to showcase new techniques or designs that have been introduced to the network and that can be shared with other local authorities
4. Seven seater Toyota Previa booked for the field visits
5. Councils roading manager required to participate in the field visits. Other staff members also encouraged to participate

### Other Requirements

- Meeting Room and Work Room
- Staff availability for entry and exit meetings, participation in field visits, and attendance as required for Procedural Auditor





# Pre Audit

What was my initial reaction to this letter and all its requirements?

@\$#%<>#!! that's a lot of stuff to sort out and get together and work through!

# Pre Audit



## What did we do to prepare?

- *Started preparing early*
- *Met with my team and divided up the workload – a problem shared is a problem halved*
- *Got our Management Accountant on board to compile all the financial info required*
  - *Previous claims as requested, GL codes, Retentions info*
- *Got the contract managers to go through all their contracts and make sure all the documentation was up to date*
  - *Procurement plan, RFT, tender documentation, NTT's, Letters of award and decline, signed copy of contract, Contract correspondence, QA records, payment schedules, practical completion and defects liability certificates, etc*
- *Collated all the other data*
  - *AMP, Procurement strategy, organisational charts, annual reports, etc*
- *Dug out the previous technical and procedural audit reports*
  - *Refreshed my mind on what their findings were*
  - *Had we followed up on them all?*

## How did the NZTA Audit Team prepare?

- Reviewed the Previous audits,
- Read our AMP, procurement strategy, annual plans etc
- Looked at our TIO programme and claims
- Interrogated our RAMM database
- Analysed our RAMM data
  - Pavement Integrity Index
  - Surface Condition Index
  - Smooth Travel Exposure
  - Maintenance Cost data
- Comparing all these factors against our peer group of similar TLA's

## Timetable change

- Auditors would now arrive on the Tuesday and finish on the Friday
- One of the Audit team would arrive on the Monday to go through all the documentation we had prepared and ensure we had together all the stuff that was going to be required by the rest of the team.
- This was a REAL benefit for us.
- Gave us the assurance that we mostly had the right stuff together
- Gave us the chance to sort out / collate the one or two minor things the pre-audit identified.

# Audit Process



The Audit team arrives....

**"We're going to parachute in and do a surprise audit,  
but I want to keep the whole thing low key."**

# Audit Process

1. **Opening Meeting**
2. Technical Audit
3. Procedural Audit
4. Close out Meeting

# Audit Process

1. Opening Meeting
- 2. Technical Audit**
3. Procedural Audit
4. Close out Meeting



# Audit Process

1. Opening Meeting
2. Technical Audit
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# Audit Process

1. Opening Meeting
2. Technical Audit
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- 4. Close out Meeting**

# Audit Team



Ron Wheeler- Senior Investment Auditor, NZTA (Lead)

Tony Lange - Senior Investment Auditor, NZTA

Murray Hassler – Roading Manager, Gore District Council

NZTA Regional Staff

- Richard Hurn, Planning and Investment Manager,

- Cambell Snook, Senior Investment Advisor.

Glen McGregor - Senior Investment Auditor, NZTA (Obs.)

# Opening Meeting

1. Meet and Greet
2. Ron and Tony went through Audit Purpose and Objectives
3. We looked at some background info on Whakatane District
4. Review of statistics and data

# Opening Meeting

## Audit Objective – Why are we here?

to provide assurance that the NZ Transport Agency's (NZTA) investment in Whakatane DC's land transport programme is being well managed and is delivering value for money#.

We will do this by focusing on the key areas of

Network Management and Renewals	
Asset Management practise	
Safety	
Procurement	
Financials	

We will recommend improvements where appropriate.

## 2008 Technical Audit findings.

- **Recommendations**

- adopt the standards specified in Road & Traffic Standard 5, "Guidelines for Rural Road Marking and Delineation", as its minimum for the delineation of rural roads (see section 3.7.2); and
- give consideration to the safety of traffic at stock underpasses and review its requirements for the protection of traffic (see section 3.7.3).

- **Suggestions**

- consider extending short culverts to beyond the width of otherwise traffickable shoulders, rather than to rely on traffic services to define hazardous waterways adjacent to carriageways (see section 3.7.2);
- use all public means available to it to educate and encourage recognised good practice in the use of road verges and dairy herd crossings (see section 3.7.3; and.
- adopt a policy of only approving a limited range of streetlighting column designs that will be accepted from developers of new subdivisions (section 3.7.4).

# Opening Meeting

WDC Pavement Integrity Index (PII)

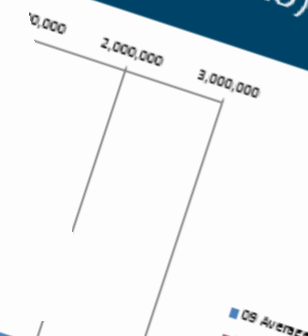
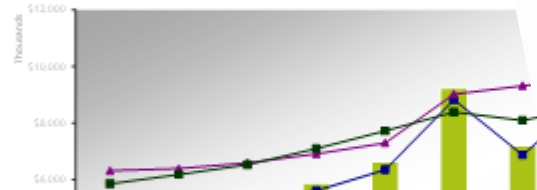
WDC Surface Condition Index

WDC - RAMM data

WDC - Indexed Maintenance @12

WDC Maintenance cost

09/15 (source TIO)



# Opening Meeting

## Key messages - Asset management

- The key to achieving least whole-of-life cost for the network is strong **asset management** practice, which includes enabling the use of innovative services, products and methods of procurement. This requires:
  - effective planning and delivery to achieve value for money objectives, e.g. early tendering opportunities, awareness of the annual programme and better timing of works
  - improved knowledge sharing
  - a consistent road classification system and levels of service across the whole network
  - greater collaboration between asset owners.



# Opening Meeting

## Key Messages – Data

- A step change in performance measurement and management and **data** collection is required to obtain best value for money and to develop requirements for improved data input, transformation of the data into useful, repeatable and meaningful information, dissemination, and effectiveness in the use of data, focusing on areas such as:
  - requirements for data, data-based systems (e.g. RAMM), dTIMS and technology platforms
  - measurements to assess the effectiveness of different road maintenance projects and new materials
  - measurement to enable better timing of interventions
  - road classification.

# Opening Meeting

## Key Messages – ONRC, FAR, Spatial Plan

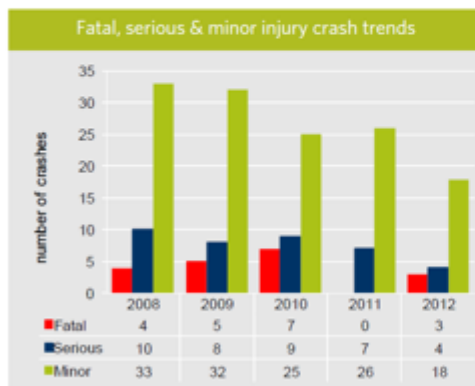
- Importance of Activity Management Planning
  - Mitigate future costs to ensure long term affordability
  - Embed ONRC into plan.  
<http://www.nzta.govt.nz/projects/road-efficiency-group/onrc.html>
- NLTP
  - investment signals due soon with draft plans due end of this year
- Spatial Plan, support for future investment

# Opening Meeting

## Safety issues 2008 - 12

### Rural road loss of control & head-on - Whakatane District

Increasing the safety of rural roads and roadsides is a high strategic priority identified in Safer Journeys. Locally rural road loss of control/head-on crashes are of concern due to the number of deaths and/or serious casualties, which reflects a high level of collective risk.



# Opening Meeting

## Safety issues...What are we looking for?

- Safe System Thinking
- Awareness of Road Safety Issues and Effects
- Consistency in application
- Whole of Network Thinking – connected with partner roads

# Technical Audit

Time to hit the road...



What were the Auditors looking for?

1. Compliance with previous audit findings
  - Adoption of RTS5
  - Better traffic safety considerations with stock underpass design
  - Culvert extension programme
  - Improvements around dairy herd crossings
2. Evidence of good asset management practices
3. Evidence of proactive safety management
4. Appropriate expenditure and value for money

# Technical Audit

What did we see?



PM 2:10 18/MAR/2014

# Technical Audit

## How did we manage our network?

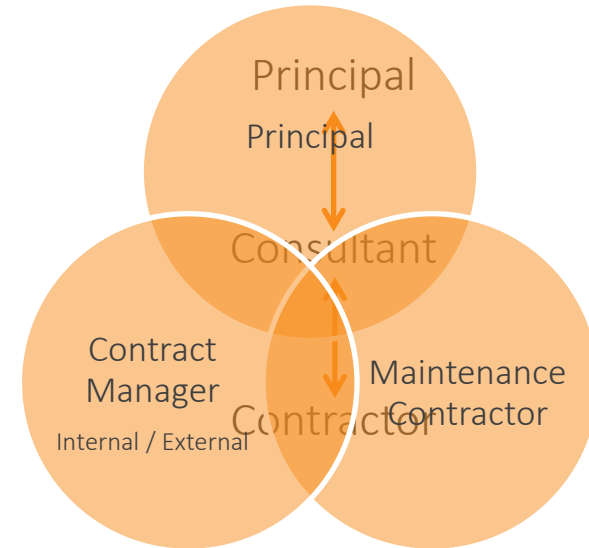
1. Combined Network Management Team
  - External Network Management Consultant
  - Internal Council staff
2. Co-located into Council's Civic Centre
3. Operationally treated as 'OneTeam'
4. Two main contracts
  - Routine Road Maintenance
    - Network Patrol
    - Pavement and drainage maintenance
    - Primary Emergency Response
  - Traffic Services
    - Vegetation control, markers, rails, signs
5. Other ancillary contracts
  - Streetlight Mtce (multiparty)
  - Footpaths
  - Street Cleaning
  - Reseals
  - Renewals / Improvements



# Technical Audit

## How do we manage our network?

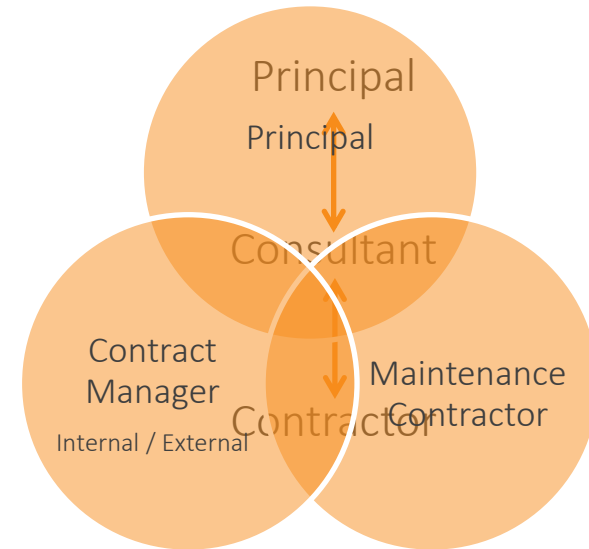
6. Done away with the tiered management approach
  - Information filters
  - Master / slave relationship
  - Adversarial tendencies
7. Adopted a flatter partnership approach
  - Close, motivated, performing team working well together
  - Joint sense of ownership, responsibility and pride
8. We value the ideas and inputs of the Contractor
9. They are invited into and become an integral part of the OneTeam environment
10. We go further and ensure the individual contractor employees are regularly invited to meetings, not just managers
11. Philosophy, aspirations and requirements of the Principal are clearly understood by all parties
12. Issues arising on the network are quickly prioritised and appropriately responded to.



# Technical Audit

## How do we manage our network?

13. Contract activity is not Contractor driven
14. Contractor lead programming didn't provide the outcomes we were looking for
15. Network Management Team programmes all work on the network, but often jointly with the Contractor
16. Programmes reviewed and accepted by the Contractor
17. Only the work that needs doing and that we can afford is done
18. Schedule is a mix of Dayworks and Unit Rate
19. No penalty clause, but a bonus payment
20. Key element is two patrol trucks that we direct daily around the network as groomers and initial responders
  - potholes, detritus, sweeping, emp's, drainage handwork
  - Eyes and ears



# Technical Audit

## How did we see our network?

We believe our approach is working well and producing the right behaviours, good performance and is value for money



...but are we viewing our network and its management through rose tinted glasses?

The Technical Audit would tell...

What did the Auditors see as we travelled the network?

How did they view what they saw?

Here's some of the highlights and lowlights...

# Technical Audit

What did the Auditors see?

Safety  
Improvements

Standard bridge  
approach guardrail



# Technical Audit

What did the Auditors see?

## Safety Improvements

Unusual and  
slightly challenging  
guardrail site



# Technical Audit

What did the Auditors see?



Safety  
Improvements

Not all sites were  
our 'showcase'  
projects

# Technical Audit

What did the Auditors see?



## Safety Improvements

Active Curve  
Warning Signs  
coupled with extra  
wide linemarking  
including no  
passing lines

....



# Technical Audit

What did the Auditors see?

## Safety Improvements

Active school zone  
signs for rural school



# Technical Audit

What did the Auditors see?



## Safety Improvements

Proposed site for new  
active intersection  
warning signs

# Technical Audit

What did the Auditors see?

## Safety / Drainage Improvements

Traversable culvert ends, placed for traditional use



# Technical Audit

What did the Auditors see?



## Drainage Improvements

traversable culvert  
ends, non-traditional  
use as high flow trash  
racks

# Technical Audit

What did the Auditors see?

## Renewals

AWT site  
completed two  
years ago



# Technical Audit

What did the Auditors see?



Reseal sites

700km @ av 12 yr life  
= 60km/yr

This year we resealed  
40km

Sweating the asset

Most of mtce repairs  
on reseal sites

Preseals a year in  
advance

# Technical Audit

What did the Auditors see?

Checked out the  
chip stockpile for  
the reseal



AM11.35 20/MAR/2014

# Technical Audit

What did the Auditors see?



On the same stretch of road we also came across the sealing of a series of maintenance patches



# Technical Audit

What did the Auditors see?

Our infamous  
coastal bluff

...as it was on the day  
of the Audit



PM12:08 20/MAR/2014

# Technical Audit

What did the Auditors see?



Our infamous  
coastal bluff

...in its current state

# Technical Audit

What did the Auditors see?



## Roadside scour

- Repeat damage site
- Road is the low point
- Gets 400mm deep stormwater flows down it
- Needed a fresh approach
- On-farm detention dams part of the new solution

# Technical Audit

What did the Auditors see?



## Roadside scour

- This inlet structure was the only asset undamaged by the high water flows

# Technical Audit

What did the Auditors see?



Unique Signage.

# Technical Audit

What did the Auditors see?



Some that raised eyebrows and created interesting discussion along the way.

PM 3:15 18/MAR/2014

# Technical Audit

What did the Auditors see?



Other things also raised eyebrows and created some debate.

# Technical Audit

What did the Auditors see?

Seal transitions  
too flat and too  
short.



PM 1:07 19/MAR/2014



# Technical Audit

What did the Auditors see?

Stock crossings  
hit the agenda  
again.



PM 3:20 18/MAR/2014

# Technical Audit

What did the Auditors see?



Stock crossings  
hit the agenda  
again.

# Technical Audit

What did the Auditors see?

BEM's installed  
and correctly  
located.



PM 3:10 18/MAR/2014

# Technical Audit

What did the Auditors see?



The less said the better!



# Technical Audit

What did the Auditors see?

They liked our  
increasing use of  
LED Lighting

...in urban areas



# Technical Audit

What did the Auditors see?

LED Lighting s  
being used more  
and more

And for rural  
intersection  
flaglighting



# Technical Audit

What did the Auditors see?

New Shared Use  
Path between  
Whakatane and  
Ohope

Concrete on the  
steep grades

(Secure that Pool  
fencing!)



# Technical Audit

What did the Auditors see?

New Shared Use  
Path between  
Whakatane and  
Ohope

Low grade  
aggregate base  
and crusher dust  
surface on the  
flatter grades





# Technical Audit

What did the Auditors see?

Transverse  
linemarking at  
intersection  
approach



# Technical Audit

What did the Auditors see?



Vegetation  
encroachment on  
some low volume  
roads

AM11:01 20/MAR/2014

# Technical Audit

What did the Auditors see?



Inconsistent application of roadside hazard marking

Here we have obstruction marker and white painted base on the power pole...

# Technical Audit

What did the Auditors see?

Inconsistent  
application of  
roadside hazard  
marking

Here we have  
nothing

Who is responsible,  
RCA or Pole owner?



PM 4:57 19/MAR/2014

# Technical Audit

What did the Auditors see?

Ground Bond  
dust suppressant

[http://www.youtube.com/  
watch?v=x30UIX2CjL0](http://www.youtube.com/watch?v=x30UIX2CjL0)



AM11:09 20/MAR/2014

# Technical Audit

What did the Auditors see?



Ground Bond dust  
suppressant

Essentially a PVA  
glue based product

# Technical Audit

What did the Auditors see?



Ground Bond  
dust suppressant

AM11:06 20/MAR/2014

# Technical Audit

What did the Auditors see?



So in summary, what did the Auditors see?

All in all a fair amount of pretty well managed roads

...with a few minor issues that could be improved





We were pretty happy with the overall result

# Procedural Audit



... but how were we fairing  
with the Procedural Audit?

# Procedural Audit

Whilst we were gallivanting around our network for most of the week, Ron spent his days ensconced in our meeting room, with files and financials and red pens and notepaper.

What was he doing....

And more importantly, what did he find....

# Procedural Audit

What did Ron do?

- He went through four years of financial transactions with a fine toothed comb
- looking to see that our GL balanced with TIO
- and that we has spent NZTA's money appropriately and on the approved programme
- He also scrutinised in detail, the paperwork and financials on ½ a dozen of our major contracts; maintenance, renewals, capital works, professional services and PSBU.
- It was a comprehensive, detailed and meticulous process
- And somewhat nerve-wracking too!

# Procedural Audit

What did Ron find?

- Well it was more what he didn't find!

**Where's the \$1,000,000?**

# Procedural Audit

- Thankfully, after working through the accounts in further detail with Ron, we found the missing money. It was in the GL, but just not that clearly identified.
- This highlighted the importance of ensuring that the GL mirrors NZTA's activity class and work category naming conventions
- And that the work category the money sits in within TIO, is where it is also mirrored in our GL

# Procedural Audit



So our Procedural Audit ended on a pretty good note too.

Again, we were pretty pleased.

# Close-out Meeting

- All the Audit activity was completed by midday Thursday
- Thursday afternoon was spent by the Auditors collating their notes and thoughts
- And preparing for the close-out meeting the next day.



# Close-out Meeting

- The Close-out meeting is an important part of the overall Audit process
- Its where the findings of the audit are presented by the audit team
- Senior representatives from Council are encouraged to attend – we had our GM Infrastructure come along.
- I also brought in all my roading team members who had participated in the audits over the past few days

# Close-out Meeting

## What we saw- field inspection

- Good quality of heavy maintenance repairs.
- Culverts well located and identified (on site).
- Vehicle entrance ways in rural areas not required to be sealed back to boundary but owner can do this. **Suggestion:** Council investigates options against WOL costs.
- Local sealing chip highest PSV in North Island but too expensive for Council!
- Stock crossings are still an issue. **Recommendation:** Policy and education enforcement – compliance with bylaw.
- Good application of RTS5 but maintenance an issue on some roads (inc. edge marker posts)
- Grass encroaching into seal
- Rural speed zones – legal and enforcable?

Auditors  
Powerpoint Notes

# Close-out Meeting

## What we saw - contd

- School safety projects - Hastings DC has good experience. Also Rob Bullick (Transport Agency).
- Street name blades very good, just a couple of location issues to improve visibility at night
- Seal /unseal transition too flat and short to account for acceleration and braking?
- Drainage systems good and appropriate for network. We liked the use of wing walls.
- Hazard markers on poles adjacent rural drains and bridge end markers- inconsistent application (consistency and placement).

Auditors  
Powerpoint Notes

# Close-out Meeting

## What we saw - contd

- Annual seal programme has moved from 60kms to 40kms. Should consider extending average life from 12 to 15 years. From our observation the network could handle this. Indices support this too. We saw little significant pavement faults. To mitigate risk associated with this change Council should also review its inspection practices
- Ohope Hill shared pathway good. Impressed with Grade 4/6 on shoulder. Is there an opportunity to complete this project?
- We note the move to a more in-house management of the network and would like to see Council quantify benefits. However network professional services as a percentage of network maintenance unusually high (24.6% in 2013/14).
- SH2 Waimana Gorge intersection concerns will be further discussed with the Transport Agency (HNO).

Auditors  
Powerpoint Notes

# Close-out Meeting

## What we saw - contd

- Drainage network – critical culverts are identified and inspected prior to notified weather events.
- Thornton Intersection safety project – suggest contact Transport Agency (HNO Otago's Peter Robinson).
- We like the innovation of multiuse signs.
- We commend the move to LEDs.
- Suggest further forensic analysis is required to identify cause of pavement failures at rehab sites and corrugations on straights at unsealed road sites.

Auditors  
Powerpoint Notes

# Close-out Meeting

## Overall comment

- Network is in very good condition
- Staff are passionate about the network
- Noted a few issues, though minor and easily resolved
- Like to see some tension applied to the renewals programme with the opportunity to extend lives.
- Need to quantify benefits of new management approach

*"Active, involved and in partnership", everyone's a Google Engineer*

- Thank you for your input and time

Auditors  
Powerpoint Notes

# What Next?

1. Awaiting draft of Auditors formal report
2. We will respond to that
3. Auditors will then issue final report

Then its all over for another few years  
...but not really...

# Post Audit

- Over the next weeks and months we will be reviewing the Audit findings and identifying what we need to do to follow up its recommendations and suggestions.
- Its all part of our on-going process of meshing in best practice with what's practical and affordable for a small rural authority



# How did we find it?

- Challenging
- Intense, particularly during the lead-up preparation
- Nerve-wracking at times
- Rewarding
- Very useful as a litmus test on our network management

# How did we find it?

The Audit team were

- Very professional in their approach
- Friendly
- Helpful
- Critical where they needed to be, but in a positive way
- Open to discussion on what they saw
- Appreciated the good things we did as well as identifying any non conformances

# How did we find it?

Overall a very positive experience

# Questions?



Thank You