From:	Bevan Percival
To:	Jack Hansby
Cc:	Karen Boyt
Subject:	RE: Urgent Request for Data from NOC"s for Fergus and the Board
Date:	Thursday, 7 December 2017 11:19:00 AM
Attachments:	AP BPQ Achievement Tracker (20171201).xlsx
	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg

## Hi Jack,

Attached the spreadsheet populated and the commentary on problem areas and quality below. **Areas in Central Waikato Where there Have been higher levels of public complaints** 

• SH 1 From Tokoroa to Taupo – high number of complaints and damage compensation claims. Main concern is potholes and flushing making road slippery – have had numerous OCU's, Ministerials and also 2 Police Notices leveraging section 21 of the Land Transport Act, resulting in issue of PIP. Our response – when the section 21 was issued, police concern of flushing we accelerated water cutting of all scrim deficient areas, and got Dave Whitehead on site to agree further scrim sealing and also brought forward some asset preservation reseals. In response to other complaints and the deterioration over this length – we have a large programme of asset preservation sealing and rehab this year over this length most of it has already been completed and has put to bed the worst areas of public concern. Multiple reseals and 1 TAC completed, 5 rehabs completed.

200

• SH 1 From Turangi to Waiouru – Desert Road – high number of public complaints, damage compensation claims, 1 motorcycle crash causing injury attributed to road conditions, 2 PIP's issued followed up by a PNC, many OCU's/ministerials. 1 rejuvenation seal over a high stress SMA site failed, sealed too late in April, all chip fell off, failed next scrim. Contractor came back and did the same again next year. In a bad state now and has all picked up in hot temps, now a renewal mill and fill site in this years programme (1<sup>st</sup> sister Mangamate). Another site in 1<sup>st</sup> sister (Mangtawai) visibly failing but pushed a year in programme, and fell apart – with multiple potholes and shoves – has required contractor to complete a large amount of mill and fill hotmix repairs in winter, now in this years programme for TAC mill and fill renewal. Also a lot of reseal sites across the Desert Road in this year's programme – all work to be carried out January/February – currently there are multiple sections alive with bleeding bitumen.

## **Quality Issues**

**Year one 15/16** – late delivery of both reseals and AWT – high percentage of quality issues on reseals, absolute minimal pre reseal repairs done just in front of sealing crew, bigges quality issue was chip falling off using harder binder than in past, sealing late in cooler temps – next year a flushing problem, rework is being done one site reworked twice now and is again flushed up this year requiring more intervention at supplier cost. Site quality control seems to be the issue and poor setting up of sites prior to sealing with the right amount/appropriate pre reseal repairs – means the sealing crew are constantly adjusting rates and dry chipping to make a silk purse out of a pigs ear. One site – SH 1 Thorpe Road (Atiamuri) was not on the programme for reseal but flushed rapidly in early summer, then there was a fatal crash, site then accelerated for 2/4 sandwich prior Christmas, this bled and failed all in one day on a warm January day, was decided only way to make safe was then to rehab, rehab designed and built in same year, failed over winter, reworked and second coated in next season, and more rework has just been done this year (third season) –

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the Plea Reg Dav Dave Senic High Natic 50 Vi Welli <b>S 9(</b>	agreed action ase let me kr ards e Whitehead or Pavements E ways & Networ onal Office inctoria Street ington 6141	ons from this meeting. now if you have any comments regarding the content.	1981 1
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From:	Bevan Percival
To:	Dave Whitehead
Cc:	Andrew Oakley; Nick Cook
Subject:	SH 1 Atiamuri to Maroa Rd
Date:	Thursday, 9 February 2017 11:15:00 AM
Attachments:	Central Waikato Exception Report RS664 Only.xlsx
	SH1 atiamuri bleeding.docx
	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg

Hi All,

We have been issued a report from the Police pursuant to section 21 of the Land Transport Act see attached.

As a result we have taken immediate action to force the contractor to accelerate delivery of current year reseals in this area and also analyse the scrim report and provide recommendation (see attached).

As such can you review the appropriateness of the recommendations for the sections highlighted in red, whether the treatments are appropriate and can be funded and advise whether we can go ahead with the recommendations ASAP to satisfy Police concerns in the area.

Give me a call if you need to discuss. Thanks

Bevan

FULL Bevan Percival / Maintenance Contract Manager Central Waikato **Highways and Network Operations** 

ddi<mark>s 9(2)(a)</mark> 

Е <u>.@</u> /w <u>nzta.govt.nz</u>

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From:	Bevan Percival
To:	s 9(2)(a)
Cc:	s 9(2)(a)
Subject:	Stripping
Date:	Thursday, 27 April 2017 3:44:00 PM
Attachments:	image001.jpg
	image002.png
	image003.png
	image004.png
	<u>image005.jpg</u>

Hi<sup>s 9(2)(a)</sup>

Photos taken by Stephen P yesterday.

This does not look good - it is in the area where the police issued notice on us.

-jt-082 is this where we agreed to carry out scrim sealing in the NB lane in advance of the future rehab to remedy scrim failure in the short term? or is this actually in the Ohakuri reseal, it looks like fresh bitumen to me?

Is this the same tank of bitumen used on Palmer Mill and south at Hallets Bay repairs where all the chip has fallen off also?

> **.** (

What is going to be done to fix this?

### Bevan

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Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

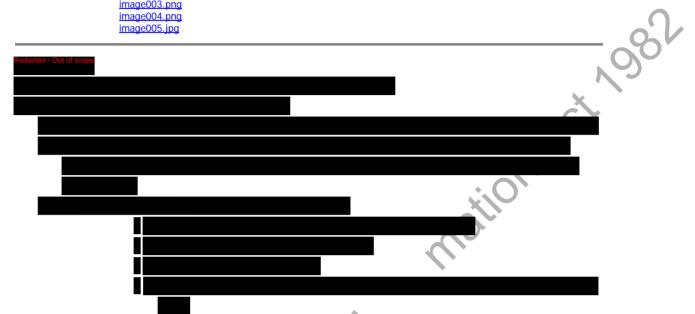
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/w <u>nzta.govt.nz</u>

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From: **Bevan Percival** To: Nick Cook; John MacDonald Cc: Stephen Parker Central Waikato RAPT comments day 1 and 2 11th and 12th December 2017 Subject: Date: Wednesday, 13 December 2017 12:33:00 PM Attachments: image001.jpg image002.png image003.png image004.png image005.jpg



4. Disappointing to see so many areas of damage to chipseals in good performing treatment lengths from tracking, pick up and plucking from bleeding that clearly hasn't been responded to proactively, the majority of sites on SH 1 are a result of the supplier's own quality issues or as a result of traffic management blindly proceeding to stop traffic for supplier's own work activities that has caused this damage. This has resulted in extra unplanned investment now by the client to 'help' the supplier to remedy some areas and will no doubt impact of the life of these seals. The current supplier has an in depth knowledge of this network and also access to very good weather monitoring stations to anticipate and respond proactively to this issue

s 9(2)(a), Redacted - Out of scope

6. It was agreed with supplier that a number of 2017/18 reseals where some pre reseal have been completed still require further repairs some of which are marked out in yellow paint but have not been done. Some sites had very temporary hand laid mix repairs in them that the supplier confirmed would be removed prior to sealing.

7. It was observed in at least one treatment length south of Desert Road summit that some second coat seals had achieved very good life (aqueduct hill) – where Nick checked the hardness/oxidation of the binder. It was mentioned that the strategy contributing to this was a first coat 2/4w followed by a 2<sup>nd</sup> coat 2/4w – is this a strategy that should be utilised again then stead of the suppliers current strategy?

- 8. We observed bleeding and binder carry at:
  - Atiamuri caused by queued traffic and had caused damage to 1<sup>st</sup> coat of Atiamuri rehab 16/17 site.
  - Ramsey's hill, enabling works and the associated traffic

management at 17/18 rehab site has caused damage to existing chipseals through the site and adjacent lengths

- Hallet's Bay tracking of 'lively' binder from late season 16/17 repairs has tracked onto binder rich sites at southern approach to Te Toke point – good intervention through dry chipping has achieved a good take and restored some texture which should put this to bed. Asked that TSL be removed but 'slippery when wet' remain in place
- Motutere corner proactive early intervention at this site through hot chipping has prevented any damage and a good take has been achieved meaning TSL signs can be removed

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- Mangamate 1<sup>st</sup> rejuv seal fell off, done too late in April, 2<sup>nd</sup> rejuv not much better was also late. Binder? of mix has softened and plucked/picked up – site is a mess. Supplier to confirm how it will be kept safe until TAC renewal occurs. Tracking to adjacent chipseal south end has possibly caused damage
- Oturere south 17/18 rehab works installing dish channel and also subsoil resulting in stopping traffic causing damage to chipseal through site and also to adjacent treatment length to the south.
- Waikato stream bridge south possible that stopping traffic for the works at the bridge may have contributed to seal damage at the north end of 16/17 rehab and also the tracking and pick up to the north end of the reab site.
- 9. Noted though that the extent of seal bleeding does not seem over and above what has happened in past much of damage has been caused by suppliers own work activities or failed work.
- 10. Still some reliance on 'low' risk 2 coat reseal tretaments. Some of these were challenged and supplier agreed should be changed to single coats (Innes rd SH 1 – straight, low stress, flat, good even textured 2<sup>nd</sup> coat was proposed as a 2/4w – supplier agreed a single coat was more appropriate. Others need to be reviewed at design stage to check that single coats would work.
- 11. Some work required on better understanding of FMA or articulation of FMA
- 12. Really pleased that the supplier is receptive to NZTA discussion and willingness to work together to improve and resolve any NZTA concerns.

Hope that helps, sure there is stuff that I have missed.

Cheers Bevan

DD

Bevan Percival / Maintenance Contract Manager Central Waikato System Design and Delivery

E <u>.@.. / w nzta.govt.nz</u> Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade, PO Box 973, Hamilton 3240, New Zealand

cid:image001.jpg@01CF0C4F.B1	255FC0		

Released under the Official Information Act, 1982

From:	Bevan Percival
To:	Stephen Parker
Subject:	FW: Road repairs required
Date:	Monday, 1 May 2017 8:47:00 AM
Attachments:	image001.png
	ATT00001.htm
	SH1 atiamuri bleeding.docx
	ATT00002.htm

## From:

@police.govt.nz]

Sent: Tuesday, 7 February 2017 11:26 a.m. To: Bevan Percival Subject: Fwd: Road repairs required Morning Bevan,

Please see the attached report relating to risk around tar bleed on SH1 between Ohakuri Road and Thorpe Road.

With rain expected this afternoon and tomorrow it may be prudent to get the contractors to have a good look at it.

@police.govt.nz>

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Thanks



Begin forwarded message:

From: 'S 9(2)(a)

Date: 7 February 2017 at 8:36:19 AM NZDT @police.gov

To: **S** 9(2)(a)

Subject: Road repairs required

Morning

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Attached is a report regarding State 1

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From:	s 9(2)(a)
To:	Bevan Percival
Subject:	Re: binder sample - SH 1 Thorpe Feedback from Resealing
Date:	Tuesday, 1 March 2016 12:13:25 PM
Attachments:	image002.jpg
	image003.png
	image004.png
	image005.png

### s 9(2)(a), Redacted - Out of scope



------ Original message ------From: Bevan Percival Date:01/03/2016 12:05 PM (GMT+12:00) Solver: RE: binder sample - SH 1 Thorpe Feedback from Resealing

Brendon mentions the delivery docket

"Attached is the PMB delivery docket which was loaded at 16:13 on 14th Dec, that was intended for the Westlink site on the 15th December" can you supply us that please.

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Thanks

(2)(a)

Bevan

From: <u>S 9(2)(a)</u> Sent: Monday, 15 February 2016 8:51 a.m To: Bevan Percival

Subject: FW: binder sample - SH 1 Thorpe Feedback from Resealing

We are interested in understanding the seal design fully and what adjustments were made for site specific conditions, this more as a lessons learnt exercise.

Our lessons learnt from the surfacing of this s te

Due to the extremely fast flushing of this site, an in depth investigation of the pavement should have been the priority, before any surface dressing was applied.

Regardless the time of the year, weather or fatality, a knee jerk reaction to seal should not happen (easy to say this now) it's great to have hindsight.

And yes )ometimes a seal can successfully hide a multitude of sins and sometimes it just won't and will bite you in the a 🛄

Rutting was a contributing factor with this site, when the pavement gets hot the binder flows to the lowest point, causing premature flushing. This is an issue with the NOC contracts (less is best) there are a lot of sites that have rutting on the network in this year's reseals. Note some of these are 1 year AWTs

A sandwich seal is considered a remedial treatment for soft or variable pavements. Reflective flushing can be anticipated. The amount will be dependent upon the pre-existing surface texture.

Where there are flushed surfaces on any reseal site that isn't a SS seal, we also dry chip these prior to sealing to minimise flushing. If we don't do this, it will need to be part of the pre-seal treatment.

Our expectation is that the supplier would do this anyway and I assume some sort of a process is detailed within your IMMS ie failure mode analysis.

Failure mode analysis was flushing and rutting- No core samples of the pavement were taken to check binder aggregate ratio

The site had to be done that day no matter what

We should have a binder sample taken from the distributor on site - I believe these are still a requirements of our specs, it is the only way that anyone knows that is the binder that went on the road - can you supply please? 1982

No sample was taken from bitumen distributer, only from point of manufacture before cutter and add-agent added.

Any sample taken from the sprayer will be misconstrued because of the diluent component.

Under P4 samples were taken to check cutter and add agent, because the contractor was paid on litres/ cutter and add-agent.

Now we get the test result from the production plant and a sample is kept at the lab for 2 months before being chucked out

The seal design provided is only the summary – and really we need to also understand what adjustments have been made, so can you provide all the workings that support the summary sheet to show the adjustments made.

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Adjustments made for specific site conditions

PMB 0% usually add 10%, however binder had 3pph kero due to overnight temperatures

+0.11/m2 Texture variations from 0.9mm to 2.2mm across the width of the pavement

As discussed the spray sheets, which should be an accurate record of what has gone on the road-show several discrepancies between the design and with the reported RAMM records, leaving us with doubt as to what was the binder grade, what was the % kero, did it actually contain PMB etc.

An NCR has been generated and sprayer operator, Supervisor and Engineer, must check entered information is correct prior spraying.

The sprayer was loaded with PMB on the Monday for Westlink SCRIM reseals.

The call was that the Thorpe Rd site was more important than SCRIM site

PME would have been the ideal product for this site as the site is relatively straight however, time and weather forecast was the governing factor.( No one wanted another accident or fatality on this site) Also we had nowhere to store the PMB

Attached is the PMB delivery docket which was loaded at 16 13 n 14<sup>th</sup> Dec, that was intended for the Westlink site on the 15<sup>th</sup> December

I have noted that many if not all the sealing work done his year uses a std 3pph amount of cutter, is this because all sites and selected treatments will perform at their optimum using a std amount of cutter or is it governed by the impracticalities associated with changing the amount on a site by site basis?

Cutter is added at the point of manu acture depending on the forecasting of overnight temperatures, the shade temperature can range on the Central Plateau and specifically in shaded for str areas from 10c to 20c.. The recommended diluent content for these temperatures are 4pph to 10 pph.

Working between 1pph and 3pph maximum in our experience is ideal.

The only other way is to onsite blend, which creates safety and environmental issues.

Note Adding utter is extremely dangerous operation, and is not recommended as an Industry practise

| Asset Manager Central Waikato Network Outcomes Contract

WGM - Transportation Asset Management | Opus International Consultants Ltd

opuslogo

@opus.co.nz

12 Ashwood Street, Taupo 3330, New Zealand PO Box 43, Taupo 3351, New Zealand



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From:	Karen Boyt
To:	Bevan Percival; Simon Brandon
Subject:	RE: bleeding road
Date:	Wednesday, 23 November 2016 5:02:40 PM
Attachments:	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg

Hi Simon.

As I understand, this time of year is when bleeding occurs due to the pavements being wet after the end of winter and the sun hitting it causes the water to bubble up and raise the bitumen level (Bevan, feel free to correct or provide better technical explanation). So we're less likely to formation see bleeding after a few weeks of hot weather.

202

Thanks

Karen

From: Bevan Percival Sent: Wednesday, 23 November 2016 4:05 p.m. To: Simon Brandon; Karen Boyt Cc: s 9(2)(a Subject: RE: bleeding road

Hi Simon.

The contractor and I had anticipated this happening. They are have been gritting the site at Ohaakuri Rd which is one of the reseals done last year where remedial repair work is required. They have also been gritting at SH I Tirohanga road which is where the most recent tries report locates.

Right now is exactly the time of year when this phenomenon always seems to manifest itself (the first heat of summer) and is **rou**tinely treated all over the country by gritting or even spraying the road with a water cart. Yesterday I was out on the network up on the desert road anticipating this was going to occur and to make sure that an appropriate response was in place.

Usually it actually is suppressed by the time we get into the peak summer period.

When I get a chance I will go and have a look to make sure it is safe and has been responded to appropriately

Also the time to be vigilant is when this is accompanied soon after by rain (later this week).

Thanks Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

DDI 9(2)(a)

/w <u>nzta.govt.nz</u>

Hamilton Office | Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand



From: Simon Brandon Sent: Wednesday, 23 November 2016 3:47 p.m. To: Karen Boyt; Bevan Percival Subject: bleeding road

Hi

ar. Act Agga Hormation Act I see bleeding problem at Atiamuri – slipping and sliding, says Treis. Not far from difficult fatal crash site which was fixed eventually earlier this year. But it's not that hot today ... so what can we expect in Jan-Feb? We are likely to be asked such g question and why. Cheers

Simon Brandon / Senior Communications Advisor Waikato Expressway & Highways Projects

DDI s 9(2)(a) E <u>.@.</u>

W <u>nzta.govt.nz</u>

Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade PO Box 973, Hamilton 3240, New Zealand



From:	Karen Boyt
To:	Bevan Percival
Subject:	RE: Fatal - SH1 Atiamuri near Thorpe Road
Date:	Friday, 17 June 2016 11:26:35 AM
Attachments:	image002.jpg
	image003.png
	image004.png
	image005.png
	image006.jpg
	image007.gif

Great, thanks. I did leave a phone message for Dave but haven't heard back, so will follow up today.

982

ation

Thanks

Karen

From: Bevan Percival
Sent: Friday, 17 June 2016 10:51 a.m.
To: Karen Boyt
Cc: Dave Whitehead; Robert Busuttil
Subject: FW: Fatal - SH1 Atiamuri near Thorpe Road

Hi Karen,

In answer to Tina's further questions below see my comments for Q5 and Q7 below.

Tina's query regarding Q8 and her following queries below are probably best answered by Dave or Robert.

A brief history of intervention after the crash is as follows:

- 1. Within days after the crash Downers constructed a sandwich seal on the 15<sup>th</sup> December 2015 (bringing forward the treatment in the FWP for 16/17),
- 2. within a short period flushing star ed reflecting through and in January 2016 it became so unstable in the hot weather that it started picking up in the wheel tracks extensively.
- 3. Mill and fill hot mix repairs of the wheel tracks with pre coated rolled in chip on top were attempted by Downer to repair this which was deemed unsuccessful
- 4. A pavement rehab was then progressed

As part of the investigation for this rehab 2 test pits were completed. This may be of some help to understand and provide an answer to Tina's last question.

The Design report can be found here: <u>https://infohub.nzta.govt.nz/otcs/cs.dll/open/13956463</u>

The testpit logs can be found here: <u>https://infohub.nzta.govt.nz/otcs/cs.dll/open/15730189</u>

Let me know if you need any more info from me.

Thanks Be an

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Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

DDI s 9(2)(a)

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# Redacted - Out of scope

## Redacted - Out of scope

## Jessie

Jessie Hedge / PA to Highway Manager

Highway and Network Operations

DDI 64 7 958 7237 T 64 7 958 7220

Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade, PO Box 973, Hamilton 3240, New Zealand

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From:	Bevan Percival
To:	s 9(2)(a)
Subject:	RE: Fatal State Highway One Atiamuri near Thorpe Road 12/2015
Date:	Monday, 20 June 2016 10:34:00 PM
Attachments:	Thorpe rd maint costs.xlsx
	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg
	image006.png
	image007.png

image008 png image009.jpg image010.jpg image011.png

Police have asked more questions about this. In the maintenance costs you sent me it shows that a second coat seal which must be over a maintenance patch? in march 2012 at the southern end. Can you send me the pavement maintenance records around that time as it seems to me a pre seal repair? Was done but the pavement maintenance records should confirm (it seems you have only supplied surfacing records from the maintenance table).

Thanks Bevan

@opus.co.nzl

From: <u>S 9(2)(a</u> Sent: Monday, 16 May 2016 11:28 a.m. To: Bevan Percival Cc: <u>s 9(2)(a)</u> @downer.co.nz' Subject: RE: Fatal State Highway One Atiamuri near Thorpe Road 12/2015

Good Morning.

I have exported RAMM Mtce Costs and at ached. There is definitely not a full width repair done here. I can only find a large watercutting patch (highlighted Green) which is the only possible reason to explain the lack of binder on the surface. However, I could propose that at the time of the 2006 AWT a 20m long dig out tie-in was constructed. This would have removed the underlying layer and may confirm that the Failure Mode was definitely related to the buried seal layer.

I have also on the same spreadsheet highlighted the Bleeding Areas and dates undertaken (Highlighted Yellow).

From your other email:

The watercutting was completed between the 29 July and 7 August. The RAMM records do not show this but our videos give the date range. Kieran is working on correcting RAMM. This was only identified today!!!. The Slippery When Wet Signs were erected on 29 July 2015. Their locations were 664/6312 LHS and 664/6529 RHS.

The second part refers to the November Inspection for the effectiveness of the watercutting. I can confirm that no inspections of any of the completed watercutting was undertaken on the Central Waikato network. This was due to the fact that I had missed the requirements in T10. From the review of the latest Exception report there were no areas of last years' watercutting which failed due to flushing. Also attached is a photo from the High Speed showing the completed watercutting at the time of the latest survey. This would have been a pass.

## Kind Regards

c 9(2)(a)	WGM transportation Asset Mana	gement   Opus International Consultants Ltd	
11 Ashwood Ave Tauh PO Box 43, Taupo 33	ara, Taupo 3330, New Zealand 51, New Zealand	të optisi to niz	N
Visit us online: <u>w</u>	ww.opus.co.nz	PC	6
	cival [mailto:Bevan.Percival@nzta	.govt.nz]	
	May 2016 2:23 p.m.	XIII	
To:s 9(2)(a) Cc:s 9(2)(a)	opus.co.nz> @downer.co.nz		
	State Highway One Atiamuri nea		
- 9/2V-3		×O'	
s 9(2)(a)			
In the last photo repair work done that definitely no	e. It almost looks as if a full widt	e again), they ask if this section had some h pavement repair has been done there, is	
Thanks	, C	10	
Bevan	192	/	
To: s 9(2)(a) Cc: s 9(2)(a)	May 2016 12:56 p.m. ' al State Highway One Atiamuri near	Thorpe Road 12/2015	
s 9(2)(a)	S. V.		
Following the 20 erected and on w the RAMM record	hat date and at what location w	hted scrim deficient areas, when were signs as the water cutting done (can you provide	
Further to that a following season outcome of the in	done to assess the effectiveness	n was the site investigation in Nov the of the water cutting and what was the	
Can you supply t	he records of gritting done prior	to the crash.	
Bevan			
Bevan Percival / M Highways and Netw	laintenance Contract Manager Cent ork Operations	tral Waikato	
DDI 64 7 958 7953	/ M 64 027 886 0945		
	evel 1, Deloitte Building		
24 Bridge Street, I	PO Box 973, Hamilton 3240, New Ze	aland	

	From: <u>S 9(2)(a)</u> @opus.co.nz] Sent: Friday, 13 May 2016 10:13 a.m.
	To: Bevan Percival Cc: @downer.co.nz'
	Subject: FW: Fatal State Highway One Atiamuri near Thorpe Road 12/2015
	Sent: Friday, 15 May 2016 10:13 a.m. To: Bevan Percival Cc: @@downer.co.nz' Subject: FW: Fatal State Highway One Atiamuri near Thorpe Road 12/2015 Our comments below:
	opuslogo
	WGM transportation Asset Management   Opus International Consultants Ltd © opus.co.nz
	11 Ashwood Ave Tauhara, Taupo 3330, New Zealand PO Box 43, Taupo 3351, New Zealand
	Visit us online: www.opus.co.nz
	From: s 9(2)(a) @downer.co.nz]
	Sent: Wednesday, 11 May 2016 11:23 a m. To: s 9(2)(a)
	Subject: FW: Fatal State Highway One Atiamuri near Thorpe Road 12/2015
	As we expected. Can you provide the info requested please.
	Thanks
	s 9(2)(a) Manager Taupo New Zealand
	New Zealand
10	T [s 9(2)(a) E s 9(2)(a) <u>@downer.co.nz</u>
0	11 Ashwood Ave Taupo
	www.downergroup.co.nz

From: Bevan Percival [mailto:xxxxx.xxxxx@xxxx.xxxx]

Sent: Tuesday, 10 May 2016 8:08 p.m.

To: s 9(2)(a)

Subject: RE: Fatal State Highway One Atiamuri near Thorpe Road 12/2015

čt 1982 - NZTA will reply directly. I'll contact Glen. Can you provide the data requested to me please.

Thanks Bevan

Sent from my Windows Phone

From: <sup>\$ 9(2)(b)(i), \$ 9(2)</sup>

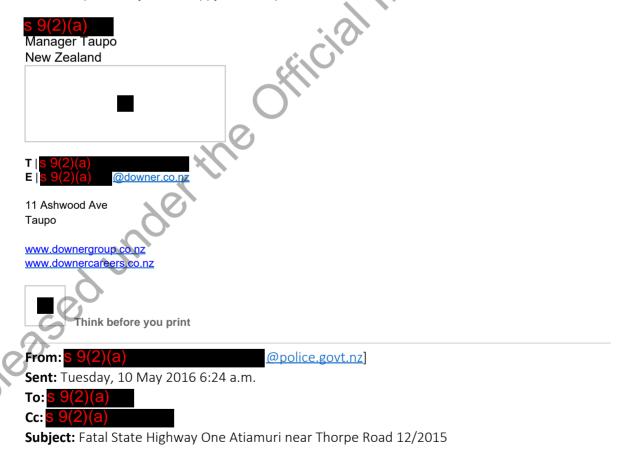
Sent: 10/05/2016 8:01 a.m.

то:<mark>s 9(2)(а)</mark> **Bevan Percival** 

Subject: FW: Fatal State Highway One Atiamuri near Thorpe Road 12/2015

Steve - Glen contacted me yesterday and explained the Crash Investigator was seeking additional information about the Thorpe Road site. Are you able to supply him the info requested please subject to Bevan's approval..

Bevan – I presume you are happy for us to provide this info?



Michael

As per our conversation yesterday regarding the triple fatal on State Highway One, near Thorpe

Road Atiamuri that occurred in December last year on the 12 .

I have been asked by the crash analyst to source the following information.

When was the area of affected road laid before the crash date? The previous surfacing was constructed on 10 December 2012

Who laid the area of affected road? Downer NZ - Hamilton

When was it noted that the road surface was starting to fail and how soon after it was laid did this occur?

Assuming your reference is regarding the flushing during the previous summer to the fatal crashes. NZTA undertake a Texture and Skid Resistance survey on the Central Waika o network late November with the last two surveys on this section were undertaken on 16/11/2014, and 24/11/2015 respectively

Who is responsible for the repairs and when was it scheduled to be repaired? AT the time of the 16/11/2014 survey NZTAs Consultant Opus International Consultants reviewed all of the deficiency areas and produce a schedule of works for completion/rectification. This report was submitted to NZTA on 17 March 2015. At this time the Contract model had changed and the report was submitted through the new NZTA Contract Model by Downer NZ – Taupo. This site was then programmed for repair between May and June 2015.

What construction configuration and materials were used for the repairs? The repair methodology was to waterblast the affected failed area. This is done by applying high pressure water to the surface and blast the excess bitumen off. This is then sucked off the surface and contained within the application vehicle. Referring to your photo 176A5664.jpg you will see the circles cut by the 600mm rotating head x 3 lines.

What is the appropriate mix and why did it flush so badly.

Attached is a photo taken by a previous road survey prior to the previous surfacing, this shows only minimal flushing prior to the 2012 resurfacing being applied. There was only minimal flushing and the treatment of a Racked In Grade 2/4 was appropriate. From the subsequent analysis undertaken post the triple fatality there were two contributing factors. The first was that the actual top layer of the pavement (Under all surfaces) was only 70mm thick above a buried seal layer this methodology was common practice in the early 90's but in recent times has b en proven to trap water and prevent the water migrating down to the underlying watertable. The second factor was that this was perceived the hottest period experienced in the Taupo area for 5 years (Since before the previous surface was constructed). The result is that the water evaporates in the underlying pavement and vents through the bitumen sealed surfaces. As the water migrates up it adheres to the bitumen carrying it upwards causing flushing. This is best seen as small volcano shaped vents in the seal. Unfortunately there is limited photos of this occurring.

I have also attached a photo 176A5664 of the crash scene where the road surface has been repaired but this has been unaffected by flushing. When was this area repaired, by who and

what mix was used.

As mentioned above this area had the excessive bitumen removed. This work was completed in late July 2015. (I am trying to locate the exact date for your records) This work was completed by Downer - Taupo

I have also attached photo 176A5475 which is south of the crash scene. This has been repaired but no flushing. When was this repaired, by who and what mix was used. There was no repair work undertaken at the southern end. It did not flush up like the rest of the remaining site. If you refer to the second photo there is limited historical flushing and I suspect simply did not have the trapped water to exacerbate flushing.

22

Can I please have any documentation and plans that answer the above questions.

Please forward any information to me at Tokoroa Police Station Po Box 44 Tokoroa hormatic

## **Kind Regards**

## s 9(2)(a)

Thank You for your time and effort in this matter.

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From: Karen Boyt To: **Bevan Percival** Subject: Re: Flushing and Stripping presentation Date: Saturday, 25 June 2016 7:32:23 PM Attachments: image001.jpg image002.png image003.png image004.png image005.jpg

Thank you Bevan, this will be perfect.

Cheers Karen

, ct 1982 On 25/06/2016, at 4:08 PM, Bevan Percival <<u>xxxxx.xxxxxx@xxxx.xxxx@xxxx.xxxx</u>wrote:

## Hi Karen,

Here are some photos of stripping all on fresh reseals completed this year! The cause of the stripping could be down to a number of factors including but not limited to: being caught in the rain (SH 5), dirty chip (SH 1 Ohakuri - Waiotahi chip), low ambient temperatures in alpine areas (SH 1 Mangatawai, Mangatoetoenui) - the underlying problem is poor decision making, planning, QA and sometimes workmanship. Over to you whether you would want to display these at an RTC.

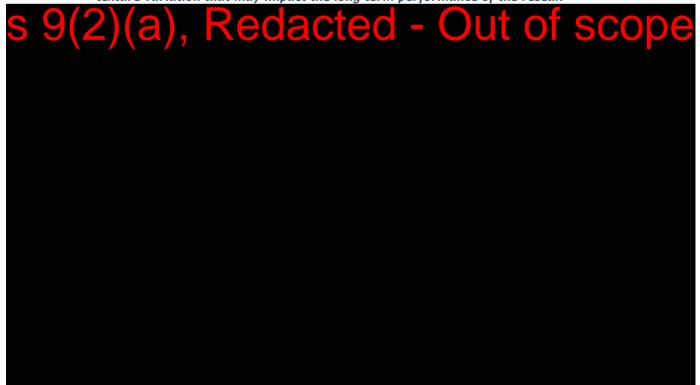
NOC requirements:

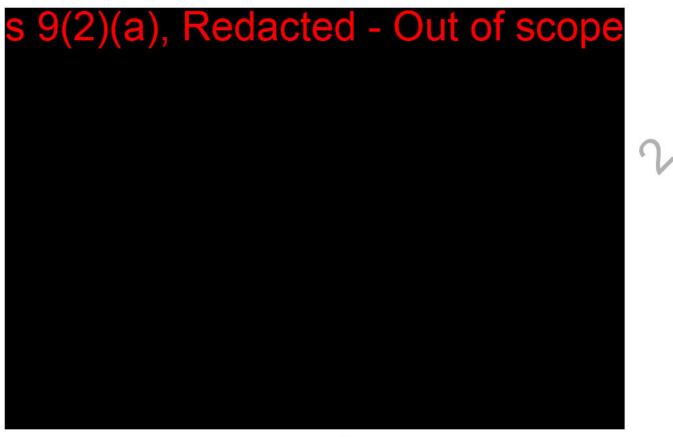
Flushing

**Operational Performance Measures in the NOC (OPM's) require:** 

All flushed areas that are greater than 10m long and are below the scrim coefficient threshold level and constitute a safety hazard as identified by the high speed survey are the contractors risk and must be treated in accordance T/10.

Other flushing must also be treated prior to resealing if there is significant texture variation that may impact the long term performance of the reseal.







4 From: Karen Boyt Sent: Saturday, 25 June 2016 8:27 a.m. To: Stephen Parker; Andrew Oakley; Bevan Percival Subject: Fwd: Flushing and Stripping presentation

Hi guys,

Below is a link to my presentation I will be giving to RTC on 4 July. All I need now is one or two clear photos of stripping. Can you help? Also Bevan, I need 1-2 bullets on how the NOC LoS deal with flushing and Releas stripping (and potholing). Do you have any ideas, maybe reference to the MMP and the KPIs?

Thanks Karen

Begin forwarded message:

From: Karen Boyt <<u>Karen.Boyt@nzta.govt.nz</u>> Date: 23 June 2016 at 4:35:20 PM NZST To: Robert Busuttil <<u>Robert.Busuttil@nzta.govt.nz</u>>, Andrew Oakley <a href="mailto:andrew.oakley@nzta.govt.nz">andrew.oakley@nzta.govt.nz</a>>, Nick Cook

## <xxxx.xxxx@xxxx.xxxx.xx **Subject: Flushing and Stripping presentation**

Try this link...

Released under the Official Information Act 1982

From:	Bevan Percival
То:	s 9(2)(a) (Opus)
Cc:	s 9(2)(a)
Subject:	RE: Flushing
Date:	Tuesday, 15 December 2015 8:10:00 AM
Attachments:	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg
	image006.png
	image007.png
	image008.png
	image009.jpg

## Thanks Steve,

From what I saw yesterday, I agree with the risk ranking. How will the flushed areas be kept safe in the meantime? Given flushing is the contractors risk what is Downer's strategy to address these areas and keep them safe until they will be resealed? As discussed with you and Mike yesterday I don't believe that putting slippery signage up is enough to mitigate the risk at these sites.

Bevan

From: <u>s 9(2)(a)</u> @opus.co.nz] Sent: Tuesday, 15 December 2015 7:45 a.m. To: Bevan Percival; <u>s 9(2)(a)</u> Subject: RE: Flushing

As discussed yesterday I also had a drive around the northern end of the network.

The Mamakus were not venting at the time and should remain stable until next month. Biggest risk site is the Palmer Mill Northbound lane. This is planned for reseal 2016/17. Both Steeghs and Tuahu are the next highest risk and if there is a significant heat difference will be the next to "light up" and bleed.

Steeghs is planned for early January and will be one of the first sites.

The Rutfilling Contractor will be undertaking a Defect Liability inspection early January with a programme of returning to have all works completed by the end of February.

Thanks

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V

| WGM transportation Asset Management | Opus International Consultants Ltd

@opus.co.nz

11 Ashwood Ave Tauhara, Taupo 3330, New Zealand PO Box 43, Taupo 3351, New Zealand

Visit us online: www.opus.co.nz



From: Bevan Percival [mailto:xxxxx.xxxxx@xxxx.@xxxx.xxx] Sent: Monday, 14 December 2015 9:38 p.m.





Today I had a look at the Mamakus and all of SH 1 to the Desert summit.

Steeghs is a concern – when is this planned to be resealed? I assume you have completed the change form to bring this one forward a year and completing the whole length? We have had complaints about this and it must be prioritised as a high risk site.

Rutfill 1<sup>st</sup> coats are sweating at Ohakuri road and also Waitahanui – what will be done with these?

A close eye needs to be kept on flushed areas at Tuahu Hill but in particular Palmer Mill road - I see slippery signs have been put out, but this does not do much - when is this one in the programme? If a way off what is the strategy to deal with the flushing?

The Desert Road looks reasonable, need to keep an eye on flushed areas around Tearooms sterilised sites, pats corner to Oturere Burn and Waihohonu bridge south up the hill and Waikato Stream in particular - these sites are flushed but not tacky but today temps weren't that high. On hot days these will probably need gritting at least. What is your strategy for restoring texture on these areas where reseals are a way off?

Did not get to Horopito – but can you ensure someone is keeping an eye on that area and gritting it etc as necessary.

Thanks Bevan

Bevan Percival / Maintenance Contract Manager Highways and Network Operations

s 9(2)(a)

Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand

/w nzta.govt.nz

cid:image001.jpg@01CF0C4F.B1255FC0

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From:	s 9(2)(a) <u>n (Opus)</u>
To:	Bevan Percival; Michael Elmes
Subject:	RE: Heb Rutfill Flushing
Date:	Thursday, 14 January 2016 2:08:33 PM
Attachments:	image001.jpg
	image002.png
	image003.png
	image004.png

## Thanks

image004.png	
I have been in discussions and they are compiling a programme of repairs for approval.	V
Thanks	
opuslogo	
s 9(2)(a)   WGM transportation Asset Management   Opus International Consultants Ltd s 9(2)(a)	
11 Ashwood Ave Tauhara, Taupo 3330, New Zealand PO Box 43, Taupo 3351, New Zealand	
Visit us online: www.opus.co.nz	
From: Bevan Percival [mailto:x@xk	
Sent: Thursday, 14 January 2016 1:24 p.m.	
To \$9(2)(a)	
Subject: Heb Rutfill Flushing	
Steve,	
When are HEB coming back to fix up flushing? I just drove over Ohakuri and it is not picking up but it is not good. It should not be left in that condition.	
Can we get some action from them?	
Bevan	
Find the latest transport news, information, and advice on our website: www.nzta.govt.nz	

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From:	Bevan Percival
То:	s 9(2)(a)
Subject:	RE: Ohakuri Rd South
Date:	Friday, 9 December 2016 5:45:00 PM
Attachments:	image003.jpg
	image004.png
	image005.png
	image006.png
	image007.jpg
	image008.jpg
	image009.png

Great thank you Tony.

It looks like they are working together well to get the best solution.

I will pass this onto to my peers to ease their concerns and also our surfacing experts to double check the rates and methodology.

Just in regard to Chris making the call onsite as to the pre-coating rate, it may not be an exact science but there is quite a difference between 21/m3 (brendon) and 51/m3 (steve) perhaps this needs Brendon or Steve's guidance onsite?

2082

Also can you just confirm that Mangatoetoenui will be done next week? Tuesday if the weather plays ball, it seems this may not be locked in at this stage?

Appreciate your help.

Have a good weekend

Regards Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

/w nzta.govt.nz

DDI<mark>S 9(2)(a)</mark> E <u>@..</u>

Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand



cid:image001.jpg@01CF0C4F.B1255FC0

From: s 9(2)(a) downer.co.nz] Sent: Friday, 9 December 2016 5:13 p.m. To: Bevan Percival Subject: RE: Ohakuri Rd South

Hi Bevan,

I have had the attached response from s 9(2)(a)

s 9(2)(a) will be reviewing all the data he has available to come up with what he believes will be permanent solution.

He will come back to me on Monday if he comes up with any other feasible solutions.

Regards,

Area Manager - Central North Island New Zealand
@downer.co.nz
58 Kururau Rd
58 Kururau Rd Taumarunui
www.downergroup.co.nz
www.downercareers.co.nz
Think before you print
From: Bevan Percival [mailto:Bevan.Percival@nzta.govt.nz]
Sent: Friday, 9 December 2016 2:09 p.m.
Subject: FW: Ohakuri Rd South
Hi <u>s 9(2)(a)</u>
Any chance we can the requested data we want to have confidence that this repair has the best chance of success and as you know time is short.
Thanks
Bevan Bevan Percival / Maintenance Contract Manager Central Waikato
Highways and Network Operations
DDI <mark>S 9(2)(a)</mark> E <u>bevan.percival@nzta.govt.nz</u> /w <u>nzta.govt.nz</u>
Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand
cid:image001.jpg@01CF0C4F.B1255FC0
S
P
From: Bevan Percival Sent: Thursday, 8 December 2016 5:03 p.m.
To: s 9(2)(a) Subject: RE: Ohakuri Rd South
To: <u>\$ 9(2)(a)</u> Subject: RE: Ohakuri Rd South

this one – can you provide the timetable and repair methodology for that too please. I think you mentioned Taumarunui would be doing the repair.

## Thanks Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

24 DI 10	lge Street, PO Box 973, Hamilton 3240, New Zealand
cid:imag	e001.jpg@01CF0C4F.B1255FC0
	Bevan Percival
To: S	
Subje	ct: RE: Ohakuri Rd South
Hi <mark>s 9(2)</mark>	
Thank	s for this. We would like to confirm a few things, can you liaise with the sealing team:
With ti best cl	his proposed treatment can you confirm your methodology to confirm this will have the hance of success:
•	What level of traffic management is planned during the operation and following? Will the chip be rolled in a controlled manner with a PTR + controlled traffic?
•	Will we get sufficient heat in the pavement for the pre coated chip to stick, has this
•	been investigated, if not is hot chip required? Is the pre coating proposed just diesel or a mix of bitumen/diesel – if a mix what is the
•	blend rate proposed? Also what is the proposed pre coating rate I/m3?
If this	is deemed a temporary repair what and when is a permanent repair planned?
	temporary repair is unsuccessful what is the contingency plan?
-	ye on board with this as well?
Thank	
Bevan	
	Percival / Maintenance Contract Manager Central Waikato ys and Network Operations
DDI <mark>S</mark>	)(2)(a) / w <u>nzta.govt.nz</u>
	on Office / Level 1, Deloitte Building



cid:image001.jpg@01CF0C4F.B1255FC0

From: \$ 9(2) @downer.co.nz] Sent: Thursday, 8 December 2016 9:32 a.m. To: Bevan Percival Subject: Fwd: Ohakuri Rd South

Sent from Samsung Mobile

- Original message ------From: s 9(2)(a)Date:07/12/2016 3:48 PM (GMT+12:00) To s 9(2)(a

Subject: RE: Ohakuri Rd South

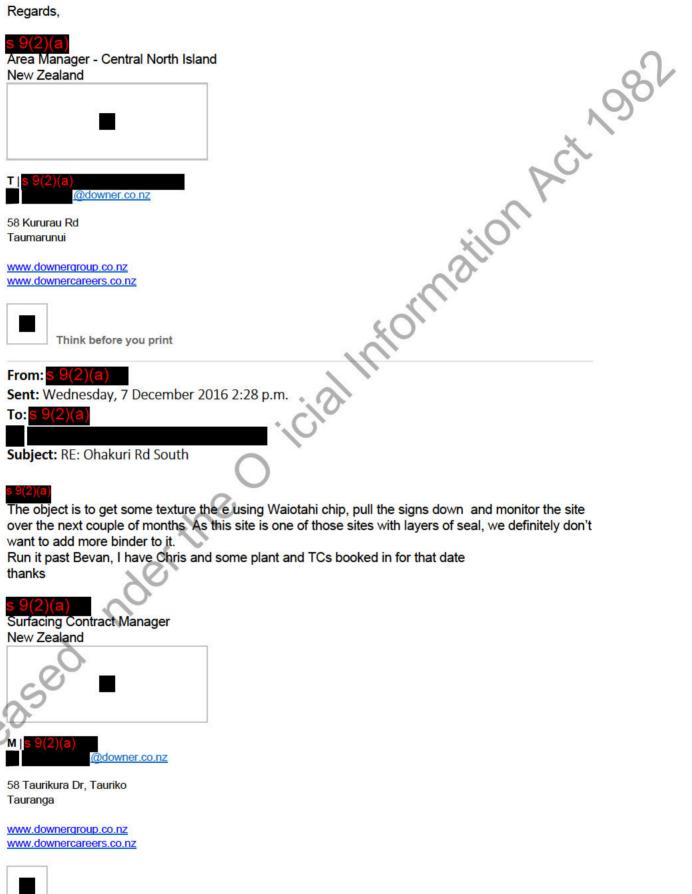
tormation Fabric doesn't stop binder migrating to the top, it stops the chip punching into the pavement and retard cracking

-or the offici Surfacing Contract Manager New Zealand Odowne 58 Taurikura Dr, Tauriko Tauranga www.downerg.oup.co.nz www.downercareers.co.nz Think before you print From: \$ 9(2)(a Sent: Wednesday, 7 December 2016 3:32 p.m. To: s 9(2)(a) Subject: RE: Ohakuri Rd South

Thanks s 9(2)(a)

The 13<sup>th</sup> sounds good for the temporary repair. Just some food for thought, in regards to our permanent repair and the issue of seal layers, would a fabric seal help mitigate this situation?

Regards,



Think before you print

From: \$ 9(2)(a) Sent: Wednesday, 7 December 2016 1:57 p.m.

To: s 9(2)(a)

Subject: RE: Ohakuri Rd South

Thanks 9(2)(a

1982 official I assume this is a temporary repair???? I also assume you will take care of this at the earliest opportunity???? If this is a temporary repair, what have you in mind for the permanent repair, as I will need to run this past our client?

Cheers.

Area Manager - Central North Island New Zealand





58 Kururau Rd Taumarunui

www.downergroup.co.nz www.downercareers.co.nz



Think before you print

From: 5 9(2)(a)

Sent: Wednesday, 7 December 2016 1:43 p.m.

To: S 9(2)(a

Subject: Ohakuri Rd South

Hi

Just got back from looking at this site, some of the chip that was spread in last couple of weeks has stuck leaving a reasonable texture. I would suggest spreading a blended G4 & G5 pre-coated in diesel and use positive traffic control most of the day to achieve embedment.

Looking at the weather forecast, Tuesday 13<sup>th</sup> looks the ideal day,



Can you guys between you delegate answering the following questions and let me know the answer. Once these have been compiled ill write the reply in the template.

Cheers,

Grant

		all	
0			

s S	9(2)(a), Redacted - Out of scope
_	
8.	The following are site specific.
а.	Ataimuri - SH1. Why is the road surface not being repaired urgently?
Du	e to the multiple layers of chip seal, the surface was identified as flushing (i.e. bitumen raised
	and bury chips) at the end of January 2019 for the treatment.
<mark>lm</mark>	mediate maintenance treatment to watercut the surface and remove the excessive binder,
wa	as planned in early February 2019.
<mark>Un</mark>	fortunately, the extreme high temperatures (38 $^{\sim}$ 40 degrees) experienced in early February
cal	used the surface bleeding and resulted the treatment changes.
<mark>Aft</mark>	ter carrying out the pavement condition survey, the treatment changed to a resurfacing work
	mill the existing unstable chip seal surface and replace it with an asphalt surface.
	wever, our asphalt resurfacing work proposed in February 2019 was delayed because of the
	ort supply of high PSV chips to meet the skid resistance requirements on the curves.
	ir contractor has been following up with quarry to deliver those chips and will start the work as
	on as the chips available.
Pla	the interim, we put 50km/h temporary speed limit to warn the public.
	nned repair work has not kept up with the changing conditions of the road surface, combined
wi	nned repair work has not kept up with the changing conditions of the road surface, combined the
wit Th	nned repair work has not kept up with the changing conditions of the road surface, combined

Unfortunately extreme high temperatures (38 to 40 degrees) experienced in early February caused the surface to bleed even more so we had to reconsider the treatment.

The results of the re-evaluation changed to resurfacing work, where we remove the top of the road surface and replace it with an asphalt surface.

Unfortunately our asphalt resurfacing work, proposed to be laid in February 2019, was delayed

because of a shortage of desired material, that high performance road chip. Our contractor has been following up with the quarry that suppliers the chip in an effort to start the work as soon as possible. In the interim, we have to retain the 50km/h temporary speed limit while we wait delivery of the

In the interim, we have to retain the 50km/h temporary speed limit while we wait delivery of the chip.

A section of road currently under traffic management and temporary speed restriction on SH 1 south of Atiamuri is programmed for repair. Because of the geometry of this section of road a high skid resistant stone chip for the resurfacing treatment programmed is required to be used. Due to delays in production of this chip the resurfacing works have been delayed. Unfortunately the current chip seal surface at this site has reacted to the very hot temperatures experienced over the summer period and some damage to the surface has occurred in a short space of time. Temporary repairs in this instance were considered but due to the build up of chip seal havers at this site it was deemed the safest way of managing this site was to place it under speed restriction and conduct a permanent renewal of the surface which would have the best chance of success.

. The condition of the road surface has altered dramatically works that were planned to repair the Contractor and

b. Ataimuri - SH1 Why has the road been allowed to degenerate so badly before speed limit was reduced to 50km/h?
Please see the response in 8a above.

As mentioned above this site has reacted to the high summer temperatures in a very short space of time. Whilst the contractor was monitoring this site and has applied grit to the surface to counter the impact of the hot weather, the existing surface has suffered from vehicle tyre pick up as the bitumen in the chip seal surface layers has become fluid in the hot weather. Because of the speed at which the surface can degenerate under these circumstances, it can be very difficult to avoid damage occurring.

c. SH1 between Wairakei roundabout and Palmer Mill road.

i. Has NZTA checked the quality of this piece of road lately? The site condition has been closely monitored by the maintenance contractor, and <mark>the</mark> regular inspections between the Agency and contractors have been carried out.

ii. Does the NZTA consider the current state of the road to be acceptable? The maintenance contractor has been investing in the patches and other holding treatment to keep the site safe and ensure the required level of services achieved. About 1km of pavement renewal and another 1 km chip seal resurfacing work is programmed for 2019/20 and will be delivered in the coming construction season.

The NZ Transport Agency considers the current state of this section of road to be fit for purpose. It is acknowledged that sections within this stretch do exhibit defects that are being managed to

ensure the safety of the section of road is maintained until programmed pavement renewal works are completed in next year's construction season.

iii. If repairs or rebuild is scheduled, what is the time frame?

There is about 1km pavement renewal and another 1 km of chip seal resurfacing work programmed for 2019/20 and There are pavement and surfacing renewal works programmed for this section of road. Programmed pavement and surfacing renewal works will be delivered in <del>the</del> <del>coming</del> next year's construction season.

(these questions are being asked as the road has been patched and is fujll of dips and potholes that are getting worse.

# Redacted - Out of scope

From:	Bevan Percival
To:	Karen Boyt; Andrew Oakley
Subject:	RE: One more question?
Date:	Wednesday, 7 December 2016 9:22:00 PM
Attachments:	image001.jpg image002.png image003.png image004.png image005.jpg

Hi Karen.



On 7/12/2016, at 4:05 PM, Andrew Oakley <<u>Andrew.Oakley@nzta.govt.nz</u>> wrote:

## Hi Karen

The bleeding site on SH1 is due to be temporarily treated before Christmas, as there is still some discussion as to the correct long term treatment, it will probably remain under temporary speeds. I shall confirm once the downer sealing team have updated the regional team

As for the two sites where we have lost the seal, I understand that yesterday and tomorrow there are meetings taking place between the regional team and the downer surfacing team to discuss the treatments and failure mode, we should tion Act 1982 receive an update. I haven't had it confirmed but I would suspect that there will be no treatment prior to Christmas, the risk on the one site oh SH4 (Makatote) is low as it is not prone to heating under direct sunlight (and would be more of an issue through winter as it has a high skid requirement), the SH1 site is potentially more problematic as it is a failed fabric seal, and the risk is that in hot weather it could wrap around the axle of an HCV although at present the fabric itself is holding in place well.

Thanks

Andy

From: Karen Bovt Sent: Wednesday, 7 December 2016 2:12 p.m. To: Andrew Oakley Subject: One more question? Hi Andy,

Since you've been with Downers, is there any progress on the repairs for the stripping and bleeding sites? Particularly Atiamuri – Ohaakuri Site. Also the Desert Road site which look extremely shiny/slippery on our Board drive-over.

Thanks

Karen

Karen Boyt / Regional Performance Manager Highways and Network Operations, Hamilton

DDI 65 9(2)(a)

E karen.boyt@nzta.govt.nz / w nzta.govt.nz

Level 1, Deloitte Building, 24 Bridge Stre t, PO Box 973, Waikato Mail Centre, Hamilton 3240, New Zealand

<image001.jpg>

	<image001.jpg></image001.jpg>	
	<image002.jpg> <image003.jpg> <image< th=""><th>004.jpg&gt; <image005.jpg></image005.jpg></th></image<></image003.jpg></image002.jpg>	004.jpg> <image005.jpg></image005.jpg>
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1000		
80		

From:	Dave Whitehead
To:	Bevan Percival
Cc:	Andrew Oakley; Nick Cook
Subject:	RE: road repairs required
Date:	Wednesday, 18 May 2016 12:36:39 PM
Attachments:	image001.jpg
	image002.png
	image003.png
	image004.png
	image005.jpg
	image006.png
	image007.png
	image008.png
	image009.jpg
	image010.png
	image011.png
	image012.png

#### Bevan,

I should have added in my previous email that the site did not appear on our SAL filter as reaching the criteria for consideration under the secondary prioritisation process.

In response to Stephen's reply, yes signage is appropriate in the short term until a treatment can be applied and in this instance it appears that the sign was put up in advance of planned watercutting later in the season but you would need to confirm this.

-1,982

If the sign was intended to be there through until the 15/16 sealing season then this is not acceptable as the proposed solution would have been watercutting on such a small area of relatively new seal and as such can be undertaken during the cooler months unlike a reseal.

I also cannot access Infohub from here.

Will be at hospital for the rest of the afternoon and as discussed flying to meet Andy in Hamilton this evening.

Cheers Dave

Dave Whitehead Senior Pavements Enginee

E xxxx.xxxxxxx@xxxx.xxx.xx

the environment before printing this email Please consider

From: Bevan Percival Sent: Wednesday, 18 May 2016 12:08 p.m. To: Dave Whitehead Cc: Andrew Oakley; Nick Cook Subject: FW: road repairs required

Attached is some history behind this site.

From: To: Bevan Percival @opus.co.nz]

Sent: Tuesday, 19 May 2015 9:44 a.m. Subject: RE: road repairs required

Good Morning,

For Thorpe Road, under T10 the use of signage is more than acceptable as a short term

treatment until the conditions are appropriate to undertake the treatment. I will be discussing the option with Murray of hot chip when I next see him as it is a suitable treatment option.

For Steeghs, we have an agreed treatment selection of a G2/4 Sandwich Seal in the 15/20-, vear : must recommend that signage be the only thing we do until this is completed as any watercutting will compromise the success of this treatment. The use of signage again is an approved solution under T10.

382

I understand your concern around the risk but we are still following the NZTA guidelines which should absolve all of us of the risk. I should be back in the office this afternoon if you wish to discuss further.

Thanks



WGM transportation Asset Management | Opus International Consultants Ltd @opus.co.nz 111 Heuheu Street, Taupo 3330, New Zealand PO Box 43, Taupo 3351, New Zealand Visit us online: www.opus.co.nz (cia) From: Bevan Percival [mailto:Bevan Percival@nzta.govt.nz] Sent: Tuesday, 19 May 2015 9:24 a.m. To: s 9(2)(a) Subject: RE: road repairs required Stephen, Can you review the location of the motorcycle crash against the location of the scrim deficient area. If this is considered a risk area then I would expect Downer to be putting forward a treatment that alleviates the risk more than putting up signs. Also with regard to the steeghs site - perhaps we should be watercutting the 150m lane meters. Can you review and let me know what you propose. Bevan Bevan Percival / Maintenance Contract Manager Highways and Network Operations DDIS 9(2)(a)

E bevan.percival@nzta.govt.nz / w nzta.govt.nz

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cid:image001.jpg@01CF0C4F.B12	55FC0

From: <u>S 9(2)(a)</u> Sent: Monday, 18 May 2015 9:21 a.m. To: Bevan Percival Subject: Re: road repairs required

This site although flushing is cracking so I would not recommend water cutting. The only two options are sealing or pavement repair. None are suitable at this time of year.

Inform

. ct 1982



Sent from Samsung Mobile

------ Original message -----From: Bevan Percival Date:18/05/2015 9:02 AM (GMT+12:00) To: Stephen Martin Subject: RE: road repairs required

Stephen,

Perhaps this should be treated – rather than signed. What are the options? Do you know where the crash occurred in relation to the 20m length?

12

Bevan

From: <mark>S 9(2)(a)</mark> Sent: Friday, 15 May 2015 11:53 a.m. To: Bevan Percival Subject: RE: road repairs required

Yes I am intending to go through the +1s with Andrew next week.

And Yes it is our risk therefore we will be putting the sign up. I still need to check all of our other areas to ensure something will be done for the end of June.

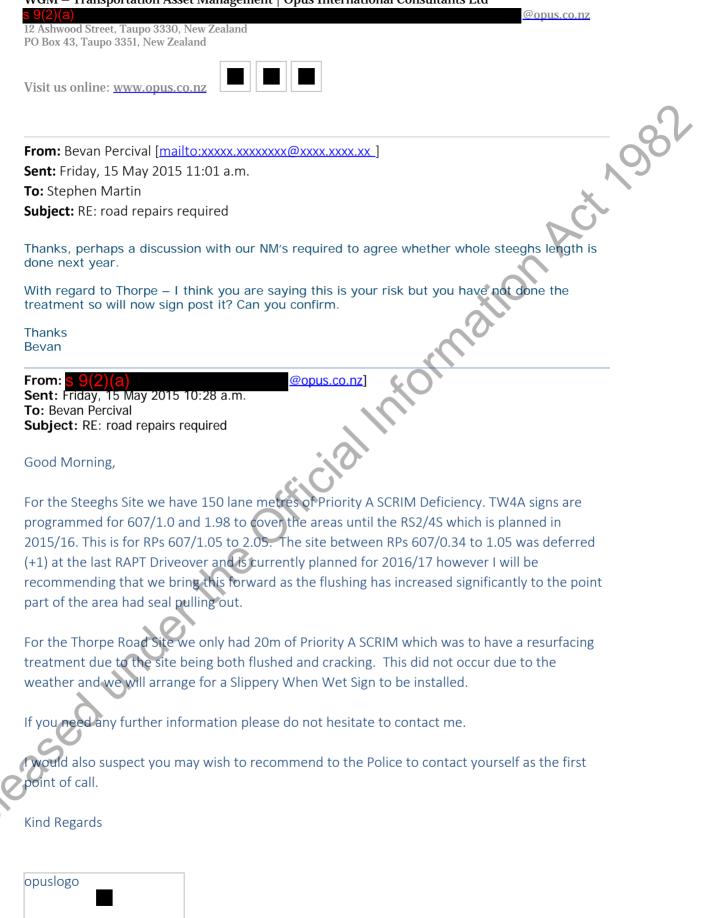
Thanks

opuslogo

s 9(2)(a)

Asset Manager Central Waikato Network Outcomes Contract

# WGM - Transportation Asset Management | Opus International Consultants Ltd



Asset Manager Central Waikato Network Outcomes Contract

# WGM - Transportation Asset Management | Opus International Consultants Ltd



Hi Nick

Not sure if you are the person to contact about this piece of road or not. If you are could someone please have an urgent look at this, if not can you redirect me to whom I should be speaking with

Cheers



Safer Journeys Strategic Sergeant, O/C Road Policing Group Taupo Area.

-31,0982 Putaruru Police Station | 41-45 Kensington Street | PO BOX 25 | Putaruru 3411 | New Zealand



Attached is a report relating to repairs required to State Highway one, Tirau. For your information and forwarding to the roading authority

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From:	Bevan Percival
To:	s 9(2)(a)
Subject:	RE: SH 1 Atiamuri to Maroa
Date:	Thursday, 9 February 2017 3:07:00 PN
Attachments:	image001.jpg
	image002.png
	image003.jpg
	image004.png
	image005 ppg

image006.png image007.jpg

#### **Hi**s 9(2)(a)

I'm about to discuss with Dave Whitehead our national scrim guru and funding facilitator for scrim treatments some of the principal risk sites to provide a way forward. The finer points will work themselves out in a fair way for the rest. But we need to get on with the water cutting and sealing.

Our PIP stands, that is just the contract and we are under considerable pressure from Police and our own Hierarchy over this. Being so far behind reseal delivery is unacceptable to us. We will be following through with further PIP's or PNC's to keep this moving if necessary – otherwise the issuing of PIP's loses it's intent.

I have certified full payment of January's renewals claims in good faith that you would follow through – I am pleased with the initial response you have provided with TM measures to make safe, however establishing for pre reseals and sealing is now being delayed again and we just cannot accept excuses.

Appreciate your help.

Regards Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

/w nzta.aovt.n

DDI<mark>S 9(2)(a)</mark> E.@..

Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand



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From: <u>S 9(2)(a)</u> @downer.co.nz] Sent: Thursday, 9 February 2017 12:51 p.m. To: Bevan Percival Cc: <u>S 9(2)(a)</u>; Andrew Oakley; Nick Cook Subject: RE: SH 1 Atiamuri to Maroa

Hi Bevan,

Please see responses below in red.

In regards to the costings you require, these will at the Principals Risk m2 rate in the schedule, for the area that Gabe is marking up on site.

Regards,

Area Manager - Central North Island New Zealand



58 Kururau Rd Taumarunui

www.downergroup.co.nz www.downercareers.co.nz



Think before you print

mation From: Bevan Percival [mailto:Bevan.Percival@nzta.govt.nz] Sent: Thursday, 9 February 2017 10:59 a.m.

To: s 9(2)(a) Cc: s 9(2)(a)

Subject: SH 1 Atiamuri to Maroa

Hi Tony, Steve,

I went through the sites this morning and looked at the scrim treatment recommendations you supplied on the spreadsheet. None of the watercutting was marked out on the ground except the flushed Ohaakuri reseal site.

My comments:

Going in increasing RP

- 1. Tirohanga reseal complete ASAP. Agree
- 2. There is a gap between Tirohanga Reseal 16/17 and Atiamuri finished AWT on a corner RS 1275 to 1390 - it is visibly flushed and this is a result of damage from stopping traffic for the AWT site - this area needs to be repaired - probably by watercutting - Downer cost - please assess appropriate treatment and include in programme - see photo 75113 Your photo shows the worst flushing is leaving the site. This area is not failing SCRIM and was flushing before the AWT started. Currently no risk to Downer. Watercutting would be at NZTA Cost.
- 3. There is damage in the NB lane from 1920 to 2400 caused by stopping traffic in the hot weather for the AWT - existing seal has picked up in many areas - this needs repair – Downer cost please programme and progress. See photo 80351 and 80326 Agree and works are being programmed as per schedule.
- 4) Scrim report 1950 to 3440 FWP RS 18/19 priority B your recommended immediate action is to complete various pavement repairs and crack sealing, at present this remains a Downer Risk site and consideration should be given to accelerating pre reseal repairs in advance of the 18/19 programmed Reseal. Areas overlap with (3) above and require Downers immediate attention. From RP 2180 to 3450 there are no SCRIM Failures so therefore nothing is required in this area. Repairs are being programmed between 1950 and 2180. Anything more is NZTA risk. Our treatment Selection is based on the current texture and do not recommend watercutting as it will impact on the subsequent seal performance. Any additional works in this area would be NZTA Cost.
  - 5. There is an area of flushing that extends approx. 80m north of the start of the Ohaakuri Intersection reseal site and should be considered for watercutting - what is the cost to do this? See photo 81554 This is in for reseal this year and we do not want to watercut beforehand. See Motutere Curve!
  - 6. Ohaakuri 15/16 Reseal rework site some small areas have been marked out for watercutting - which makes no sense. All wheeltracks/whole length of this site needs

watercutting. Downer risk site - please complete the whole site ASAP. See photos 81900 and 81906. Agree Gabe should have marked that out as per discussions this morning

- 7. 17/18 AWT site between Ohaakuri and Thorpe T/10 minimum requirements will need to be met but will need to discuss with Dave Whitehead whether more should be done in interim. What is the cost to complete your recommended treatment of cracksealing? Will need to assess once I get Gabe's onsite measures
- 8. Thorpe Rd complete rework ASAP Agree
- 9. Uphill corner 8460 to 8620 has some A's one of which featured last year, your recommendation is immediate action scrim seal will this make the SAL prioritisation. Will need to discuss with Dave Whitehead whether this can be progressed? And when? It is unlikely it would make the cut as there is a lack of crashes. We intend to tie the sealing works in at the same time as the pre-reseal repairs using the Taumarunui Maintenance crew.
- 10. Tuahu reseal site progress ASAP a lot of pre reseal repairs to be done crew should be there today? There are a lot of 'A's in this site for the 3<sup>rd</sup> year in a row! Agree. However as discussed yesterday, with several activities in the same area the pre reseal repairs will be started Monday once watercutting completed. Reseal was being held off due to potential logging operations which has now taken too long.
- 11. Passing lane section south of Tuahu road some scrim failures/visibly flushed/site of truck motorcycle fatality recommendation is temporary signage, but Police not satisfied with this approach should be watercut? In interim will it qualify as a SAL site for next year with the recent crashes? What is the cost to watercut it? See photos 85312, 85336. This is programmed as a 17/18 reseal watercuting should be done to restore texture as a pre reseal treatment. As per the SCRIM Sheet we have recommended to bring the reseal forward which in principal Andrew Oakley has agreed to. Pre-reseals will be undertaken ASAP.
- 12. Short Melter slag site at top of passinglane has flushed see photo should this be watercut? What is the cost? See photo 90234 Site didn't fail SCRIM and is in for AWT next year. Watercutting would be NZTA Risk.
- 13. Tuahu Stockpile AWT 17/18 site your recommendation is to roll in hot chip into badly flushed areas at Downer cost which we accept but this needs to be completed in a controlled manner under traffic management and rolled in - not just spread at speed and vacate like the last hot chipping that was done in the area. As the site is a 2017/18 AWT we are only required as per T10 to put up signage. The Hot Chip is over minimum T10 requirements and therefore would be at NZTA cost. The risk on the spreadsheet is for the minimum. Anything over and above would be NZTA risk.

We need to know the costs of the sites that are NZTA risk so that we can agree and progress ASAP.

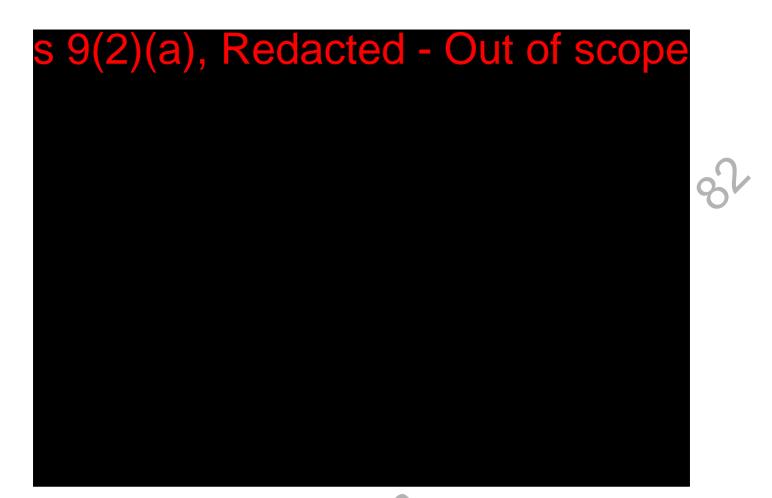
Will discuss whether we want to accelerate other scrim sites internally and come back to you.

Thanks Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Op rations

DDI<mark>S 9(2)(a)</mark> E .@ /w <u>nzta.govt.nz</u> Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand cid:image001.jpg@01CF0C4F.B1255FC0

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Released under the officia

From:	Simon Brandon
То:	Bevan Percival; Mercedes Santos
Cc:	Liam Ryan
Subject:	RE: SH1 Atiamuri
Date:	Tuesday, 9 February 2016 11:13:02 AM
Attachments:	image002.jpg
	image003.png
	image004.png
	image005.png
	image006.jpg
	image007.jpg

Thanks for than Bevan Let's hold off for now until get a clear picture of area repairs and when. Cheers Simon

From: Bevan Percival Sent: Tuesday, 9 February 2016 11:02 a.m. To: Simon Brandon; Mercedes Santos Cc: Liam Ryan Subject: RE: SH1 Atiamuri

Hi Simon,

Downer are digging test pits and conducting other tests on the site today and the speed restriction is at 30kph while work is done on site.

I am reluctant to say that further repairs will be carried out and when they will be carried out at the site until we see the results of the tests and the treatment options that we have asked our supplier to put forward to us with urgency so that if necessary we can carry out a pavement rehab type treatment at short notice if necessary.

At present the site is quite safe but has been kept under a 50km speed restriction as a pre cautionary measure while we monitor the success of the recent repairs done. The recent repairs have ensured that the ruts have been filled in and smoothed off and that coarse surface texture has been restored across the site.

The site is approx. 300m long and therefore the speed restriction covers this length plus enough lead in the allow people to slow down.

If you need any more info give me a call.

Bevan

Bevan Percival / Maintenance Contract Manager Highways and Network Operations

DDI<mark>S 9(2)(a)</mark> E <u>.@</u>

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/w <u>nzta.govt.nz</u>



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**From:** Simon Brandon **Sent:** Tuesday, 9 February 2016 9:16 a.m. **To:** Bevan Percival; Mercedes Santos Cc: Liam Ryan Subject: RE: SH1 Atiamuri

Hi

We have taken a battering about this site on Facebook but happy to update ... when we have the answers. When will the permanent repairs be done ie this season? × 1981 What is the current speed restriction - 50km/h? And for how far approx.?

From: Bevan Percival Sent: Friday, 5 February 2016 4:26 p.m. To: Simon Brandon: Mercedes Santos Cc: Liam Rvan Subject: RE: SH1 Atiamuri

Hi Simon,

Our supplier Downer will be digging test pits and completing tests on samples of the road on Tuesdav next week.

This information will be then used to complete a design of permanent repairs.

At that stage a decision will be made as to the appropriate treatment for the site.

The area will remain under temporary traffic management in the interim as a precaution.

Bevan



Cc: Bevan Percival; Liam Rvar

Subject: SH1 Atiamuri

Hi auvs

No doubt Atiamuri Thorpe Rd issues top of your list. And the next move being worked out.

The Facebook crowd have noted this week's work appears unsuccessful ... and we need to communicate via all our channels when the Final Solution has been sorted, what it involves and when.

Please let me know when way ahead is known.

# Thanks Simon

Simon Brandon / Communications Advisor Waikato Expressway & Highways Projects

DD E.@ nzta.govt.nz

cid:image002.jpg@01D110B0.F1490CC0

Hamilton Office / Level 1, Deloitte Building 24 Anzac Parade PO Box 973, Hamilton 3240, New Zealand

Released under the Official Information Act 1982

## Hi Grant.

-e? Hormain The road surface for fatal crash site on SH1 Atiamuri was resurfaced in March 2018 to address the binder bleeding issue.

Regards,

Sunny

From: Grant Tregidga Sent: Tuesday, 4 June 2019 11:13 AM To: Bevan Percival <xxxxx.xxxxxx@xxxx.xxxx.xx> Cc: Sunny Zhang <xxxxx.xxxx@xxxx.xxxx.xx> Subject: FW: Tar seal bleed

Hey have you guys seen this come past your desk before?

Do you have any updates?

Grant Tregidga / Principal Network Manager System Design and Delivery DDI 64 7 958 9606 / M 64 27 460 4646 E xxxxx / w nzta.govt

## From: **S** 9(2)(a)

Sent: Friday, 31 May 2019 3:55 PM To: Grant Tregidga <<u>Grant xxxxxxx@xxxx.xxxxx</u>> Subject: FW: Tar seal bleed

Hi Grant

all well – just wondering if you had had a chance to find out about this tar bleed issue. Hope you

ial

Many thanks

Cheers Bill

9(2)(a) Special Projects Advisor | Integration and Infrastructure, Science and Strategy WAIKATO REGIONAL COUNCIL | Te Kaunihera a Rohe o Waikato Take a look at the work we do



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Private Bag 3038, Waikato Mail Centre, Hamilton, 3240, New Zealand

From: **S** 9(2)(a) Sent: Wednesday, 8 May 2019 8:33 AM Formation @waikatoregion.govt.nz> To: S 9(2)(a) Subject: FW: Tar seal bleed

Hi Bill – are you able to shed any light on this?? Jocelyn

Chief Executive | Office of the Chief Executive WAIKATO REGIONAL COUNCIL | Te Kaunihera a Rohe o Waikato Take a look at the work we do P: +6478590595 M: +64212462314

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From: RUSSEL RIMMINGTON <<u>xxxxx@xxxx.xx.xx</u> > Sent: Wednesday, 8 May 2019 8:03 AM To: Vaughan Payne <<u>Vaughan.Payne@waikatoregion.govt.n</u> Subject: Fwd: Tar seal bleed

Vaughan, I appreciate the 'serious accident unit' will report back to us but could you kindly request that the NZTA address public concern about tar bleed around Aitimuri. Thanks Russ

----- Original Message To: "xxxxxxxx@xxxx.xx.xx\_" <xxxxxxxx@xxxx.xx.xx\_ Date: 07 May 2019 at 23:29 Subject: Fwd: Tar seal bleed

Hi Russ

FYI read below about tar seal bleed and failed road repairs at Atiamuri. I've never received follow up to confirm if the problem was sorted. Never received the report on Atiamuri. But someone did report to us in Committee about tar seal bleeds at Atiamuri so it should be in minutes probably early 2016.

Kathy

Kathy White Councillor - Taupo-Rotorua Constituency | Council, committees and sub committee

WAIKATO REGIONAL COUNCIL | Te Kaunihera a Rohe o Waikato<https://waikatoregion.govt.nz/> Take a look at the work we do<<u>https://www.waikatoregion.govt.nz/community/whats-happening/video-hub/</u>> M: +6421676947 F: facebook.com/waikatoregion 1982 Private Bag 3038, Waikato Mail Centre, Hamilton, 3240, New Zealand Begin forwarded message: From: Rangi Hetet Date: 7 May 2019 at 10:50:17 AM NZST To: Cc: Rangi Hetet Subject: FW: RE: Tar seal bleed -----Original Message-----From: Kathy White [mail <mailto:xxxx x@xxxxxxxxxxxxx xxxx xx Sent: 4 April 2016 9:52 PM To: Bill McMaster [mail Subject: RE: Tar seal bleed Rangi Hetet Kaiawhina | Tai-ranga-whenua, Community and Services WAIKATO REGIONAL COUNCIL | Te Kaunihera a Rohe o Waikato<https://waikatoregion.govt.nz/> Take a look at the work we do<https://www.waikatoregion.govt.nz/community/whats-happening/video-hub/> P:+6478592782<tel:> F: facebook.com/waikatoregion Private Bag 3038, Waikato Mail Centre, Hamilton, 3240, New Zealand Thanks very much, Bill. Kathy White

Councillor, Taupo-Rotorua General Constituency Deputy Chair, Regional Transport Committee Waikato Regional Council +64 7 859 0896 |or DD M: +64 21 676 947 Private Bag 3038, Waikato Mail Centre, Hamilton 3210

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Hi Kathy

Many thanks for your email and sorry just getting back to you now. I will follow up with Kaye and see if we can get her to report back to the RTC soon re Seal bleed etc. I will also keep an eye out for the Atiamuri report and get that to you when it comes out. Will be back in contact with you soon. Hope you have a great week.

Inform

32,982

Cheers Bill

From: Kathy White Sent: Friday, 1 April 2016 11:39 p.m. To: Bill McMaster Subject: Tar seal bleed

Hi Bill

I see that a report was being written in relation to the multiple fatality accident at Atiamuri at the end of last year. I believe it is due out soon. Can you please find out about this and get it for me?

Also, can we ask Kaye Clark (or someone else) to talk to the RTC about what tar seal bleed is, why it happens, and its involvement in accidents. I'd like to know how common it is

I was reminded about this when I drove home from Hamilton yesterday and saw that there is more work being done in a number of sites down that stretch of road south of Atiamuri. If this work is due to Kaye speeding things up, please pass on my thanks.

Hope you have a good weekend.

Cheers

Kathy White Councillor, Taupo-Rotorua General Constituency Deputy Chair, Regional Transport Committee Waikato Regional Council +64 7 859 0896 |or DD M: +64 21 676 947<<u>tel:+64%2021%20919%20504</u>> Private Bag 3038, Waikato Mail Centre, Hamilton 3210 Please consider the environment before printing this

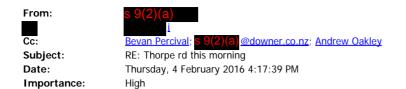
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Hi

This is not good news. We have had really negative feedback over this repair (see comment section on this article: http://www.stuff.co.nz/national/76298227/Road-bosses-fail-to-fix-road-where-three-people-died) Ant this is turning a huge reputational issue for us. This is the third time that people see work on the road and it is still not fixed.

782

What do we need to do to get the repair done properly? We have surfacing and pavement experts so if we need to fly them here then I am happy to organise this. Please let me know as I don't think we can hold this over uc tornation winter so we need to act very quickly.

Cheers.

/ Acting Regional Performance Manager Highways and Networks Operations DDI<mark>S 9(2)(a)</mark>

-----Original Message-----From: **S** 9(2)(a) downer.co.nz] Sent: Thursday, 4 February 2016 3:13 p m. To: Mercedes Santos Subject: FW: Thorpe rd this morning

Hi Mercedes,

Please find attached, some photos taken this morning of the Thorpe Rd site that was rut filled on Tuesday. As can be seen in photos 1164 and 1165 there has been some chip loss. We will be monitoring this site daily and will update you should things change.

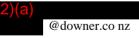
ial

Regards,

s 9(2)(a)

Area Manager - Central North Island New Zealand

Downer



58 Kururau Rd Taumarunui

Zero Harm Think before you print

-----Original Message-----From: **S** 9(2)(a) Sent: Thursday, 4 February 2016 8:48 a.m. To: s 9(2)(a Subject: Thorpe rd this morning

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image013.ipg

Opus would have done the binder/stone ratio tests themselves and we just copy the result,  $\frac{s}{s} \frac{6(e)}{1}$  maybe able to obtain the test result. In fact I cannot remember where I got this information from, usually it is part of the Opus report to justify the pavement renewal.

Evidence of water trapped between the layers was in relation to significant seal bleeding/flushing as often caused by water vapour evaporating causing bubbles and blisters on the chip seal surface. The bleeding and flushing is worst on those sites that have a buried seal layer and a flushed chip seal is used as an indicator of water in the pavement.

Kind Regards

echnical Manager - Pavements

@downer.co.nz Road Science, 9/2 Owens PI, Mt Maunganui, New Zealand. PO Box 2344, Mt Maunganui 3116, New Zealand. www.roadscience.co.nz

FULL

From: Bevan Percival [mailto:Bevan @ 🐝 Sent: Wednesday, 22 June 2016 3:57 p.m.

To: s 9(2)(a)

Subject: Thorpe Road Testpits/pavement report

## Hi Greg,

Trying to answer some further police questions about this site. The report refers to a binder/stone ratio result of 18.2% was this from separate testing than that on the 9<sup>th</sup> February testpits?

The reports says there is evidence of water trapped between the seal layers. The photos suggest the pits were pretty dry?, the logs say the material was moist – perhaps nothing to suggest though anything unusual to what you might expect to find if you dug a testpit in any pavement?

Thanks Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

/w nzta.govt.nz

DDI<mark>s 9(2)(a)</mark>

Hamilton Office / Level 1, Deloitte Building 24 Bridge Street, PO Box 973, Hamilton 3240, New Zealand

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	From: To: Subject: Date: Attachments:	Ben Rohde Bevan Percival: \$ 9(2)(a) RE: TM of Flushed sites Tuesday, 17 May 2016 8:20:54 AM image06.jpg image07.png image08.png image09.png image01.png image011.png image011.png image014.jpg
	Hi Bevan,	, Č
	Thanks for doir	ng a Site Audit and we will have the guys sort these areas out ASAP.
	Can we please	have copies of the SCR forms for our records?
	Cheers	
	Ben	
	opuslogo	
	Opus Internations s 9(2)(a) 11 Ashwood Avenu	Network Controls Manager Central Waikato Network Outcomes Contract   mal Consultants Ltd @opus.co.nz te, Taupo 3330, New Zealand 3351, New Zealand
	Visit us online:	www.opus.co.nz
		ercival [mailto: <b>x@x</b> ]k
		16 May 2016 9:23 p.m.
	To: $S 9(2)(a)$	
	Cc: <mark>S 9(2)(a)</mark>	
	Subject TM of	Flushed sites
	Hi All,	
2010	that have slipp the Generic TN Nth site consis	ck from Hamilton this evening I did an audit of 3 unattended sites along SH 1 pery signage in place, being Bull Ring north, Ohakuri Nth and Palmer Mill. From IP I have, none of the 3 sites are set out in accordance with your GTMP. Ohakuri ts of 2 slippery signs, and 1 works end sign in poor condition, there is no to provide positive traffic measures.
	Can you nrovi	da ma tha last sita audit forms for those sitas

Can you provide me the last site audit forms for these sites.

Please ensure ASAP that:

- 1. If signage is put in place it complies fully with your approved GTMP, these sites require correction ASAP
- 2. Review the need for this signage if there are scrim failures within these sites or the texture is deficient then surely it needs to be addressed however there is no water

cutting marked out? Yet on flushed sites that have priority A scrim failures around the network there is no warning signage? I would expect a risk based approach yet this is not what we are seeing. Can you confirm why these sites have Traffic Management in place and other priority 'A' sites have no traffic management in place?

#### Bevan

Bevan Percival / Maintenance Contract Manager Central Waikato Highways and Network Operations

DDI <mark>S 9(2)(a)</mark> E <u>.@</u>	/w <u>nzta.govt.nz</u>	
Hamilton Office / Level 24 Bridge Street, PO B	1, Deloitte Building ox 973, Hamilton 3240, New Zealand	



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