

Out of Scope

From: 9(2)(a) - Privacy
Sent: Wednesday, May 3, 2023 10:15 AM
To: 9(2)(a) - Privacy
Cc: 9(2)(a) - Privacy
Subject: FW: EM80 Availability

As discussed this was after breakdown in Dec, when delays were escalated up the chain.

Kind regards,

9(2)(a) - Privacy | Professional Head of Track

9(2)(a) - Privacy

Level 2, Wellington Railway Station, Bunny Street | PO Box 593, Wellington, New Zealand



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From: 9(2)(a) - Privacy
Sent: 17 January 2023 14:20
To: 9(2)(a) - Privacy
Subject: RE: EM80 Availability

Hiya 9(2)(a) - Privacy

Engineering are already discussing this with the Region on suitable mitigations, whether the Region will be able to manage this in the short to medium term is a question to be answered.

Already we have sections of the Auckland Metro that due to project work didn't get the EM80 to measure it so they have already imposed a Code Exemption with further mitigations that will put strain on resources.

Now with the EM80 breaking down the cut-off date for further Auckland Metro sections is the 19th Feb, I doubt very much knowing what's involved in rebuilding an engine that the EM80 will be up and running by then, but if the plant and machinery group pull out all the stops to get it up and running it is possible. Even so, I feel there is a strong likelihood that wider mitigations will have to be in place from that date.

Worse case scenario is if additional detailed inspections, track repair work, trolley measurement/survey etc don't go ahead then a 40km/h blanket TSR would have to be in place but I must stress this is just an IF. The Regional team

and Engineering are working on a range of solutions that would mitigate this and still ensure the track is fit for normal working.

Kind regards,

9(2)(a) - Privacy | Professional Head of Track

9(2)(a) - Privacy

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From: 9(2)(a) - Privacy

Sent: 17 January 2023 11:51

9(2)(a) - Privacy

Subject: FW: EM80 Availability

Hi 9(2)(a) - Privacy

Please see response below from Rob Gibbes, can you get back to me asap with the details he is requesting.

Thanks

9(2)(a) - Privacy | General Manager Engineering – Operations

9(2)(a) - Privacy

Level 2, Wellington Railway Station, Bunny Street, Wellington 6011 | PO Box 593, Wellington 6140, New Zealand



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From: Robert Gibbes 9(2)(a) - Privacy

Sent: Tuesday, 17 January 2023 10:35 am

To: 9(2)(a) - Privacy

Cc: 9(2)(a) - Privacy

Subject: FW: EM80 Availability

Happy New Year 9(2)(a) - Privacy

We are looking at options on the EM80 but do you know exactly what is required and when? What would the typical time expected to do the outstanding work be?

The engine parts are a couple of weeks away, but there may be a short term work around depending on how much there is to do.

Ngā Mihi,

Robert Gibbes | Chief Operating Officer - Construction Delivery

9(2)(a) - Privacy

KiwiRail Building Millennium Centre, 604 Great South Road Ellerslie 1051 | Private Bag 92138, Auckland Mail Centre, Auckland 1142, New Zealand



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From: 9(2)(a) - Privacy
Sent: Monday, 16 January 2023 2:28 pm
To: 9(2)(a) - Privacy; Robert Gibbes 9(2)(a) - Privacy
Cc: 9(2)(a) - Privacy; Siva Sivapakkiam 9(2)(a) - Privacy
Subject: RE: EM80 Availability

9(2)(a) - Privacy

Thanks I have given AT and AOR a heads up and copied you in.

Rob;

It would be good to understand the 'why' on this one.

After extensive works and management of H40 and TSR post the Xmas BOL, we now have had to go back to customer with a 'potential safety-code issue' that could result in more disruption by placing more TSR's on the AKL Metro network.

R

9(2)(a) - Privacy

From: 9(2)(a) - Privacy
Sent: Monday, 16 January 2023 1:45 pm
To: Siva Sivapakkiam 9(2)(a) - Privacy
Subject: FW: EM80 Availability

Hi All,

Happy New Year!

Sorry to start the year off with less than positive news.

The EM80 is out of action due to engine issues and was unable to complete the Dec run. We should get an indication of timing/cost to repair within the next 24 hours however current indications are that it is likely that it will be some time before its operational again.

Assuming there isn't a quick fix significant code exemptions and mitigations are likely to be required that may result in TSR's being imposed across the Network and Auckland Metro is likely to be impacted the most initially.

Engineering (Mark F/Chris W) currently exploring front footing with the Regulator if worse-case scenario eventuates.

Will keep you updated of progress.

Regards

[Redacted]

9(2)(a) - Privacy | **General Manager Engineering – Operations**

9(2)(a) - Privacy

Level 2, Wellington Railway Station, Bunny Street, Wellington 6011 | PO Box 593, Wellington 6140, New Zealand



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From: 9(2)(a) - Privacy

Sent: Monday, 16 January 2023 12:31 pm

To: 9(2)(a) - Privacy

Subject: FW: EM80 Availability

FYI

Regards

9(2)(a) - Privacy | **Technical Director**

9(2)(a) - Privacy

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From: 9(2)(a) - Privacy

Sent: Monday, 16 January 2023 12:03 pm

To: 9(2)(a) - Privacy

Subject: FW: EM80 Availability

9(2)(a) - Privacy is this something we need to keep the regulator informed of as if it drags on will involve significant code exemptions and mitigations that may result in TSR's being imposed across the Network?

I believe Auckland Metro will be the most severely affected initially.

Kind regards,

9(2)(a) - Privacy | **Professional Head of Track**

9(2)(a) - Privacy

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From: 9(2)(a) - Privacy

Sent: 16 January 2023 11:40

9(2)(a) - Privacy

<Luis.Bahia@kiwirail.co.nz>

Subject: RE: EM80 Availability

Hello

I am expecting a response back from the engine rebuilders within the next 24 hours.

The heads are off and are currently getting pressure tested. We are awaiting timelines and availability for the other components required to get the engine back operational.

Mike is progressing well with the routine maintenance of the buggy's etc.

I will report back as soon as I receive an update.

Thanks

Ngā Mihi,

9(2)(a) - Privacy | **National Plant and Equipment Manager.** – Construction Delivery

9(2)(a) - Privacy

14 Midas Place Middleton Christchurch 8024 | PB Box 6289 | Christchurch 8442 | New Zealand



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From: 9(2)(a) - Privacy

Sent: Monday, 16 January 2023 10:55 am

To: 9(2)(a) - Privacy

Subject: EM80 Availability

Hi all and happy new year

I've had a catch up with Dave Green re the health of the EM80 Car – seems there is still some work to do to determine the issues behind the latest failure.

The reliability of the EM80 Car is of extreme importance to Engineering and network compliance. Last year we were faced with some challenges in getting the Car actively involved in inspections, such that it wasn't deployed until May 2022. This made it very difficult to achieve a compliant recording schedule and left us with a late North Island run to complete in December.

Unfortunately, due to mechanical failure as you know, this was not able to be completed. We thus find ourselves once again behind the 8 ball for the coming calendar year.

We need to bring the programme back on schedule, so that we are not constantly operating within our extended tolerance periods.

Can we, with some urgency, request an update on the prognosis and expected timescales to get the Car into its programme?

Issue we are faced with include:

- Code exemption requests for non-compliant EM80 frequency in Auckland Metro. This is also compounded by the P2P staging works which we need to cover off from a geometry inspection compliance aspect – any mitigations for running scheduled services will be dependent on when the Car will be available.
- Proposed modifications to EM80 recording parameters and thresholds to be carried out by PRT - we need to know the windows available to carry out on-site modifications.
- Potential for ongoing loss of reliability – we would very much like to be assured that the requisite level of maintenance and expenditure is being allocated to allow us to operate within the standards to avoid any further heat being applied by the regulator.

Please respond at your earliest convenience.

Best regards,

9(2)(a) - Privacy Senior Track Engineer

9(2)(a) - Privacy

Track Engineering, Level 2, Wellington Railway Station, Bunny Street | PO Box 593, Wellington, New Zealand



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To: Network Authorities
WELLINGTON

From: Technical Officer EM80
PALMERSTON NORTH

9(2)(a) - Privacy

On behalf of: North Island Track Production Manager

Date: 17th February 2023

Subject: EM80 Track Evaluation Car Test Runs

These test runs are necessary to test and calibrate the machine dynamically prior to the next programmed run.

<u>Monday</u>	<u>27th February 2023</u>	<u>Calibration Run</u>
<u>Tuesday</u>	<u>28th February 2023</u>	<u>Calibration Run</u>

RECORD between Palmerston North and Feilding.
including both station limits.
Request depart 0830 Hours.

RECORD between Palmerston North and Woodville.
including both station limits.
Request depart 1000 Hours.

RECORD between Woodville and Dannevirke.
Work between authorisation required from:
1050 hours to 1500 hours for multiple run comparisons.

RECORD between Woodville and Palmerston North
Request depart Woodville approx 1505 hours
Cross services at Woodville or Oringi.
And arrival at Palmerston North 1600 hours

For all crossings we can take the loop.

Other work that may be carried out each day is:
May use the balloon loop at Woodville to carry out curve comparison tests and/or turn car Woodville.

Any change to above bulletin requirements for daily recording location points will be advised by 1300 prior to each days testing re location etc.

Although the car can record up to 60 km/hr it will average slower speeds, allowing for stops to check and adjust measuring equipment, and the slower speeds required over level crossings as per rule 914

9(2)(a) - Privacy



For : Track Production Manager North Island

EM 80 Cell Phone 0274 429 067

From: 9(2)(a) - Privacy
To: 9(2)(a) - Privacy
Subject: EM80 in Auckland Metro
Date: Thursday, 4 May 2023 11:02:15 am
Attachments: Dec 2022 Wellington EM80 List.xlsx
Outlook-nlskzmf.png
image001.png

Here you go 9(2)(a) - Privacy

Not too much to add from my perspective just noting that DG did mention about compliance a couple of times.

- 20th Jan (Sent to All from DG via email) Attached is the North Island Metro Programme for the Track Evaluation Car, to catch up on the missed sections of track before xmas with the breakdown. Also attached are the Dynamic calibration test runs for the 9th and 10th February
Hi All, This affects Hamilton and Auckland areas only, to complete the essential code requirements. We are endeavouring to get the north island run started from Hamilton on the 28th February, and will cover the ECMT first. This next NI programme from the 28th will start to be arranged once I return to work next week.
- 17th Feb (Sent to All from DG via email) EM80 Test calibration Runs will now be the 27th and 28th of February. By the 1st March they hopefully should have the PNGL open to Waipukarau 109km nth end of Waipukarau Loop, otherwise will run to where it gets open to on the PNGL that day, then now head north up the NIMT on the 2nd March.
- 1st March - (Version E Sent to All from DG via email)
- 8th March - (Sent to All from DG via email) The current EM80 NI programme will terminate once EM80 arrives at Palmerston North on Friday 10th March, We should have revised programme for the EM80 out next week, starting running again hopefully week of the 27th March.
- Had a phone call from 9(2)(a) - Privacy to discuss shift plan around Easter Anzac BOL's .. He briefly mentioned about keeping within compliance
- 18th April - (email to DG from me - Just checking please when the next EM80 run is .. I think I may have got my wires crossed as I had you running 12th April ??)
- 18th April - (emailed 9(2)(a) - Privacy - Just checking please do you know what the story is with the EM80?? This is the last comms that we have had .. I think.. We were expecting it to run last week if I read this right ??
- 20th April - (email to DG from me - Sorry to be an absolute pain, I'm sitting with our guys today to do some planning and would be really good if we had an idea of when the EM80 will be running in WGTN ??
- Had a phone call from DG - Discussed change of plan and no notification - He mentioned that some people had been missed of his email chain / distribution list and I was one of them. He was going to send out updated plan and discuss compliance issue with 9(2)(a) - Privacy.
- 20th April - (Version H Sent to All from DG via email)
- 1st May - I had asked Becky if EM80 had run through LNI - she mentioned it was done about a month ago

Cheers

9(2)(a) - Privacy | Workbank Planner / Scheduler | Wellington Metro Network Services
9(2)(a) - Privacy
154 Hutt Road, Kaiwharawhara, Wellington 6035 | PO Box 30995, Lower Hutt 5040, New Zealand



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From: 9(2)(a) - Privacy
Sent: Thursday, 27 April 2023 10:24 am
To: 9(2)(a) - Privacy
Cc: 9(2)(a) - Privacy
Subject: Re: EM80 in Auckland Metro

Hi 9(2)(a) - Privacy

As requested please find below timeline for comms i have received for the pending EM80 run in discussion,

The initial plan was sent out by 9(2)(a) - Privacy on 1 of March which apparently was Version-E for EM80 to run Wellington metro between 12th - 17th of April. No data of version A, B, C nor D received

- Later on, 15th of March, Version-G was sent out with new running dates for Wellington as 8th - 11th of May. No reason for delay was mentioned in the mail. No data for Version-F received.
- Later on, 20th of April the latest Version-H was received scheduling Wellington to be covered between 19th - 24th of May stating about a setback in Kawerau and wheel lathing to be done in Westfield yard between 2nd-4th of May.

Please note, the constant rescheduling has put our compliance at high risk as discussed.

In addition, constant rescheduling has been causing us planning issues as well because we have track teams planned to follow the EM80 for at least 2 weeks and them pushing the dates forward with <1month notice makes it difficult for planners/Production team to reschedule the teams on other jobs and procure plant/materials for those other jobs. The delays are so common now that we plan contingency jobs every time, we get an EM80 schedule.

Please find attached a list of Star and Class-1 faults for Wellington Metro's last EM80 run from December. As per the report, on Metro Main lines we had,

- 48 faults (15 stars/33 CL1's) on NIMT
- 46 faults (14 stars/32 CL1's) on WRAPA between Wellington and Upper Hutt.
- 12 faults (4 stars/8 CL1'S) on WRAPA between Upper Hutt and Masterton.
- Given JVILLE and MLING lines are low speed lines, they can be mitigated.

Please note the above values do not include loops or yards which would increase the numbers exponentially(494 to be exact).

Let me know in case any more info is required.

Thanks and Regards,

9(2)(a) - Privacy Field Asset Engineer, Wellington Metro Network Services

9(2)(a) - Privacy

154 Hutt Road, Kaiwharawhara, Wellington 6035 | PO Box 593, Wellington 6140, New Zealand



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Home

Of KiwiRail's four core values, 'Care and Protect' is the one our people live and breathe by. It is why our Zero Harm vision is to become the leading health and ...

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From: 9(2)(a) - Privacy

Sent: 26 April 2023 20:59

To: 9(2)(a) - Privacy

Subject: Fwd: EM80 in Auckland Metro

Team,

Are we able to provide the past experiences in regards to delays caused to EM80 runs in Wgtn since Nov 2022 thorough to now?

Sent from my iPhone

Begin forwarded message:

From: 9(2)(a) - Privacy
Date: 26 April 2023 at 7:50:01 PM NZST
To: 9(2)(a) - Privacy
Subject: FW: EM80 in Auckland Metro

9(2)(a) - Privacy

able to provide something like this for Wellington ?...that would assist
I will need the Wellington EM80 record of performance or lack of it - early tomorrow morning
Cheers mate
R
JK

From: 9(2)(a) - Privacy
Sent: Wednesday, 26 April 2023 7:45 pm
To: 9(2)(a) - Privacy
Subject: EM80 in Auckland Metro

Hi [redacted],

As requested I have put a timeline below of the comms/ issues from the track machinery group regarding the EM80 in Auckland metro.

- EM80 last ran in Auckland metro in December 19th 2022 – EM80 broke down during this run and did not complete Otahuhu south, DM only (646km to 664km). The way we found out about this was through a Auckland metro track worker, not from the Machinery group as I would expect.
- The delay in the repairs was significant and there are some emails to support this (please let me know if you require them).
- In February the asset team with 3 geometry trolleys walked from Otahuhu south DM to capture any track defects we could, which stopped a blanket TSR being imposed. A agreement from AT, AOR and KR freight to stop the running of trains at short notice on a Sunday Morning to allow this to happen.
- The EM80 then after repairs with a lot of delays and to be honest not much information coming forward from machinery group, did come back to Auckland on the 5th March 2023 to completed 646km to 664km DM.

April 2023 run....

- On 15th March 2023 – 9(2)(a) - Privacy sent out the EM80 plan that shown Auckland Metro will be completed from 19th April to 3rd May.
- On Thursday 19th April I was informed that potentially the EM80 had broken down, so I called the National Resources Manager Infrastructure Operations to find out. I was informed that the machine was in Huntly and was going as per the plan and would be in the Metro that night.
- The FAE that was planned to be on the EM80 that night found out at 22:30 that the machine would not be in the Metro as planned (see email attached).
- On the 20th April the EM80 Technical Officer sent out a new plan (see attached).
- The EM80 did run Pukekohe to Westfields UM, Westfields to Manukau DM and Manukau UM on 20th April. However the EM80 did miss two sections that were on the new plan (Southdown to Westfield and Arrival 3 road to Otahuhu) – this information has not been communicated to us by machinery group and the reason we know this is due to the FAE on board.

The EM80 now has to complete all other areas by 15th May, if not then everything north of Westfields may require at blanket TSR.

9(2)(a) - Privacy – Do you have other emails or information to support the above please?

[redacted], while we are on this subject can I add some thoughts...

- This situation has the potential to happen every time the EM80 is due its run because we rely on 1 machine for KiwiRail.
- I feel the whole machinery group need to get better with comms to us. E.g
 - When the EM80 has an issue, then we need to know ASAP and not hearing from others.
 - When the tamper run we should have a shift report every night and not having to wait days if not weeks for the report as this has an impact on delaying lifting of TSR's.

I will be in the office at 07:00 tomorrow morning so let me know if you need anything else.

Cheers

9(2)(a) - Privacy | **Asset Engineer, Auckland Metro**

9(2)(a) - Privacy

Railway Lane, Otahuhu, Auckland 3920 | PO Box 22822, Auckland 3920, New Zealand

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From: 9(2)(a) - Privacy
To: [REDACTED]
Cc: [REDACTED]
Subject: FW: BECA Report from GM Metros
Date: Monday, 8 May 2023 10:02:00 am
Attachments: [image001.png](#)
[image003.jpg](#)
[image005.jpg](#)

Hi [REDACTED] - as info ahead of your 11am with Jon.

Regards ... S.

9(2)(a) - Privacy

From: 9(2)(a) - Privacy
Sent: Monday, May 8, 2023 9:55 AM
To: 9(2)(a) - Privacy
Subject: BECA Report from GM Metros

[REDACTED]

My notes for distribution to BECA.

Terms of Reference

1. *A timeline of decisions taken (or escalation missed) from a date of 6 weeks prior to 26 April (or earlier if necessary) regarding the scheduling of Wellington track evaluations in relation to compliance periods with appropriate contingency and maintenance of the EM80.*

Wellington Metros Operational Network Services team can provide the exact infrastructure details associated with the timeline

* Summary Below [REDACTED] has already provided)

- 20th Jan (Sent to All from DG via email) Attached is the North Island Metro Program for the Track Evaluation Car, to catch up on the missed sections of track before Xmas with the breakdown. Also attached are the Dynamic calibration test runs for the 9th and 10th February
Hi All, This affects Hamilton and Auckland areas only, to complete the essential code requirements. We are endeavouring to get the north island run started from Hamilton on the 28th February, and will cover the ECMT first. This next NI program from the 28th will start to be arranged once I return to work next week.
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the last comms that we have had .. I think.. We were expecting it to run last week if I read this right ??

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- [REDACTED] phone call from DG - Discussed change of plan and no notification - He mentioned that some people had been missed of his email chain / distribution list and I was one of them. He was going to send out updated plan and discuss compliance issue with 9(2)(a) - Privacy
- 20th April - (Version H Sent to All from DG via email)
- 1st May - Manjot had asked [REDACTED] if EM80 had run through LNI – she mentioned it was done about a month ago

2. *The maintenance and scheduling systems and linkages between the various responsible functions in KiwiRail*

The infrastructure business (below rail), delivers “maintenance and renewals”.

The programs are planned and coordinated via the National Integrated Plan.

The integrated plan is based on a 104 week time horizon, plus a 3rd year @ 80% outline.

In essence a 3 year plan that timelines the schedule of work, matched to funding.

- The Rail Network Investment Plan (RNIP) – (national program)
 - The program includes: construction works to upgrade, improve network capacity and resilience, and “BAU” maintenance.
 - Specific below rail work; drainage, formation, ballast, re-sleeper, rail, signals and traction

The National Planning Manager, manages delivery of the 3 year RNIP.

Each region provides a planner or, planners (in the case of AKL - based on scale and volume).

The planners coordinate and manage the 3 year program using the P6 scheduling system.

The enabling functions (Protection and Plant Group) link to the Integrated Plan, however their report lines remain outside Infrastructure, in Construction.

It is assessed we have not suitably integrated and aligned Protection and Plant Group into the overall national delivery plan.

These functions are pivotal to the delivery of work and the RNIP.

- Protection are the gate-keepers for ‘safe-working’, ‘security of line possession’, and BOL’s.
- Plant group provide essential tamping, ballast cleaning, work train scheduling, and grinding to compliment the work program.
- Their functions enable site hand-back post works to line-speed, reducing customer disruption, and critically improving rail health and asset condition life-span.

Observations – Suggestions that would enable improved functional integration.

Using the Integrated Plan as the enterprise wide program of work, superimpose each functional businesses work program more effectively.

A fundamental approach is offered....if it is already being followed, then it may need resetting/refreshing.

- The BAU and CPAD maintenance and construction programs, project a 3 year time horizon, mapping future work and resource demand as the baseline for national planning * (Integrated Plan)
 - BAU and CPAD optimise XMAS, Easter, ANZAC, Labour weekend, Waitangi weekend, AKL-WGTN Anniversary weekends for major Metro works and any early ramp-downs / forecasted shuts
 - These timeframes are critical to program delivery and are not negotiable
 - They form primary windows where enabling or supporting businesses MUST prioritise availability-reliability and serviceability of resources to the Integrated Plan
- Traction and Signals should overlay their modular cyclic asset condition monitoring and repair plan against the * (Integrated Plan)
 - Traction and Signals then deconflict modular cyclic asset repair and maintenance with the 3 year Integrated Plan, prioritising resources to meet work demand whilst maintaining their own cyclic asset condition maintenance
- Plant Group should overlay their WOL equipment maintenance and servicing plans for

- period/phase/routine/1/2 life maintenance and repairs against the * (Integrated Plan)
- Major repair and service windows should be synchronised outside critical delivery plan timelines
 - Plant resources MUST be available at peak work program periods
 - Plant 'period or phase' (major maintenance), should wherever possible be scheduled outside peak integrated plan demand periods
 - redundancy, slippage and contingency (basic fundamentals to WOL asset management) need to be applied to plant servicing
 - Based on the age of the assets; additional holdings of critical spares and an adjusted more intensive maintenance intervention level needs to be programmed
 - Plant group planners (grinding-tamping-work trains-ballast cleaner) should be part of the Integrated Planning Team * the current system is failing
 - Protection Group and the TAR system is reviewed to align with P6, and should be part of the Integrated Planning Team * the Protection planners should work within the National Planning Group

Recommendation:

The protection and Machine Group planning functions transfer to the below rail business and sit within the National Planning Group who sponsor delivery of the integrated plan.

This element is pivotal going forward, and by Nov 2025 will form the KR component of the IRMC (Integrated Rail Management Centre).

3. *When the matter was escalated to Senior Exec*

Unsure of exact date, but too late in the piece retrospectively

4. *The extent to whether accountabilities are clear for this under our Principles and Standards*

There needs to be greater transparency between the integrated plan (maintenance and renewals plan), engineering code of compliance inspection regimes, and machine group support to both.

This event highlights a potential disconnect between BAU-Engineering and Machine Group around rostering, and programming the EM80

Additionally, the escalation process and (where intervention from higher is required), is unclear

5. *Noting that the EM80 is the only Track Evaluation Car in NZ and there is a gap between now and arrival of the new car and ATIS equipment what process and other resilience steps could be taken in the intervening period*

Suggested Resilience Steps to Manage the gap:

- Have plant group dedicate a planner permanently into National planning
- Increase spare parts holdings of EM80 targeting known inventory matched to reoccurring faults
- Program increased levels of service interventions to maintain reliability and availability
- Increase fitter capacity (train and schedule support)
- Increase number of EM80 trained operators-drivers
- Repower – re-engine the current EM80 (it needs to run for another 4 years)
- Seek a wet or dry hire lease of an inspection car as a bridge to provide reliability
- Procure a second HRV under the ATIS program with AMTP that offers AKL-Wellington Metro an ATIS mounted camera geometry and visualization capability which can also be used nationally
 - Funding exists within the program
- Accelerate an upgrade to an enhanced NDT rail and geometry inspections
- *Is this an opportunity to ask the real question of (is one inspection car - a golden asset - enough) ?*
 - *With the significant growth and demand on rail would it not be appropriate to buy 2 !!*

6. *Confirmation that the single-issue fault is identified in KiwiRail's risk register*

This is A Plant Group question.

Background Info provided outside TOR scope on ATIS and New EM80 procurement

KR has a 4 year gap until a new EM80 arrives, the vehicle is under tender and funding is approved. The ATIS program is scheduled to arrive early 2024.

The Automated Track Inspection System (ATIS) is:

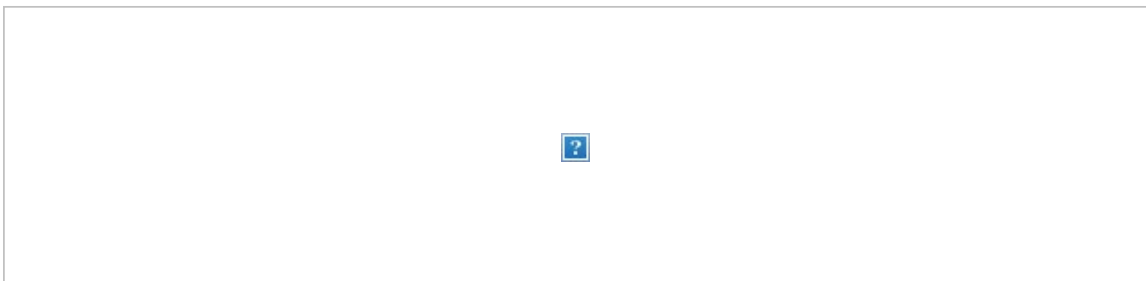
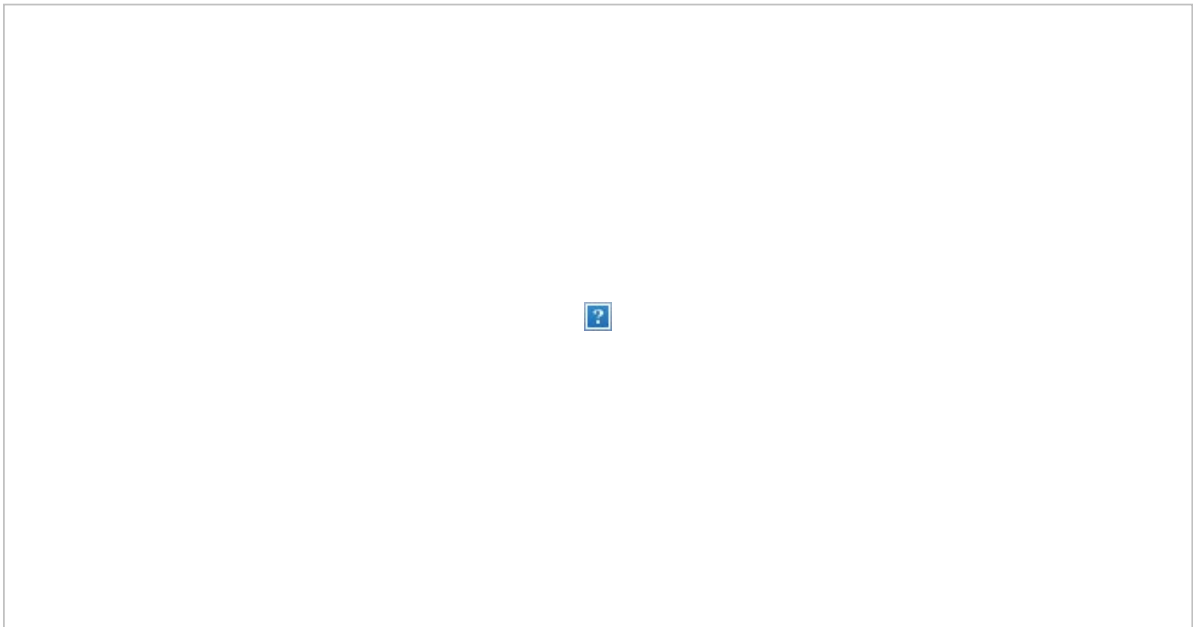
- A system of modern inspection equipment and computer processes which provides highly accurate and regular track and OLE condition information
- The inspection equipment will be fitted to a rail vehicle to collect track and OLE data, this data is then processed in the office and the outputs are reviewed, analysed and shared with other KiwiRail systems
- The information collected from ATIS will be a key input into preventative maintenance regimes and asset integrity, reliability and performance
- ATIS includes a diagnostics team to review, validate and analyse the data
- ATIS is planned for deployment in the Auckland Metro early 2024

The introduction of ATIS will future-proof our asset condition monitoring, inspection, and intervention capability as we move to automated and mechanized 'maintenance ways of working'.

Benefits:

- Provides a safer work environment by using technology to carry out some of the on-track inspections, removing people from the track usually at night-time.
- Provides the opportunity to learn new skills and to work with modern technology, as used by many other rail networks around the world.
- New job opportunities, there are 2 new roles being introduced creating 5 x FTE positions – ATIS operator and ATIS Inspector
- An opportunity use existing track and OLE knowledge to help implement the new system at KiwiRail

ATIS Resourcing



This EMU mounted system measures track geometry and visual asset condition "real time" then feeds it into an automatic diagnostic program that provides a robust asset work bank forecast.

ATIS will be used across both Metros and could be rolled out to the wider national network - mounting these systems on freight trains / DMU's.

Additionally – an HRV has been procured due to issues with CAF EMU camera system mounting. This adds redundancy to the Metros inspection regimes.

NDT (non-destructive testing) is also being reviewed to upgrade the current EC-SM - ACFM and PAUT testing functions.

The review will enable automated and modernised equipment to be procured to offer appropriate rail fault mitigation solutions.

Additional Note outside TOR scope but relates to the planning shortfalls

Auckland Metro have provided this review of plant group related issues where failure, coordination or management of assets has fallen short of program needs and affected delivery of BAU

This is separate to the EMB0.

Ser	General 6 month review of plant group assets	Dates	Info
1	NDT run in Auckland not advised to Networks or Protection	16 Jun 22	NDT car arrives in Auckland with no protection in place. BAU teams not warned out so that shifts could be arranged to remedy faults. Discussions with Alex Swenson determined that program and changes would be sent well ahead of time in future.
2	NDT Weld Audit	30 Sep 22	Following the discovery of 4 broken welds in the Metro, work commenced on a plan to audit all welds done within the previous 6 months. By 25 Oct we had identified to Machine Gp 900 welds that needed to be tested using NDT. Several dates for the completion of all weld checks were given. Eventually 10 Jan 23 was given. This target date was missed and to date information on checked welds has been hard to obtain, a number of welds remain unchecked, however, to date, no issues have been identified with welds that have been tested.
3	EM80 Delay	Dec 22/Jan 23	19 Dec 22 – Received info (not from Machine Gp) that EM80 had developed a fault meaning that it could not complete its run in Auckland (<i>circa 18km of track short</i>). Code exemption work required and contingency plan put in place. EM80 run required by 19 Feb 23 to avoid mitigations. 12 Feb 23– Machine Group cancels Metro work, issuing amended program without communicating with Metro AE or Management. 16 Feb 23, Akl Metro AE staff required to develop mitigation plan requiring walking inspections using Amberg trolleys due to unavailability of EM80 despite ongoing communications with Machine Gp.
4	General Tamper Forecasting	Various	The tamper program is beset by changes and poor communications. We have had various instances in the past 12 months, and no doubt beyond, where tamper plans have been advised late requiring significant re-planning of protection and networks operations. * Has become a common occurrence.
5	EWR and YJ Work Train Serviceability		Since mid-2023 the Networks HSAT has been reporting issues with the EWR wagons (serviceability, re-fueling issues, hazards identified requiring remediation etc.). Initial discussions with Machine Gp in Nov/Dec 22 sought repairs/remediation but were generally met with an apathetic 'there is nothing we can do' attitude. Information sent re possible step and handhold upgrades have not been replied to despite follow up. Networks HSAT is completing a risk assessment of the EWR and YJ

		wagon sets with a view to escalating issues through KR senior HSAT and ZH forums. To date a number of hazards indicate that wagons are not being maintained (ie, missing or expired fire extinguishers)
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Nga Mihi

JK

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“Influence is the True Measure of Leadership”
“The Pursuit of Excellence is our Goal”

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