From: Jim Stabback Steve Mutton To:

Subject: Re: Auckland Harbour Bridge - Truck Strike Date: Monday, 21 September 2020 6:54:36 PM

Attachments: image001.png image003 png

Thanks Steve

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From: Steve Mutton <Steve.Mutton@nzta.govt.nz> To: Jim Stabback <jim.stabback@aucklandcouncil.govt.nz>; Shane Ellison (AT) <Shane.Ellison@at.govt.nz>
Subject: RE: Auckland Harbour Bridge – Truck Strike

Kia ora lim and Shane

Update 21-Sep-20 2.00pm

All four centre lanes of the Auckland Harbour Bridge remain closed.

There has been heavy congestion on the Auckland motorway network and local roads this morning as customers start the working week with the Auckland Harbour Bridge operating at 50% capacity.

Waka Kotahi is committed to doing everything possible to re-open the centre lanes of the Harbour Bridge as quickly as possible to allow extra vehicles across the bridge.

Our bridge engineers are making great progress on both a temporary and permanent solution to fix the bridge damage, however this is an incredibly complex process. We are now confident we have a temporary solution to repair the damaged strut which will allow one extra lane in each direction to be opened on the centre span of the bridge.

Current plans indicate work on the bridge to install the temporary solution will begin overnight on Tuesday 22 September. This is a complex undertaking and has never been done before so the bridge team must do extensive testing on the bridge before opening it up to live traffic. This includes mathematical peer review by independent experts which we are doing in parallel to the construction of the temporary piece.

Once the temporary fix is in place there will be real life testing with heavy vehicles to ensure it performs to the design specifications and requirements. Only then will a final decision be made about whether the temporary fix is suitable to allow the re-opening of additional lanes. Once that decision has been made it is expected that two extra lanes on the centre-span of the bridge (one northbound and one southbound) could be open to traffic later this week. To enable this to happen, the southbound lanes of the Auckland Harbour Bridge into the city centre will be closed overnight on from Tuesday 22 September.

In parallel, the team is working on a permanent repair of the damage to re-open all lanes on the Harbour Bridge, however this work will take some time and is weeks away from installation. Repair work may not be √isible on the bridge however there are teams working to design and peer review the replacement parts for both the temporary and permanent solution, source the materials, manufacture the part and plan for installing it. The bulk of this time is in the design, calculation and peer review of the new strut in relation to how it will impact on the performance of the whole bridge. This includes careful calculations on how to rebalance its load-bearing function. The new modelling is necessary because the materials of the new structure will not exactly match those that were installed 60 years ago.

While the damaged component of the structure is important, there is no risk to the structural integrity or overall safety of the Harbour Bridge. The north and southbound clip-on lanes continue to be safe to use as they have their own supporting structure.

Waka Kotahi and Auckland Transport are implementing a bus priority system on State Highway 1 northbound to the Auckland Harbour Bridge. The priority lane is to reduce congestion for buses to the North Shore and provide more reliable journeys for customers. This bus priority system will allow buses to access the SH1 northbound on-ramp at Fanshawe Street via a new priority lane, allowing buses to bypass the queuing traffic. This priority lane onto the motorway will then merge with the general state highway traffic. To improve safety for both bus and motorway traffic at this new bus merge point, the Curran Street northbound on-ramp onto SH1 is closed to all traffic. Motorists who would usually use the Curran Street onramp are advised to follow the sign-posted detour route to the Fanshawe Street northbound on-ramp.

Waka Kotahi thank you for your ongoing patience with the inconvenience and disruption caused by the lanes closure. We're working hard to ensure the bridge can be back in operation as quickly as possible.

Nga mihi Steve

Steve Mutton / Director Regional Relationships, Upper North Island Engagement & Partnerships M +64 5 9(2)(a)

From: Steve Mutton

Sent: Sunday, 20 September 2020 1:02 PM

To: jim.stabback@aucklandcouncil.govt.nz; Shane Ellison (AT) < Shane Ellison@at.govt.nz>

Subject: RE: Auckland Harbour Bridge - Truck Strike

Kia ora Jim and Shane

Update 20-Sep-20 12.30pm

All four centre lanes of the Auckland Harbour Bridge remain closed.

A temporary fix to re-open the lanes may be possible in a few days but a permanent repair is weeks away. Waka Kotahi bridge engineers have been working on both and we are working as quickly as we can.

Repair work may not be visible on the bridge but a team of nine structural engineers is working on the complex task of removing and replacing the strut that weighs about 4 tonnes and is 22.7 metres long. That includes modelling how to re-balance its load-bearing function so that it's safe to incrementally re-open lanes on the centre span with a temporary fix in place. This work is ongoing and will take time. Fabrication of the replacement parts for the temporary and permanent fixes is also under way.

During the weekend bridge engineers have also completed safety inspections on the bridge. They've been assessing how to repair or replace the damaged load-bearing upright strut. The strut is important to the structure of the bridge as it helps support its weight. The engineers have also checked if other struts were damaged, given they've had additional load transferred to them. The sheared end of the damaged strut has been temporarily bolted back on to the bridge.

While the damaged component of the structure is important, there is no risk to the structural integrity or overall safety of the Harbour Bridge. The north and southbound clip-on lanes are safe to use as they have their own supporting structure.

While the Auckland Harbour Bridge is at half its usual capacity there are also significant knock on effects across the transport network, with additional vehicles now switching to the Western Ring Route. We are asking people to consider working from home if possible or to use public transport instead of taking the car

as heavy congestion and delays are expected on both sides of the bridge as well as other state highways and local roads.

We are really seeing the benefits of having a high-quality alternative route to the Auckland Harbour Bridge via the Western Ring Route and SH16, SH18 and SH20 and are strongly encouraging those who do have to travel especially heavy and freight vehicles to use this route.

The Northern Busway will be operating and buses are safe to use the clip on lanes, however buses will be delayed as they join the queues to cross the bridge. Auckland Transport (AT) is confident in its available passenger capacity on buses for the coming week ahead as buses are only 50% full compared to normal pre-COVID passenger levels. AT is also planning to increase bus frequency outside of peak hours so that more customers can take advantage of the 30% off-peak fare discount. Ferries are operating as usual and have spare seating capacity.

Waka Kotahi thanks motorists for their ongoing patience with the inconvenience and disruption caused by the lanes closure. We also thank the industry, freight and courier transportation sector for allowing extra time to take the alternative Western Ring Route. We have seen a significant drop in the number of trucks using the Harbour Bridge that contributes to this recovery. We're working to ensure the bridge can be back in operation as quickly as possible.

Nga mihi Steve

Steve Mutton / Director Regional Relationships, Upper North Island Engagement & Partnerships

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From: Steve Mutton

Sent: Saturday, 19 September 2020 7:06 PM

To: jim.stabback@aucklandcouncil.govt.nz> Shane Ellison (AT) <Shane.Ellison@at.govt.nz>

Subject: RE: Auckland Harbour Bridge - Truck Strike

Kia ora Jim and Shane,

Update 19-Sep-20 18:00

All four centre lanes of the Auckland Harbour Bridge remain closed. Congestion remains heavy today on both the Auckland Harbour Bridge, surrounding state highways and local roads.

Waka Kotahi is committed to re-opening the centre lanes of the Harbour Bridge as quickly as possible however they will potentially remain closed for a number of weeks.

A number of specialised bridge engineers are working round the clock to assess the damage and are designing a number of options for a temporary and more permanent solution. This work is ongoing and will take time.

Overnight investigations revealed the impact has damaged a load-bearing upright strut of the bridge overarch. The upright strut is fixed to the bridge top and bottom with a series of bolts. These bolts have sheared off and left the strut detached at the bottom. The strut is bent and twisted at the point it was hit. Please refer to the photos in the media statement below.

The damaged strut is important to the structure of the bridge as it helps support its weight. Bridge engineers

are assessing how to repair or replace the strut, while also checking if other struts were damaged, given they've had additional load transferred to them.

The sheared end of the damaged strut has been temporarily bolted back on to the bridge. While the damaged component of the structure is important, there is no risk to the structural integrity or overall safety of the Harbour Bridge.

Waka Kotahi understands the inconvenience and disruption the closure of lanes is having on motorists, public transport and freight, and thanks everyone for their ongoing patience. We're working to ensure the 4ACT 1982 bridge can be back in operation as quickly as possible.

Nga mihi Steve

Subject: Engineeers assess damage to Auckland Harbour Bridge after truck strike

MEDIA RELEASE

19 September 2020



Engineers assess damage to Auckland Harbour Bridge after truck strike

Waka Kotahi NZ Transport Agency is urging motorists to adjust their travel plans and usual patterns to avoid significant disruption caused by the closure of four lanes on the Auckland Harbour Bridge.

Congestion remains heavy on both the Auckland Harbour Bridge, surrounding state highways and local roads following yesterday's incident where two trucks were blown over causing significant damage to the bridge.

Waka Kotahi is focussed on doing everything possible to re-open the centre lanes of the Harbour Bridge as quickly as possible however they will potentially remain closed for a number of weeks.

Bridge engineers are working on options for a temporary and more permanent solution to the damage that has been caused. This work is ongoing and will take time.

"Overnight investigations revealed the impact has damaged a load-bearing upright strut of the bridge overarch" says Waka Kotahi Senior Journey Manager Neil Walker.

"The upright strut is fixed to the bridge top and bottom with a series of bolts. These bolts have sheared off and left the strut detached at the bottom. The strut is bent and twisted at the point it was hit.'

The damaged strut is important to the structure of the bridge as it helps support its weight. Bridge engineers are assessing how to repair or replace the strut, while also checking if other struts were damaged, given they've had additional load transferred to them. The sheared end of the damaged strut has been temporarily bolted back on to the bridge.

Repair work may not be visible on the bridge deck and will involve manufacturing the bridge parts off-site.

While the damaged component of the structure is important, there is no risk to the structural integrity or overall safety of the Harbour Bridge.

All four centre lanes remain closed and customers are urged to avoid unnecessary travel and use the Western Ring Route via SH16, SH18 and SH20 as an alternative to the Harbour Bridge. While the Western Ring Route was carefully planned and constructed to be used as an alternative to the Harbour Bridge, especially for trucks and heavy vehicles, it will now also experience congestion and delays with the additional traffic volumes that would have been on the Harbour Bridge.

That means people who do have to travel should allow plenty of time for their journeys on both routes. Waka Kotahi recommends customers consider working from home where possible from Monday. If they do need to travel into and out of the CBD, they consider alternative travel options, such as taking public transport.

The Northern Busway will be operating and buses are safe to use the clip on lanes, however buses will be delayed as they join the queues to cross the bridge, so passengers should plan ahead and allow extra time for their journey.

Yesterday, a truck carrying a shipping container was blown sideways by sudden wind gusts up to 127 kph and hit the bridge superstructure. The truck righted itself and carried on. At about the same time, a northbound truck was blown by wind gusts across two lanes and toppled over the moveable lane barrier and became stuck.

The north and southbound clip-on lanes remain open and are safe to use as they have their own supporting structure, however traffic is still backed up and long delays are expected throughout the weekend and into next week.

"We understand the economic significance of the Auckland Harbour Bridge to help support the movement of people and freight within the region and throughout the rest of New Zealand".

On average, more than 170,000 vehicles cross the Auckland Harbour Bridge on weekdays, with the configuration of the eight lanes changed four times a day to adjust to peak time traffic flows.

Waka Kotahi understands the inconvenience and disruption the closure of lanes is having on motorists and thanks them for their ongoing patience. We're working to ensure the bridge can be back in operation as quickly as possible.



Caption: The bridge strut bent out of shape after being hit by a truck on the Auckland Harbour Bridge



Caption: The bracket where the bridge truss has been sheared away, breaking the bolts holding it in place

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From: Steve Mutton

Sent: Friday, 18 September 2020 8:49 PM

To: jim.stabback@aucklandcouncil.govt.nz; Shane Ellison (AT) <Shane.Ellison@at.govt.nz>

Subject: Auckland Harbour Bridge – Truck Strike

Kia ora Jim and Shane

Waka Kotahi has advised Auckland motorists that there will be significant reduction in the capacity of the Auckland Harbour Bridge for several days and potentially up to several weeks after damage to the bridge superstructure today.

I am sharing this update with you as this is a really important strategic asset in our Auckland transport network.

A southbound truck carrying a shipping container was blown sideways by sudden wind gusts up to 127 kph just after 11am and hit the bridge superstructure. The truck righted itself and carried on. At about the same time a second northbound truck was blown by wind gusts across two lanes and toppled over the moveable lane barrier and became stuck. The truck has since been righted and the driver was uninjured.

The truck striking the bridge has damaged the superstructure, with a steel diagonal member sheared off at the base. The centre span of the bridge, including four traffic lanes (two lanes in each direction) are closed.

Recent assessments of the structural damage indicate that a permanent fix will be a long-term process and the four-lanes across the centre span of the bridge will remain closed to traffic for some time. While the damaged component of the structure is important, there are no concerns for the overall safety of the Harbour Bridge.

The north and southbound clip-on lanes remain open and are safe to use as they have their own supporting structure, however long delays are expected. We have advised customers should use the Western Ring Route via SH16, SH18 and SH20 as an alternative to the Harbour Bridge. The Western Ring Route has been carefully planned and constructed to be used as an alternative to the Harbour Bridge, especially for trucks and heavy vehicles.

Congestion on the state highways and Auckland Transport local roads is inevitable as we work through this closure and Waka Kotahi recommends customers consider alternative travel options next week, such as taking public transport or working from home. The Northern Busway remains operational and buses are able to use the clip-on lanes of the Harbour Bridge.

We understand the economic significance of the Auckland Harbour Bridge to help support the movement of people and freight within Auckland, the wider region and throughout the rest of New Zealand.

Waka Kotahi is focussed on doing everything possible to re-open the centre lanes of the Harbour Bridge as quickly as possible and will be working throughout the night, over the weekend and potentially over the coming weeks on its recovery. The health and safety of workers and customers using the bridge is paramount when managing its recovery and we will only re-open the centre-span of the bridge when we are fully confident in its structural integrity.

We apologises for the inconvenience and disruption, and thank you and motorists for your ongoing patience as we work to get the Harbour Bridge up and running again.

If you have any questions please do not hesitate to contact me anytime.

Nga mihi

Steve

Steve Mutton / Director Regional Relationships, Upper North Island Engagement & Partnerships









WITO' YOU

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