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Te Whare Māngai o Aotearoa

Transport and Infrastructure Committee
Komiti Whiriwhiri Take Waka, Take Hanganga

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Briefing on the pedestrian crossing in Williamson Avenue in Grey Lynn, Auckland

Presented to the House of Representatives
by Andy Foster, Chairperson

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Recommendation

The Transport and Infrastructure Committee has considered a briefing on the pedestrian crossing in Williamson Avenue in Grey Lynn, Auckland, and recommends that the House take note of its report.

About this briefing

As a committee, we are interested in understanding the financial, planning, and delivery issues affecting the construction of infrastructure in New Zealand.

The raised pedestrian crossing on Williamson Avenue in Grey Lynn, Auckland, was constructed in 2022, and cost Auckland Transport around $490,000 to complete. Although such crossings are useful for slowing traffic, we were concerned about the cost of this project.

We initiated this briefing as we believe the redevelopment of the pedestrian crossing on Williamson Avenue offers a snapshot of the larger issues facing the infrastructure sector. Our intention with this briefing was to examine this project as a case study of the financing and delivery of infrastructure in New Zealand. We were particularly interested in the topics of health and safety, traffic management, and productivity.

We heard from Auckland Transport about its reflections on the project.

Redevelopment of the Williamson Avenue pedestrian crossing

The project to upgrade the pedestrian crossing in Williamson Avenue involved replacing the existing zebra crossing with a raised pedestrian crossing. The project was first identified in January 2021 as part of the Mass Action Pedestrian Improvement Programme.[1] We were told that 20 percent of all pedestrian-related crashes in Auckland between 2011 and 2015 happened at zebra crossings. We also heard that about half of all deaths and serious injuries caused by automobile incidents happen to people outside the vehicles (cyclists, motorcyclists, and pedestrians).

Incidents at this specific crossing have included a crash seriously injuring a cyclist, and a pattern of crashes resulting from motorists failing to give way. A survey of pedestrians at Williamson Avenue showed that demand for a safer crossing was high, and that the existing crossing was well used.

[1] The Mass Action Pedestrian Improvement Programme was a region-wide initiative to improve safety at pedestrian crossings.

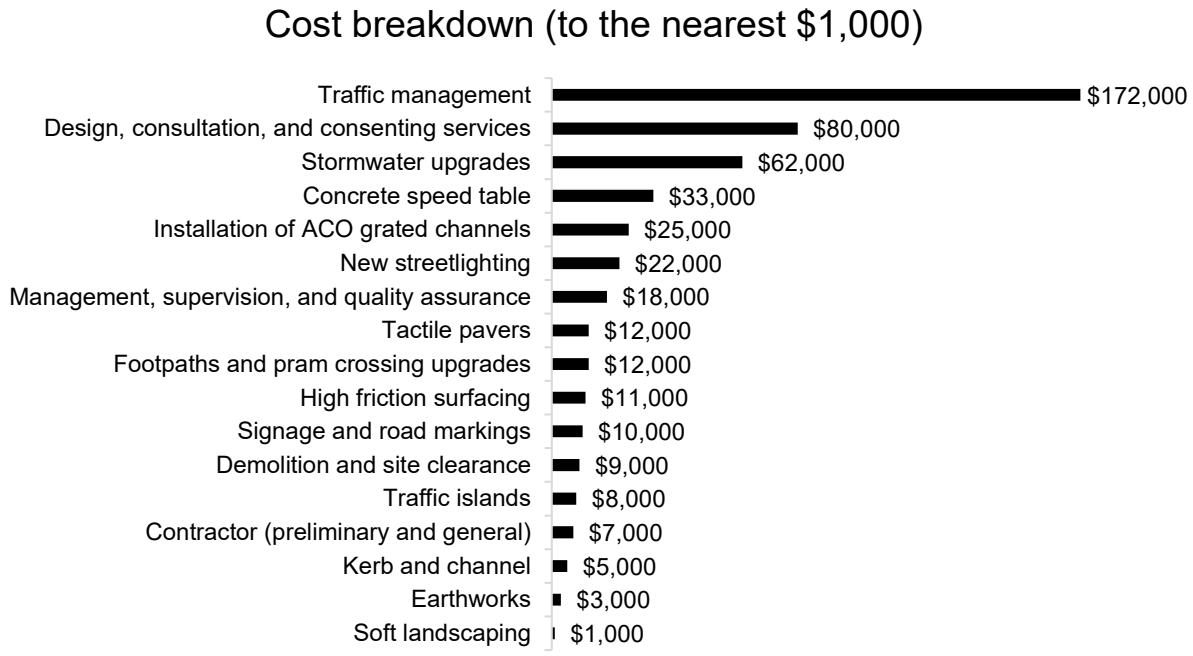
We understand that speeds of no more than 30km/h are considered optimal for reducing the risk of harm to people outside vehicles at crossings, and are generally appropriate where there are concentrations of pedestrians and cyclists at areas with high traffic. Auckland Transport said that evidence shows a reduction in crashes and increase in the safety of pedestrians where raised crossing tables are installed. Because raising the crossing would reduce approaching speeds, it would also help to avoid crashes at nearby intersections.

Before the project began, public consultation was carried out via letters to 33 nearby property owners. Online consultation was also available through the project page on the Auckland Transport website.[2]

Initial construction occurred in July and August 2022. Further works, including fixing concrete defects, fixes to the height of the ramp, and stormwater upgrades, were completed in April 2023. In total, the project took 58 days to complete. A traffic management plan was in place during this entire period, including a combination of stop-go and traffic signals on all four approaches to the crossing.

Expenditure on the crossing

The total cost of the project was $490,662. Traffic management was the biggest expense, at around $172,000 or 35 percent of the total cost. The project was co-funded by the Auckland Council (49 percent of funding) and the New Zealand Transport Agency | Waka Kotahi (51 percent of funding) under the Road to Zero Programme.[3] A total breakdown of costs related to this project is available in the graph below.[4]



We noted that four options were considered in deciding on the raised crossing. They were a "do-nothing" approach, a gateway treatment, a signalised crossing, and a Swedish-style

2 Williamson Avenue, Grey Lynn – Raised Zebra Crossing | Auckland Transport.

3 Road to Zero: New Zealand's Road Safety Strategy 2020–2030 | New Zealand Government.

4 Written submission to the Transport and Infrastructure Committee | Auckland Transport, p 5.

raised speed table (the preferred option). Auckland Transport preferred the raised crossing option as the others would be less effective at reducing vehicle speeds. However, as the feasibility report noted, the raised table would require some new stormwater drainage. Auckland Council also identified flooding issues in this location, as it is situated at the low-point of the area, so extensive stormwater upgrades were also undertaken as part of the project.

Some of us considered that other more cost-effective solutions could have been considered, such as the installation of a stop sign or upgrades to the crossing that required less stormwater drainage upgrades. We heard that Auckland Transport intends to take a more site-specific approach to similar projects in future to make sure the most appropriate option is chosen every time.

Pedestrian safety

Auckland Transport told us that it tracks and monitors the efficacy of all its safety interventions to make sure that each project achieves what it is supposed to. All safety monitoring is conducted to international standards. It follows the Safe System approach, which intends to build a more forgiving system that protects people from death and serious injury when they crash.[5] The approach entails accepting that accidents happen, and building safety precautions for when they do. A raised crossing on Williamson Avenue was deemed to be the option most in line with this approach.

Auckland Transport acknowledged that it approached this project entirely from a safety lens, which meant that the cost was not quite aligned with the scale of the project. Although we agree that the safety of pedestrians is important, we expect in future to see similar infrastructure being installed or upgraded at a lower cost proportionally.

Auckland Transport said that the estimated “social harm cost” in Auckland is $2 billion a year. This involves the cost of deaths, injuries, and loss of productivity for those unable to work. It told us that it has commissioned work to investigate these statistics further. We would be interested in seeing this work when it is completed, to better quantify the cost of road incidents.

Traffic management

Williamson Avenue is a busy road and bus route. Because of this, Auckland Transport said that a full road closure was not possible as part of the project’s traffic management plan. Instead, a combination of stop-go and traffic signals was used on all four approaches to the crossing. Work was conducted during off-peak traffic hours, between 9am and 4pm. The safety of construction workers, pedestrians, and road-users was a primary concern in the approach to temporary traffic management.

We expressed our concerns that traffic management made up 35 percent of the total cost of this project. Auckland Transport agreed with us that perhaps less attention was given to the cost of traffic management because the project was classified as “low risk”, as it cost less than $2 million to fund. It said that for similar projects the cost was about 25 percent,

[5] The Safe System | Auckland Transport.

although it could get "quite out of hand", as in this instance. For larger capital projects, traffic management costs are around 10 percent. Auckland Transport said "it is how it is", when it comes to the proportion of a project's total cost spent on traffic management. In smaller projects the cost of traffic management would always be higher proportionally than for larger projects. However, Auckland Transport acknowledged it was not happy with the economic outcome of this crossing. Some of us are not happy with the cost.

We asked about possible solutions to lower the cost of future projects. Auckland Transport said it accepted that there would be future projects where traffic management exceeds 10 percent of the overall cost. It was, however, heartened by the introduction of the New Zealand guide to temporary traffic management (NZGTTM) which outlines how to use a risk-based approach to plan traffic management.[6] This allows for an innovative approach to traffic management with each project, rather than requiring a standard approach for each project. This should, in turn, reduce costs.

Auckland Transport also spoke about approaches to traffic management in other jurisdictions. It said that in similar jurisdictions there is much more of an obligation on drivers to be careful around road workers. We consider that a culture change may be needed when it comes to complying with temporary traffic management around construction sites. This could involve installing cameras to monitor drivers' non-compliance with safety standards and handing out fines where necessary. It would mean less need for traffic management in the long run.

Staffing and productivity

In 2022 the Infrastructure Commission | Te Waihanga published the New Zealand Infrastructure Strategy 2022–2052, which estimated that in 2024 New Zealand will have a shortfall of 118,500 construction workers.[7] It said that these skill shortages would be particularly noticeable in regions like Auckland, which has many important projects. It concluded that New Zealand needs more people with the skills to plan, build, operate, and maintain infrastructure. The skills and abilities of contractors are particularly important. It noted that more work was needed to identify the exact extent of workforce shortages, and what could be done to develop the skills to ensure projects can be completed to a high standard.

We noted that the four days of remedial work conducted in April 2023 were due to staffing issues and initial work not being completed to a high enough standard. We asked whether the wider issue of contractors' capability and skills in the infrastructure industry was something that Auckland Transport was concerned about, and whether it had any reflections on the issue.

We heard that while there are no shortages at a management level, Auckland Transport said that there are not enough trained and skilled tradespeople in New Zealand: not enough "actual, on-the-ground skill".

6 New Zealand guide to temporary traffic management | New Zealand Transport Agency—Waka Kotahi.

7 Rautaki Hanganga o Aotearoa New Zealand Infrastructure Strategy | New Zealand Infrastructure Commission—Te Waihanga, p 153.

> We've got managers for Africa, but what we don't have—and this is a wider issue, to your point—is the actual on-the-ground skill, if you like, as a country. So when we're trying to pour concrete to a grade and to a specification, you can have all the managers you like watching it happen but if you don't have the right personnel on the site that have the right physical-trade based experience and skill you're going to pour it wrong every time.

In turn, this means that more remedial works are needed, driving up the time taken and money spent on projects. This was reflected in the roadworks at Williamson Avenue, as remedial works were needed due to defects caused by a lack of skilled workers. It noted that this lack of skill is a problem across the entire industry.

As an example, Auckland Transport noted that grader drivers, among other specialised trades, are a dying breed. Not enough young people are developing this skill as it is "not sexy enough now; no one wants to be a grader driver". We consider that more incentives are needed for people to train in specialised trades such as gas fitters, concrete workers, drain layers, and grader drivers. We are interested in conducting further work to analyse improvements and investments that could be made to incentivise and train more tradespeople in these specialised roles.

Conclusions from Auckland Transport

We were pleased to see that Auckland Transport has reflected on what it can do in future to lower overall costs on similar projects. This includes:

- conducting more extensive design reviews, and taking a site-specific, risk-based approach to ensure projects work for their specific context while ensuring costs are reasonable
- using pre-cast crossing units, which can be installed in one night rather than over a number of weeks (reducing the overall amount of traffic management needed)
- taking a temporary traffic management cost reduction approach, with a target for this to cost no more than 10 percent of the overall project cost
- following the newly introduced NZGTTM, which provides for site-specific approaches to temporary traffic management.

Auckland Transport told us about 16 projects that it has revisited to reduce the total traffic management cost.[8] In many cases a full closure was chosen, rather than the initially planned stop-go system, as well as looking at site specific designs. This meant that less traffic management was needed overall, lowering the cost of traffic management substantially. The most significant reduction in costs was the crossing at Ponsonby/Pompallier. After revisiting traffic management plans, it was decided that this project would be constructed using "super weeks" with full road closures, rather than partial closures and a stop-go system. As a result, the total cost of traffic management dropped from 31 percent to 18 percent of the overall project cost.

[8] To view the total cost differences on all 16 projects, see: Williamson Avenue raised pedestrian crossing briefing (Supp 2) | Auckland Transport.

Auckland Transport said that it could not take the approach it did with Williamson Avenue on all its projects, as it does not have the budget to spend this amount on every single small-scale roadwork project. Instead, it must take a site-specific approach, and view each project through both a safety and an economic lens. It noted the wider sector issue of funding creep, where the cost of projects increases as they are carried out. It considered that the way infrastructure is funded in New Zealand could be optimised to give more scrutiny to ensuring that projects do not erode in value during their construction.

Our conclusions

We accept that, from the viewpoint of the safety of pedestrians and other road users, the decision to replace the painted crossing on Williamson Avenue with a raised crossing was a worthwhile investment. We recognise that it was a more complex project than just installing a speed bump, as there were specific infrastructure needs in this site such as tree trimming and stormwater drainage upgrades. We are, however, concerned about the cost of the project and how this reflects broader issues with the provision of infrastructure in New Zealand.

This project was conducted under a low-cost/low-risk funding pathway, as it cost less than $2 million to complete. We have some concerns that because of this categorisation, projects under $2 million do not receive an appropriate level of scrutiny about how funding is being spent. We are concerned in particular that any project that does not cost more than $2 million may also have costs that could have been lowered if a different approach was taken.

Four options were considered to improve pedestrian safety at this crossing, with the raised speed table chosen as it was the safest option. The crossing's location entailed associated costs, such as the high level of traffic management, and stormwater drainage work. Some of us consider that the design scope was not wide enough, and that the options could have been considered further to balance the need for pedestrian safety, the overall cost of the project, and the requirements of this specific location.

We are encouraged by comments from Auckland Transport that it intends to conduct more extensive design reviews in future projects. We note the example of the crossing upgrade at 18 Wickman Way. Initial plans were for a raised table, but this was changed to speed cushions due to stormwater constraints. This design review reduced the overall cost of the project from $253,353 to $127,087. We expect that changes after design reviews like this one will continue to be the case in future projects.

The Williamson Avenue crossing project was part of a wider programme which was assessed for funding purposes at the outset. However, because individual projects were under $2 million, no funding assessment was done when the cost of some further projects within the programme increased. The committee considers that the New Zealand Transport Agency | Waka Kotahi and road controlling authorities should, in future, monitor the costs of projects within approved programmes to ensure significant cost creep is avoided. We acknowledge that this is not a problem solely faced by Auckland Transport—this is a wider issue of infrastructure funding in New Zealand.

We consider that there would be huge value in establishing good practice guidelines on roadworks, and increased scrutiny to ensure better returns on investments. We are pleased

with the reflections made by Auckland Transport and expect to see a reduction in costs of future projects as a result of its new approaches. We think infrastructure projects should be approached on a case-by-case basis, rather than applying a one-size-fits-all solution. We intend to conduct further work about financing and delivery issues within New Zealand's infrastructure sector.

Appendix

Committee procedure

We met between 21 March and 9 May 2024 to consider this briefing. We heard evidence from Auckland Transport.

Committee members

Andy Foster (Chairperson)
Hon Julie Anne Genter
Mariameno Kapa-Kingi
Cameron Luxton
Grant McCallum
Tom Rutherford
Tangi Utikere
Arena Williams

Greg Fleming, Shanan Halbert, and Ricardo Menéndez March participated in some of our consideration of this item of business.

Related resources

The documents we received as advice and evidence for this inquiry are available on the Parliament website, along with a recording of our meeting on 11 April 2024.