

under: the Fast-track Approvals Act 2024

in the matter of: applications for resource consents and archaeological authorities and notices of requirement by the New Zealand Transport Agency Waka Kotahi to develop a rapid transit link and associated infrastructure and connections between Brigham Creek and Auckland City centre, alongside State Highway 16, known as 'North West Rapid Transit'

applicant: **New Zealand Transport Agency Waka Kotahi**
Requiring Authority and Applicant

Statement of Evidence of Meredith Bates for New Zealand
Transport Agency Waka Kotahi

Dated: 3 June 2026

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STATEMENT OF EVIDENCE OF MEREDITH BATES FOR NEW ZEALAND TRANSPORT AGENCY WAKA KOTAHI

- 1 My full name is Meredith Bates. I am one of the co-authors of the Assessment of Transport Effects (*Transport Assessment*) lodged with the Application.¹
- 2 My qualifications and experience are set out in the Transport Assessment. I reaffirm the Code of Conduct statement set out in the Transport Assessment.
- 3 My evidence has been prepared to support the New Zealand Transport Agency Waka Kotahi's (NZTA) response to comments on its notices of requirement (NORs) and applications for resource consents and archaeological authorities (together, *Application*) for the North West Rapid Transit Project (*Project* or *NWRT*).

SCOPE OF EVIDENCE

- 4 My evidence responds to the construction transport-related aspects of the comments made by:
 - 4.1 Costco Wholesale New Zealand Limited (*Costco*);
 - 4.2 New Zealand Retail Property Group (*NZRPG*); and
 - 4.3 Stride Holdings Ltd (*Stride*).
- 5 My evidence addresses the following construction traffic matters raised in those comments:
 - 5.1 The scale and duration of the Project's construction transport effects at Westgate, particularly at the Hobsonville Road Interchange; and
 - 5.2 NZTA's approach to managing construction transport effects.
- 6 Ms Dowling's transport evidence addresses the Project's overall transport effects and responds specifically to the alternative design (Option 3) that Stride considers should be preferred.
- 7 I briefly address the SIDRA modelling for the Project's operational transport effects for completeness.

INDICATIVE DESIGN AT WESTGATE

- 8 At Westgate, the Indicative Design includes an underpass beneath Fred Taylor Drive. Fred Taylor Drive is a key arterial route connecting to the

¹ Part 6 – Attachment 20 - Assessment of Transport Effects (*Transport Assessment*).

Hobsonville Road / SH16 off-ramp / Gunton Drive interchange (Hobsonville Road Interchange), as shown in Figure 1.

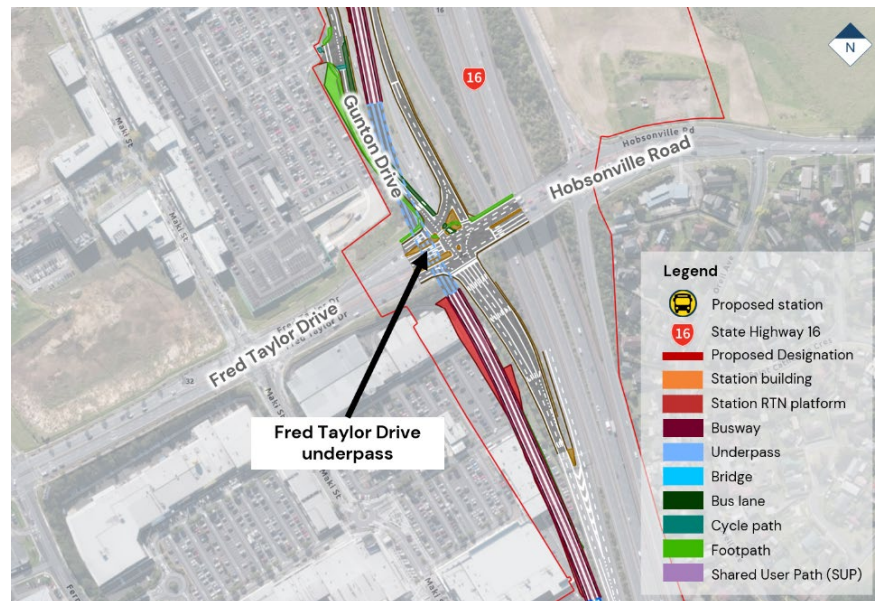


Figure 1 – Indicative Design around Hobsonville Road Interchange (Figure 3-1 in the Transport Assessment)

- 9 Gunton Drive connects to the Hobsonville Road Interchange and serves the Northwest Shopping Centre and the retail area to the north of Westgate precinct. The local bus component of Westgate Te Waiarohia station is currently being constructed off Gunton Drive, between Kedgley Road and Tawhia Drive as shown in Figure 2 - Westgate Te Waiarohia station (Figure 3-4 in the Transport Assessment) and the Project will add the rapid transit component to that station.

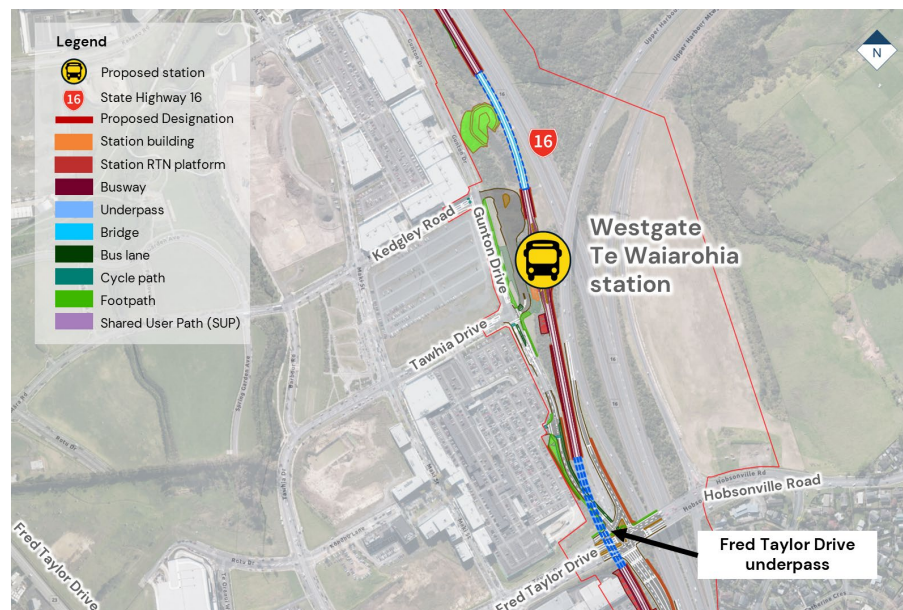


Figure 2 - Westgate Te Waiarohia station (Figure 3-4 in the Transport Assessment)

- 10 The Westgate Station currently being constructed is a local bus interchange station and it is expected to be completed by mid-2026. It will serve local bus services and the WX1 service, and will provide an additional approach at both the Gunton Drive / Kedgley Road and Gunton Drive / Tawhia Drive intersections. The Project includes the rapid transit component of the station, which will be built to the eastern side of the local bus station.
- 11 The Indicative Design includes the widening, extension and remarking of the Hobsonville off-ramp (*Offramp Improvements*) to improve the number of vehicles able to proceed through the Hobsonville Road Interchange, as shown in Figure 3. I consider these works would provide enduring benefits (beyond the Project's construction period) for users of the interchange, particularly those accessing Gunton Drive, which currently has a single lane from the off-ramp to the southern end of Gunton Drive.

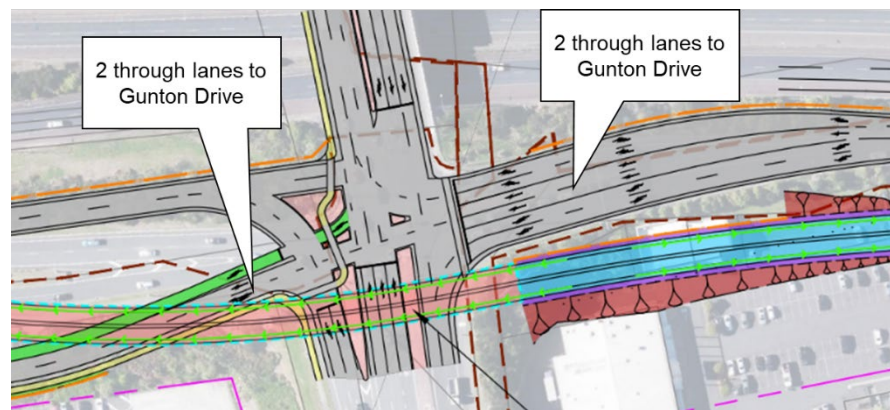


Figure 3 - Indicative Design at Hobsonville Road Interchange (from Attachment 6.1 - Indicative Design West of the Application)

METHODOLOGY FOR ASSESSING CONSTRUCTION TRAFFIC EFFECTS AT WESTGATE

- 12 I disagree with the comments from Costco, Stride and NZRPG that the Project's construction traffic effects have not been adequately assessed.
- 13 SIDRA modelling was undertaken to inform my assessment of the Project's construction traffic effects at and around the Hobsonville Road Interchange.
- 14 The SIDRA modelling focused on the Hobsonville Road Interchange as it is the key constraint for construction traffic effects due to the function it plays in providing access to the wider Westgate network. Accordingly, if construction of the Project has minor impacts at the Hobsonville Road Interchange, I consider it will also have minor impacts across the wider Westgate network.

- 15 I consider that SIDRA modelling is an appropriate tool for assessing potential construction traffic impacts at Westgate. The construction of the Indicative Design would change localised capacity at a signalised interchange as a result of temporary traffic management. SIDRA modelling is specifically designed to test intersection performance under varying capacity and lane configuration scenarios. I consider it provides robust outputs for the metrics most useful for measuring construction traffic effects, including delay and queue storage performance. The construction of the Indicative Design would not result in lane closures or turn/movement restrictions during the day/peak times that could result in network re-routing effects that might require a different assessment methodology.
- 16 Accordingly, I consider the methodology I used to assess the Project's construction traffic effects was appropriate.

ASSESSMENT OF CONSTRUCTION TRANSPORT EFFECTS AT THE HOBSONVILLE ROAD INTERCHANGE

- 17 The Hobsonville Road Interchange currently has operational constraints due to heavy demand for trips in a single lane that causes queues to extend onto the SH16 motorway at busy periods. This queuing is particularly evident during Saturday peak hours, and during the PM peak on congested days.
- 18 The expected effects of temporary traffic management measures required for construction of the Indicative Design on the operation of the Hobsonville Road Interchange were tested in the SIDRA modelling by reducing the lane capacity (the maximum hourly design flow of vehicles) on each road approaching the intersection by 10%. This reduction in lane capacity simulates the lane shifts, uneven surface and typical performance reduction that would occur with temporary traffic management measures in place. It reflects the expectation that driver behaviour would change, as narrow lanes, barriers and reduced shoulder width intentionally cause drivers to slow down and drive more cautiously. The 10% lane capacity reduction is based on observed capacity reductions on other comparable construction projects.
- 19 It is important to note that a 10% lane capacity reduction does not necessarily mean traffic is diverted away from the Hobsonville Road Interchange. The same traffic flows are input into the SIDRA modelling, the lane capacity settings are reduced by 10% and the results show whether there will be any changes in queues and/or delays with this 10% lane capacity reduction. In this case, as a result of the Offramp Improvements, any increases in queues or delays are minimal so I do not expect traffic to divert from the Hobsonville Road Interchange. That is, I do not expect a 10% reduction in demand or vehicles entering the Hobsonville Road Interchange.

- 20 SIDRA modelling was undertaken for scenarios to assess the construction traffic effects of the Indicative Design:
- 20.1 The “do nothing” scenario: the existing road layout;² and
- 20.2 The “construction” scenario: the existing road layout as amended by the Offramp Improvements and with temporary traffic management measures in place.
- 21 The results of this modelling are presented in Table 1.

Table 1 - Level of Service at Hobsonville Road Interchange (Construction Effects)

Performance is indicated by the Level of Service (LOS). Definitions for each LOS are provided in **Appendix A**.

Intersection	Period	Do nothing	Construction
Fred Taylor Dr / Hobsonville Rd / SH16 NBD Off Ramp / Gunton Drive	AM	C	C
	PM	D	E
	Sat Noon	F	D
Hobsonville Rd / SH16 SBD On Ramp / SH18 Off Ramp	AM	C	C
	PM	D	E
	Sat Noon	F	D

- 22 The SIDRA modelling results for the “do nothing” scenario (ie the existing layout) match the observed existing operational constraints (described at paragraph 19 above). The Saturday peak hour model results show the northbound off-ramp has a 19% chance of backing up to the motorway (a 300-350m queue) in that scenario.
- 23 For the “construction” scenario, the SIDRA modelling results show:
- 23.1 During the Saturday peak hour, there is an improved level of service at the Hobsonville Road Interchange and the off-ramp queue is contained within its 140m storage capacity during the Saturday peak hour.
- 23.2 During the AM peak period, there is no change in the level of service performance of the Hobsonville Road Interchange.
- 23.3 During the PM peak period, there is a slight deterioration in the performance of the Hobsonville Road Interchange.

² Based on the existing road layout in 2025 at the time of the assessment of construction traffic effects.

- 24 The improvements above are due to the Off-ramp Improvements rather than the construction works.
- 25 The following section provides more detail on the SIDRA modelling results for the PM peak period as it has a deterioration in performance.

SIDRA MODELLING FOR THE PM PEAK

- 26 The SIDRA modelling of the PM peak period show that the performance of the Hobsonville Road Interchange reduces (that is the LOS reduces from D to E) in the "construction" scenario compared to the "do nothing" scenario.
- 27 Figure 4 shows the modelled queue lengths associated with that LOS reduction.

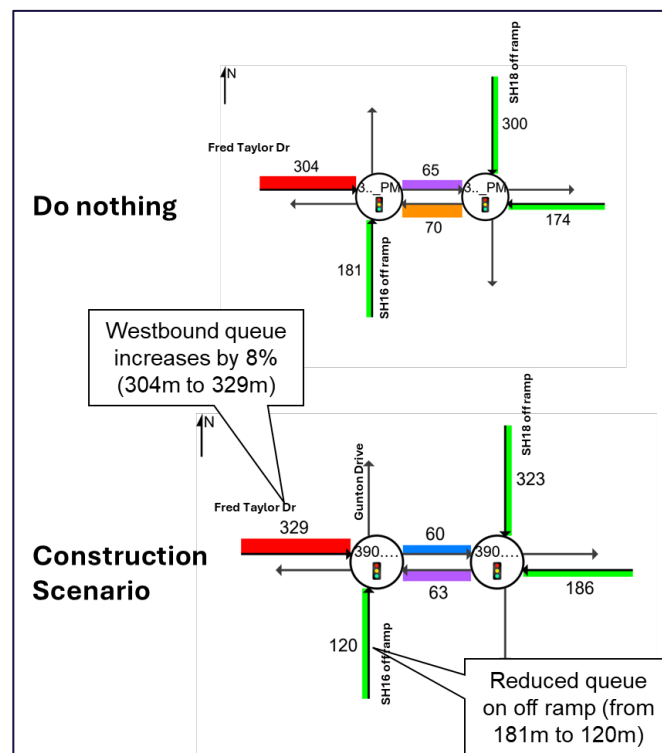


Figure 4 - PM Peak Hour Queue Lengths in "do nothing" and "construction" scenarios (SIDRA)

- 28 The changes in queue lengths at the approaches to the Hobsonville Road Interchange in the PM peak are:
- Fred Taylor Drive eastbound: queue increases from 304m to 329m.
 - SH16 off ramp: queue reduces from 181m to 120m.
 - SH18 off ramp: queue increases from 300m to 323m.

- Hobsonville Road westbound (east of SH18 off ramp): queue increases from 174m to 186m.
- 29 The SIDRA modelling also showed the change in average delay at the approaches to the Hobsonville Road Interchange in the PM peak are:
- Fred Taylor Drive eastbound: delay increases from 76 seconds to 85 seconds;
 - SH16 off ramp: delay increases from 73 seconds to 89 seconds;
 - SH18 off ramp: delay increases from 116 seconds to 138 seconds;
 - Hobsonville Road westbound (east of SH18 off ramp): delay increases from 75 seconds to 84 seconds.
- 30 The construction of the Project will increase the queue lengths at three of four approaches to the Hobsonville Road Interchange in the PM peak (as shown in paragraph 28 above). However, those increases in queue length correspond to approximately 3-4 cars. Accordingly, I consider those queue lengths increases to be negligible.
- 31 Further, in the AM peak period and Saturday noon peak, the queue lengths on all four approaches reduce in the "construction" scenario compared to the "do nothing" scenario.
- 32 During construction of the Project, delays will increase at all approaches to the interchange in the PM peak period (as shown in paragraph 29 above). I consider an increase in intersection delay is expected during the construction of a major project and in my opinion the increased delays in the PM peak result in a minor construction traffic effect. Further, in the AM peak period and Saturday noon peak, the delays on all four approaches reduce (i.e. improve) in the "construction" scenario compared to the "do nothing" scenario. The Saturday noon delay savings with the "construction" scenario compared to the "do nothing" scenario are in the order of 80 seconds on the SH18 off ramp.
- 33 I note the lane layout of Fred Taylor Drive approach to the interchange was changed (in December 2025) subsequent to my assessment of construction effects being prepared. The modelling was re-run to account for that change and the results do not alter the conclusions set out above. The lane layout change will improve the operation of the interchange in all scenarios.
- 34 Therefore, I consider the construction traffic effects at the Hobsonville Road Interchange are minor adverse effects in the PM peak only.

Northside Drive connection

- 35 Stride and NZRPG have requested conditions requiring the Northside Drive connection to be operational before construction of the Project commences at Westgate.
- 36 For the purposes of the Transport Assessment, I assumed the Westgate station and adjacent busway alignment are constructed before Northside Drive is implemented. Accordingly, my assessment of construction transport effects did not rely on the Northside Drive connection.
- 37 If the Northside Drive connection was in place, trips would be diverted from the Hobsonville Road Interchange to Northside Drive (particularly those heading to areas further north of the Hobsonville Road Interchange). The diversion of those trips would improve the operation of the Hobsonville Road Interchange due to fewer vehicles using it. However, in my opinion, the Offramp Improvements provide beneficial improvements to the operation of the Hobsonville Road Interchange during construction and long-term.
- 38 In my opinion, the Northside Drive connection is not needed to manage the Project's construction traffic effects.

Conclusion on construction transport effects

- 39 As set out above, in my opinion, the Project only has adverse construction traffic effects at the Hobsonville Road Interchange in the PM peak and those effects are minor. This conclusion assumes the Offramp Improvements are undertaken prior to construction of the busway section around Fred Taylor Drive commencing. I note that there may be other measures that are more appropriate than the Offramp Improvements to include in the final design of the Project.
- 40 The Project's construction traffic effects are not lasting or permanent. Given the scale and significance of this Project, it is to be expected that the construction of some stages of the Project will be in the order of four years. However, the construction traffic effects will not be constant over that period. They will vary in use and duration, and will be particular to the different construction activities and locations. For example, temporary night time lane closures, lane realignments, and speed reductions will be used in different places, at different times, for different durations of the overall construction period.
- 41 In my opinion, it is neither reasonable nor realistic to expect no reduction in traffic capacity or level of service during construction of this Project or any other major project. The impacts of the Project will be comparable with other major projects around the Auckland region. The effects will be appropriately managed and minimised in accordance with a Construction Traffic Management Plan (CTMP) as discussed below.

NZTA'S APPROACH TO MANAGING CONSTRUCTION TRANSPORT EFFECTS

- 42 A CTMP will be prepared to ensure that the adverse construction traffic effects of the Project are appropriately managed (NZTA's Proposed Designation Condition 16). The CTMP will ensure the contractor appropriately manages any adverse traffic safety and efficiency impacts on other road users caused by the Project.
- 43 The CTMP will be prepared in accordance with the designation conditions and road controlling authority (RCA) requirements and approved through the normal RCA processes.
- 44 The construction of the Project is anticipated to require a range of temporary traffic management measures commonly utilised across the wider Auckland motorway and transport network. The standard temporary traffic management measures that are likely to be used for this Project include:
- 44.1 temporary reduced speed limits;
 - 44.2 narrowed lanes and lane shifts on the state highway and local road network;
 - 44.3 additional site access points; and
 - 44.4 lane closures outside peak periods.
- 45 The CTMP will be prepared once the final design and construction timeframes are known so that the CTMP is calibrated to that detail. I consider this appropriate to ensure the CTMP reflects both the final design and the traffic conditions of the day, rather than anticipating those matters now.
- 46 The CTMP will detail any minimum network performance parameters, monitoring and measures to be implemented in the event of an exceedance of those parameters (Conditions 16(b)(x) and (xi)). Accordingly, I consider the effectiveness of the temporary traffic management measures will be throughout construction.
- 47 In my opinion, NZTA's proposed CTMP condition will ensure the Project's construction traffic effects are minor and managed appropriately.

ASSESSMENT OF OPERATIONAL TRANSPORT EFFECTS AT THE HOBSONVILLE ROAD INTERCHANGE

- 48 For completeness, I briefly address operational effects (post construction).

- 49 The SIDRA modelling showed that the Indicative Alignment (with the Offramp Improvements) will have permanent positive benefits as it will result in level of service improvements as summarised in Table 2. Accordingly, I do not discuss operational effects further in my statement of evidence.

Table 2 - Level of Service at Hobsonville Road Interchange (Operational Effects)

Performance is indicated by the LOS. Definitions for each LOS are provided in Appendix A.

Intersection	Period	Do Nothing	With Project
Fred Taylor Dr / Hobsonville Rd / SH16 NBD Off Ramp / Gunton Drive	AM	C	C
	PM	D	D
	Sat Noon	F	D
Hobsonville Rd / SH16 SBD On Ramp / SH18 Off Ramp	AM	C	C
	PM	D	D
	Sat Noon	F	D

Meredith Bates
3 June 2026

APPENDIX A: LOS definitions based on average delay per vehicle in seconds (d in seconds)

The table below defines the LOS thresholds based on average delay per vehicle in seconds (“d”) at signalised intersections.

Level of Service	Traffic flow description	Signalised intersection
A	Free flow: Traffic flows at or above the posted speed limit with full lane mobility.	$d \leq 10$
B	Reasonably free flow: LOS A speeds maintained, slight restrictions on manoeuvrability.	$10 < d \leq 20$
C	Stable flow near free flow; lane changes require more driver awareness.	$20 < d \leq 35$
D	Approaching unstable flow; reduced speeds and limited manoeuvrability.	$35 < d \leq 55$
E	Unstable flow at capacity; irregular speeds and minimal gaps for manoeuvring.	$55 < d \leq 80$
F	Forced or breakdown flow; unpredictable travel times and frequent slowing.	$80 < d$

Source: SIDRA INTERSECTION 9.1 User Guide (April 2023).