

ATTACHMENT 7.1

ADDITIONAL INFORMATION REQUEST

TRANSPORT

This attachment sets out the questions and responses to the clause 23 request (request for additional information) from the Council on the original plan change. This addresses the matters related to transport.

This attachment sets out the topic, Council's question, the technical expert who prepared the response and the additional information sought by the Council.

**'Proposed Plan Change xx (Private) – Te Auaunga'
Amending I334 Wairaka Precinct**

Applicant: Te Tūāpapa Kura Kāinga - Ministry of Housing and Urban Development

Address: 1-139 Carrington Road, Mt Albert

Proposed activities: PPC – Partial Rezoning and Revised (currently Wairaka) Precinct Provisions

Overview of applicant Response

- 1 This is a combined response for questions T1, T2, T3, T5 & T5.
- 2 These questions largely focus on the ITA document (Stantec, June 2020, approved by Auckland Council March 2021).
- 3 While the approved ITA remains relevant for the plan change application, significant parts – including matters such as the queried development assumptions and trip generation rates – have since changed, and instead are referenced in the Te Auaunga Plan Change - Transport Assessment & Traffic Modelling Report, referenced herein as the "TMR" (Stantec, December 2022). The TMR also identified which of the previous ITA assumptions remain valid (such as the overall transport environment and related principles). Thus both documents have to be read together to assess the plan change application. These documents were included in the package of documents contained in Appendix 5 to the plan change request: "Te Auaunga Precinct 2022: Integrated Transport Assessment".
- 4 As such, we will refer to the updated statements made in the TMR, rather than those in the original ITA being queried in the responses to these questions.

Specific request T1

With reference to ITA Section 5.8 and Appendix E please provide evidence to confirm consistency of the new heights proposed under the PC with trip generation assumptions in the ITA, including correlation between building height and gross floor area / development yield, and in turn, trip generation.

Please also provide an alternative higher trip generation scenario, in the event that higher development yields could be achieved under the new permitted height limits (see Planning P1 below).

**Reasons for request
T1**

The AEE / Section 32 Report refers to areas within the precinct where increased height is to be permitted, to in turn enable additional growth. However, it is not clear as to how this has informed the assessment of trip generation potential within the ITA, in Section 5.8 and Appendix E, with regards to correlating increased building heights with corresponding increases in gross floor area, numbers of residential apartments and other related land-use metrics.

Further analysis of the correlation between building heights, development yield and consequent trip generation potential is therefore considered appropriate in order to understand the full potential longer-term transport effects of the proposal.

Please note that this analysis should be informed by any updated yield information as a result of RFI P1 below.

Applicant response

Consistency of new heights with trip generation assumptions

- 1 Regarding the influence of added height on trip generation, there is no direct influence of this on the traffic modelling, as the traffic model is fundamentally based on a number of dwellings, rather than building heights. As such, while changes in height proposed do play a role in changing the number of dwellings that HUD considers can be provided, traffic modelling is solely based on assessing the impacts created by the targeted number of residential dwellings (and other activities, where relevant).
- 2 As heights are not changing to the same level across the whole precinct, changes in height enabled by the plan change could in practice lead to changes in traffic distribution *within* the precinct - with more traffic originating, as a percentage of all precinct traffic, from some areas than before.
- 3 For clarity, it is acknowledged that when the traffic-modelled number of dwellings was increased from the ITA assumptions to the TMR (plan change) assumptions, the increase was distributed linearly (i.e. all internal areas were factored to the same degree).
- 4 This was done in this more simplified manner because HUD and the development partners cannot yet identify the exact numbers of dwellings for the various areas within the centre and north of the precinct, only the overall maximum assumption being sought – these being the scale of dwellings and associated trip generations used in the TMR modelling (superseding the ITA).

- 5 However, the precinct is spatially relatively small – excluding the southern zones (disconnected in motor vehicle terms from the central and northern areas), the maximum distances are around 800m. The central and northern areas are also interconnected for motor vehicle purposes, and their only links to the wider network are via the same “gates” all connecting onto Carrington Road.
- 6 Small changes in the “centre of gravity” might be caused by local height changes being more substantial in one area compared to another area, or one area seeing slightly more intensive development than the other. However, for the above reasons, they will tend to quickly redistribute themselves within the precinct based on traffic conditions at the “gates” (path of least resistance based on congestion and roading design). All such traffic in any case will travel along the same external route (Carrington Road). As such, the slight simplification is not considered to have any material impacts on the assessment of traffic impacts undertaken within the TMR.
- 7 It should also be noted that a significant part of the “added development” now being traffic modelled is not in fact additional proposed density created by either zoning changes or permitted height changes – rather a large part of the added density represents a simple extension of the modelling horizon to a point where more of the already permitted density is assumed to have been constructed. Further discussion on the difference between the yield enabled by the operative provisions and the new plan change requested precinct provisions has been provided by John Duthie in clause 23 response P8B.

Alternative higher trip generation scenario

- 8 Regarding the request for an “alternative higher trip generation scenario”, this is not considered necessary, as the ITA / TMR already sets effective traffic-related limits of development via the maximum development assessed (as per Section 3 of the ITA, for 2,049 dwellings by 2028, respectively as per Section 2 of the TMR, for 4,000 dwellings by 2031 – plus the relevant other non-dwelling activities within the precinct for each scenario).
- 9 If HUD, or one of the development partners in the precinct, proposed to substantially change or exceed these assumptions in the future, this would then not be in accordance with the ITA, including the TMR. Accordingly, this would then lead, at that time, to a requirement to provide a new or revised assessment to exceed those levels (and/or an updated ITA / traffic model), as required by the proposed precinct provisions.
- 10 As such, an “alternative higher trip generation scenario” for potential “higher yields” has relevance only if such a proposal for more development is made in the future. It is not a scenario that HUD seeks direct or indirect approval for with this plan change application.

Specific request T2

Please provide further clarity for the choice of trip rate reductions cited in section 5.8.2.1 of the ITA, namely:

- 10% reduction in tertiary education Trip Rates, based on 'likelihood of remote learning'
- 30% reduction in tertiary education trips, due to behavioural change influenced by network congestion

And similarly for the choice of trip rate reduction cited in section 5.8.3.3:

- 25% reduction in residential trip rates in the North-west, northern and Carrington Zones, due to congestion driving a stronger mode shift (compared to 20% agreed with AT)

The above percentage reductions should be supported by appropriate quantitative evidence, for example, in relation to the impacts of remote learning on education trip generation, or the influence of severe congestion on encouraging modal shift.

Please also confirm whether these percentage reductions have been agreed with AT.

Reasons for request T2 In the absence of reasonable evidence to support the proposed reductions, and confirmation of their agreed use with the Road Controlling Authority (AT), it is not possible to verify that a fair and robust assessment of trip generation and transport network performance has been undertaken.

Applicant response

Trip rate reductions

- 1 Section 3.6. Table 5 of the TMR contains a summary of the trip generation rate changes between the ITA traffic model and the TMR traffic model.
- 2 Before addressing specific rates, it is useful to set out the overall approach to trip generation rates.
- 3 Having identified a specific level of development sought (which is largely enabled by the zoning and enabled heights even before the plan change; refer discussion in T1), traffic and transport work in preparation for the plan change focussed as much on reducing (car) traffic generation as on accommodating it. This is in line with both the precinct's policies¹, the approved ITA's transport vision² and Government policy.³
- 4 However, in the review of traffic models and their assumptions, there is often an approach of assuming "conservative" trip generation rates as a default, to be "on the safe side" - or to undertake modelling with such higher rates (i.e. as sensitivity tests) which then become treated as "de facto" impacts being discussed.

¹ Auckland Unitary Plan Operative in Part, I334.3 Policy 22 – "Manage the expected traffic generated by activities in the precinct to avoid, remedy and mitigate adverse effects on the safety and efficiency of the surrounding transport network, particularly at peak times..."

² Section 4.1 of the approved ITA – "...the ITA envisages that the Precinct... will have a transport environment that: Avoids excess vehicle dominance (whether for movement or car parking)..."

³ New Zealand Government Emissions Reduction Plan 2022, Summary Document – "... reduce the total kilometres light vehicles travel by 20 per cent by 2035..."

- 5 HUD, advised by Stantec, acknowledges that using conservative rates historically generated by Auckland developments – even some apartment developments – would lead to significantly higher traffic (congestion and parking) impacts than described in the TMR.
- 6 These impacts would likely result in a need to either reduce the proposed development, significantly increase vehicular capacity on surrounding roads, or accept higher levels of congestion. Clearly, none of the three outcomes are desirable. In practice, significant capacity increases for private motor vehicles would also be prohibitively expensive / impractical, and arguably would run contrary to overarching policies such as the ones cited above.
- 7 However, as set out in the ITA and TMR, the precinct is very well-suited to medium-high density residential development from a transport perspective. It will see significantly reduced traffic impacts overall for Auckland averages – both in terms of trips generated and trip lengths (VKT created) – than the same number of dwellings created in greenfields locations on Auckland’s fringe. This is even before acknowledging the reduced mode share for public transport and active modes possible in such further-out greenfield locations.
- 8 As such, any discussion about trip generation assumptions for the precinct that may be considered as “aspirational” by reviewers should focus not on increasing the trip generation “to be safe”.
- 9 Instead, discussion should focus on what measures (physical, operational or in terms of review conditions) – “carrots and sticks” – are necessary to give authorities confidence that the trip generation rates assumed will eventuate in reality.
- 10 The applicant team considers that such significant measures are already being proposed, with strict car parking constraints being the most immediate (“stick”), and improvements to non-car modes being the other main change (“carrot”).

Education trip rates

- 11 Regarding the specific education trip rate query, we consider that the question seems to mis-identify the (most relevant) rates being applied in the TMR.
- 12 It is correct that a 10% reduction to historically appropriate tertiary education trip generation rates is proposed for the 2024 Scenario A of the ITA, rising to a reduction of 30% by the 2028 Scenario B.
- 13 However, the TMR further reduces this - reducing the original 0.11 trips / student during the peak hour to 0.07, a reduction of about 36% in total, or roughly one third reduction (see Section 5.8.2.1 of the ITA and Section 3.6 of the TMR).
- 14 While this is obviously a significant and aspirational change, this reduction is a combination of many various “carrot and stick” factors on the (driving) behaviour of Unitec’s students – not just one factor in isolation. The influences include:
 - (a) Remote learning: The current tertiary education realignment in New Zealand makes it somewhat more difficult to identify remote learning policy offerings likely to be typical in the future. However, this is now significantly more typical than before Covid and is likely to form a large part of any student’s learning experience. This also includes more informal cooperation by students as well, rather than necessarily meeting for group projects at the Unitec site.

- (b) 2023 Census data – expected to be available before the plan change hearing – is likely to also assist with a better post-Covid data base regarding remote learning / working levels.
- (c) Unitec’s Travel Demand Management – the Travel Plan for Mt Albert Campus (2020-2021)⁴ sees potential to reduce car traffic by a third (which is the same level as the TMR assumes) and focusses on the development of a carpooling system and encouragement of active commutes. It states:

“Over the next few years, as campus retracts back to the core, we will have less space for parking. This is our opportunity to develop a campus that supports healthy, sustainable travel choices.”

- (d) Congestion impacts: For example, where students choose to travel earlier or (where feasible) later, or switching to other transport modes such as bus, train & walk, or cycling because increased congestion as identified in the TMR makes driving a less attractive mode in relative terms than it is now. This is especially relevant as projects such as the Carrington Road Upgrade at the same time aim to improve public transport and active modes.
- (e) Research into demand peak spreading is discussed in detail in New Zealand Research Report No 241⁵ and a number of other studies e.g. [emphasis added]:

*“As congestion increases in urban road networks, there is a tendency for the distribution of traffic during peak periods to become more uniform, as journeys are **delayed or deliberately re-timed** to avoid the worst parts of the peak periods”.*⁶

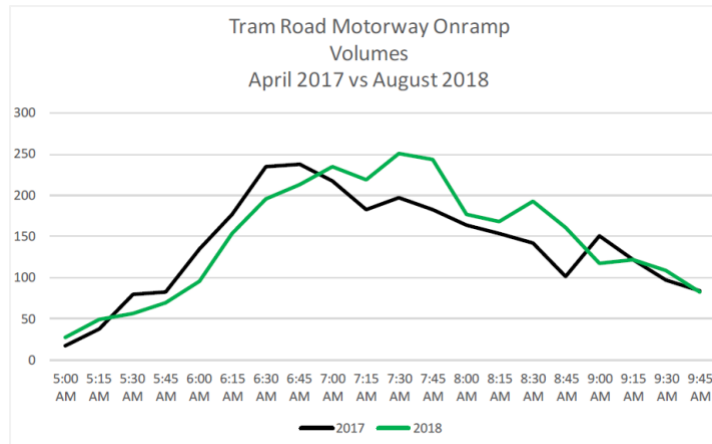
- (f) An example from Christchurch⁷, refer below, shows Tram Road on-ramp traffic volumes pre-Western Belfast Bypass (WBB) completion in 2017 and post-completion in 2018. It shows traffic demand profile peaked at around 6:30am earlier in 2017 as people chose to travel earlier to avoid congestion compared to 7:30am peak after the completion of WBB. The difference in travel demand during any specific time peak hour was around 10%-25% upwards / downwards, showing that congestion can directly affect demand.

⁴ <https://oneplanet.unitec.ac.nz/wp-content/uploads/2022/02/Travel-Plan-2020-and-2021.pdf>.

⁵ <https://www.nzta.govt.nz/assets/resources/research/reports/241/241-Research-into-traffic-peak-spreading.pdf>.

⁶ <https://assets.highwaysengland.co.uk/roads/road-projects/a2-bean-ebbsfleet-junction-improvements/Orders/I.8+DMRB+Part+1+Traffic+Appraisal.pdf>.

⁷ Cited in “NZ Modelling User Group (MUGs) Micro Time-of-Day Choice Research Validation of Existing MTC Methods”, report by Stantec, V4, August 2021.



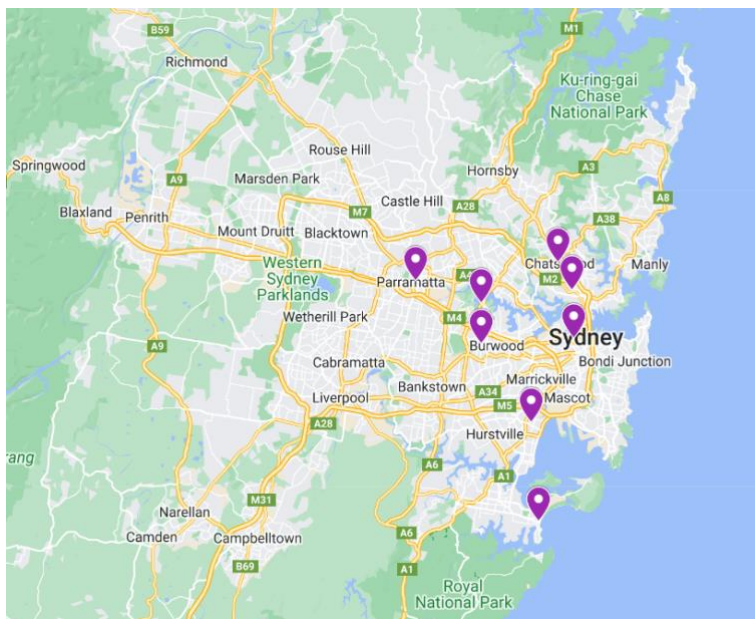
- (g) Public transport improvements: The assumptions made in the TMR are for vehicle traffic levels in 2031, some eight years from the time of production of the TMR. Despite recent difficulties for public transport patronage in Auckland caused by Covid effects and driver shortages, it is considered realistic to expect that access by public transport to the precinct will significantly improve in the coming eight years from its already very good accessibility levels.
- (h) The ITA discusses the expected changes in Section 4, while the TMR also discusses further public transport-related improvements (particularly an extended Carrington Road Upgrade scope) in Section 2.4.
- (i) Active mode improvements: Similar to the public transport improvements, safer and more convenient ways to walk, cycle or scooter to the precinct will also assist in reducing the trip generation rates. Making connections to and from the Western Line train stations more accessible also boosts multi-modal trips (walk-train, cycle-train).
- (j) The ITA discusses the expected changes in Section 4, while the TMR also discusses further public transport-related improvements (particularly an enlarged Carrington Road Upgrade scope) in Section 2.4.
- (k) Unitec charging for car parking – the site survey of existing trip generation at the Unitec site in 2014 was undertaken at a time when car parking in the precinct was both plentiful and fully free.⁸ Unitec’s parking availability has since shrunk substantially, and Unitec have confirmed to HUD that car parking will in the future be charged. This will make driving to the Unitec campus significantly less attractive.
- 15 All these assumptions are expected to significantly reduce the historically “suburban” driving patterns among Unitec students as Auckland urbanises further.
- 16 In regard to “sanity checking” the projected total reduction, it is useful to assess the car mode share percentages of other New Zealand tertiary institutes. While the 45% driving (driver or passenger) mode share rate found for Unitec students in 2018 is unlikely in the foreseeable future to drop to the 4% to 13% driving mode shares achieved at City Centre and City Centre Fringe tertiary education institutes in Auckland⁹ an effective “one third reduction” as per the trip rate assumptions only requires this 45% to drop to 30%.

⁸ In 2014, there were approximately 2,650 car parks available to students and staff, based on *Report on Car Parking at Unitec Campuses For Commercialisation of Car Parking for Unitec, Silvereye, 2014*.

⁹ Section 2.4.2 of the ITA and Table 4.3, Auckland Transport Tertiary Student Travel Survey 2018.

Residential trip rates

- 17 Regarding the question on further residential trip generation rate reductions in the North-west, northern and Carrington areas in the ITA, we refer to the discussion in Section 5.8.3.3 of the ITA. While the added increase from 20% to 25% was not explicitly agreed again with Auckland Transport, it is noted that the ITA has since been approved by Auckland Council – this included extensive Auckland Transport feedback to Council. As such, the ITA rates, including these reductions can be considered the agreed baseline, from which further changes in the TMR proceed.
- 18 In this regard, as set out in the TMR, significant further changes in assumptions have occurred since the ITA. This is in part because some of the rates in the ITA are considered by HUD as rates that were chosen in 2020 “to be safe”, rather than to represent rates resulting from more stringent “carrot and stick” measures to reduce private car travel to and from the development.
- 19 The inclusion of more stringent measures than in the ITA – most substantially, a significant reduction of car parking compared to the ITA assumptions – also results in a need to differentiate more between different trip generation rates for different types of dwellings. This includes differentiating rates by the average level of car parking (if any) the dwellings will provide.
- 20 This is discussed in detail in Section 3.6.3 of the TMR and broken down by areas before being summarised in Appendix A of the TMR.
- 21 The TMR in these sections also discusses surveys by Transport for New South Wales (formerly Roads and Maritime Services). Published as far back as 2013, this survey data supports reduced rates as being realistic. The relevant study assessed trip generation rates of urban apartments with good public transport access in Sydney. The areas where surveys took place are shown below:



- 22 The trip generation study in Sydney covered high density residential areas that comprised mostly 2+ bedrooms. The number of dwellings at the surveyed developments ranged between 28 and 234 dwellings with an average of 100 dwellings per development and the parking ratio per dwelling ranged between 0.64 to 1.60 with an average rate of 1.24 parking spaces per apartment.
- 23 For the proposed development at Wairaka, out of the 4,000 dwellings, at least 1,000 are intended to provide no car parking at all, while the remaining 2,000 will provide 0.7 or less car parking spaces per apartment on average. Such parking ratio per dwelling is therefore towards the lower rate of the surveyed data in Sydney.
- 24 In addition to that, as set out in the TMR's relevant section, the rates for the 2031 traffic model remain still higher than the Sydney rates:

...represented a halfway average between the 2020 ITA trip generation rates for the 1.5-bedroom and the average surveyed Sydney trip rate per unit (the higher of trip rate per unit, per parking space and per bedroom).

- 25 The survey data identifies that while chosen rates are notably lower than applied in Auckland in the past, they are far from unrealistic in comprehensively planned, parking-constrained and well-located developments such as those proposed for the precinct.

Specific request T3

Please assess options for southern connections to the Precinct (via Laurel Street / Renton Road / Rhodes Avenue), but with access limited to walking and cycling and potential public transport use.

Reasons for request T3

While any vehicular access via Laurel Street, Renton Road and Rhodes Avenue would require a change to Wairaka Precinct Rule I334.3(26), which currently precludes direct vehicle access to and from the south, an arrangement allowing for access limited to use by sustainable modes of travel could contribute toward strategic aims to achieve modal shift.

The ITA references a previously considered 'back route' bus service following the north-south spine and looping via Carrington Road at both ends of the Precinct, which AT previously did not support due to slow service speeds compared to Carrington Road.

However, a potential variation to this proposal could include a re-routing of such a bus service via a new bus-only link to the south of the Precinct, which would provide buses with the advantage of a shorter-distance route compared to general traffic.

The ITA acknowledges previous consideration towards additional access to the Precinct from the south, and while it confirms that the arterial road network to the southeast of the precinct is currently not forecast to experience significant congestion issues which would warrant new road connections, a bus service serving the main spine road through the Precinct could have wider-spread benefits for trips generated within the Precinct.

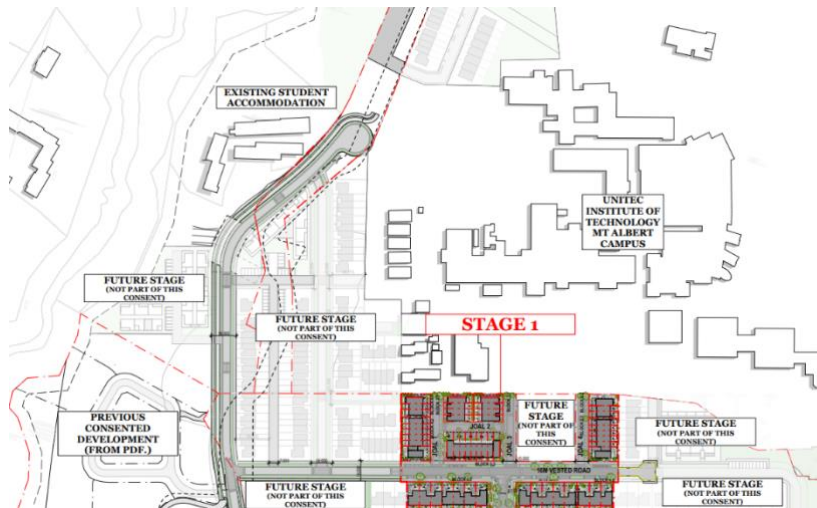
Applicant response

Precinct provisions

- 1 To clarify in response to the question, neither the existing precinct objectives and rules nor those proposed in the plan change specifically prohibit vehicular connectivity from the southern existing residential roads into the precinct as such; rather, the various objectives, standards and matters of control / matters of discretion that intended to:
 - (a) discourage direct vehicular access from these southern roads into the tertiary education site and/or any tertiary education parking buildings (e.g. policy 26 referenced in the clause 23 request and non-complying activity A30);
 - (b) discourage "rat running" through the precinct to avoid Carrington Road congestion; and
 - (c) retain a residential character for the southern streets.
- 2 Extensions of the existing roads into the precinct provided that a cul-de-sac is maintained will be a permitted activity (A27) and extensions into the precinct as a public road are a restricted discretionary activity (A29), including specifically to provide vehicular connections to the western road within the precinct as sought through the plan change.
- 3 For the avoidance of doubt, neither the ITA, the ITA traffic modelling, or the updated assumptions in the Te Auaunga Plan Change – Transport Assessment & Traffic Modelling Report (*TMR*) include any vehicular connectivity between the northern and central areas of the precinct (in this regard including the Unitec tertiary education area) and the southern residential zones within the precinct and the southern existing roads. There is a clear "cut" in the traffic model preventing cross-traffic.
- 4 For completeness, it is also noted that Policies I334.3 (25) and (26) currently do not identify (list) Mark Road, which in the plan change's version of Precinct plan 1 is proposed to also be shown as connected into the precinct. However, for avoidance of doubt, the relevant policies (and the statements made below) are considered by HUD to also cover this fourth southern local street.

Existing consents

- 5 For context, it is noted that the Wairaka Precinct Stage 1 development recently consented under the COVID-19 Recovery (Fast-track Consenting) Act 2020 authorises extensions to Laurel Street and Rhodes Avenue, including separated cycle and pedestrian facilities. Together with the consented Spine Road through the 'backbone' consent (BUN60386270) the existing precinct provisions are therefore now increasingly being translated into actual physical roading details, i.e. development envisages turning heads at the "cut" preventing vehicular cross-connections, as shown below in an excerpt from the Stage 1 application's masterplan.



- 6 While not directly affecting the plan change (which does not propose specific roading designs, nor proposes to modify the relevant parts of the precinct rules), these plans are a good representation of what the traffic models in the ITA/TMR assume – that the "cut" will include a form of (ideally physical) barrier to vehicle connectivity, while active mode connections across the "cut" remain uninterrupted. It is also understood that there is the possibility that not all internal roads necessary for such a link will be vested as public roads by the development partners.

Walking and cycling connections

- 7 The Wairaka Precinct Stage 1 consent also demonstrates how cycle and pedestrian connections are proposed to be provided in the precinct.

Bus-only route

- 8 Regarding the possibility of a "back route" bus service travelling through the southern residential roads and then connecting onwards along the Spine Road across such a "cut", it is considered that there is nothing within the precinct rules as written that would prohibit this, nor would the changes now proposed as part of the plan change modify any relevant rules. However, there would arguably be a need for any such proposal to show how a "bus only" link would be implemented in such a way to discourage private car use. Signage alone would be considered highly unlikely to be sufficient.

- 9 Auckland Transport over the last ten years has implemented an ambitious overhaul of its public transport network (the “New Network”), which re-prioritised bus services onto main corridors – to achieve greater frequencies, better reliability, and the ability to implement bus priority more effectively.
- 10 A “back route” through the precinct would appear to be contrary to the service design objectives and relevant public transport planning policy by Auckland Transport. For example, Auckland Transport says the following on their own website regarding the removal of bus stops/routes from some streets as part of the New Network re-organisation of routes [emphasis added]:
- 25.1 *Some of the factors we consider when removing bus services from a street include low all-day patronage, road layout constraints, [alternative] access to frequent services, and shortening the routes to make them quicker and more direct.*
- 11 These factors weigh particularly in cases where a back route would run parallel to, and in-between, two nearby Frequent Transport Network corridors whose stops are well accessible from the vast majority of the Precinct (stops on Great North Road and Carrington Road). It would also arguably undermine planned bus priority improvement on Carrington Road as part of the Carrington Road Upgrade.
- 12 In summary, it is not considered necessary or appropriate to provide specific provision for such a service in the precinct provisions themselves. There is nothing in the plan change that prevents such a “back route” from being implemented in the future, should there be changes to public transport service planning guidance, or changed local conditions that would make such a route more desirable.

Specific request T4 Please provide an assessment based on the Woodward Road Level Crossing not being removed.

Reasons for request T4 The Table in Section 4.9 ‘Summary of Transport Assumptions’ assumes completion of the Level Crossing Removal in all modelled scenarios. It is uncertain at this stage what the timing of those works would be (updates from KiwiRail / AT would be beneficial in that respect).

In the event that this work does not take place by the time of completion of Plan Change development and other transport proposals, an analysis should be provided of the level of operational effects on the adjoining road network.

Further detail on this proposal would be beneficial for background context and understanding the timing and nature of adverse effects on the adjoining road network. Possible considerations could include development staging to align with the Rail Crossing works being completed and construction works being timed to avoid the construction phase of Carrington Road corridor improvements.

Applicant response

- 1 The transport reviewer appears to have read Table 4.9's relevant row as "Level crossing removal at Woodward Road".
- 2 The table's relevant row however states "Level crossing at Woodward Road" (no mention of removal). That is, the ITA (and the TMR) retain the level crossing in their traffic models in all scenarios and apply modelled penalties (to replicate the effect of periods of crossing closure) to car traffic along this route.
- 3 In earlier discussions (prior to the 2020 ITA model being finalised), it had been considered whether the removal (grade separation) of the Woodward Road level crossing would have been a beneficial change. However, tests found that in terms of the traffic models, removal did not create significant benefits.
- 4 Therefore, while there may well be advantages from a potential future removal of the crossing, perhaps as part of a future Auckland Transport/KiwiRail level crossing removal programme, the level crossing was retained in all models, and the table row states this.

Specific request T5

Please provide a schedule of transport improvements and interventions with 'trigger points' in the form of development milestones (e.g. nos. dwellings, completion of other land use activities), at which particular improvements are deemed to be required. Please also include anticipated timescales based on latest information available.

Reasons for request T5

While Section 4.9 of the ITA lists Transport Assumptions and interventions included in the traffic modelling scenarios, many of these are notably dependent on other parties for funding and delivery, such as the Carrington Road upgrade works to be delivered by AT.

Following recent discussions with AT, it is understood that the timeline for delivery of the Carrington Road improvements is subject to ongoing uncertainty and may extend beyond the horizons assumed for the traffic modelling scenarios (of 2024 and 2028 for Scenarios A and B respectively).

Trigger points for individual transport improvements according to levels of development completed may ultimately be seen as more appropriate, to ensure that transport effects will be mitigated in a timely manner.

It is also appropriate to revisit the traffic modelling scenarios with regard to the assessment years and particular improvements assumed in each scenario, in the event that the full package of Carrington Road improvements cannot be delivered by the respective time horizons.

Applicant response

Carrington Road upgrade

- 1 In December 2022, the Government announced \$113 million in funding for the Carrington Road upgrade. That funding, which was provided through the Infrastructure Acceleration Fund, is explicitly tied to the development proposed within the precinct.

- 2 Auckland Council (and then Auckland Transport (AT)) were successful in their application to the government for this standalone, competitive, grant funding round – which was not part of regular ATAP or other funding streams – as they committed to meet criteria that required the Carrington Road upgrade works timeframe to enable the housing development, and included a 2025 physical works start date. These documents can be supplied by AT. While it is appreciated that a project of this scale will always have a measure of delivery uncertainty around it, in terms of design, consenting and construction timeframes, it is not considered accurate by HUD – as one of the parties to the relevant contracts mentioned above – to characterise the status of the upgrade as having “ongoing uncertainty”.

Assumptions and trigger points

- 3 The answer to this question can be found in the “assumptions” sections of the ITA (Section 3 for development and Section 4 for transport assumptions) and TMR (Section 2 for development and transport updates to the ITA). This is further summarised in tables in Section 4.9 of the ITA and Section 3.8.3 of the TMR respectively.
- 4 These sections of the ITA and TMR already provide an essentially “three stage” trigger point process which also identifies the key mitigations required:
- (a) Scenario A in the ITA (i.e. to allow up to 1,023 dwellings, limited external road network changes are required beyond the first signalisation of an additional access “gate” – i.e. no Carrington Road Upgrade is required).¹⁰
 - (b) Scenario B in the ITA (i.e. to allow up to 2,049 dwellings, the Carrington Road Upgrade needs to be implemented (along the precinct frontage only) including added signalised intersections along the length including Woodward Rd).
 - (c) The TMR scenario (i.e. to allow up to 4,000 dwellings, the Carrington Road Upgrade needs to be implemented along the length of Carrington Road, not just the precinct frontage).
- 5 While these scenarios each have assumed horizon years (2024, 2028 and 2031 respectively), it is considered that the level of development and assumed mitigation represent the most relevant scenarios in response to the stated query.
- 6 As such, there is not considered to be any need for or benefit from modelling other time horizons “in case of non-delivery” (or only partial delivery) of the extended Carrington Road Upgrade.
- 7 If such non-delivery occurred, this would simply mean that development could only occur up to the assumptions of the “lower” scenario that does not yet include the missing upgrade, as new development in the precinct will be assessed for consistency with any existing ITA applying to the proposed development. Alternatively, an applicant for development could undertake new modelling and/or an update of the ITA at that time to assess alternate ways of ensuring appropriate mitigation. (Refer proposed matter of discretion I334.8.1(1A)(f)(i).)

¹⁰ It is noted for avoidance of doubt that approval of the ITA was contingent on further sensitivity modelling on AT request. This led to an agreement that the first access “gate” may need to be signalised after 600 dwellings (Gate 2 in the ITA assumptions, since proposed to instead be Gate 1 by the local development parties and modified accordingly in the TMR). This approved arrangement essentially creates an agreed **fourth scenario** (lowest-intensity in comparison), for which no signalisation or Precinct-external road upgrades (beyond tie-in adjustments at the “gates”) are deemed necessary at all.

- 8 However, the already-modelled scenarios represent a logically stepped increase in both development levels and mitigation, including assessing at what development levels the basic and extended Carrington Road Upgrades become necessary.
- 9 Therefore, the request is already considered fulfilled by the application documents.

'Proposed Plan Change xx (Private) – Te Auaunga'
Amending I334 Wairaka Precinct

Applicant: Te Tūāpapa Kura Kāinga – Ministry of Housing and Urban Development

Address: 1-139 Carrington Road, Mt Albert

Proposed activities: PPC – Partial Rezoning and Revised (currently Wairaka) Precinct Provisions

Specific request Please update the proposed Precinct Plan to show a shared path connection in the northern part of the precinct, to replace the linkage lost through proposed PC75.

Reasons for request It is understood that consideration has been given to an alternative shared path route. This should be illustrated on the Precinct Plan for consideration. Note that the intention to replace this path was referred to in the 11 May 2021 MHUD letter (see also OS6).

Applicant response provided by John Duthie, Tattico

Applicant response

- 1 The Precinct plan map update provided with the clause 23 response package and reproduced for ease of reference below shows the proposed walking and cycling path connection in the northern part of the precinct. The new path section is proposed to run from approximately where the Northwestern Shared Path's boardwalk section finishes, travelling between Building 1 and the open space to connect to Carrington Road in the vicinity of the current path crossing south of Sutherland Road. The purpose of the new path section is to provide connectivity for future residents in the centre and north of the precinct.

- 2 Although we understand some alternatives have also been investigated by Council/ Auckland Transport (A7), the advantages of placing the path in this location are considered to be:
 - (a) there is sufficient space in this location to fully separate pedestrians and cyclists, avoiding the user conflicts that sometimes arise with shared paths;

 - (b) it separates cycling traffic heading further west (or east) from cyclists heading north/south, who are likely to continue along the separate cycleway within the precinct (also shown on the Precinct plan), which creates additional capacity for cycling;

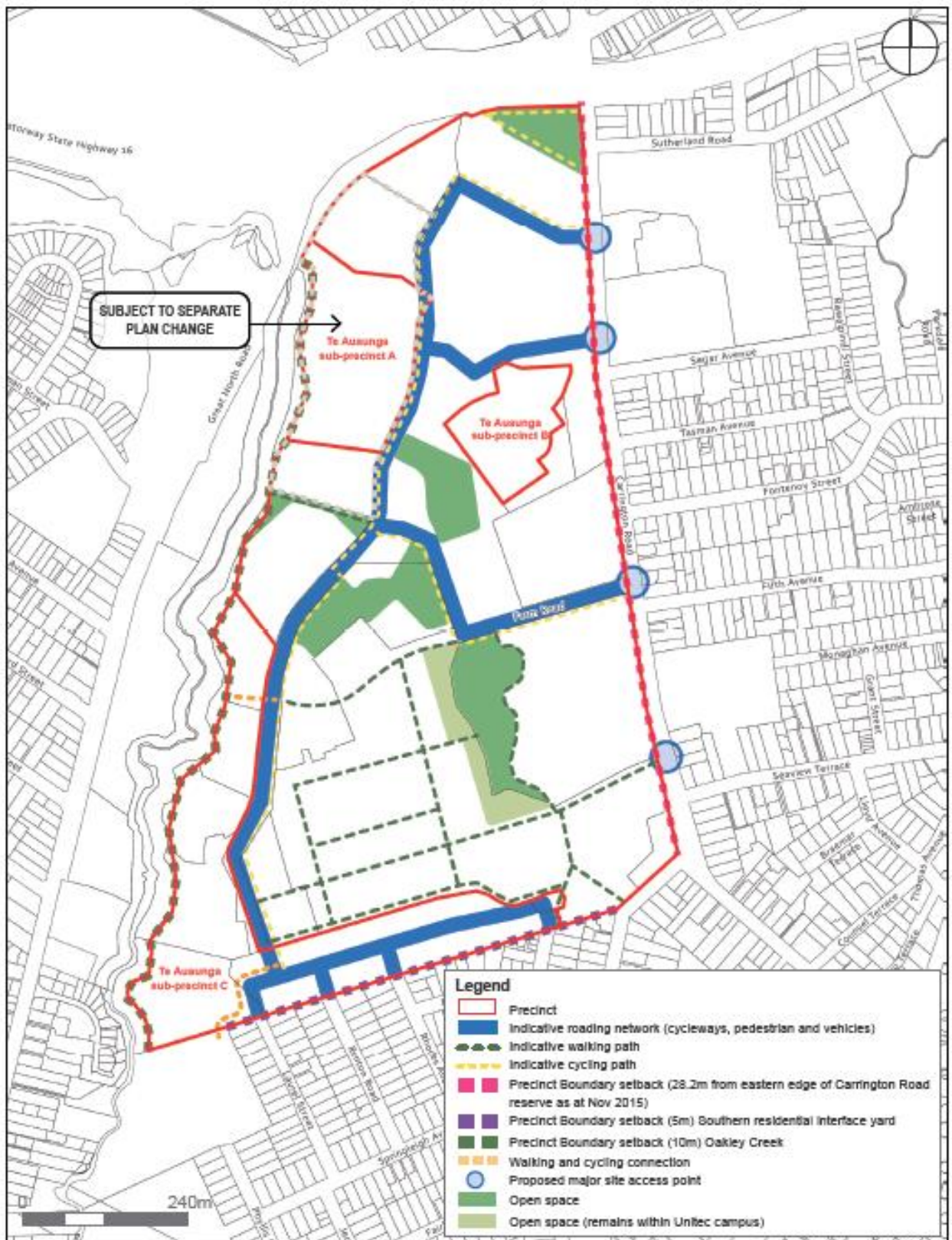
 - (c) it assists with Crime Prevention Through Environmental Design and open space activation, through generating additional foot and cycling traffic adjacent to public open space; and

 - (d) it improves connectivity / directness from the west towards the expected location of the long-term signalised crossing of the path over a wider Carrington Road.

- 3 HUD has had a number of discussions with AT over this alignment. The final alignment shown on the plan below and included in the updated set of Precinct plan maps provided for the clause 23 UD8 response, has been agreed with AT as being appropriate to provide a local connection for future residents of the precinct.

I334.10. Precinct plans

I334.10.1 Te Auaunga: Precinct Plan 1



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Question

T(F)1

Specific request

T(F)1 Subject to ongoing discussion and agreement with Auckland Transport (AT), please provide up to date traffic modelling assessment of the effects of the plan change on the adjoining road network, based on the latest information available in relation to road and intersection layouts associated with the Carrington Road Upgrade, and any other appropriate updates. Please also confirm the key assumptions adopted in agreement with AT in relation to trip generation, modal share, any discounts applied to through traffic on Carrington Road, etc.

Reasons for request

It is understood that the scope and details for the Carrington Road upgrade project, as assumed in traffic modelling undertaken to date, are still to be confirmed with AT. Areas of uncertainty include issues which appear to be significant in nature with regards to potential traffic effects, e.g. widening of bridging points over SH16 Motorway and railway over-bridge, use of priority lanes for bus priority versus 'T2', future intersection forms.

Applicant response provided by

Max Robitzsch, Stantec

Applicant response

- 1 The HUD applicant team and the Auckland Transport Team are regularly engaging with each other to ensure that important assumptions are aligned, and the eventual design of the Carrington Road Upgrade will fulfil the requirements of the plan change and the transport network overall.
- 2 However, the Carrington Road Upgrade design is not finalised, as Auckland Transport is still proceeding through a business case process (and associated design process). There are a variety of factors that are either changing currently or may potentially change further as the design process concludes.
- 3 In particular, Auckland Transport is currently working through testing further assumptions related to peak hour trip generation and through-traffic discount impacts. However, some aspects of this latest AT model are still incomplete, and thus their outputs are currently not useful for comparison – as agreed by both the HUD team and Auckland Transport's consultants working on the business case model.

- 4 Such an iterative process is not unusual, particularly where designs are being progressed further by Auckland Transport during the plan change process (rather than after) – as is necessary in this case to meet the tight timeframes for a proposed 2025 construction start. Any significant infrastructure project like the Carrington Road Upgrade will see some level of assumption set or design modifications once work is undertaken at this level.
- 5 Further changes are likely to be introduced through the plan change processes post-notification – it is perfectly normal that traffic models change or are assessed further through this process.
- 6 As such, there is no “agreed” or “finalised” modelling / assumption set currently available. However, a memorandum is attached to this response as Attachment 7.2 assessing the key differences in assumptions, layouts and outcomes between the plan change model (as provided by the applicant and discussed in the December 2022 TAR) and the most recent Auckland Transport model provided in July 2023.
- 7 To briefly summarise, the comparison report agrees that input assumptions are comparable, that there are some differences in design (road) layout and model coding, and that outcomes are also roughly comparable – with a significant exception, being PM peak performance at the southeastern end of the model (i.e. the Mt Albert town centre). In this area, the current Auckland Transport modelling predicts poorer performance than the applicant’s model.
- 8 The difference, in the opinion of the applicant team, derives from a number of factors, the most important one being that the applicant’s model has assumed a new rail overbridge west of the New North Road, with a total of five traffic lanes, whereas the Auckland Transport model currently retains the existing arrangement for this section with three lanes.
- 9 It is understood that the AT team does not consider the upgrade scope will include a new rail overbridge. However, the applicant team considers that there are likely to be less-costly opportunities to increase vehicular and public transport capacity on the Carrington Road approach to this intersection, for example by moving active modes onto clip-on bridges or separate structures, allowing the existing overbridge to be reverted back to the pre-2019 layout, with four traffic lanes, providing more capacity and/or more flexible signal arrangements than assumed in the current AT model.
- 10 Additionally, it is considered by the applicant team that the current arrangements for New North Road / Carrington Road / Mt Albert Road signal phasing assumed in the reviewed AT model’s signal can and should be optimised further, in particular to prioritise southbound New North Road traffic more over the (very small) northbound right turn flow from New North Road into Mt Albert Road.
- 11 In terms of bus lanes versus transit lanes, the differing assumptions do lead to somewhat differing outcomes for bus services in both models. As communicated before, the applicant team prefers the use of bus lanes. This would be with an emphasis on considering bus priority on the wider network approaching the model area to overcome the issues that have led to the transit lanes being investigated, rather than adding more car capacity by creating lanes able to be used by private car drivers.
- 12 However, these differences are not considered problematic at a fundamental level for the plan change, as this is essentially an operational matter (i.e. the bus lane / transit lane operation is easily able to be changed with markings and signage, and could therefore be phased in), so this is not considered a matter that needs to be resolved now. In fact it is something that Auckland Transport can also modify post-implementation if required.

- 13 It is therefore considered that the above matters can be resolved through further work by the AT team, with coordination with the applicant team, during or subsequent to the plan change process. There is therefore considered no necessity for such model differences to preclude notification, considering the overall outcomes between the two models are not seen as having insurmountable differences, and work is ongoing to align them where necessary.
- 14 The reference above to the traffic model analysis is set out in Attachment 7.2.

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Question	T(F)2
Specific request	T(F)2 Please undertake an assessment of parking effects on nearby residential streets resulting from development enabled by the plan change, in the event that parking controls indicated in the ITA, including Residential Parking Schemes, are not progressed by AT.
Reasons for request	It is understood that AT have yet to agree in principle to the parking controls proposed in the ITA, including residential parking schemes in the surrounding streets, aimed at mitigating against parking and traffic related impacts which are otherwise expected to occur as a result of the Plan Change.
Applicant response provided by	Max Robitzsch, Stantec
Applicant response	
1	<p>The query requests an assessment of parking effects on nearby residential streets – i.e. a prediction of potential “parking overspill”, in the event that parking controls including Residential Parking Schemes are not implemented. The applicant team considers that such an assessment would provide limited benefit to the assessment of the plan change application, given that:</p> <ul style="list-style-type: none">▪ The applicant has accepted and acknowledged that the risk of parking overspill is real and substantial – independent of the exact level of impacts – and consider that Residential Parking Schemes are both necessary and appropriate to prevent these impacts.¹¹▪ It is very difficult to implement a project with the ambition to achieve a lower car dependency than relied upon by its surrounding neighbourhood without implementing measures such as Residential Parking Schemes to manage “parking overspill”. This is because – as discussed further below – behaviour change will require both incentives and disincentives. The alternative is that new projects like this one will gravitate toward the status quo in terms of car dependency, which is a poor outcome when considered against a range of strategic objectives held by Auckland Transport and Auckland Council.

¹¹ Sections 2.3.5, Section 3.6.3 and 3.8.3 of the Te Auaunga Plan Change – Transport Assessment & Traffic Modelling Report, referenced as the “TMR” (Stantec, December 2022).

- 2 As such, it is considered that Auckland Transport should use the abilities (“tools in the toolbox”) they have been given by Auckland Council to appropriately respond to intensification and work in concert with the applicant to enable the realisation of the wider outcomes being sought for both the plan change area and the wider transport network.
- 3 Further, an assessment of parking effects on nearby residential streets would also be limited in practical application, as it would need to combine a wide variety of (not yet agreed) assumptions:
 - Any quantified assessment would need to use data from historical Auckland developments – which are far more highly car-centric than the proposed development is intended to be. In addition, any use of quantified assumptions for a less car-centric development, such as from overseas developments, could be considered speculative in the Auckland context, and would solely invite discussions between experts as to whether assumptions are “conservative enough”.
 - Any assessment would struggle to find exactly comparable conditions in literature or surveys, with both similar rates of (on-site) parking being provided and being in similar transport environments and similar locations in the wider urban environment (distance from workplaces etc).
 - Any such assessment would, by necessity, need to make assumptions about future factors that are out of control of the applicant. These would include how AT’s public transport network performs 5-10 years into the future, how much intensification unrelated to the applicant development areas will occur in the potential overspill areas, and what fuel / electricity prices or taxes are applied to cars in the future.
 - Again, any “optimistic” assessments of these crucial factors could easily be challenged as speculative, leading to assessments that lean heavily towards a conservative historical “predict and provide (extra car parking)” approach - treating high car parking demand as, essentially, a fact of life to be accommodated.
- 4 It is important to note that the above does not mean that the applicant team considers parking overspill as an unlikely or irrelevant risk. The applicant’s team however considers that a study trying to assess the specific intensity and extent of the impact provides little practical benefit to the assessment of the plan change, because it risks being no more than a speculative “worst-case estimate”- of an impact that all parties are seeking to avoid.
- 5 Additionally, the applicant has acknowledged that controlling (limiting) car parking opportunities for new residents of the precinct / plan change area is crucial not just to reducing the impacts of parked cars, but also the impacts of moving cars (trip generation). In short, providing residents access to extra parking above the limited ratios proposed in the application (within or without the precinct / plan change area) will inevitably lead to significantly more car trips and thus more congestion than predicted.¹²

¹² Clause 23 responses, TF2, Trip Generation, particularly paragraphs 3, 9 and 10 – Stantec

- 6 With these statements made, the applicant considers that a more appropriate approach in terms of planning for a well-functioning urban environment should focus on preventing parking overspill – instead of discussing what the potential levels of such an impact (without restrictions) would be, and whether, for example, the likely impacts by year X might reach Street Y, or only as far as Street Z.
- 7 As set out in the TMR and in the original Integrated Transport Assessment (ITA)¹³, the plan change area / precinct is very well set up to enable high levels of public transport and active mode use, with projects such as the Carrington Road Upgrade further improving these modes.
- 8 However, all other things being equal, many new residents may still lean towards an historic Auckland “default” of higher car ownership and usage – because in key ways, car use currently remains easier than other options. Without the “stick” of constraining the ability of new residents to park their cars (above the 0.7 or fewer spaces per dwelling average assumed), the “carrots” of high-quality alternatives available are unlikely to be sufficient alone to generate the mode shift necessary to achieve both the applicant, and Auckland Council’s objectives.
- 9 The TMR acknowledged¹⁴ that the plan change process itself cannot require the implementation of Residential Parking Schemes, as these depend on separate processes (including consultation) by Auckland Transport. However, this does not mean that the tool itself is problematic, or that Auckland Transport does not have the ability to implement such schemes if they consider them an appropriate tool.
- 10 Residential Parking Schemes have been implemented successfully in various areas of Auckland, particularly in the inner isthmus around the city centre, where they are effective at controlling external parking demand into these areas. It is acknowledged that this is mainly discouraging the “work end” of commuter car trips, whereas in the proposed environment, they are intended to deter residential parking (and higher levels of ownership of cars by new residents);- i.e. they would function at the “home end” of the typical trip (although they may also act to incentivise public transport use for other existing users of surrounding on-street parking by those visiting the precinct to work or study).
- 11 In practice, the implementation and administration of such schemes would therefore not need to be any different than for existing schemes, meaning Auckland Transport can choose to respond to (or ideally, get ahead of) parking overspill occurring by implementing an existing process.
- 12 We are also aware that concerns have been raised, including by Auckland Transport, about the ongoing costs of Residential Parking Schemes (both for Auckland Transport, and in fees for residents). In terms of annual permit fees for existing residents, many will have off-street car parks and may not need permits. For others, the typical fees are considered to represent a non-trivial but still quite limited fee for, essentially, a year-long priority use right to a public resource.

¹³ ITA document, Stantec, June 2020, approved by Auckland Council March 2021.

¹⁴ Section 2.3.5 of the TMR

- 13 For Auckland Transport, they have not provided the costs of administering such a scheme (technically, extending the administration of existing schemes to new areas). However, it is considered likely that the costs of doing so would pale compared to the costs of providing fewer dwellings or providing those dwellings further out of the isthmus, and the related costs of more cars being driving – and being driving for longer distances – on Auckland’s already congested networks.
- 14 Costs and disbenefits from such extra traffic are manifold for Auckland overall and Auckland Transport in particular, ranging from impacts on health, climate change and traffic injuries to more direct costs for maintenance of roads, construction costs for the widening roads and enlarging of intersections (cumulative across Auckland, not just in the plan change area).
- 15 In summary, providing a quantified assessment of the impacts of not implementing parking constraints would, by necessity, be highly speculative, and tend towards assuming very negative outcomes in an attempt to “ground” itself via limited and historically car-centric data.
- 16 Auckland Council, via Auckland Transport, has the legal ability to control who is allowed to park in a public street, and can thus control / prevent the discussed impacts. Other tools of similar effectiveness are not known, and historical responses such as providing more parking on-site will in fact undermine key policy outcomes and lead to further traffic impacts. Residential Parking Schemes are a proven tool to help achieve the precinct / plan change aims of housing intensification, and related policies of achieving transport mode change, without excessive disruption.