Specialist Response Template – Fast-track Approvals Act 2024 – Substantive Application

Technical Specialist Memo – Traffic Engineering

To:	Colin Hopkins – Lead Planner & Doug Fletcher – Principal Project Lead
From:	Nagaraj Prabhakara, Principal Development Planner, Auckland Transport
Qualifications & Relevant Experience:	I hold the qualification(s) of: Bachelors of Civil Engineering & Master of Engineering Studies, majored in Transportation, and have 20 years of experience in Civil & Traffic Engineering. I am a full member of Engineering New Zealand. I have prepared expert evidence and technical assessments for resource consent applications and fast-track applications, and have appeared as an expert witness before consent authorities and the hearings on multiple occasions.
Preparation in Accordance with the Code of Conduct:	I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses (Code), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.
Date:	22/09/2025

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name:	Drury Quarry Expansion – Sutton Block
Fast-Track application number:	FTAA-2503-1037 (EPA reference) + BUN60449474 (Auckland Council reference)

Site address:	121 MacWhinney Drive, Drury; 1189 Ponga Road, Drury; 2113 and Ponga Road, Papakura

2.0 Executive Summary / Principal Issues

Auckland Transport (AT) has assessed the proposed application and considers there is the potential for significant adverse effects on the road network and the safety of road users. Auckland Transport notes the application proposes at least 2000 truck trips per day for the quarry operation.

The proposed expansion will provide at least 185 Million Tonnes of aggregate supply to Auckland to support its future growth for approximately 50 years once aggregate extraction from the Sutton Block pit commences. It is anticipated that as the existing Drury Quarry pit nears the end of its life and reduces aggregate extraction, the Sutton Block pit aggregate extraction will increase to ensure a continuous supply to the Auckland region.

The Sutton Block pit will be developed over four proposed stages. The timing of these stages is indicative only and may vary over the life of the quarry.

Stage 1 (approximate Years 0 – 2) involves the construction of the roading infrastructure required to access the site, stream diversion, removal of overburden, construction of the northern bund, begin ecological mitigation efforts, and commencement of quarrying. Some aggregate extraction is expected to commence in Year 1, and progressively be increased to full production in Year 4.

Stage 2 (Years 3- 15) and Stage 3 (Years 15 -30) involve the initial pit development, starting with the removal of additional overburden material, creation of stockpiles, and subsequent aggregate extraction. Stages 2 and 3 predominantly see the progressive widening of the pit. This stage also sees capital investment in processing equipment to increase capacity.

The final stage of work, Stage 4 (Years 30 -50), marks the full extent of the quarry pit over 50 years. During this stage, the pit will be progressively deepened to a pit depth of approximately -60RL.

The existing Quarry has vehicle access from Bill Stevenson Road, with no changes proposed. Section 3 of the integrated transportation assessment (ITA) report prepared by Don Mckenzie Consulting, dated March 2025, states that intended truck routes for the Quarry operation are via Bill Stevenson Drive, Maketu Road, either towards the Ramarama interchange or the Quarry Road at the northern side of the Maketu Road.

Private plan change PC 46 was approved to rezone the land to allow industrial developments at Maketu Road, Quarry Road and Fitzgerald Road, Drury. The private plan change also includes rezone a further 20 hectares of land within the precinct from heavy industry to light industry.

New public roads within the PC 46 area have been built by private developers (not by the quarry owner) to support the light and heavy industry zone approved under PC 46. The public roads were built around

2019. The industrial area is not fully developed yet and some of the internal roads are not yet vested with the Council.

AT unable to complete the full assessment of the proposal ensuring the existing road infrastructure can cater for the proposed activity including truck trips due to insufficient information supplied by the applicant.

3.0 Documents Reviewed

- Application for Resource Consent and Assessment of Environmental Effects prepared by Tonkin + Taylor dated 31/03/2025.
- Integrated Transportation Assessment (ITA) report prepared by Don Mckenzie Consulting dated March 2025.

4.0 Additional Reasons for Consent Not included in AEE

N/A

5.0 Specialist Assessment

AT requested the applicant to provide a Pavement Impact Assessment (PIA) along the intended truck routes ensuring the existing pavement structure can cater for the intended truck volumes.

Effect on public pavement structure

The current proposal does not specify a limit on truck trips, making it difficult to predict pavement wear, asset life, and plan future road maintenance effectively.

Heavy vehicle traffic has potential adverse safety effects on existing road and the surrounding transport network. For example, an increase in heavy vehicles results in increased pavement wear, including potholes, alligator cracks, rutting, etc. on the road surface. Damage of this nature in turn could result in effects such as less skid resistance, swerving and loss of control by motorists, leading to increased risk of accidents. There could also be a reduced level of service of the road, as the speed at which vehicles can travel reduces significantly due to carriageway damage and results in an adverse effect of the network operation.

When considering whether there will be pavement effects from a development Auckland Transport is guided by the "Austroads Guide to Traffic Management part 12", which states a PIA should be undertaken where a proposed increase in heavy vehicle traffic equals or exceeds 5 to 10% of the existing traffic load on roads from fully loaded Heavy Commercial Vehicles (HCVs). A PIA can indicate whether the existing roads can safely accommodate ongoing truck movement associated with an activity. The

pavement assessment should include an analysis of the existing condition of the road assets and an assessment of the effect of the additional pavement loading, including potential adverse effects on the anticipated asset life.

In addition, high volumes of heavy commercial vehicles will also impact asset life and future road maintenance issues. The following outlines some of the asset owner's maintenance issues resulting from high trip generation activities.

- Higher Maintenance Costs:

Local authorities may face increased financial burdens due to accelerated wear and tears at the rate payers cost.

As the road controlling authority, Auckland Transport may need to adjust its budget allocations to support more frequent operational interventions.

- Disruption to Road Users:

Maintenance activities can lead to traffic delays, detours, and reduced accessibility for residents and businesses.

- Lifecycle Reduction:

The design life of pavements may be significantly shortened, requiring earlier-than-expected reconstruction.

- Asset Management Challenges:

Increased HCV traffic complicates long-term pavement management strategies, especially where data on vehicle movements is limited.

<u>Effects on the roading network:</u>

The Transport Assessment prepared by Beca, dated 12 Nov 2019, to support the Plan Change 46, does not have contain adequate information regarding whether quarry expansion has been accounted for and, if so, how much traffic was allocated. The land in the PC46 area already had an existing industrial zoning when PC46 was applied for, and PC46 only sought to rezone 10Ha of light industrial to mixed-use business and 20Ha of heavy industrial to light industrial. The Transport Assessment largely assesses the difference in trip generation resulting from the rezoning and associated effects; it does not clearly state how much quarry traffic was allowed for.

The current proposal does not specify a limit on truck trips, making it difficult to assess the potential adverse effects on the road network. The surrounding area is zoned as Light/Heavy Industrial, and this expected land use should be factored into the assessment. The section 6.1 of the Integrated Transportation Assessment (ITA) report prepared by Don Mckenzie Consulting, dated March 2025, states that quarry related truck trips are projected to reach at least 2000 truck trips per day. However, it is not clear how these figures translate into peak-hour truck movements or other quarry-related vehicle movements (i.e. staff cars and other light vehicles). This information should be provided by the applicant to help us understand the effects of the quarry on congestion during peak periods.

AT's main concerns around the trips relate to three main areas;

(1) damage to the road pavement caused by heavy vehicle movements,

(2) potential congestion and capacity effects relating to high numbers of vehicles travelling to and from the quarry (both trucks and light vehicles), particularly during peak hours; And

(3) road safety matters.

AT anticipates congestion and capacity issues most likely to occur during peak hours and are critical intersections. Both heavy and light vehicle trips have an impact on congestion.

To mitigate this issue, a peak hour cap on the number of trips to and from the site would help reduce the potential adverse effects (which could be modelled as part of the application process). The applicant would be required to monitor this cap, and if it were exceeded, implement a travel demand management plan. This could involve setting staff shift start and end times to be outside of peak periods or scheduling customer pick-ups for out of peak periods.

Truck routes from the quarry to the Ramarama interchange traverse via Maketu Road/John Main Drive intersection. The applicant should provide an intersection analysis including capacity analysis (traffic modelling) at this intersection to ensure no potential adverse roading network operational issues from the additional truck and other quarry related vehicle movements at this intersection.

The section 6.1 of the Integrated Transportation Assessment (ITA) report prepared by Don Mckenzie Consulting dated March 2025 does not provide information on the number of peak hour truck movements or quarry related vehicle movements (i.e. staff cars and other light vehicles). This information should be provided to have a better understanding of the potential adverse effects of the quarry during peak periods.

AT requested the applicant to provide a detailed assessment of the intersections (Bill Stevenson Drive/Maketu Road & Bill Stevenson Drive/Jack Stevenson Road) Toi to ensure that the existing intersection layouts and signal phasing can accommodate the proposed quarry-related vehicle movements including the anticipated trips from the industrial zone. This information is essential to ensure the road network can operate safely and that the level of service is not compromised.

The Drury South Area is not yet fully developed. The applicant should provide a revised a transport assessment report with a scenario (including transport modelling of the scenario) including the full buildout of the Drury South development which represents future traffic conditions which will exist during the life of the development, not only the current traffic volumes and the traffic conditions for the surrounding area. This information is required to have a better understanding of the existing road network capacity and potential adverse impacts from the Quarry trips. This was previously requested and the applicant responded that they had based their models on a 50% future growth year scenario, meaning that they used traffic survey data (Section 3.2 table 1 of the ITA prepared by Don Mckenzie Consulting dated March 2025) and increased it by 50% for their modelling to account for the undeveloped sites in the industrial area. AT considers the assumptions made in the ITA report are inappropriate based on the existing developments within the PC46 industrial zone. Trip generation for the Drury South Industrial Precinct should be estimated based on the sizes of the lots and expected

warehouse/factory coverage consistent with the methods used for the PC46 ITA. Updated traffic modelling should be provided using the updated estimate of traffic from the Drury South Industrial Precinct.

When providing updated modelling the applicant should provide an explanatory note showing how traffic volumes were calculated and distributed. It should clearly show the number of quarry vehicles and vehicles from other sites in the Drury South Industrial Precinct and how each was calculated.

Road Safety

Section 3.1 of the Integrated Traffic Assessment (ITA) prepared by Don Mckenzie Consulting dated March 2025 states that proposed quarry operational trucks intend to use two routes for getting access between the quarry and the motorway. The second route is between the site and the SH22/SH1 interchange to the north. AT believes that the existing condition of Quarry Road is not in good condition and pavement and have very narrow road shoulders. The Quarry Road has bends between Maketu Road and Great South Road. The applicant should be asked to provide an assessment of the second route (Quarry Road including intersections of Quarry Road /Great South Road and Great South Road /SH22) to ensure the existing network has adequate capacity and no potential safety and operational issues from the proposed additional truck movements.

The assessment should include tracking curves at the bends and Safe Intersection Sight Distance in accordance with Austroads Guide to Road Design Part 4A, to ensure no safety concerns along the truck route along Quarry Road.

AT is concerned about the Quarry tracks using the Fitzgerald Road. If quarry trucks intend to use Fitzgerald Road, the applicant should provide an assessment of the existing road carriageway to confirm that increased quarry truck traffic on Fitzgerald Road will not result in road safety effects. According to Auckland Unitary Plan, some sections along Fitzgerald Road have been zoned as “Residential - Terrace Housing and Apartment Building Zone” and “Residential - Mixed Housing Urban Zone”. High truck movements along Fitzgerald Road create adverse impact effects on the future residential dwellings. The applicant must provide an assessment of the potential adverse impacts on future residential dwellings.

The applicant stated that they do not expect quarry traffic to use Fitzgerald Road. The confirmed most the trucks visiting the site belong to customers. The consent holder should inform their customers to avoid using Fitzgerald Road for quarry-related operations to mitigate the potential adverse safety effects on Fitzgerald Road.

Previously, AT issued a Section 67 memo to Council, however the applicant’s responses have not adequately addressed the concerns raised and these issues remain outstanding.

Auckland Transport does not support the current Fast-track application based on the assessment currently provided by the applicant and considers that the application is due to insufficient information supplied by the applicant.

6.0 Section 67 Information Gap

At the time of writing this Memo I have identified the following information gaps:

Previously, AT issued a Section 67 memo to Council, however the applicant's responses have not adequately addressed the concerns raised and these issues remain outstanding.

However, truck movements should not result in adverse effects on the road network, nor should they impose costs on ratepayers. The existing roads within the PC46 area should be capable of accommodating the anticipated trip generation from the industrial zone without compromising their performance.

Please find the below s67 matters:

- The applicant hasn't provided any assessment on the existing roading structure ensuring existing roading structure can cater for the additional truck movements without creating any road safety issues for the other road users. According to Austroads section 12 guidelines, developments that create more than 10% heavy vehicle movements warrant a pavement impact assessment. Section 6.2 of the ITA states that the current proposal will increase truck movements from 600-700 on an average day to 1,200-1,400 trucks per day. The current proposal will have a net increase of 200% high commercial vehicles (HCV). Please provide a pavement impact assessment along the intended truck routes, ensuring the existing road structure can cater for the additional truck movements/loads and have no detrimental effects on the life of the road structure.

High: To ensure the proposed truck trips should not affect the asset life and does not create any adverse effects on to the other road users.

- Section 3.1 of the Integrated Traffic Assessment (ITA) states that proposed quarry operational trucks intend to use two routes for getting access between the quarry and the motorway. The second route is between the site and the SH22/SH1 interchange to the north. Please provide an assessment on the second route (Quarry Road including intersections of Quarry Road /Great South Road and Great South Road /SH22) to ensure the existing network has adequate capacity and no potential safety and operational issues from the proposed additional truck movements.

  AT understands that resource consent and engineering application approvals have been obtained by the other developer for the Quarry Road closure including extension of Maketu Road extension and bridge construction within the Maketu Road extension. There will be a period of Quarry Road closure from the bridge construction as well as impacts from other developments in the area. Therefore, quarry trucks will be fully assigned to the south route. This would mean

100% of trips will have to use the south route, please provide an assessment based on the entire trucks will have to use the south route.

- It is unclear whether the quarry traffic will be using Fitzgerald Road. Please confirm quarry traffic will be using Fitzgerald Road. An assessment of Fitzgerald Road will be required if the quarry traffic intends to use Fitzgerald Road for the quarry operation.

- Truck routes to Ramarama interchange traverse through Maketu Road/John Main Drive. Please provide an intersection analysis including capacity analysis at this intersection to ensure no potential adverse roading network operational issues from the additional truck movements at this intersection.

- The Drury South Area is not yet fully developed. Please provide transport assessments with a scenario (including transport modelling of the scenario) including the full buildout of the Drury South development which represents future traffic conditions which will exist during the life of the development, not only the current traffic volumes and the traffic conditions for the surrounding area. This information is required to have a better understanding of the existing road network capacity and potential adverse impacts.

- The ITA document does not clearly include the Drury South fully developed scenario for its modelling. There is reference to the PC46 ITA on page 8, but it is not clear how these values were calculated or applied. The applicant needs to provide a detailed assessment of the likely traffic volumes for the Drury South fully developed scenario as part of the current application. If the applicant relies on earlier traffic modelling from PC46, please provide the modelling details and explain clearly how it was calculated and applied.

- Pages 8 & 9 of ITA states that Level of service (LOS) D is acceptable at the existing two signalised intersections, but according to AT's Network Operating Plan, on arterial roads the minimum LOS during peak periods is C. Please provide an updated assessment on the LOS of the network to ensure that to ensure that no potential adverse impact on the roading operation.

- Please provide the copies of the Movement Summary Tables and Traffic Signal Phasing and Timing reports from SIDRA so that AT can confirm the traffic volumes on each leg of the intersections are reasonable and assess the potential average delay, queue lengths, and LOS for individual movements.

High: The absence of this information significantly limits Auckland Transport's ability to assess the full extent of adverse effects on the transport network performance. The road can accommodate the additional trips from the undeveloped land from the industrial zone safely.

Information gap	Nature of deficiency	Decision-making impact	Risk / uncertainty created

1. *Pavement Impact Assessment report along the truck routes.*	***No pavement Impact Assessment report provided.***	*Unable to access the adverse effects on the roading structure and to ascertain existing road pavement has adequate capacity to cater for the proposed truck trips.*	*The road maintenance works are to be rescheduled and incur higher maintenance costs at the rate payers cost. Asset will be affected if the existing structure do not have a capacity.* *Potential for inadequate provision of open space and acquisitions at a capital cost will not be conducted by Council's Property Provision Team.*
2. *Further detailed assessment is required on the truck trips and assessment on wider network.*	*The submitted ITA didn't address the potential traffic generation from the undeveloped land ensuring the network and intersections performs safely.*	*Unable to access the capacity of the road network considering the undeveloped area within the PC 46 area.*	*This will effect on the network performance e.g. queuing within the network and create congestion.*

7.0 Recommendation

Auckland Transport does not support the current Fast-track application based on the assessment currently provided by the applicant and considers that the application should be declined unless concerns in relation to Quarry truck trips and pavement impact along the proposed truck routes on Bill Stevenson Road, Maketu Road, Quarry Road have been sufficiently addressed by the Applicant.

8.0 Proposed Conditions

9.0	Supporting Documents