In the Environment Court of New Zealand
Auckland Registry

I Mua I Te Kōti Taiao O Aotearoa
Ki Tāmaki Makaurau

ENV-2023-AKL-160

Under	the Resource Management Act 1991
In the matter of	An application for a direct referral to the Environment Court under section 87G of the Act for an order granting the applicant's resource consent applications to construct and operate a new asphalt plant at 54 Aerodrome Road, Mt Maunganui, together with an application for consent to authorise the continued operation of the existing asphalt plant on the site pending construction of the new plant
Between	**Allied Asphalt Limited**
	Applicant
And	**Bay of Plenty Regional Council and Tauranga City Council**
	Consent Authorities

Statement of Evidence of Judith Victoria Makinson

Dated 28 February 2024

Counsel acting:
Stephen Christensen
Project Barrister
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p 027 448 2325
stephen@projectbarrister.nz

Qualifications and experience

1 My full name is Judith Victoria Makinson. I am a Director at CKL NZ Ltd, specialising in transportation engineering.

2 I hold a Bachelor's degree in civil engineering and a Master's degree in transportation engineering and planning from the University of Salford (UK). I am a Chartered Professional Engineer and am a Chartered Member of Engineering New Zealand. I am also a Chartered Engineer in the United Kingdom and a Member of the Institution of Civil Engineers. I have over 25 years' international experience working as a transportation engineer in both New Zealand and the United Kingdom with Arup, WSP Group, Gifford, TDG, Stantec and CKL.

3 I have undertaken Integrated Transportation Assessments (**ITAs**) for major developments such as for 180ha of industrial land at Southern Gateway in Auckland and 450 residential dwellings at Northview in Hamilton. I have experience in assessing the traffic and transportation effects of rezoning land through plan change processes, including acting for South Waikato District Council in relation to rezoning 40ha of rural land to industrial in Putāruru.

4 I am qualified as an Independent Hearing Commissioner and in this role I have experience considering the effects of major infrastructure projects through notice of requirement processes, rezoning as well as individual resource consent applications. These include the Te Ahu a Turangi Manawatū Gorge road replacement, Te Putahi Ladies Mile rezoning and the Kiwirail Regional Freight Hub at Bunnythorpe.

5 My role in relation to the Allied Asphalt Limited's (**Allied**) application for resource consents for a new asphalt plant and the continued operation of an existing plant pending construction of the new plant at 54 Aerodrome Road, Mt Maunganui (**Application**), has been to provide advice in relation to transportation engineering. I supervised the preparation of an ITA report for the Assessment of Environment Effects (**AEE**) accompanying the Application, which appears at Appendix 11 of the AEE.

6 My assessment is based upon the project description provided in the planning evidence of Mr Craig Batchelar.

7 In preparing this statement of evidence I have considered the following documents:

(a) the AEE accompanying the Application;

(b) the section 92 request from Tauranga City Council (**TCC**);

(c) submissions relevant to my area of expertise;

(d) the statement of evidence on corporate matters prepared by Mr Brian Palmer;

(e) the statement of evidence on planning prepared by Mr Craig Batchelar

(f) TCC City plan provisions relevant to my area of expertise;

(g) The section 87F report;

(h) the Waka Kotahi NZ Transport Agency Crash Analysis System (**CAS**).

(i) the Waka Kotahi NZ Transport Agency 'One Network Framework Classification Guide', Appendix A (**ONF**)[1]

(j) the Waka Kotahi NZ Transport Agency 'Road to Zero: New Zealand's Road Safety Strategy 2020-2030 (**Road to Zero**)[2]

(k) the NZ Government Safer Journeys 'The Safe System Approach to Road Safety' (**Safe Systems**)[3]

(l) the Mobile Roads database **(Mobile Roads)**[4]

(m) the Waka Kotahi MegaMaps GIS system **(MegaMaps)**[5]

(n) the Waka Kotahi NZ Transport Agency Traffic Monitoring System (**TMS**)[6]

8 I have visited the Application Site and surrounding environment and am familiar with the area from a traffic and transportation perspective.

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[1] One Network Framework (ONF) - Classification Guidance - 17 November 2022 (nzta.govt.nz)

[2] Road-to-Zero-strategy_final.pdf (transport.govt.nz)

[3] The safe system approach to road safety (nzta.govt.nz)

[4] Mobile Road

[5] Portal for ArcGIS - Sign In (nzta.govt.nz)

[6] NZTA Traffic Monitoring System (TMS)

Code of Conduct for Expert Witnesses

9 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of Evidence

10 I have prepared evidence in relation to:

(a) The existing environment of the Application Site as it is relevant to my area of expertise;

(b) The key findings of my assessment of effects;

(c) Matters raised by submitters on the Application;

(d) Matters raised in the Bay of Plenty Regional Council and TCC s87F report; and

(e) Proposed conditions of consent.

Involvement with the Project

11 I have provided traffic and transportation input to the project from the start of the consenting process. I have undertaken a number of site visits, and have supervised the preparation of an ITA for the site.

12 In preparing my evidence I have updated the assessment of traffic effects for the site.

Executive Summary

13 I have assessed the transportation effects of the proposal.

14 Based on the proposal being developed at the Application Site, the future plant would generate the same volume of trips per hour and per day as the current plant as I understand that there is no expectation of changing typical daily operations. As such there can be no additional traffic effects that require mitigation. I also consider that no assessment of future year traffic effects is necessary on the same basis.

15 I have also assessed the traffic impacts under a scenario of 3,500 tonnes of material being produced in a day, however, I understand that this represents the peak production capacity and is highly unlikely to occur.

16 On this peak production day scenario, the constant export of asphalt from site and importing aggregate across both night and day shifts is what drives the increased level of activity. I have assessed this as being some 29vph across a 20hr period of which 14vph would be inbound and 14vph[7] would be outbound. Assuming all of this traffic accesses Aerodrome Road from Hewletts Road to the north as the most direct way to enter and exit the wider industrial area, that equates to 7vph turning right and left in from Hewletts Road and the same turning right and left out of Aerodrome Road. In simple terms, this is 1 additional vehicle movement every 8.5 minutes for each of those manoeuvres and represents a 0.67% change in traffic demands on Hewletts Road. I consider this level of change to be negligible.

17 In terms of road safety, I also consider that the level of traffic that could occur during peak operational day scenario is unlikely to have an effect on road safety.

18 I therefore conclude that there are negligible adverse effects in terms of function, safety and road capacity and I therefore conclude that there is no traffic or transportation reasons as to why the proposed development should not be consented.

Transport Effects Assessment

Existing Environment

19 I have considered the road and traffic environment at the Application Site. It has frontage to Aerodrome Road only, which is classified as a local road in the City Plan[8]. This has the function of "*providing direct access for residential and other areas of development in urban areas, with more than one intersection to other local or collector roads*[9]". Aerodrome Road is classified as an activity street in ONF[10] . The function of an activity street is "*to provide access to shops and services by all modes. These streets have a significant demand for movement as well as place with a need to manage*

[7] Values have been rounded

[8] T400series.pdf (tauranga.govt.nz)

[9] 3_definitions.pdf (tauranga.govt.nz)

[10] The One Network Framework is a tool to help establish transport network function, performance measures, operating gaps and potential interventions for each road and street type. Https://www.nzta.govt.nz/planning-and-investment/planning/one-network-framework/

competing demands within the available road space"[11]. I consider that the City Plan and ONF definitions are consistent and accurately describe how Aerodrome Road functions.

20 Aerodrome Road has two 4.9m wide traffic lanes, divided by a 2.5m painted median. On-street parking is provided for by marked on-street parking bays, otherwise on-street parking is controlled through the use of no stopping at all times (**NSAAT**) markings.

21 The speed limit on Aerodrome Road in the vicinity of the site is 50km/h. This starts just south of the Hewletts Road intersection and extends to the roundabout intersection between Jean Batten Drive and Aerodrome Road.

22 Aerodrome Road meets Hewletts Road (State Highway 2) at a signalised intersection approximately 125m to the north of the subject site. Right-turn movements onto Aerodrome Road from Hewletts Road are prohibited. Hewletts Road is classified as a primary arterial road in the City Plan and has the function of "*joining significant centres of population and/or providing for regional and inter-regional traffic flow*". The ONF classifies Hewletts Road as an urban connector, which has the function to "*provide safe, reliable and efficient movement of people and goods between regions and strategic centres and mitigate the impact on adjacent communities*". I consider that the City Plan and ONF definitions are consistent and accurately describe how Hewletts Road functions.

23 The surrounding area is largely industrial in nature.

24 The Application Site is currently part occupied by Allied's asphalt plant with a Fulton Hogan office occupying the street frontage. I understand that construction activities underway at the time of writing will provide new offices for Fulton Hogan and will alter the number of vehicle crossings serving the site. The asphalt plant is currently only accessible via the northernmost vehicle crossing. In future this will allow entry only to the plant. The two central vehicle crossings will be replaced with a single crossing serving the office car park, and a new vehicle crossing adjacent to the southern site boundary will allow for exit from the plant site.

25 A pair of bus stops is located approximately 300m north, or a four-minute walk from the Application Site, on Hewletts Road. These bus stops are served by the 2B and 2W bus services. The 2B service travels between Tauranga CBD and The Boulevard via Bayfair and Papamoa Plaza. The 2W service travels between Tauranga CBD and Papamoa Beach Road via

[11] Street categories | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

Bayfair and Papamoa Plaza. These bus services have a combined 15-minute operating frequency.

26 No footpaths are provided on Aerodrome Road within the vicinity of the Application Site or on surrounding roads. Pedestrians are therefore expected to use the berm. No dedicated cycling infrastructure is provided within the vicinity of the site. Cyclists are therefore expected to share the road with motorists.

Traffic Volumes

27 The latest traffic volumes along Aerodrome Road have been obtained from the Mobile Roads which is based on council road asset management and maintenance (**RAMM**) data. Aerodrome Road has an average daily traffic (**ADT**) volume of 4,000 vehicles per day (**vpd**), with 21% HCVs. Peak hour volumes along Aerodrome Road are not available within Mobile Roads and I have assumed peak hour volumes to be 400 vehicles per hour (**vph**) which is 10% of the daily traffic demands as is typically the case.

28 The Waka Kotahi Traffic Monitoring System (**TMS**)[6] has been used to obtain the peak hour and daily traffic volumes on Hewletts Road. The TMS reported that Hewletts Road just west of Aerodrome Road carries 3,590vph during the peak hour, and 42,299 vpd of which approximately 10% are HCVs.

Road Safety

29 The Safe System approach to road safety is to acknowledge that drivers make mistakes and to create a road environment that minimises harm when mistakes occur. Similarly, the Road to Zero road safety strategy is to reduce death and serious injury (**DSI**) crashes across New Zealand by 40% by 2030 as part of a long-term goal to remove all DSI crashes. Neither approach expects to stop all crashes.

30 I have supervised a review of the CAS database which records reported traffic crashes, for an area including along Aerodrome Road between Cherokee Road and Aviation Avenue (including both intersections). The standard crash period considered is five years, hence I have considered all crashes between 2018-24. The recorded crashes are shown in **Figure 1**.

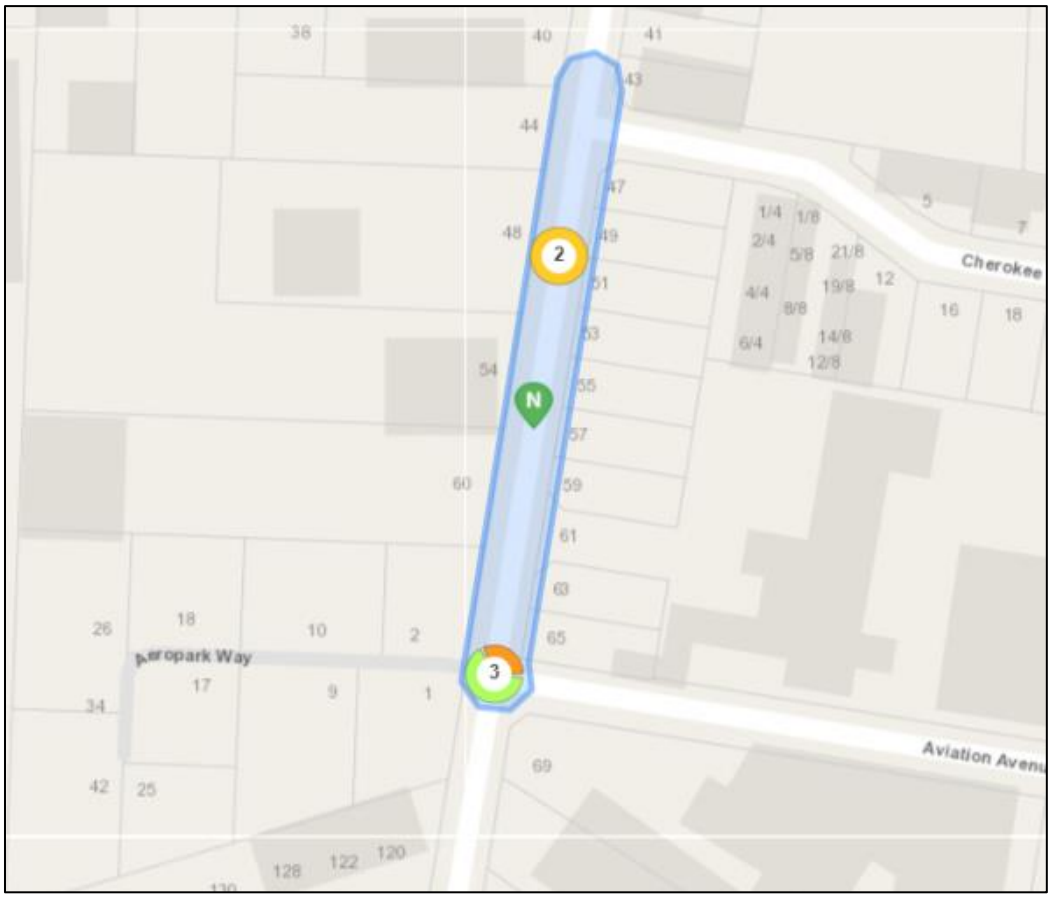


Figure 1: Waka Kotahi CAS Analysis 2018-2024

31 One serious injury, two minor injury and three non-injury crashes have occurred along Aerodrome Road. The general particulars are as follows:

(a) Serious injury crash at the Aviation Avenue /Aerodrome Road intersection, 2020 – Motorcyclist was attempting to overtake a turning truck;

(b) Non-injury crash at the Aviation Avenue /Aerodrome Road intersection, 2018 – Motorcyclist was travelling northbound along Aerodrome Road attempting to overtake vehicles. Vehicle turned into right-turn bay and collided with motorcyclist;

(c) Non-injury crash at the Aviation Avenue /Aerodrome Road intersection, 2019 – Vehicle travelling southbound on Aerodrome Road, lost control turning left onto Aviation Avenue and collided into parked vehicle;

(d) Non-injury crash outside 54 Aerodrome Road, 2020 – Vehicle travelling southbound on Aerodrome Road collided with an on-street parked vehicle. The collision occurred due to distracted driver checking mobile phone;

(e) Minor injury crash outside 48 Aerodrome Road, 2021 – Inexperienced motorcyclist travelling southbound, lost control and drove onto the footpath, colliding with an on-street parked vehicle; and

(f) Minor injury crash outside 48 Aerodrome Road, 2022 – Intoxicated driver heading southbound on Aerodrome Road collided with an on-street parked vehicle (night time).

32 Based on the CAS records, there have been a total of six crashes in proximity of the subject site. In my opinion, it is evident that all six crashes occurred due to driver error and were not related to the road geometry. The only crash that occurred immediately adjacent to the site was due to illegal behaviour on behalf of the driver. The only crash that involved an HCV was caused by inappropriate behaviour by a motorcyclist. I have attached the CAS records as **Appendix 1**.

33 I have also reviewed the road safety rating for both Aerodrome Road and Hewletts Road from the Waka Kotahi MegaMaps GIS system. The personal and collective risk rating for both road corridors and the Hewletts Road slip lane is as shown in **Figure 2** and **Figure 3**. Collective risk represents the likelihood that a crash will occur[12]. Personal risk represents the likelihood of a crash affecting an individual[12].

[12] Measures of Road Risk - KiwiRAP | NZAA Motoring

Figure 2: Personal Risk

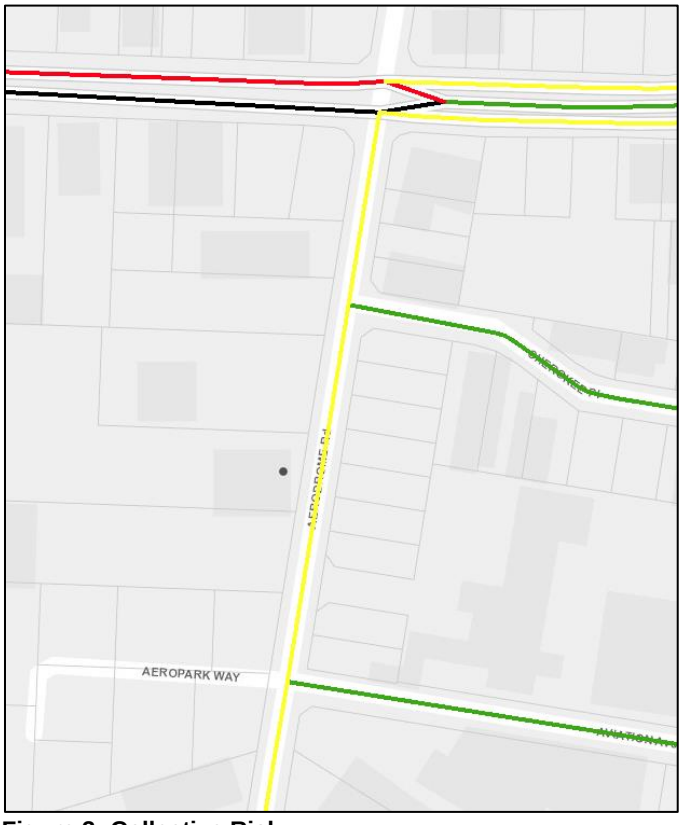


Figure 3: Collective Risk

The personal and collective risk ratings are shown in **Table 1**.

Table 1: Personal and Collective Risk Table

Road	Collective Risk	Personal Risk
Aerodrome Road	Low medium	Medium high
Eastbound: East of Aerodrome Road	Low Medium	Medium
Westbound: East of Aerodrome Road	Low Medium	Low Medium
Eastbound: West of Aerodrome Road	Medium high	Medium
Westbound: West of Aerodrome Road	High	Medium
SH2 slip lane	Low	Low

34 In my opinion, the low medium collective risk along Aerodrome Road aligns with the observed crash records, demonstrates that it is not a high-risk road corridor and that there are no particular safety concerns associated with its operation over and above what might typically be expected.

Traffic Effects

35 Appendix 4K of the City Plan identifies the information requirements for ITAs. The extent of ITA is linked to the number of new or additional car parks provided on a site. The minimum threshold for an ITA is 25 – 30 new car parks at which point a Basic ITA is required. The proposal does not include any new car parks and therefore no assessment of traffic effects is required. However, the original ITA and this update have been provided for robustness.

36 I have assessed the likely trip making behaviour for a typical day based on Mr Palmer's evidence and as presented in **Table 2** of my evidence.

Table 2: Typical Operational Two-way vehicle movements

	Peak Hour Trips	Daily Trips
Staff	4	14
Inbound Materials	5	40
Outbound Product	23	90
Total	28	144

37 I understand from Mr Palmer that the current typical daily production is some 500 tonnes of asphalt and that this is unlikely to change as part of the proposal. Whilst there is naturally a degree of variation in day-to-day operations, there is no intention to significantly change normal operations. In terms of traffic effects, the future plant would therefore generate the same volume of trips per hour and per day as the current plant and there is therefore no change. As such there can be no additional effects that require mitigation in my opinion. I consider that no assessment of future year traffic effects is necessary on the same basis.

38 I have also assessed the traffic impacts under a scenario of 3,500 tonnes of material being produced in a day. I understand from Mr Palmer that this is the maximum that could realistically be produced and that this level of production would be a 'once in a blue moon' event. I also understand from Mr Palmer that this is a level of production that requires advance notice and planning, with material needing to be stockpiled on site over a number of days. As such, the number of traffic movements on the peak day is not a straightforward factoring of the typical day traffic movements. Based on Mr Palmer's evidence I assess that the traffic movements associated with a peak production day would be as shown in **Table *3***.

Table 3: Maximum Production Operational Two-way Vehicle Movements

	2 Days Prior to Peak		Peak Production Day	
	Peak Hour Trips	Daily Trips	Peak Hour Trips	Daily Trips
Staff	4	14	8	16
Inbound Materials	9	108	5	118
Outbound Product	23	90	24	468
Total	34	212	29	602

39 I note that the peak hour trips for all the different activities do not align. I assess that the busiest hour of site activity would be likely to generate 29vph - 34vph.

40 I assess that in the busiest hours of the day, there is little difference in the numbers of operational vehicle movements that would occur on the road network under peak operational conditions when compared to the typical day where 23vph could reasonably be expected. The increase of 6vph in the busiest hour equates to 3vph inbound and 3vph outbound. Given the existing traffic volumes on Aerodrome Road and Hewletts Road of some 400vph and 3,590vph, I consider this level of change to be negligible and well within the day-to-day variation in traffic conditions. I reach the same conclusion in relation to the run up to a peak production day where the level of change is around 11vph or 5vph – 6vph inbound and 5vph – 6vph outbound.

41 I have included my calculation of these trip volumes as **Appendix 2.**

42 The greatest effect of a peak operational day will be in relation to the number of hours per day during which higher traffic volumes would eventuate. For the run up to peak production days, that level of change is around 4vph and is associated with the stockpiling of aggregates. I consider this level of change to be negligible as above.

43 On a peak production day, the constant export of asphalt from site and importing aggregate across both night and day shifts is what drives the increased level of activity. I have assessed this as being some 29vph across a 20hr period of which 14vph would be inbound and 14vph would

be outbound[13]. Assuming all of this traffic access Aerodrome Road from Hewletts Road to the north as the most direct way to enter and exit the wider industrial area, that equates to 7vph turning right and left in from Hewletts Road and the same turning right and left out of Aerodrome Road. In simplistic terms, this is 1 additional vehicle movement every 8.5 minutes for each of those manoeuvres, and representing a 0.67% change in traffic demands on Hewletts Road. I consider this level of change to be negligible.

44 In terms of road safety, I also consider that the level of traffic that could occur during peak operational days is unlikely to have an effect on road safety.

Vehicle Crossing Design

45 Through the s92 process, TCC requested that the width of the existing northern vehicle crossing be reduced from the existing 15.4m to 10m. This is to reduce the speed at which HCVs can negotiate the entry, whilst maintaining sufficient width to allow entry. I support this amendment. Swept path analysis confirming this is included as **Appendix 3**.

46 The southern vehicle crossing will also be limited to 10m in width.

47 Both vehicle crossings serving the asphalt site comply with the minimum sight distance, and separation requirements from adjacent vehicle crossings and the nearest intersection. I have included an assessment against the relevant City Plan Rules as **Appendix 4**. The one-way operation of the site also ensures that vehicles can enter and leave in a forwards direction. As such, I consider the proposed vehicle crossings to be suitable for the proposed asphalt plant upgrade.

Matters Raised by Submitters

48 Ms O'Neill (Submitter 80) has raised increased traffic congestion as a matter of concern in relation to the proposal. As I have discussed earlier in my evidence, the traffic effects of the proposal on a typical day is likely to be no different than existing. On the rare occasions where peak operation occurs, I have assessed that the change in traffic volumes is likely to be some 6vph – 11vph during the busiest hours on site, and up to 29vph across the remainder of the day. I consider this to be a negligible effect as set out earlier, particularly given what I understand to be the very low likelihood of this level of production occurring.

[13] I have not made any allowance for the difference between peak day typical day operations and have also rounded vph values downwards to an even number

Matters raised by s87F report

49 Section 7.8 of the s87F Report addresses Transportation matters and concludes that there would be a less than minor effect on the function, safety and capacity of the road network as a result of the proposal. I agree with this conclusion.

50 The Report recommends a consent condition that reduces the width of vehicle crossings to the site to a maximum of 10m at the property boundary in accordance with the TCC Infrastructure Development Code. I support this and agree with the reasoning provided in the S87F Report.

Proposed consent conditions

51 I confirm that I have reviewed the draft consent conditions. I support condition 29 reducing the width of the vehicle crossing as above.

Conclusion

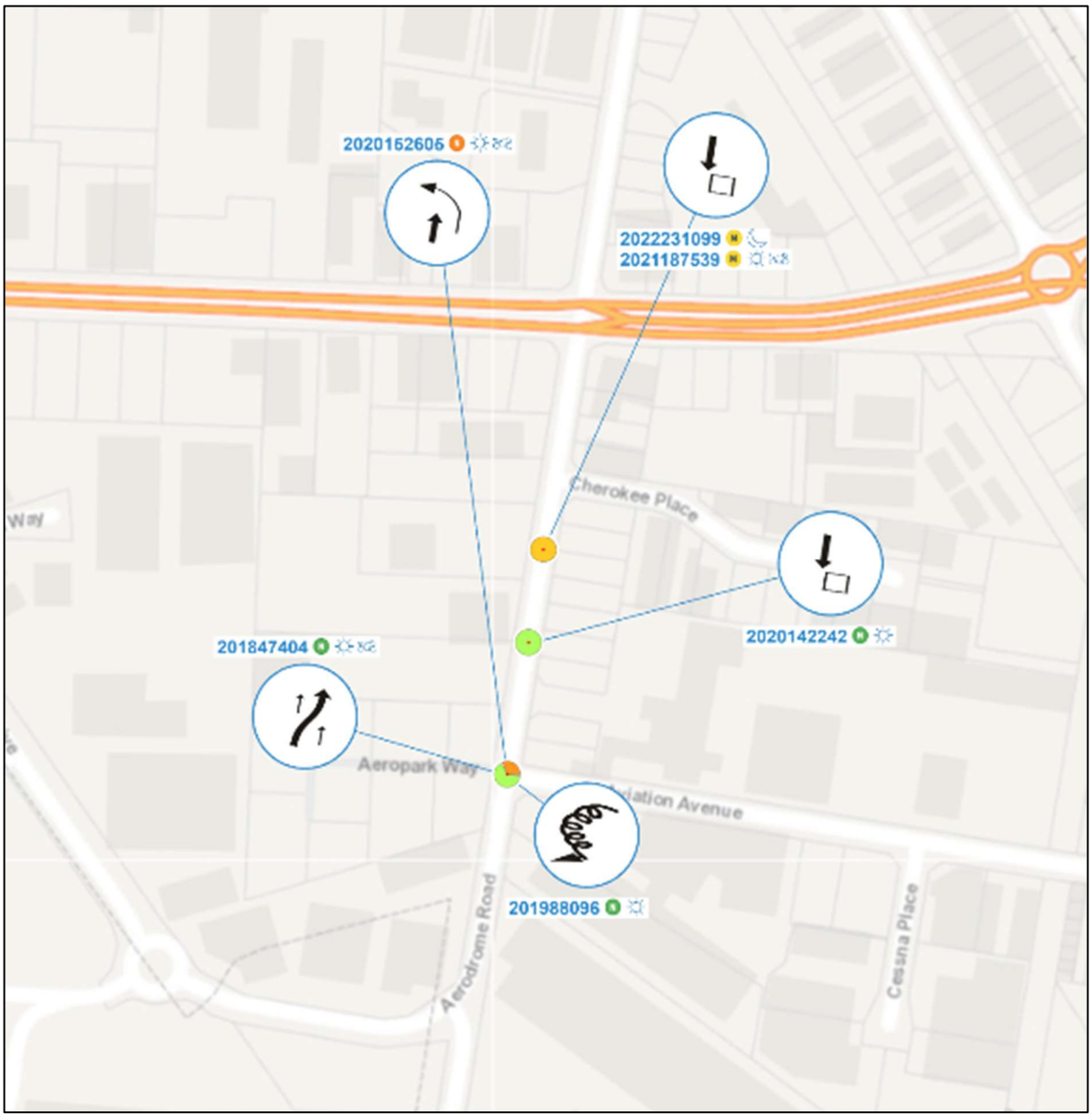
52 In terms of the traffic effects at this site, I conclude that there are less than minor adverse effects in terms of function, safety and road capacity and I therefore conclude that there are no traffic or transportation reasons as to why the proposed development should not be consented.

Judith Makinson

Dated this 28th day of February 2024

Appendix 1 – CAS Report

CODED CRASH ID	Crash road	Distance	Direction	Side road	Date	Day of week	Time	Description of events	Crash factors	Surface condition	Natural light	Weather	Junction	Control	Casualty count fatal	Casualty count serious	Casualty count minor	Social Cost $(m)
1231676	AERODROME ROAD		I	AEROPARK WAY	22/05/2020	Fri	15:27	Motorcycle1 NDB on AERODROME ROAD sideswiped by Truck2 NDB on AERODROME ROAD turning left	MOTORCYCLE1, alcohol test below limit, failed to notice indication of vehicle in front TRUCK2, alcohol test below limit	Dry	Bright sun	Fine	Crossroads	Stop		0	1	0	1.95
1173097	AERODROME ROAD		I	AVIATION AVENUE	17/08/2018	Fri	16:23	Car/Wagon1 NDB on Aerodrome road changing lanes/overtaking to right hit Motorcycle2	MOTORCYCLE2, alcohol test below limit, other inexperience, speed on straight CAR/WAGON1, alcohol test below limit	Dry	Bright sun	Fine	T Junction	Nil		0	0	0	0.05
1227153	AERODROME ROAD		I	AVIATION AVENUE	22/12/2019	Sun	10:44	Car/Wagon1 SDB on AERODROME ROAD lost control turning left; went off road to right, Car/Wagon1 hit kerb, parked (unattended) vehicle	CAR/WAGON1, alcohol test below limit, lost control when turning, new driver/under instruction	Dry	Bright sun	Fine	T Junction	Nil		0	0	0	0.05
1228701	AERODROME ROAD	94	N	AVIATION AVENUE	15/01/2020	Wed	12:20	Car/Wagon1 SDB on AERODROME ROAD, MOUNT MAUNGANUI, TAURANGA hit parked veh, Car/Wagon1 hit parked (unattended) vehicle	CAR/WAGON1, alcohol test below limit, attention diverted by cell phone, new driver/under instruction	Dry	Bright sun	Fine	Nil (Default)	Nil		0	0	0	0.05
1259872	AERODROME ROAD	51	S	CHEROKEE PLACE	4/05/2021	Tue	8:52	Motorcycle1 SDB on AERODROME ROAD hit parked veh, Motorcycle1 hit parked (unattended) vehicle	MOTORCYCLE1, driver over-reacted, new driver/under instruction, too far left	Dry	Bright sun	Fine	Nil (Default)	Nil		0	0	1	0.3
1317114	AERODROME ROAD	46	S	CHEROKEE PLACE	4/08/2022	Thu	1:30	Car/Wagon1 SDB on AERODROME ROAD hit parked veh, Car/Wagon1 hit parked (occupied) vehicle	CAR/WAGON1, too far left	Dry	Dark	Fine	Nil (Default)	Nil		0	0	1	0.3


2020152605
2022231099
2021187539
Cherokee Place
2020142242
201847404
Aeropark Way
201988096
Aerodrome Road
Cessna Place

Appendix 2 - Trip Calculations

BAU / Typical day (500 Tonnes of production):

Employee movements:

Night shift – 3 staff working 6pm – 3am

Day shift – 4 staff working 7am – 4pm

All employee movements are expected to be made using light vehicles only.

Total employee vehicle movements: 14 vpd and 4vph as day shift arrives or leaves prior to and after completing their shift

Inbound materials:

Inbound materials are delivered during day shift only (7am – 4pm), to supply both day and night shift production

500T aggregate imported in 30T truck and trailer load (17 loads per day)

2 loads of bitumen daily

1 other load allowed for (lime, refuse, sweeper, maintenance etc)

Total inbound material trips on a typical production day: 40vpd and 5vph

Outbound product:

There is an approximately 1-hour lag between the start of a shift and product being available for delivery. 50% of product is typically delivered in the first two house of production, with the remaining 50% being exported across remainder of shift.

500T asphalt exported in 11T truck loads (45 loads)

Total outbound trips on a typical production day: 90vpd and 23vph in busiest hour

Traffic movements on a 3500-tonne peak day:

Employee movements:

Night shift – 4 staff working 6pm – 5am

Day shift – 4 staff working 7am – 6pm

All employee movements are expected to be made using light vehicles only.

Total employee vehicle movements: 16 vpd and 8vph during shift changeover.

Inbound materials:

If the site is operating at maximum capacity, increased inbound materials deliveries will begin occurring up to 2 days before to the peak day.

Max yard can handle is some 1,500T per day. Assuming 2 days prior stockpiling at 1,000T and 1,500T inbound aggregate on day of production

- 2 days prior at 1,000T aggregate imported between 7am – 4pm, 30T truck and trailer load (34 loads per day)
- Production day @ 1,500T aggregate imported constantly over 22 hours, 30T truck and trailer loads (50 loads)
- 7 loads of bitumen deliveries on production day
- 2 other loads allowed for (lime, refuse, sweeper, maintenance etc) on production day

Total inbound material trips on each of 2 days prior to peak production day: 68vpd and 9vph additional to normal production on those days

Total inbound material trips on peak production day: 118vpd and 5vph on the basis that deliveries will occur over the entire 22hour period

Outbound product:

It has been assumed that there will be a one hour lag between start of shift and first outbound product delivery. It has also been assumed that outbound delivery across 20 hrs will occur at a constant rate.

There is an approximately 1-hour lag between the start of a shift and product being available for delivery. On peak production days, export of product is expected to occur evenly over a 20 -our period. Deliveries assumed to be made using a combination of smaller rigid trucks (12-tonne capacity) and larger truck and trailer units (18-tonne capacity). As such, the average truck capacity has been determined as 15-tonnes.

3,500T asphalt exported in 15T loads (234 loads)

As such, the 234 truck deliveries will result in a total of 468vpd. These deliveries will occur over the entire 22-hour period, hence peak hourly vehicle flow is 23vph.

Total outbound trips on a typical production day: 468vpd and 24vph in busiest hour.

Appendix 3 – Vehicle Crossing Layout

CKL
Planning | Surveying | Engineering | Environmental
Auckland Office
A: 25 Broadway, Newmarket
P: 09 524 7029
E: Auckland@ckl.co.nz

ALLIED ASPHALT LIMITED
54 AERODROME ROAD
MT MAUNGANUI

NORTHERN VEHICLE CROSSING
SECTION 92 RESPONSE
WIDTH REDUCTION

Issue	Description	Checked	Date
A	NORTHERN VEHICLE CROSSING	MTH	03.03.2023

		Date
Designed:	PR	03.03.2023
Drawn:	PR	03.03.2023
Checked:	MTH	03.03.2023

Scale: **NTS** (A3 Original)

Job No: **B21204** Dwg No: **000** Rev: **A**

FILE: B21204-TR- -CAD
PLOTTED:2024-02-23 15:19:26

Appendix 4 – TCC City Plan Rules Assessment

Criteria	Compliance	Comment
4B.2.7 Site Access and Vehicle Crossings		
a) The location of vehicle access points from an intersection shall be in accordance with Appendix 4G: Location of Access Points from Intersections;	Complies	At least 9m of separation required and 12m of separation achieved
b) Vehicle crossing points serving a business activity site shall be a minimum width of 4 metres, and a maximum width of 9 metres on the site boundary;	N/A	Does not apply as articulated truck and trailer units frequent the site. See rule below.
c) Vehicle crossing points serving a business activity site where articulated trucks and trailers or buses are likely to be used shall be designed to accommodate these vehicles;	Complies	Vehicle crossings accommodate design vehicles. A Section 92 request was received to reduce width of the existing northern vehicle crossing to 10m. A response was sent on 03/03/2023 stating the vehicle crossing will be reduced to a width of 10m.
d) Vehicle crossing-point widths for other activities shall be a minimum width of 2.7 metres on the site boundary;	Complies	Vehicle crossings are over 2.7m wide
e) Where vehicle entrance locations are altered, the crossing area no longer required shall be reinstated as verge and/or footpath and kerbs replaced. The cost of such work shall be borne by the owner of the property served by the former crossing;	N/A	Removal of vehicle crossings occurring under separate consent. Amendment to north crossing can comply with this rule
f) The minimum sight distance from vehicle access points shall be in accordance with Appendix 4H: Calculating Sight Distances;	Complies	At least 55m required and over 100m available
g) Access points on to Taurikura Drive where Rule 18A.14.3.2 Traffic Management, Safety and Convenience does not apply are permitted subject to compliance with Rule 4B.2.7 Site Access and Vehicle Crossings a), b), c), e) and f).	N/A	Site does not front Taurikura Drive
4B.2.8 Points of Service for Developments with Direct Access onto the Strategic Road Network		
a) Any activity involving the retail dispensing of vehicle fuels shall locate the fuel pumps a minimum of 10 metres from the mid-point on	N/A	Site does not involve fuel dispensing

the boundary of any vehicle crossing onto the strategic road network. For truck stops this distance must be at least 18 metres;		
b) All other drive-in facility activities with direct access onto the strategic road network shall have the first point of service activities set back a minimum distance of 20 metres from the edge of the road carriageway in accordance with Appendix 4I: Location of Points of Service where there is direct access onto the Strategic Road Network.	N/A	Site does not include any drive-in facilities.