BEFORE THE REGULATORY COMMITTEE OF WAIPA DISTRICT COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application to the Waipa District Council by Festival One Ltd for resource use consent under section 88 of the Act to establish and operate an annual temporary event (Christian music festival) in the Rural Zone at 209 Whitehall Road, Karapiro.

STATEMENT OF EVIDENCE OF ALASTAIR JAMES BLACK

ON BEHALF OF THE APPLICANT

(Traffic)

Dated: 27 August 2021

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2 Alfred Street
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gray matter

INTRODUCTION

1. My name is Alastair James Black. I hold a Bachelor of Engineering degree (Civil, 2002) from the University of Canterbury. I am a Chartered Member of Engineering New Zealand (CMEngNZ) and a Chartered Professional Engineer (CPEng). I have worked in the transportation field for 18 years.

2. I am based in Hamilton and have worked for Gray Matter Ltd as a transportation engineer since March 2009. For two years prior to that I was a Project Engineer for the London Borough of Hammersmith and Fulham. For the previous six years I was a civil/transportation engineer with Opus International Consultants Ltd in Hamilton.

3. I am familiar with the transport issues arising in and around the Waikato, having provided advice to Waipa District Council (WDC) and other local authorities, NZ Transport Agency (NZTA) and developers on range of transport related projects in the area. I have the following specific experience relevant to the matters within the scope and purpose of this statement of evidence:

   (a) Consultant civil/transportation engineer for Road Controlling Authorities assisting in the review of consent applications including quarries, industrial, intensive farming, commercial, childcare and residential developments within wider Waikato Region;

   (b) Consultant civil/transportation engineer for developers, landowners and local authorities preparing traffic impact assessments for development proposals including quarries, intensive farming, rest homes, museums, childcares, schools, commercial and residential developments, and attractions in a rural network including Hobbiton.

   (c) Consultant project manager for HCC and NZTA for the Southern Links Investigation relating to a Notice of Requirement for 32km of proposed arterial road network to the south of Hamilton;

   (d) I hold a Site Traffic Management Supervisor (STMS), Level 1 qualification for temporary traffic management and have assisted in the preparation and review of traffic management plans for events; and

   (e) I have completed the NZTA Road Safety Engineering Workshop and have led safety audits on urban and rural improvement projects for local roads and state highways.

EXPERT CODE OF CONDUCT

4. I confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses in the Environment Court, Practice Note (2014), and agree to comply with that Code of Conduct. I state where I have relied on the statements of evidence of others for my assessment. I have not omitted to consider material facts known to me that might alter or detract from my opinions.

OVERVIEW OF EVIDENCE

5. I have been retained by Festival One Ltd (the Applicant) to provide traffic engineering advice relating to their consent application to establish and operate an annual temporary event at 209 Whitehall Road, Karapiro 3496. I directed preparation of, and reviewed, the *"Proposed Festival One Event, 209 Whitehall Road, Whitehall, Integrated Transport Assessment" (Issue 2, 9 June 2020)* for this proposal. I prepared two subsequent letters in response to queries raised by Council:

   (a) *"Proposed Festival One Event – Updated Transport Response"* dated 10 June 2021; and

   (b) *"Proposed Festival One Event – Response to Council Queries"* dated 17 July 2021.

6. The purpose of this statement of evidence is to summarise my key conclusions, address matters raised by submitters and in the s42a report, and comment on the proposed conditions in relation to transport.

7. My evidence covers:
   (a) A summary of the proposal;
   (b) Summary of the transport effects;
   (c) Summary of proposed transport mitigation;
   (d) Responses to submissions; and
   (e) Comments on the proposed conditions.

8. I have relied on the Draft Traffic Management Plan (ITA, Appendix F) prepared by Traffic Management NZ to demonstrate the likely temporary traffic management required to mitigate some of the transportation effects of the festival.

9. In preparing this evidence I have reviewed the following:

(a) Waipa District Council's s42A Report prepared by Aiden Kirkby-McLeod (20 August 2021).

10. In summary, I confirm the conclusion of my Integrated Transport Assessment that with implementation of appropriate mitigation through conditions of consent, the transport effects are expected to be no more than minor.

THE PROPOSED FESTIVAL

11. The event is a four-day music and entertainment festival with provision for attendees to come and go as desired each day or camp on site (tents or campervans) for the full or part duration of the event. The proposed festival will be held over Auckland Anniversary weekend. The festival would allow public access from 6am Friday morning (parking only, ticketing/event access not active until 10am) until Monday afternoon.

12. My assessment of effects is based on my experience and knowledge of the local network, traffic engineering and transport planning principles and the Applicant's experience in running the current event at Mystery Creek. Their experience includes that:

(a) The origin / direction of arrival is based on ticket sales information from the 2018 and 2021 events;

(b) The audience arrives and departs over extended periods;

(c) The audience is willing to follow directions and travel advice delivered via the Festival One app, which directs them to the preferred routes;

(d) The audience typically arrives in groups with several people in each vehicle;

(e) The majority of the audience stays on-site overnight; and

(f) Performers are regularly shuttled to and from the site and do not stay overnight.

13. Festival One intends to grow the event over a period of several years, from 3,300 tickets (2018 event) to a maximum of 10,000 tickets. The ITA includes consideration of an initial event being for 5,000 tickets even though it may take several years for the festival to reach this size. This precautionary approach mitigates the risk of unexpected behaviour, peaks and approach directions. I

have not assessed the effects of an event with more than 10,000 ticket holders and anticipate controls on attendance through conditions.

TRIP GENERATION AND DISTRIBUTION

14. I based my transport assessment on the maximum number of ticket holders as 10,000, plus 2,000 staff, volunteers and special guests. The expected total number of trips generated by the entire festival operation is approximately 16,000 trips[1] over a 10 day period. Ticketholders make approximately 70% of all trips, with 30% of trips made by staff/volunteers and special guests.

15. Trips will peak several times over the weekend, compounded by the 1-day tickets being used on the Saturday and Sunday, and the majority of people departing at the end of the festival. This is illustrated at Figure 19 of the ITA.

16. The trip generation was updated based on data collected at the 2021 event. An updated travel profile is provided at Figure 2 of my Updated Transport Response[2]. In summary this profile shows:

    (a) More clearly defined arrival and departures peaks (the profile in the ITA had overlaps between arrival and departures).There is very little overlap between arrivals and departures; and

    (b) Peak trips being lower than previously assumed due to the higher vehicle occupancy. Peak trips reduce from around 1,940 trips to 1,540 trips over a five-hour period.

17. Trips have been distributed to the local network based on information supplied by the Applicant showing the origin of festival attendees as being, 65% from north/Auckland, 22% from the south, and 13% from the east (Tauranga). I used these proportions to distribute the event traffic on the transport routes and assess the transport effects.

SUMMARY OF TRANSPORT EFFECTS AND PROPOSED MITIGATION

18. The potential adverse effects of the proposed activity relate mainly to the additional traffic using the local roads during the event. The effects are likely to be focussed at the Karapiro Road/ Whitehall Road intersection and along Whitehall Road for the arrival trips. For the departure trips, the most noticeable

[1] The Executive Summary of the ITA, incorrectly states the total trip generation as 14,760.
[2] Proposed Festival One Event – Updated Transport Response" dated 10 June 2021.

effects are likely to be focussed on the French Pass/ Thornton Road route into the Cambridge urban area.

19. Local road users are likely to notice the additional activity with the effects likely to be delays in access and egress from their properties, slowing for turning traffic, or delays in turning at intersections.

20. State Highway users are unlikely to notice the additional activity due to the usual holiday traffic activity expected on Auckland Anniversary weekend, but the effects are likely to be slowing for turning traffic, or minor delays in turning at intersections.

21. In my view, the transport effects can be managed through the proposed conditions of consent which require:

    (a) Waipa DC approval of the detailed design for the vehicle crossings, parking areas and on-site roads prior to construction.

    (b) Provision of 3,000 on-site car parks for the 10,000 patron event, with other minimum parking requirements for the smaller events.

    (c) A Traffic Management Plan is developed for approval by Waipa DC and NZ Transport Agency.

    (d) A review of the traffic and parking demand following the first event, prior to any increase over 8,000 patrons, and prior to any increase over 10,000 patrons.

S42A REPORT

22. I have reviewed Council's s42A Report. I have no comments on the content of the report or the draft conditions of consent.

SUBMISSIONS

23. I have reviewed submissions made by the following parties which raised transport related matters:
    (a) Henk and Jacky Weijers (oppose)
    (b) Stephen and Louise Howse (oppose)
    (c) Bryce Ede (initially opposed, submission now withdrawn)
    (d) Chris Murphy (oppose)
    (e) Waka Kotahi – NZ Transport Agency (support)

(f) NZ Police (oppose, submission now neutral)

(g) Glenn and Anna Thomas (oppose)

(h) James and Mary Casey (oppose)

(i) Russel/ Angela Bezzant (oppose)

(j) Firth Industries Ltd (support, submission now withdrawn)

(k) Fire and Emergency NZ (no formal submission)

24. I note that the NZ Transport Agency submission is not opposed to the proposal and their suggested conditions have been incorporated into the proposed conditions. I clarified with NZ Transport Agency[3] that they require monitoring of queue lengths on the approaches to the SH1/ Karapiro Road and SH1/SH29 intersection. That amendment has been included in draft Condition 22(g).

25. The submissions raise transport matters including:

(a) Impact of additional traffic movements causing congestion/ delays;

(b) Safety concerns of additional traffic using the local roads, including French Pass Road;

(c) Safety concerns at the SH1/ Karapiro Road intersection;

(d) Safety concerns at the Karapiro Road/ Whitehall Road intersection;

(e) Dunning Road intersection;

(f) Adequacy of the traffic management plan;

(g) Emergency vehicle access;

(h) Internal site access road; and

(i) Parking on Dunning Road.

Impact of additional traffic movements caucusing congestion/ delays

26. Existing activities in the area will notice the increase in traffic on local roads. The effects are likely to be focussed at the Karapiro Road/Whitehall Road intersection and along Whitehall Road for the arrival trips. For the departure trips, the most noticeable effects are likely to be focussed on the French Pass Road/ Thornton Road route into the Cambridge urban area.

27. As discussed in the ITA and further responses the additional traffic has been distributed to the network and the effects along affected road corridors and at affected intersections has been considered and quantified. Our analysis shows there is a minor increase in the likelihood of queuing and delays. The draft TMP has been developed to minimise the risk. In a worst-case scenario stop/go traffic

[3] Email correspondence with NZ Transport Agency (Claudia Jones), 13 October 2020 – included as Attachment 1.

management can be implemented to manage delays at the affected site access or intersection(s).

28. The draft TMP prepared by Traffic Management NZ states *"Delays of up to 5 minutes may occur while Stop Go is active, however if delays exceed more than the maximum wait time allowed by the RCA (normally 5 minutes), the STMS is to inform the TMC and take appropriate action."*

29. However, the use of Stop/Go traffic control to control entry movements is expected to be limited. As stated in the ITA[4] Gate 1 *"will be formed as a double wide access to allow entry and exit via the primary property entrance. Both the vehicle crossing and internal road will be two lanes wide to allow vehicles to pass"*. Constructing the gate and internal access roads to two lanes wide:

    (a) Provides additional capacity for entry movements reducing the risk of off-site queuing; and

    (b) Reduces the likelihood of queuing should a vehicle breakdown or become stuck as a second lane is available to bypass any stopped vehicles.

30. Stop/Go control may be used to manage departure movements, especially the right-out movements. I would expect the traffic management contractor to manage traffic flows and prioritise the arrival of traffic on Whitehall Road over departing event traffic so that delays and queues are contained within the site.

31. As shown in Appendix G of the ITA, the main car park area is located approximately 1km from Whitehall Road. This provides significant length of access road for internal queuing and stacking of vehicles, conservatively assuming 10m per vehicle[5] this equates to queuing space for 200 vehicles.

32. In my view:

    (a) There is a minor increase in the likelihood of queuing and delays that can be managed through the Applicant's approach to travel management and temporary traffic management; and

[4] ITA, Section 4.3
[5] A 99.8%ile car is 5.2m long (Waipa District Plan, Appendix T2 – Car Parking and Manoeuvering Layouts). Assuming 10m allows for a 2.4m gap in front and behind each vehicle.

(b) Due to the layout of the site, there is a low risk of off-site queuing that would result in congestion or delays.

Safety concerns of additional traffic using local roads including French Pass Road

33. My colleague, Melanie Parsons, drove over the affected local roads with Callum Wilson the Waipa DC Safety Engineer on 11 July 2018. I have relied on her summary of the drive-over and discussions which is provided in the ITA (Section 6.1). I subsequently drove over the route on 3 June 2021.

34. As illustrated in the ITA (Figure 20), the French Pass Road route is primarily identified as a route for departing traffic. It may be used by some local ticket holders who are aware of the route. The ITA (Figure 20) anticipates that approximately 10% of the event traffic will use Taotaoroa Road. Once drivers are on these routes there are very few intersections / decision points. The Indicative Signage Plan and draft TMP outline the proposed approach to direction and confirmation signage that will reinforce to drivers that they are on the correct route.

35. The drive over with Waipa DC identified that the curves on Taotaoroa Road, and the tight curves on the approach to the gully and bridge on French Pass Road should have a cursory sign to warn drivers to slow for the curves ahead. These cursory signs discussed on the drive over have been included in our Indicative Signage Plan[6] and the draft TMP.

36. At times during the event there will be significant increases in traffic on the local roads. These peak periods are illustrated in the ITA (Figure 19) and my Updated Transport Response (Figure 2). Temporary traffic management is proposed at key intersections with direction and confirmation signage providing additional information to drivers. I consider that the proposed approach to temporary traffic management, direction signs and communication is appropriate to manage event traffic along these local roads.

Safety concerns at the SH1/ Karapiro Road Intersection

37. I share the submitters concerns about the potential for safety impacts at the SH1/ Karapiro Road intersection, especially for departing traffic making a right-turn out of Karapiro Road and arriving traffic making a right-turn in. This safety concern was discussed during consultation with the NZ Transport Agency and

[6] ITA, Appendix E, Figure 25

is recognised in their recommended condition. That condition has been adopted as Condition 20 l).

38. The ITA (Appendix B) provides the reported crash history for the period 2015-2019 which showed a number of crashes involving turning vehicles. I have searched NZTA's CAS database for 2020 and 2021[7] and there have been no additional crashes to date.

39. The approach to minimise the risk of adverse safety effects at this intersection is to direct traffic to use other routes that avoid right-turns at the intersection. Mitigation is proposed through the use of diversions, public notices, and event directional signage used in conjunction with the communications strategy (Festival One app and NZTA's journey planning tools).

40. I consider that the proposed approach to traffic management and communication is appropriate to manage event traffic at this intersection.

Safety concerns at the Karapiro Road/ Whitehall Road intersection

41. Henk and Jacky Weijers raised concerns about the number of crashes at the Karapiro Road/ Whitehall Road intersection.

42. The ITA (Appendix B) provides the reported crash history for the period 2015-2019 which showed three crashes (one serious injury to a motorcyclist and two non-injury). The identified crash factors were inappropriate speed, an overseas driver, and cutting corner on bend. I have searched NZTA's CAS database for 2020 and 2021[8] and there have been no additional crashes to date[9]. None of the reported crashes involved vehicles turning from Karapiro Road into or out of Whitehall Road.

43. The draft TMP includes options for a 50km/h speed restriction or a 30kmh speed restriction with stop/go control. A speed restriction reduces the potential severity of a crash as well as reducing the likelihood of a crash. Advanced direction signs are proposed. I consider that the draft TMP is appropriate to manage event traffic at this intersection.

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[7] CAS search completed on 24 August 2021. The current processing times are 1 working day for fatal crashes, four weeks for injury crashes and 3 months for non-injury crashes, so there is the potential that some more recent crashes have not been processed.
[8] CAS search completed on 24 August 2021
[9] A crash was reported in 2020 where a vehicle lost control and struck the bridge located 85m north of the intersection.

Dunning Road Intersection

44. Glenn and Anna Thomas are seeking that traffic management is put in place at the Dunning Road / Whitehall Road intersection. This intersection is approximately 650m south of Gate 1 and 750m north of Gate 2. The ITA did not include a specific assessment of this intersection as no event-related traffic would be turning there. Dunning Road intersects Whitehall Road at a skew angle on the outside of a large radius bend which restricts sight distance.

45. During peak periods I consider that although no event traffic is likely to use Dunning Road, there is the potential for delays to existing users turning into and out of Dunning Road. The available sight distance is less than current desirable standards and increases the risk of a crash occurring. I support the TMP being expanded to specifically require traffic management at this intersection.

Adequacy of Traffic Management

46. The draft TMP was prepared by Traffic Management NZ in accordance with the Traffic Control Devices Manual, Part 8: Code of Practice for Temporary Traffic Management (CoPTTM). The proposed conditions (Condition 19) require that the CAR and TMP be approved by both Waipa District Council and NZ Transport Agency.

47. I consider that the draft TMP has been prepared in accordance with best practice and identifies the approximate scale and extent of temporary traffic management likely to be required to manage event traffic. However, amendments will be required during the approval process, for example inclusion of traffic management at the Dunning Road / Whitehall Road intersection.

Emergency Vehicle Access

48. Emergency vehicle access along the affected roads would only be restricted by event traffic if there are queues on public roads. As discussed at paragraphs 29-31 off-site queuing is not expected at the site accesses.

49. The draft TMP (page 9) states *"The STMS will suspend or re-evaluate the methodology of the works to allow passage of emergency service vehicles."* In my view an experienced traffic management contractor will be able to react to the need for intervention to allow emergency vehicle access along Whitehall Road. For example, this could involve the use of stop/go traffic management to allow emergency vehicles to pass queued traffic.

50. Gate 2 is available for emergency vehicle access to the site should there be queuing affecting the operation of Gate 1.

Internal Site Access Road

51. The submission of Henk and Jacky Weijers raises concerns about the access to and from the site, I have assumed this relates to the internal site access road. As discussed at paragraph 29, the intention is to widen the vehicle crossing and internal access road to provide for two-way traffic. The correspondence on behalf of Fire and Emergency NZ also commented on the site access, seeking a minimum width of 4m for access roads. Condition 15 requires that Gate 1 is to provide for two-way traffic.

Parking on Dunning Road

52. Glenn and Anna Thomas are seeking that there is no parking on Dunning Road. In my view there is no reason to expect event-related parking on Dunning Road, as the event area is located 1km from Whitehall Road with Dunning Road is an additional 650m from Gate 1 and around 3,000 car parking spaces will be available on site for the maximum size event. If on-street parking does occur, this could be addressed through the TMP.

Review Frequency

53. Several submitters have requested an annual review of traffic and parking related to the festival activity. The risk of unexpected off-site effects due to poor event management or incorrect assumption is highest during the first few events. I support a precautionary approach in requiring a review of the first three events as a reasonable way to mitigate the risks of unexpected adverse effects.

CONCLUSION

54. In summary:

    (a) Access improvements will be implemented to the satisfaction of Waipa DC.

    (b) The proposed festival will generate approximately 16,000 vehicle trips over a 10 day period (based on a 4 day festival with 3 days for set-up and 3 days pack-out). Event traffic will be noticeable on the surrounding network, but I consider it is manageable through the use of public notices, temporary traffic management, event direction and cursory signage, and recommended transport route information delivered via the Festival One app.

    (c) A draft TMP has been provided that identifies the approximate scale and extent of temporary traffic management likely to be required to manage

event traffic. The TMP will require approval from Waipa DC and NZ Transport Agency.

55. I confirm the conclusion of my Integrated Transport Assessment that with implementation of mitigation through amended conditions of consent, the transport effects are expected to be no more than minor.

Alastair Black

Dated 27 August 2021

ATTACHMENT 1: NZTA CORRESPONDANCE

Alastair Black

From: Claudia Jones <Claudia.Jones@nzta.govt.nz>
Sent: Tuesday, 13 October 2020 12:46 pm
To: Alastair Black
Subject: RE: Festival One conditions

Hi Alastair,

By "all approaches", Waka Kotahi meant the approaches from not only the State Highway 1/Karapiro intersection but also other state highway intersections such as the State Highway 1/State Highway 29 intersection.

As a minimum, both the SH 1/Karapiro and SH1/SH29 intersection should be monitored.

Kind regards,

Claudia Jones / Planner
Consents & Approvals- Transport Services
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Waka Kotahi NZ Transport Agency
Hamilton Office / **Level 1, Deloitte Building** 24 Anzac Parade
PO Box 973, Waikato Mail Centre, 3240, New Zealand

From: Alastair Black <Alastair.Black@graymatter.co.nz>
Sent: Monday, 12 October 2020 4:44 PM
To: Claudia Jones <Claudia.Jones@nzta.govt.nz>
Subject: Festival One conditions

Hi Claudia
I am preparing evidence for the Festival One hearing and I want to be clear about the change NZTA is seeking in the submission.
https://www.waipadc.govt.nz/our-services/planning-and-resource-consents/notified-resource-consents

Waka Kotahi Submission

Waka Kotahi has reviewed the application documents associated with LU/0145/20 lodged with Waipa District Council, and notes the following:

1. Waka Kotahi is satisfied that Conditions 1-4 in the Mitigation Letter dated 19th May 2020 have been incorporated into the application. However, modification is required to proposed Condition 10 under Section 9 of the applicant's Assessment of Environmental Effects. Waka Kotahi required that the event specific monitoring report shall include information on maximum queue length for all approaches. Proposed Condition 10 within the applicant's AEE only requires information on the maximum queue lengths for turning movements at the State Highway 1/Karapiro Road intersection for peak festival periods.

2. The application is of the same scale as that which Waka Kotahi initially reviewed.

We have this bullet point within Condition 10

- Maximum queue length for turning movements at the SH1/Karapiro Road intersection for peak festival periods;

You letter (19 May) has

- Maximum queue length for all approaches

We understood that NZTA was concerned with the SH1/Karapiro intersection so added the additional clarification.
Are you wanting queue lengths for through traffic recorded at the SH1/Karapiro intersection, or something else?

Would this amendment be acceptable?

- Maximum queue length for **all** movements at the SH1/Karapiro Road intersection

My draft evidence is due Wednesday (for submission to Council by noon Friday), so a speed response would be much appreciated

Thanks
Alastair

Alastair Black, Transportation Engineer | CMEngNZ, IntPE(NZ) | Gray Matter Ltd

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