

BEFORE THE WAIKATO DISTRICT COUNCIL

UNDER the Resource Management Act 1991

AND

IN THE MATTER OF a resource consent application by Gull New Zealand
Limited for construction and operation of a service
station at 68-72 Great South Road in Pokeno

STATEMENT OF EVIDENCE OF IAN PHILIP CONSTABLE

TRAFFIC ENGINEER

21 APRIL 2021

Introduction

1. My full name is Ian Philip Constable. I am a consulting traffic engineer and director of the consulting engineering practice, Traffic Solutions Limited. I am registered as a Member of Engineering New Zealand (MEngNZ). I have a Masters in Engineering Studies (Transportation) degree from the University of Auckland (2006).
2. I have been involved in road engineering for the past 44 years, specialising in traffic engineering for the past 32 years.
3. Of particular relevance to this application is my experience providing traffic engineering consultancy services for several fuel facility providers and other commercial developments for many years.
4. Some other similar projects I have been involved with in recent years are:
 - (a) Gull service station at 54-56 Dundas Road, Sanson;
 - (b) Mobil service centre at Anzac Memorial Drive, Taupo;
 - (c) Service Station (non-brand specific) at 11 Allen Road, Pakowhai, Hawkes Bay;
 - (d) Z Energy service station at 287 Oteha Valley Road, Albany, Auckland;
 - (e) Mobil service station redevelopment, 661 Te Rapa Road, Hamilton;
 - (f) Gull service station redevelopment at 102-104 Norton Road, Hamilton;
 - (g) Gull service station at 301 Tremaine Avenue, Palmerston North;
 - (h) Gull service station redevelopment at 99 Fifth Avenue, Hamilton.
5. In each of the above cases my role was to provide traffic expertise, carry out site investigations, provide input during the designs of the proposals relating to access, parking and site layout, liaise with the clients and other professionals on the project teams, and prepare the necessary reporting for resource consent applications.

Project Involvement

6. I have been involved with this proposal since June 2019. My role has been to provide traffic engineering input into the design of the proposal, in particular relating to access, servicing and site layout. I have carried out site investigations and assessed the suitability of the proposal in relation to the transport environment and also in terms of the proposed road upgrade, and I prepared the Traffic Impact Assessment report ("Traffic Report") that is included in the application package for this Project.

Code of Conduct for Expert Witnesses

7. I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note 2014, and I agree to comply with it as if this hearing was before the Environment Court. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of evidence

8. My evidence will include:
 - (a) A description of the existing and proposed developments of relevance to transportation;
 - (b) Summary of the existing and future transport environments;
 - (c) Summary of traffic effects;
 - (d) Council Officer's report;
 - (e) Draft Conditions;
 - (f) Matters raised in submissions;
 - (g) Conclusions.

9. I confirm that I have read the submissions received, and the Council Officer's report, and that I am familiar with them.
10. I carried out my initial site visit in June 2019. During that visit I assessed the feasibility of the proposal, mainly with respect to traffic safety at site accesses, having regard to the adjacent transport environment. I indicated to my client Gull New Zealand Limited ("Gull") that I could support a service station at this site, providing that the western access is used only as a site entry, due to inadequate visibility westwards from that access location. The service station has been designed accordingly.
11. I have also obtained available traffic count data from the Council, accident records from the official crash database held by the New Zealand Transport Agency. I have used these data, and known traffic generation characteristics of the land-use type proposed, to form my opinion about the traffic generation effects of the proposal on the operation of the surrounding streets.
12. Subsequently I have revisited the site in April 2021 and undertaken several drive-by visits at various times.

Executive summary

13. I have assessed that the majority of traffic flows that will access the service station will be pass-by traffic that is on the road anyway, but just calls in on the way past. I concluded that the additional traffic flows that the activity will generate will be a small proportion of the total traffic accessing the site, and that the additional flows will have insignificant effect on network capacity, or traffic safety.
14. I have also assessed that vehicle crossings will be of appropriate width and form to accommodate the numbers and types of vehicles that will use them, including fuel delivery tankers. I also assessed that sight distances will be adequate to enable the accesses to operate safely, providing that the western access is used as an entry only.
15. The Council Officer's report has stated that the development could operate in the existing road environment with no more than minor adverse effect.

However, it has expressed concern that the proposal cannot be satisfactorily accommodated after Great South Road has been upgraded and the intersection at Pokeno Road signalised. This is mainly due to the proposed kerbed median adjacent to the site that will prevent access by fuel delivery tankers. I disagree with that conclusion. A possible solution, which will enable entry and exit movements by all vehicles, is attached to this evidence in Attachment 3.

16. I have also read the submissions received following notification of the proposal. In summary, my opinion remains that the service station could be accommodated in the transport network, in both the existing and future roading environments.

Existing and Proposed Developments

17. The site presently contains two residential buildings. One is a residential dwelling, the other is used as an office. These will be removed.
18. The proposed service station will comprise the following:
 - (a) A forecourt with 3 pump islands providing 6 service positions;
 - (b) One air hose;
 - (c) Two car parking spaces associated with the air hose;
 - (d) Two vehicle accesses, the northern access being an entry only and the southern an exit only;
 - (e) Underground tanks at the rear of the site, under a paved area that will accommodate fuel unloading by tanker.
19. There will be no shop, or workshops.

Existing Transport Environment

20. The operative Waikato District Plan Franklin Section classifies Great South Road as a National Route. However, this is a legacy from when the road was State Highway 1. The Waikato Proposed District Plan classifies it as a Collector road, in recognition that the road has changed its function in the network. Collector

- roads place a higher priority on providing access to properties. I also note that the New Zealand Transport Agency “One Network Road Classification” system, which is a nationwide hierarchy, also defines it as a Primary Collector road.
21. I consider it is therefore appropriate that the road be considered as if it were a Collector road, and not as a National Route as specified in the operative District Plan.
 22. Attachment 1 to this evidence is an aerial photograph showing the existing geometrics of Great South Road and other streets in the immediate vicinity of the site.
 23. Adjacent to the site, Great South Road contains one traffic lane in each direction separated by a flush median, plus sealed shoulders. The horizontal alignment is straight from the site eastwards. Westwards from the site is a 130m radius curve, which has a maximum safe operating speed of 55 to 60 km/h. The vertical alignment is almost level.
 24. Pokeno Road intersects with Great South Road some 60m northwest of the site. It is also a two-laned road. Its intersection at Great South Road currently has a “Give Way” sign control.
 25. Market Street intersects with Great South Road just southeast of the site. The road has a straight and almost level alignment, with clear visibility along it. The northern leg of the road is a cul-de-sac. The road also extends southwards from Great South Road, forming a cross-intersection with Great South Road. The intersection is uncontrolled on the northern approach, and a “Stop” sign control on the southern approach. There is a left turn slip lane and associated traffic island into the north part, the slip lane extends as a taper along Great South Road partly across the site frontage of the site.
 26. The legal speed limit on all roads in the immediate vicinity is 50 km/h.
 27. Traffic count data provided by the Council shows that the roads near the site carry the following daily traffic volumes:

(a)	Great South Road (Market – Pokeno)	3,995 vehicles per day
(b)	Market Street (north of Great South)	20 vehicles per day
(c)	Pokeno Road (west of Great South)	2,616 vehicles per day
(d)	Ford Street	870 vehicles per day

28. The Great South Road count is dated 2015. The Council has not counted this road since when the resource consent application for the service station was lodged. A Council estimate suggests it carried the same traffic in 2020, however, this does not include traffic associated with the recently constructed nearby Countdown supermarket or other surrounding development. Allowing for these, and some traffic growth I estimate the road now carries between 6,000 and 7,000 vehicles per day.
29. Nevertheless, this volume remains well within the capacity of a two-laned road. As a comparison, a typical two-laned road can carry up to about 20,000 vehicles per day before it reaches practical capacity.
30. The Traffic Report includes a study of accidents that the New Zealand Transport Agency recorded within a 200m radius of the site during the 5-year period 2015 to 2019. These were the latest available data at the time. I have since updated that investigation to include the year 2020. During the 5-year period 2016 to 2020, one accident was recorded to have occurred on Great South Road within about 100m radius of the site. The accident involved a lost control vehicle, which the official report states occurred due to a medical condition. An occurrence of one recorded accident within a 5-year period shows that the transport network immediately surrounding the site is presently operating safely.

Future Transport Environment

31. Approximately 6 months after lodging the application for resource consent, Council officers advised that it is proposing to upgrade Great South Road adjacent to the site. I understand the design is still progressing, but the scheme plan as it presently stands is appended to this evidence as Attachment 2.
32. Features of the road upgrade are summarised as follows:
 - (a) Four lanes on Great South Road through the intersection at Pokeno Road (two lanes in each direction);
 - (b) Signalisation of the intersection at Pokeno Road;

- (c) A northbound diverge taper and a southbound merge taper directly adjacent to the site where the four-lane part joins into the existing two-lane part to the east;
 - (d) A flush median on Great South Road north of Pokeno Road;
 - (e) A median on Great South Road east of Pokeno Road. The plan does not identify if this is to be a flush or a kerbed median but the Council Officer's report states it will be a kerbed median;
 - (f) A footpath along the northern side of Great South Road. No footpath presently exists on the northern side.
 - (g) Closure of Ford Street where it intersects with Pokeno Road just west of Great South Road. The southern end of Ford Street will become a cul-de-sac.
33. In addition the Council is proposing to modify the intersection of Market Street with Great South Road. The design is still in the early stages, and a high level scheme is included in Appendix F in the Council Officer's report. The roundabout will have two circulation lanes, and Great South Road between Pokeno Road and the roundabout will be 4-laned completely. The merge and diverge lengths proposed with the signalisation at Pokeno Road will therefore be temporary.

Summary of Traffic Effects

34. In the Traffic Report I concluded the following traffic generation and network safety effects:
- (a) That the activity will potentially generate a maximum 60 vehicle turn movements per hour at the site accesses.
 - (b) That 85% of the turn movements at the site accesses will be pass-by traffic that is on the road network anyway. Hence the amount of actual additional traffic that the service station will attract onto the wider network will be considerably lower, estimated to be a maximum of about 10 vehicle trips per hour. Service stations, particularly those without shops, by their nature are not big generators of new trips.

- (c) It is unlikely such an increase in traffic flow on the network will have a noticeable effect on network capacity.
- (d) All vehicles entering the site will use the western access, which will be an entry only. All vehicles exiting from the site will use the eastern access, which will be an exit only. There will effectively be one-way direction of circulation within the site.
- (e) The proposed vehicle crossings will be of appropriate width to accommodate the numbers and types of vehicles that will use them.
- (f) Sight distances from the proposed accesses will meet or exceed recommended guidelines, except in the case where a driver exiting from the proposed western access will have insufficient visibility northwards due to the road curve.
- (g) Thus my recommendation early in the design phase was that the western access be used as an entry only. As indicated above, this has been incorporated into the design submitted with the application.
- (h) The design of the development includes measures to ensure that the sight distance from the eastern exit remains adequate for safe operation. These include a restriction on planting and fence heights in the front landscaped area, locating the pylon sign to the eastern side boundary, and relocating a fence and removing existing vegetation from the road reserve to the west of the site. Gull has agreed to these measures and they have been incorporated into the design, and/or into recommended conditions of resource consent.
- (i) The accesses and site layout will accommodate the tracking path of a fuel delivery tanker truck right turning into the western access and right turning out of the eastern access. This arrangement is Gull's preference for operational reasons. The tracking path of a fuel tanker carrying out these manoeuvres is shown in Figure 5 in the Traffic Report.
- (j) The pump islands will be located within the site in accordance with the Land Transport New Zealand publication RTS 13 "Road Safety Guidelines for Service Stations". This document is used nationwide and is commonly referred to in the traffic engineering industry. Separation

distances between the pump islands and the vehicle accesses will be sufficient that there will be little probability of vehicles queuing back out of the site when waiting for a service position.

- (k) There will be no adverse off-site parking effects. The activity will not attract parking because there will be no shop. The only generator of parking will be the air hose, which will be adequately provided for.

Council Officer's report

35. I have read the Council Officer's report, and the Council's Transport Peer Review report included in Appendix C of the Officer's report. The conclusions of the Council's planning and transportation specialists can be summarised as follows:

- (a) The traffic effects associated with the proposal will have no more than minor effects on the existing transport environment, and are therefore acceptable;
- (b) The traffic effects associated with the proposal will have more than minor effects on the proposed future transport environment (as proposed on the road upgrade plan in Attachment 2), and are therefore not acceptable.

36. In other words, if it were not for the proposed road upgrade, the Council Officer's report would have considered the traffic effects of the development to be acceptable.

37. It is only the road upgrade that has created the situation where traffic aspects of the development have not been satisfactorily mitigated.

38. The issues associated with the road upgrade raised in the Council Officer's report are summarised as follows:

- (a) The kerbed median along Great South Road adjacent to the site that will be installed as part of the road upgrade will prevent fuel delivery tankers and customers from right turning in and out of the site;

- (b) The necessary changes to the vehicle access design to accommodate tankers left turning in and out of the site will create unacceptably wide crossings, which will adversely affect pedestrian safety;
 - (c) The flare at the western vehicle crossing needed to accommodate tankers left turning into the site will encroach into the Church Street paper road. This will compromise a future intersection if Church Street is ever constructed.
 - (d) A long flare in the eastern vehicle crossing will be needed to accommodate exit movements by tankers left turning out of the site;
 - (e) There will be an increased probability of vehicles U-turning or crossing lanes at the Pokeno Road intersection to enter the site;
 - (f) The reduction of vehicle movements to left turns only at the site accesses will double queue lengths at the site entry, causing increased probability of tailbacks out onto Great South Road, particularly on “discount days”.
39. I disagree that providing for left turn only movements at the site accesses will introduce these undesirable effects. I consider it is possible to provide access that caters for left turns only. Attachment 3 shows how this could be achieved.
40. In Attachment 3 the entry and exit tapers at the vehicle crossings would be lengthened to accommodate the tanker path, as indicated. These are similar to but not the same as those in Figure 5 in the Council’s Traffic Peer Review Report. It can be seen in Attachment 3 that the tapers shown would accommodate the fuel delivery tanker that Gull typically uses.
41. In the Council’s Traffic Peer Review report concern was expressed that the entry taper would need to extend across the boundary frontage into the Church Street road reserve, and that this would impinge on any future intersection design if Church Street is ever constructed. According to the Council’s planner there is currently no plan to construct this part of Church Street. However, I do not consider that an intersection should or would be provided at this location regardless of whether or not the service station is constructed, for the following reasons:

- (a) The intersection would be immediately adjacent to the traffic signals at Pokeno Road, offset just enough to prevent it being treated all as one intersection. Even a left turns only intersection could result in nose-to-tail conflicts due to the very close proximity of the left turn movement to the intersection, particularly from the Pokeno Road approach;
 - (b) The Council's reporting expresses concern about vehicles weaving across lanes to access the site. Such a scenario would be significantly more problematic at a left entry into Church Street because it is so much closer to the intersection;
 - (c) Sight lines from a future exit point from Church Street would have insufficient visibility westwards along Great South Road due to the curve in the alignment of Great South Road. I have already stated that no exiting should occur from the western access at the service station development, due to the same sight line being inadequate for safe operation. The sight line from a left turn exit from Church Street will be similarly short.
42. Therefore, if Church Street is ever constructed then I believe the only viable option is for it to be a cul-de-sac, with no direct connection to Great South Road. It would be accessible only via Market Street and Albert Street (as indicated on Figure 2 in the Council's Traffic Peer Review report).
43. Hence a left turn entry taper at the western vehicle crossing to the service station will not affect the design of a future road intersection because in my opinion, it will not be feasible to provide a safe intersection there anyway.
44. Another feature of the site access shown in Attachment 3 is the use of raised platforms at each vehicle crossing. These would be provided in accordance with the recommendation in the Council's Traffic Peer Review report and would effectively narrow the useable part of the vehicle crossings to minimum widths for most users. Only large vehicles such as fuel delivery tankers would ride over the platforms, which as stated in the Peer Review report, would be 25mm high. The vehicle crossing widths shown on Attachment 3 would be as follows:

- (a) Western entry 5m normal use (9m including platform)
- (b) Eastern exit 4m normal use (7m including platform)

45. Under normal use both vehicle crossings would comply with the Council's width requirement of 6m. Such widths will enable pedestrians to pass by with an acceptable level of amenity and safety.
46. Only when a fuel delivery tanker is accessing the site would those parts of the crossings restricted by the platforms be utilised. Passing pedestrians should only experience increased exposure when tankers are accessing the site, but since fuel deliveries are infrequent (estimated at 2 to 3 deliveries per week), I consider the effect is acceptable, the same as in the original proposal.
47. It is agreed that the exit flare on the eastern vehicle crossing will need to be extended to accommodate the left turning tanker path. However, it should not need to be as long as the Council's Traffic Peer Review report suggests and would not encroach into the Market Street intersection area. The majority of the time the flared part of the crossing would be unused because it extends well outside the natural path that customers will track. Only the tanker will use the flared part of the access.
48. It has been suggested that the kerbed median will increase the probability of vehicles U-turning around the nose of the median at the intersection, to enter the site. This is not sufficient reason to decline resource consent because it is a traffic enforcement matter. A "No U-Turn" sign on the island nose would assist with enforcement if U-turning does occur. I also do not consider that vehicles will normally cross lanes to enter the service station when passing through the intersection. Vehicle accesses to all types of land developments including service stations are located downstream of multi-lane intersections and I am not aware of anywhere this scenario is experienced or causes a traffic safety issue.
49. Finally, I disagree that restricting turn movements to left turns only will double queue lengths entering the site. The site entry is only wide enough to accommodate one vehicle at a time whether it is a left or right turning vehicle, so the direction of approach is not relevant. If anything, restricting site access

- to left turns only may cause a reduction in the number of entry movements because half of the passing traffic will not be able to access the site.
50. Hence I consider the Council Officer's report is not correct in its conclusion that traffic effects of the development are not able to be sufficiently avoided, remedied or mitigated. In my opinion the development can be accommodated both in the existing and future road environments satisfactorily.
 51. There are some positive aspects of the road upgrade with regard to the proposed service station, which is not mentioned in the Council's reporting. This is that the traffic signals will help to break up traffic flow on Great South Road, providing better opportunity for vehicles to access the site. The proposed footpath across the site frontage will also provide improved amenity for passing pedestrians.

Draft Conditions

52. I have reviewed the draft conditions attached as Appendix I to the Council Officer's report. I make the following comments in regard to Conditions 15(f) and 17.

Condition 15(f)

53. This condition relates to setting back the fence line at 80 Great South Road to the property boundary. Gull has advised it is amenable to funding the fence relocation, including survey and other associated costs of implementation. However the Council also has a role to play because it has the authority to enable it to happen.

Condition 17

54. Condition 17 requires that a design stage road safety audit be carried out. There has been traffic engineering input into the design of the development. The design has been thoroughly peer reviewed by Council's traffic consultants and their road safety engineer. I consider that subsequent involvement by yet another team of engineers will not add any further value to the process. I recommend this condition be deleted.

55. Otherwise the conditions relating to traffic engineering appear satisfactory to me.

Submissions

56. I have reviewed the traffic related matters in submissions received following notification of this development. These are itemised as follows:

- (a) Proximity to Pokeno Road intersection
- (b) Traffic queuing onto roadway during fuel promotions
- (c) Pedestrian safety
- (d) Out of date traffic data
- (e) Increased traffic due to Ford Street closure
- (f) Traffic risk at memorial on Anzac Day
- (g) Increased traffic demand

57. I address each of these under the following sub-headings:

Proximity to Pokeno Road intersection

58. This has already been covered in previous reporting and in this statement of evidence. Council officers are comfortable with the proposal in the existing road environment. The suitability in relation to the future road environment has been assessed in detail in the Council Officer's reports and in this evidence, and in my opinion is appropriate.

Traffic queuing onto roadway during fuel promotions

59. Gull has provided me with some transaction data at two other similar service stations with the same number of service positions. These are located at Waiuku and Tuakau. Hourly transaction data for a normal day and a "discount day" are listed in Table 1.

Table 1: Transactions at Gull Waiuku and Tuakau

Hour Ending	Waiuku		Tuakau	
	Normal Day	Discount Day	Normal Day	Discount Day
0100	2	0	3	1
0200	1	0	1	3
0300	0	1	2	0
0400	1	1	2	1
0500	2	7	6	2
0600	10	4	18	19
0700	27	42	13	21
0800	27	67	26	40
0900	25	72	34	70
1000	27	74	29	69
1100	30	81	30	59
1200	28	70	29	63
1300	25	63	18	55
1400	29	55	27	49
1500	16	68	25	57
1600	25	70	35	68
1700	41	79	47	77
1800	40	88	44	84
1900	24	79	27	83
2000	19	79	17	66
2100	11	55	22	52
2200	8	30	9	44
2300	1	14	5	13
2400	1	0	1	9
Totals	420	1099	470	1005

60. On the normal day (Thursday 4 March 2021) Waiuku experienced a total 420 transactions. The highest in any one-hour period was 41 transactions. On the discount day (Thursday 25 February 2021) Waiuku experienced 1099 transactions, and a peak 88 transactions in any one-hour period.
61. On the same days Tuakau experienced 470 transactions on the normal day, and a peak 47 transactions in any one-hour period. On the discount day Tuakau experienced 1005 transactions, and a peak 84 transactions in a one-hour period.
62. Gull has indicated to me the length of stay of customers on the forecourt at their Tuakau service station. This data indicates an average 3 minutes forecourt occupancy per customer. An investigation I carried out shows a length of stay of 3.25 minutes, which is slightly longer than but is in general agreement with the advice from Gull. On the basis of say, a 4 minute forecourt occupancy, to

- be additionally conservative, the capacity of a service position would be 15 customers per hour, or 90 customers for all 6 service positions. In this assessment I have assumed that a customer carries out one transaction and is equal to one vehicle entry trip.
63. In Table 1 above, at no time did either the Waiuku or Tuakau stations exceed the maximum capacity, although they did approach capacity at some times. Allowing for fluctuations in demand within a given hour, I expect there may have been queues of one or two vehicles at times, but such queues would have been contained within the site. If similar queuing occurs at the proposed Pokeno service station then this will also be entirely accommodated within the site.
 64. Gull advises that in its experience queuing rarely ever spills off their sites on their discount days, because customers are deterred from waiting too long and will go elsewhere or return later. This experience tends to be supported by the data provided to me as listed in Table 1 and in my assessment above.
 65. There is no reason to expect the proposed service station at Pokeno will operate any differently.
 66. Hence based on the comparable site data, it is highly unlikely that queues will tail out onto Great South Road, or into the Pokeno Road intersection, or will cause any visibility issues around the curve.

Pedestrian safety

67. Concerns have been raised about safety to pedestrians passing by the service station frontage. These include children walking to and from the school bus. There is presently no footpath directly in front of the site, although one will be provided with the road upgrade, which will link to the pedestrian crossing at the traffic signals and to the footpath network on the opposite side of the road.
68. The Council's Traffic Peer Review report, which I agree with, has stated that pedestrian safety would not be significantly compromised providing that the site accesses are restricted in width. The proposal, which will include the proposed raised platforms, whether in the existing or future road environments, will effectively restrict the access widths.

69. The Land Transport New Zealand publication RTS 13 “Road Safety Guidelines for Service Stations” categorises the suitability of a site for a service station depending on the number of pedestrians that walk past the site. It includes the following descriptions for three possible categories:

Category 1: Less than 150 pedestrians/hour. Suitable for a service station. At low pedestrian flows, motor vehicles may dominate the driveway/ footway interface so that pedestrians are forced to give way. Driveways should be designed to reinforce the motorist’s obligation to give way to pedestrians. Driveway widths can be maximised if required.

Category 2: 150 - 500 pedestrians/hour. Generally suitable for a service station. Special consideration should be given to ensure pedestrian amenity is maintained. For example, the number of driveways on frontage roads and driveway widths should be minimised where possible.

Category 3: Greater than 500 pedestrians/hour. Generally unsuitable for service stations. High pedestrian flows may cause delays, frustration and on-road queuing problems to motorists wishing to access the site. In some circumstances a service station development may be feasible at high pedestrian flows, provided there is adequate space for vehicles entering the development to safely wait on the roadway while giving way to pedestrians.

70. In the existing road environment it is clear that the site falls into Category 1 because existing pedestrian flows passing the site are very low, by my observations less than 10 pedestrians per hour. In the future road environment I suspect the site will remain within Category 1, although it could possibly move up to Category 2 if pedestrian flows passing the site were to increase to more than 150 pedestrians per hour. It is highly unlikely that the site will reach Category 3. In both scenarios RTS 13 suggests that the site is suitable for a service station, albeit in Category 2 the number and widths of the vehicle crossings on the frontage road should desirably be minimised. The proposed access widths will effectively be minimised, as RTS 13 recommends.

Out of date traffic data

71. It is agreed that more up to date traffic data would be desirable, but it is not available. The Council's Traffic Peer Review report has estimated that the volume on Great South Road is currently about 6,300 vehicles per day. This is based on the available data, plus traffic that the Countdown supermarket generates. Traffic will continue to grow further as development in and around Pokeno occurs.
72. Regardless of whether the existing traffic volume is 6,300 vehicles per day, or even higher, the conclusion does not change that the service station traffic will be able to be accommodated on the network.

Increased traffic due to Ford Street closure

73. According to the road upgrade plan (refer Attachment 2), Ford Street will be closed at the Pokeno Road end and will become a cul-de-sac. According to Council's own count data this road presently carries an estimated 870 vehicles per day. This is more traffic than the development along it is likely to generate and thus it is clear the road is used as a through road.
74. When the road is closed, the through traffic presently using it will divert to Pokeno Road instead.
75. In any case, I cannot see how traffic flows on Great South Road adjacent to the site frontage will increase significantly as a result of this part of the proposed road upgrade.

Traffic risk at memorial on Anzac Day

76. The Council's proposed upgrade of the intersection of Market Street with Great South Road has already been described. It is expected that the proposed roundabout upgrade at this intersection include measures to ensure a safer environment for people visiting the cenotaph than the current situation, where the cenotaph is located within a traffic island.

77. The service station will be sufficiently remote from the roundabout that vehicles exiting from the site will have merged into the normal traffic flow before they reach it.

Increased traffic demand

78. I have already stated above that the service station will generate no more than 10 vehicle movements in any one hour period, over and above background traffic flow. Service stations by their nature do not generate a high proportion of primary trips, the majority of traffic that is attracted to them is pass-by traffic that is already on the network.

Conclusions

79. The Council Officer's report is generally in support of the service station proposal in the existing road environment. However, it opposes the development in the future road environment on the basis that it has not been demonstrated that it can be satisfactorily accommodated.
80. However, I disagree with that conclusion. The layout shown on Attachment 3 to this evidence shows how access could be provided, which would accommodate all vehicles left turning at the site accesses, including fuel delivery tankers.
81. The western access will include a flare that protrudes partially into the Church Street road reserve. Such an arrangement is not supported in the Council Officer's report because it would impinge on the provision for a future road intersection if Church Street is ever constructed. However, I do not consider that a road intersection should be constructed there anyway, due to the very close proximity to the signalised intersection at Pokeno Road, and poor visibility westwards due to the curved alignment of Great South Road.
82. The proposed vehicle crossings will be of appropriate width to accommodate the numbers and types of vehicles that will use them and will enable a safe pedestrian environment. Measures have been agreed by Gull to ensure that the sight distance westwards will be adequate to enable the eastern exit access to operate safely.

83. A number of traffic concerns have been raised in submissions. These range from proximity to the Pokeno Road intersection, traffic queuing on the roadway, pedestrian safety and increased traffic demand. I have assessed the matters raised. There are no issues that give me reason to change my conclusions.
84. In conclusion, in my opinion the proposed development can be accommodated within both the existing and future road environments, with effects that are no more than minor. Thus I consider that resource consent could be granted from a traffic engineering perspective.



Ian Constable

Date: 21 April 2021

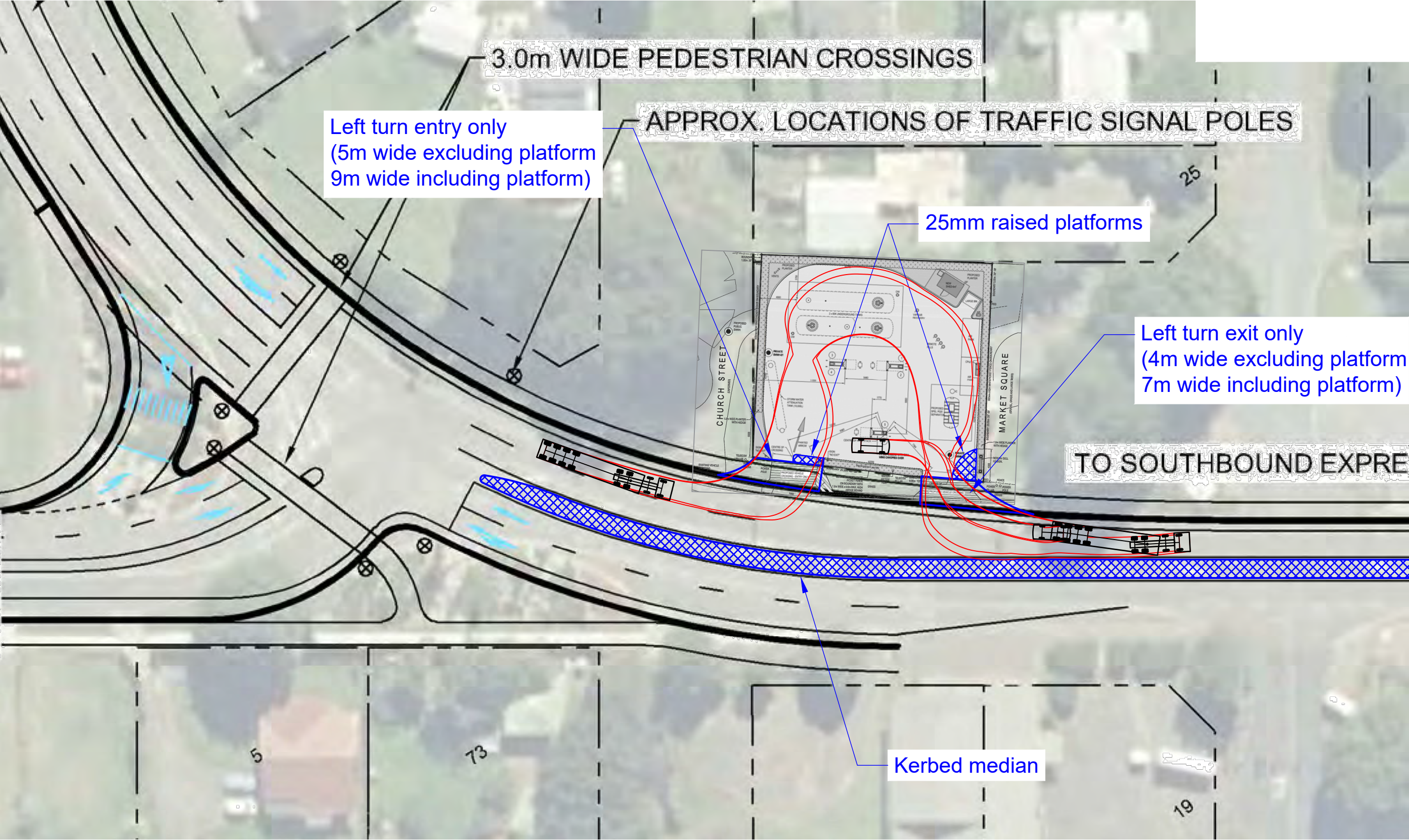




WORK IN PROGRESS

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REVISION		APPROVED	DATE	Waiakato		wsp		SHEET NO.		PROJECT	
				Waikato District Council		Hamilton Office		1		WAIKATO DISTRICT COUNCIL	
				MAYOR C. COOPER		POKERO RD 300		2		POKERO TOWNSHIP	
						POKERO RD 300		3		GREAT SOUTH RD IMPROVEMENTS	
								4		INTERSECTION SCHEMATIC	
								5		WAIKATO DISTRICT COUNCIL	
								6		2-WLASS AV	
								7		SHEET NO.	
								8		REVISION	
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PROPOSED SERVICE STATION DEVELOPMENT, POKENO
Left Turns Only Access
A3 Scale 1:500