29 September 2021

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For the attention of: Kay Panther Knight

via email: [kay@formeplanning.co.nz]



160 Kāpiti Road, Paraparaumu: Consent Application Response to KCDC s92 Request (Transportation) Application Reference: 210151

Background

It is proposed to construct and operate a Countdown Store and two adjacent trade retail tenancies on land at 160 Kāpiti Road, Paraparaumu.

An application for the necessary consents was lodged with the Kāpiti Coast District Council (**KCDC**) and was supported by an Integrated Transportation Assessment (**ITA**), dated July 2021.

In a letter dated 27 July 2021, KCDC responded with a request for further information.

In a reply letter dated 12 August 2021, responses were provided to the information requested. Subsequently, an on-line meeting was held with KCDC officers on 2 September 2021 in which agreement was reached on a number of matters. This meeting also identified a number of residual matters for which information was requested.

For completeness, this document records all responses / discussions / agreements to the issues raised by the KCDC letter and includes additional information in response to the residual matters.

For ease of reference, the question numbers below are those from the KCDC letter.

KCDC Question 3

Why have the growth rates identified in the report been used for the assessment rather than the 2026 SATURN model? It is understood that the rates proposed in the assessment is based on the 2018 and 2020 date, but this is just on some links. These growth rates (1.4%) seem very low and are generally not expected from background growth.



Response(s)

[Letter dated 12 August 2021] As described in the ITA Section 2.5, detailed growth rates have been calculated based on link counts between the expressway and Arawhata Road, because this is the area of the network potentially most sensitive to the effects of the proposed Countdown. The use of counts specific to the modelled peak hours is considered more relevant than generic district-wide rates, because these reflect the behavioural responses of drivers to peak period conditions, such as trip-timing.

[Meeting 2 September 2021] Growth rates agreed – no further action required.

KCDC Question 4

Related to the above the SATURN model also does not take account of the level of growth proposed in the Wellington Regional Growth Framework. The Kāpiti District is expecting significantly more growth than has previously been anticipated, which could make capacity on Kāpiti Road even more problematic. Therefore please confirm what other development assumptions have been made in the SIDRA model for the future year forecast.

Response(s)

[Letter dated 12 August 2021] It was agreed with KCDC officers at a pre-application meeting in November 2020 that the assessment could only take account of any known and consented development proposals. In this regard, it was agreed that KCDC would supply details of any relevant developments for consideration. No information was received and for this reason no specific allowances were made over and above the growth applied to the background traffic volumes.

[Meeting 2 September 2021] KCDC suggested that effects associated with the extension of the Mitre10 Mega store within Kāpiti Landing (RM 180235) should be specifically taken into account. TK advised that the April 2018 ITA for this consent indicated that the scale of the increases was small (hourly traffic activity increasing by at most 35 vehicle movements) and within the daily variability in traffic volumes experienced on Kāpiti Road. KCDC agreed – no further action required.

KCDC Question 5

Please confirm how the SIDRA model addresses cumulative effects? This includes not only consented but as yet undeveloped sites at Kāpiti Landing.

Response(s)

[Letter dated 12 August 2021] Refer response to Qu 3 above. Allowance cannot be made for unconsented developments as these will be the subject of their own transportation assessments as required by the relevant consent status and district plan rules. Agreed – no further action required.

KCDC Question 6

Please confirm what assumptions, if any, have been made in the SIDRA model with regards to mode shift? Just based on traffic flows. Committed development east-west connector etc.

Response(s)

[Letter dated 12 August 2021] The SIDRA model does not have a mode-split stage and it is not the purpose of such a model to calculate mode-split. If the outlook within Kāpiti is for a

greater proportion of future trips to be made by modes other than the private car, then it is possible that the SIDRA traffic forecasts overstate future traffic volumes (and the assessments will be conservative).

It was agreed with KCDC officers at a pre-application meeting in November 2020 that KCDC would advise of any committed infrastructure projects that could be relevant to the assessment, such as the east-west connector. No information was received and for this reason no specific allowances were made. In this regard, it is understood that the effect of the east-west connector would be to remove traffic from the critical part of Kāpiti Road so its exclusion is expected to result in a conservative assessment.

[Meeting 2 September 2021] Action with KCDC to identify what the effects of the East-West connector road might be upon the Kāpiti Road corridor and whether these effects then needed to be accounted for in the SIDRA model. Applicant noted that the KTM4 SATURN model build book (Table 3-2) assumes 186,500m2 GFA of development in the airport area by 2026, but actual rates of development are well below this level – as a result the rates of growth inherent in the SATURN model are likely to be over-stated.

[Email from KCDC Neil Trotter 17 September 2021] KCDC confirmed that we could proceed on the basis that the effects of the East-West connector road are neutral.

KCDC Question 7

We are concerned about the level of service F on the Friendship Place roundabout and it would be good to see the output showing what [effect] mitigation has on level of service. Please can this be provided? The Transport Assessment refers to mitigation making matters better, but by how much? The level of service should be C and 14% increase in attributable to this proposal (400 to 430 in the peak hour).

Response(s)

[Letter dated 12 August 2021] Section 4.5 and the tabulation at page 16 of the ITA describe the effect of mitigation on the roundabout LOS. All turning movements would operate at LOS A or B in both of the assessed peak periods.

[Meeting 2 September 2021] KCDC wished to see how traffic demands for the roundabout had been calculated.

[Subsequent assessment] Refer Annexure A.

Figure A1: Shows the derivation of base-year traffic movements for the weekday PM peak in 2018. Count information collected by Matrix was reconciled with KCDC data to produce a single set of turning movements.

Figure A2: Shows the derivation of Do-Minimum traffic volumes for the weekday PM peak period in 2026, by the application of the identified growth rate to the 2018 volumes (1.4% per annum, or 11.2% total).

Figure A3: Shows the derivation of Option (with Countdown) traffic volumes for the weekday PM peak period in 2026.

Figure A4: Shows the overall traffic generation and distribution for the supermarket and associated development separately, together with an adjustment for passing trips (these are through movements on Kāpiti Road which are replaced by movements in to and out of the supermarket site). Generated vehicle movements are allocated to turning movements using the primary access (to/from the roundabout) and the secondary access, for example:

- trips from the NW: 100% are assumed to enter by turning L at the roundabout;
- trips from the SE: 100% are assumed to enter by turning R at the roundabout;
- trips to the NW: 100% are assumed to exit by turning R at the roundabout; and
- trips to the SE: 25% are assumed to exit by turning L at the roundabout, 75% are assumed to exit by turning L at the secondary exit.

These figures reflect the adjusted trip distribution agreed with KCDC (refer below).

An identical process was applied for the Saturday period model.

KCDC Question 8

We currently experience queues back to Langdale Avenue in the eastbound direction which don't appear to have been identified in the SIDRA modelling, please provide more information in this regard.

Response(s)

[Letter dated 12 August 2021] The model relates to average conditions within peak hours, so it is possible that more extensive queuing can occur for shorter periods within the peak hours. Also, there is a need to distinguish between stationary or transient queuing (when vehicles are moving slowly) – the SIDRA model appears to be forecasting intersection conditions which are consistent with the traffic demands in this area.

[Meeting 2 September 2021] KCDC wished to see more information from the SIDRA model regarding this queue length.

[Subsequent assessment]

Concern has been expressed by KCDC officers that lengthy queues on the NW approach to the Friendship Place roundabout observed on Saturday periods were not being reflected in the SIDRA model.

Table C1 of the ITA reported calibration in terms of 95th percentile observed vs modelled queue lengths, but data for this approach for the modelling Saturday peak period was not available. Surveys were undertaken on Saturday 18 June 2018.

In response to the KCDC concerns, the original data collected by Matrix was revisited. This identified that this data had been collected (but not reported in the main part of the spreadsheet because a problem with the initial survey meant that this was resurveyed).

The available data is reproduced at **Annexure B**. This shows a 95th percentile queue length of 13 vehicles but as part of a continuously moving queue. The corresponding queue length in the SIDRA model is 17 vehicles, with a queue length of 122m. This suggests that SIDRA is slightly over-representing the queues on this approach.

The volumes on this approach (for the 2018 base-year) are 877 vehicles/hour and the degree of saturation at the roundabout is 88% with an average delay of 13.2 seconds/vehicle. These figures confirm that the roundabout is busy and approaching capacity at this period.

Unlike traffic signals, the stream of traffic on a roundabout approach only stops in response to opposing traffic movements. This means that the first few vehicles on the approach may be required to stop completely, but beyond this, vehicles are generally slow-moving and not part of a stationary queue of vehicles. This is likely to be what is being observed on this approach at busier periods. In my view, the modelled roundabout performance reproduces observed conditions to an acceptable degree and forms a reliable basis for the assessment of conditions with the changes in traffic loadings resulting from the operation of the proposed Countdown store.

KCDC Question 9

It is unclear why the assumed traffic distribution is 16.6% onto Langdale Avenue and around 1.5% on Expressway South, 31% west on Kāpiti Road (with way fewer east) and 15% to Kāpiti Landing? Can you provide more detail on how this distribution has been derived?

Response(s)

[Letter dated 12 August 2021] This is based on the likely origin/destination of the Countdown shoppers, as described in the ITA Section 4.2. A high a percentage from the Expressway South is not expected because the catchment is only parts of southern Raumati, Paekakariki etc. In contrast, Langdale Avenue serves a much higher percentage of residences and potential customers. Kāpiti East is low because this would continue to be serviced by the established Countdown at Coastlands. A spreadsheet can be supplied if required but the adopted distribution is broadly consistent with the retail study.

[Meeting 2 September 2021] KCDC wished to see analysis modified to assume a 10% distribution of trips to/from Kāpiti Landing (instead of 15% in original analysis).

[Subsequent assessment]

At the request of KCDC, the traffic distribution has been modified to set the percentage of trips to/from the Kāpiti Landing business park at 10%. A pro rata adjustment has been made to trips to/from other origins / destinations.

The adjusted distribution is shown below:

Trip Distribution	% of Trips	f Trips Weekday Saturday % of Trips Weekday		Saturday						
		Arr	Dep	Arr	Dep		Arr	Dep	Arr	Dep
A - Kapiti Rd SE of Arawhata	11%	22	22	19	19	11%	1	1	3	3
B - Arawhata	6%	12	12	11	11	6%	1	1	1	1
C - Expressway South	2%	4	4	3	3	2%	0	0	0	0
D - Expressway North	12%	22	22	20	20	12%	1	1	3	3
E - Milne Dr	3%	5	5	5	5	3%	0	0	1	1
F - Te Roto	5%	10	10	9	9	5%	1	1	1	1
G - Business Park	10%	19	19	17	17	10%	1	1	2	2
H - Langdale	18%	34	34	30	30	18%	2	2	4	4
I - Kapiti Rd NW of Langdale	33%	63	63	56	56	33%	4	4	8	8
Total	100%	191	191	170	170	100%	11	11	23	23

The effect of this change is small, amounting to a reduction of 20 trips to/from the business park (from 58 to 38) in the weekday PM peak period, with corresponding increases to/from other areas.

Annexure C reproduces the results presented at Table 4.1 and Figure 4.1 of the ITA, but for the model runs with the adjusted trip distribution. This confirms that the changes relative to the results presented in the ITA are negligible.

KCDC Question 10

Please identify construction traffic numbers as, whilst this is identified as being in the Construction Management Plan, it is unclear if these would breach the permitted activity standards in the District Plan and if so by how much.

Response(s)

[Letter dated 12 August 2021] It is unclear which permitted activity standards are being referred to regarding construction traffic. The permitted activity trip generation threshold

for this site to Kāpiti Road is 100 vehicles/day pursuant to Rule TR-R2. It is unlikely that construction traffic will exceed this limit and a condition of consent could comfortably address this. Further, a draft Construction Traffic Management Plan can also be required as a condition of consent, which would facilitate further assessment and certification by Council at that point, once a contractor is appointed and further details around construction logistics etc are known. This is a temporary effect only and one that can be comfortably managed through standard practice.

[Meeting 2 September 2021] Agreed that this matter can be addressed by a condition of consent.

KCDC Question 11

Please advise why are different rates from different Countdown Supermarkets around New Zealand used for various purposes throughout the assessment? It would be better to provide trip generation rates for a few comparable sites. We're familiar with the Tawa Countdown but not others. The context of the other sites and trip rates needs to be explained further. As an example of the assessment using sites that may not be comparable to the proposed development, it appears as though the Hawera site is a town centre site with the car park likely to be shared/used by shoppers making combined trips (like our Waikanae Countdown). NZTA Research Report 453 is indicating a rate of 16.3 and the NZTA Planning Policy Manual app 5b 17.8; so we would need further justification for the rates of 10.6 and 9.4.

Response(s)

[Letter dated 12 August 2021] These trip rates were advised to KCDC at the pre-application meeting in Nov 2020 and no issues were raised at that time. The criticised use of 5-year old trip rates is rather odd in the context of the recommended use of RR453 data (document published 2011 but much of the data referenced is much older) and the PPM (now 14 years old)! The intention was to use rates relating specifically to other Countdown stores with a similar retail offer. Notwithstanding this, and as described in the ITA Annexure C, we have undertaken further analyses of additional stores that we consider to be helpful with local examples for comparison. The analysis accepted for the Aotea store (Porirua) adopted rates of 10.3 (weekday) and 8.0 (Saturday). An analysis accepted for the just-opened store in Richmond adopted a weekday rate of 10.4 - no Saturday analysis was undertaken. In this context, the rates adopted in the assessment of 10.6 (weekday) and 9.4 (Saturday) are reasonable, especially given the competing retail offers from Pak & Save (Coastlands), Countdown (Coastlands) and New World (Kāpiti Landings).

[Meeting 2 September 2021] The trip rates were agreed.

KCDC Question 12

Can more detailed information on how you derived the reductions to trip rates to accommodate linked trips, public transport, walking/cycling and 30% passer-by trips please be provided? For example, evidence from other stores, research documents etc.

Response(s)

[Letter dated 12 August 2021] The adopted 30% pass-by rate is a standard value used for retail. Other values are estimates but are nonetheless considered reasonable in the context of the proposed store.

[Meeting 2 September 2021] The 30% adjustment for pass-by trips was agreed, but KCDC sought clarification of how the adjustment was applied.

[Subsequent assessment] The response to Question 7 includes detail of the application of the pass-by trip adjustment.

KCDC Question 13

Has the SIDRA model taken into account the effects of platooning on the roundabout from the downstream lights?

Response(s)

[Letter dated 12 August 2021] Yes - the SIDRA model used intentionally links together 11 intersections along Kāpiti Road so that the potential interactions between the intersections could be taken into account.

[Meeting 2 September 2021] Agreed.

KCDC Question 14

Please provide details/designs for the roundabout improvements, site frontage works – central median, pedestrian crossing and bus stops.

Response(s)

[Letter dated 12 August 2021] We have undertaken site investigations to determine that these works are feasible within the available road reserve. Since these are reliant upon agreement from both KCDC and GWRC (as public transport authority), the necessary approvals in principle are sought before investing time in the detailed design work.

[Meeting 2 September 2021] Agreed that plan(s) would be prepared showing the proposed modifications within the road reserve to a greater level of detail. KCDC requested that the possibility of providing footpath access to the supermarket along the edges of the site (in addition to the proposed central access) be investigated.

[Subsequent assessment] Plans are supplied with this letter. Note that:

- the measures shown are indicative only and require confirmation from both KCDC (as roading authority) and GWRC (as public transport authority);
- Space constraints within the site means that the provision of footpaths at the edges
 of the site would result in the number of parking spaces being reduced, triggering a
 compliance issue. For this reason, such footpaths are not proposed. Nonetheless, the
 proposed central footpath is considered to represent an attractive route for
 pedestrians to use;
- bus stop locations are shown but will be reliant upon confirmation by GWRC that spacing with respect to existing stops is acceptable; and
- there is an existing sump adjacent to the secondary access which will require relocation in order to achieve an adjustment to the kerbline in this area.

KCDC Question 15

Please identify how rat running through the adjacent car park areas (west of the site) will be discouraged?

Response(s)

[Letter dated 12 August 2021] It is unclear which parking area(s) this is making a reference to. The internal design of the Countdown car park will not be an attractive alternative to through traffic using the adjacent section of Kāpiti Road.

[Meeting 2 September 2021] KCDC clarified that this comment relates to the potential use of the parking areas by SE-bound traffic to avoid delays on Kāpiti Road. KCDC also raised issue of the tight turn radius proposed between the Countdown site and the adjacent site (currently occupied by Capital City Ford) and whether this might preclude its use by larger vehicles such as car transporters.

[Subsequent assessment] The design of the Countdown parking area, together with the less direct access between this and the adjacent site means this route would be an unattractive alternative to the use of Kāpiti Road.

As both the Countdown and Capital City Ford sites are owned by the same entity, the current lease arrangement for Capital City Ford is understood to be able to be terminated, if required. Any subsequent occupier of the site would be required to work within the constraints of the available access. At this stage, the Applicant does not intend to alter the access arrangement to accommodate those movements.

KCDC Question 16

Please confirm if the vehicle movements and parking demand includes the trade element of the store.

Response(s)

[Letter dated 12 August 2021] Yes. The table on p14 of the ITA gives trip rates for both the Countdown and trade retail elements and the associated description makes reference to the combined development. Section 4.7 of the ITA specifically references the parking demand and supply for the Countdown and trade retail elements of the development.

[Meeting 2 September 2021] Agreed.

SIDRA Model Outputs

KCDC has requested that output files be supplied from the SIDRA model(s). These are too extensive to include within this document and will be supplied separately.

Closure

This document provides additional information requested by KCDC in relation to the transportation assessments of the proposed Countdown supermarket on Kāpiti Road. The only change to the SIDRA model relates to an adjustment of the trip distribution to reflect a lower proportion of trips with an origin / destination within the Kāpiti Landing business park. The analyses described above confirm that this change has a negligible impact upon the road network performance as reported in the ITA. Accordingly, the conclusions reached in the ITA regarding the overall level of effect are considered to remain valid.

Yours sincerely,

T.m. Kelly

Tim Kelly Tim Kelly Transportation Planning Limited (*Phone: 027-284-0332, E-mail: tim@tktpl.co.nz*)

ANNEXURE A





Figure A3

Supermarket Traffic Generation	Supermarket Traffic Generation (Weekday) - Adjusted for PT/walk/cycle												
To:	A	В	с	D	E	F	G	н	1	J	Total		
From:													
A - Kapiti Rd E of Arawhata										22	22		
B - Arawhata										12	12		
C - Expressway South										4	4		
D - Expressway North										22	22		
E - Milne Dr										5	5		
F - Te Roto										10	10		
G - Business Park										19	19		
H - Langdale										34	34		
I - Kapiti Rd W of Langdale										63	63		
J - COUNTDOWN	22	12	4	22	5	10	19	34	63		191		
Total	22	12	4	22	5	10	19	34	63	191	383		

LFR Traffic Generation (Week	LFR Traffic Generation (Weekday) - Adjusted for PT/walk/cycle												
To:	Α	В	с	D	E	F	G	н	1	1	Total		
From:													
A - Kapiti Rd E of Arawhata										1	1		
B - Arawhata										1	1		
C - Expressway South										0	0		
D - Expressway North										1	1		
E-Milne Dr										0	0		
F - Te Roto										1	1		
G - Business Park										1	1		
H - Langdale										2	2		
I - Kapiti Rd W of Langdale										4	4		
J - LFR	1	1	0	1	0	1	1	2	4		11		
Total	1	1	0	1	0	1	1	2	4	11	23		

Supermarket Traffic Generation	Supermarket Traffic Generation (Weekday) - Passing Trip Adjustment												
To:	Α	В	с	D	E	F	G	н	I	1	Total		
From:													
A - Kapiti Rd E of Arawhata									-34		-34		
B - Arawhata											0		
C - Expressway South											0		
D - Expressway North											0		
E - Milne Dr											0		
F - Te Roto											0		
G - Business Park											0		
H - Langdale											0		
I - Kapiti Rd W of Langdale	-26										-26		
J - COUNTDOWN											0		
Total	-26	0	0	0	0	0	0	0	-34	0	-60		

LFR Traffic Generation (Week	LFR Traffic Generation (Weekday) - Passing Trip Adjustment													
To:	Α	В	с	D	E	F	G	н	I	1	Total			
From:														
A - Kapiti Rd E of Arawhata									-2		-2			
B - Arawhata											0			
C - Expressway South											0			
D - Expressway North											0			
E-Milne Dr											0			
F - Te Roto											0			
G - Business Park											0			
H - Langdale											0			
I - Kapiti Rd W of Langdale	-2										-2			
J - LFR											0			
Total	-2	0	0	0	0	0	0	0	-2	0	-4			

Figure A4

ANNEXURE B

			Manual recou
			(Kapiti Rd)
			Lane 1
11:30	to	11:32	8
11:32	to	11:34	8
11:34	to	11:36	11
11:36	to	11:38	13
11:38	to	11:40	13
11:40	to	11:42	11
11:42	to	11:44	13
11:44	to	11:46	13
11:46	to	11:48	13
11:48	to	11:50	13
11:50	to	11:52	13
11:52	to	11:54	8
11:54	to	11:56	9
11:56	to	11:58	13
11:58	to	12:00	8
12:00	to	12:02	13
12:02	to	12:04	13
12:04	to	12:06	10
12:06	to	12:08	13
12:08	to	12:10	13
12:10	to	12:12	13
12:12	to	12:14	7
12:14	to	12:16	3
12:16	to	12:18	13
12:18	to	12:20	13
12:20	to	12:22	13
12:22	to	12:24	13
12:24	to	12:26	13
12:26	to	12:28	7
12:28	to	12:30	5

continuous *maximum can be seen: 13 vehicles moving queue (13 vehicles)

95%tile (m) 13 91

ANNEXURE C

	Year Time Period Countdown Development	LOS - Delays (secs/veh)													Total Volume					
rear			From: Kapi	iti Road (SE)			From: Friends	hip Place (SW)		From: Kapiti Road (NW)			From: Access / Countdown (NE)				Intersection	(vehs/hr)		
			Left	Ahead	Right	Approach	Left	Ahead	Right	Approach	Left	Ahead	Right	Approach	Left	Ahead	Right	Approach	intersection	
2018	WkDy PM Peak	No	5	5	9	5	12	12	16	14	4	4	8	5	8	8	12	9	7	1,887
2018	Saturday Peak	No	5	5	9	5	24	24	28	26	13	12	17	13	14	14	18	15	14	2,293
								1												
2026	WkDy PM Peak	No	6	6	10	6	20	20	24	22	5	5	9	6	10	10	14	11	9	2,099
2026	Saturday Peak	No	5	5	9	5	12	12	16	14	7	7	11	8	11	11	15	12	8	2,018
2026	WkDy PM Peak	Yes	14	15	19	15	133	133	138	135	9	9	13	9	10	10	14	13	36	2,405
2026	Saturday Peak	Yes	8	8	12	9	26	26	30	28	15	15	19	16	13	13	17	15	16	2,305
	1			-																-
2026	WkDy PM Peak	Yes (mitigation)	15	15	19	15	12	15	19	15	9	9	13	10	11	10	14	13	13	2,405
2026	Saturday Peak	Yes (mitigation)	8	8	12	9	9	8	12	10	14	14	18	15	13	13	17	15	12	2,305

Table 4.1: Kapiti Road / Friendship Place Roundabout Performance

KEY: Level of Service												
Α	В	с	D	E	E F							



ANNEXURE D

Plans showing indicative changes within the road corridor.







